The GCI Archive

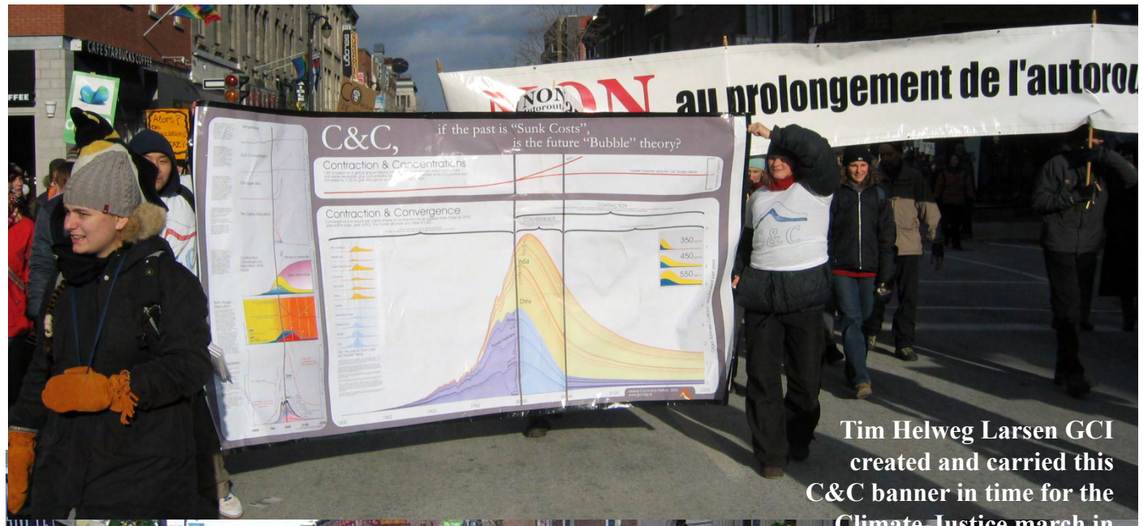
1989 - 2004


"Contraction
[of global emissions to respect the Earth's capacity]
& Convergence"
[of all nations' emission-rights to per-capita parity]
~ "is the logical conclusion of an equitable approach to resolving Climate Change."
Ambassador Estrada: Chair, Kyoto Conference.
~ Global Commons Institute ~ www.gci.org.uk

Lewis Cleverdon GCI - created and erected this C&C banner in time for the Climate-Justice march in LONDON UK

The banner was erected opposite and facing the US Embassy in Grosvenor Square LONDON

Around 8,000 marchers arrived at the square from 2.30 03-12-2005. They heard speakers George Monbiot, Caroline Lucas, Ruth Jarman Norman Baker refer to the urgent need for C&C.



Tim Helweg Larsen GCI created and carried this C&C banner in time for the Climate-Justice march in MONTREA L Canada.

The GCI team at COP-11

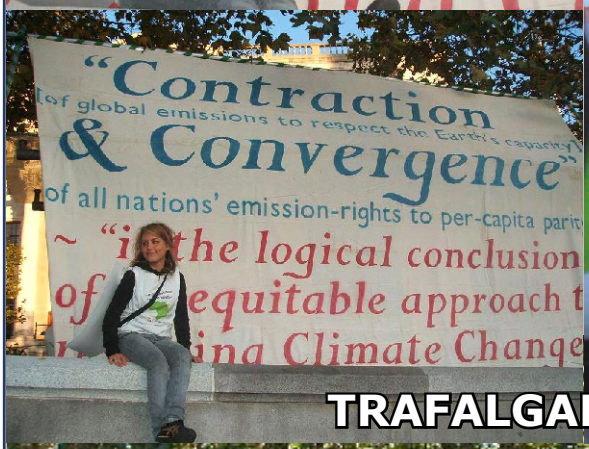
Sara Kate Mcconnell Turnbull, Tim Helweg-Larsen, Tatsuro Shigetomi, Gillian Helweg-Larsen

For the now beautiful young woman who,
only yesterday, was this beautiful little girl.

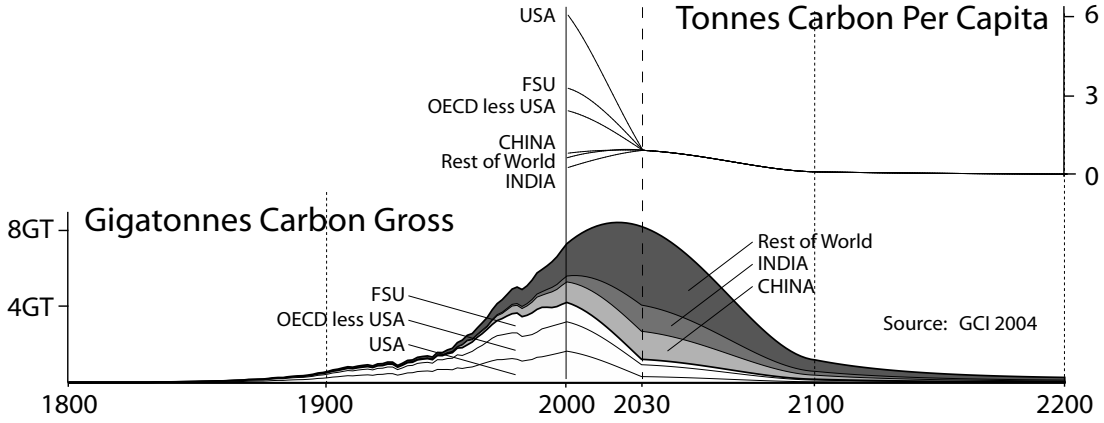
Dearest,

*"Remember, if when tomorrow comes,
your heart is in the right place, you are never
far from home . . . . "*

Your loving
Dadda



GCI BRIEFING: "CONTRACTION & CONVERGENCE"



This example shows rates of C&C negotiated as regions.
This example is for a 450ppmv Contraction Budget, Converging by 2030.

The Global Commons Institute [GCI] was founded in 1990. This was in response to the mainstreaming of global climate change as a political issue. Realising the enormity of the climate crisis, we devised a founding statement on the principle of "Equity and Survival". [1]

In November 1990, the United Nations began to create the Framework on Climate Convention [UNFCCC]. GCI contributed to this and in June 1992 the Convention was agreed at the Earth Summit in Rio. Its objective was defined as stabilizing the rising greenhouse gas [GHG] concentration of the global atmosphere. Its principles of equity and precaution were established in international law. Climate scientists had showed that a deep overall contraction of GHG emissions from human sources is prerequisite to achieving the objective of the UNFCCC. In 1995 negotiations to achieve this contraction began administered by the specially created UNFCCC secretariat.

Between 1992 and 1995 and at the request of the Intergovernmental Panel on Climate Change [IPCC], GCI contributed analysis highlighting the worsening asymmetry, or "Expansion and Divergence" [E&D] of global economic development. It became clear the global majority most damaged by climate changes were already impoverished by the economic structures of those who were also now causing the damaging GHG emissions. [2]

To create a sustainable basis on which to resolve this inequity, GCI also developed the "Contraction and Convergence" (C&C) model of future emissions. In 1995 the model was introduced by the Indian Government [3] and it was subsequently adopted and tabled by the Africa Group of Nations in August 1997. [4]

Negotiations for the Kyoto Protocol to the UNFCCC ran from 1995 until 1997. In December 1997 and shortly before they withdrew from these negotiations, the USA stated, *"C&C contains elements for the next agreement that we may ultimately all seek to engage in."* [5]

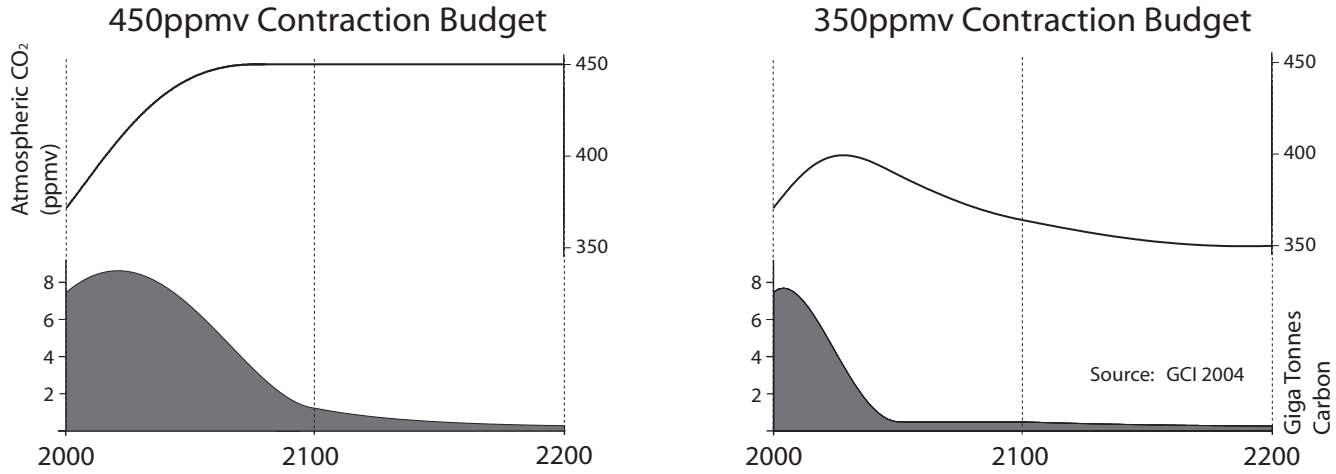
Since then C&C has been widely referenced in the debate about achieving the objective of the UNFCCC. In 2000 C&C was the first recommendation of the UK Royal Commission on Environmental Pollution in its proposals to government. [6] In December 2003 C&C was adopted by the German Government's Advisory Council on Global Change in its recommendations. [7] In 2003 the secretariat of the UNFCCC said the objective of the UNFCCC, *"inevitably requires 'Contraction and Convergence'."* [8] The Latin America Division of the World Bank in Washington DC said, *"C&C leaves a lasting, positive and visionary impression with us."* In 2004 the Archbishop of Canterbury took the position that, *"C&C thinking appears utopian only if we refuse to contemplate the alternatives honestly."* [9] In 2002, the UK Government accepted GCI authorship of the definition statement of C&C, recognising the need, *"to protect the integrity of the argument."*

This statement follows and is available in thirteen languages. [10] It has been adopted by the House of Commons Environmental Aundit Committee and in part in the UN's forthcoming "Millennium Assessment." In 2005, the UK Government will host the next G-8 summit. The Government has already committed this event to dealing strategically with the problems of Africa and Climate Change. Numerous civil society and faith groups are now actively lobbying the Government to have C&C adopted as the constitutional basis for avoiding dangerous future climate change.

[1] http://www.gci.org.uk/signon/OrigStatement2.pdf
[2] http://www.gci.org.uk/articles/Nairob3b.pdf
[3] http://www.gci.org.uk/Archive/MegaDoc_19.pdf [page 116]
[4] http://www.gci.org.uk/nairobi/AFRICA_GROUP.pdf
[5] http://www.gci.org.uk/temp/COP3_Transcript.pdf
[6] http://www.gci.org.uk/Endorsements/RCEP_Chapter_4.pdf
[7] http://www.gci.org.uk/Endorsements/WBGU_Summary.pdf
[8] http://www.gci.org.uk/slideshow/C&C_UNFCCC.pdf
[9] http://www.gci.org.uk/speeches/Williams.pdf
[10] http://www.gci.org.uk/translations.html

"CONTRACTION & CONVERGENCE" - DEFINITION STATEMENT

Negotiating Rates of Contraction



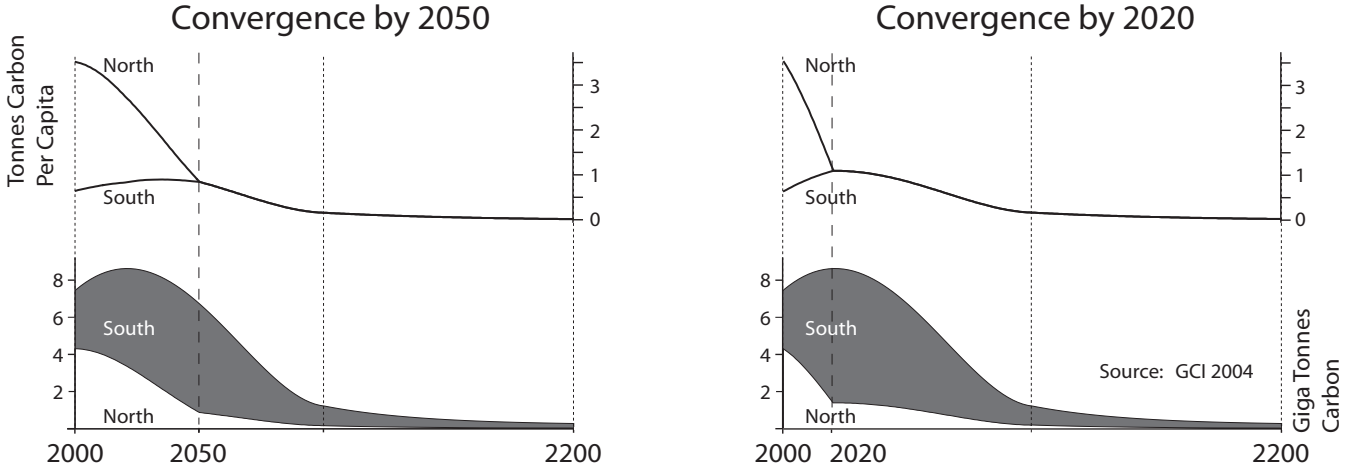
Annual Carbon Emissions contract over time to a sustainable level. This is the "Contraction Event".
The Choice of a "safe" CO2 stabilisation level determines the total tonnage of carbon to be burnt during the contraction event.
Two examples of CO2 stabilisation levels are shown above, with thier coresponding contraction budgets.

1. "Contraction and Convergence" (C&C) is the science-based, global climate-policy framework, proposed to the United Nations since 1990 by the Global Commons Institute (GCI). [1,2,3,4]

2. The objective of safe and stable greenhouse gas concentrations in the atmosphere and the principles of precaution and equity, as already agreed in the "United Nations Framework Convention of Climate Change" (UNFCCC), provide the formal calculating basis of the C&C framework that proposes:

   * A full-term contraction budget for global emissions consistent with stabilising atmospheric concentrations of greenhouse gases (GHGs) at a pre-agreed concentration maximum deemed to be safe, following IPCC WG1 carbon cycle modelling. (See Image Two on page two - GCI sees higher than 450 parts per million by volume [ppmv] CO2 equivalent as 'not-safe').
   * The international sharing of this budget as 'entitlements' results from a negotiable rate of linear convergence to equal shares per person globally by an agreed date within the timeline of the full-term contraction/concentration agreement. (GCI suggests [a] between the years 2020 and 2050, or around a third of the way into a 100 year budget, for example, for convergence to complete (see Image Three on page two) and [b] that a population base-year in the C&C schedule is agreed).
   * Negotiations for this at the UNFCCC should occur principally between regions of the world, leaving negotiations between countries primarily within their respective regions, such as the European Union, the Africa Union, the US, etc. (See Image One on page one).

Negotiating Rates of Convergence



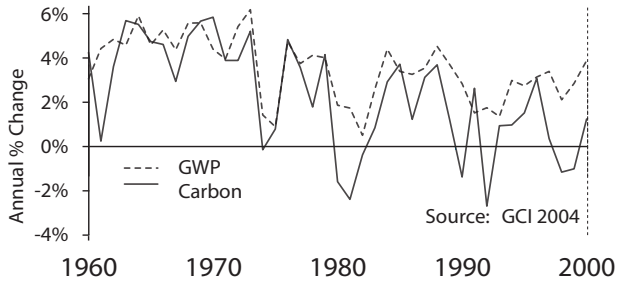
Per capita emissions around the World converge on equality by a negotiated "Convergence Date".
Two examples of convergence are shown here, each within a 450ppmv contraction budget.

* The inter-regional, inter-national and intra-national tradability of these entitlements in an appropriate currency such as International Energy Backed Currency Units [EBCUs - 5] should be encouraged.
* Scientific understanding of the relationship between an emissions-free economy and concentrations develops, so rates of C&C can evolve under periodic revision.

3. Presently, the global community continues to generate dangerous climate change faster than it organises to avoid it. The international diplomatic challenge is to reverse this. The purpose of C&C is to make this possible. It enables scenarios for safe climate to be calculated and shared by negotiation so that policies and measures can be internationally organised at rates that avoid dangerous global climate change.

4. GHG emissions have so far been closely correlated with economic performance (See Image Four Page Three). To date, this growth of economies and emissions has been mostly in the industrialised countries, creating recently a global pattern of increasingly uneconomic expansion and divergence [E&D], environmental imbalance and international insecurity (See Image Four Page Three).

GWP, Carbon Lockstep



Year to year percentage change of Gross World Product, GWP (measured in US$) and Global Carbon emissions

5. The C&C answer to this is full-term and constitutional, rather than short-term and stochastic. It addresses inertial argument about 'historic responsibilities' for rising concentrations recognising this as a development opportunity cost to newly industrialising countries. C&C enables an international pre-distribution of these tradable and therefore valuable future entitlements to emit GHGs to result from a rate of convergence that is deliberately accelerated relative to the global rate of contraction agreed (see Image Three on page two).

6. The UK's Royal Commission on Environmental Pollution [6] and the German Advisory Council on Global Change [7] both make their recommendations to governments in terms of formal C&C. Many individual and institutional statements supporting C&C are now on record. [8, 9] The Africa Group of Nations formally proposed it to the UNFCCC in 1997. [10] It was agreed in principle at COP-3 Kyoto 1997. [11] C&C conforms to the requirements of the Byrd Hagel Resolution of the US Senate of that year [12] and the European Parliament passed a resolution in favour of C&C in 1998. [13]

7. This synthesis of C&C can redress the increasingly dangerous trend imbalances of global climate change. Built on global rights, resource conservation and sustainable systems, a stable C&C system is now needed to guide the economy to a safe and equitable future for all. It builds on the gains and promises of the UN Convention and establishes an approach that is compelling enough to galvanise urgent international support and action, with or without the Kyoto Protocol entering into force.

[1] http://www.gci.org.uk
[2] http://www.gci.org.uk/model/dl.html
[3] http://www.gci.org.uk/images/CC_Demo(pc).exe
[4] http://www.gci.org.uk/images/C&C_Bubbles.pdf
[5] http://www.feasta.org/events/debtconf/sleepwalking.pdf
[6] http://www.rcep.org.uk/pdf/chp4.pdf
[7] http://www.wbgu.de/wbgu_sn2003_engl.pdf
[8] http://www.gci.org.uk/Archive/1989_2004
[9] http://www.gci.org.uk/consolidation/Sasakawa.pdf
[10] http://www.gci.org.uk/papers/zew.pdf [appendix C, page 16]
[11] http://www.gci.org.uk/temp/COP3_Transcript.pdf
[12] http://www.gci.org.uk/briefings/C&C&ByrdHagel.pdf
[13] http://www.gci.org.uk/consolidation/UNFCC&C_A_Brief_History_to1998.pdf [pp 27 - 32]

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The charts on page four are stacked one above the other on the same horizontal time axis [1800 - 2200]. This helps to compare some of what is known about existing rates of system change with an underlying assumption in favour of a C&C arrangement being put in place.

A new feature shown is the rate of economic damages from increasingly 'unnatural disasters' (measured as 'uninsured economic losses' by Munich Re) now rising at 7% per annum, twice the rate of global growth. Another is the devastating and worsening economic asymmetry of "Expansion and Divergence" (E&D). This shows a persistent pattern of increasingly dysfunctional economic growth. One third of population have 94% of global purchasing power and cause 90% of GHG pollution. [We call these 'debitors']. The other two thirds, who live on less than 40% of the average global per capita income, collectively have 6% of global purchasing power and a 10% share of GHG pollution. [We call these 'creditors'].

To escape poverty, it is creditors who embody the greatest impulse for future economic growth and claim on future GHG emissions. But this group also has the greatest vulnerability to damages from climate changes.

Most institutions now acknowledge that atmospheric GHG stabilization, *"inevitably requires Contraction and Convergence".* However, some of the response to C&C, sees it merely as 'an outcome' of continued economic growth with only tentative acknowledgement of the damages and little comprehension of E&D.

While C&C is not primarily about 're'-distribution, it is about a 'pre'-distribution of future tradable and valuable permits to emit GHGs. Its purpose is to resolve the devastating economic and ecological imbalance of climate change. GCI's recommendation to policy-makers at the United Nations is for the adoption of C&C globally for ecological and economic recovery as soon as possible.
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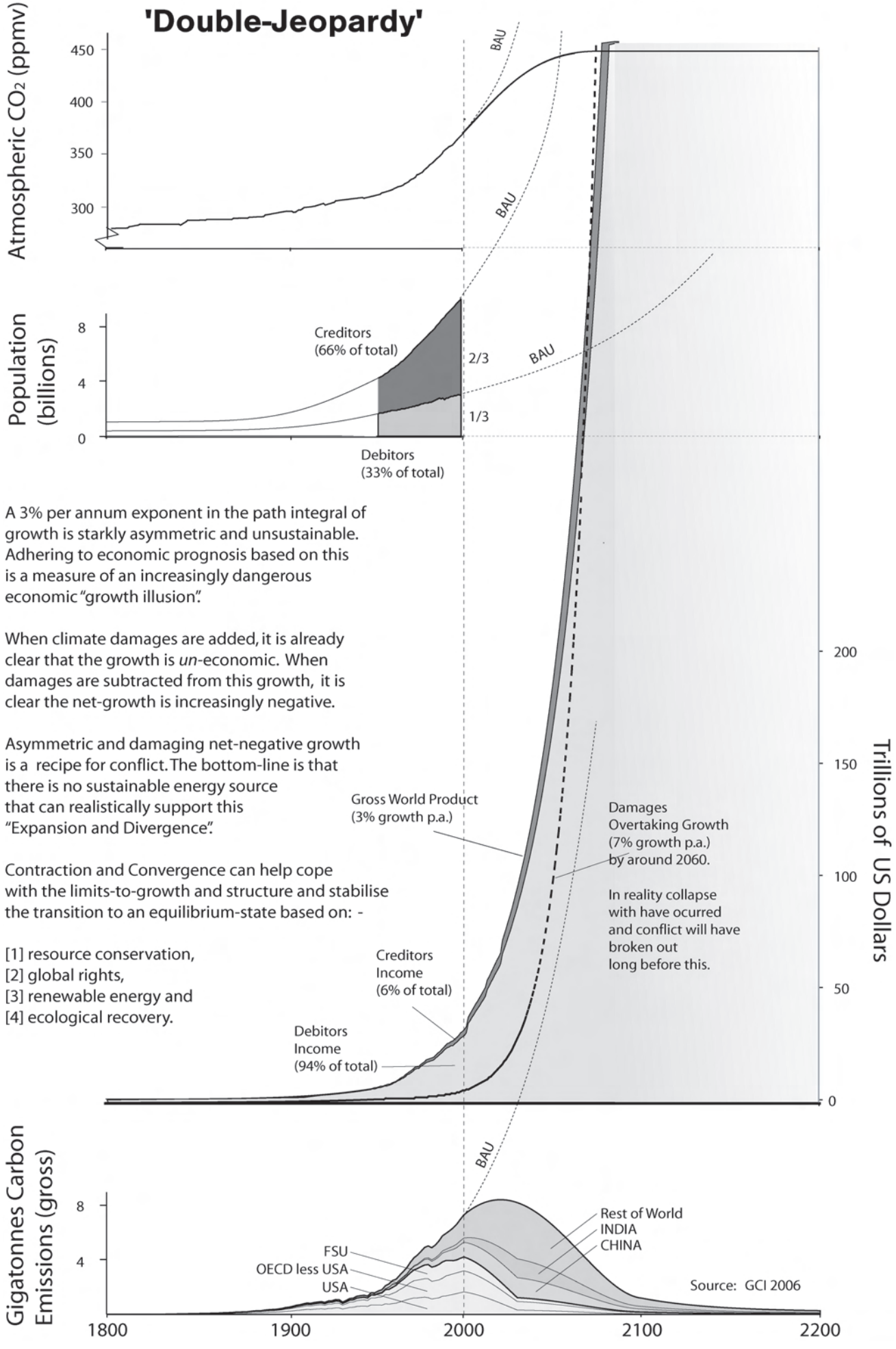
Asymmetric Growth & Climate Damages
'Double-Jeopardy'



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APRIL 17

World Rainforest Movement Penang Manifesto: Call to Action for Forests & their Peoples

1. Forests, both temperate and tropical, are an integral part of the life-support systems of the planet performing numerous ecological and social functions that are essential for the continuation of life, as we know it on earth.

Those functions include; - regulating climate at both regional and global level - providing a habitat for the majority of species on earth - providing a homeland and spiritual basis for millions of forest peoples - maintaining and conserving soils regulating hydrological cycles and ensuring water supplies.

2. The continuing loss of the world's forests now constitutes a global emergency.

In temperate areas, the bulk of primary forests has been destroyed. What remains is being lost to logging and acid rain and other pollutants. In tropical areas, forests are disappearing at a rate of 100 acres a minute or more. Moreover, the rates of destruction are increasing, and, on current trends, little will be left by the year 2040.

3. The immediate and long-term consequences of global deforestation threaten the very survival of life on earth, as we know it. Indeed the scale of deforestation and its impact now represent one of the gravest emergencies ever to face the human race.

Such consequences include: - a loss of biological diversity on an unprecedented scale - the destruction of forest-based societies - increasing floods, droughts, soil-erosion and desertification - the disruption of climatic equilibrium and the acceleration of global warming - an increase of impoverishment and famine among rural populations.

4. Deforestation is the inevitable result of the current social and economic policies being carried out in the name of development.

Such policies and practices include; - plantations both for industrial forestry and for export crops - ranching schemes - dam projects - commercial logging - mining and industry - the dispossession of peasants and indigenous peoples - colonization schemes - roads - pollution - tourism.

5. Official solutions to the problem of deforestation have ignored or played down the fundamental causes of deforestation, and have instead adopted policies that blame the victims of deforestation for their plight, while simultaneously pursuing 'solutions' that can only result in the further degradation of forests and croplands through the promotion of industrialized forestry.

Specifically such policies include; - The Tropical Forestry Action Plan (T-FAP), as promoted by the World Bank, the UN Food and Agriculture Organization (FAO), the UN Development Programme (UNDP) and others - sustainable yield commercial logging, as promoted by the International Timber Trade Agreement (ITTA) - policies to zone the forests - the commercialisation and privatisation of biological diversity, as promoted through the International Biodiversity Programme - pollution control programmes that are directed towards managing specific pollutants rather than reducing the source of pollution.

6. Throughout the world, the victims of these policies are taking action to arrest deforestation and reverse the process of destruction. In Sarawak, Amazonia, the Himalayas, Thailand, the Philippines and elsewhere, people are standing up to protect the forests and their societies. Such people have proved that they are able to use the forests in the only way that is compatible with their preservation. It is they, not corporations, aid agencies or banks, which should be entrusted with designing and implementing the protection and regeneration of the forest wealth of the planet.

7. The victims of the development process, along with those concerned with their fate and the fate of the earth, therefore call upon the United Nations and national governments:

To declare the preservation of the remaining tropical forests of the earth to be a global imperative and to subordinate political and economic considerations to achieving the overriding goal of their preservation . . .

> to restore ecological justice and integrity to humanity by returning to the millions of people who both live in the forests and who depend on it, their right to a sustainable livelihood

- to restore ecological justice and integrity to life on earth through ceasing further forest destruction and regenerating damaged forest lands through the guidance of indigenous peoples, peasants and local communities, planting only the

choice of trees and plants, with the aim of restoring ecological diversity and the survival of indigenous societies - to restrain the over-consumption and wastage of resources by the world's privileged groups through making the necessary changes in life-style and consumption patterns consistent with the development of sustainable livelihoods throughout the globe, in order to satisfy the ecological, spiritual, social and aesthetic needs of people everywhere.

8. Specifically, we call on the United Nations and national governments:

To empower forest peoples and those who depend upon the forests for their livelihood with the responsibility for safeguarding the forests and ensuring their regeneration by; - (a) achieving land security both through revising land-tenure legislation through land reform, as recommended in the Brundtland Report, (b) ensuring forest people have the right to a decisive voice in formulating policies for their areas, (c) correcting social and economic policies based on the assumed cultural superiority of non-forest peoples;

To halt all those practices and projects which would contribute either directly or indirectly to further forest loss. Such projects would include plantation schemes, dams, mining, ranching schemes and industrial projects, commercial logging, Tropical Forestry Action Plan (T-FAP), UN Biodiversity Programme etc.

To revise radically the policies of those agencies that currently finance the projects and practices causing deforestation. Funding for such projects should be ceased and instead directed towards projects that promote the protection and regeneration of forests. The agencies involved include the multi-lateral aid agencies and banks such as the World Bank, the Inter American Development Bank, the Asian Development Bank, the UN Food and Agriculture Organization and the UN Development Programme, the overseas aid agencies of the developed countries and major international cooperation;

To implement a programme for regenerating degraded forest lands and reinvigorating local cultures through the agency and under the direction of forest peoples;

To take immediate steps to curb wastage, misuse and over-consumption of timber products;

To take immediate steps to cut down the consumption of beef imported from tropical forest areas;

To take immediate steps to reduce atmospheric pollution and to eliminate those pollutants responsible for forest die-back at source, both through improved technologies and through changes in current patterns of consumption and also production;

To restructure the present unequal world economic system which is dominated by institutions and policies that favour the developed countries at the expense of the poor of the Third World. This global system at present enables the developed countries to control and use an overwhelming and disproportionately high share of the world's natural resources. A fairer and more equitable economic system is fundamental to any strategy for saving and regenerating the world's forests.

To initiate a global shift towards developing sustainable livelihoods. The basic goals of such a shift would be developing systems of production that are ecologically and socially sustainable. This will require; - reducing the scale at which production is carried out and adopting practices which minimize the impact of production on the environment; - maximizing local self-sufficiency; - assuring that economic activities are subordinated to social and ecological ends.

This is the text of 'The New York Declaration' (delivered 19-9-1989 to the UN). It is effectively the 'Penang Manifesto' or the first step in the preparation of ''A Forest Peoples' Charter'

Supporting Organizations –

ABEN REDES (Nicaragua), Americans for Indian Opportunity (USA), Bank Information Centre (USA), Cultural Survival (USA), Development GAP (USA), Earth Island Institute (USA), ECOROPA, The Ecologist (UK), Environmental Defence Fund, Forest Peoples Support Group (UK) Friends Committee for National Legislation (USA), Friends of the Earth (Brazil), Haribon Foundation (The Philippines), The Indonesian NGO's Network for Forest Conservation— SKEPHI (Indonesia), Japan Tropical Forest Action Network (Japan), Monitor Consortium (USA), National Wildlife Fed.

NOVEMBER 3

Guardian
Last chance to save the rainforests

We delivered the following letter to Mrs. Margaret Thatcher yesterday.

On September 19th a petition entitled "An Emergency Call to Action for the Forests and their Peoples" was presented to UN Secretary General Mr Perez de Cuellar. This campaign was initiated two years ago by ECOROPA and the UK's Ecologist magazine. Three million three hundred thousand supporting signatures collected in the UK, Europe and around the world were delivered to Mr de Cuellar in three wheelbarrows by Ecologist editor Edward Goldsmith and colleagues.

All asked for an emergency meeting of the General Assembly of the UN to draw up an emergency action plan to halt and indeed reverse the continued destruction of the world's tropical rain forests, one of the gravest threats ever to face humankind.

When you spoke to your party conference at Blackpool on October 13th you spoke of global warming and climate change and presented the view that "Britain has taken the lead and will continue to do so."

The Ecologist/ECOROPA campaign (not to mention the work of the Green/Ecology movement over the last 20 years), are examples of how Britain may justifiably claim to be making a contribution to the great imperatives of cultural reappraisal now upon us all.

When you address the UN on November 8th on behalf of all the people of this country, we believe you ought to make it your opportunity to endorse the campaign and join Britain with those countries which have already done so.

Whilst you promote the view that environmental problems are solved through "prosperity-created-technology" - dismissing "a return to some village-life" - this is nonetheless an opportunity for you to endorse the rights, as we all do, of those people around the world to maintain their indigenous way of life without the threat of ruin from intrusive opportunistic development and exploitation. This would clearly go some way to making credible your claim that you really are responsive (to use your own words): -

"to something deeper in us, an innate sense of belonging and sharing life in a world that we have not fully understood."

Aubrey Meyer, Sara Parkin (Int. Liaison Secr. Green Party UK), David Bellamy, Jean Lambert (Speaker Green Party: UK), Edward Goldsmith Agnes Bertrand (ECOROPA Europe), Nicholas Hilldyard (Ecologist Magazine), Jonathan Porritt (Director, Friends of the Earth), Paul Ekins, James O'Connell (Department of Peace Studies, University of Bradford), Dr Mick Kelly, Prof Tim O'Riordan (University of East Anglia), Prof G. A. Cohen (Chichele Professor of Social and Political Theory, All Souls' College, Oxford), Brian Barry (Professor of Political Science, LSE, Latin American Bureau), Stephen Corry (Director General Survival International), Dr Caroline Lucas, Jo Steranka, Nick Anderson (Co-Chairs, The Green Party), Fern Morgan Grenville (ECOROPA UK), Diana Schumacher (Schumacher Society), Liz Hosken (Trustee, Gaia Foundation), Peter de la Cour (Green College), Alexander Goldsmith, Dr Alan Carter (University of London), John Gribben (Writer), Reinhard Buttikofer (MP, West German Green Party),

NOVEMBER 09

Kilburn Times

Green Campaigners deliver letter to PM

Well-known Green campaigners delivered an open letter to the Prime Minister last week urging her to help save the world's rain forests.

The letter was the brainchild of Brent Green Party member Aubrey Meyer. It called on her to use her address to the United Nations next Wednesday to join the worldwide demand for an emergency debate on the fate of the rain forest.

Mr. Meyer explained:

"I wrote the letter to Mrs. Thatcher because we all share great anxieties about the destruction of the rainforests and their peoples and global warming."

"I was just plain livid at Margaret Thatcher's claim that Britain leads the world on environmental matters. It is only due to the slogging of the Greens over the last 20 years that Green issues are on the agenda at all."

He toured Brent collecting signatures for the letter and then persuaded famous environmental campaigners like TV naturalist David Bellamy and Friends of the Earth director Jonathan Porritt to add their names. Several of them joined Mr Meyer to hand over the letter last Thursday and the event was filmed for part of a Channel Four documentary about the rainforest campaign.

NOVEMBER 23

Kilburn Times

Annihilation

You reported our petition to Downing Street on the world's rainforests (November 9th edition).

Speaking to the UN General Assembly on November 8th Mrs. Thatcher rejected worldwide calls for an emergency UN debate, announcing instead UK funding for the World Bank's ineffective Tropical Forestry Action Plan. While admitting the urgency of the problem of deforestation and global warming the Prime Minister ignored the plight of the forest peoples. She argued in favour of a "business-as-usual" approach that has annihilated and displaced millions of forest people, devastated Third World environments, done nothing for developing countries' economies and lined the pockets of big business. Any plan that seeks to conserve the rainforests and their peoples must prohibit industrial logging from untouched forest land.

The import of luxury tropical hardwood by rich countries is immoral. We don't need the wood and we should leave it where it is needed to sustain the living environment and help save the planet from the greenhouse effect.

Why has the UK government refused to support the freeze on greenhouse gas emissions agreed this month in die Netherlands by more than 60 nations and done nothing to restrict the rape of Third World environments by Western industry?

We believe that a solution to deforestation, the destruction of forest peoples and global warming must involve: -

A halt to commercial exploitation of the rainforests;

- Recognition of the landownership and residence rights of forests dwellers;
- Worldwide awareness that the main agents of forest destruction are the multinationals and Third World governments and the World Bank;
- Following the example of West Germany and the Netherlands the rich countries should stop importing tropical timber;
- Strong government action should be taken to cut greenhouse gas emissions by industry and motor vehicles.

We hope that concerned people will write to their MPs. the Prime Minister and the Foreign and Environment Secretaries to express their dissatisfaction with current UK government policy.

Aubrey Meyer

Miles Litvinoff

Brent Green Party

1990

JANUARY

BBC Wildlife
How to tell the green from the camouflage

Guest Editorial Aubrey Meyer

On 8 November, in the course of her famous environmental address to the UN General Assembly, Mrs. Thatcher pledged £100 million to the Tropical-Forestry Action Plan (T-FAP). In the next day's headlines this was characterised as '£100 million to save rainforests', but in fact it was a grand snub to the 3.3 million people who petitioned the United Nations last September for an emergency debate on the deforestation crisis.

T-FAP, an $8 billion programme conceived and promoted by the World Bank and associated UN aid agencies, is ostensibly concerned with ecosystems and the needs of indigenous peoples, and its stated aims are the promotion of agro-forestry, increasing firewood supply, reforesting upland watersheds, conserving forests and increasing the bureaucracy needed for implementation.

But only 8% of the original 1985 budget was allocated for conserving ecosystems. The rest was for industrial use, agro-forestry, bureaucracy, 'land use' and so on. By 1988, 42 of the countries which had drawn up national T-FAPs had refused to make any commitment at all to eco-system preservation, and the use of natural forests by indigenous peoples was virtually ignored. (In Oct. 89, it was reported from Thailand that, because of T-FAP and other factors, up to six million forest-dwellers would have to be 'relocated'.)

The text that states T-FAP's aims is ripe with the concern so often expressed in recent centuries by missionaries and commercial interests - "to improve the lives of local peoples," who, as usual, weren't consulted about whether their lives needed improving. In setting up the action plan, bankers, economic strategists and top government officials met in secret and devised their classic 'top-down' forest management strategy.

The familiar bias obtained. The victims were, in fact, the culprits, who were burning their forests down: deforestation had nothing to do with massive dams, mining, oil extraction, ranching or planting—the local peoples had just taken it into their heads to create Armageddon.

But the forests and their peoples have lived together in harmony since, most probably, Adam left Eden - and certainly well before Jesus threw the money-lenders out of the temple. A lot of the Indians have never heard of money. Now they are blamed and made the victims of sustainable forest development', where agro-forestry, cash-cropping and price-is-right logging are being promoted to co-ordinate human needs', not to mention enabling Third World countries to service their debt repayments.

But now we've started to recognise that everything really is connected to everything else, that the forests and their peoples are intimately connected with the balance of the world's weather systems and the amelioration of global warming.

Before she went to address the General Assembly, Mrs. Thatcher received an open letter to this effect. It was signed by many prominent environmentalists and academics, and it was delivered to her by a delegation comprising Edward Goldsmith of The Ecologist magazine, David Bellamy, Jean Lambert, Koy Thompson of Friends of the Earth, Robin Hanbury Tenison of Survival International and Dr David Clark, Labour spokesman on food, agriculture and rural affairs.

For 15 years, Aubrey Meyer was viola player in various orchestras around the world, ending up as freelance extra in the London Philharmonic Orchestra. His score for the Standard Award-winning ballet Choros has been performed in the UK and the US. Other interests are writing poetry, building furniture and green politics. Occasionally, when really provoked he instigates projects such as the open letter to Downing Street.

The letter, which was also published in full in the Guardian, requested that Britain be included among the countries which, along with 3.3 million (now 3.5 million) petitioners, are calling for an emergency UN debate on deforestation. Instead, she ignored that opportunity, reaffirmed her belief in let-it-be (the future's not ours to see) economics, and actually attacked green philosophy.

Since then, Sir lan Lloyd, a senior Conservative and chairman of the all-party Commons energy committee, has said that the Prime Minister's faith in science to point the way is misplaced. He has indicated the need to prepare public opinion for worst-case environmental scenarios now. Earlier in the year, Sir Crispin Tickell, UK ambassador to the UN, suggested that, within the lifetime of our children, between 60 million and 300 million refugees from environmental disaster zones could be on the move.

The petition, which was launched in The Ecologist in July 1987 and was organised by the pan-European environmental group ECOROPA, was intended as a way of highlighting the extreme danger of the continued destruction of the rainforests and the tragic plight of the indigenous peoples. At first, a million signatures were being sought, but they snow-balled unpredictably to 3.3 million by the time the petition was delivered to Perez de Cuellar, the UN Secretary-general, last September. It calls for land security for forest peoples, a voice for them in policy making, preservation of their rural values, a halt to all projects contribute to loss of forest (including dams, plantations, ranches, mining, logging, industrial projects and T-FAP), funding for forest regeneration, a ban on natural forest timber imports and a curb on misuse and over-consumption of timber products generally.

These and many other suggestions were all designed to subordinate economic interests to social and ecological ones.

The campaign goes on. A charter for the forest peoples is being prepared, and petition signatures are still coming in. In two years we present the plea again. Although it seems to be happening in slow motion, this ecological crisis has inducements such as a T-FAP pushing it forward to disaster.

This planet needs intensive care. To help, please contact ECOROPA-UK, Crickhowell Powys, Wales 18 ITA.

We need millions of signatures and the attention of the world media - all focused on the UN in 1992.

FEBRUARY

Geographical Magazine
The Campaign Continues

By Aubrey Meyer

The present Government has been lauded for pledging £100 million to 'save the rainforests'. In reality however, the Tropical Forestry Action Plan to which the money has been donated has a classic top-down resource management strategy which ignores the real need for land rights for dispossessed and threatened forest dwellers. It chooses to concentrate on the industrialisation of the forests.

This campaign, Save the Forests and their Peoples, was begun in 1987 by the Ecologist magazine and the Pan-European Ecological grouping ECOROPA. Launched in the July 1987 edition of the Ecologist and drawing attention vigorously to the causes and the extent of the deforestation crisis, the call was for An Emergency Meeting of the General Assembly of the United Nations (see Geographical, January 1990). It was sent

out worldwide and accompanied by proposals for appropriate action. The hope was to present a million signatures of support for presentation at the UN.

> Two years later, on 19 September 1989, during which time another 100,000 square kilometres of primary tropical rainforest were destroyed, an almost 'miraculous' 3.3 million signatures were delivered personally to the UN General Secretary Perez de Cuellar in front of the eyes of the world press; the 'Emergency Call to Action for the Forests and their Peoples' had arrived. It was supported by a comprehensive Briefing Document which pointed out that 'the continuing loss of the World's Tropical Rainforests now constitutes a Global Emergency'.

Since that date Austria and Germany have supported the call and Colombia, with an initiative of remarkable vision, has declared an area of its Amazon rainforest territory (larger than the UK - at the current rate approximately a year's worth of destruction) to be protected in perpetuity, granting full land-rights to the indigenous forest-dwellers recognizing them as the true and natural Guardians of the Forests.

Before Mrs Thatcher went to give her 'Green' speech at the UN on 8 November 1989, she received an open letter co-signed by more than 30 prominent environmentalists and academics. It requested that she join Britain with those countries and the 3.3 million petitioners who have called for the emergency debate. With cross-party representation, it was delivered to her by a delegation of Edward Goldsmith (Editor of the Ecologist magazine), David Bellamy, Jean Lambert of the Green party, Koy Thompson (forest campaigner for Friends of the Earth), Robin Hanbury Tenison (Director General of 'Survival International') and Dr David Clark (Labour Shadow Spokesman on Food, Agriculture and Rural Affairs). It was also published in the Guardian with the full list of co-signatories.

Mrs Thatcher did not reply to the letter, but in the course of her speech a few days later, she made plain her understanding of the deforestation crisis by donating UK £100 million to the World Bank's Tropical Forestry Action Plan (T-FAP).

However, the T-FAP has been extensively criticized by environmentalists around the world since its publication in 1987. Although the problems of and surrounding deforestation are intricate, emotive and complex, the reason for this criticism in essence is very simple: the primary orientation of the plan is the industrialization and commercialization of the forests. Whilst recognizing the problems of deforestation as the loss of a resource base, both material and ecological, the architects of T-FAP failed to address the real causes of deforestation, the full extent of the devastation and the global destabilization of the biosphere as a whole. As the Ecologist/ECOROPA briefing document stated somewhat starkly,

‘forests, both temperate and tropical are an integral part of the life-support systems of the planet, performing numerous ecological and social functions that are essential to the continuation of life as we know it on earth’.

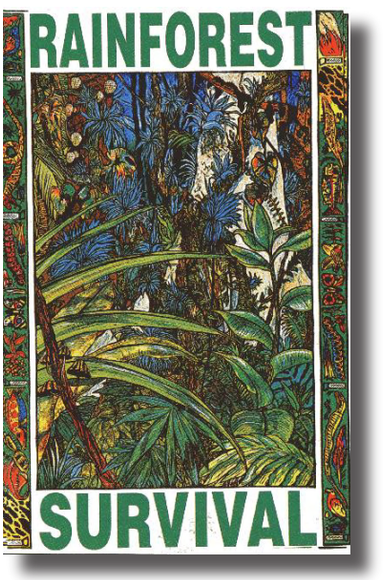
Emphasis was given to the regulation of both local and global climate and the integral role that the forests play in hydrological cycles.

The T-FAP by contrast, ignored this dimension altogether and trivialized the pre-eminent and destructive role played by the massive development projects such as dams, highways, mining operations and plantations, often funded by various development banks including the World Bank itself. They tended rather to shift the blame for the destruction onto the landless farmers, expediently making the victims the culprits. Whilst these victims, often farmers, are indeed amongst the major agents of deforestation, many have been forcibly displaced off their own lands to make way for development.

Under these circumstances they have no choice other than to start again somewhere else, and this is one of the contributing causes to slash and bum. There are other causes directly proceeding from ranching and various forms of cash cropping, not to mention certain ‘sustainable logging’ activities. The International Tropical Timber Organization’s own report on ‘Natural Forest Management for Sustained Timber Production’ concluded that there had been a success rate of .00125 percent. The Queensland Forestry department finally had to abandon all logging in an open recognition of the unsustainability’ of logging practices. However there remains the root-cause of the ‘landlessness’ of displaced peoples. This is what characterizes the Ecologist/ECOROPA proposals and makes the Colombian initiative a mould-breaking precedent. The commercial orientation of T-FAP was perhaps inevitable. Convened by the World Bank, The Food and Agricultural Organization of the UN (FAO), the United Nations Development Programme (UNDP) and the World Resources Institute (WRI), a meeting was held in private in Bellagio, Italy, in 1987 between top officials of these bodies to agree and publish the results of a two-year deliberation aimed at saving the forests. The task-force that prepared the plan consisted of the Head of the largest paper company in the Philippines, a former chief scientist of Britain’s Agriculture Ministry, the President of Canada’s Council of Forest Industries, The World Bank’s Forestry Advisor, a senior forestry official from the US government and advisors on environment and forestry to the governments of Brazil, Malaysia, India and Nepal. T-FAP’s stated ‘key ingredient of active participation by the millions of small farmers and landless

The T-FAP trivialized the destructive role played by massive development projects shifting the blame onto the landless farmers. They made the victims the culprits, peoples who daily

use the forests and trees to meet their needs seemed poorly supported by the composition of the task-force an elite of 'top-down' planners inclined to dismiss grass-roots opposition as 'emotional'. They were certainly vehemently criticized by environmentalists and the grass-roots affected around the world for having devised a strategy which ignored the real need for land rights for the dispossessed and threatened forest dwellers, concentrating instead on the 'industrialization' of the forests themselves. With a contemplated $8 billion to spend, their own figures for budget-allocation are something of a 'self-indictment': 25 percent for 'industrial use'; 30 percent for agro-forestry; 20 percent for 'bureaucracy' with ten percent for ecosystem preservation (1.5 percent in Latin America). They have subsequently talked about promoting the 'conservation and management of samples of ecosystems as reservoirs of species diversity'.



It is not only the extent to which T-FAP planners failed to recognize primary causation and the consequent guarantee of continuity in the forest-destruction process; it is not only their short-term commercial strategizing and the perpetuation of myths such as 'benign' development; it is not even their bias against the opinions, needs and rights of the virtually defenceless, indigenous forest peoples, but especially this supremely arrogant 'specimen-mentality' which almost envisages and may now even tragically presage, the obliteration of the forests and their peoples as a preliminary to the collapse of the life-maintaining systems of global ecology. It is to this plan that Mrs Thatcher has just committed £100 million.

Of course this is alarming. In the more general area of the 'greenhouse-effect' to which the destruction of the rainforests is a major positive contributor - Sir Ian Lloyd (Chair of the all-party Commons energy committee) has indicated the pressing need to 'prepare public opinion for worst-case environmental scenarios'. He suggested the Prime Minister's faith in the incontrovertible evidence of science to point the way is misplaced.

The Ecologist/ECOROPA campaign goes on. The call for an Emergency Debate will continue asking for 'open' discussion of these problems where the views of the grassroots and the NGOs concerned will be heard. The campaign aims to present in excess of 30 million signatures worldwide supporting the call for both natural balance and ecological justice to be re-established in the rainforests, the lives of the peoples who live there, the plans of the development agencies and the hopes of all of us who ultimately depend as much on the survival of the rainforest as do forest dwellers themselves.

The Overseas Development Administration (ODA) replied to the letter on Mrs. Thatcher's behalf, admitting that the T-FAP is flawed and has encouraged forest destruction. Nevertheless, the government's stated aim remains 'the recapitalization of

the world's forests' and the promotion of T-FAP However, at a recent quarterly meeting of the Euro Greens in Brussels, 26 national green parties (including, for the first time, those from Eastern Europe) took a unanimous decision not only to endorse but also to be active in the campaign.

Petition forms are contained in this issue of Geographical. Please respond.

The full text of the Briefing Document which accompanied the petition to the UN is also available from the Ecologist (phone 0258 73476) price £5.00.

The Rainforest Survival poster, is available from Ecotrade at 12, Elbow Cottages, Haughton, Newark on Trent, NG24 3RW.

JUNE 15

Guardian

The league of cruel numbers

Who should be blamed for the greenhouse effect? John Vidal on the growing battle of statistics

THE independent World Resources Institute based in Washington has published a report for the United Nations which sets out what amounts to the first full league table of greenhouse gas emitting nations. It is a significant contribution to the debate about global warming because it is the first time that combined figures for all the three main greenhouse gases haven been compared country by country.

Sponsored by the UN Environment and the UN Development programmes, the report's figures (see chart first column) show that greenhouse warming gases are emitted in almost equal parts by the first and third worlds. Adding carbon dioxide, methane and chloro-fluoro-carbon (CFC) emissions, it lists countries by their volume of emissions based on 1987 figures. Here the US and the USSR come in first and -second place. Brazil, China and India follow ahead of Japan, West Germany, the United Kingdom and other developed nations. Another table, however, has been extrapolated from these figures by environmentalists who argue that the UN figures are biased in favour of the first world because they universalise the blame for greenhouse warming.

Aubrey Meyer, who is lobbying the UN' for an emergency debate on deforestation, has divided the figures by populations to arrive at a per capita league table. (See table, previous page). This finds China and India for example, dropping into 24th and 25th place and the United States in fourth place behind Canada, Ivory Coast and Brazil. The general affect, he says, move first world countries up the league table.

The battle of statistics is politically important because potential solutions to the problem will be argued on the different figures.

Poorer countries say that the west has exported pollution with its technology, and it is up to the rich to pay to clean up the mess made by each of its citizens. Mrs. Thatcher and President Bush, however, have already stated that the arguments should not be based on who is responsible or who should pay, which, in turn has been interpreted as meaning that the West favours schemes whereby countries pick up the burden, according to their emissions - whatever their ability to pay.

Gross Greenhouse Gas Emissions World Resources Institute [1987 data]			Per Capita Greenhouse Gas Emissions WRI and GDP [1987 data]		
Country	GHG [mtc]	% World Total	Country	GHG Per Capita	GDP Per Capita
USA	1,000,000,000	17.6	Canada	4.52	$15,160
USSR	690,000,000	12.0	Ivory Coast	4.15	$740
Brazil	610,000,000	10.5	Brazil	4.13	$2,020
China	380,000,000	6.6	USA	4.06	$18,530
India	230,000,000	3.9	Australia	3.81	$11,100
Japan	220,000,000	3.9	East Germany	3.66	-
West Germany	160,000,000	2.8	Saudi Arabia	3.11	$6,200
UK	150,000,000	2.7	Netherlands	2.92	$11,860
Indonesia	140,000,000	2.4	UK	2.66	$10,420
France	120,000,000	2.1	West Germany	2.65	$14,400
Italy	120,000,000	2.1	USSR	2.38	-
Canada	120,000,000	2.1	Colombia	2.21	$1,240
Mexico	78,000,000	2.4	France	2.16	$12,790
Burma	77,000,000	1.3	Italy	2.09	$10,350
Poland	76,000,000	1.3	Poland	1.98	$1,930
Spain	73,000,000	1.3	Burma	1.92	-
Colombia	69,000,000	1.2	Spain	1.84	$6,010
Thailand	67,000,000	1.2	Japan	1.78	$15,760
Australia	63,000,000	1.1	South Africa	1.31	$1,890
East Germany	62,000,000	1.1	Thailand	1.22	$850
Nigeria	53,000,000	0.9	Mexico	0.89	$1,830
South Africa	47,000,000	0.8	Indonesia	0.78	$450
Ivory Coast	47,000,000	0.8	Nigeria	0.34	$370
Netherlands	43,000,000	0.7	China	0.34	$290
Saudi Arabia	42,000,000	0.7	India	0.28	$300

Meyer says:

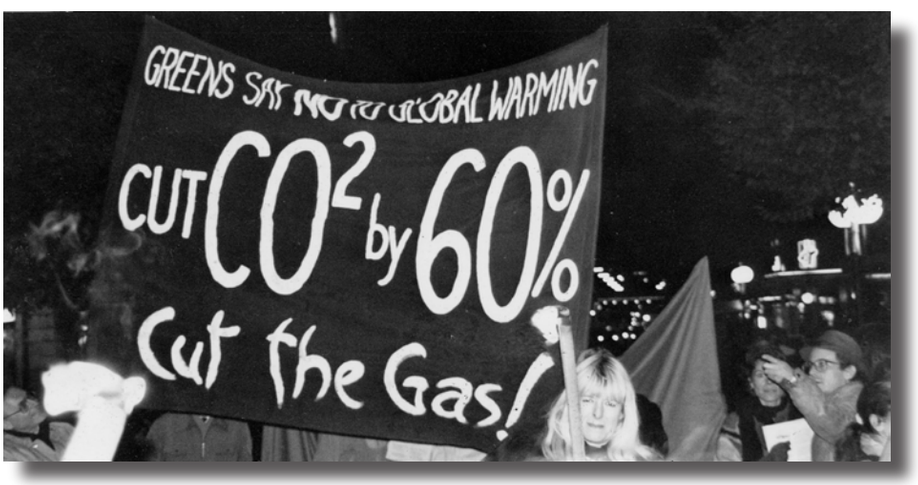
> "When per capita emissions are compared it shows a First World energy consumer generates on average three tonnes of these emissions per annum compared with a Third World consumer who generates 0.7 tonnes per annum.

The UN version is a scurrilous number crunching way of dissociating the issue of culpability. The three tonnes per person in the west compared to 0.7 tonnes in the third world is absolutely fundamental because the bottom line in this crisis is personal responsibility. If per capita GNP for the countries listed is compared (see chart, extreme right) the issue of who should pay for arresting global warming begs the question who is able to afford to cut back on emissions? Clearly the biggest polluters have the biggest GNPs, and lower league countries by comparison have little or no money.

If, as the US and others implied recently, reducing greenhouse emissions is too expensive for them to pay for, clearly addressing the assumptions in favour of the continuous economic growth which created this problem in the first place is an urgently necessary exercise."

A spokesman at the Department of the Environment yesterday said,

"At this stage league tables do not help. There are real anomalies if you look at simple figures. What we are urging people to do is prepare national studies."



NOVEMBER

Green Party UK, Le Parti Ecologiste Suisse, Les Vert & "The Ecologist"

Conference of the Green Party UK, le Parti Ecologiste Suisse, les Verts and "the Ecologist" magazine

Statement to the Second World Climate Conference
Geneva November 1990

The current global ecological disaster needs a reassessment of wealth distribution. The first step on the path to elementary and necessary justice, for everybody's sake, is that all people be considered equal.

We present a table that shows the mean contribution, per country, of each individual to the augmentation of the global greenhouse effect. This contribution includes the direct contribution of CO2 the indirect contribution from forest destruction, the methane and CFC production, converted to equivalent CO2 heating effect.

We are conscious that these numbers do not take into account the net balance view, since the actual contribution of a country to the oxygen production of the ecosystem is not accounted for, but only the degradation of its oxygen producing' capacity through reforestation. Nevertheless these numbers are a co-indication of a real worldwide discrimination against some of the poorer countries.

On the other hand, a new economic order, which would mean equality in wealth for all human beings, implies the stabilization of the population of the countries to their present levels. If not a new injustice would replace the present one.

INTERNATIONAL PER CAPITA GREENHOUSE GAS EMISSIONS

The current global per capita per annum figure for greenhouse gas emissions is 1.28 tonnes per person per annum. Individuals in 2/3rds of the countries listed below are, on average, below this global average figure. If we reduce it by 60 (consistent with the IPPC required target for emission restraint for stabilizing atmospheric concentrations) to 0.512 tonnes per person per annum, still 1/3rd of countries listed on current emissions, are below this revised figure.

[contact GCI for the data referred to above]

1991

MARCH

GCI
Freeloading on Global Warming Benefits

How do local people in Karnataka feel about a First World 'carbon-fix' in the Western Ghats?

(1) - Climate-destabilizing, anthropogenically aggravated global warming due to enhanced CO_2 emissions primarily from the developed countries, is now accepted as fact.

(2) - The so-called 'no-regrets' philosophy is out-of-date. It was based on the orientation that environmental policies that addressed the threat of global warming but which also made good environmental sense locally or regionally, should be pursued with the latter justification only. 'No regrets if global warming fears prove unfounded'

(3) - The Karnataka Western Ghats conservation project has global warming benefits. Its ethos is wholly consistent with carbon-fixing forestry facet of the 'Global Strategic Response' to global warming as articulated by the UK government in its White Paper on the Environment (see box).

"The part that forestry can play in keeping levels of CO2 in the atmosphere down is one of the reasons for Britain's contribution to the international efforts to conserve and regenerate the tropical rainforests. In keeping with its domestic environmental policies, the Government wishes to see a more open and informed discussion of the T-FAP. (Note the Karnataka Western Ghats Forest Conservation project will be subsumed within India's Tropical Forestry Action Plan when she joins the process. This is already in train). "The plan needs to involve local people as well as the highest levels of government in developing countries, and to place increased emphasis on conservation."

UK Gov. Environment White Paper 1990

(4) - Consistent with the policy proposals developed through the Intergovernmental panel on Climate Change, the Joint Ministerial Statement (signed by 127 countries) from the Second World Climate Conference in Geneva (Nov 1990), included an extensive policy proposal on the role of 'enhanced forestry' in 'carbon-fixation' in the context of 'sources and sinks' (see box).

(5) - With reasoning not unrelated to 'no-regrets', ODA asserts that its funds to Karnataka for the Western Ghats conservation project, will be a 'donation' (not a loan, not tied) and that the investment justification for the project is complete on a regional/local cost/benefit analysis only

(6) - They maintain further that there are "no tools to assess global warming benefits and that for this reason global warming benefits are not considered a justification for the project."

(7) - They also concede that there are "methodological problems" in addressing this dimension of environmental auditing.

(8) - Nonetheless the global warming benefits (with or without the audit) are there. It would be disingenuous to suggest otherwise and disingenuous to deny that we in the UK, as comparatively high per capita developed world polluters, are beneficiaries of these global warming mitigating environmental services. We are in the UK ten times - per capita - more responsible for the emissions of greenhouse gases than Indians.

(9) - Considering the controversy over forest-zoning, and that zone two of the project is currently anticipated to cover about half of the forest total area 'by decree', and that zone two will be 'basically a no-go area' for local people who have often, if illegally, pursued subsistence needs in this area, UK promotion of forest conservation in Karnataka (with global benefits), might come to be viewed with mixed feelings by the 'community' whose 'participation' in the project has been declared a sine-qua-non.

(10) - These problems will be exacerbated in the wake of the climate conference where India particularly drew attention to "extravagant per capita emissions in certain parts of the world", and where it also became generally evident that in spite of the rhetoric in the Joint Ministerial Statement, "every time we saw the mention of the main greenhouse gas CO2 the result of fossil fuel consumption, there was no spirit of compromise during the negotiation process with regard to even the mention of the term." This was the on record view of the Head of the delegation from St Lucia, Naresh Singh, in respect of setting targets for CO2 emissions abatement.

(11) - In the face of the IPCC's call for immediate minimum 60 cuts in anthropogenic long-lived greenhouse gas emissions, being met with a response from inter alia the UK (which they repeatedly characterized as "demanding") of "stabilization at current emission levels within fifteen years", the problems of the UK appearing to freeload on 'global warming benefits' become more entrenched.

"Taking into account that the developed world is responsible for about 3/4 of all emissions of greenhouse gases (incl. CO2) . . . we note that the conservation of the world's forests in their role as reservoirs of carbon ... is of considerable importance for

global climatic stability . . . We recognize the need to reduce the rate of deforestation in consonance with the objective of sustained yield development and to enhance the potential of the world's forests through improved management of existing forests and through vigorous programmes of reforestation and afforestation and to support financially the developing countries in this regard through enhanced and well coordinated international co-operation including strengthening the T-FAP and the ITTO."

Second World Climate Conference 'Ministerial Statement' Nov 1990.

(12) - It is probable that the UK government will attract criticism from "local people as well as the highest levels of government" in the "developing country" concerned for placing "an increased emphasis on conservation" of forests in a manner which has such a considerable degree of (unacknowledged) self-interest. (Loosely speaking it seems to qualify as an example of 'tied-aid', tied that is, to the global warming benefits.

(13) - It has for UK domestic consumption, the possibly disingenuous status of being included in the UK portfolio of global warming response activities. The White Paper's response to global warming leads easily to this inference.

(14) - It has been conjectured by an ODA official that Karnataka Forestry Department might have used the issue to bargain more aid money from the ODA (in spite of the official disclaimer regarding the global warming benefits). If this were true, there is a greater likelihood that the monies so raised would have increased the department's benefits ahead of local people's benefits.

(15) - In spite of the "lack of tool to assess global warming benefits", the benefits are unarguably there. In spite of the "methodological problems" in developing environmental economics to the point where this kind of audit can be plausibly carried out, there are pressing reasons - within establishment rationale - to develop these skills rapidly and apply them, and to acknowledge this 'shortcoming' in the interim facilitated by some additional form of compensatory response. This will at least ameliorate a situation in which the image of 'free-loading' is likely to consolidate.

(16) - No less important is the application of the AFOS rationale as expressed in the Sao Paulo Declaration that, "the forest crisis is rooted in the agricultural sector and in the people's need for employment and income. Deforestation will be stopped only when the natural forest is economically more valuable than alternative uses for the same land." The real point is that the forests are obviously pre-eminently valuable "in their role as reservoirs of carbon", never mind the other multifarious values

they embody for environmental services and renewable produce and their uniquely important value as home to millions of forest-dwelling peoples.

(17) - This 'infinite' value is 'real' even if it defies conventional auditing. In the absence of being ascribed a finite value, infinite value should be assumed because it is generally suspected that their total destruction would instigate climate chaos.

(18) - Concurrently if the ODA wish to operate as-is under the global warming disclaimer, then our strategy for ameliorating climate change has to come rely more immediately and much more decisively on an emissions abatement programme domestically and one which is specifically not dependent on the 'multi-lateral only' approach currently advocated by the government. Afterall, the Climate Convention seeking process may fail. Are we then to go down with chimneys belching or is that the moment we start claiming the hitherto unacknowledged global warming benefits of forest conservation in Karnataka afterall. The words of the Sao Paulo Declaration (see box) seem to have a demanding relevance to these issues.

> "Consideration of forestry issues, and of tropical forestry issues in particular, must not distract attention from the central issue of global climate change and the emission of greenhouse gases attributable to the burning of fossil fuels by developed countries.

No agreements on forests and global climate change will be reached, without commitments by developed countries on greenhouse gas emissions. The groups recognized that the conservation of tropical forests is of crucial importance for global climatic stability.

> Although forests can assist in mitigating the effects of atmospheric carbon build-up the problem is essentially a fossil fuel one and must be addressed as such.

In this way, and as a general principle, the final report of the present IPCC workshop on Tropical Forests, while putting tropical forests in the overall context of global warming, should make it clear that the burden of response options is not to be placed on developing countries and thus should state clearly that all countries should make a contribution to the solution of the global warming problem.

The temperate forest die-back (caused by acid-rain) as analogous to tropical deforestation (caused by tropical people's attempts to satisfy basic human needs) could be specifically mentioned in such a context."

Statement from the SAO PAULO workshop, IPCC First Assessment, AFOS Subgroup, Working Group 3 - January 1990

APRIL

GCI

Carbon Fixing First World CO2 in 3rd World Forests, 'Sinks without Trace'

Promoting the conservation of tropical forests has increased relevance now that dangerous human increase of global warming has been accepted as fact. Our carbon dioxide emissions are increasing and forests 'fix' carbon.

The 137 countries present at the Second World Climate Conference in Geneva are now engaged in the awesome task of "strategically responding" to this ultimate pollution issue in the hope of creating a 'Climate Convention' by 1992. Equity and restraint have already been recognized as crucial to this 'global response'; equity between countries of the developed and the developing worlds, and restraint of greenhouse gas emissions, primarily in the developed world, where 3/4 of all such emissions originate.

Inter alia, 'compensatory' (source-sink) measures for global warming abatement have also been noted in the Joint Ministerial Statement from Geneva. "The conservation of the world's forests in their role as reservoirs of carbon, is of considerable importance for global climatic stability." To this end, there is a need "to reduce the rate of deforestation and to enhance the potential of the world's forests through improved management of existing forests and vigorous programmes of reforestation and afforestation."

This, in the words of the UK White Paper on the Environment is, "one of the reasons for Britain's contribution to the international efforts to conserve and regenerate the tropical rainforests. Forests are ' carbon-sinks'. "

Addressing 'equity', India noted "extravagantly high per capita emissions in certain parts of the globe" in response to the Japanese assertion that "increased population growth is the biggest threat to climate stability." And indeed, possibly following the EC admittance of the same, 'per capita' reckoning is now accepted as a method of greenhouse gas emissions auditing in the Joint Ministerial Declaration. The trend revealed in this (see chart) is stark. With very few anomalies, the developed countries have very high levels in comparison with the developing countries, ranging say from an average US/Canada level at 4,06 tonnes per person per annum, to a Solomon Islander at 0.08 tonnes per person per annum, or an Asian average at 0.46 tonnes per person per annum.

The average global figure is 1.28 tonnes per person per annum, which puts 2/3 of countries below the world average. Further, even if we reduce this figure by 60 to 0.512 tonnes per person per annum, (consistent with the IPCC requirements for stabilization of greenhouse gas levels in the atmosphere at present levels), it emerges that still l/3 of countries are left with a margin in which to increase emissions. British individuals currently emitting 2.64 tonnes need to reduce by 4/5 to conform: Indians could nearly double their current per capita emissions and not exceed even the IPCC required revised average level.

Comparing Indian/UK per capita emissions is appropriate considering the 'source-sink' strategy. Britain is poised to foster tropical forest conservation in the Western Gnats of Karnataka state in India starting in 1991. £29 million over 5/6 years will help preserve "a set of environmental resources of world importance."

However, ODA has said, "because there are no economic tools for assessing global-warming benefits (carbon-fixing) and there are methodological problems in developing these, G-V benefits are not considered a justification for the project. What a handy short-coming; we are clearly beneficiaries nonetheless, especially being per capita ten times more responsible for greenhouse gas emissions than individual Indians. If you can't cost it, it doesn't count; sinks without trace. QED.

This threatens the likelihood of success in the convention-seeking process on climate change.

As the IPCC report states; "Consideration of forestry-issues, and tropical forestry issues in particular, must not distract from the central issue of global climate change and the emission of greenhouse gases attributable to the burning of fossil fuels by developed countries. No agreements on forests and global climate change will be reached, without commitments by developed countries on greenhouse gas emissions." As we know Britain's "demanding" commitment to "stabilize at 1990 levels by 2005" is "to do nothing within fifteen years."

It also threatens the kind of good will from the Karnatakan grass roots that project-formulation consultants have now recognized to be the sine-qua-non of successful forest conservation. ODA have been at some pains to develop the innovatory theme of 'community participation' in this project. Concurrently local peoples' fears are riding high because of the likelihood that the funding will strengthen the management hand of their historically somewhat 'sociologically-insensitive' forest department. Earlier in the year the local federation of voluntary organizations actually petitioned Mrs. Thatcher direct to withhold funding for the project. They particularly object to the arbitrary zonation of the forests.

Recently the Development Commissioner - a state government official of considerable influence -intervened, insisting that all project documents had to be shared amongst all affected parties saying that the project implemented "would only be one based on mutually agreeable solutions."

So participants on both sides square up; on the one hand to "the project's environmental objectives (which) cannot be achieved except with the whole-hearted participation of those people whose livelihood derives in whole or in part from the forests," and on the other to, "the short to medium term (where) the environmental and sociological components of the project may be in conflict, (and) there is a considerable danger that measures taken to conserve and protect the forest will be, or will be perceived to be, at the expense at forest-dwellers and forest-users."

As currently defined, the establishment of a 'non-populated' zone two is expected to cover over half the total forest area. This will be balanced (planners feel) by 'Joint Forest Planning and Management' for 'Community Needs' at the forest margins between the Forest Department and the grassroots.

Fact is that a bit of money for "measures to conserve and protect the forests and the planet as sinks for our pollution are and will be perceived to be, at the expense of local forest-dwellers and forest-users," especially in the absence of C02 restraint here at the source of problem. This isn't exactly measure for measure, and this potentially useful project is in danger of being a "free-lunch carbon-fix".

GCI at INC-2 1991

THE NORTH MUST ACKNOWLEDGE AND SETTLE ITS ACCUMULATED CARBON DEBT

Cutting fossil fuel emissions is an ecological and political imperative - not just an option'. Catastrophic climate change can only be averted by emissions restraint.

It is *impossible* - morally, politically, technically and physically - to make developing countries pay the bill for the continuation of unsustainable over-development in the industrialised countries of the North.

The Organisation for Economic Cooperation and Development OECD) now openly advocate a climate policy which violates both the equal rights and the equal survival rights of the huge majority of the world's people who live in developing countries and are not causing the world's climate to change. This is not just dangerously immoral, it is deluded.

The prime example is the United States, which plans to increase its C02 emissions by 15% over the next decade. This is committing the whole world to increased risk of ecological havoc, and to increased tension between nations.

Developing countries have the historical role of insisting that the North puts its own house in order on its own territory. This is the pre-condition of an ecologically sustainable future.

Development cannot be called sustainable unless C02 emissions are restricted to what the civilised biosphere can tolerate.

Consider these well documented facts: -

- Historically, 95 of industrial C02 emissions have come from the North.
- C02 from human activities was responsible for 72 of the global warming set in train during the 1980's.
- Approximately 80 of current C02 emissions comes from the industrial burning of fossil fuel. This takes place overwhelmingly in the North.
- When national industrial emissions are analysed on a per capita basis, it can be seen that only the nations of the North are causing global warming, with the South actually subsidising this behaviour.
- Analysing historically on a per capita basis, the North has already used up all its own emissions "rights" and can only stay in business by appropriating the rights of others.
- By refusing restraint the USA is destroying the fundamental rights of others to survive.
- The IPCC has recently reaffirmed that immediate 60 - 80 cuts in C02 emissions are necessary to stabilise atmospheric C02 concentrations at 1990 levels.
- To compensate for 60 of current industrial C02 emissions through reforestation would require the use of an area two thirds the size of China for a rolling programme of continuous tree-planting. Even this assumes that all converted carbon would remain permanently sequestered.

Reforestation is no kind of a solution to global warming, as was recognised as long ago as January 1990 in the Sao Paulo Declaration on Climate and Forests made by the IPCC/AFOS working group. The declaration clearly states: - "Although forests can assist in mitigating the effects of atmospheric carbon build-up, the problem is essentially a fossil fuel one and must be addressed as such. No agreements on global climate change will be reached without commitments by developing countries on greenhouse gas emissions." The bar chart overleaf confirms this judgement. To produce it the Global Commons Institute has calculated on a per capita adjusted basis, each nation's fossil fuel emissions of C02 and methane expressed as national percentages of global output. This excludes emissions from changes of land-use. The centre line of the graph represents the existing global per capita average of industrial C02 and methane emissions only. Bars to the right show percentages of above average emissions contributed by each nation - the extent of each nation's carbon debit. Bars to the left show corresponding shortfalls contributed by "creditor" nations. We must emphasize that the graph says nothing about ecological sustainability because the positioning of its centre line does not reflect the requirement for a 60 – 80 overall cut in C02 emissions. It merely shows what would be required to rearrange the existing unsustainable patterns of industrial C02 and methane emissions on an equitable basis. It only represents what could be achieved if the Climate Change Convention enshrined overall emissions stabilization at current levels. Without considering historical inequities, these comparisons make clear the magnitude of the debt owed by the North to the South.

JUNE 9TH

Guardian

Cold War of Global Warming

Your front page story (Guardian June 2nd) "UN presses for Nuclear Power" is alarming. It is already very clear that the pro-nuclear powers are preparing to load the IPCC Climate Conference with arguments that favour a switch to nuclear power as the 'solution' to the greenhouse effect crisis. The prominence you afford this is appropriate.

While we are all experiencing an accelerating loss of environmental status quo, those favouring the political status quo are proposing technology that is intractable, uneconomic, unsafe, and also a highly centralising form of power generation in synch with their own political bias behind a façade of 'supra-political' environmental concern.

In her UN speech last November (having just doubled Britain's contribution to the UNEP) Mrs. Thatcher reasserted that nuclear power was the answer to runaway manmade climate change saying it was – despite the attitude of the so-called Greens – the most environmentally safe form of energy.

This is the perception she assimilates from that self-confessed science-junkie champion of nuclear power and author of the Gaia Hypothesis, Jim Lovelock, who is on record as saying that, "in a funny way I value life more than I value human beings." This might be all very well if (Mrs. Thatcher) had the sense to conclude from all of this that valuing life (with or without human beings) is in no way dependent on resuming programmes of environmental roulette with nuclear power.

What about wave power that almost sank without trace after the costings were doctored in Whitehall and Westminster? What about the Brundtland Report conclusion that "generation of nuclear power is only justifiable if there are solid solutions to the presently unsolved problems to which it gives rise?"

We should all be very wary of this dangerous alliance between power hungry politicians and the cult of science and the technological fix as the solution to all human problems. This is gazing at Medusa not Gaia.

Lets be very clear about this – they could only model overall reductions based on switching to nuclear power because of the energy-intensive assumptions that all these theoreticians and planners are transfixed into projecting because of their being captive to the world view of industry, big business and the corrupt anti-people politics which shields them.

This was all too apparent at the ozone conference. I spoke at length to India's Environment Minister, Maneka Ghandi about these concerns after her recent attendance at the this ozone conference.

She told me the Third World had walked behind the West into nuclear power and she needed no reminding about the duress she was going to be under given the way the IPCC's report was handling the greenhouse effect prognosis. She said that,

> "vast amounts of the report are tailored because they say we are only going up two degrees in heat when in Bangalore for instance we are already up three to four degrees and the Maldives are shouting about sinking."
>
> [Maneka Ghandi, Indian Environment Minister]

She accepted that not just nuclear but also thermal and hydropower were uneconomic and obsolete from the moment they were set up and said that, "we have to work on alternatives, nobody has seriously worked on them. Now solar is developing into a decentralised alternative and until you decentralise power you can't possibly achieve anything else."

She specifically confirmed to me that she meant power in both senses saying that, "one will lead to the other." The bottom-line in this environmental crisis is simple.

This is a party-political struggle no matter how much the establishment attempt to depoliticise it. In the end they, neither the right nor the left, want seriously to address the decentralisation of power in both senses precisely because it would be ideological defeat for them and a painful meeting with ecological reality not to mention the loss of a job.

Aubrey Meyer

JUNE 18

Guardian
Climate change; urgent message to the world

SAVE the Forests Save the Planet has drafted this statement to the climate change negotiators whose talks start in Geneva tomorrow: -

"We acknowledge with concern that climate change through human enhanced global warming is a real and growing threat and is caused by the emissions of long-lived greenhouse gases from human activities.

The Intergovernmental Panel on Climate Change advises that to stabilise atmospheric concentrations requires a reduction to less that 40 percent of current levels. On average each person to the world contributes 1.65 metric tonnes of carbon and equivalents (MTCE) each year. 40 per cent of this figure - 0.86 MTCE represents each individual's output threshold for forcing future climate change.

At least 63 per cent of the people in the world produce greenhouse gas emissions at or below this threshold figure, and their emissions contribute only 90 per cent of the non-forcing total. They therefore provide the equivalent of a 10 percent credit, which is taken up by the rest of the world. This inequity is particularly unacceptable at a time when the majority of people are struggling to meet basis human needs.

It is also unacceptable as the forcing emissions total is derived largely from unsustainable, luxury-based activities in countries one of whose governments has still refused even the principle of setting targets for CO2 emissions stabilisation, let alone reduction.

We believe that all people present and future should have rights to life and sustainable livelihoods which are free from the threat and the reality of human induced climate disruption.

We stress that the responsibility for taking corrective action and reducing bad practice lies with those who created and who continue to exacerbate this global crisis.

We demand that their response should be immediate and without prevarication, and should take special action over this issue of social inequity."

Anyone wishing to sign this statement should contact: -

Aubrey Meyer.

Save the Forests

42 Windsor Road, London NW25DS

Marcus Colchester, World R'forest Movement; Chad Dobson, Bank Info Ctr. (Washington); George Marshall, London R'forest Action Group; Paul Ekins; Dr Gill Shepherd, Social Forestry Network (ODI); Ann Clwyd, Shadow Minister, ODA; Penny Kemp; Malcom Harper, UNA; Stephen Bristow, SOS Sahel Int.; Ann Taylor, Shadow Minister, Environment Protection; Jim Berreen, Green Party; Danyal Sattar, New Economics Foundation; Ben Jackson, World Development Movement; Sir Richard Body (Con); Tony Benn (Lab); Richard Holt (Con); Brent Blackwelder, Friends of the Earth USA; Teddy Goldsmith, The Ecologist; Janet Alty (UKGP); Roland Morgan, Planet News; Mike Ferrigan, PO, Green Party; Jane Taylor (GP Cllr.); Niki Kortvelyessey, Tony Cooper (GP); Joe Farman; Paddy Ashdown (Lib Dem) Simon Hughes, Lib. Dem. Environment spokesman; Margaret Ewing, (SNP); lan Flindall (UKGP); Lord Stoddart of Swindon; Baroness Ewert Biggs, Opp. Spokesman for Overseas Development; John Valentine, David FitzPatrick (GP); Wilfried Telkaemper, Vice-President European Parliament; Dafydd Wigley, Dr Dafydd Ellis Thomas, (Plaid Cymru).

Drafted by Jim Berreen & Aubrey Meyer, republished at the Earth Summit in June 1992 with many more signatures.

[See - http://www.gci.org.uk/signon/OrigStatement2.pdf].

In the IPCC and at the UNFCCC, The Statement became the basis for GCI to: -

1. Quantify Ecological Debt 1991/93

2. Rebut Climate Cost/Benefit Analysis 1993/95

3. Establish "Contraction & Convergence" 1995/2002

JULY 23

Guardian

Ecological debt to the Third World

THE "Trinidad Initiative" is hardly an arrangement in need of praise. Even if implemented (as Mrs. Chalker knows), it will reduce overall Third World indebtedness - $1.4 trillion - by no more than one per cent.

Further it takes no account of the ecological debt polluting industrial economies, such as the G7, are running up at the expense of the very survival prospects of literally millions of people worldwide, most of whom live in these "indebted" countries. Mrs. Chalker (Letters July 22) says G7 committing themselves to the principle of greater debt-relief for the poorest countries is "very welcome"; She does not acknowledge G7's commitment to increase pollution, the vulnerability of the poor and our ecological indebtedness to them, or the extent to which we continue to evade this debt.

A month ago and on this page, a statement on climate change was published co-signed by numerous people, which list, now includes representatives of Institutions, eminent scientists and leaders and "front bench" speakers on environment and development from all political parties in Britain.

While the signatories admit the problem of our inequitable and unsustainably high greenhouse gas emissions levels and the urgent need to act, Mrs. Chalker has declined to sign. This statement acknowledges that in respect of human access to the global commons as sinks for the greenhouse gas emissions of us all, people living in the emissions-intensive industrial countries of the North are literally subsidised by the majority of people worldwide whose emissions are so slight as to be within the guidelines to stability advised last year by the Intergovernmental Panel on Climate Change (IPCC).

Disappointingly Mrs. Chalker in a separate reply to me declined this point and focused instead on developing countries limiting their emissions.

Equal rights, (surely part of the "good governance" which Mrs. Chalker advocates?), includes equal rights of access to and benefit from natural global environmental services, such as

atmospheric carbon re-absorption by trees and seas (the so-called 'sink function') not to mention rights to a non-destabilised climate and some kind of a sustainable future.

We are literally ecologically in debt to people whose low levels of emissions do not over-capacitate "sinks" provoking climate change and who provide this shortfall-subsidy to us. While the subsidy makes us unsustainable by definition, it constitutes a form of global welfare payment from the poor to the rich, indeed to those whose governance of emissions is least good and whose living standards increase is least needed.

Moreover, as the beneficiaries of this welfare subsidy, we in G7 have (incredibly) just committed ourselves collectively to a "net increase" to CO2 emissions to spite of the rhetorical commitment "to limit net emissions and achieve an effective framework convention on climate change".

Simultaneously, whilst Mrs. Chalker's ministry says that our conserving Third World forests is to "help them in their efforts to control their emissions of greenhouse gases", the UK Department of the Environment publish estimates stating that to offset CO2 emissions with trees, tropically reafforesting an area 1.5 times the size of the UK would be necessary and that arresting deforestation has the "considerable advantage" (For whom? I ask).

Whilst we do not cut emissions, we do not allow others to cut their trees. Not a good prospect for the sustainable development Utopia so much part of the ODA/DOE G7 apologia for growth.

Our ecological debt is implicit in this and increases everyday we fail over emissions restraint. Delay also hastens the onset of ecological trauma and the "inevitable climate disasters" of which again the National Academy of Sciences warned recently. It increases the extent to which we live at the expense of the already vulnerable, not only depriving their right to thrive, but more and more of their chance to survive. Extending the period of "debt-repayment" is an inverted concept and looks to a future which for many may not exist at all.

Aubrey Meyer

Save the Forests, Save the Planet, London NW25DS.

SEPTEMBER 9

The Independent

Britain's role in climate targets

Sir: Your article "No carbon copies as Brussels seeks energy tax" (5 Sept.) is welcome.

It is sobering to read that, "the EC believes because industrialised nations are the greatest culprits, they have a duty to lead the way". Recognising the serious nature of the climate threat, ministers from 137 countries at the Second World Climate Conference in Geneva last year committed the industrialised nations to just this.

One year on, most industrialised countries are now committed to targets for CO2 emissions restraint. However, the United States (supported only by the UK) is still on track for an at least 15 per cent increase in its CO2 emissions over the next 15 years. It promulgates the "comprehensive approach". This relies on tree planting to fix atmospheric CO2, rather than restraint at source.

Considering the US, with 4 per cent of the world's population, provides 25 per cent of global CO2 emissions and that its projected tree planting will "re-fix" less than 2 per cent of its projected CO2 emissions, UK support for US policy is misguided. Doubtless the EC continues to make this clear to the UK Government,

> -since it is well understood, at least in Europe, that tree-planting and the North's fascination with Third World forest conservation can never be a substitute for the restraint of CO2 emissions at source.

Ultimately carbon taxes will have to be resolved internationally commensurate with the degree of international inequity and the requirements of climate stability. For now the EC has at least made a start. Let's hope their debate generates more light than heat for the planet.

Yours faithfully

AUBREY MEYER

Coordinator, Save the Forests, Save the Planet, London, NW2.

SEPTEMBER

Guardian
Drunken drivers on the road to global warming

YOUR leading article (September, 26) about the green scorecard contained a small but significant error. Catalytic converters on cars actually increase carbon dioxide emissions (petrol litre burned for mile travelled), because they make car engines less fuel efficient. 'Cats' for CO2 restraint is 'score-card-sharping'.

Worse the Government's response to the whole reason for CO2 restraint — global climate change — contains at least four major errors. The first is their inadequate assessment of the enormity of the ecological threat both to Britain and globally. The second is their failure to understand the need for a fair and equitable international response to this threat. The third is their attitude of noncompliance towards the ecological realism which drives the EC's current energy tax proposals. The fourth is the extent to which they have underestimated the growing international outrage over the violation of the global commons -the atmosphere - and the precipitation of climate change by Northern industrial, transport and energy emissions, both current and historical. At the latest round of climate change negotiations just wound up in Nairobi, the message from the overwhelming majority of nations to the real culprits in the North was loud and clear — get your own houses in order before you preach "environmentalism", make the global home uninhabitable and stop trying to pass the buck. The US/UK attempt to shift the blame onto "future emissions" from developing countries is exposed. Northern accumulating emissions alone may be bringing us to the threshold of serious irreversible change as the latest marine evidence of coral bleaching now shows. At the preparatory meeting during August for the United Nations Conference on Environment and Development in June next year, the Head of the Indian delegation summed up our predicament and the imperative we face in a blunt and simple way. For the North there have to be lifestyle changes: reduced consumption and introducing effective public transport for example, obviating the selfish and destructive car-dependency which asphyxiates our cities and dams the planet and its children's future.

We are seen as drunken drivers on the road to global warming, over the limit and under the influence of bad habits of an unsustainable level of consumption.

The government's claim to lead the world in environmental, protection is grotesque and blurred. Rather like an alcoholic joy-rider who says "pass me the bottle", oblivious of who gets hurt. There are those who feel that all this is the beginning of the biggest human rights violation in history. They have the moral high ground and are a majority with key cards to play. The government's green score-card is nothing more than a Joker.

Aubrey Meyer, London NW2

SEPTEMBER

Guardian
The climate of change

PAUL BROWN'S article (£165 billion bill put on cleaner world, September 6) is interesting. He quoted Mr. Derek Osborne, the UK's chief negotiator in the UNCED's '92 (United Nations Conference on Environment and Development) preparations in Geneva as saying:

"We were a little daunted by the vastness of the subject and the problems to be overcome... will the talks of the enormous bill frighten everyone off?"

He could have said, "We are daunted by the scale of the global problem, both human and environmental, and are frightened about the future. However being frightened off with nowhere to go sooner or later makes paying this bill inevitable".

Well, the EC has started and is taking carbon taxation to suppress greenhouse gas emissions seriously. As they have recently said: "The industrialised nations are the greatest culprits. They have a duty to lead the way. Targets for restraint have been set."

In the Liberals' document 'Costing the Earth', they stated, "environmental subsidies are the converse of environmental taxes. While the latter are designed to ensure that the user of the product bears the cost of environmental damage caused, environmental subsidies are designed to ensure users benefit from environmental damage avoided. In relation to greenhouse gas emissions and climate change, this has real fundraising potential. Prominent Liberals, academic and many high profile politicians of all parties, have signed a "climate statement' published on this page in mid June. 'This acknowledges the majority of people on the planet, with their very low per capita emissions, quantifiably subsidise the minority who threaten climate stability. Thus accepting the EC stand for carbon taxation, we begin to see how the £165 billion can be raised annually and the global temperature lowered. In effect, climate "culprits" are taxed and those who provide climate subsidy are compensated in an assessment based on internationally agreed standards.

If, for example, £16.50 were equitably levied for every metric tonne of carbon equivalent (MTCE) for CO_2 and methane emitted in excess of the stabilisation threshold, UN stabilisation fund could collect £165 billion per year from global carbon taxes alone. Thus the US would pay 25 per cent of Mr. Osborne's "big bill" at a stroke (the UK a mere two percent). Perhaps the UK's lonely support for the US "comprehensive approach" to climate change is based on this hidden agenda and encouraging the US in its futile programme of compensatory tree planting is shrewder than I thought.

United Nation's climate change negotiators are just resuming work in Nairobi. If they are serious about wanting the UNCED to go with a bang let's see if the bucks start here.

Aubrey Meyer

OCTOBER 4

Guardian

The global debt that Britain must pay

THE story "Britain trails EC partners and G7 on overseas aid" (Guardian, October 1), notes the Overseas Development Administration's desire to see any "debt-write-off" we extend to developing countries registered as an aid programme credit. This, it was suggested, would give a fairer account of Britain's "miserly" aid programme. And yesterday we read of how "Bonn gets tough on Third World" through its aid programme. Self-interest, conditions and cutbacks is what this is really all about.

Our tinkering with the quantity and quality of northern aid is a blind to reality. It is we in Britain and in the industrialised north generally, who are in debt to the less developed countries elsewhere. Aside from the scandal of there being (in spite of aid) a net transfer of revenue and resources from the south to the north, there is a deeper scandal of how northern lifestyles are appropriating from the most vulnerable their fundamental rights to life and sustainable livelihoods which is destabilising the global commons as we use their emissions rights and warm the world. Nothing reveals this rights-appropriation more clearly than an audit of CO2 and other industrial greenhouse gas emissions.

The starkest assessment yet has come from the California based research group ISEP (Institute for Sustainable Energy Paths) which noted that,

"If the remaining global fossil carbon budget were shared according to a strict person-year equity including historic emissions, industrialised countries would have no emissions rights left at all."

[Institute for Sustainable Energy Paths]

(This would include the "right" to breathe.) Put more simply; it is only because around 3 billion people somewhere over the horizon don't emit CO2 at the average rate of UK or US citizens, that we ourselves don't already experience outright climate force majeure. As all those climate-statement signatories acknowledged on this page (Letters, June 18), and there are now over 100 eminent signatories from all over the world, we are literally subsidised by the less developed countries in our over-access to the global commons, as we over-capacitate the natural "sinks" for greenhouse gases and precipitate global climate change with our massive emissions. The ODA however, has again refused to recognise and address this and pursues instead a "sweet-green" pseudo-alternative to emissions restraint at source in Britain.

While the Government keeps its foot firmly on the GNP accelerator, trying to rev the engines of growth, the ODA tries to keep our exhaust pipe pointed firmly at dwindling southern forests with a conservation programme which is in truth,

unashamedly for our benefit. It is this cock-eyed polluters' piggy-back arrangement which causes countries like Malaysia to walk out of the current UN negotiations for UNCED (our so-called last best chance to save the earth).

Trying to save our lifestyles by saving others' sovereign forests is the "cheap date" that won't wash. It is insulting and postpones the imperative of equitable emissions restraint at source. This is the national and global imperative the Government refuses realistically to tackle. Earlier this year the House of Commons Select Environment Committee made an express recommendation that the industrialised countries should be seen to be playing a full part in curbing emissions of greenhouse gases,

"and do not give the appearance that they are anxious to preserve the rainforests merely in order to lessen the impact of their own carbon dioxide emissions. The White Paper expresses hopes for the successful negotiation of a Convention on the control of emissions... such a Convention is crucial if the greenhouse effect is to be moderated."

The Government, avoiding the advice completely, replied:

"The Convention must attract the support of as many and as wide a spread of countries as possible, and the Government believes that this will best be accomplished by ensuring the Convention contains the commitment by all countries to devise national strategies to limit greenhouse gas emissions and protect and enhance sinks, particularly forests. The Government has stated that, if other countries take similar action, the UK is prepared to return its emissions of C02 to 1990 levels by 2005."

Well QED for the global upstairs/downstairs. In the view of many, it is we who used up our and others' rights running up this global environmental debt as we developed our industries. Now is the time for recompense; real response time is running out. Where committees recommend, let us demand that the Government desists from procrastination.

Lynda Chalker has said the "good governance" requirements of our aid programme are "not conditionality but common sense". But where is the good governance of our emissions? Moreover, "if other countries take similar action" is conditionality.

Characterising our aid programme as miserly misses the point. It is the overseas aid that we receive that is generous to the point of insanity. The ODA was right about one thing, "we need a change in the calculations". Let's cut the gas, recognise the debt and settle for global fairness along with "commons sense". If only for all our children's sake, we don't have the right to do otherwise.

Aubrey Meyer

42 Windsor Road, London NW2

OCTOBER 21

Guardian

The liberty agenda and the right to survive

THE Commonwealth Conference in Harare is a fine forum for addressing human rights. John Major's rush to champion this cause in that forum (Guardian, October 16) scatters fearful angels, leaving some devilish double standards and awkward "linkages". Some, as yet indigestible to the UK government, go way beyond "aid and good governance".

Global warming and climate change, the result of dangerously extended and unsustainable energy policies in the industrialised countries of the' North, are (sadly) the onset of the biggest human rights violation in history. Many of the countries in the frontline of adverse impacts of climate change are in the Commonwealth. Bangladesh for example will be further devastated by floods, storms and future sea-level rise, not to mention Tuvalu, Vanuatu, Kiribati, St Lucia and many other small island states. Desertification and general eco-system stress in Africa can only accelerate. Many of our Commonwealth partners are there. It is deplorable that our government has, in the middle of the "tidal wave of human rights sweeping the world", remained indifferent to linking equal human rights to climate change.

The sense of "rights" usually arises after rights have been violated or taken away (I didn't know I had a right to a stable climate until I discovered that someone was destabilising the climate and taking that right away).

The trick is, if you don't let people know you're compromising their rights until it's too late, the odds are the victim has to adapt.

It is therefore in no sense foolish of Mr Major to raise the issue of equal human rights. In fact it is laudable. The foolish bit is the pre-emptive substitution of their rights to climate at the behest of providence with imposed climate change at the behest of unaccountable, industrial technocracy. It's a little galling when the apostles of this elite, (offering aid linked to human rights, democracy and good governance), are the ones responsible for this rights appropriation. As Mr Major knows, we have the intractable problem of our own massive and still unrestrained green house gas emissions and serious augury of a faltering future.

Do we not all have fundamental rights to the common wealth of the non-destabilised global commons — the right to survive — ahead of any other right? Did not the Institute for Public Policy Research state (Letters, September 20),

"rights cannot be absolute where the enjoyment of a right infringes another person's fundamental right?"

The Western lifestyle, with high resource-use and energy-impact, is not the standard to which all people globally aspire.

> No amount of development exuberance and technology-chauvinism overrides the fundamental rights of literally billions of people (in fact all of us if we but knew it) to lives free of the threat and the reality of human-induced climate disruption.
>
> There is a clear majority of people on the planet whose lives and lifestyles do not inflict destabilising impacts on the general health and common wealth of the planetary ecosystem and the equilibrium of the global commons.

They do not precipitate force majeure. Blackened pots from northern pulpits who do, will doubtless bring southern kettles to the boil if we try to negotiate another round of double standards (a little linkage here, a little less linkage there) and to run a two-tier world.

> Mr Major is right to make equal human rights the big issue. It would be a class (and sensible) act for a classless global community, where the rich did not commit suicide by robbing the poor.

It would repudiate the global apartheid implicit in the American go-it-alone nonsense. Mr Major is fortunate to have this opportunity.

He is in the company of Nelson Mandela in Harare. May he be inspired by the recent words of the latter:

"the ANC sees the preservation and the rehabilitation of the environment as part of our liberation struggle. That is why what are called third generation rights — or more popularly Green rights — are included in our proposed Bill of Rights. Like all other human rights, they are inalienable."

There's your liberty agenda.

Aubrey Meyer

42 Windsor Road, London NW2

1991

Rev Peter A Indalo
Programme Director, Oyani Christian Rural Services, Kenya.

"We formally request a copy of your publication "Equity and Survival - Climate Change, Population and the Paradox of Growth." This document is vital to this agency as a resource material on our awareness education on climate change and population growth - matters which globally affect mankind. Please will you inform us on all your priority areas and provide any relevant documentation. May God bless you in your service to his people."

1992

FEBRUARY 10

Guardian
Emissions impossible

IT is easy to agree with the indignation in Tom Drinkwater's letter (February 6) about the "greed" of G7 and the lack of realism in their economic policies.

But on the crucial issue — Northern energy emissions in relation to Southern forests — he inadvertently reinforces the most dangerous stereotype.

Tropical forests cannot now or ever, "soak up the CO2 which the G7 countries spew out." If current Northern energy emissions were to be offset in the manner suggested, it would require permanent wall-to-wall reforesting of an area twice the size of greater Europe.

The prime concern of us all should be one simple thing, how to face the inevitable need to cut these energy emissions to non-threatening levels at source without delay. As the continuing ozone story makes clear, there are unpleasant surprises ahead.

Aubrey Meyer, Global Commons Institute

MARCH 2

Guardian
Kamikaze growth economy

YOU REPORT transnational corporations (TNCs) as opposing carbon taxation, one of the EC's intended global warming management measures (Environment Guardian, March 20).

The Conservative manifesto announces its intention to merge the UK Department of Energy into the Department of Trade and Industry. This is adroit. It diminishes UK Government strategy for emissions restraint and pushes responsibility towards those who (by definition) are most anti-restraint and most pro-growth, the TNCs.

TNCs threaten to decamp to the Third World according to "the polluter finds some other sucker to pay" principle.

The EC admits that the measures to arrest greenhouse emissions so far contemplated are inadequate. The chairman of the Intergovernmental Panel on Climate Change has recently affirmed to UN climate change negotiations, that the OECD

measures for reducing the increase in the rate of emissions are inadequate. GCI calculates if we burn more that 20 per cent of known fossil fuel reserves, we're beyond thresholds of global ecological safety. Now we have DTI to the rescue!

To our disgrace, this general election has not been notable for its concern with this issue. But as we pass the planetary sell-by date, let's spare a thought for those who will really pay the bill for our kamikaze "growth" economics— the planet's presently voteless children.

As the poet Louis MacNeice wrote years ago,

"I am not yet born - oh hear me."

Aubrey Meyer

Global Commons Institute, 42 Windsor Road, London NW2

MARCH 9

Guardian

Obscure view of the global crisis from our political penthouse

POPULATION growth is not the primary threat to our global environment (Letters, March 2). It is pollution.

If the present world population were all to take up residence in the United States, the US would experience a population density similar to the Netherlands.

> If however we all started emitting greenhouse gases at the current per capita rate of US citizens, the global output of the gases would occur at seven times the current rate. The entropic consequences of such an impact would amount to the end of life on this planet as we know it.
>
> Conversely, if everyone alive emitted no more greenhouse gas than the average Chinese individual, we would (according to Inter-governmental Panel on Climate Change criteria) actually reduce atmospheric concentrations below current levels.

Northern governments and institutions such as NASA and the Royal Society fudge this issue. The WHO completely ignores it.

When are we (in our political penthouse) going to admit the primary threat of our unsustainable levels of consumption and pollution, instead of blaming our economic victims for the pollution of their poverty?

Aubrey Meyer.

Director, Global Commons Institute.

MARCH 20

Times
Letter to the editor

Sir, The Department of Trade and Industry may now become the new home of the Department of Energy. Energy efficiency will go to the Department of the Environment. This is a Conservative election pledge. The restraint of greenhouse gas emissions in the UK will therefore largely become the DTI's concern and when EC energy ministers and environment ministers meet to discuss EC strategy for emissions restraint, the UK will presumably be sending a trade and industry minister instead of an energy minister.

At the last such meeting in December, ministers conceded that the EC's contemplated measures (including the proposed energy tax) were inadequate. The Conservatives' scheme will hardly help.

DTI might legitimately be called the 'Department of Economic Growth,' with a brief directly in conflict with emissions restraint. It is this conflict of interests which is at the heart of the global warming crisis. Global climate change is merely a symptom of economic growth via energy conversion and the consequent carbon dioxide emissions, and to give the energy brief to the DTI is to compound the problem, not to cure it. Do we believe that industry "self-regulation", aided by a possible energy tax, will produce effective emissions restraint?

In February, while the Intergovernmental Panel on Climate Change (IPCC) advised deadlocked UN climate-change negotiators that "more far-reaching efforts are required than are currently contemplated (within the OECD) in order to achieve a major reduction of the rate of carbon dioxide increase in the atmosphere", European multinational companies were threatening to decamp to the Third World to escape the EC's energy tax.

It is widely recognised world wide that the onus of creating strategy for emissions restraint — essentially a global strategy for equity and survival — now lies with the OECD.

If this government is sincere in its commitment to the IPCC findings they could do worse than move the Department of Energy en bloc to the Department of Environment, while the DTI should be subject to the requirements of a DoE committed to those findings. This should be an election issue.

Aubrey Meyer

Global Commons Institute

APRIL 9

Guardian
Green card

SO the IMF forecasts a "comfortable" 3.2 per cent growth in the industrialised economies next year. This inevitably means a rise in the emissions of carbon to the atmosphere. There is a close correspondence between economic growth and emissions growth for the three decades past.

> Any politician in this election who says that "recovery" is based on boosting economic growth is really saying that CO2 emissions must increase. This sort of recovery therefore, is based on changing global climate in a way which decreases the survival prospects of us all. "Famine" victims in the Horn of Africa are just one of the appalling early signals of this.

That this issue has not been discussed at this time, is evidence of the insanity of those who would lead us.

This election is supposed to be about increasing "choice".

However, all our prospects are diminishing every moment we continue to evade this issue.

Aubrey Meyer

Dr. John Gribben, Dr. Wilfried Bach, Jim Berreen, Dr. Hari Sharan, Danyal Sattar, Dr. Julian E Salt, Sara Parkin, Gustav Grob

APRIL 21

Guardian
Royal hoot on the oily road to Rio

TODAY the Brundtland Commission — or the World Commission on Environment and Development — starts a four day session in London. Prince Charles has been invited to make the opening keynote address. The "population explosion" is his theme. Considering the commission hopes to remove obstacles to success at the UN Conference on Environment and Development (UNCED), this keynote contribution is likely to prove explosive too. Industrial destabilisation of the biosphere is the environment/development issue.

Mutually equal survival rights is the global political issue. The commission might as well go home if these are not central to their concerns.

It is all very well to say that no country can prosper while its population growth outstrips its economic expansion. This is the kind of knob-twiddling insight characteristic of our discredited Overseas Development Agency. Last year (in "Children by Choice and not by Chance") they published the

following. "Countries whose governments establish a climate within which couples can exercise reproductive choice should eventually attain population growth rates that are in balance with their economic and natural resources." It is we who stand condemned with these arguments far more than the Third World. With our insatiable boutique culture, we consume finite resources at rates hundreds of times in excess of people in developing countries. This inevitably diminishes the access of others. "More is best (but less for the rest)" is the reality we ideologize with open-ended economic growth. And now this "wealth-creation" has spawned the smug samaritanship of "poverty alleviation" (for those "less fortunate than ourselves") and environmental salvation to boot. When is the penny going to drop? The boot is on the other foot. "First World feast equals Third World famine" is the reality already. What for example do we think is causing the unprecedented drought and famine in sub-Saharan Africa?

Contributors to the Brundtland Commission should address one issue ahead of all others: the global climate-altering pollution consequences of fossil fuel-driven economic growth.

This occurs principally in the North and at the expense of billions of present and future people, principally in developing countries. This is the most drastically threatening part of our future scenario. This is our legacy to the unborn as well as those who struggle to stay alive already.

Global domestic product and industrial CO2 output go up and down together like Antony and Cleopatra. To achieve positive economic growth and negative emissions growth — ie. to decouple the economy from the energy sector which sustains it — is alchemy.

However much we approach the thermodynamic limit of production efficiency — a worthwhile effort as far as it goes — the inexorable conclusion is that still we have to use resources less and those which we do use renewably.

Then, moreover, there is the equal challenge of how we are going to have to do this fairly. This is at the heart of the UNCED agenda. Global rights and equity are the portals to sustainability and survival. People in the South don't want lectures from us about population growth. They don't want chicken egg conditionality from Northern know-alls either ("we'll do x dependent on others playing their part"— Mr Major's line). The horse is reduced consumption in the North: the cart of salvation awaits this to roll. For the moment the oily road to Rio runs through Riyadh, rolling us all to ruin. By raising population growth at this moment, Charles merely hoots from his car as the same old bandwagon passes the same old buck.

Aubrey Meyer

Global Commons Institute

APRIL 24

Guardian

Scapegoats of the Third World

REPORTING of Prince Charles' speech shows how promptly our establishment climb onto the scapegoat bandwagon.

This is the imperious closing of ranks in advance of the UN Conference in June. If we can sufficiently pull rank on the Third World and denigrate them and their population over the next five weeks, the now almost inevitable fiasco at UNCED will be much easier to explain here in terms of Third World "unreasonableness".

Prince Charles did raise the issue, but most of his speech was devoted to other things. He and Mrs. Brundtland drew attention to profligate Northern resource consumption. He specifically confirmed his agreement with the GCI proposition that excessive energy consumption and emissions growth in the North is the overriding issue on the UNCED agenda.

Population growth in the developing countries is a function of industrial growth in the developed countries. As we in the North vacuum up resources from all over the world, we simultaneously destroy the integrity of their local social structures. The consequence of this is the distortion of the balance of people to resources. Having more children becomes a rational response to overcoming the energy deficit consequent on local resource depletion. Comparatively, within the North, there is only the illusion of sustainability. Our high resource-to-people ratio is only possible based on our massive absorption of resources from abroad. Present accounting does not acknowledge diminution of ecological space and stability globally consequent on this depletion and pollution feed-back. When Prince Charles re-uttered the South's cry for justice, he was acknowledging this.

> The so-called "poor" are not asking for charity, they are claiming mutually equal survival rights.

If in the North 'we want to survive too, we have no choice but to heed this call and cut back on consumption.

Strangely, ranks of males crowed their population-growth expertise in subsequent TV interviews. "Give these women jobs and condoms," they said.

Says a lot, really. They seemed not to realise that we haven't earned the right to criticise developing countries or their women. Especially not when we are so compliantly captive to the ritual ignorance (not-to-mention the unwanted emissions) of White House America.

Anandi Sharan, Aubrey Meyer

Global Commons Institute, London NW2

MAY 11

Guardian

Arms cuts to defend the planet

THE UK's environment minister has just "negotiated" a form of environmental opt-out for the US government with respect to the restraint of greenhouse gas emissions. Michael Howard's new text (if ratified at Rio) will allow the US to fulfil its intention to increase its greenhouse gas emissions. It means the US has neither the means nor the intention to pay its environmental debt.

While the Organisation of Economic Co-operation and Development states that,

"the market itself cannot internalise environmental costs", our government has said, "only business and industry can deliver environmental improvements".

Unsurprisingly, we find business and industry in Europe united against the EC's proposals for restraining carbon emissions correctly claiming that it puts them at comparative disadvantage with the US. Further, we find that the insurance market will not cover against damage through global climate change.

Consequently the environmental costs incurred by the industrialised North and pre-eminently the US, are being substantially externalised on to frequently innocent third parties in the Third World as they (indeed we all) incur the opportunity costs of adverse climate changes.

The US delegate to the current climate negotiations declares that his government won't make any adjustment which compromises the US position as a major economic power. Where they had previously stated that they regarded any external attempt to modify their energy policy as an infringement of their national sovereignty, we find this has now been weirdly redeployed as the principle of "consumer sovereignty," where "we don't tell people what they can and can't buy." What this really means is "can't pay, won't pay". More precisely, it is theft. Mr Howard's text makes the UK party to this theft- Southern governments will not take this lightly.

In the new era of global environmental security, the global family squabble at their peril. All victories will be pyrrhic.

You cannot externalise the interests of 80 per cent of the world's population with impunity.

For the US to give this kind of geriatric leadership at this time is direct evidence of moral and financial bankruptcy. More importantly, it is evidence of the fatal ideological contamination called "me first or me only". As Rio will show, this puts our world in peril from both political and ecological disequilibrium. We really are faced with "all or nothing".

Europe-wide anti-global warming activities are taking place on May 15 (ring 081-806 1561 for details).

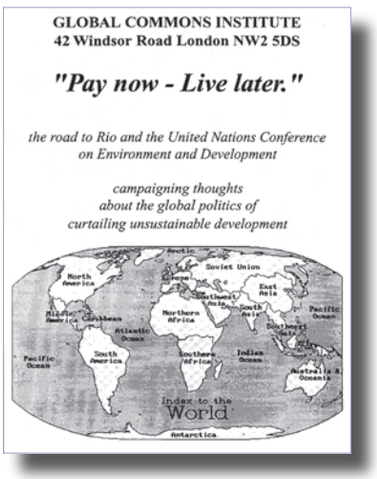
Aubrey Meyer, Global Commons Institute

Nick Hildyard, The Ecologist

JUNE 1992

GCI
Pay Now – Live Later – the Road to Rio and the UNCED

An Early Compilation of Materials Relating to Contraction and Convergence



JUNE

The Centre For Our Common Future and the IFC
A Package Marked, 'Return to Sender'.

Some Problems with the Climate Convention

Aubrey Meyer and Jim Berreen of GCI

ED. This month Northern experts review the Conventions signed at UNCED.

June was the month when the world was due to be set straight at the United Nations Conference on Environment and Development (UNCED) in Rio de Janeiro. Against all the odds, UNCED's Canadian Secretary-General, Maurice Strong, had cajoled and persuaded the world that the time for a change was now and that they should sign up for global conventions and an agenda that would allow civilization to survive into the first half of next century.

The brightest jewel in the Summit's crown was to be a convention on climate which recognises the problem of human-induced climate change and seeks to reduce the causes and mitigate the consequences of the climate change which is now inevitable.

So, after years of debate, the most up-to-date scientific and technical advice, and thousands of hours of negotiation on the words to be used, how did the world's diplomats, international lawyers and politicians make out?

Having listened and contributed to much of the debate, and reading the text of the convention, the Global Commons Institute (GCI) finds them sadly wanting.

The convention represents some sound ideas, but no action.

The immense pressure from the developed countries to continue this uncontrolled and possibly uncontrollable experiment with the atmosphere and the climate has doomed the most vulnerable states like Tuvalu and Kiribati to disaster.

It has also ensured that much of drought-stricken Africa will suffer on a permanent and unethical basis.

As a showpiece, the convention is tawdry and as an exercise in global responsibility, the negotiation has been a near disaster. The convention acknowledges that the excess production of greenhouse gases is likely to cause deleterious changes in climate. Moreover it recognises that the developed countries, bearing the major ecological responsibility for climate change (see chart on this page), have to take immediate action. It also recognises in passing the needs of the most vulnerable states.

Having affirmed that climate protection is its aim, the convention then defines a precise objective of limiting greenhouse gas emissions to levels which do not imperil the climate and which will allow natural recovery in those systems already affected.

But then comes the real rub. All the above is subject to the convention's demand for sustained economic growth and development.

By the very nature of the physical world we live in, these will require that more energy be produced, that more products be made and, ultimately, that more greenhouse gases be released.

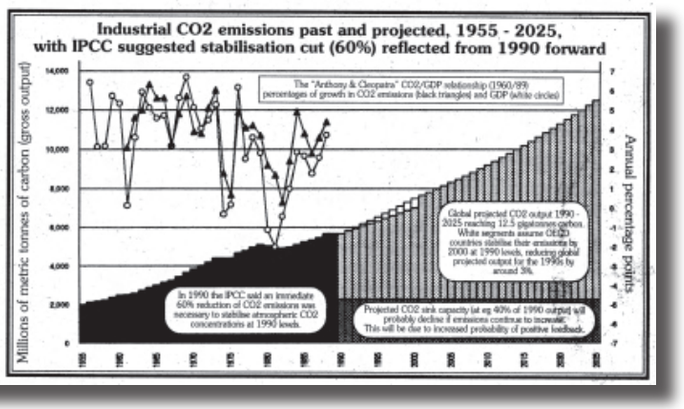
The relationship between CO2 and GDP for the past thirty years and the CO2 emissions trend which unfettered economic growth will provoke). The convention also insists that no measures for climate protection should be allowed to impinge "unjustifiably" on free and open international trade —hardly a word to put international lawyers and GATT negotiators out of business.

The core proposals do not involve anything but an unspecified statement that excess greenhouse gas emissions are a bad thing. It also notes that something may be done about these emissions as long as the oil habits of the US, the UK and other producers (notwithstanding their now wilful destabilisation of the world's climate) are not disturbed.

In odd moments of poignant good intent, the convention acknowledges the needs of the most vulnerable states, but its response to this situation is totally inadequate given the real circumstances of those states. The financial assistance and technological transfer that is referred to is unspecified.

A Climate Change Convention which is "... promoting strong and sustainable economic growth" without radical decoupling of the CO2/GDP relationship and an equitable settlement of the historical ecological debt, is a convention for changing the climate.

Global Commons Institute



The mechanisms for financial management are vaguely left to "established" institutions, such as the GEF, operating under the aegis of the "Conference of the Parties" which, will seek to effect the convention and its aspirations. The original ideas from the G-77 group of developing countries and the Association of Small Island States (AOSIS) for some kind of deal on insurance and reparation for ecological and infrastructural damage resulting from anthropogenic climate change have been eliminated from the discussion.

All that is mentioned is the needs of the most vulnerable to adapt to changing climatic conditions. How is it that the world's senior intergovernmental negotiators have failed to comprehend that small island states such as Tuvalu, Kiribati and many of the world's low-lying islands will have become uninhabitable long before the rising tides and storm surges resulting from climate change and global warming will physically wash them out of existence?

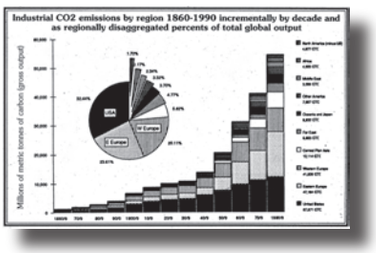
Is it simply that the real cost of reparation for the damage set in train is more than decision-makers in the OECD can afford to admit, now or ever? With early evidence of climate change becoming manifest around the world as increasing storm frequency and severity, advancing coastal erosion, changing wind and weather patterns and widespread continental drought, perhaps the developed countries have decided just to brazen it out while "recognising the needs of the most vulnerable".

Genocide by yet another act of awareness.

So what is needed? Professor Bert Bolin of the Inter-governmental Panel on Climate Change (IPCC) was in little doubt when he presented his report to the 5th negotiating session for the climate convention (INC5): Much more emissions reduction is needed within the terms of the convention. This was not a political demand, it was a rational response to an ultimatum from the laws of nature.

According to the IPCC, we need at least a 60% reduction in carbon emissions just to hold the 1990 elevated levels of CO2 concentrations in the atmosphere (see chart this page).

It is clear that the OECD countries and the petrochemical interests that drive their policies have no intention of reducing, let alone stopping, the damage they cause to the world's climate, regardless of its potentially devastating impact on civilization.



Apparently, the board rooms have decided that the most vulnerable states have no long-term future. Unfortunately, brave words of recognition of another's plight and the complete loss of sovereign interests are of no value in an open market.

The first and vital pragmatic step in addressing these issues of global equity and survival must be to institute a reduced dependence on fossil fuels.

But, with the connivance of the UK, the US and its Saudi clients, this seems completely blocked. Instead, driven by the new and deluded realpolitik of "polluter sovereignty", climate change negotiators created a package defending vested interests.

It is faintly addressed to gathering uncertainties and it has a slight wrapping of compassion. Nevertheless, common sense, if not our changing climate, will one day bring it home - marked: "return to sender".

Jim Berreen

Aubrey Meyer

Global Commons Institute (GCI)

GCI is an independent think-tank that researches the causes of global ecological problems and assesses their political implications. It campaigns for rational change accepting the link between equity and survival.

Contact:

Global Commons Institute, 42 Windsor Road, London NW2 5DS, UK

JUNE 8

Guardian

Opposing polluter sovereignty

TO THE heads of government in the G7 countries:

As you depart for Rio, please will you consider this. Rio is not the "start of a process", it is the culmination of a long and arduous effort by countless concerned people over at least 20 years. These people have sought to bring governments, business and industry to their senses and face up to the reality of the global survival crisis we all collectively face.

There is no point in any of us continuing to duck the main cause of this crisis — the wasteful consumption and destruction of natural resources by the so-called industrial development process and its economic mirror image in "growth". It does seem scarcely believable that through this process, humans have actually affected the metabolism of the biosphere and started to change global climate, but the evidence for this is growing relentlessly.

It will be an act of folly and deceit if in Rio you declare yourselves in favour of a global ecological recovery programme while you commit us to intensifying the causes of global ecological degradation and the political imbalances which are caught up in this. Nothing makes this prospect clearer than the climate convention text crafted by UK environment minister Michael Howard that he intends co-signing with White House US.

Signing this text is merely institutionalising "polluter sovereignty" for the US as it has said it has no intention of reducing emissions. On the contrary it is going to increase emissions as will all signatories, as the text commits them to maintain strong and sustainable economic growth. You should note carefully that for G7 as well as globally, the C02/GDP growth-link remains consistently unbroken over the last 30 years.

A year ago on this page a statement demanding US emission restraint was published with about 20 cosignatories. One year on over 300 people have co-signed as a consequence. Over 50 of these are European MPs (and UK MPs of all parties, including three party leaders) along with eminent scientists and environment development specialists from all over the world. They said, "we believe that all people present and future, should have rights to life and sustainable livelihoods which are free from the threat and the reality of human-induced climate disruption."

They also said "We stress that responsibility for taking corrective action and reducing bad practice lies with those who created and who continue to exacerbate this global crisis. We demand that their response should be immediate and without prevarication."

Polluter sovereignty is not a satisfactory response.

In the context of global climate change, more than half the world's population emit greenhouse gases at insignificantly low levels, while a minority — reflecting runaway consumption patterns — emit greenhouse gases at excessive levels, provoking potentially runaway climate changes and obliterating any remaining potential for globally equal survival rights. The cosignatories pointed out that this inequity is particularly unacceptable when the majority of the world's people are already struggling to meet basic human needs. Last but not least, we also caution you against pursuing arguments about population growth which imply (or may be taken as implying) that the onus is on people in developing countries to breed less

so as the present profligate consumption-pollution patterns can be maintained by populations in the industrialised countries of the North.

The anger of people some have described as "less fortunate than ourselves" (most but not all of whom are in the so-called developing countries) will in no way be mitigated by these smoke-screen arguments. On the contrary, the adverse political consequences of this anger will steadily combine with the adverse ecological consequences of polluter sovereignty and overwhelm any remaining possibilities of a rational political response to this primarily consumption-pollution driven global crisis. The leadership required (and which we urge you to give) can only be based on honestly admitting the extent of our responsibility in the North and unconditionally committing ourselves to an equitable recovery.

This recovery cannot be based on the economics of increasing competition-led growth of demand for the precious finite resources of life. Recovery can only be based on sharing these fairly at sustainable rates of use. Advocacy of this basic principle and rejecting polluter sovereignty is common sense. It is the prerequisite of future survival prospects for us all.

Aubrey Meyer, Dave Bradney, Global Commons Institute

Tom Barker, Alt. Tech Assoc:

Dilwyn Jenkins, Ctr Alt Tech

Anandi Sharan, World Clean Energy Coalition

Ed Mayo, New Economics Fdn:

Kate Young, Womankind Nicholas Hildyard, The Ecologist

Susan George, A Dir TNI Jason Wilson, UCL

Jakob von Uexkull, Right Livelihood Award

Tony Cooper, Green Party global warming working group:

Jim Berreen, Green Party environment speaker; Sara Parkin, UK Green Party Executive:

George Monbiot, author Amazon Watershed:

Kate Cameron-Daum, North Atlantic Network: Hemansu Roy Trivedi, Indian Tribal Women's Trust;

Titus Alexander, End Global Apartheid.

JUNE 12

Guardian

How British aid measures up in the Third World

JOHN MAJOR defends the UK record on aid saying quality not quantity is the issue. He says aid as a percentage of GDP is an irrelevant indicator.

This de-linkage is interesting. This suggests that GDP as currently measured is about quality and not about quantity which of course is nonsense. In fact with global biophysical limits exceeded through the increased intensity of GDP measured human activities, GDP is revealed as having an emerging anti-quality component where notions of value-added are being overtaken by conditions and quantity of value-destroyed (e.g. ozone hole). Is Mr. Major starting to argue for de-linking our wellbeing from GDP too? That - from the proponents of "growth" - would be the day.

When British GDP reflects the quality and the efficiency which Mr. Major imputes to British ODA, the odds are we'll have successfully been subjected to the kind of reverse North/South scrutiny that the politics of Rio initiates in global terms; i.e. accountability and redress over the inequitable and unsustainable use of global commons resources - or as John Vidal reported from Rio on Agenda 21, the extent to which the North's overconsumption of resources is the cause of Third World poverty. Wealthy samaritans describing how grateful Southern paupers must spend their pocket money may be John Major's big news in Rio, but it is yesterday's news in terms of making the global process sustainable.

What is needed is a GDP based on making the, Global Domestic Process sustainable. This takes all costs and benefits - environmental and social - into account in a globally democratised process. Doing this will give the majority rights to a greater say over our development, spending and acquisitions than we are presuming to have over theirs.

Aubrey Meyer, Global Commons Institute

Simon Hughes MP, Liberal Democrat Environment Spokesperson

Jim Berreen, Environment Speaker Green Party

Dale Campbell-Savours MP Labour Spokesman Overseas Aid

Penny Kemp, Green Alternative for Europe

JULY

European Chemical News - Environment Review

Green Rights for all; the earth view

Can the opposing demands of North and South ever be reconciled with the future health of the planet? ECN asked Aubrey Meyer to give his view of the discussions at UNCED.

THE UNITED NATIONS Conference on Environment and Development (UNCED), or the so-called 'Earth Summit', recently brought into focus the efforts of the international community to protect the global environment by curtailing unsustainable development.

Sadly though, these efforts were undermined throughout, principally by the 'me-first' intransigence of the US administration and by those from industry who successfully lobbied it against any measures for compensation or restraint.

In the noisy debate about whether we have exceeded the limits of biospheric tolerances which has put 'survival' so decisively on the agenda, it is becoming increasingly apparent that equity is the global political price of re-establishing equilibrium in the ecosystem. If nothing else, the UNCED has assisted in getting recognition for this new reality.

Can we reconcile the varied and invariably conflicting interests of the powerful, the prosperous, the plebeian, the imperilled and the poverty-struck? There is no simple answer, but we must recognise that what was once a moral dilemma has now become a practical imperative - either we share fairly the finite resources of life at no more than sustainable rates of use, or the biosphere will be damaged beyond its capacity to sustain many species - our own included.

To make matters more difficult the UNCED preparations clearly established the relevance of the uneasy questions long haunting the international debate; namely that much Southern poverty and consequent local environmental degradation can be explained by the global economic system, inequitably operated by the industrialised countries of the North for their own benefit.

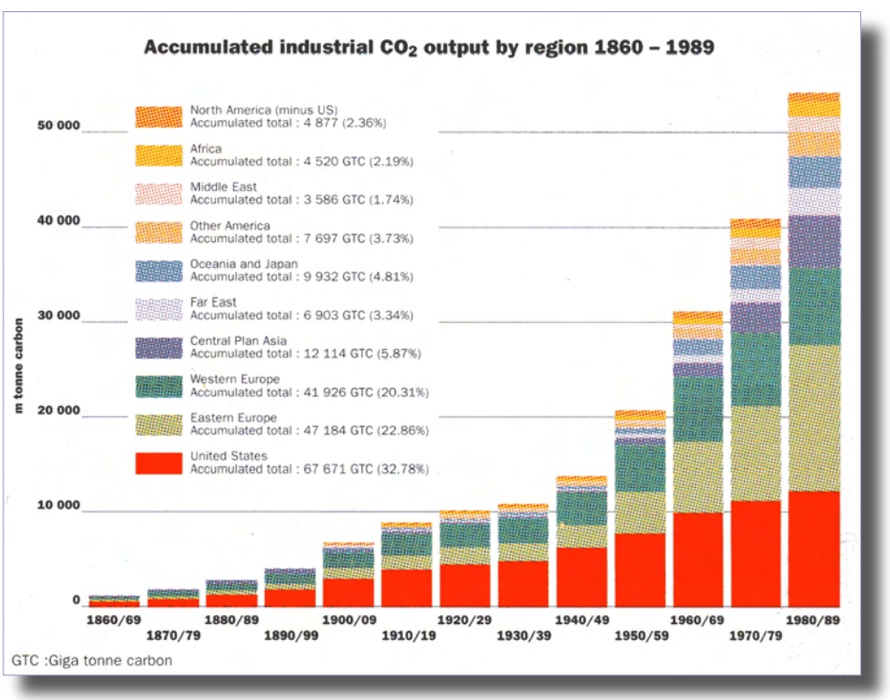
As recent reports from the World Bank, the United Nations Development Programme and others show, the poor in developing countries now actually measurably subsidise the rich countries through structural adjustment and regimes of export-led growth, inequitable barriers to trade, low commodity prices and the now seemingly endless regime of debt repayments. All this adds up to a considerable net resources transfer from South to North.

By incapacitating developing countries in this way we compound the global climate changes that we have precipitated, for example by hastening their liquidation of tropical rainforests for debt repayment. Our actually helping to add this damage to our existing industrial damage is sheer folly.

All this explains the 'get-lost' attitude of countries like Malaysia. It certainly had no inclination to accord recognition to the forests as part of the global common heritage. It insisted that 'its' forests were 'sovereign' to be exploited in whatever way it chooses, and that if the forests were so important to the global ecosystem their maintenance should be paid for. The money offered by the North has been insignificant, and the US pursuit of this 'least-cost' forest conservation option for global warming management (plus bio-technology support) is proving to be costly and dangerous, both politically and ecologically.

In the face of these complex challenges and the intractable politics they generate, we find politicians more and more promoting the idea that business and industry (rather than governments) are the solution to environmental problems.

This is true to some extent, but also somewhat ironic. Business and industry have traditionally been a major immediate cause of environmental degradation, and politicians promoting the business and industry solution are really acknowledging their own dwindling influence over both supply and demand side behaviour.



This is ever more so in the intensely consumerist democracies of the developed North, where society's well-being is now as good as indexed to an increase in consumerism - in a word, growth. Consumers only elect politicians who offer good news.

The good news that electors still want to hear is that increased consumption is assured; politicians can only propose this growth based on the increased production made possible by the expansion of the activities of a business and industry sector ever eager for new profits.

Side-stepping institutional responsibility (and apparently forgetting the extensive US consumer protection legislation), the US administration defensively coined the term 'consumer sovereignty', explaining that, 'we don't tell people what they can and can't buy'.

The problem with all of this, even allowing for industry's increased efficiency, is that any environmental gains are lost in the 'economic' growth of production and consumption. This relentlessly yields a net escalation of pollution and environmental decline. The US EPA currently estimates a 7.5 growth rate of hazardous waste in the US for example, in spite of abatement.

In the context of UNCED, this scenario of consumer-led environmental decline has not impressed delegations from developing countries where the per capita consumption levels are a fraction of those maintained in the North and often below the threshold of daily survival. When the US as the world's major greenhouse gas polluter refuses emissions restraint, 'consumer sovereignty' translates as 'the United States lifestyle is non-negotiable'.

This really means 'polluter sovereignty'.

Moreover President Bush's cry of, 'jobs before the environment' was not entirely honest and was hardly an appropriate preface to his subsequent claim that, 'America is the leading environmental nation in this world'. Further, US non-compliance over the bio-diversity treaty made it clear that 'profits before the environment' was really his intention.

It is this US intransigence and irresponsibility over emissions restraint and bio-diversity, more than any other factor, which soured the efforts for global co-operation on climate, species, habitat and especially forest preservation.

However, consumer sovereignty does not necessarily exclude protection of the environment by increasing the price of consumption. Green economists are now arguing for the introduction of a product pricing system which 'internalises' full costs of the environmental and social damage caused by production. This alternative to environmental regulation is promoted as the most efficient means of environmental protection through the market.

Apparently to this end, the UNCED was vigorously lobbied by some of the market's most active protagonists, the recently formed Business Council for Sustainable Development (BCSD). This group of around 50 senior executives from multinational

corporations including key chemical industry chiefs was constituted at the suggestion of UNCED convenor Maurice Strong.

In BCSD's recent manifesto-like publication Changing Course, sustainable development is based almost entirely on this idea of full-cost pricing. It is aimed at changing supply and demand behaviour. In theory, in an economy of fully-costed social and environmental transactions, full cost pricing will signal 'least cost equals least damage' and trigger the appropriate behavioural changes.

Taken to the point where environmental protection is achieved commensurate with the scale of the environmental damage we have caused, this is something of a revolutionary goal, as the reverse is almost entirely true of current pricing practice.

Recognising this, BCSD argues for an evolutionary approach, saying that full-cost pricing 'must proceed using imperfect existing knowledge and imperfect available tools... [but]... the lack of accuracy in determining the actual and future costs of pollution should not allow us to conclude that no price can be established at all.' This gradualist approach presumably also creates the breathing space for the BCSD to achieve its concurrent stated aim of achieving sustainable development whilst still maintaining profits to industry.

This reveals a telling ambivalence in corporate motivation, and may still amount to having someone else's cake and eating it, because the industrial world's environmental debts are enormous, go back a long way, and still go mostly unaccounted for.

However, if politicians see an enhanced role for multinationals in the pursuit of sustainable development, BCSD feels that this is clearly reciprocal.

> "As individuals set prices for privately-owned goods, society must establish through political processes prices for the use of goods held in common - water, atmosphere and so on. This work must be based on the best available scientific evidence and on people's preferences and choices.'"
>
> The implications of this are immense. Nothing less than the recognition of equal rights of benefit from the resources of the global commons is required. BCSD's challenge is as much to politicians as to business and industry itself.

But since they, like most UNCED participants, declare climate change to be the potentially most serious of all the environmental threats, both politically and ecologically, it would have been appropriate for them to acknowledge the extent to which past (vast) profits to industrialists have been generated at the expense of the greenhouse gas source/ sink equilibrium

for example. Since politicians from the industrialised countries have been unable to face this difficulty, there is a clear role here for leadership within industry.

It would still be prudent for us all - politicians, industrialists and others - to recognise this long-term environmental debt and the loss of equal individual rights of access to a global commons resource (climate stability) engendered by this disequilibrium. China's politics in the climate treaty negotiations made clear the extent to which it still articulates its future energy expectations in terms of 'me-too' exploitation of fossil fuels.

UK Prime Minister John Major's rather languid judgement that past 'damage was inflicted not out of greed or malice, but out of ignorance' is only partly true and underestimates the immense practical need for redress. Moreover, his Darwin Initiative 'for the survival of the species', whilst responsibly helping to put survival on the agenda, has unfortunate overtones of 'survival of the fittest'. In current market terms this implies the survival of the wealthiest.

Still, taken with or without environmental costs internalised, ecologically speaking such ideas are fantasy. Without internalisation we are helplessly on the road to overexploitation and with it, in fully costed global commons resource terms, the fittest - be they individual or corporate - are largely the most environmentally indebted; perhaps indeed the least fit, the least wealthy.

Without a real commitment on the part of the wealthy to liquidate their environmental debt, they remain as much in danger as everybody else. Inevitably some form of resource and technology re-distribution is a part of any survival strategy. Like it or not, we are even more hostage to China's - not to mention India's - future fossil fuel intentions, that they and others were (or are) to our past (fossil fuel derived) economic dominance. In the face of this, US confrontational tactics have been disgraceful but also naive. Ecological realities are generating new political realities in the global system.

Now, driven by such survival/equity considerations, some from the multinationals are reincarnating as visionaries and starting to argue for environmental and social equity across the whole spectrum of the global community. They have begun to broaden their assessment of who their stakeholders are: not only employees and shareholders but also suppliers, customers, neighbours, citizens' groups and others.

BCSD further acknowledges that 'large numbers of people do not participate in the markets'. In fact we know many of these are actually amongst the market's collateral costs. Huge numbers can barely participate in life at all, let alone the market. If the market and our collective industrial impacts continue to degrade the biosphere, African droughts and

desertification, and cyclones devastating low-lying islands and states actually terminate these peoples' interests and become our memento mori.

While circumstantial evidence for these linkages is growing, 'the tragedy is that poverty and hunger exist in a world never better able to eliminate them,' said Maurice Strong. 'This is surely a denial of the moral and ethical basis of our civilization, as well as a threat to its survival.'

Recognition and defence of the basic rights to the commons - 'green rights' - of these 'others' is the greatest challenge for those business visionaries who would change course. Perhaps they may join their voices to the others who have endorsed the statement in the panel. It was widely circulated in the UNCED preparations.

This Global Commons Institute statement (reproduced at the end of this article) issued a year ago has since been signed by hundreds of people from all over the world including many senior European politicians, environment/ climatologists and environment/development experts. US-led polluter sovereignty at the UNCED was not a satisfactory response. The truth is that if the North in general and the US in particular, had been more honest about the on-record inequitable as well as unsustainable use of the global commons (particularly the 'over-filling of sinks'), the South might have been more amenable to forest conservation and the proposed convention. All three conventions have forests as a major component, and while they are global commons assets, they are in conventional economic terms quite obviously primarily the national economic assets of the countries in which they stand. One angry South East Asian delegate, defensive about deforestation, asked if a further convention for the prevention of fossil fuel destruction was going to be put on the agenda as well.

It is no accident that Fidel Castro received the longest applause of any leader in Rio for the following words:

> "The main responsibility for the atrocious destruction of the environment lies with the consumer societies. They are the offspring of the old colonialist and imperialist policy that engendered the poverty and backwardness that are today the scourge of the majority of mankind. We need less luxury and waste in a few countries so there can be less poverty and hunger in the greatest part of the world."
>
> [Fidel Castro]

Even George Bush was seen to applaud this speech. Given all this, it cannot be a surprise to anyone that the developing countries looked for - and found - a way to fight back.

In the post-UNCED new world order, mutually assured destruction (MAD) has been replaced by mutual ecological blackmail (MEB) between the North and the South, and the industrialised countries have only got themselves and George Bush to blame.

To overcome the new and deluded 'me-first-or-me-only' narcissism of the powerful, the articulation and defence of green rights globally has to be at the core of our strategy for ecological recovery from now on. Across the board, fairness is the sine qua non of survival. If politicians cannot understand this and provide leadership, perhaps the corporate visionaries can?

Aubrey Meyer

Director, Global Commons Institute

42 Windsor Road, London NW2 5DS UK

"We acknowledge with concern that climate change through human enhanced global warming is a real and growing threat and is caused by the emissions of long-lived greenhouse gases from human activities. The Intergovernmental Panel on Climate Change advises that to stabilise atmospheric concentrations requires a reduction to less than 40 percent of current levels.

On average each person to the world contributes 1.65 metric tonnes of carbon and equivalents (MTCE) each year. 40 per cent of this figure - 0.86 MTCE represents each individual's output threshold for forcing future climate change. At least 63 per cent of the people in the world produce greenhouse gas emissions at or below this threshold figure, and their emissions contribute only 90 per cent of me non-forcing total. They therefore provide the equivalent of a 10 percent credit, which is taken up by the rest of the world. This inequity is particularly unacceptable at a time when the majority of people are struggling to meet basic human needs. It is also unacceptable as the forcing emissions total is derived largely from unsustainable, luxury-based activities in countries one of whose governments has still refused even the principle of setting targets for CO2 emissions stabilisation, let alone reduction.

We believe that all people present and future should have rights to life and sustainable livelihoods which are free from the threat and the reality of human induced climate disruption. We stress that the responsibility for taking corrective action and reducing bad practice lies with those who created and who continue to exacerbate this global crisis. We demand that their response should be immediate and without prevarication, and should take special action over this issue of social inequity."

AUGUST 14

Guardian

Stop sniping, save the planet

JONATHON PORRITT'S castigation of the green movement's supposed political superficiality and lack of adaptability has predictably won the approval of environmental campaigners within the Labour Party (Letters, August 10). But no amount of excitement about "post-Marxist eco-socialism" will substitute for key debate on the deadly nature of economic growth itself.

The basic trends that greens have been pointing to for 30 years – environmental devastation, resource depletion and population growth – are still moving smoothly on, making it ludicrous to suggest that green politics and strategy should be radically recast because of recent but unspecified "momentous changes".

It is not denial in the green movement that is hindering green politics. It is denial amongst the public, aided and abetted by the contradictory idea from some environmentalists and industrialists that further economic growth can somehow be harnessed to solve the eco-crisis that growth itself has created. Spouting about sustainable development and the absence of any clear alternatives to this improbable concept, send a clear message to the public that present catastrophic trends can only persist. Governments (despite all they now know) are intent on "business as usual" behind their new fig-leaves of "sustainability". While the public continues to be offered nothing positive and realistic to support, who can blame it for resorting to fatalism and denial?

Nothing less than a viable political agenda for the equitable rationing of the planet's finite resources is now needed.

Politics to achieve this must acknowledge the physical limits which the biosphere imposes on us and the political limits which global inequities place on our abilities to find globally acceptable solutions.

Is it too much to hope that future articles in this Environment Guardian series will be shorter on petulance and longer on radical analysis?

Aubrey Meyer, Dave Bradney, Jim Berreen, Tony Cooper, Anandi Sharan.

Global Commons Institute, 42 Windsor Road, London NW2

AUGUST 17

Guardian

Mind big mother, not little brother

TOBY YOUNG'S piece about little brother (Guardian Review, August 14) quotes a Blue Peter sceptic, Michael Mortimore. The ODI's Mr. Mortimore disputes the Third World debt/environment-degradation linkage. He also notes the risk of overloading factual information with a moral burden and asks for a rational and scientific approach rather than an ideological one.

A rational approach to these issues should (we feel) be founded in a recognition that "debt" is a far more pervasive phenomenon than the "disputed (monetary) linkage" allows. Politicians and economists now grappling with the so called "externality" costs of development, do this "rationally" because of newly extending self-interest assessments and a desire to make economic sense of the human survival predicament.

The widespread scientific acceptance of climate change, its causes and the prospect of force majeure (not to mention the laws of thermodynamics) are now primary and make this debt/degradation linkage dispute entirely secondary. With the advent of global climate change we do know the following: (a) the overwhelming cause of this has been and remains CO2 emissions from the industrialised countries (Blue Peter was correct to make the link to fossil fuel use) (b) in the international monetary system, while industrialised countries are the biggest "creditors" in monetary terms, they are also the biggest "debtors" in terms of global environmental impact.

The money "loaned" to the Third World has been almost entirely the product of a fossil fuel economy with rampant unpaid environmental costs at source.

It is irrational — not to say perversely ideological — of industrialised countries to continue promoting the global monetary system, at the expense of the global ecosystem by failing to "internalise" these damaging development costs or more importantly, to restrain these damaging developments.

While we may reschedule Third World debt in the hope of avoiding default, attempting to reschedule ecological debt — i.e. postponing emissions restraint in the hope of impunity — is about as rational as hoping to change the laws of physics.

The debt/degradation linkage argument (regardless of its outcome) has been superseded. The degradation is the debt, and failing to own up to this is even more dangerous than the debt itself.

In the face of this, a little evangelism from young people does not require our permission. Nor will any moral burden be removed by Mr. Young's unsubtly emotive counter-evangelism.

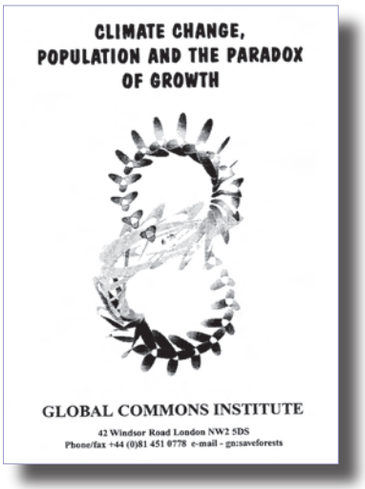
Industrially abusing Big Mother is our problem, (not the aftershocks from Little Brother).

Aubrey Meyer, Jim Berreen, Global Commons Institute
Miles Litvinoff, author, Earthscan Action Handbook

OCTOBER 1992

GCI
Climate Change, Population and the Paradox of Growth

Aubrey Meyer and Anandi Sharan



OCTOBER

Aziz Pahad
Deputy Head, ANC Department of International Affairs.

"We thank you for your information about the GCI campaign. We are eagerly following your work and find the information very useful.

A new democratic South Africa will be keenly interested in environmental issues and we are confident that your institute will play an important role in assisting us to deal with environmental issues in South Africa and internationally.

Please continue to keep us informed about your activities."

1992

Branislav Gosovic
Director, the South Centre

"The paper on climate change, population and growth is most interesting. It will be very useful for our future work on post-UNCED strategies for the South."

1992

Riza Selahettin
Malaysian High Commissioner's Office, London.

"We intend to disseminate the information in your booklet as widely as possible."

OCTOBER 21

Guardian

Survival & 'Innocence' in the postmodern environment

DO post-modernists merely use knowingly ironic quotation marks to avoid "false innocence" in an age of innocence lost?

Was Maurice Strong innocently ironic at the Rio "Earth Summit" when he remarked:

"Past damage to the planet was inflicted largely inadvertently. We now know what we are doing. We have lost our innocence."

Professional academics and post-modernist sociologists now play an important role in the post-Rio "sustainable development" debate (aided by 20 million pounds of UK Government funding). The "Business Council for Sustainable Development" do too. This grouping of transnational corporation executives are the "growth optimist" visionaries of global capitalism, with many hopeful governments in tow.

If post-modernists envision a "new values millennium" where "batteries have been recharged" with the BCSD agenda, it seems to invite us to accept that "innocence lost to sustainable development" may result in perennial growth.

So far the use of the word "sustainable" has only served to put quotation marks around the words "development" and "growth". All major political statements on sustainable development post-Rio, from G7 outwards, have been "growth-optimist" - trying to economically accelerate us out of ecological trouble. In fact ecological recovery is now made contingent on economic growth.

Rio's Climate Change Convention commits us to promoting "strong and sustainable economic growth" with the competing aim of reducing greenhouse gas emissions.

This contradiction owes much to the efforts of the industrial lobby from which the BCSD have sprung.

BCSD have indicated to us a willingness to publicly debate the growth/limits controversy. This is at the very fulcrum of the global equity and survival equation in which the unknown balance of our world beyond postmodernism floats. Will post-modernists (and critically the newly funded professionals) acknowledge the ecologically fatal cost of modernists' misplaced growth-optimism? Or will they too subscribe to the idea that "the last gasp of the past" merely precedes a new values millennium, one which we can ideologically inflate to answer a universe of question marks with an infinity of quotation marks?

Global capitalism has come at a price. Who will pay for capitalism as Cosmos?

Aubrey Meyer, Anandi Sharan, Jeremy Seabrook.

London NW2

1992

Gerard Dorin
Head Administrator OECD Environment Directorate,

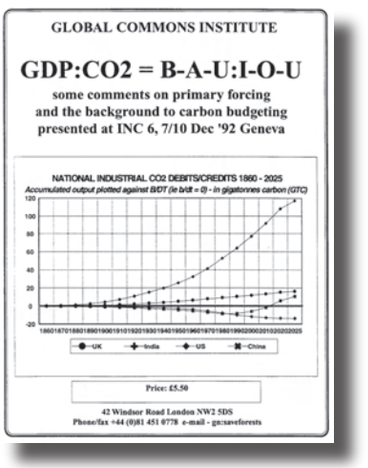
RE: Economics of Global Climate Change Conference

"Your intervention here was brave and not the sort of thing we are used to hearing here. I agreed with everything you said."

DECEMBER 1992

GCI
GDP:CO2 = B-A-U:I-O-U

Some comments on the primary forcing and the background to carbon budgeting presented at INC – 6


GLOBAL COMMONS INSTITUTE

GDP:CO2 = B-A-U:I-O-U

some comments on primary forcing and the background to carbon budgeting presented at INC 6, 7/10 Dec '92 Geneva

NATIONAL INDUSTRIAL CO2 DEBITS/CREDITS 1860 - 2025

Accumulated output plotted against BAU (ie b/dt = 0) - in gigatonnes carbon (GTC)

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1992

Judith Furner
Scientists for Global R Responsibility

I write to thank you very much indeed for your splendid presentation at the SGR conference on 16th November.I had not heard of the Global Commons Institute until it was suggested that you be invited to speak at the Conference and I am delighted that I have had the opportunity to remedy the omission.

I have been interested in green policies for many years, and I was fascinated to hear your argument and justification for your suggested policy. I was also most impressed that you have had backing from, among others, Tory MEPs. The policies you describe are often supported by those who suffer from inequitable distribution, but by definition have little power. It is extremely encouraging that you are being supported by the establishment in the West.

Thank you very much again for offering the members of SGR such a stimulating and informative Keynote Address. It certainly provided the Conference with a most exciting start to the day. Now that I am aware of your Institute I shall certainly look out for any information in the press relating to it. Indeed, if you have any relevant publications I shall be most interested to see them.

DECEMBER 16

Guardian

Fighting for the air we breathe

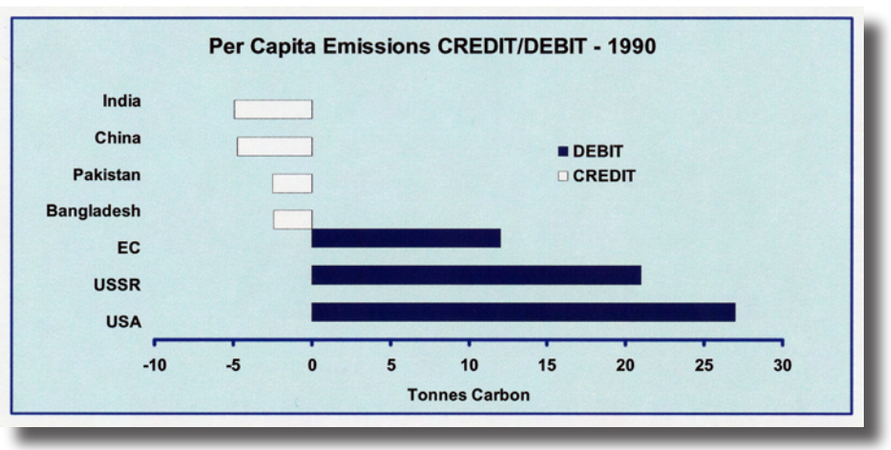
Mr. TOLBA'S article (Guardian, December 13) was timely. It correctly drew attention to the limitations of sovereignty and the "free" market, when it comes to solving global problems such as climate change.

Here in Geneva at the negotiations for an international convention to arrest climate, change, these limitations are all too evident. There is a dangerous struggle over equal access to a common but finite resource, namely the atmosphere, the primary medium of global climate equilibrium. It is a dimension of the global commons which transcends ownership and marketability.

There are essentially two aspects to this struggle - how do we all make an agreement which is both fair and safe? To members of the Global Commons Institute (GCI), this unavoidably involves linking survival and equity.

The task is complex and considerable considering the hugely differentiated impacts and disparate circumstances of wealth and poverty amongst the negotiating parties.

At the one end there are countries like India and China and at the other the US. All refuse for themselves the restraint of their emissions of CO2, the most damaging anthropogenic greenhouse gas. On the face of it they are playing a dangerous game of mutual ecological blackmail. But to accept this indiscriminately is to accept a fallacy.



It is unsafe but it also unfair. Even excluding historic emissions, their greenhouse gas impacts could not be more different if we apportion these fairly.

As a first step, GCI proposes that each person alive today receive an equal share of emissions but subject to the stabilisation criteria published by the Intergovernmental Panel on Climate Change (IPCC) in 1990.

This would be recognised as a right. National impacts would then be assessed as percents (of global excess emissions) credit or debit according to whether national balances exceed or fall short of the stabilisation threshold.

As the accompanying chart shows, it is then immediately clear why India, China and others are for the time being, justified in refusing restraint and why the US is not. In fact the US (with only 4 per cent of global population) accounts for. at least 27 per cent of the climate forcing due to carbon emissions.

Their intransigence over carbon restraint amounts to criminal and even malicious irresponsibility. It makes a mockery of the good faith upon which these negotiations are supposed to be based. It makes the world a more dangerous place (both ecologically and politically) in which to defend the most fundamental right of all, the right to survive.

The Global Commons Institute calls on all MPs of good faith and common sense to support the Early Day Motion to the House of Commons (No 319) condemning the US and calling on the Government to ensure that the Climate Convention signed at the Earth Summit reflects the link between equity and survival.

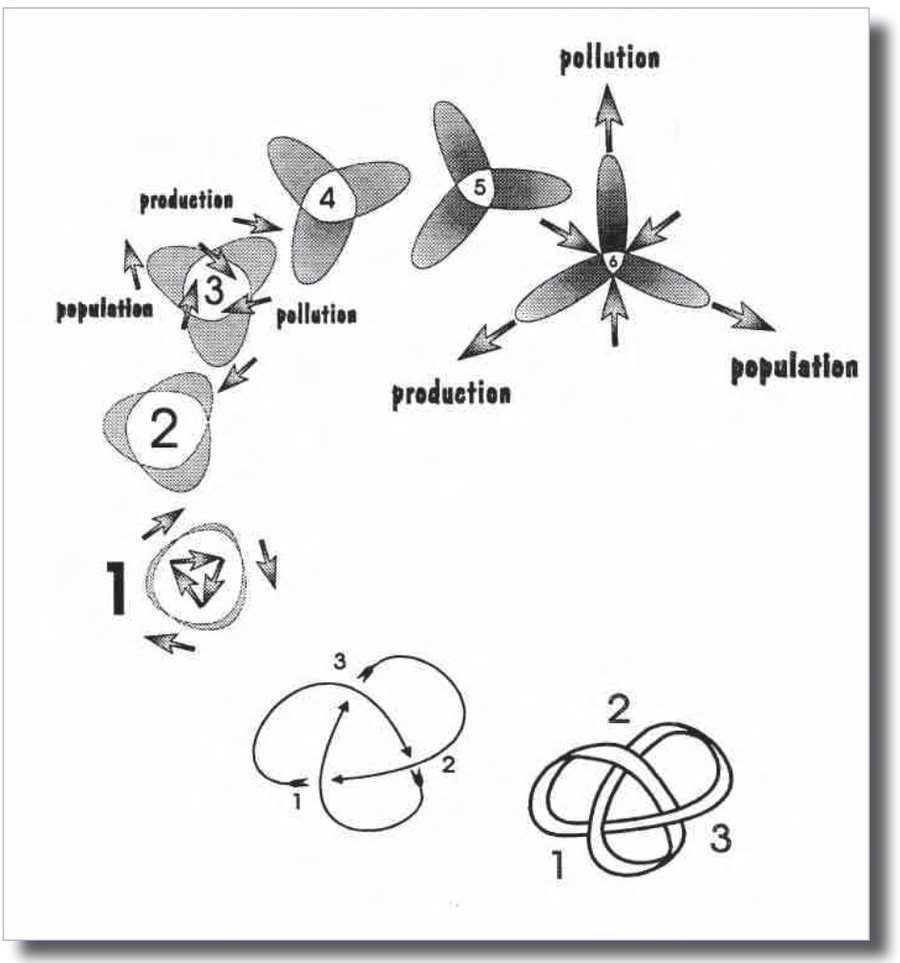
Aubrey Meyer
Global Commons Institute
London NW2

1993

1993

GCI
Global Climate Change and the Noose of Equity and Survival

Aubrey Meyer and Anandi Sharan.



Equity and survival are now inextricably linked. This is the basic contention of the Global Commons Institute

MARCH 20

Guardian International
Power subsidy from the poor

THE industrialised countries receive an energy subsidy from the South worth $3.4 trillion annually at current value.

This is the political issue at the UN climate negotiations under way again in New York.

This figure reflects the fact that 93% of global Gross Domestic Product is generated with fossil fuels at levels above that required to preserve climate stability.

This is done by 36% of the worlds population. The other 64% generate 7% of global fossil GDP at or below the sustainable level. The extent of their unused fossil GDP entitlement was $3.4 trillion for 1990. The current conditional offer through the World Bank from the subsidised North is at best 0.00006 of this amount.

This is a confidence-busting measure at a time of deepening crisis.

Aubrey Meyer

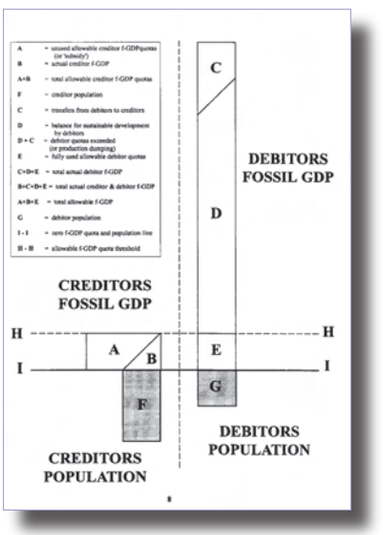
Anandi Sharan

The Global Commons Institute at the UN

MARCH 1993

GCI
Climate Change and the Precautionary Principle

An Analysis of Climate Creditors and Debitors to the UN Negotiations INC-7



MARCH 22

Inter Press Services - UN
LDCs footing $3.4 trillion bill for North's energy practices

Developing countries are subsidising unsustainable energy practices in the North to the time of $3.4 trillion a year, an environment research body said here.

A document by the London-based Global Commons Institute (GCI) calculates just how much industrial countries, or "energy debitors", owe developing countries, or "energy creditors".

The document has been presented to the Intergovernmental Negotiating Committee for a Framework Convention on Climate Change (INC/FCC), which is meeting at UN Headquarters this week to discuss funding for the convention.

Anandi Sharan of GCI explained the links between gross domestic product (GDP) and carbon dioxide emissions, noting that, "the two go up and down together, so that the higher the GDP, the greater the carbon dioxide output."

An Intergovernmental Panel on Climate Change (IPCC) has said a minimum of 60% cuts in carbon dioxide emissions were needed to slow further warming and curb adverse changes in the climate system.

"At present there are countries which are massively over their allocated quota limit and countries which are well under that limit," Sharan said.

She said that currently total global GDP amounted to some 20 trillion dollars per year, but that based on the IPCC recommended cut in greenhouse gas emissions, only seven trillion dollars worth per year is sustainable.

And of the global 20 trillion dollar GDP, industrialised countries account for $19.2 trillion. But on the basis of their population, industrialised countries are only allocated $2.7 trill. worth of global GDP, "so they're actually appropriating, or in debt to the tune of $16.5 trillion annually based on 1990 figures," she said.

Based on the IPCC assumption of a 60% cut in greenhouse gas emissions, the GCI calculates that environmentally non-damaging carbon dioxide output per person annually would amount to some 0.46 metric tonnes of carbon. But it says that today, the United States alone emits between seven and eight metric tonnes of carbon dioxide per person annually.

"When you look at the per capita consumption figures, we find that India and China can triple and quadruple their emissions without getting anywhere near the present levels of developed countries' emissions," Sharan said.

Commenting on the INC talks so far Sharan said,

"the biggest scandal is that the only accountability that seems to be being discussed here is the accountability of developing countries through the Global Environmental Facility."

The GEF is the interim financial mechanism mandated to provide the resources on a grant or concessional basis to developing countries to help them implement the commitments of the Climate Convention.

The convention, signed by 160 countries at the Earth Summit in Rio de Janeiro last June, invites countries to return to their 1990 levels of greenhouse gas emissions as soon as possible.

"There is no formal accountability, as yet at all, by the emitter countries - there's an 'intention' to cut emissions, but the stated commitment is to 'strong and sustainable economic growth'," Sharan said.

She noted that through the energy subsidy the South pays the North, the industrialised nations can run a system,

"which allows them to dump their unsustainable technologies and energy systems on the world at prices that drive out sustainable technologies like renewables and reproductive holistic systems."

"It is of paramount importance that we stop talking about developing countries at all in the context of climate change, and that we concentrate whole-heartedly on getting eco-restructuring in the North," she said.

And Jeremy Leggett, Scientific Director of Greenpeace International's Climate Campaign warned Wednesday that;

"time is everything in this game." He said, "as every month goes by, we learn depressing news out there in the natural world — it looks less and less likely that this series of record-breaking storms around the world, is not at least, in part, getting its excess energy from the known heat-trapping ability of greenhouse gases."

He warned that insurance companies in the industrialised countries, on whose health successful economies depend, could soon be ruined by the avalanche of recent windstorms.

According to Greenpeace, between 1966 and 1987, there was no windstorm anywhere in the world which cost more than billion dollars in insured losses. But it says that during the period 1987-1992, there have been at least ten such catastrophes.

by Jaya Dayal

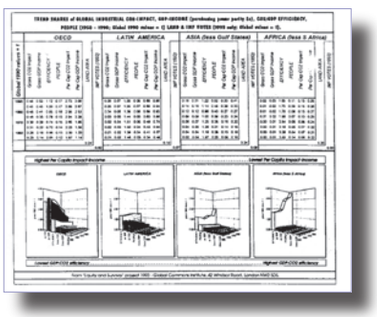
New York, Mar 22 (IPS)

APRIL

Patrick Karani
Climate & Africa Project, African Centre for Tech. Studies, Nairobi

"You raise very interesting, challenging and controversial issues in the dilemma of the Framework Convention on Climate Change. The way you address "Global Benefit" is impressive. I agree with you that the concept - as understood by the financial lending institutions - is neither exhaustive nor participatory. The effort you make to generate some statistics is very appealing. With no doubt the points you raise on institutional reform and equity are important and require serious attention. Institutional frameworks of the IMF and OECD among others need to be counter-checked in order to conform to the commitments of the Convention. Will you make a presentation to ACTS in Nairobi?"

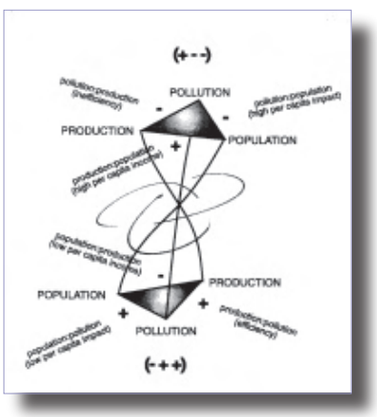
MAY 1993



GCI
Who Provides Global Benefit; who causes Global Disbenefit

A Policy Briefing to the IPCC 2nd Assessment

JUNE 1993



GCI
Making Way for Decision-Taking Under Uncertainty

A Policy Briefing to the OECD/IPCC Conference on Climate Change Economics

JUNE

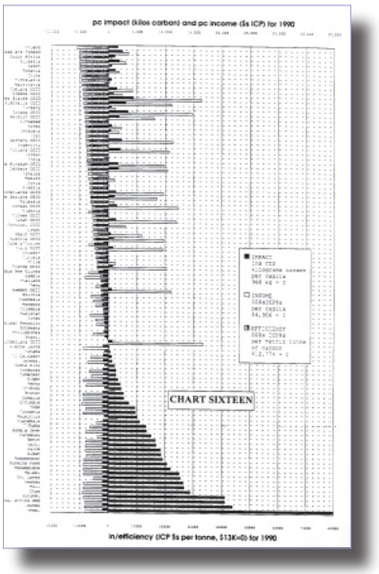
Carlos E Suarez
Institute of Energy Economics, Lead Author on IPCC WG3 SAR.

"I would like to congratulate you for the (Benefit/Disbenefit) research done and for its wide distribution. I would ask you to send us, as soon as possible, the complete version of your work."

AUGUST

GCI
Joint Implementation In a Globally Sustainable System, Equity and Efficiency Converge

An Analysis of Climate Creditors and Debitors to the UN Negotiations; INC 8



AUGUST

Ambassador of W Samoa to the EC.
Dr Frank Rosillo Calle

"I recommend the Global Commons Institute as lead authors in the IPCC working group 3. I have been very impressed by the quality of GCI's work in developing comprehensive methodologies for conducting "benefit/disbenefit analysis", which seems the most appropriate first step in the development of genuinely sustainable solutions and policy formulation."

SEPTEMBER

Kamal Nath
Chairman, Montreal Protocol negotiations, Environment Minister India.

"I had occasion to discuss with the Global Commons Institute, various important issues related to Climate Change and the Montreal Protocol during my visits abroad. Their outspoken views and in-depth knowledge in economic analysis of the issues relating to equity, costs, benefits, disbenefits would go a long way in bringing out these important aspects in clear terms. Such analysis projected in the IPCC reports would certainly help the conference of the parties in arriving at an objective decision. I strongly recommend their names as lead authors for working group 3.

I also will support any funding proposal they may care to submit.

SEPTEMBER

Dr Ernst von Weizacker
Director, Wuppertal Institute for Energy, Climate and Transport, Germany

"The Global Commons Institute is one of the few places in the world giving the necessary emphasis to a radical questioning of short-sighted economic theory. GCI's approach is rational and compassionate. Their voice must be heard & should be further elaborated in the international debate on global warming & other global ecological challenges.

Their papers are stimulating. The characterisation of countries' socioeconomic efficiencies particularly, is quite original. It would be highly desirable to have them on board for future work on equity in the IPCC context."

NOVEMBER

Bert Bolin, IPCC Chairman, James P Bruce and Hoesung Lee, Co-Chairs, IPCC Working Group 3

"We would like to invite you to the IPCC Workshop on Equity and Social Considerations - Nairobi, (18/23 7 94) to make a presentation entitled **'Unequal Use of the Global Commons: Consumption Patterns as Causal Factors in Global Change'.**

We know that with your widely recognised expertise in this field, you would make an important contribution to the work of the IPCC. It is very much hoped that you will respond positively to this invitation"

1993

Mohammed S al Sabban
Head of Saudi Arabian Delegation to the IPCC -

Concerning the GCI rebuttal of the case made by the World Bank representative for measuring the incremental costs for protecting the global environment.

"With regard to the intervention by the Global Commons Institute, my delegation wishes to support every word of what they have just said."

1993

Nicholas Hildyard and Larry Lohman
the Ecologist Magazine.

"We strongly recommend to you the Global Commons Institute as lead authors for your report on the socio-economic framework for decisiontaking concerning the economics of climate change. GCI includes a network of authors who are both literate and numerate in this debate. They have been involved with these matters at the UN and beyond over several years. They have built up a considerable reputation doing cross-cutting socio economic analysis. This has had a clear focus on benefits and disbenefits and who it is who provide these and who suffer these. This effort has been successfully challenging short-sighted economic theory still typical of the pro-growth lobby in the industrial countries. GCI has successfully been providing a focus for those who express a more globally responsible view. Support for their work is considerable and widespread."

1993

Dr R K Pachauri
Director TATA Energy Research Institute, India.
Lead Author on IPCC WG3 SAR.

"I did hear from the Intergovernmental Panel on Climate Change Working Group Three secretariat about your paper on "Global Benefit". I think you should be very pleased at the response, because you have very effectively made the point that you intended."

1993

Dr Julian Salt
Department of P Peace eace Studies. University of Bradford.

"A quite excellent analysis and superb graphics. I'm impressed yet again by the concise way in which you tackle the subject in hand. I only hope it has the same impact on the UN Climate negotiations!"

1993

Dr (Mrs) Jyoti Parikh
Lead Author on IPCC WG3 Second Assessment Report - Indira Gandhi Institute.

"Thank you very much for keeping me informed about your work. Its nice to have your support in this battle."

1994

FEBRUARY 28

William Nordhaus
Yale University

Yale University
Professor William D. Nordhaus
Department of Economics
P.O. Box 1972, Yale Station
New Haven, Connecticut 06511-1972

Fax: 203-432-5779
Phone: 203-432-3587
Email: NORDHAUS@ECON.YALE.EDU
February 28, 1994

Mr Richard Douthwaite
Global Commons Institute

Dear Mr. Douthwaite:

I was recently sent an article you wrote that commented on some of my work (TWR, no. 40, p. 3). To begin with, you will be happy to know that I actually am not part of the IPCC process, so whatever errors I have broadcast will not be imposed by me. On a more serious note, I believe that you have not seen the most recent work, which will be published soon by MIT Press and which I include.

I believe the major difference of opinion between yourself and the "economic" point of view is whether it is appropriate to balance economic and ecological objectives. You say that the decisions "have to made on the basis of judgement alone," which suggests that you recognize that there is no way to avoid making choices, at least implicitly. The economic perspective in cost-benefit analysis attempts to condense the complex set of impacts over space, time and sectors by summarizing them in a scalar measure of value; others prefer to keep the measures in the original and undigested vectors of impacts. The fact that the scalar is in monetary units is not really crucial, it could be in "spotted-owl equivalents" if you preferred. Perhaps what you really object to is the test of whether your values about species diversity, ecosystem preservation, and so forth are shared in the political and economic market place. I wonder if, by insulting and denigrating those who propose methods of constructing valuations of such things as species diversity you are really trying to protect your own views from careful scrutiny.

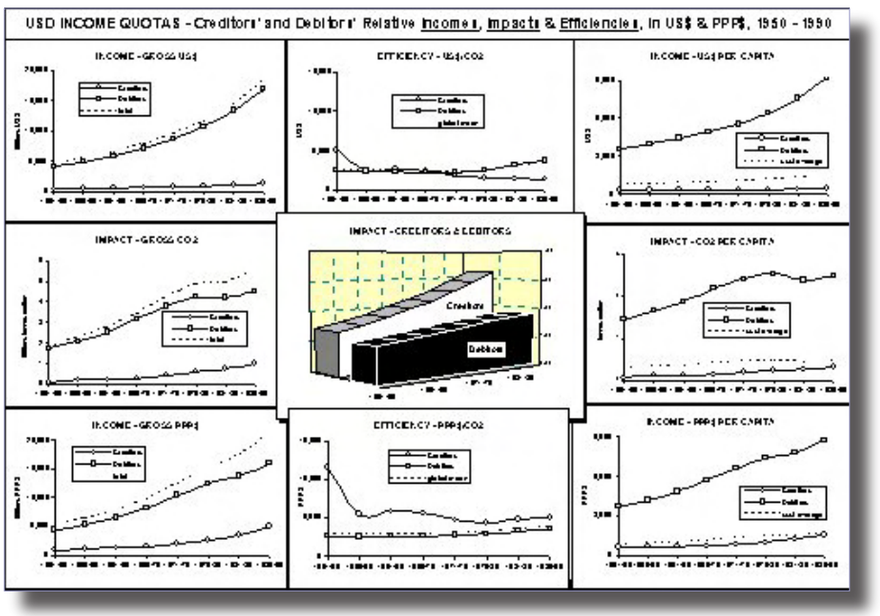
Sincerely yours
(Signed William Nordhaus)

cc: D Pearce

JUNE 1994

GCI
"The Unequal Use of the Global Commons"

GCI's submission to IPCC Second Assessment of Climate Change, Working Group Three"



1994

Guardian
Richard Douthwaite

NOT many groups invited to attend a key UN conference are unsure whether they will be able to raise the air fare. Fewer still have to book into the YMCA. And the number that can claim to have played a more influential role than most government delegations are rare indeed.

Despite its rather posh name, The Global Commons Institute is a small group co-ordinated from a private house in North London. Set up after the UN's second World Climate Conference in 1990, GCI works to pressure the current global climatic system and to ensure each country has a fair share of planetary resources.

Its finest hour came last year when it sent a small team to the Intergovernmental Panel on Climate Change and helped deny the Canadian Secretariat the outcome it had envisaged.

The IPCC was set up by the UN Environmental Programme and the World Meteorological Organisation to find out whether man's activities might be disturbing the world's climate and, if so what could be done. In 1990 it confirmed there was a risk

of a catastrophic climate change unless greenhouse gas levels were stabilised. This, the IPCC said, would need humans to reduce their greenhouse gas emissions by 60-80 per cent.

Such a sharp cut would have a profound effect on the world economy and the Montreal meeting was to prepare a brief for economists to advise on how best it might be done. At least, that was what the GCI party thought.

The group consisted of Aubrey Meyer, a composer and former viola player with the London Philharmonic Orchestra, Anandi Sharan, a housewife and self-taught expert on renewable energy, and GCI's strategist, Jim Berrean, a former senior lecturer in environmental studies at Birmingham University. I went along, too, ostensibly to give economic advice, but really to marvel at how they operated.

We were surprised by what we found. The secretariat's draft instructions for the economists made it clear that preserving conditions for economic growth was far more important than preserving the environment. As a result, the economists were being asked not how greenhouse gas levels could be stabilised most efficiently but what was the slowest rate of increase the world could afford.

In response, the GCI distributed a statement on bright yellow paper to draw delegates' attention to what was going on. Then, after Professor David Pearce of University College, London, claimed that "every action we take entails a cost" and that restricting fossil fuel use would therefore cut human welfare, I was pushed to the microphone.

Pearce admitted that his statement was incorrect; that incomes in the future might not have to fall if fuel use was restricted, because the world economy was not operating at maximum efficiency. Action to halt warming would not necessarily deteriorate the world's economic performance, he agreed.

By Day 4 it looked as though GCI's efforts had been in vain. But, at the last minute, the US insisted that the economists be asked to study the issue of stabilising greenhouse gas levels in the atmosphere. Other nations quickly agreed. The US might have taken this line anyway, but by raising the issue so prominently, GCI ensured the question was addressed. "GCI should be very pleased with the influence they had," said Dr Peter Sturm, head of the OECD's resource allocation division.

Today, GCI has the widespread support of non-OECD nations and the grudging respect of the IPCC itself. Indeed, the IPCC has now invited GCI to make a presentation at the climate change conference in Nairobi later this month on the unequal use of the global commons (the parts of the earth we all share).

But GCI may be forced to stay at home. "We cannot afford to go," Aubrey Meyer says. "Teams from industrialised countries are meant to be sponsored by their governments, but the British government has refused us any help." So have other northern global bodies. Is anybody there?

GCI can be contacted on

081 451 0778.

Richard Douthwaite wrote The Growth Illusion.

JULY 01

Guardian

Why some lives come cheaper than others

PROTECTING the world environment requires that development be sustainable. Some time ago mainstream economists set out to capture the "sustainable development" agenda for the economics profession. In this pursuit they invented "global cost/benefit analysis" (G-CBA). Global warming and the cost and benefits of climate change are now being assessed by them in these cash terms. And this assessment is being pushed by the UN's Intergovernmental Panel on Climate Change.

Part of this exercise entails giving cash values to human lives. They accept there are going to be hundreds of thousands of deaths worldwide as a result of global climate changes.

> A recent research paper from the UK government-funded Centre for Social and Economic Research of the Global Environment states that the cash value of a "statistical life" in the EU or the US is $1,500,000 per head, but in China it is only $150.000.

This means, as an economist, you help to capture the sustainable development agenda for your profession by discarding a real Chinese life 10 times more easily than a real life in the EU or the US.

Ironically, these lives are not at risk as a result of damage to the global environment for which citizens in the EU and the US have been and are at least 10 times more responsible per head than citizens in China.

There is, of course, a heavy foreign policy cost associated with this since the population of the EU and the US is out-numbered 10-1 by everyone else. The need to value human rights as equal, is prudent as well as perennial.

Aubrey Meyer, Global Commons Institute, and representatives of 50 organisations including the following:

Atmospheric Sc. Univ. at Albany NY; Centre for Human Ecology, Edinburgh University; Christian Aid UK; Climate Net-work Africa; Ecologica Ltd, Lancaster; Friends of the Earth International; Global Commons Trust UK; Global Environmental Research Centre; Green Party, Oxford, Australia, California, Germany, Ontario, Northern Ireland, Norway, Sweden, UK, US; Live Wire BBS, Bombay; New Economics Foundation; Oikonerei Survival Project, Tanzania; Scientists for Global Responsibility; Stock-holm Environment Institute.

JULY 4

Guardian
Now we know

MY letter (July 1) included the following:

"Ironically, these lives are not at risk as a result of damage to the global environment ..."

This should have read: "Ironically, these lives are now at risk..."

Aubrey Meyer

Global Commons Institute

1994

H E Ambassador Afamasaga Toleafoa
Ambassador of W Samoa to the EC.

"Congratulations on your success co-organising the Commonwealth Partnerships Conference. I am truly stunned by the extent to which GCI's ideas were incorporated into the conference statements. Your analysis is clear, rigorous and very useful to us. We want to keep in touch with you."

1994

Peter Sturm
OECD Economist,
Head of Division "Resource Allocation"

"GCI should be very pleased with the influence they have already had on the economists at IPCC's Working Group 3."

JULY 20

The Standard - Nairobi
Industrialised nations blamed

Climatic changes to hurt world economies

By Hussein Mohammed

INDUSTRIALISED countries have been blamed for the catastrophic changes in the world climate.

A researcher attending an international conference in Nairobi said that 99 per cent of the rise in greenhouse gas concentration, which is worrying everyone across the globe, has been caused by the industrialised countries.

The researcher, Mr Aubrey Meyer, of the Global Commons Institute in London said these countries (industrialised) must therefore take responsibility to put "matters right". The meeting held at UNEP headquarters in Nairobi, was called by the United Nations' Intergovernmental Panel on Climate Change (IPCC). Several participants representing countries worldwide are also attending the week-long meet that opened on Monday to discuss the social and equity issues that could arise from attempts to prevent global warming. Researchers at the meeting strongly criticised methods proposed by the industrialised countries to prevent a catastrophic change in the world's climate.

"The rich nations want to use financial power they have built up by consuming unsustainable, climate-threatening quantities of fossil fuels such as oil, gas and coal to buy the right to consume even more," explained Mr Meyer.

Four years ago, about 170 scientists working for IPCC said if global warming was to be stopped, it was necessary for industrialised countries to make cuts of between 60-80 percent in the rate of gasses causing earth's climate to warm rapidly. It was observed that most of the 'greenhouse gasses' were produced by the burning of fossil fuels in industrialised countries.

The IPCC is now employing large numbers of economists, mainly from Industrialised countries, to give advice on reduction in fossil fuels used. One method being proposed includes a scheme for joint implementation whereby a wealthy country is required to pay a poorer nation to cut its greenhouse gas emissions in preference to cutting its own. Mr Meyer argued that both of these ideas might make matters worse unless they were implemented as part of a programme under which industrialised countries steadily cut their fossil energy use until there was no more.

"At present, the World Bank and other institutions believe that the amount of money a country has should determine the amount of fossil fuel it is able to use.

If their right-by-income approach is adopted, it will reward those countries which have caused the present crisis to profit from the damage they have done," Mr Meyer commented.

JULY 29

Guardian

Commons people given green light

THANK YOU — the Guardian made it possible. On the morning of July 1, there seemed to be no chance that a few days later anyone from Global Commons Institute (GCI) would be able to fly to an international conference in Nairobi to deliver a paper documenting the extent to which the industrialised countries are really responsible for the world climate crisis.

We had received an invitation from the Intergovernmental Panel on Climate Change (IPCC) to do this. The UK government refused to fund our attendance in spite of their obligations within the IPCC.

However by evening, everything had changed. Richard Douthwaite's article in Environment Guardian about GCI's plight produced several offers of small sums from pensioners and others who could ill-afford them (Why is it that the poor are always the most generous?) before Edward Goldsmith, the founder of the Ecologist magazine, rang offering to pay a return airfare for one of us as well. And so I became one of the 150 people from around the world who took part in the IPCC's conference on the "equity and social considerations" of global climate change. GCI thanks all those who made our attendance possible.

We took the facts to many people from the South. They are mostly deprived of impartially analysed information about this matter. But not one of the industrial countries' economists was present. It is they who are carrying out the "global cost/benefit analysis", valuing lives in the North 10 times higher than lives in the South and writing up the resultant "policy options" in the new IPCC report. Criticism of their deft and inequitable approach is mounting steadily.

For example, they should have heard from the people most at risk, like those from the low-lying and small-island states. Ruby Saha, who works for the Mauritius government made the meeting's saddest but most telling presentation. She told how her island, along with many others, was already affected by the climate crisis. Higher windspeeds, taller waves, fiercer storms and heavier rainfall had already done severe damage to property and cost thousands of lives.

She was "truly aghast" at the OECD economists' valuing life in the EC ten times higher than in the "poor" countries.

But those responsible aren't even listening. For the moment things will only get worse.

Aubrey Meyer.

Global Commons Institute

SEPTEMBER

Peter Newell
Keele University University,
Co-Organiser IRNES conference.

"We offer great thanks for coming to the Fourth IRNES (Interdisciplinary Research Network on Environment and Society) Conference and delivering such a stimulating and powerful talk.

Your presentation was the highlight of the whole conference in terms of its clarity, directness and passionate delivery. I really think you made people think that evening. GCI could not have a more eloquent and dedicated advocate than yourself."

1994

Sung Woong Hong
Korea Research Inst. for Human Settlements
Lead Author on IPCC WG3 SAR

"It was a great pleasure to receive your paper "Equity and Survival - Who provides global benefit; who causes global disbenefit?". This paper will be very useful for my section."

1994

Tim Lenton
Scientists for Global Responsibility.

"Thank you for the GCI materials. They are both useful and interesting. I am hoping you can speak at the Second "Science for the Earth" forum in Cambridge. Your perspective on the role played by economists in addressing global environmental problems would be interesting. We like the questions you pose."

1994

Barry Coates
WWF UK,

Climate Action Network Conference on Transport & Global Warming

"The principles of international equity that are embodied in sustainable development require that the industrialised countries recognise the global impact of their consumption patterns, and provide development opportunities for poorer countries. Recent papers provided new perspectives on the importance of the international dimension. The Global Commons Institute have highlighted the accumulated debt in terms of over-use of the atmosphere, and calculated an estimated debt value that vastly exceeds the financial debt owed by the South."

1995

APRIL

Kamal Nath
Indian Environment Minister

"We face the actuality of scarce resources and the increasing potential for conflict with each other over these scarce resources. The social, financial and ecological inter-relationships of equity should guide the route to global ecological recovery.

Policy Instruments such as "Tradable Emissions Quotas", "Carbon Taxes" and "Joint Implementation" may well serve to make matters worse unless they are properly referenced to targets and timetables for equitable emissions reductions overall. This means devising and implementing a programme for convergence at equitable and sustainable par values for consumption on a per capita basis globally."

[Indian Environment Minsister]

JULY 23

Independent
One Western life is worth 15 in the Third World, says UN report

Lives in poor countries should be valued as worth 15 times less than those in the West, according to UN economists calculating the possible cost to the world of global warming. Their calculations are in unpublished official documents, seen by the Independent on Sunday, which are expected to be endorsed by the world's governments this week. The documents are designed to guide policymakers in deciding how to respond to potentially disastrous climate change.

The calculations – which the documents admit are "controversial" and "reflect discrimination against the less well off" – are bound to create an internal row just as evidence is mounting that global warming is taking hold. Research in both Britain and the United States shows that 1995 could be the hottest ever year worldwide.

Experts say that the huge disparity between the value placed on life in rich and poor countries minimises assessments of the damage that will be done by global warming and so will give governments an excuse to avoid taking action to combat it.

Sir Crispin Tickell, the Prime Minister's chief advisor on the environment, describes the calculations as "ludicrous" and says they could discredit international attempts to evaluate the extent and consequences of the threatened climatic change. He has already written to protest to leaders of the Intergovernmental Panel on Climate Change (IPCC), the official body set up by world governments to assess the dangers of global warming.

The documents have been prepared by economists in an IPPC working group and are expected to be approved by the plenary meeting of IPCC in Geneva on Tuesday. They say that, by the best estimates, a doubling of the amount of carbon dioxide, the main cause of global warming, in the atmosphere, could cause damage equivalent of only 1.5 to 2 per cent of the world economy. As some estimates suggest that the cost of cutting emissions of the gas would be greater, this may be taken as justification for inaction. But these calculations are partly based on valuing lives in developing countries – where most of the deaths, mainly from strokes and heart attacks brought on by the extra heat, would occur – at £62,500 each, compared to £940,000 each in Europe and North America.

Lives in the former Soviet Union are valued at £180,000 each, one fifth of the figure in the West.

> Calculations which value all lives equally, and include other factors missing from the official assessment, produce estimates that global warming could cut the world's wealth by up to a quarter each year- which would call for dramatic preventative action.

Michael Grubb, head of the Energy And Environment Programme at the Royal Institute for International Affairs, who has made a special study of the costs of global warming, describes the 1.5 to 2 per cent figure as "ridiculously definite" and almost certainly a large underestimate.

He says that it is so far impossible to make an accurate assessment, but the cost could range from virtually nothing up to 25 per cent of world GDP.

Aubrey Meyer, director of the Global Commons Institute which has produced similar figures, says:

> "The calculations the governments are being asked to endorse are profoundly unreliable and could provide an excuse for them to do nothing. By placing such a low value on the lives of most of the world's people they seem to endorse the economics of genocide".

So far this year worldwide temperatures have equalled those in the first part of 1990, the hottest year on record, suggesting that global warming is resuming after a brief lull.

The lull was caused by the huge volcanic eruption of Mount Pinatubo in the Philippines in the summer of 1991, which flung 20 million tons of sulphur high into the atmosphere, filtering out sunlight. Until the eruption took place 1991 was set to be even hotter than 1990 after six record breaking years in the 1980s.

The sulphur has now dropped out of the atmosphere and the hot years are returning. 1994 was the fourth warmest year ever and would have been the hottest if it had not been for an exceptionally cold January and February worldwide. Now 1995 is bidding for the record.

NOVEMBER 1

Guardian

Who says that life is cheap?

When an impoverished viola player dared to take on a world-renowned economist over whether a cash value can be put on human life, the outcome looked inevitable. As global warming experts meet this week, Richard Douthwaite reports on how an individual can help change world thinking

CAN one put a cash figure on the value of the human lives which will be lost as a result of global warming? Is there a monetary figure for the worth of the species which will become extinct and the coastal plains and islands which will be submerged by rising seas? Most ordinary people would probably say not. But environmental economists are not ordinary people.

In May 1993, the Intergovernmental Panel on Climate Change - the world body of scientists charged by the United Nations to investigate every possible aspect of climate change and who only last week confirmed that the phenomenon is with us and has been partly induced by mankind - commissioned some 100 of the most eminent among them to investigate the socio-economics effects of climate change. The economic tool with which they hoped to make climate change a decision-making objective was "cost-benefit analysis" (CBA).

This involves estimating the cash value of all the damage likely to be done by global warming and comparing it with the cost of acting to slow warming down or to stop it completely. The "efficient" solution, the economists were to argue, was only to pay as much to stop warming as the benefits from stopping it were worth.

It was left to two extraordinary ordinary people to point out that these economic emperors had no clothes.

One was a north London housewife and mother, Anandi Sharan; the other, a self-confessed obsessive about climate and equity, was a former viola player with the London Philharmonic Orchestra and ballet score composer, Aubrey Meyer.

With tickets paid for at the last minute by a widow in Leamington Spa following a piece in these pages, they flew out to Montreal in 1993 under the banner of the minute, underfunded Global Commons Institute. They checked into the YMCA and walked over to the IPCC meeting at which the report was being planned. Jim Berreen, a former ecology lecturer and co-founder of the GCI and I went along as observers. We sat at the back of the conference hall, behind the national delegations and alongside blue chip environmental organisations such as Greenpeace and anti-environmental ones representing US coal and oil companies. We had a button to alert the chairman when we wanted to speak, two microphones and a red light to tell us when we were "on". Whenever he spoke, the hall's sound system made Aubrey's faint South African accent so pronounced he sounded positively menacing.

> It quickly became clear that the question the IPCC thought the report ought to answer was: "How much global warming can be stopped without seriously slowing the rate of world economic growth?'' The idea of asking the economists to advise on the best way of stopping warming entirely did not it seemed, arise.

Professor David Pearce of University College London, a world authority on cost-benefit analysis, shared the IPCC view and argued in a paper that slowing down warming would inevitably involve costs. By this he meant that world output would inevitably be lower if restrictions were placed on the use of fossil fuel.

Aubrey went on the attack, arguing that the world economy was not operating at anything like maximum efficiency at present, given the massive unemployment and waste of resources worldwide. As a result he said, no economist could prove that using less fossil fuel, more human labour and radically different technologies would inevitably leave the world's human population worse off. And if world output was not lower there would be no world cost although there might be a cost for the OECD nations, whose rate of consumption might have to fall.

In the world economy, he pointed out, one man's cost is another man's pay packet. Consequently, the redistribution of income that would result from a strategy of low fossil fuel use could well lead to higher levels of output of certain goods, such as education, basic foods and clean drinking water, and leave billions of people better off. And that would be on top of securing the undisputed benefits of stopping global warming. Prof Pearce agreed, but argued that this did not change anything and the meeting took its planned course. A working

group, WGIII was set up to write the report. Pearce was appointed to the writing team for the cost-benefit chapter. The Social Costs of Climate Change; Greenhouse Damage and the Benefits of Control.

Aubrey and the GCI were horrified when the first draft of this chapter was circulated a year ago. He called it, "the economics of genocide" because it costed the lives that would be lost as a result of warming in poor countries at $100,000 just a fifteenth of the value of lives in wealthier ones. Other Third World damage was marked down too.

The draft's overall finding was that the industrialised countries - those causing climate change - would suffer twice as much damage as all the rest of the world, although they have only 20 per cent of the world population and occupy less than 20 per cent of the world's land area. This was despite the fact that the draft itself showed that 85 per cent of all the low-lying land that is estimated will be lost because of rising sea levels would be in developing countries, as would three-quarters of the reductions in fresh water supplies and 78 per cent of the extra deaths.

The draft also purported to show that the cost of reducing greenhouse gas emissions would probably be greater than 2 per cent of Gross World Product (GWP). While the losses if greenhouse gas emissions were not curbed would amount to only 1.5 to 2 per cent of GWP. The implication, Aubrey argued, was that if these figures were allowed to stand it would mean that the world community would do very little to slow the warming because it would believe it was cheaper not to. Pearce and his team had arrived at these figures by estimating how much people would be willing to pay to avoid a higher death rate or having their land flooded. As people in poor countries can't offer to pay very much, their deaths and the damages they will suffer were valued at much less than in wealthier countries, skewing the international distribution of the cost.

Although this technique, the "willingness-to-pay" method, is widely used in CBA, other economists argue it should be applied only when a development produces a benefit, and not to value things as they are. But Pearce's team chose not to use the "willingness to pay method". This would have asked people whose island homelands will disappear how much compensation they would require from fossil fuel users to accept their fate with equanimity. This approach would obviously have led to entirety different results.

Aubrey, working full-time and alone from his tiny bedroom in Willesden, north-west London, went on the attack. He began circulating a letter to eminent people all over the world, protesting at the unequal life valuation and seeking their support. He collected 500 signatures, some from authors

working on other sections of the IPCC report. It generated international press coverage. (Pearce later described it as, "a silly campaign of misinformation and abuse").

> Aubrey went further. To show how unreliable the draft chapter's figures were and how much they depended on the assumptions on which they were based, he and Tony Cooper, a statistician, recalculated them. using the same damage figures throughout the world. They also made allowances for possible positive feedbacks the official writers had ignored.
>
> Their results were dynamite and were published in a special peer-reviewed paper by the Ecologist magazine. They showed the level of uncertainty surrounding the effects of warming to be so great that by the year 2050, the annual losses could amount to anywhere between 12% and 130% of GWP -that is, the total value of everything produced in the world in a year. At the higher end of this range, life as we know it would collapse.
>
> For the OECD countries, the damage could be anywhere between 0.6% and 17% of annual output, and for the rest of the world, between 25% and 250%.

In other words, life in the Third World could become impossible and the number of people dying there annually from storms, disease and starvation could be very much higher than the 113,000 that Pearce and his colleagues estimated.

The IPCC tried to get national delegations to approve their draft report at a meeting in Geneva in June this year. It very nearly succeeded but, largely as a result of the signatures campaign, there was widespread unease about the Pearce section and the chairman, James Bruce of Canada sent it to a private, governments-only committee for consideration. The committee's recommended wording came back to the full meeting just 10 minutes before it was due to end with the disputed estimates still included. A vote was taken to approve the wording as a package. It was passed. The meeting was declared closed.

Aubrey thought all was lost, but the Cubans had been in the queue to speak just before the gavel came down. When this was pointed out, Bruce was obliged to reopen the meeting. The Cubans then rejected the amended wording outright because GCI's arguments had not been answered. When Brazil backed the Cubans with a formal protest Bruce had no option but to call a meeting specially to settle the issue. It took place in Montreal three weeks ago. In the three months between the Geneva and Montreal meetings several unsuccessful attempts were made to get the Pearce team to modify their draft. "We won't be revising it." Pearce told Fred Pearce, of New Scientist. "This is a matter of scientific correctness versus political correctness."

In Montreal, pressure was put on the Pearce team to incorporate the GCI range of damage estimates. They refused, leaving the IPCC with the choice of dumping their chapter entirely or leaving its figures out of the Policymakers' Summary—the only part of the report over which the UN body had direct control. In the event, the chapter was not dropped, but the summary effectively disowns it. stating that, "the value of life has meaning beyond monetary value".

It was a triumph for Aubrey. But why has everyone been happy to leave him and his handful of friends to fight what is patently absurd.

What was the British government thinking of when it generously grant aided Professor Pearce's IPCC work. Why was his team so determined to produce figures that show that little need be done about warming that they refused to accept even the possibility of much worse damage happening? Was it that they couldn't see that at least as much growth could be generated building a new type of economy as it can by tinkering with the old?

AUGUST 3

Nature

Developing countries dispute use of figures on climate change impacts

London. An intergovernmental meeting held to finalize a draft document on the social costs of climate change ended in stalemate last week. Representatives from developing countries attending the meeting refused to endorse a suggestion that global warming would cause twice as much economic damage to the industrialized nations as it would to the rest of the world.

Working Group III of the Intergovernmental Panel on Climate Change (IPCC) has been preparing a draft summary for policy-makers of the damage likely to result from a rise in global temperatures after a doubling of carbon dioxide concentrations.

But the drafting ran into controversy when developing nations, led by India, and China, challenged the use of different criteria for measuring damage in countries of the North and of the South.

The value put on a death in a developed country, for example, was calculated to be 15 times higher than in a less industrialized nation. Such disparities result partly from the conversion of all estimates of loss from national currencies into US dollars. "$1 in, say, Cambodia is not the same as $1 in the United States," one delegate remarked.

Also at issue is the value to be placed on the 'abatement costs' of global warming. The IPCC committee had calculated that slowing down global warming could be more expensive than merely paying for the damage caused by a doubling in carbon dioxide concentrations (1.5 - 2 per cent of GWP).

But critics such as Aubrey Meyer of the environmental group Global Commons Institute, based in London, disagree.

Meyer argues that cost-benefit analysis should not be used to assess the damage likely to be caused by global warming.

"The difficulties of allowing for risk, or assessing the value of a plant or animal species that becomes extinct, are well known," he says.

Narasimhan Sundaraman, secretary to the IPCC, acknowledges disagreements over putting a value on loss of life. But he adds that industrialized nations' representatives are willing to consider alternative methods of modelling.

At the same time, he points out that developing nations have so far failed to propose a single workable alternative. The IPCC working group will attempt to finalize the policy-makers' summary of its report at its next meeting in Montreal, Canada, in October.

Ehsan Masood

AUGUST 3

New Scientist

Global row over value of human life

Fred Pearce

ENVIRONMENTAL economists are refusing to revise a controversial report on the social cost of global warming, which values the lives of people in rich nations up to fifteen times higher than those in poor countries. Critics claim that the report suggests that action to halt global warming may not be cost-effective.

At a meeting of a working group of the UN's Intergovernmental Panel on Climate Change (IPCC) in Geneva late last month, delegates from India, China, Brazil, Cuba and others vetoed a summary of the work. The meeting ended in deadlock amid calls for the report to be reworked. But one of the authors, David Pearce of University College, London, told New Scientist this week: -

" We won't be revising it, and we have no intention of apologising for our work. This is a matter of scientific correctness versus political correctness."

[David Pearce, UCL]

The study forms a chapter in the IPCC's forthcoming Second Assessment Report, its 'first full report on the science of climate change for five years. The dispute threatens to hold up publication of the report early next year. One solution to the impasse, suggests Pearce, is for the IPCC to remove the chapter from its report entirely.

At issue are some of the techniques developed by environmental economists for analysing the costs and benefits of preventing global warming. As part of this exercise, Pearce and his colleagues have placed values on human lives that range from $1.5 million for people from the richest countries down to $100 000 for those in poorer developing nations. The valuations are based on assessments of a community's willingness and ability to pay to avoid risks of death.

The chapter is complete and cannot be changed, says Pearce. But in Geneva, government delegations rejected as immoral and inaccurate the text of a summary of the chapter for policy makers because it implicitly endorsed this approach. They called for a common valuation of human life—preferably at the higher level.

Pearce replies that, while a common valuation of life might be a legitimate approach, it was not what his team was asked to do by the IPCC. In any case, he says, if life values were averaged out, the overall conclusions of the study would not change much. There is, he says, no scientific basis for valuing all lives at the higher level. The result is deadlock. Under IPCC rules, the summary must reflect the scientists' text.

But the politicians have refused to accept it, and the scientists will not alter it.

Indian delegates first formally complained about the IPCC's social cost analysis before the Climate Conference in Berlin in April, when environment minister Kamal Nath wrote to ministerial colleagues round the world claiming the calculations were "absurd and discriminatory", and called for them to be "purged from the process".

A key fomenter of dissent among Third-World delegations is Aubrey Meyer of the London-based pressure group, the Global Commons Institute.

After the Geneva meeting, he claimed that Pearce's work shows that a doubling of carbon dioxide levels in the atmosphere by the middle of the next century would cause damage from climate change valued at between 1-5 and 2 per cent of "gross world product".

But reducing emissions of greenhouse gases to prevent such a rise would cost more than 2 per cent of GWP.

> "If these estimates had been accepted, it would have meant that the world community had been advised that little need be done to slow the warming process, because it was cheaper not to,"
>
> [Aubrey Meyer, GCI]

-he says. Pearce, however, denies that his work is a blueprint for inaction.

"There is plenty in our chapter to justify action," he says. "We are specifically debarred from making policy recommendations, but I am on record many times personally calling for action to address global warming."

Meyer says the cost-benefit analysis contains other faults. For instance, estimates of "willingness to pay" to avoid risks of death assumed that incomes in poor countries will remain low.

But other IPCC work on trends in emissions of greenhouse gases, for instance—assumes poor nations will grow richer.

"If they get richer, they will be willing to pay more to save lives. The economists' valuation of future lives should reflect that," he says.

1995

Greening the Earth
GCI Berates IPCC Review Process

"Now the Global Commons Institute (GCI) . . . . has weighed in heavily against the U.N.'s new report on the economics of climate change. At the heart of GCI's criticism is the value of human life, which the Intergovernmental Panel on Climate Change (IPCC) says, in one chapter, is worth $100,000 in the United States, but only $10,000 in India.

> It's not hard to imagine that this might rile a few people (and a few more in India). We're reminded that the U.S. Declaration of Independence says that "all men are created equal," which the U.N. seems to be saying does not apply when we die. Interesting concept."

http://www.co2andclimate.org/climate/previous_issues/vol1/v1n9/feature1.htm

SEPTEMBER 20

David Pearce

Sir Crispin Tickell
20 9 1995

IPCC and CBA

Thank you for your response. I have to say I find it rather depressing.

I have seen John Adams paper: this repeats what he has been saying for 25 years and reflects no greater an understanding of the subject today than he had then. It also contains undergraduate level howlers. When I get time, I'll explain, but I have done it all before and it has no effect, so I have no greater expectations that logic will prevail this time either !

If one has firm views on CBA it has to be incumbent on the critic to be familiar with the theoretical underpinnings of subject and its use. I have written 3 textbooks on the former and daily practise the latter: it is used widely, whether anyone likes it or not. You offer nothing by way of substantive criticism of the subject. You suggest willingness to pay is an 'economist's artefact': what then do you do every day when you pay for goods and services? Or is the idea of 'demand' an artefact ? You must admit, it would be an extraordinary science fiction world which does not depend on the 'artefact' of willingness to pay !

Economists do not 'value the environment': they measure people's preferences, using money as the numeraire (Adams' paper reveals that he does not understand the concept of numeraire). Are preferences then irrelevant ? If so, who decides ? The elite ? How is the idea of measuring someone's preferences 'subjective'? What is being measured is indeed individuals' subjective assessment of a change in environmental quality, just as your demand for everyday goods is your subjective assessment of what benefit you will get when you buy something. This is really page 1 of any economics textbook and it cannot be dismissed by assertion to the contrary.

As to the 'hysteria' at Geneva, that was engineered by a very concerted campaign by one individual and some sidekicks to get back at myself and others for a perceived humiliation some time ago. Unfortunately, you have been used as part of that campaign. The hysteria has nothing to do with CBA or economics and nothing to do with a concern for global warning or the poor: it has everything to do with a sustained campaign of misinformation

and abuse. We may now be at the point where its perpetrators will have to answer elsewhere for their actions.

The term 'unacceptable cost' is not mine and was introduced by the Secretariat.

I sent you chapter 6 in its final form (minus some corrected typos): if it did not arrive, do let me know.

Finally, some people seem to think me economics of global warming dictates less action compared to not using economics. Nothing could be further from the truth. The effect of ignoring the economics can be seen: the trivial targets set by countries for the year 2000 which all the models show make virtually no difference at all for the rate of temperature rise. More interestingly, many countries will not even achieve that target (the UK is an honourable exception), including some of those who struck the most moral tone at Rio.

Now look at the economics. Our estimates suggest best guess damages of 1.5-2 % of GNP for 2xC02. This cannot be compared to the very similar quoted costs of control for 50% reductions since (a) the damage figure is for all damage and the control cost figure is for 50% reductions, and (b) the damage figure is a 'snapshot' for one year (the year at which 2xC02 occurs) whereas we know, of course, that the damage continues. The integrated assessment models are very crude, of course, but they look as if they suggest 15% cuts m emissions in the next decade, purely on CBA grounds. The current targets, even if they were to be met, suggest cuts of about 7%. So, me CBA suggests, even on the most conservative of assumptions, a doubling of control effort compared to the stated current intent, and, of course, more than this if we allow for the fact that nations will not even get to the 2000/1990 target. But the CBA is even more significant than this because it embraces the secondary benefits that accrue from greenhouse gas control, and these may be several times the benefits from avoided greenhouse damage. CBA, then, dictates firm and aggressive action.

My frustration with the critics, widely shared by others, is that they have taken just one issue, which they have then deliberately distorted or simply failed to understand, and have ignored totally the analysis that we and others have produced. My long experience of 'single issue' politics is that it reflects motivations quite different to the issues at stake in the scientific debate. We get a long way by analysing 'applause seeking' as one motive. The remaining ones are more insidious.

My guess is that we have exhausted the potential for changing minds with these exchanges and I am sorry that you have chosen to take the stance you have, I think you will find you are wrong on every count.

Yours sincerely

David Pearce

cc John Adams
cc Sam Fankhauser

Sir Crispin Tickell
Green College, Oxford

GREEN COLLEGE
At The Radcliffe Observatory
WOODSTOCK ROAD
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From the Warden:
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Telephone (01865) 274770
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27 September 1995

Professor David Pearce
Director
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Dear David,

Thank you for your letter of 20 September about cost benefit analysis and all that.

You do not persuade me. You may or may not be right about what you described as the hysteria at Geneva, but I think you do yourself a disservice in not recognising the serious and in my judgement well founded objections to your current approach. I am not aware of being used as part of any campaign, but I am intrigued by your thought that "its perpetrators would have to answer elsewhere for their actions".

You say at the end of your letter that you think that I will find myself wrong on every count. You may be right. But I reply to you in the words of Oliver Cromwell to the General Assembly of the Church of Scotland in 1650: "I beseech you, in the bowels of Christ, think it possible you may be mistaken".

Yours sincerely,

Crispin Tickell

1995

Planetary Connections
NEVER GIVE UP!

Triumph for Global Commons as climate economists told to "Try Again"

Economists, who have spent the past two years attempting to estimate what level of resources the world's governments should put into trying to halt or slow the rate of global warming, have been told by a UN Agency to go back and do their work again.

The economists aroused international outrage earlier this year, when it became known that they were valuing the life of a citizen of a developing country at only one fifteenth of the life of an American or European citizen.

What was to have been their final report was rejected at a recent meeting in Geneva of the Intergovernmental Panel on Climate Change (IPCC). "If their estimates of damage had been accepted, the world community would have been advised that little need be done to slow the warming process because it was cheaper not to do anything," said Aubrey Meyer, founder director of the London-based, Global Commons Institute.

> The decision is a triumph for the Institute and its founders, and all those who have been working to oppose what has become known as the 'unequal life valuation'.

When doing their sums, the economists accepted the premise that, many more lives would be lost in the poorer countries than the richer ones, as a result of global warming.

But, extraordinarily, they calculated the value of a human life at what a person is prepared to pay to avoid the risk of dying!

Obviously, the inhabitants of poor countries could afford to pay much less them people in rich countries - one fifteenth was the figure used by the economists.

Hence their conclusion that a life in a developed Western country is worth 15 times more than a life in the so-called Third World!

The figures they came up with reflected these findings: value of an American or West European $1.5 million; value of an African or Indian $100,000.

On this basis the report concluded that the value of damage done as a result of lives being lost was very much greater in the developed countries than in all the rest of the world put together. This, despite the fact that only the 20% of the world's people live in these countries and occupy less than 20% of the world's land area!

GCI circulated these and other corrections before the meeting and by the time it began, there was an immediate and insistent rejection of the unequal life-evaluation used in the economists' work.

But the economists' report was handed to a closed sub-group of "government only" negotiators who spent three days considering what should be done. And an attempt was even made by some governments to prevent non-governmental agencies like the Global Commons Institute speaking during the negotiations.

At the end of the last plenary session of the last day a "final" text was presented to delegates for adoption. The chairman, Mr. Jim Bruce of Canada, insisted that the whole section was passed as it stood and, despite the controversy, brought down his gavel and closed the meeting. All the OECD country delegations, many of whom were professional economists sat in complete silence and allowed this decision to go through unchallenged.

However, at the 11th hour, the Cubans saved the day.

They had been in the queue to speak before the gavel came down and the chairman was obliged to reopen the meeting. Rejecting the text outright, the Cubans pointed out that several arguments had not been answered and that the errors in the assessment had not been corrected. Key developing countries didn't trust the technical validity or competence of the report, in particular the way the distribution of the damages had been worked out.

Brazil also then rejected the report saying that "they were formally protesting on behalf of their government". "This was a quite remarkable outcome" Mr. Meyer said. "But for the final words of the Cubans and others, the game would have ended with the IPCC "knowingly publishing wrong data." So now the economists, most of whom are from rich countries, have two months to reconsider their conclusions for a specially-convened meeting in Montreal in October.

"When Jim Bruce brought the gavel down, I thought all the work GCI had done had been wasted," Mr. Meyer said.

"Funny how even a defeat can be defeated, if you hang-in until the end."

GCI has achieved an enormous amount working on a tiny budget. It needs funding to continue its important work.

1995

Earth Island Journal
The True Cost of Climate Change

UNITED KINGDOM - The International Panel on Climate Change (IPCC) was criticized in Montreal last October for underestimating the financial costs of climate change.

With atmospheric carbon dioxide predicted to double by the year 2050, the IPCC had estimated that 113,000 human deaths, as well as crop and property loses from increased drought, flooding and storm damage could claim 1.5 - 2% of the Gross World Product (GWP -the total value of everything produced in the world in a year).

This prediction may seem frightening, but, according to GCI, the IPCC's report actually minimized the true costs of climate change by valuing the lives of Third World residents at only $100,000 apiece - "a fifteenth of those in the First World" - and assessing a hectare of land in the South as worth one-tenth as much as a similar amount of land in the North.

While 80 percent of the world's people live in the non-industrialized South (an area covering approximately 80 percent of the Earth's surface), the IPCC calculated that the cash value of climate damage would be twice as high in the North.

GCI, however, pointed out that 78 per-cent of added deaths, 75 percent of drinking water losses and 85 percent of all low-lying lands lost to rising seas would occur in developing countries.

GCI's calculations, by contrast, predicted annual losses by 2050 that "could amount to between 4.5 percent and 47 percent of GWP. At the higher end of this range," GCI concluded, "life as we know it would collapse."

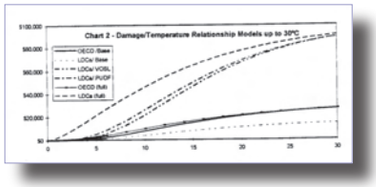
Noting that six of the seven writers of the IPCC report were from the North, GCI pointed out that the authors relied on an economic cost-benefit analysis known as the Willingness-to-Pay (WTP) method, a formula inherently biased against people who have less money to spend.

GCI proposed using a Willingness-to-Accept (WTA) method to determine how much money Third World citizens would need to,

"happily accept higher risks of death from disease, storms, the drying of their rivers and flooding of their land."

GCI speculated that the IPCC ignored the WTA approach because,

"if people say that there is 'no amount' of monetary compensation that would make them happy," it would destroy the premise of cost-benefit analysis and transform the problem from an economic exercise into a moral issue. - GS



OCTOBER 1995

GCI
A Recalculation of the Social Costs of Climate Change

Aubrey Meyer and Tony Cooper

SEPTEMBER 30

New Scientist
Costing Calamity

The fundamental problem with the calculations of the value of human life by David Pearce and his colleagues (This Week, 19 August) is that they were carried out on a willingness-to-pay (WTP) basis rather than a willingness-to-accept (WTA) one.

The team's choice of WTP had the advantage of making it the exclusive arbiter of the value of the damage likely to be done by global warming, enabled it to operate without reference to what the victims of warming, such as small island states faced with oblivion from a rise in the sea level, might be willing to accept as compensation. If it had adopted WTA instead, the compensation demanded could have been so huge that the high levels of fossil-energy use on which the Western economic system is based could not continue.

But WTP has serious drawbacks too. In particular, the values it uses are based on how much money people have and, as a result, it distributes the damage likely to be caused by global warming in an absurd way, with the most costly aspects of the death and destruction seeming to occur in the wealthy countries.

If WTP calculations are done correctly, the maldistribution they produce is so extreme that almost everyone would find their use ridiculous and invalid. The figures show the OECD countries suffering five times as much damage as the rest of the world, despite having only a fifth of its population. But Pearce and his team never reached this conclusion because a mistake crept into their work, which survived peer review and was only pointed out by a non-economist attached to GCI. Their error was to take damage estimates expressed in terms of each country's domestic price levels and divide them by its gross domestic product expressed in terms of the current exchange rate, in order to arrive at the proportion of its GDP that was likely to be lost as a result of warming. In other words, by using domestic purchasing power on the one hand and international purchasing power on the other, they divided apples by oranges. This increased the damage figures for the poorer parts of the world so significantly that alarm bells did not ring and the team was not alerted to the fact that it was using the WTP approach in a confused and inappropriate way.

In his letter to New Scientist last week, Samuel Fankhauser said that the costs of the damage done by global warming and the costs of abating that damage should not be compared.

We at GCI agree that they should not be compared, because, they are paid by different sets of people. The damage done by warming will hurt everyone and its costs are therefore truly global. The assessment of this should be based on WTA. The costs of abatement, however, should fall exclusively on that minority of humankind which is causing the pollution and which is benefiting from doing so. The curtailment of this should be based on the axiom that "the polluter pays".

What this means in this case is that those who cause climate change through using fossil fuel should pay adequate compensation to those who suffer the consequences. And what is adequate compensation? The best approximation has to be whatever sum is produced by WTA calculations.

In short, when the Inter-governmental Panel on Climate Change's Working Group III reconvenes to discuss this issue in Montreal next month, Pearce and his colleagues should be told to revise their chapter to properly reflect the global scale and distribution of the damages. If they won't do this, they should withdraw their chapter so another team may be assembled to prepare a replacement using the WTA approach.

Aubrey Meyer

Global Commons Institute

OCTOBER

ASEED Newspaper
Is One American worth 15 Bangladeshis?

Aubrey Meyer, a South African born musician has proved that one person can make a difference when he took on the world's leading environmental economist, Prof. David Pearce - and won.

Professor Pearce, when calculating the costs of climate change, had assumed that the life of a person in the Third World was worth one fifteenth of the value of a Westerner. His report to the Intergovernmental Panel on Climate Change (IPCC), had a key chapter rejected because a number of Third World countries including India, complained after being alerted by Aubrey Meyer. Pearce's group had calculated that if nothing was done to stop Climate Change, global warming would cost 1.5 - 2 of Gross World Product annually by the second half of the next century. They had calculated that action to limit global warming would cost 2% of Gross World Product annually. Meyer argued that these calculations were based on flawed and immoral, assumptions. The economists' calculations were based

on 2.5°C warming -the average of the IPCC prediction of 1.5 - 3.5°C. Meyer showed that the assessments of damage costs were based on unreliable calculations.

The cost of deaths due to global warming made up a large part of the total damage costs, and was largely based on a single study into the effects of a temperature rise on people in fifteen US cities. The economists, had only considered deaths due to heat stress and storms, not due to disease or malnutrition. Meyer's biggest challenge to the economists was over their calculation of different values of life and property between rich and poor countries. Based on how much people would pay to avoid the risk of death from global warming, the IPCC economists had valued the cost of a lost life in the West at $ 1.5 million and at only $ 100,000 in the rest of the world. Aubrey

Meyer called this "the economics of genocide". David Pearce said his critics did not understand the methodology.

"The report simply says that people value risks differently. That valuation is affected by the level of their incomes."

Two other IPCC economists, Samuel Fankhauser and Richard Tol also responded to Meyer, claiming that the issue of different life values was a red herring. They said no problems with a global average value of life for assessing world damages. However it would be an average value, not the Western value, which would not change the overall results of their work. They said that Meyer's proposal of valuing all life at Western levels was flawed because the point of analysing damage costs in different parts of the world was to assess differences in vulnerability.

The summary for Policy Makers that the IPCC published did not use the economists figures because of Meyer's lobbying. However, it emphasized that while the estimates for the damages to the industrialised countries were only one to two percent of GDP , estimates of damages to agricultural Developing Countries were several times higher.

The irony is that the most of the responsibility for global warming lies with the industrialised countries, which have been responsible for the vast majority of greenhouse gas emissions.

Not everyone in the environmental community is happy about what Meyer did. The Climate Action Network said that the single issue of Pearce's chapter should not have been allowed to distract from the greater goal of limiting climate change.

Bill Hare, a Greenpeace consultant, complained that political pressure like Meyer's

"would destroy the IPCC's integrity as an impartial body and open the way for vested interests to interfere."

NOVEMBER 09

Nature

UN climate change report turns up the heat

London. A report to the United Nations on the economic dimensions of climate change may be published with a key chapter missing unless a dispute can be settled between the chapter's authors and delegates from developing countries.

The chapter, which forms part of an over-all study on the economic and social implications of climate change from working group three of the Intergovernmental Panel on Climate Change (IPCC), suggests that the costs required to slow down greenhouse gas emissions may exceed estimates of damage from climate change.

But the summary of the report, written explicitly for policy-makers and agreed by the working group in Montreal last month, effectively cancels this conclusion. Its writers argue that damage estimates would be higher if the chapter's authors had used the same criteria to assess losses in rich and poor countries, rather than, for example, estimating loss of life of an individual in a poor country at US$100,000, one-fifteenth of the value in a rich country.

As a result, the authors of the chapter have decided to withhold their work unless they are allowed to respond to criticisms of their calculations made in the summary, which is written by experts from governments, particularly Cuba, India, Colombia and the Alliance of Small Island States. "I would prefer to publish the chapter with an addendum making clear why we [the authors] disagree with the summary for policy-makers," says David Pearce, director of the Centre for Social and Economic Research of the Global Environment at University College London and the lead author for chapter six.

A senior IPCC official has said that any changes to the report's content should have been made during two earlier rounds of peer review among governments and independent experts. "At this stage, the authors can make a few editorial changes for clarity of reading, but not changes to the meaning or substance of the report," says James Bruce, co-chair of working group 3.

Under IPCC rules, authors of chapters are responsible for overall editorial content. A chapter cannot be published by the panel unless all authors transfer their copyright to the climate body. One of the authors of chapter six, William R. Cline, a senior research fellow at the Institute for Inter-national Economics in Washington DC, agrees he would rather have the chapter erased from the IPCC's final report than see it included in its present form. But although Bruce concedes that the omission of the contentious chapter "could cause problems" for the IPCC, news of the chapter's probable withdrawal is likely

to be welcomed in many developing countries, as well as in the London offices of the Global Commons Institute (GCI), a group of environmentalists behind the campaign to "rewrite or withdraw" the chapter.

GCI has successfully lobbied developing countries to call for a recalculation of the damage that would result from a doubling of carbon dioxide concentrations by the year 2050 in a way that would require richer countries to shoulder more responsibility for the effects of climate change.

The chapter's authors had valued the damage from climate change at 1.5-2 per cent of gross world product (GWP), the market value of all goods and services sold throughout the world. But GCI argues in a paper written for The Ecologist that damage estimates would be higher - between 12% 130% GWP - if based on a formula that asked countries how much compensation they would be willing to accept for the losses from climate change.

When the authors refused to alter their calculations, GCI persuaded those responsible for the summary for policy-makers to erase references to damage estimates, and include phrases such as "the literature on the subject in this section is controversial", and "the value of life" and "the loss of unique cultures" cannot be quantified.

But Pearce argues that the GCI formula, "is not supported by published data", and would not necessarily have increased the estimates for climate change damage in the developing world. One of the few known research papers to use the 'willingness to accept' method - from the Indira Gandhi Institute of Science in Bombay - resulted in an estimated $10.000 value for loss of life.

Pearce claims that GCI has tried to turn an essentially scientific process into a political one. He says it should not have interfered with the process of independent scientific inquiry.

"The IPCC is not a policymaking body. It is a body of scientific experts. We had strict instructions from the IPCC only to review the existing literature and not create any new literature."

[David Pearce, UCL]

But Aubrey Meyer, the director of GCI, disagrees and says Pearce and his team "are in no position" to label others with the charge of compromising scientific objectivity. Four out of the seven authors of the chapter, says Meyer, are the most frequently recurring names in the chapter's list of references. The same four names, he adds form the majority of references linked to parts of the chapter dealing with damage estimates."

"How can this be an objective process when the authors spent much of the time reviewing each other's work?" he asks. Meyer says that the rule that authors cannot create literature should

be lifted. He adds that the composition of authors should also better reflect the world's demography; only two of the chapter's seven authors were from the developing world.

But Pearce claims that Meyer and his colleagues have behaved "irresponsibly" in seeking to have quantitative references to damage estimates removed from the summary, as "99 per cent of all policy-makers will read this section, not the whole report".

The report is due to be approved at the IPCC's next plenary session in Rome next month.

Ehsan Masood

Ayala Ochert

1995

Tom Wakeford
Scientists for Global Responsibility

"GCI are the best campaigners for non-industrialised people that we know."

NOVEMBER 24

Times Educational Supplement
Green economist faces picket

A British economist is at the centre of a row over his controversial contribution to an international report on global warming.

Campaigners, who claim that David Pearce's methods rate third world lives at one 15th of the value of first world lives, are stepping up their actions, which will include picketing his offices on Wednesday.

David Pearce, an environmental economist at University College London, was leading author for a chapter in the report, for approval next month, of the Intergovernmental Panel on Climate Change's working group three. Group three assesses the social and economic consequences of global warming.

> He and his co-authors produced a result that suggests it would cost more to alleviate the damage caused by global warming than the damage itself will cost.

The chapter successfully passed both governmental and scientific peer review but then upset the writers of its summary, which is read by policymakers around the world. The summary now says that the authors would have drawn the opposite conclusion if they had valued all lives equally.

Aubrey Meyer, of the Global Commons Institute, which has sparked much of the protest, said publishing the chapter "will taint the IPCC irreparably and permanently". He said that the first working group's report, assessing climate change, "is clearly a scientific effort. To suggest that the third group's report is equally scientific is aggrandising their work and the economics profession in general".

Some UK environmental scientists have privately agreed with him.

Critics also say that monetary value cannot be attached to lives.

Professor Pearce, who is director of the Centre for Social and Economic Research of the Global Environment, said that critics did not understand the methodology of the chapter.

"The report simply says that people value risks differently. That valuation is affected by the level of their incomes."

He said that the alternative — to assess everyone equally — would increase the amount spent on disaster aversion and foreign aid:

"We would end up allocating all our national income to life-saving."

[David Pearce, UCL]

NOVEMBER 30

Nature

Economics of climate change

SIR — Further to your news report on the economics of climate change (Nature 378, 119; 1995), I write on behalf of myself and the undersigned*. We note that the Inter-governmental Panel on Climate Change (IPCC) is now due to approve for publication its full Second Assessment Report (SAR) at its plenary meeting in Rome on 11-15 December.

The assessment by Working Group Three (WG3) of the "Social Costs" of climate change (or "damages") will be included in the SAR. This contains the now notorious 15:1 mortality costing between rich and poor people in developed and developing countries. This largely explains why the overall damage figures cited in the chapter (1.5-2 per cent of gross world product) are so low.

Both the global and the regional damage figures are widely regarded as unsafe, so much so that the Summary for Policy-Makers (SPM) of the "Social Costs" written by the governmental representatives at the last WG3 meeting omits reference to these quantitative damage results altogether.

In fact, rather than being a 'summary' of the chapter, the SPM largely concentrates its comments on how much higher the damage results would have been had nondiscriminatory

methods of valuation been used. This has produced a marked inconsistency between the chapter and its summary, which the authors of the chapter themselves have confirmed.

> If IPCC puts its imprimatur on this material by publishing it, this unsafe and discriminatory data will become official advice to the UN negotiating process for at least the next five years.

This would give a disastrously wrong signal at a time when it is becoming increasingly clear that serious policy measures to arrest climate change are now required and when the political tensions over the "differentiated responsibilities" in this task are increasing as well.

> Moreover, if the IPCC goes ahead and publishes in these circumstances, it will violate its own procedures. These clearly state that approval of the SPM signifies that it is "consistent with the factual material contained in the full scientific and technical assessment," and this is clearly not the case.

In these circumstances, IPCC's reputation for procedural correctness and consensus-building around scientific accuracy will be permanently compromised. Consequently we urge the rejection of the "Social Costs" chapter in the report.

Aubrey Meyer

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saveforests@gn.apc.org

Tom Wakeford (Biology, York); Nigel Woodcock (Earth Sciences, Cambridge): Gerald Leach (Stockholm Environment Institute and IPCC lead author): John Whitelegg (Ecologica UK); Ben Matthews (East Anglia): Maneka Gandhi (ex-Environment Minister, India): Vandana Shiva (Centre for Science and Ecology); Bittu Sehgal (Sanctuary Magazine): Medhar Paktar: Claude Alvarez (Third World Network. India); Peter Newell (Environmental Politics. Keele); David Smernoff (Bay Area Action, California); Ernst von Weizsaecker (Wuppertal Institute); Christine von Weizsaecker; Hans Peter Duerr (Max Planck Institute for Physics): Freda Meissner-Blau (ECOROPA); Charles Levenstein (Massachusetts and New Solutions); Brian Moss (Environmental and Evolutionary Biology, Liverpool); George Marshall (Earth Action Resource Centre): John Barkham (Environmental Sciences. East Anglia); Nicholas Hildyard (The Ecologist], Rudolf Lippe (World Decade for Cultural Understanding, UNESCO); Hartwig Spitzer (Center for Science and International Security, Hamburg): Hans Jurgen Fischbeck (International Network of Engineers and Scientists for Global Responsibility); Heinrich Volkert (Protestant Church of Germany); Simon Naylor (Geography, Keele); Martin Rees (Kings College Cambridge); Philip Webber (Scientists for Global Responsibility); Michael Benfield (Town and Country

Planning, University of Newcastle upon Tyne); Wolfgang Sachs (Wuppertal Institute); Angelika Zahrnt (BUND/ Friends of the Earth, Germany); Greg Samways (Environmental Sciences. East Anglia): Susan George (Transnational Institute. Amsterdam); Andrew McLellan (Institut fur Umwelt-wissenschaften. Zurich); Philip Smith (International Network of Engineers and Scientists for Global Responsibility); Christian Azar (Chalmers University of Technology, Goteborg): Karl-Erik Eriksson (Theoretical Physics. Goteborg): P. R. Shukia (Indian Institute of Management, Ahmedabad and IPCC WG3 lead author); Tim Lenton (Environmental Sciences, East Anglia and Plymouth Marine Laboratory).

NOVEMBER 30

Nature
Temperature rises in dispute over costing climate change

London.

Sir Crispin Tickell, one of the British government's leading advisers on environmental policy, has stepped into a fierce controversy about a United Nations (UN) report on the social and economic dimensions of climate change by suggesting that the use of cost-benefit analysis in a key chapter of the report is inappropriate.

Tickell, formerly Britain's ambassador to the UN, is now warden of Green College, Oxford. The author of a book on climate change, he made the comments in an exchange of letters with David Pearce, director of the Centre for Social and Economic Research on the Global Environment at University College, London, and one author of the forthcoming Second Assessment Report of the UN's Intergovernmental Panel on Climate Change (IPCC).

Tickell says cost-benefit analysis "should not be the basis — still less the sole basis — for making policy". But Pearce says Tickell's remarks are "wholly out of step" with government policy. "Being alone does not make you wrong," writes Pearce, a lead author of Chapter 6 of the section of the report prepared by IPCC's working group III. "But it ought to make you wonder if you have the basis for making such a judgement."

Tickell appears to disagree with the decision of the authors of Chapter 6 to use a technique for placing a value on loss of life whose implications are to assign a value in a developing country of one-fifteenth the value in the developed world, as it is based on a country's capability to pay for reduced risk. He describes the results of this method of calculation, known as 'value of statistical life', as "economists' artefacts of doubtful value and subjective character, with almost unlimited capacity to mislead".

But Pearce, questioning Tickell's understanding of the techniques of cost-benefit analysis, says developing countries cannot pay the same as the higher-income developed world. "The resources have to come from somewhere," he writes. "If, for example, they come from reduced foreign aid, we may kill more people than we save."

Pearce cites the lack of published literature exploring the impact of equal value statistical lives — an alternative method for placing a value on life — as another reason for not using Tickell's ideas as the basis for calculations in Chapter 6. "Our remit was to describe what the literature says, not to rewrite it, nor do original research."

The exchange is likely to add fuel to the debate already raging about the methodology used by the authors of Chapter 6 to estimate damage from climate change. The debate has pitted the authors against government delegates to the IPCC, and divided the environmentalist movement over calls from one group, the Global Commons Institute in London, that the chapter should be withdrawn (see Nature 378,119; 1995).

One author has suggested that this should be done on the grounds that a summary designed for policy-makers and written by a team of experts from different governments appeared to contradict the chapter. The summary does not contain quantitative damage estimates, on the grounds that such values are subjective. This author now appears to have withdrawn his objections. And the IPCC says the chapter will be included in the Second Assessment Report due to be approved in Rome next week.

However, a letter in this issue of Nature (see page 433), signed by 38 scientists including Sir Martin Rees, Britain's Astronomer Royal, and Hans Peter Duerr, director of the Max Planck Institute of Physics, says the chapter must go, on the grounds that a summary contradicting the chapter's contents violates IPCC procedures.

But not all environmentalist groups agree with this stance. The Climate Action Network, an alliance of green groups working in the field of climate policy, says this single issue should not be allowed to obstruct the greater goal of limiting the harmful effects of climate change.

The chapter contains "a lot of information relevant to policy-makers", says Bill Hare, a climate policy adviser with Greenpeace International.

Hare also says the Second Assessment Report will not be the last word. The report will be discussed at a meeting of the Subsidiary Body on Scientific, Technical and Technological Cooperation before it is put to the Conference of Parties.

Omitting Chapter 6 before it is even published, "would destroy the IPCC's integrity as an impartial body and open the way for vested interests to interfere", adds Hare.

P. R. Shukla, professor of management sciences at the Indian Institute of Management at Ahmedabad and a lead author for Chapters 8, 9 and 10 of the report, agrees. "We must not throw the baby out with the bath water," he says. But Shukla, whose chapters calculate the costs of slowing down greenhouse gas emissions, says the IPCC should arrange an interim review -"perhaps a supplement to the second assessment report" - that takes notice of more recent literature from the developing world.

Ehsan Masood

DECEMBER

Appropriate Technology
Second victory on climate economics

The economists who calculated the social costs of climate change in terms of people's willingness to pay to avoid damage, have effectively had their work rejected for the second time at the October meeting of the Intergovernmental Panel on Climate Change (IPCC).

A Global Commons Institute (GCI) paper, criticized the economists for discriminatory and arbitrary valuations, and for a failure to allow for the higher range of temperature forecasts made by IPCC scientists.

Government representatives at the IPCC meeting in Montreal agreed with GCI, reproaching the economists that 'the value of life has meaning beyond monetary value', but were not prepared to endorse the suggestions of some countries that research on action to prevent global warming should be based not on 'willingness to pay' the economic value of damages, but on 'unwillingness to accept' damages in the first place.

GCI is calling for the discredited chapter on the economics of climate change to be removed before the IPCC publishes its findings.

Global Commons Institute, 42 Windsor Road,

London NW2 SOS, UK.

1995

Alicia Barcena
Executive Director Earth Council, Costa Rica

"I sincerely hope that we can stay in close contact and explore avenues of co-operation. The three documents you sent are particularly relevant for us in the design of the Earth Report. The information of "global benefit and disbenefit" and related themes for eg offers a very useful analytical approach as well as the trends of global industrial CO2 impact, GDP income and efficiency.

The GCI abstract for the US Global Climate Conference offers a very interesting methodological framework for a systematic analysis. We would very much appreciate if you could continue providing these very useful documents and information on the trends of sustainable development."

1995

Joint IMF/World Bank Library

"Please may we order the full 'Equity and Survival' series of GCI publications."

1995

Dwight Van Winkle,

Citizens Alliance for Saving the Atmosphere (CASA),Osaka, Japan, Atmosphere Action Network for East Asia (AANEA)

A new network for regional cooperation

Current AANEA member organisations:

China: Friends of Nature

Hong Kong: The Conservancy Association

Hong Kong Environment Centre

Japan: Citizens Alliance for Saving the Atmosphere and the Earth (CASA)

Japan Acid Rain Monitoring Network

Japan Air Pollution Victims Association

Peoples Forum 2001, Global Warming Study Group

Mongolia: Mongolian Association for Conservation of Nature and Environment (MANCE)

Russia: Geographical Society, Wildlife Foundation

South Korea: Center for Environment and Development, Citizens

Coalition for Economic Justice (CCEJ), Green Korea

Korean Federation of Environmental Movements

Taiwan: Climate Action Network Taiwan

Taiwan Environmental Protection Union

I have read several times GCI's submission to IPCC WG3. I have always been sympathetic to per-capita emissions allocation, but have never seen such a clear and persuasive explanation of why such an allocation is needed both for ethical and practical reasons. Also, I liked very much your point that climate policy analysts should make explicit the ethical positions and values inherent in their work. So much of the debate on tradable emissions quotas and JI avoids the crucial issue of allocation.

I also agree with you that the Climate Action Network should discuss this issue more.

My group is participating in a newly formed network of East Asian NGOs (Atmosphere Action Network for East Asia (AANEA)) working on atmospheric issues. I want everyone in this network to read your paper, because we as a network need to develop a common position on the issue of equity, and your paper is the best base for discussions I know.

1995

Tom Wakeford and Martin Walters (Eds.)
Science for the Earth

"Here at the Global Commons Institute we are concentrating on the democratization of the climate change negotiations, steering them away from people-less money and empowering money-less people"

1996

MAY

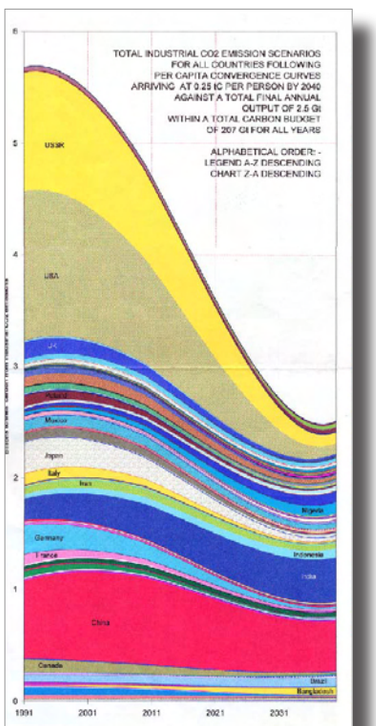
Climax
Tough... but true

By Mark Ballard

What really needs to be done according to the Global Commons Institute.

Talk is Cheap, but Climate Change is expensive

The negotiations on climate change seem to go on and on. What's really on the agenda for COP-2?



Over recent years, global climate change has emerged as one of the most serious international issues which faces our planet.

In the 1990 report from the Intergovernmental Panel on Climate Change or IPCC (the body set up in 1988 by the UN to advise world leaders on the extent of the problem) it was made clear that to continue emitting greenhouse gases at the current rate was likely to lead to catastrophe. By that time however, it was clear that the gap between the scientists and the politicians on what must be done was huge. The scientific working group of the IPCC stated that in order for atmospheric levels of carbon dioxide to be stabilised at current (1990) levels, annual emissions from humans would have to be reduced by 60-80%.

Under intense pressure from industrialised countries, the 'Response Strategies' working group of the IPCC (the group set up to work out what the policies to halt climate change should be) gave "no support to the idea of a stabilisation of greenhouse gas emissions. Unlike many other environmental issues, the Climate Convention is driven by science, rather than broad grassroots concerns. Therefore politicians feel no public pressure to act.

But despite the weaknesses of the 1990 IPCC report in suggesting policy measures, the scientific message galvanised governments to start negotiations, which were completed at the Earth Summit in Rio with the signing of the UN Framework Convention on Climate Change (UNFCCC).

Although at the time many NGOs said that the Convention was far too weak, certain sections of it have begun to have an impact. International negotiations are incredibly tedious and slow moving, but it is now possible to see changes that weren't

expected in 1992. Article 2 of the convention - the objective - is especially important and states that "the ultimate objective of this convention is to prevent dangerous anthropogenic interference in the climate system" - in non-UN speak to stop humans influencing the climate in catastrophic ways. Given that the Convention was to be reviewed in the light of 'the best available scientific evidence', this has proved to be a surprisingly firm commitment.

The commitments nations make to combat climate change need to be constantly measured against the objective. If the commitments aren't strong enough - not in line with the objective, more commitments are needed. However, this objective is not in itself a legally binding commitment. The main outcome of the first conference of the parties (COP-1) to the Convention in Berlin was to start negotiations on how to meet the objective. The current state of the debate is extremely complex. Countries are all trying to get the outcome that most suits their national interest.

Some countries like Saudi Arabia and Kuwait have even threatened to pull out of the convention if they don't get their own way. A great deal depends on whether Clinton wins the US presidential elections - since he is more likely to agree on a real reduction in emissions. However the gap between the increasingly firm scientific evidence of Climate Change and the indecisiveness of the debate is striking. The 60% reduction in emissions of the 1990 IPCC is a million miles from the current discussions. Even the stabilisation of emissions from industrialised countries at 1990 levels by 2000 agreed in Rio will not be reached by most countries. It will be impossible to persuade developing countries like Brazil and Indonesia not to increase their carbon dioxide emissions to Western levels unless they feel that the Western countries are making a real effort to reduce their emissions. That's why sustainability goes hand in hand with global equity.

Politicians lack a sense of urgency. They think people neither know nor care about climate change. We need to make it clear that people across the world recognise the dander. They also refuse to recognise that it is not the emissions that are the problem, it's the system that causes the emissions. Our current economic and political system is based on consumption of finite resources and pollution. Only a change in economic organisation and consumption patterns can stop environmental destruction. This is clear from the scientific evidence - let's make it clear to the politicians.

Sustainability is equity

Aubrey Meyer from the GCI tells us what the real issues should be at the climate negotiations.

The Global Commons Institute exists to explore and explain the linkage between Equity and Survival. This linkage is likely to become increasingly clear with the onset of human-induced global climate changes. If the human causes of climate change - principally fossil fuel consumption - continue unchecked, more and more people in the present and future generations will suffer increasing hardship. If the consumption of fossil fuel is to be seriously cut back to avoid this and reduce the risks of a catastrophe, a global plan must emerge which achieves two things:

‘Contraction and Convergence’

This is the message that GCI will take to Geneva in July to the 2nd Conference of the Parties to the Climate Change Convention.

By contraction we mean a fall in total carbon dioxide emissions. Drawing on the work of the Intergovernmental Panel on Climate Change (IPCC), GCI believes that carbon dioxide emissions caused by fossil fuel must fall by at least 60% against 1990 levels by the year 2040.

This would allow atmospheric levels of CO2 concentration to return to their 1990 levels of 350 parts per million by volume (ppmv). Failure to do this will not only trigger enormous social and environmental damage, it will also trigger massive political resentment towards the nations who are primarily responsible for the over-consumption, which is causing this crisis.

By ‘convergence’ we mean per capita resource use meeting the same level in each country.

Over-consumers must reduce their consumption levels by more than the global average rate to make room for those who consume very little to increase their resource consumption to a point where consumption levels are equal between people. However this levels must be one which does not destabilise the global climate system. This agenda of ‘contraction and convergence’ is not going to be initially easy. The cuts in resource use and emissions for industrialised countries are severe. However, these reductions are possible.

And the 60% cut can be achieved within 45 years from now, if we recognise that we have no other realistic options. The more time we delay starting to reduce emissions the steeper the curves will have to be.

We must therefore deal immediately with the principal obstacle to this programme. And that problem is political. It is the forced and increasing inequity of the global status quo. In a nutshell, a minority of people increasingly consume too much at the expense of the majority of people who consume very little. This is true both within and between nations. Correcting these inequities is not an act of charity. It is common sense. One might even call it the economics of survival.

After all, like everyone else, people who consume too much are also at risk of the damaging consequences of over-consumption. These people cannot realistically expect the rest of the world to reduce their current consumption or their expectations of increased consumption, unless the task is shared fairly between all people and all nations. This is especially true because if the global common property resources like the atmosphere belong to anybody, they surely belong to all of us equally. At the moment damage to global common property is clearly proportional to income, but ownership of these resources is assuredly not.

What is the GCI?

GCI is an independent group of people, mostly based in the UK. GCI's aim is the protection of the Global Commons. The group works on the ecological, economic and political aspects of global climate change. The GCI was founded in 1990 after the Second World Climate Conference. GCI lobbied the Intergovernmental Negotiating Committee for a Framework Convention on Climate Change where we helped to establish the language of equity in the Convention in the run up to Rio. Since then, GCI has been part of the Economics Group of the Intergovernmental Panel on Climate Change (IPCC) where we successfully overturned the mainstream economic ideas which asserted that the value of climate-change-related damages to developing countries and their peoples was less per unit than in the developed countries.

GCI does not have charitable status nor does it receive regular funding from any source. We urgently need financial support to carry our agenda to the COP-2. A substantial record of GCI's arguments and activities is available to anyone who may wish to offer us this support.

GCI, 42 Windsor Road, London NW2 5DS, UK

JULY 29

Big Issue

Global mission impossible

Aubrey Meyer is on a mission to save the world from economists' solutions to global warming. By Camilla Berens

How would you react if you were told that a group of economists had calculated that the value of someone living in the Third World is just a 15th of an American or European?

This is not some madcap theory but the formula being put forward to world leaders as a yardstick to work out the costs of controlling global warming.

In 1990, the influential Intergovernmental Panel on Climate Change (IPCC) - a select group of scientists set up by the United Nations to look into all aspects of global warming - advised the UN that the world would have to cut its greenhouse gas emissions by 60-80 per cent in order to avoid catastrophic climate changes.

"Basically, they're saying that your right to be on this planet is proportional to your income"

As a result, the IPCC commissioned a team of leading international economists to investigate how such a sharp reduction of emissions would affect the world economy and to advise on the best way to carry out such reductions.

But when Aubrey Meyer, a green campaigner with a passionate interest in global warming, read the economists' briefing in 1993, he was horrified. Rather than working out the best way of stalling the effects of global warming the economists were going to work out the cheapest.

"It was clear it had nothing to do with calculating the most efficient way of dealing with the problem. Their task was to work out the slowest rate of increase in emissions that the world could afford. It was putting economics before lives," says the 49-year-old environmentalist.

The economists' findings were to be published in a weighty IPCC report. When a draft of their chapter was circulated in 1994, Meyer's worst fears were confirmed.

The economists' figures were based on how much people were willing to pay to insure themselves against the potentially disastrous effects of climate change, for example in the event of flooding, famine or drought.

"Their conclusion was that an average person in the Third World would only be able to pay $100,000, just a 15th of those in wealthier countries," says Meyer. "Basically, they're saying that your right to be on this planet is proportional to your income."

Meyer believes these calculations were not just racist but could lead to horrific consequences. The IPCC's final report is to play a key role in advising world governments on how to devise a strategy for tackling global warming.

Meyer immediately started a campaign to have the controversial chapter removed. He argued that by putting a lower value on the lives of people in poorer countries, governments could conclude that it would be cheaper to allow some countries to disappear under the sea than to halt global warming.

When you consider that an estimated 85 per cent of all low-lying land and three-quarters of lost water supplies will be in developing countries, doing nothing because it's too expensive "is insanity" he says.

A violinist and composer, Meyer gave up his career in the late Eighties to focus on the global warming debate full time. Working from his tiny London flat, he and three friends - an environmental lecturer, a computer software engineer and the former editor of the Green Party's newspaper - set up the Global Commons Institute. Their aim was to act as an independent voice in the global debate on the greenhouse effect.

Meyer's fears have even worried members of the scientific establishment. Among those expressing concern has been Sir Crispin Tickell, one of the British ` Government's leading advisors on environmental policy.

In a letter to Professor David Pearce, the lead author of the chapter, Tickell asserted that IPCC's economic formula should not be the basis - still less the sole basis - for making policy, and that it had "almost unlimited capacity to mislead". Professor Pearce responded to the controversy by saying it was a storm in a teacup and would make no difference to the results of the chapter.

Despite a growing number of objectors, the chapter was eventually published last month, although the opening summary acknowledged Meyer's concerns.

Richard Douthwaite, a writer and former economist who has been following the debate closely, says the IPCC document is now in a mess: "Meyer has successfully challenged the idea that economics is the best method of finding solutions to global warming but there is nothing to go in its place."

Meyer and his colleagues want governments to agree to a gradual reduction in the amount of carbon emissions based on the principle that the worst polluters be cut the most. "Time is running out," he says. "At best we have 50 years. After that, political conflict caused by environmental refugees, disease, famine and water shortages will make our current lifestyles impossible. Nobody will escape the consequences of global warming. Governments must act before it's too late."

NOVEMBER 17

Scotland on Sunday

Sharing fuel is the only way to save the planet

Everyone knows that global warming is a catastrophe waiting to happen. So why is so little being done to prevent it? Aubrey Meyer blames buck-passing and economic expediency

THE world is running the risk of catastrophic climate change as a result of global warming; but no one has yet taken determined action to avert it.

The reason is that the problems involved in doing so are enormous since . . .

there is an almost perfect correlation between the rate at which countries emit the gases which cause warming and their national incomes.

In a nutshell, those making the money are those making the mess and they are in no hurry to change if that means taking lower salaries.

Only a minority of humanity is causing the problem. In 1990 for example, one third of the world's population used 80 of all fossil energy and enjoyed 94 of total world income. The other 2/3 had to scrape by on the remaining 6.

To make the energy-intensive countries' inertia seem more reasonable, their economists have come along with 'efficiency' arguments to the effect that since it is not 'cost-effective' to reduce emissions beyond a certain point, some rise in world temperatures is inevitable.

But cost-effective for whom? Certainly not for the Bangladeshis and the populations of small islands and low-lying coastal plains who will lose their homes and land as the sea level rises. Perhaps not even for ourselves and the rest of Western Europe if the Gulf Stream falters and our year-round temperatures fall to those of Labrador.

Since what is efficient for some is not efficient for all, the economists' approach must. be abandoned. Instead, a declining but increasingly equitable distribution of the right to use fossil energy among everyone living on this planet is the only way that we are likely to forge an international agreement to avert the looming crisis.

Mrs Thatcher's 'Green' speech to the UN in 1989 tried to blur these tensions, about who was vulnerable, who and what was to blame and what should be done. She suggested, ludicrously, that the rise of greenhouse gas concentrations in the atmosphere was largely due to slash-and-burn agriculturalists in the Third World. Also, and in spite of Chernobyl, she claimed that increased reliance on nuclear power was the only way to

mitigate the primary cause of the warming, namely the carbon dioxide (CO2) emissions from fossil fuel use. Things have moved on since then, but mostly in favour of new and dafter forms of passing the buck.

In early 1990, the Intergovernmental Panel on Climate Change' (IPCC) published its first assessment of the issue of global warming. In this, the "world community of climate scientists agreed that global mean temperature had risen by around 0.5°C since the beginning of industrialisation and that greenhouse gas concentrations in the atmosphere had risen during this period by 25% to an unprecedentedly high level. It was also revealed that there was a significant correlation between these emissions, their accumulation in the atmosphere and the consequent temperature rise because of the heat-trapping character of the gases. Major adverse impacts were predicted such as sea-level rise, increased food insecurity, droughts, floods, storms, disease, migrations, rising human mortality with - in extremis - possibly runaway effects because of major equilibrium shifts in the system as a whole.

Based on the perspective obtained from their computer models of global climate, the IPCC scientists also made a "confident" judgment which has become a notorious issue for policy-makers: to restrain greenhouse gas concentrations in the atmosphere just to 1990 levels would require immediate 60-80% cuts in their emission rates.

This simple statement was and remains a bomb-shell. Although we know what has to be done, we continue to do the opposite and emissions continue to rise. Fossil fuel-burning accounts for 80% of human CO2 emissions; the exponentially expanding formal global economy is 95% dependent on fossil fuel use; and there is a nearly 100% year-on-year correlation between fossil fuel use on the one hand and income or Gross World Product (GWP) on the other. The two oil shocks during the 1970s, for example, showed a loss of GWP which almost perfectly mirrored the contracted use of fossil fuel. The predicted trend is that fossil fuel use rises at 2% per annum globally, and GWP at around 3%.

Received wisdom says that economic growth is the sine qua non of human welfare. So if this is true, how do we achieve this 3% annual growth in the global economy without precipitating a climate catastrophe? Or put the other way around, how do we achieve at least 60% cuts in CO2 emissions to stabilise the rising concentrations of greenhouse gases in the atmosphere, without major contraction of the economy? A 60% advance in the use of nuclear energy would turn an already unstable world into a larger unexploded bomb than it is sane even to dream of. Selectively getting rid of slash-and-Burn farming would not significantly affect the composition of the atmosphere since most of what is burned grows again with the carbon dioxide released being 'recaptured' in the regrowth.

Sadly, the ideology behind the Thatcher UN speech has constantly avoided the real problem which is that equality precedes efficiency in the sustainability stakes.

So vested political and economic interests maintain their ostrich-like 'growth-at-the-expense-of-climate' priorities, even if some things at least come out more clearly into the open. Initially the problem was denied. But as evidence of adverse trends and human cause mounted, the drum-beat of 'cost-effectiveness' and 'efficiency gains' was banged out to a cartoon of technical fixes that would embarrass Walt Disney.

Take 'cost-effectiveness' in this context. Economists moved into the IPCC in 1993 saying, 'cost-benefit analysis' was the solution to this problem - the cost of the damage should be compared to the cost of prevention to established cost-effective policy. Making everything proportional to income, the economist subsequently 'proved' that prevention was the vastly more expensive option. But the costs of cutting pollution were exaggerated because in effect the polluters were auditing their own inconvenience costs. And the costs of the damages were depreciated because they were mostly expected to occur in parts of the world where people had little or no money and were basically regarded as expendable.

The value of mortality, for example, between poor and rich countries was compared on the basis of 15 dead Bangladeshis equal one dead Englishman. One economist quite typically declared that Bangladesh was too poor to be worth saving from sea-level rise. Understandably, this approach was dubbed "the economics of genocide" in the Third World press. It was then denounced by the Indian government at the 1995 round of the UN climate negotiations and the IPCC's economists were subsequently rebuked for their prejudicial methods and daft results.

Then again, take the dubious and relative exercise of 'efficiency gains' in the context of economic growth. Frankly, there is no point in spending any more of the world's income on the diminishing returns of efficiency gains in attempts to develop and deploy sci-fi technical fixes (such as mirrors in the sky and deep-sea deposition of frozen CO2), unless it is set in the prior and absolute context of restraint. The risks are just too high. Fossil fuel consumption, regardless of all other considerations, has to be contracted and contracted equitably from now on, if we are to avoid the worst of the climate changes to come.

Recently we were offered the latest scam of the polluters and their economists: more dollars now for less pollution later, 'the economics of delayed action'. This has been one of the most alarming features of the policy content of the IPCC's Second Assessment Report published earlier this year. Predictably,

industry has leaped on to this ' bandwagon of delayed-action where the argument is that before we can do the right thing we must first become rich and then richer.

Economists now tell us that things must get worse before they can get better even if the world's poor - must be liquidated. Surely reality tells us this is deluded nonsense.

There is an international solution, which we at the Global Commons Institute (GCI) have called 'Contraction and Convergence'.

It proposes contraction of fossil fuel use with international consumption converging from the present distribution, where consumption is proportional to income, to equitable and sustainable levels on a per capita basis globally, in other words proportional to population.

International equity becomes the price of survival. Without this, we conjoin with a trend towards the rich finally committing suicide by continuing to rob the poor.

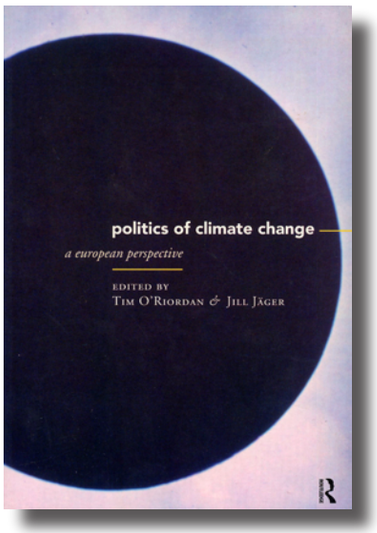
Aubrey Meyer, Director of the Global Commons Institute will deliver a lecture on global warming on Tuesday at 6pm in the Quaker Meeting House, Victoria Terrace, Edinburgh

DECEMBER

Ilona Graenitz
Member European Parliament

I wish to thank you heartily for your excellent contribution to the Linz conference. The conference was deemed a success by the participants I had the opportunity to speak to, and we owe this success in no small part to your contribution, which was both passionate and very convincingly argued.

The Contraction and Convergence idea is one which I am sure is destined to increasingly influence the agenda of negotiations in the future, and I wish you the best of luck in your advocacy work.



1996

Tim O'Riordan, Jill Jager
Politics of Climate Change

Publisher: Routledge ISBN: 041512574X

Economists calculate that the value of a 'northern life' may be up to ten times higher than the value of a 'southern life', and estimate that the total global damage from climate-change-induced events is around $362 billion, or approximately 1.5-2.5 per cent of gross world economic product (see Fankhauser, 1995). The analysts are, however, adamant that this comparison is a rule of thumb that can be adjusted via various statistical weightings, If, however, the value of a life is made equal in money terms, and the purchasing parity of local currency is taken into account, then, so argues the Global Commons Institute (Meyer, 1995), the 'true' damages would amount to $720 billion or 3.2 per cent of GWP.

This would justify, so the advocates claim, much more expensive ameliorating measures now, targeted especially at the Third World. The Global Commons Institute figures are just as politicized as the IPCC economist calculations. Frankly there is no value neutral analysis of the costs and benefits of climate change, or of accommodation to the effects of climate change. To prove the point, the Global Commons Institute analysis, astutely packaged and circulated, has been taken up by the Indian environment minister on behalf of many developing nations. The result is that any scientific assessment is thrown into the arms of politics and international relations. One can readily see how the 'science' loses its significance in such disputes. Yet these disputes are very real and very serious for those at the centre of the negotiations.

These two examples illustrate the problem that climate change science and politics cannot be dissociated either from the political process, or from a wider set of policy issues within which all climate change analyses must be interpreted. These relate to levels of consumption between north and south, luxury US subsistence needs, international trading arrangements, debt responsibilities, aid relationships, population growth, human rights and forms of democratic political cultures in different countries, and the un- answerable theme of who or what is ultimately responsible for inequality and poverty.

1996

Prof. Tim O'Riordan
University of East Anglia
Environmental Sciences Department and Associate Director CSERGE.

"Your papers are a real treasure. I enjoyed the graphs enormously."

1996

Environmental Politics
Valuing the Environment and Valuing Lives

Blueprint 4: Capturing Global Environmental Value by David Pearce. London:

Eanhscan, 1995. Pp.xiii + 212; index. £10.95 (paperback). ISBN 1 85383 184 0

Valuing Climate Change by Sam Frankhauser. London: Earthscan, 1995. Pp.xiv +

180; index. £14.95. ISBN 1 85383 237 5

The Intergovernmental Panel on Climate Change (IPCC) has made a tremendous effort to assess the costs of minimising climate change will do. Its results, recently presented in its Second Assessment Report (SAR), have to be treated with caution however, because if the cost of reducing or preventing climate change has been over-estimated, or if the amount of damage that climate change will do has been set too low, then the world's response to the problem will be less than desirable. Conversely, if the mitigation costs are understated, or the extent of the likely damages put too high, the international community might over-react. As a result, the assumptions on which the SAR is based need to be scrutinised for accuracy, realism and fairness. The need for fairness cannot be over-emphasised since there is little prospect of international agreement on programmes to phase out the practices which cause climate to change, if those responsible for the practices are seen to be evading their responsibilities unfairly.

The question of fairness arises most acutely in one part of the SAR - that produced by Working Group 3 (WG3) under the title 'Economic and Other Cross-Cutting Issues' which will largely be remembered for the so-called 'unequal life controversy' in the chapter on the social costs of climate change. This arose over the placing of money values on the damage likely to be done by climate change. Since people are certain to be killed as a result of global warming, a value had to be put on the lost lives and the authors of one of the WG3 chapters inadvertently created headlines along the lines that '15 dead Chinamen equal one dead Englishman' by using a standard economic method of valuation called 'Willingness to pay'.

All hell broke loose. Some governmental critics of this said lives should not be valued in monetary terms. Others took the position that if lives were to be valued, they should all be valued equally. And many of these argued that the value used should be the industrial country value, as industrial countries have overwhelmingly caused, and still do cause, climate change. Yet others said that the damages should not be caused in the first place, but their voice remains largely unheard.

The books under review here - Valuing Climate Change by Sam Fankhauser and Capturing Global Environmental Value (Blueprint 4) by David Pearce need to be read in the light of this controversy because Pearce was the IPCC's convening lead author of the problem chapter and Frankhauser was one of its seven co-authors. Moreover, Valuing Climate Change was one principal source of the money values of warming damage used in the SAR, and Capturing Global Environmental Value reproduces some significant sections of the IPCC material.

At the time he wrote the material which became his book, Fankhauser was a Ph.D. student writing his thesis under the supervision of Pearce who is a Professor of Economics at UCL. Pearce is also the Director of the Centre for the Social and Economic Research of the Global Environment (CSERGE), the ESRC-funded think- tank where much of this methodology and these texts have been developed and propagated.

In the acknowledgements in his own book, Pearce presumptuously declares that Fankhauser's work was 'work carried out for the Intergovernmental Panel on Climate Change (IPCC)'. In the foreword to Sam Fankhauser's book Pearce also writes, 'Fankhauser shows that measurable damage costs of doubling C02 concentrations (in the atmosphere) are around 1 to 2 per cent of gross world product (GWP). This benchmark figure has to be compared to the cost of reducing emissions. These may amount to 1 to 3 per cent of GWP for a fifty percent cut, if top-down models are used.'

These comments essentially summarise the economists' project - in this case global cost/benefit analysis (G-CBA). The project simply compares the cost of the damages and the cost of preventing some of them. In so doing, it attempts to globalise the economic proposition that purchasing power equals political power. Such an analysis claims to convert all relevant factors to cash equivalent, hence the requirement to 'capture' global environmental value. This is purportedly done in order that those who take the decisions about whether and how much to cut global greenhouse gas emissions, do so 'cost-effectively', consistent with economics jargon written into the Climate Convention. According to the economists, conversion to cash-equivalent requires assessment of how much people are willing to pay for a particular course of action. The exercise is presented as entirely un-prescriptive. However since the dominant policy-objective of the age is 'cost-effectiveness', the mere arrival of G-CBA, let alone the cash values recorded in it, crucially are prescriptive of the approach taken and by extension, whether we arrest or adapt to climate change.

In an exercise of this monetary nature, on this global scale, and especially in a situation where the global polluters responsible for causing these climate changes have grown massively rich through the very processes which now put everyone at risk, one momentarily imagined that common sense would take hold

in the economics profession. Indeed, it seemed inconceivable that there would be a tolerance for the trend to trade fundamental issues of equity against persistently superficial efficiency objectives. Indeed some authors beyond the IPCC like Hohmeyer and Gaertner did take steps to mitigate the methodological effects of raw global neo-classical economics. Hohmeyer and Gaertner, whose report to the EL) on the Social Costs of Climate Change was grudgingly cited by Pearce in the IPCC report, did for example expressly put an equal and high end value on the lives at risk. Ekins, Grubb, GCI and others have also argued clearly in favour of this approach which should be applied to all assets at risk.

But Pearce and his colleagues insisted that in their method willingness to pay is proportional to peoples' ability to pay, so rich people can afford to pay more than poor people and that determines the argument. And moreover, they asserted, poor people should be asked to pay premiums equal only as a proportion of income to those of rich people, and expressly not an equal cash amount. The trouble with this is that it presumes for example that Bangladeshi peasants - most probably innocent in perpetuity of causing a single joule of global warming - when asked what they would be willing to pay to insure themselves against the increased risks of mortality due to human-caused climate changes (or to establish the value of their 'statistical' lives), would agree to this formula and hasten to their nearest insurance broker. More probably, with basic information about the situation properly available to them, they would do no such thing. They would probably say that they would prefer the people causing the problem and putting them at risk, to stop doing so. In fact many in the Association of Small Island States (AOSIS), for example, have been saying precisely this since the Second World Climate Conference in 1990.

However, these sensitive issues notwithstanding, amongst the many categories of damage assessed, the economists' method was explicitly applied to the calculation of the value of the 'statistical lives' of the global population. This was done with economists recognising that we are certainly now faced with the growing risk of rising large-scale mortality due to increasing adversities caused by the climate changes that we are causing. In this situation, the absurd and discriminatory result of the economists' valuation method is made definitively plain in the Fankhauser book. Statistical lives at risk in the industrial countries are each worth $1.5 million.

Statistical lives in 'poor' countries are each worth only $0.1 million, or a fifteenth of the industrial country value. In fact Fankhauser anticipates that annual global mortality consequent on climate changes will reach 138,000 by the time atmospheric C02 concentrations reach twice the pre-industrial level - for him notionally 2050 under business-as-usual conditions and that 80 per cent of this will occur in the poor countries. Leaving

the 15:1 differential unaltered, Fankhauser's assessment of mortality represents 20 per cent of the total damages assessed by him, and is the biggest single sector of damage.

In a global cost/benefit analysis where the ratio of abatement costs to damage costs is so crucial, it is apparent that the ratio is also extremely sensitive to the value returned on mortality which, in turn, is extremely sensitive to the assumptions underlying the valuation of 'statistical' lives. If for example just all the lives to be lost were valued at the high-end value, the total damages would rise by about one per cent of GWP. In fact GCI demonstrated that if all assets at risk were so valued, with IPCC positive feedbacks built onto the full range of climate sensitivity defined by them in the First Assessment Report, the monetary value of annually occurring damages by the time atmospheric C02 concentrations double could rise to 130 per cent of GWP. However, the economists were adamantly opposed to anything more than periodic qualitative remarks about 'uncertainties', knowing full well that numbers are what get remembered and recycled and compared.

Since these climate changes are now observably being caused by the rich among human beings, their discriminatory rich man's methodology was dubbed the 'economics of genocide'. And, as the economists' material advanced its way into the IPCC, there was a stream of disapproval. In fact 'absurd and discriminatory', was what the Indian environment minister called the economists' approach in a letter of protest to the heads of delegations attending the Conference of the Parties (COP) in Berlin in April 1994, adding that 'it should be purged from the process'.

Governments met in July and then again in October 1995, to try to agree a Summary for Policy-Makers (SPM) of the material. On both occasions they were fundamentally in conflict with the authors. They finally agreed an SPM which reads more like a hostile critique of the material it was supposed to summarise, as the following extracts amply demonstrate:

The literature on the subject in this section is controversial and mainly based on research done on developed countries, often extrapolated to developing countries. There is no consensus about how to value statistical lives or how to aggregate statistical lives across the countries. Monetary valuation should not obscure the human consequences of anthropogenic climate change damages, because the value of life has meaning beyond monetary value. It should be noted that the Rio Declaration and Agenda 21 call for human beings to remain at the centre of sustainable development. The approach taken on this valuation might affect the scale of damage reduction strategies. It may be noted that in virtually all of the literature discussed in this section 1). the developing country statistical lives have not

been valued equally at the developed country value 2). other damages in developing countries are also not equally valued at the developing country value.

While some regard monetary valuation of such impacts as essential to sound decision making, others reject monetary valuation of some impacts, such as risk of human mortality, on ethical grounds. Additionally there is a danger that entire unique cultures may be obliterated. This is not something that can be considered in monetary terms, but becomes a question of loss of human diversity for which we have no indicators to measure economic value.

Human life is an element outside the market and societies may want to preserve it in an equal way. An approach which includes equal valuation of impacts on human life wherever they occur may yield different aggregate global estimates than those reported (in the chapter). For example, equalising the value of a statistical life at a global average could leave total global damage unchanged but would increase markedly the share of these damages borne by the developing world. Equalising the value at the level typical in the developed countries would increase the monetised damages several times, and would further increase the share of the developing countries in the total damage estimate.

These books - and indeed the discipline they represent stand or fall dependent on the resolution of the malaise outlined above. It is clear that the authors have at the very least, a professional concern with protecting the global environment. And we suspect that the commitment runs deeper, when we recall the epigraph to Blueprint 2, where Pearce first introduced his efforts to marry economics to the global commons. The epigraph is the following quote from Lorca:

The kingdom of plants and animals is near at hand; though Man forgets his Maker, plants and animals are very near the light. And Poet, tell men that love is born with the same exaltation in all planes of life that the rhythm of a leaf swaying in the wind is the same as that of a distant star, and that the very words spoken by the foundation in the shade are repeated by the sea, and in the same tone. Tell man to be humble. In nature, all things are equal.

TOM WAKEFORD

and AUBREY MEYER

Global Commons Institute

Environmental Politics, Vol.5, No.2, Summer 1996, pp.363-366

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1997

JANUARY 6

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Professor Timothy O'Riordan

Aubrey Meyer
Global Commons Institute
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London NW2 5DS

6 January, 1997

Dear Aubrey,

I am enormously grateful to you for your comments on my chapter for the CUP book. The chapter was always in draft form. Jo Smith now informs me that it will be published by CUP as a wholly new version. This will give me a chance to add a lot more on the material you have so kindly sent, and to ensure you are properly cited. I should add that your enormously committed and stalwart efforts are appreciated by some in CSERGE as much as they are depreciated by others! It is easier for me to talk to you now than it was a year or so ago. Here is another piece by me on the WG3 report - for Environment Magazine - for which again your comments would be welcome. It is also in draft.

All the best for 1997

Tim O'Riordan

1997

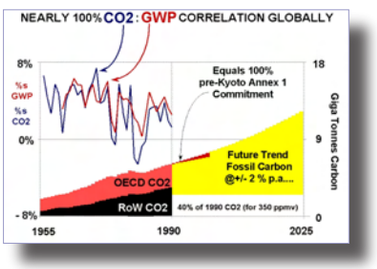
Richels, Manne (IPIECA)
Climate Economics Symposium

"We begin with one widely discussed proposal: a transition to equal per capita emissions rights (globally) by 2030," again allowing the expedient of a "prescription" to "solve" what is otherwise insoluble.

FEBRUARY

Countryside Magazine
Now the big one

The RSPB deserves credit also for highlighting another major environmental problem, global warming. It joined with the World Wide Fund for Nature to announce that climate change and resulting sea level rise threaten the future of the UK's great estuaries and the wildlife they support. The society calculated that 99 per cent of wintering grey plover, 88 per cent of avocet, 75 per cent of dark bellied brent geese, 64 per cent of knot, 61 per cent of black-tailed god-wit and 54 per cent of shelduck used areas at risk of sea level rise.



Barbara Young, the society's chief executive, said: "Global climate change particularly threatens long distance migrants. These birds depend on the use of UK estuaries as 'stepping stones' to make their incredible journeys. Unless urgent action is taken to reduce global emissions of greenhouse gases, these journeys and the birds that make them will not survive." More than 2,500,000 wildfowl stay in the UK for the winter, most of them on estuaries. Millions more use the estuaries as fuelling points on their way to Northern breeding grounds in Spring, or on their way south to wintering areas on the African coast.

A WWF spokesman said a consensus of scientists now agreed that human activity was a major cause of climate change.

"Although the rate of this change in world temperatures - and where they will occur -is still unpredictable, we do know that the impacts are potentially devastating affecting food, water, health and very survival of humankind," he said.

Among many very serious consequences might be migration, homelessness, pressure on land and the spread of tropical diseases like malaria and dengue fever.

"At the last international climate change meeting both governments and non governmental organisations watched in frustration while a small but highly organised group of industrialised countries, led by the oil and fossil fuels lobby, tried to hold the negotiations to ransom with blocking tactics and obfuscation," says the WWF.

It took John Gummer, the UK's environment secretary, and Tim Wirth, head of the US delegation, to bring the negotiations back on course.

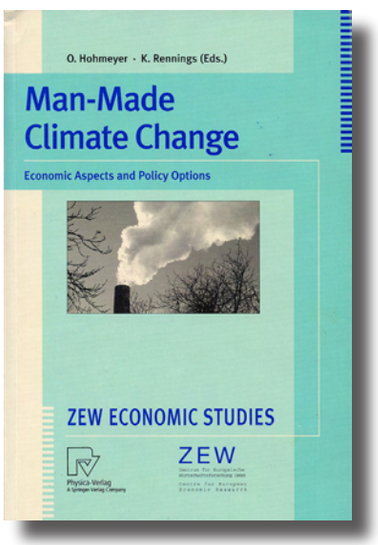
"It is difficult to put a price tag on stabilising emissions- but it is even more difficult to put a price on factors that cause budget deficits, such as homelessness, disaster relief and disease eradication.

It is time we took a longer-term view and put into action some short-term solutions."

What can we do?

Energy conservation is the key to reducing carbon emissions. Reduction in car journeys and the use of high consumption cars would be a step as would home insulation, and widespread use of bicycles!

Also one might support the Global Commons Institute of 42 Windsor Road London NW2 5DS whose director is Aubrey Meyer.



MARCH

ZEW Centre for European Economic Research
Man-Made Climate Change - Economic Aspects and Policy Options

Chapter 15:

The Kyoto Protocol and the Emergence of "Contraction and Convergence" as a framework for an international Political solution to greenhouse gas emissions abatement

MARCH 13

Nature
US seeks greenhouse gas cuts from the Third World

[LONDON] US delegates to the United Nations (UN) climate convention clashed with those from developing countries, the European Union (EU) and environmentalist groups last week over US proposals to include commitments from the developing world in a proposed protocol for reducing greenhouse gas emissions.

At present, only developed countries are required to reduce their greenhouse gas emissions, according to an agreement on the terms of a future protocol reached two years ago. The protocol itself has to be agreed at the next annual conference of the UN climate convention, which is due to be held in December in Kyoto, Japan.

But at a meeting of signatories to the convention in Bonn last week, at which countries presented their initial negotiating positions, the US delegation — apparently with one eye on potential difficulties in Congress — suggested that the original terms of the proposed protocol may need rewriting.

US officials have tabled suggestions that some developing countries should be encouraged to begin reducing their emissions voluntarily, with all countries taking some steps by 2005, possibly according to a formula in which wealthier countries would make proportionately higher reductions, termed differentiation.

China, which leads the block of 77 developing countries known as the G77, has threatened to pull out of the talks unless the US proposal is withdrawn. Privately, however, some G77 delegates are understood to be attracted to the idea of differentiation between responsibilities as a possible basis for calculating commitments after Kyoto.

The EU, the Alliance of Small Island States (AoSIS) and environmentalist groups, such as the Climate Action Network, have also criticized the plans. They prefer the simpler, but politically more challenging, goal of a standard reduction in emissions for all developed countries only. They also want to avoid complicating talks further by ensuring that commitments from developing countries are not discussed until after Kyoto.

AOSIS and environmentalist groups favour the toughest measure: a 20 per cent cut in greenhouse emissions by 2005. EU environment ministers announced a target of reducing emissions by 15 per cent of 1990 levels by 2010. A 10 per cent reduction would be achieved through measures in individual countries (see figure, above right), with a further 5 per cent reduction through other policies and measures.

Australia, a large coal producer, and the oil-exporting countries are calling for compensation for any revenues lost as a result of the protocol, which may force their customers to switch to 'greener' forms of energy.

One environmentalist group, the London-based Global Commons Institute, has emerged as a surprise supporter of the US plans which, it believes, "have the potential" for providing a more equitable basis of emissions reductions.

The institute's director, Aubrey Meyer, points out that the European position is also based on a form of differentiation, as poorer countries, such as Greece and Portugal, have been allowed to increase their emissions. He believes the US plan could "go far with one or two big G77 names" on its side.

But the prospect of reopening the terms of the protocol upsets campaigners such as Merylyn McKenzie Hedger of the World Wide Fund for Nature. "[This idea] risks stalling everything," she says. "Let's concentrate on what's achievable." Nevertheless she believes that a split in G77 ranks could increase support for a flat-rate reduction.

But one developed country delegate says the United States is unlikely to risk derailing the protocol. Rather, he believes the US plans are likely to help shape the terms of a future protocol that includes developing countries, but which will be settled after the Kyoto talks.

The US plan also supports the creation of a market in greenhouse emissions. Countries needing to make small reductions to meet a national target could agree to an extra reduction in exchange for cash or environmental technologies. A country purchasing this 'entitlement' could credit it towards its own emissions target.

Another idea is to 'borrow' emissions from a future period to assist current compliance.

Ehsan Masood

APRIL 2

Guardian

A global gas meter

Aubrey Meyer wants every country to be given a fuel-burning limit

THE United Nations' efforts to a devise a framework so that the countries of the world can reduce their carbon dioxide emissions seem, at last, to be moving in the right direction.

We now accept that warming is a serious problem; we know there are limits to the amounts of fossil fuels we can consume.

We must work out now who gets to burn what and how much.

There is also consensus that the market cannot be the sole arbiter of how much fossil energy each country can consume, as this would entrench the economic power of those wealthy industrialised nations which created the problem.

The equity and survival approach that my organisation, the Global Commons Institute, has been urging since 1990, is gaining ground. Under this, each person on the planet has an

equal right to emit whatever limited amount of gas proves to be sustainable and governments would be issued with permits to match their populations.

The proposals tabled by the US at the climate change negotiations in Bonn this month reflect these shifts of attitude. Since it would be unacceptable for the US to dictate what level of emissions will be permitted in future, their proposals steer clear of doing this. But they provide a potential framework for limits and could lead to an international management for handling the problem.

Another hopeful sign is that the European Parliament has just approved a modified version of a Global Commons proposal, based on each person's equal right to emit. If adopted internationally, this would lead to a reduction in the world greenhouse gas emissions.

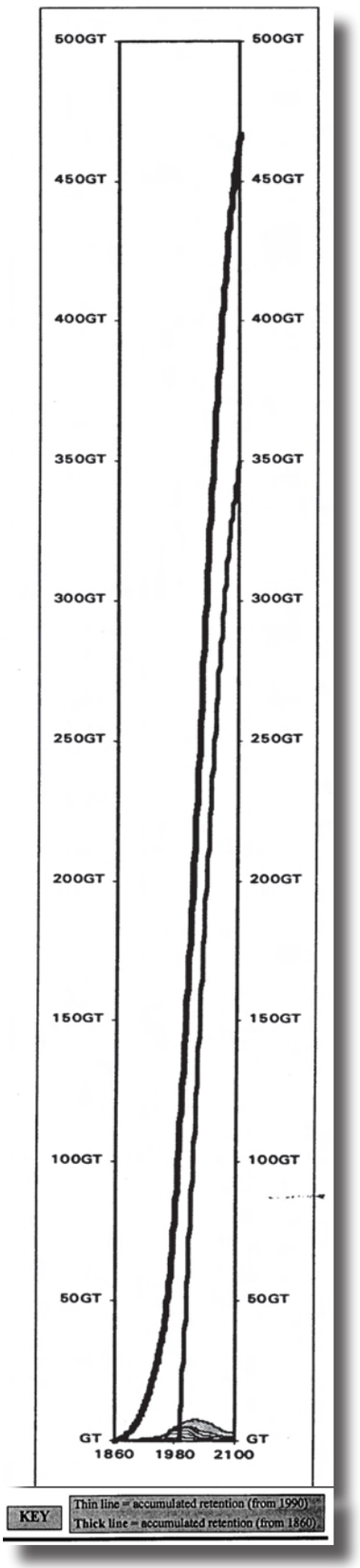
The reduction in emissions could stabilise the atmospheric concentration of the main greenhouse gas, carbon dioxide, at around 450 parts per million. This compares with the current level of 360ppm, so, even if it is adopted, further warming is inevitable. Our model could be adjusted to a lesser impact, but this would require even greater political will.

The European Parliament's version has a small contingency budget on top of the basic scheme, so countries can buy additional entitlements if they pay into a risk-compensation fund. The level of risk would be under continual review and countries would have to re-absorb their emissions if the risks were too high. Countries which bust the limit would face penalties and would not be allowed to increase their international competitiveness by using too much fossil fuel.

This idea may appeal to the Americans, who regard the EU's current proposals for substantial industrialised-countries only cuts as totally unrealistic.

Developing countries could well accept the proposals too, since they will be able to sell any unused emission rights to over-consuming industrialised nations.

Because they can increase their emissions in the short-term, they can make capital investments to allow their production systems to stay within limits in future while still improving living standards.



JUNE

Rio+5 NY
Linking Equity and Survival

The enclosed colour all country "Contraction and Convergence" regime shows a cut of 60% in annual CO2 emissions levels by 2100 as compared to 1990. However, atmospheric concentrations of CO2 continue to rise to 450 ppmv over the next century (to over 70% above pre-industrial levels) in spite of this contraction of human CO2 emissions. It is this persistent atmospheric retention of CO2 emissions which is at the heart of the emerging crisis of human-induced climate change.

Damages from raised atmospheric CO2 concentrations, and the resultant temperature increases, will intensify in spite of the vigorous abatement which is specified in the "Contraction and Convergence" chart shown for avoiding the worst of the damages. The elongated graphic alongside this text attempts to portray this dilemma. The proportion of what is retained in the atmosphere from 1990 forwards will be at least slightly more than half of the total emitted. This is the tall line curve rising from 1990 to around 350 gigatonnes (billion tonnes) of carbon by 2100. Visually this dwarfs the "Contraction and Convergence" programme of annual CO2 emissions. To make this connection, refer to the colour graphic and then recognise it as the black and white blip shrunk to near invisibility at the bottom of the graphic alongside this text. The other line which rises upwards from 1860 to more than 450 gigatonnes by 2100, represents the total of human CO2 emissions retained in the atmosphere since that year.

The international political quarrel over the annual CO2 emissions totals so far has profoundly avoided this ratio of emissions to concentrations and therefore the central point of the United Nations Convention on Climate Change (UNFCCC). The total annual emissions output in 1990 was around 6 gigatonnes. What we absolutely have to focus on is the dangerously accumulating CO2 stock total in the atmosphere from the past and into the future. We must recognise that this upward curve of atmospheric concentrations is going to take many decades of vigorous action to merely stabilise, let alone reduce. This represents the profound global double-jeopardy of rising ecological and political stress where we do the "right thing" but things continue to get worse.

The inserted colour-print sheet: shows global fossil fuel consumption for all countries since 1860 through to the present. It also suggests how future international entitlements to consume fossil fuel might be structured consistent with both the objective and "basis of equity" in the United Nations Convention on Climate Change (UNFCCC). In other words, it suggests what could be considered consistent with the common sense requirement for international fairness and structural reconciliation between all actors and parties to the UNFCCC.

As we commence this awesome task of trying to save ourselves from a potential runaway climate disaster, we have little alternative. The left-hand vertical axis shows gigatonnes of carbon

from CO2 from fossil fuel burning. In this graphic (which is simply one of any number of possible scenarios of future international consumption/entitlements patterns running the GCI CCOptions software), the programme of "Contraction and Convergence" from 1990 through to 2100 is entirely a mathematical invention. It absolutely is not a "trend-prediction". It is a prescriptive planning model. It is not an attempt to guess how the global community might behave on the issue of energy consumption if left to its own inclinations for liberalisation, marginal taxes and efficiency gains.

The graphic delineates a programme of "Contraction and Convergence" where "Contraction" is the global process of cutting global CO2 emissions by a certain percentage by a certain target date.

The absolute purpose of "Contraction" is meeting (one interpretation of) the objective of the United Nations Convention on Climate Change (UNFCCC) namely: - "to achieve ... stabilization of greenhouse gas concentrations in the atmosphere at a level that would prevent dangerous anthropogenic interference with the climate system."

The "convergence" dynamic within the "contraction" programme is based on a judgment that a unitary - even constitutional - focus is required for resolving the deteriorating international disagreement about globally "common but differentiated responsibilities" under the UNFCCC.

In GCI's view, this focus is the imperative of accepting a formal allocative process of "convergence" to equal and sustainable levels of CO2 entitlements on a per capita basis globally. In this graphic the "convergence" date was set for the UN Centenary in 2045. In other words, by that year equal per capita carbon entitlements will have been reached globally. The inter-country representation of this shows that countries' entitlements under the global cap are exactly proportional to their populations from the "convergence" year forward. The "convergence" date would be negotiated reconciling the past carbon debt of the industrial countries with a bearable future balance of international emissions trading, under the overall discipline of continuing global restraint.

If that seems prescriptive - and it is - it is preferable to the status quo where we are prescribing ourselves to oblivion because of a nearly chaotic failure of the political process to engage with the severity of this global crisis.

Some flexibility can be achieved through the international trading of these CO2 entitlements, and trade is assumed in this regime. In fact it could be a way of achieving two crucial things. Particularly during the "convergence period", the economies of the high-end per capita consumers the industrial countries, who contract soonest and to a greater extent than the 60% mean global contraction, could buy permits from the economies of the low-end per capita consumers whose entitlements rise during the "convergence" period.

Whilst the greater purchasing power of the high-end consumers makes this purchase possible, the trade would have the potential effect of generating major revenue for the low-end consumers to purchase and deploy post-carbon energy technologies and substantially avoid future carbon emissions thereby.

If such an international programme was proactively engaged and soon, the avoided emissions - particularly in developing countries - would substantially retard the rate at which accumulating atmospheric CO2 concentrations lock-in rising global disbenefit under the status quo, whilst not compromising - in fact quite possibly enhancing -developing country energy and general development paths.

Those who make the argument that "global problems require global solutions" where the problem is global warming are quite right. But the political price for this is global "convergence" and recognising that "global solutions" - and therefore "contraction" - will be unachievable without it. Equity and survival are thus functionally linked; QED.

by Aubrey Meyer

JULY

Outreach Rio+5
Contraction & Convergence

A global solution to the global climate crisis

Global Climate Change links Survival to Equity. If the human causes of climate change -principally rising fossil-fuel consumption - continue unchecked, very many people of present and future generations will suffer increasing adversity and huge numbers will not even survive.

So if this consumption is to be seriously cut back, a global plan must emerge which formally links survival and equity in a dynamic global policy framework.

The contraction of overall greenhouse gas emissions for survival must be politically enabled through the equity of a planned convergence of international per capita consumption patterns to equal and sustainable levels. Without at least the acceptance in principle of such a framework, we face a continued political stand-off in the United Nations negotiations on Climate Change which will persist beyond Kyoto.

Drawing on the work of the Intergovernmental Panel on Climate Change (IPCC), Global Commons Institute (GCI) advocates that global fossil fuel consumption must contract by at least 60% against 1990 levels within 100 years. According to the climate models, this would cause atmospheric levels of CO2 concentration to stabilise at 450 parts per million by volume (ppmv) by 2100.

If the same was done in 50 years, the models indicate a return to 1990 levels of 350 ppmv by 2100.

Already rising levels of damages attributable to global climate changes indicate the 50 year path may well be more prudent. Low-lying countries like Bangladesh and the small-island states already favour such a path because of the forecast sea-level rises which threaten them with oblivion. A constant process of monitoring damages resulting from climate changes linked to public opinion and scientific review, could help the United Nations Convention on Climate Change (UNFCCC) shape this global budget in everybody's survival interest. However the future allocation of international emissions entitlements under this budget cannot be determined by science.

Nor can the allocation be determined by existing purchasing power disparities in the international markets,

-an argument which until recently the industrial countries were reluctant to forgo. In the name of efficiency, such an approach would simply continue to inflict social and environmental costs on the vulnerable and innocent third parties which the markets consistently deem to be expendable.

This would become an unstoppable vicious cycle in a world where money and people are already increasingly polarised.

Common sense must prevail.

A political process must now emerge with a constitutional focus on equal human rights globally - the logical "basis of equity" in the UNFCCC. Only such an approach has the possibility of securing and stabilising the long-term international co-operation and restraint required to achieve the dauntingly serious objective of the UNFCCC. All our survival increasingly depends on this.

Convergence therefore is to equal fossil fuel consumption levels on a per capita basis globally over an agreed timeframe. In this, above average consumers will progressively contract their consumption levels by more than the global average rate of contraction. This will make room for those whose per capita consumption levels are below average to increase their consumption until the agreed date by which consumption levels are equal between all people globally, whilst collectively being at levels which do not destabilise the global climate system.

The earlier the negotiated convergence date, the greater share to the developing countries, and they are powerfully placed to force a hard bargain at this time. From the convergence date onwards, the contraction process would continue on a pro rata basis globally.

by Aubrey Meyer

AUGUST

Africa Group of Nations
AGBM7

"As we negotiate the reduction of GHG, the countries of Africa believe that there should be certain principles that need to be clearly defined.

A globally agreed ceiling of GHG emissions can only be achieved by adopting the principle of per capita emissions rights that fully take into account the reality of population growth and the principle of differentiation."

AUGUST

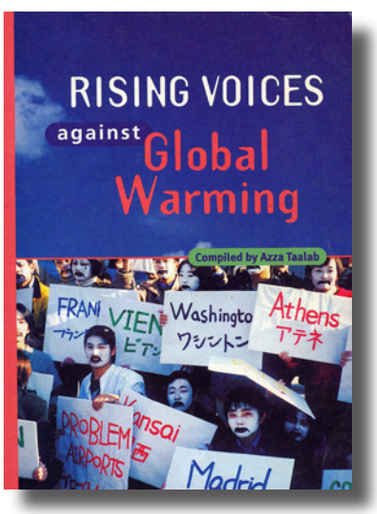
Zhou Dadi
Director Energy Research Inst.
State Planning Commission, China

I am pleased to extend the invitation to you that my colleagues and I would like to have a meeting with you when you visit Beijing in your convenient time during the second week of this July.

You are welcome to visit our institute as well.

The subject of the meeting is to discuss the possible use of model on analysis of entitlement of emission by per capita principle.

1997



Azza Taalab
Rising Voices against Global Warming

Publisher: IZE, Frankfurt

GLOBAL LEGISLATORS ORGANIZATION FOR A BALANCED ENVIRONMENT - GLOBE

"THE OXEN AND THE BUTTERFLIES"

7 December 1997

Ladies and Gentlemen, Excellencies, delegates, members of the press, fellow parliamentarians and beloved Madam Chairman of GLOBE Japan, Akiko Domoto - Welcome to GLOBE. You Madam Chairman are a living symbol of what might be described as the GLOBE motto "think for yourself, and speak for the species." That is what we intend to do in our work here today. We meet in Kyoto at the hinge of the negotiations, as we begin, what I believe is called the "end-game".

The start of the Ministerial Segment is the moment at which the Great and the Jet-lagged join the Wise and the Weary! We know that these negotiations are not a game. The next few days are at the hinge of history. This conference is not pre-destined for success. We all know that there are those here in Kyoto who contemplate a tactical failure. Success this week would not be the end of our work on climate change; but it would perhaps be the end of the beginning.

Success would be a public promise to a grandchild. Failure would be the starting flag for a ferocious future. We parliamentarians, who have come the long road from Berlin via Geneva, think this a time for simplicity and a touch of principle. We parliamentarians are, you see, simple folk. We are the oxen of the world's political system. We observe these great negotiations which map out the future of the species, knowing that our work begins where you negotiators have finished. You need us to vote the laws and pass the budgets which give reality to your formulas. Above all you need us to stand on platforms around the planet and explain to electors: - to explain why the monsoon is late, the rivers are dry, or the floods are rising. to explain why the Forest is burning, the cattle are dying, or in some countries why there is surf in the High Street; to explain above all that these are not Acts of God, but Acts of Man.

We "parliamentary oxen" have longer lives than "Ministerial butterflies", even if we are not as beautiful. We are specialists who carry the political memory of the planet's governmental system. GLOBE with over 300 members can only be here as witness to a greater reality. There are 30,000 elected legislators on planet Earth. Some months ago 95 of our brother oxen in the upper chamber of the United States Congress passed a "Sense of the Senate" resolution. It stated a simple political fact. They could not ratify a treaty unless it was seen to be fair and to be a global solution to a global problem. There are 150 similar parliaments around the world who could, and should pass similar resolutions. The "Sense of the Planet" is that none of us can carry forward climate change legislation if it is not seen to be both efficient and equitable.

Kyoto is a challenge to us all. Climate change is a challenge to us all. It is not a scientific challenge, the science is clear. It is not a technological challenge for we are an innovative species. It is a political, intellectual, institutional, and some would say spiritual challenge.

In conferences over the last two years, GLOBE has adopted and adapted the analysis put forward by the Global Commons Institute, and others, known as Contraction and Convergence. We support this because we believe it to be both equitable and efficient; because it forces us to think in the right time scale 1860-2100; and because its simple dramatic graphic is both flexible and powerful.

It is not the answer, but it is the framework for an answer. It illustrates the problem and the need for an institutional development in which to place emissions trading, technology transfer and the rest. It is an envelope of equity within which we can trade and barter our collective path to sanity. It provides an ethical answer to the ethical question of Southern rhetoric, and an efficiency answer to the efficiency argument of the North.

Any deal must be subject to auditing and validation. Any deal can only be made to work within accepted and robust institutional and intellectual framework.

Contraction and Convergence is the intellectual underpinning for "The Tale of the Three Bubbles". The "European bubble" incorporates the same principle - the less developed must be allowed to continue to grow, in the most carbon-free way possible, while the most developed must make the most severe cuts within a cap on emissions. It is inadequate only in as far as we need a "planetary bubble" that applies the same principle globally. If we need reminding of urgency we have only to recall the "ice-bubbles" in the Antarctic that record the carbon-driven dramas of previous ages.

OCTOBER

Dr Song Jian
China State Councillor Climate Change

"When we ask the opinions of people from all circles, many people, in particular the scientists think that the emissions control standard should be formulated on a per capita basis. According to the UN Charter, everybody is born equal, and has inalienable rights to enjoy modern technological civilization. Today the per capita consumption is just one tenth of that of the developed countries, one eighth of that of medium developed countries. It is estimated 30-40 years would be needed for China to catch up with the level of medium developed countries."

[Dr Song Jian,

China State Councillor Climate Change]

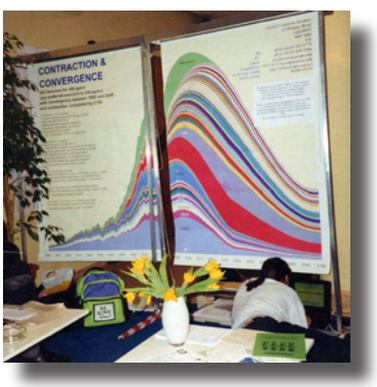
NOVEMBER 20

Nature

Equity is the key criterion for developing nations

If the Kyoto meeting fails to reach a satisfactory outcome many leaders of developing countries are aware that they may be asked to share responsibility for the failure. The question occupying the minds of top civil servants from Brasilia to Beijing, already under pressure to reduce their greenhouse gas emissions sooner than they want, is simple: how should they respond?

So far, the Group of 77 developing countries, which includes India, African states, the Middle East, Southeast Asia and the whole of Latin America apart from Argentina, has been united in its opposition to the US proposals (see above) for developing country commitments.



Unsurprisingly, the poorer countries argue that the rich must take the lion's share of responsibility for combating global warming, on the grounds that they are the prime cause of current problems. Until this happens, the G77 countries say they will also refuse on principle to discuss the issue of emissions trading or joint implementation. But the G77 is an uneasy coalition. At one end of its spectrum of opinion are the oil states, including Saudi Arabia, Kuwait and Venezuela, which would prefer a weak agreement that does not harm sales of oil. At the other are the small island states and low-lying countries, such as Bangladesh, for which a weak agreement may spell environmental catastrophe. In the middle lie India, China and the other large industrializing countries of the Far East and Latin America, who will resist any agreement that would harm their industrial growth.

How developing countries choose to respond to the US proposals remains the key question up to, and even after, Kyoto. There are three possible scenarios. Under the first, the US conditions will be unanimously opposed, even if this means no agreement at Kyoto. Under the second scenario, developing countries will split between those who agree to support the United States, and those who refuse.

The third scenario would see developing countries as a group striking a deal with the United States in which they agree to reduce their emissions at some point in the future, but with the United States providing them with something in return.

Despite their public opposition to the idea of immediate commitments from developing countries, many officials from the G77 and China (which is not a member of the group) seem reconciled in private to the idea of a 'non-binding' side agreement — a 'Kyoto mandate' — attached to the main treaty. Under this, developing countries would make a non-binding

promise to reduce emissions by a certain amount from a specified date. In return, the United States is likely to be asked not to block agreement on targets that would enable developing countries to reduce emissions to a per-capita limit — instead of a flat percentage reduction.

The countries that support this stance believe it to be a more equitable way of distributing emissions reductions.

A per capita-based solution would set an emissions limit, or 'cap', to a specified number of tonnes of carbon per person a year. Countries emitting more than this would agree to reduce their emissions to the required cap by an agreed date. Countries that emit below the cap would be allowed to increase their emissions up to the limit (see graph right).

Per capita solution?

Those who have been promoting the idea that the world's emissions could converge on a single, per-capita figure include the London-based environmentalist lobby group, Global Commons Institute. Aubrey Meyer, GCI's director, says that, if a per capita strategy were to be followed, global concentrations of carbon dioxide could stabilize by 2030 at a level of 450 parts per million by volume of the atmosphere. (This is still well above the pre-industrial level of 280 parts per million; atmospheric carbon dioxide concentrations at present are 360 parts per million.)

Partly at Meyer's suggestion, this idea has already been formally adopted by the African group of countries, led by Zimbabwe. A variation of this strategy also lies behind the decision by European-Union member states to back an average 15 per cent reduction;

countries such as Portugal and Greece would be allowed to raise emissions, while others, such as the United Kingdom and Germany, would reduce theirs by more than 15 per cent.

But some European countries — the United Kingdom in particular — remain nervous about the idea of differentiated responsibilities based on per capita emissions being applied elsewhere. According to a senior British official, this is primarily because of the difficulty in deciding the level at which the cap is set.

A per capita solution is also opposed on strategic grounds by most environmentalist groups, in particular the Climate Action Network, an umbrella group of most of the world's climate-related non-governmental organizations. Indeed, CAN is lobbying developing countries not even to respond to the United States' proposals. (450 parts per million by volume) by 2030.

Jennifer Morgan of CAN in the United States says the organization sees the main problem as the timing—not the principle— of a proposal on per capita emissions. CAN will oppose anything that reopens the original terms of the climate convention in which developing countries are exempt from reducing their emissions.

Morgan describes the introduction of the developing country issue at Kyoto as a flawed strategy which could imperil the prospect of a legally binding treaty. She fears that the United States might use the developing countries as an excuse to veto the protocol if its terms are not to its liking.

Heavyweight support?

> But a per capita based solution has found enthusiastic supporters in the European Parliament, as well as in the Globe network, an organization comprising parliamentarians with an interest in environmental issues.
>
> Globe is engaged in its own lobbying campaign. When governments and environmentalist groups were protesting against the Byrd resolution in the US Senate, Globe took what some saw as the extraordinary step of lobbying senators to support it, arguing that the resolution is a route to procuring agreement at Kyoto by getting the United States to agree to per capita emissions in exchange for developing country reductions.

If it is to go further, however, the per-capita idea needs the support of heavyweights such as China and India.

China is known to be sympathetic, and said so at a recent conference in Beijing. India is believed to hold a similar view, but continues to maintain an unsettling silence.

China's position reflects a debate between traditional Communists, who strongly oppose the US line partly on ideological grounds, and a more pragmatic breed of politician ready to engage with the United States if a long-term benefit for China can be found. On climate change at least, the latter group seems to be winning the argument.

In a speech last month in Beijing, Song Jian, president of China's Council for International Cooperation and Development, said: "China bears no responsibility for reducing greenhouse gas emissions." But he added: "When we ask the opinion of people from all circles, many, in particular scientists, think that the emission control standard should be formulated on a per capita basis." Sir Crispin Tickell, warden of Green College, Oxford, a member of this council, was present at Song's speech. He says this is the clearest indication likely to be given of China's preferred route to emissions reductions.

India, on the other hand, has maintained an uncharacteristic silence about greenhouse gases since the change of government last year which saw the departure of the activist environment minister, Kamal Nath. This could be because India is unwilling to engage with the United States until Kyoto.

Anil Agarwal, director of the Centre for Science and Environment in New Delhi, has a simpler explanation: India's climate policy, he says, is in total disarray.

But Kilaparti Ramakrishna, director of the science and public affairs programme at the Woods Hole Research Centre in Massachusetts, says that India may yet emerge as a major player. "Responsibility for climate policy has been given a higher political priority," he says.

"It used to fall under the remit of the Department of Environment and Forests. But recently it has been taken over by the more powerful Foreign Office, which thinks more in terms of north-south [global] equity. That is a significant development," he says.

The United States, meanwhile, has neither ruled in or out the question of per capita greenhouse cuts. But most US administration officials remain unconvinced about the idea. There is the obvious concern that, under this strategy, the United States would have to make the largest reductions. There is also the view in some quarters that it seems to reward countries — such as China — with large populations and relatively low energy consumption.

Finally, the idea of an equity-based distribution of responsibility to reduce global warming strikes some as being ideologically tainted. In the words of one US official, "To me this is global Communism. I thought we'd won the Cold War."

But the idea still has its strong supporters. Indeed, many now feel that an international commitment to per capita based targets, rather than absolute goals, is most likely to produce a solution at Kyoto that both rich and poor countries will be prepared to swallow.

Ehsan Masood

DECEMBER

Prof Saifuddin Soz
Indian Environment Minister

"In any discussion, "Contraction and Convergence", the central point is entitlements - equitable per capita entitlements. At Kyoto we had stressed that any discussion on emissions trading ought to be framed in terms of per capita entitlements.

[Prof Saifuddin Soz,

Indian Environment Minister]

Any trading can take place only after the emissions entitlements of the trading partners is defined and legally created - equitably of course. Historical emissions are iniquitous and cannot be the basis of entitlements. Entitlements will define the sharing of the atmosphere on an equitable basis which also brings together all the cooperative mechanisms in the Kyoto Protocol in a common framework."

DECEMBER

Corner House
Briefing No.3 - Climate and Equity

"....The aim would be for per capita emissions globally to converge, allowing developing countries to increase their per capita emissions upwards, while those of developed countries would contract to meet them. This jointly-agreed pattern of carbon use would take place under an agreed carbon ceiling.

Contraction & Convergence

Accepting per capita emissions as the cornerstone of any future framework for controlling emissions may open the way for negotiating a long-term agreement that takes account of the differing circumstances and means of all countries; meets the developing countries' demands for fairness; accepts the need for eventual limits by developing countries; and meets the prerequisite for an effective long-term international agreement to avoid dangerous climatic change.

One proposal, originally put forward by the London-based Global Commons Institute (GCI) and subsequently taken up by the Africa Group of Nations, suggests a three-fold process for building such a framework:

First, countries would set an internationally agreed global ceiling on CO2 concentrations in the atmosphere for the next century. This ceiling would be negotiated internationally and the agreement would include a scientific review process every five years to allow the target to be revised up or down in the light of new knowledge.

Second, countries would agree a global "carbon emissions budget" for each year of the next century in order to reduce global CO2 concentrations progressively to within the agreed ceiling. The rate at which the "emissions budget" declined year by year would be a matter for negotiation.

Third, countries would agree to allocate the annual CO2 budget among each other on a per capita basis and with a view to per capita emissions converging by an agreed date.

Sharing the right to use the world's atmosphere on an equal basis is the fairest and most durable way of dividing the CO2 budget. As with all the other "targets" in the proposal, the year for convergence would be a matter of negotiation.

In effect, the proposal would tie parties into a negotiated, but flexible, programme for reducing emissions which would also ensure that, within a fixed period, no one enjoyed the right to emit more than their fair share of greenhouse gases, as agreed by the international community.

The resulting process of "contraction and convergence" would thus see those in the North cutting emissions, whilst those in many countries of the South would be able to increase their emissions for a period determined by the agreed ceiling, the resulting global carbon budget and the agreed convergence date within it.

It is clearly easier and cheaper to avoid future emissions in developing countries where, for example, fossil fuel-fired power stations have not been built on any scale, than it is in fully industrialised countries where it will take a generation to reverse existing dependence on fossil fuels. However, the South's ability to leapfrog fossil-fuel dependency may depend on their access to clean, energy-saving technologies currently being developed in North as well as South. Given sufficient political pressure, Northern industrial interests may be persuaded to "gift" such technologies. In the short-term, however, initially rising allocations of emissions entitlements in developing countries could be traded with industrialised countries whose allocations are contracting from the outset.

Such "emissions trading", however, would need to be strictly regulated if it is not to be exploited by companies seeking to dump outdated, polluting technologies on the South or to use the threat of doing this via "relocation" as a means of driving down the pay and conditions of workers. Care must also be taken lest emissions trading become a means of postponing action to curb emissions as companies buy up the South's future development options.

It is thus critical to place emissions trading firmly within the framework set by contraction and convergence. As GCI puts it,

"Contraction only makes sense if one accepts the science of climate change. Convergence only makes sense if one accepts the need for contraction and the need for equity. Trading emissions only have a place if they are set in the discipline of contraction and convergence and if used as a tool for achieving flexibility within the overall constraints that contraction and convergence defines. Otherwise they would simply make matters worse."

Negotiate, Negotiate. As GCI is at pains to point out, the concept of linking contraction to convergence does not in itself dictate future emissions targets — but the negotiated application of the concept does. In effect, "contraction and convergence" provides a framework through which targets might be set on an equitable basis and then applied internationally.

GCI's own view is that the targets would need to be considerably more stringent than those put on the table at the December 1997 meeting of parties to the Climate Convention in Kyoto. One problem is that although scientists now recognise that humanity is dangerously close to the cliff's edge, they do not know exactly how close. The current scientific consensus

is that anything more than a doubling of atmospheric CO2 concentrations over pre-industrial levels — 280 parts per million by volume (ppmv) — which on current trends will happen by the year 2040, is "likely to cause dangerous climate change".

To keep global CO2 concentrations in the atmosphere below that level would require global CO2 emissions to be reduced progressively by 60-80 per cent of 1990 emissions.

As GCI points out, significant climatic damage is already being caused at current atmospheric CO2 concentrations, which stand at just 30 per cent above pre-industrial levels. GCI therefore suggests that a future carbon budget resulting in an atmospheric CO2 concentration of no more than 450 ppmv (60 per cent above the pre-industrial level) by the year 2100 should be agreed as the maximum upper limit. This could then be negotiated downwards as evidence of climatic damage and human causation became more apparent.

Under this carbon budget, with a convergence date of, say, the year 2030, the per capita emissions entitlement globally at convergence would be about one tonne of carbon per person per year. To reach that figure, Britain would need to reduce its emissions by 50 per cent and the US by 77 per cent. Meanwhile, China would be permitted to increase its emissions by no more than 41 per cent and Bangladesh by no more than 2354 per cent. Thereafter, all would progressively reduce their emissions pro rata to a final per capita entitlement of 0.2 tonne of carbon per year by the year 2100.

Support for the principle of setting emission limits on a per capita basis has already been expressed by leading negotiators from China and India, in addition to the Africa Group. The US, meanwhile, has neither ruled in nor ruled out the notion of per capita emissions. The space for negotiation is thus open. Indeed, as the prestigious science journal, Nature , remarks:

> "Many now feel that an international commitment to per capita based targets, rather than absolute goals, is most likely to produce a solution at Kyoto that both rich and poor countries will be prepared to swallow."

www.thecornerhouse.org.uk/briefing/03climate.html

DECEMBER

COP-3 (Kyoto) Final Plenary
Emissions Trading

ZIMBABWE: [for the Africa Group]

" . . . . . we do support the amendment that is proposed by the distinguished delegation from India, and just to emphasise the point of the issues that still need a lot of clarification would like to propose in that paragraph the inclusion, after "entitlements" that

is the proposal by the delegation of India, the following wording; after "entitlements, the global ceiling date and time for contraction and convergence of global emissions because we do think that you cannot talk about trading if there are not entitlements, also there is a question of contraction and convergence of global emissions that comes into play when you talk about the issue of equity . . . . . "

Chairman:

I thank you very much. ..... May I ask again the distinguished delegate of the USA if they have another suggestion to propose in connection with the proposals made by the distinguished delegate of India. He does.

UNITED STATES OF AMERICA:

" . . . . It does seem to us that the proposals by for example India and perhaps by others who speak to Contraction and Convergence are elements for the future, elements perhaps for a next agreement that we may ultimately all seek to engage in . . . . "

www.gci.org.uk/temp/COP3_Transcript.pdf

DECEMBER 12

British Environment & Media Awards
Andrew Lees Memorial Award

"Aubrey Meyer, almost single-handedly and with minimal resources, has made an extraordinary impact on the negotiations on the Climate Change Treaty, one of the most important of our time, through his campaign for a goal of equal per capita emissions, which is now the official negotiating position of many governments, and is gaining acceptance in developed and developing countries alike."

DECEMBER

Tom Spencer
Chair Euro-Parliament. Foreign Affairs Com.

"Many of you know the Contraction and Convergence analysis. It offers a framework for an answer. It offers an envelope of equity within which we can trade and barter our way to collective sanity in the coming decades."

DECEMBER 12

Independent
Now the test for Kyoto resolution

Seen in the harsh light of dawn, what did more than a week of round-the-clock negotiation in Kyoto achieve? Nicholas Schoon, Environment Correspondent, examines the brave new world created by the new anti-global warming treaty.

Things will never be the same again... perhaps. In Kyoto the nations of the world agreed on a decisive step to begin tackling the threat of man-made climate change. But it will take about six years before you can judge whether nearly 30 developed nations - which agreed to cut their annual output of six key global-warming gases - are serious about the new Kyoto protocol.

First, they will have to sign and ratify the treaty to make it legally binding- and there are major doubts about whether the biggest polluter, the US, with its anti-Kyoto majority of politicians in Congress, will.

Secondly, their governments will have to make a prompt start on implementing the policies needed to stop emissions of these gases rising. They have a few years to change the upward trend into a decline in order to comply with the provisions of the new United Nations treaty.

Overall, it means a 5.2 per cent cut in annual emissions of climate-changing greenhouse gases from the developed world by 2012, compared with a 1990 baseline. The European Union has agreed to an 8 per cent cut, the US to 7 per cent and Japan to 6 per cent. Although EU nations felt strongly that the US and Japan should cut emissions with the same flat rate, the fact that they took the issue most seriously and called for a deeper cut than any other group of countries has ended up with them being allocated the largest reduction.

As for Japan, its negotiators argued remorselessly and successfully in Kyoto that the nation hosting the treaty conference was a special case. Japan uses fossil fuels with high efficiency because it has virtually none of its own - they all have to be imported. As a result, it produces relatively few of the greenhouse gas emissions associated with these fuels

considering its huge productivity and wealth. Under the final agreement, Russia has to stabilise its emissions. Australia, Iceland, and Norway are allowed to increase their global-warming pollution by 2012: they all pleaded successfully that they were special cases.

Environmentalists are, discreetly, rather pleased by the final agreement. Given how far the major industrialised nations were apart at the start of the conference, the depth of cuts agreed is slightly more than they were guessing at its start.

It was the Americans who caved in most of all, but there is a risk the Republican-dominated Congress will refuse to ratify the treaty. Jeremy Leggett, a former campaigner with Greenpeace who now promotes solar power, said: "I'm quite encouraged. Now we'll see whether this treaty starts to transform the energy industry." He said it sent a clear signal to big oil companies that their sales of polluting fossil fuels would be capped in the developed world, and encouraged them to move into renewable energy sources. In the long run the developing countries will have to be brought into the treaty if it is to be effective in slowing the rate of climate change caused by pollution.

The most rational way of dealing with the problem seems to be the "contraction and convergence" approach advocated by the London-based Global Commons Institute. Under its scenario, every inhabitant of the planet would be allocated the same quantity of greenhouse gases to emit, divided out of a total which kept climate change within tolerable limits.

The most rational way of dealing with the problem seems to be the "contraction and convergence" approach advocated by the London-based Global Commons Institute. Under its scenario, every inhabitant of the planet would be allocated the same quantity of greenhouse gases to emit, divided out of a total which kept climate change within tolerable limits.

This would give every country, whatever its wealth, a certain quota of pollution. Developed countries have more than their fair share of this quota, while many developing nations still have less. The institute says all countries should be able to trade their quotas through a free market.

1998

FEBRUARY

Mrs. Rungano Karimanzira
Chair, Africa Group

Allow me from the outset to express my most sincere gratitude to Globe International, particularly its President Tom Spencer; the Director of Global Commons Institute (GCI), Aubrey Meyer… for inviting me to this very important meeting. Your support is greatly appreciated. As a non-Parliamentarian it is indeed a great honour to address such an august body. My credentials are simply that I have chaired the Africa Group since my election to the INC bureau at its tenth session and represented the region from COP1 through to COP3.

When we met amongst ourselves to exchange views on the progress of the negotiations, delegations from Africa felt something was not right. We failed to define our role on this process. We battled to find a common position that could influence the course of the negotiations. We were all aware that the ship was sailing without us but we needed a legitimate reason to jump on board too.

A long time had passed between the INC process to COP2, the momentum of the negotiations was slowly picking up as we were preparing for the COP3 and yet we could not find legitimate inroads into the negotiations. Having been faced with the responsibility to convene the Africa Group I took upon myself to try and establish that missing link.

It was at this point that GCI participants were called upon to explain their approach – this time very slowly.

It was then at AGBM 8 in August 1997 and after a series of early morning workshops that most of the African delegates present took a strong interest in what GCI was presenting all along. Their approach provided the link between our national goals and aspirations and realisation of the ultimate objective of the Convention with all parties playing an active role. Contraction and convergence is indeed the only approach available today that addresses questions of equity, fair and sustainable emission reduction targets, ensures that an acceptable level of per capita emission was agreed upon and maintained by all throughout the world.

Furthermore this approach allowed growth in developing countries (increasing their emission levels) while developed countries are compelled to assume an environmentally sound economic growth pathways and reduced emissions. This then would level the playing field that has been skewed in favour of developed countries at the expense of developing countries.

> It was our belief that such an approach not only goes beyond merely linking environmental considerations to economic growth but also includes vital issues such as human development, participations of communities in decision making and social and economic justice…… Therefore the approach of contraction and convergence presents a new economic development paradigm for the twenty first century and beyond.

I believe that this is the time to lobby vigorously for support for the GCI contraction and convergence approach sooner rather than later.

The time to act is now. Mr Chairman. Let us go on the offensive to ensure that every citizen of the world has an equal responsibility for reducing emissions of GHGs.

Protection and preservation of mother earth should thus be our immediate preoccupation.

> Africa reaffirms its position on contraction and convergence included in her statement at AGBM 8 in Bonn in August 1997.

APRIL

Earthwatch
Energy-backed Currency Units

A new means to phase out fossil fuel consumption

REMEMBER KYOTO, LAST year's international conference on limiting global warming which had rather limited results?

Well, the United Nations has called an equally high-powered conference on the same subject for Buenos Aires (November 2nd - 13th) and, this time, the prospects are more promising. There's an excellent chance that the world will move beyond mere voluntary undertakings and that a workable, enforceable plan for cutting greenhouse gas emissions will emerge.

If it does, one man can claim a lot of the credit.

He's Aubrey Meyer, who once played the viola professionally in the BBC's Ulster orchestra and composed two successful ballet scores. In 1990, Aubrey decided that tackling climate change was more urgent than making music and, with a few friends, set up the Global Commons Institute which he runs from his cramped flat in North London. His influence on the course of the international debate on the issue has been immense.

For example, he single-handedly derailed an attempt by an international group of economists to work out how much warming it was economically sound to stop. He did this by showing that the group's cost-benefit calculations had valued the human lives expected to be lost in Asia as a result of climate change at only a fifteenth of the value they put on North American and European lives lost from the same cause. This invalidating their entire approach, especially in the eyes of international organisations.

CONTRACTION & CONVERGENCE

Now he's come up with 'Contraction and Convergence', a plan for reducing greenhouse gas emissions. Under the plan, an overall limit on the world's total greenhouse gas emissions is fixed by international agreement for every year in the next century so that the eventual level of these gases in the atmosphere does not exceed twice their pre-industrial level. You won't be surprised to hear that in order to meet this ultimate target, the use of fossil energy has to steadily contract.

Once these annual limits have been set, the right to burn whatever amount of fuel as fixed for any year is shared out among the nations of the world on the basis of their current population. In the early stages at least, some nations will find themselves consuming less than their allocation while others will be consuming more, so it is proposed that under-consumers should have the right to sell their surplus to the energy junkies. This key feature of the scheme will generate a healthy income for some of the poorest countries in the world and give them every incentive to follow a low-energy development path.

For the past two years, Aubrey has been attending meeting after meeting explaining the plan, with the result that it was adopted by a ten-to-one majority by the European Parliament in September. Developing countries have welcomed it too and the 113 countries in the Non-Aligned Movement made it their policy at a recent meeting in South Africa.

The only opposition to the plan is coming from people who are ideologically opposed to any form of emissions trading.

Anyway, C&C, which is, when you think about it, the only conceivable basis for a united world response to the climate problem, has been taken on board by the system and is effectively out of Aubrey's hands.

NEW GLOBAL CURRENCY

So now he's moved on to another problem:

'What currency are over-consuming nations going to use to buy extra energy consumption permits from the poorer ones?'

This question would not occur to most people but if the wealthy nations can use their own currencies to pay, they will get the right to use part of their additional energy for free.

Why's this? Well, the countries he's concerned about operate reserve currencies such as the dollar, sterling and the D-mark which other nations keep in their gold and foreign currency reserves to give credibility to their own currencies. Dollars amount to 57% of these reserves - so many of the dollars the US pays out for its imports never return to the US in payment for American goods but stay in central banks around the world. This is one of the reasons why the US has been able to run a balance of payments deficit year after year, taking more from the rest of the world than it gives back

As Aubrey doesn't want industrialised countries to be able to continue to use excessive amounts of fossil energy because they run reserve currencies, he worked with a friend to devise an international currency which would stop them. Here's how the system they devised would work: Each month, the IMF (International Monetary Fund) would assign Special Emission Rights (SERs, the right to emit a specified amount of green house gases and hence to burn fossil fuel) to national governments according to the Contraction and Convergence agreement. It would also issue energy-backed currency units (ebcus) to the governments on the same basis as the SERs, and hold itself ready to supply additional SERs to whoever presented it with a specific amount of ebcus.

This fixes the value of the ebcu in relation to a certain amount of greenhouse emission and through that to a certain amount of energy. The ebcu issue would be a once-off to get the system started. If a government actually used ebcus to buy additional SERs from the IMF, the number of ebcus in circulation internationally would not be increased to make up for the loss the ebcus paid over to the IMF would simply be cancelled and the world would have to manage with less of them in circulation.

In other words, the IMF's obligation to supply additional SERs is strictly limited by the amount of ebcus it puts into circulation - there is no open-ended commitment.

Governments receiving SERs would be free to buy and sell them internationally, and the price set by these sales would establish the exchange rate of their national currencies in terms of ebcus, and thus in terms of energy and each other. Countries would keep ebcus in their foreign exchange reserves and relate the amount of national currency in circulation to the value of the ebcus and any other external currency they held. If a country allowed too much of its own currency to get into circulation so that its economy expanded faster than it became more energy-efficient, its demand for fossil energy would rise. This would either alter the country's exchange rate in relation to the ebcu,

making energy more expensive and thus discouraging its use, or run down its foreign exchange reserves, thus cutting the amount of money in circulation, which would also have the effect of cutting energy consumption back. So the system is nicely self-balancing. National economies could only grow by becoming more fossil-energy efficient, which is just what we want.

I explained in my last Earthwatch article that the current crisis in the World economy is due to excess production in relation to people's ability to buy. However, it is being made much worse because the world's currencies are not backed by anything apart from confidence, a quality which is in short supply these days. That's why the dollar and the yen are moving so erratically up and down. Aubrey's energy-backed currency would be much more stable than any of the present reserve currencies. It would represent something real. Will his new idea get anywhere? Who knows? But if you were looking for someone to persuade the world community about anything, Aubrey's your man.

Richard Douthwaite is an economist and writer based in Mayo. You'll find out more about his ideas in his books The Growth Illusion and Short Circuit.

Globe International
Climate Change & the G8

On Sunday the 17th of May, the leaders of the developed world and Russia will sit down in Birmingham at the World Economic Summit to discuss climate change.

They will discuss emissions trading and the involvement of the developing world. They have an opportunity to consolidate the gains made in Kyoto and to include the developing world on an equitable basis, in an agreement that would last for centuries.

Alternatively, they can lower their vision and settle for a short-term 'hot-air' swap with the Russians that will outrage India and China and set back progress in climate change negotiations due to culminate at COP4 in Buenos Aires in November 1998. A sub-global agreement ignoring two thirds of the world would be a sordid and short-term cop-out.

Not only is the latter choice undesirable, it is unnecessary. There is a global solution to the self-evidently global problem of climate change that already commands widespread international support.

GLOBE International adopted the "Contraction and Convergence" analysis in May 1977. Since then, I and my colleagues have campaigned for its acceptance. This pamphlet

is a record of those efforts and provides a short summary of the work of the Global Commons Institute (GCI) in this field. I would like to pay tribute to all the GLOBE parliamentarians who have fought so hard for this cause and particularly to the work of Aubrey Meyer and the GCI team on whose brilliant analysis the campaign is based.

"Contraction and Convergence" is the only practical and convincing way forward for the world. It is vital that the G8 leaders recognize this and commit themselves to negotiating ahead of COP4 the global solution for what everyone accepts is the global problem.

Such negotiation can only be based on the principle of equity and the establishment of the robust and flexible model contained in these pages.

MAY

Jim Phelps
Chairman of ZEAL, South Africa

Dear Environmental Friends

When I was in England at the University of York some years ago, I met former South African, Aubrey Meyer, who is with the Global Commons Institute (GCI) in London.

He is an outstanding and tenacious environmental activist, and is largely responsible for C&C, a brilliant and practical solution to deal with the global warming disaster looming ahead.

This is the mother of all environmental threats. The GCI solution has been gaining increasing international recognition.

You need to know about it.

MAY

Independent
Maverick musician could put a stop to global warming

Geoffrey Lean on how Aubrey Meyer is winning a lonely battle

SENIOR politicians and negotiators from around the world are meeting in the House of Commons this week to promote a "world-saving" idea - dreamed up by a middle-aged musician in the prosaic north London suburb of Willesden.

They believe he may have found how to cut the Gordian knot of international efforts to combat global warming; and they aim to catch the attention of the leaders of the world's eight most powerful nations at this week's Birmingham summit.

The meeting - to be chaired by former environment secretary John Gummer, and addressed by the present Environment minister, Michael Meacher, is being put on by GLOBE International, an association of parliamentarians from 100 countries. It marks an extraordinary coming in from the cold for 51-year-old Aubrey Meyer, who has spent years battling industry, governments and environmental pressure groups. Now his plan - for fairly sharing rights to emit carbon dioxide, the main cause of global warming has become the policy of India, China and the whole African continent. The Clinton administration invited him to Washington to brief its senior officials.

The story is a remarkable triumph of stubbornness, obstreperousness and sheer bloody-mindedness - all orchestrated from a tiny backroom in a cramped ground-floor flat. No 43 Windsor Road, Willesden, is a undistinguished house in a Victorian terrace. There is little to mark it out from its neighbours except a bright window box of geraniums, an "Adopt a Whale" sticker on a pane, and - when I turned up last week the strains of Mr Meyer playing the challenging Sibelius violin concerto.

Inside are three small rooms, each with a bed built over head with no space to sit up in it -just beneath the ceiling, for Mr Meyer, his wife and eight-year-old daughter. He himself sleeps above a poky study filled with files, laptops, two fax machines, a high-quality colour printer and not enough space to swing a catalytic converter.

Born and brought up in South Africa, he came to London in 1968 on a scholarship to the Royal College of Music, specialising in the viola. He played for the London Philharmonic, was principal violinist for the Gulbenkian Orchestra in Lisbon, and wrote the score for the Royal Ballet's Choros, which won an Evening Standard award.

He was looking for a subject for a musical when he first became interested in the environment. He read a newspaper interview with Chico Mendez, the Brazilian rubber-tappers leader later assassinated for his work to protect the rainforest, and began researching the issue.

The musical never got written, as Meyer went green. He joined the Green Party, but was quickly disillusioned. So he decided to set up his own organisation, focusing on global warming. He sold his viola - "like amputating a limb" - to buy a computer, and with typical cheek grandly called his shoestring project the Global Commons Institute.

He quickly developed a simple proposal: that everyone on earth should have the right to emit the same amount of carbon dioxide. Taking the best estimate of scientists - that emissions will have to be reduced by 60% per cent by the end of the

next century he worked out (with the help of a mathematician friend, Tony Cooper) what each nation would be allowed on this basis, and produced graphics to illustrate it.

Industrialised countries (that have emitted four-fifths of the pollution so far) would be allocated much less in future. Developing countries would be allowed more than at present but would have to moderate their growth. But they could sell their emission rights to the rich, earning money to develop less polluting technologies and making it easier for the bigger polluters to adapt.

The idea ran into as much opposition from environments groups as from governments and industry, and he endured "lonely dog years", financing his operation with the occasional small grant from well-off sympathisers.

He has little time for the established groups, but admits that his personality didn't help create good relations: "Everything they say about me is true. I'm bloody rude, disruptive and confrontational." Obsessive? "Maturely so, I hope."

But eventually the persistence paid off, and events have now put him centre-stage. Last December's Kyoto agreement sanctioned trading the rights to emit carbon dioxide.

He says, with some justice, that his is the only existing proposal on how this could be done. The United States is insisting it will not ratify the agreement unless developing countries also agree to limit emissions; Mr Meyer says he has worked out how this could be done, in probably, the only way the Third World would accept.

Meanwhile the US, Canada and Japan are exploiting a loop-hole in the Kyoto agreement by negotiating to buy up vast amounts of spare Russian capacity to pollute, infuriating both Europe and the Third World and endangering the whole treaty.

This week's meeting will present Mr Meyer's plans to the summit as a convincing alternative.

Persuading the biggest polluters such as the US will be difficult.

Michael Grubb, director of energy and environment at the Royal Institute for International Affairs, says:

"No one has come up with a more logical way of solving the problem fairly, but in the real world it is likely to be a nightmare to get agreement on it."

Mr Gummer says that Mr Meyer's concept is "crucial". He adds: "I don't see how we can get a global answer to climate change unless there is a degree of global justice."

JUNE

Grace Akumu
Coordinator Climate Network Africa.

Dear Aubrey

May I congratulate you, and GCI for the consistency you have demonstrated since the climate negotiations started. Climate Network Africa is very proud of your work and will continue giving our support Please do not despair even if sometimes (and most of it) the G-77 reacts, rather than be on the offensive. I think it is mainly because of the complexity of the issue at hand and the diversity of the Group; politically, economically, socially and culturally.

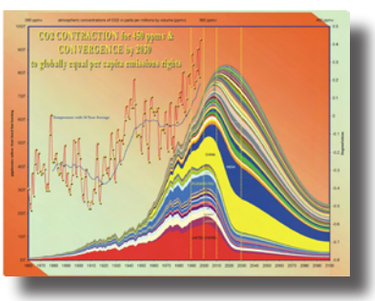
But let's just keep on hoping that one day we shall move mountains.

Pass my regards to all your colleagues at GCI.

JUNE

Parliamentary Monitor
An Opportunity to Correct the World's Climate Damage

Labour MP, Alan Simpson, argues that the time has come to correct the damage that has been done to the global environment



JOHN PRESCOTT leaves London for China in July to try and breathe fresh life back into the negotiations to broker an international deal on curbing greenhouse gas emissions. He would do well to place equity at the centre of discussions. Unless equity is firmly on the negotiating table, the prospects of any deal at all on climate change are absolutely zero.

Few scientists now doubt that the earth's climate is changing and that, if corrective measures are not taken soon, humanity will slide into a period of intensified climatic disequilibrium. Yet international action to curb emissions has been virtually non-existent.

At the 1992 Earth Summit, held in Rio de Janeiro, most countries agreed to return their emissions of greenhouse gases to 1990 levels by the year 2000.

Few are doing so. Indeed, emissions in the US have risen.

The international conference on climate change in Kyoto last December was supposed to break this deadlock. Little, however, was achieved. The pollution cuts in the Protocol agreed at Kyoto and now awaiting ratification are the result of chaotic horse-trading amongst a few countries and are ridden with caveats;

even if they are delivered, they would have negligible effects on the dangerously-rising levels of atmospheric greenhouse gas concentrations.

Prescott knows this. He knows too that the chances of effective international action depend critically on the willingness of all governments to settle their differences and agree a collaborative framework for addressing climate change.

> For China and other Southern countries, equity has always been the starting point for any deal.

Their position is clear: no individual should be denied the possibility of surviving climatic change because of their poverty, race, class, gender, religion or geographical location. Likewise, any "solution" that denies people in the South the resources and technologies that they may seek to build (or rebuild) sustainable livelihoods in a rapidly warming world - whilst permitting the use of those resources and technologies in the North - would be profoundly hypocritical.

If equity is to form the basis for allocating future emissions of greenhouse gases, then Northern countries should shoulder the prime responsibility for making cuts in greenhouse gas emissions. The developing countries are not the ones that have created the problem of global warming - and expecting them to forego development options in order to correct a problem caused mainly by others is patently unfair.

Equity presupposes, however, that everyone takes responsibility for keeping their future emissions within social and ecological limits. Many Southern countries argue for emission targets to be set on a per capita basis, rather than merely a percentage increase or reduction over 1990 levels. The aim would be for per capita emissions globally to converge, allowing developing countries to increase their per capita emissions upwards, while those of developed countries would contract to meet them. This jointly-agreed pattern of carbon use would take place under an agreed ceiling.

Accepting per capita emissions as the cornerstone of any future framework for controlling emissions may yet open the way for negotiating a long-term agreement that takes account of the differing circumstances and means of all countries. It meets the developing countries' demands for fairness yet foresees the need for eventual emissions reductions by them as well. It suggests the framework for an effective long-term international agreement to avoid dangerous climatic change.

One such proposal, originally put forward by the London-based Global Commons Institute (GCI) and subsequently taken up by the Africa Group of Nations and GLOBE International, under the leadership of Tom Spencer MEP, suggests a four-fold process for building such a framework:

• First, countries would set an internationally-agreed global ceiling on CO2 concentrations in the atmosphere for the next century;

• Second, countries would agree a global "carbon emissions contraction budget" for each year of the next century in order to stabilise global CO2 concentrations within the agreed ceiling. The ceiling and budget are held under review;

• Third, countries would agree to allocate the CO2 budget amongst each other as the result of international per capita emissions paths converging by an agreed date, and;

• Fourth to reduce global emissions at the least cost, the allocated emission entitlements would be tradable amongst the parties to the above arrangements.

The resulting process of "contraction, convergence, allocation and trade" would thus see those in the North cutting emissions in situ or paying a social-ecological market premium for their over-consumption to those in the South.

Meanwhile, Southern countries would be able either to sell or to use their emissions entitlements consistent with the negotiated programme of contraction and convergence.

Contraction and convergence is, in effect, a means of allocating property rights to the commons that constitutes the climate system globally.

However, in the absence of such a framework, these property rights are being established on an ad hoc basis by the biggest polluters who are currently appropriating rights to global climate on the basis of their past and present emissions. Trading emissions entitlements under these circumstances will not only mean that the climate is sold off over the heads of affected local communities but it will also compound the problem of negotiating an international settlement consistent with the objective of the UN Climate Convention.

Small wonder that countries like China and India are insisting that the issue of property rights be sorted out before the US or other industrialised countries push ahead with any deals involving emission trading. These rights can be negotiated but they must not be pirated.

The Labour Party has set its stall out to address the "big picture". At a global level, contraction is the big idea which holds the picture together. Without it, nothing is sustainable. There is a growing awareness that sustainability can only be achieved if it is founded on the primacy of global equity in preference to free markets and new technology. If John Prescott can broker agreement on this basis, it will be the most ethical policy the world has seen.

JUNE 19

Guardian

Emissions that count

> . . . . But hovering in the wings is a proposal, known to be acceptable to almost everyone in the developing world and increasingly by the developed countries. It would seem to resolve almost all US objections to the Kyoto agreement, and has the advantage of being demonstrably fair, pragmatic and politically neutral.

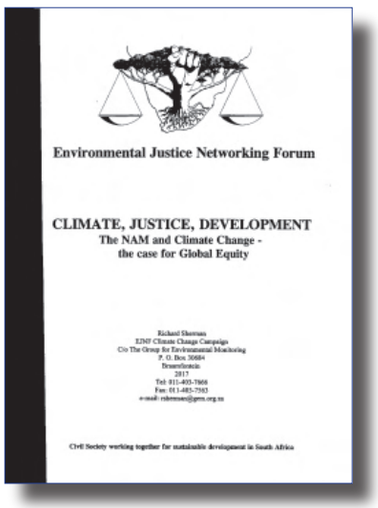
"Contraction and Convergence" (C&C), dreamed up by the small Global Commons Institute in London, is based on two principles: that global emissions of greenhouse warming gases must be progressively reduced and that global governance must be based on justice and fairness. Rather than look at emissions on a country by country basis, C&C proposes reducing emissions on a per capita basis.

It means agreeing internationally how rapidly greenhouse gas emissions should contract each year and then allocating permits to emit them to all countries on the basis of their populations. The permits would be tradeable, so that those countries which could not manage within their allocations could buy extra ones from those with a surplus.

> It would strengthen the global economy and address many of the concerns of the WTO, the IMF and the World Bank by channelling money to poor countries not as aid but as a right. Its simplicity and its potential is appealing and it has powerful supporters, including Svend Auken, the Danish environment minister, his counterpart Jan Pronk in Holland, Michael Meacher in Britain, Jacques Chirac and Klaus Topfer of the UN environment department.

The British royal commission on environmental pollution has advised the government to press for an approach like this, and many developing countries, including China and India and the Africa group, have voiced support. Insurers and MPs from various countries, even US senators, have publicly shown enthusiasm. Even Tony Blair has said that the C&C approach "merits full consideration . . . ."

www.guardianunlimited.co.uk/globalwarming/story/0,7369,509220,00.html



AUGUST

GCI
Climate, Justice, Development – A Policy Briefing to the Non Aligned Movement on Climate Change; the case for Global Equity

AUGUST 26

GLOBE
XIVTH International General Assembly

ACTION AGENDA

Global Response to Climate Change

We, Members of GLOBE International: . . .

7. Support the adoption of a mandate at Buenos Aires to redefine the way in which greenhouse emission cuts are currently shared between countries, following the principle of equity enshrined in the Contraction and Convergence analysis, and urge the summit of the Non-Aligned Movement countries meeting in Durban, RSA, to persist in demanding an equitable approach as a precondition for their participation in COP4 at Buenos Aires.

http://www.globeinternational.org/archives/giga/gigaXIII98/actionagendas/climate.html

NOVEMBER

Environment
The Politics of Buenos Aires

Success at COP 4 will depend on the unprecedented interaction of many political dimensions and cannot be predicted using traditional analysis.

A particular mindset and considerable determination will be necessary to influence, or at least substantially track, the politics of the Fourth Conference of the Parties to the UN Convention on Climate Change (COP 4) in Buenos Aires in early November. On one level, the political issues debated in Argentina will be very simple: Nations will engage in re-engineering their economies for the 21st century in line with the proven need to substantially reduce the burning of fossil fuels. Viewed at length, however, this is a paradigm shift on par with the industrial or agricultural revolutions of previous centuries. It is a question not simply of what countries will do but how they organize what must be done.

A shift of this magnitude has abundant complexities. National efforts to redress past follies are expressed in technically complex negotiations, largely conducted using the ground rules of traditional diplomacy. The process is both geographically dispersed and bureaucratically arcane. The number of people party to the negotiations is inevitably small and their disagreements are not easily explicable to the general public. Inevitably but regrettably, this semipublic process is being heavily lobbied by interests vested in the fossil fuel industry who seem to cultivate confusion and promote inaction. Timing becomes the dilemma: Action needs to be taken immediately to mitigate adverse consequences in the next century. Parliamentary democracies, however, favour four-year time frames.

The scope of climate disruption is genuinely global and requires a global response, but current global institutions are inefficient, partial, untried, and in some cases as yet uninvented. The slow and painful process of institutional reform will most likely be hindered by current economic distress unless the crisis proves so catastrophic that it provokes a fundamental reformation of ideas.

Success at COP 4 will depend on the unprecedented interaction of many political dimensions and cannot be predicted using traditional political analysis. Major players in this system cannot opt for anything less than success. Failure is difficult to explain domestically, especially considering that renowned scientists continue to present the stark national consequences of international failure.

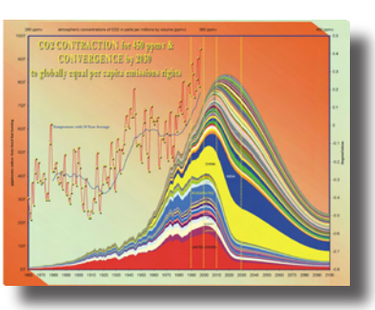
As the process deepens, it inevitably involves a greater number of countries and a wider range of political elites. The work initiated by scientists and civil servants has been taken up by diplomats and environment ministers. It now also requires parliamentarians to ratify decisions while finance ministers consider the fiscal and monetary consequences. In each political system the climate change debate highlights the weak points of a national culture. The U.S. administration finds itself blocked by a lobby-driven Congress. The European Commission must negotiate under the constraint of the national sensitivities of 15 governments. In Japan, the issue is fought out by rival bureaucracies and reflected in the fractured party politics of the Diet. In China, only recently have the ecological costs of the country's intensive industrialization been seriously acknowledged.

In India, a new government seeks to be the regional superpower while most of her nearly one billion people continue a rural struggle for survival in an ever more fragile environment.

As a small group of environmentally committed parliamentarians. Global Legislators Organisation for a Balanced Environment (GLOBE), based in Brussels, recognizes the scale of the political task that faces participating nations. However, GLOBE believes that there are ways to avoid being overcome by a millennial pessimism. The group has sought to find a common language and an acceptable time frame in which to conduct these political debates.

GLOBE has adopted and promoted the "contraction and convergence analysis" developed by the Global Commons Institute, which aims to determine the amount by which global carbon emissions must be reduced and how to distribute the burden equitably.

The analysis, as shown in the figure on the next page, is an elegant representation of the challenge that faces humanity and the solution that lies within our grasp. It is, however, merely a model to frame diplomatic and political activity. It is not an answer, a mandate, or a magic totem. It illustrates the shared nature of humanity's predicament and points towards a conclusion that maximizes both efficiency and equity.



It provokes ideas to enable political elites to escape from the four-year time trap. It has visual impact, and it powerfully communicates the nature of the choices to the world's electorates. It seeks to use instruments such as markets to correct the malfunctions that we unknowingly stumbled into in the adolescence of our industrial age, all within an achievable political time scale.

It has neither winners nor losers. It points to those habits that will destroy us, as well as to those survival. instincts that can save us.

As the technical battles rage over sinks and senates, clean development mechanisms and dirty politics, we all must struggle to keep our heads above the wealth of demands. Our constant concern must be to keep our bearings and ask ourselves whether any particular decision takes us closer to the rendezvous with reality. Never before has humanity been so starkly faced with the choice of "hanging together, lest we hang separately."

Tom Spencer, GLOBE International, Brussels and Chairman, European Parliament

Foreign Affairs Committee NOTE: The figure shows information on four axes: The lower horizontal axis is a time series in years from 1860 to 2100: the upper horizontal axis shows concentrations of the greenhouse gas carbon dioxide rising from 280 parts per million by volume (ppmv) to 450 ppmv over the same time period; the left-hand vertical axis shows tons of carbon measured as 'gigatonnes' (billions of metric tons) from carbon dioxide emissions from fossil fuel burning from all countries globally. The countries are organized into three groups: the countries of the Organisation for Economic Cooperation and Development (OECD) at the bottom with the countries of the Former Soviet Union immediately above the OECD Together these two groups comprise the Industrial Country group or the so-called Annex I of the FCCC. All the remaining countries of the world are above the Annex I group. In each group the countries are ordered upwards from largest to smallest emitter based on 1990 carbon dioxide output values; the right-hand vertical axis shows temperature as points of a degree Celsius.

The two overall time periods are the past and the future. The past is reported from observed data. The future is not a prediction - it is a projection of Global Commons Institute's (GCIs) "Contraction and Convergence" model.

Note that concentrations rose from 280 ppmv to 360 ppmv by 2000, a rise of 30 percent above pre-industrial (observed data continues until 1997); global mean temperature rose by 0.6 of a degree Celsius (observed data continues until 1997): data for carbon dioxide emissions from fossil fuel burning is that reported by the Carbon Dioxide Analysis and Information Center (reported data for emissions continue until 1996 followed by estimates reported by the developed countries for themselves until 2000). The developing countries between 1997 and 2000 were assumed to continue growing at the growth rate averaged in the first part of the decade.

The future (from 2000 to 2100) is an example of "Contraction and Convergence." This is a projection and can be revised during the budget period. It is just one example among an array of possibilities of how the model might ultimately be used to get international agreement

The rates of "Contraction and Convergence" are assumed to be 100 percent flexible within the constraints of the algorithms. Consequently the allocations that result from an agreement based on "Contraction and Convergence" need to be internationally tradable with 100 percent flexibility as well.

"Contraction" is shown here so that greenhouse gas emissions are steadily reduced globally by 2100 to an annual output value of 40 percent of 1990 output values. The integral (accumulated total) of this particular contraction budget (2000 to 2100) is 640 gigatonnes carbon. Taking the average of the IPCC climate models, this gives a stabilization value by 2100 for atmospheric concentration of carbon dioxide of 450 ppmv as a suggested value for meeting the objective of the FCCC. The purpose of this aspect of the figure is to demonstrate that stabilization of atmospheric greenhouse gas concentrations requires by definition a contraction budget. Albeit with different integrals and time frames this is true no matter which outcome greenhouse gas concentration value is chosen.

"Convergence" in the model is the specific and progressive method of organizing the future international shares of the agreed contraction budget in a manner that is globally inclusive, globally equitable, and also globally tradable. Convergence starts from whatever the initial given distribution is and progresses incrementally to a chosen date in the next century (in this example it is 2030) after which international shares of the global contraction budget stay equal on a per capita basis globally. The model also enables the population numbers (United Nations medium fertility predictions to 2050) to be frozen in the accounts at any date (in this example it is 2030).

The whole exercise taken together should be regarded as "Contraction, Convergence, Allocation and Trade."

SOURCE: Global Commons Institute

SEPTEMBER

Heads of Government Conference Non-Aligned Movement (NAM)

In August and September the NAM held a heads of Government conference in South Africa. Combining the logic of "Contraction and Convergence" with the trade Article 17 of the Kyoto Protocol (KP), the NAM agreed the following statement: -

"Emission trading for implementation of (ghg reduction/limitation) commitments can only commence after issues relating to the principles, modalities, etc of such trading, including the initial allocations of emissions entitlements on an equitable basis to all countries has been agreed upon by the Parties to the Framework Convention on Climate Change."

OCTOBER

European Parliament

This is a formulation of C&C by the Parliament that was carried by 90% of the vote. It reflects inter alia that nearly all European Environment Ministers have also publicly endorsed C&C.

"Calls on the Commission & Member States to take the lead in brokering an agreement on a set of common principles & negotiating framework beyond COP4 based on:

1- agreement to have a worldwide binding limit on global emissions consistent with a maximum atmospheric concentration of 550 ppmv CO2 equivalent,

2- initial distribution of emissions rights according to the Kyoto targets,

3- progressive convergence towards an equitable distribution of emissions rights on a per capita basis by an agreed date in the next century,

4- across-the-board reductions in emissions rights thereafter in order to achieve the reduction recommended by the Intergovernmental Panel on Climate Change (IPCC),

5- an agreement to have a quantitative ceiling on the use of flexibility mechanisms that will ensure that the majority of emission reductions are met domestically in accordance with the spirit of articles 6, 12 and 17 of the Kyoto protocol; in this context trading must be subject to proper monitoring, reporting and enforcement;

6- an adequately financed mechanism for promoting technology transfer from Annex 1 to non-Annex 1 countries;"

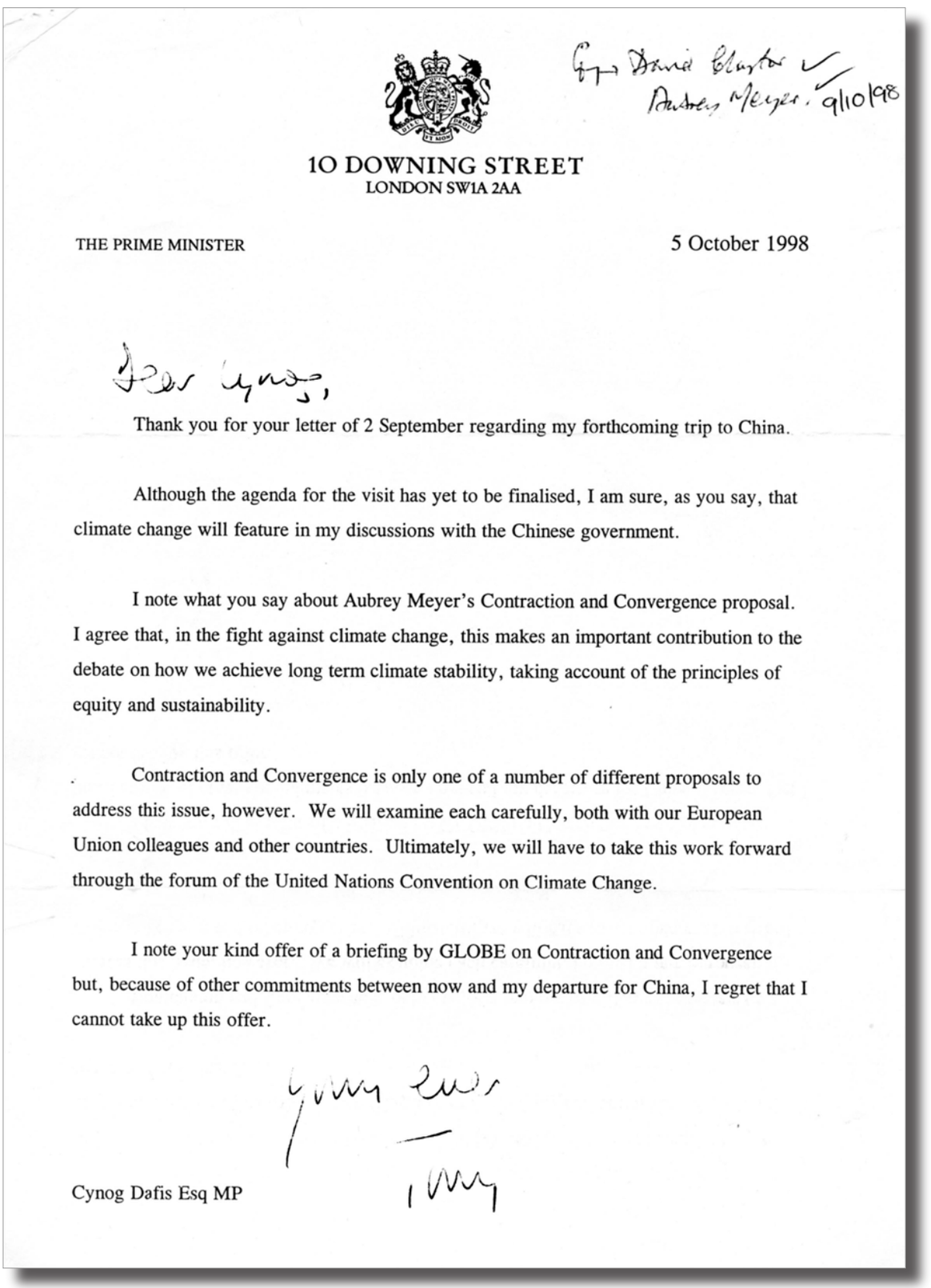
OCTOBER

Sir Robert May
UK Government Chief Scientist

"Thank you for the information on "Contraction and Convergence" policy and the efforts by GCI and GLOBE to build up global support for it. These matters are clearly of great importance and I would agree that this approach merits full consideration, including at the senior international political level along with other ideas contributing to the development of a workable global climate strategy."

Tony Blair
Prime Minister United Kingdom

"In the fight against climate change the Contraction and Convergence proposal makes an important contribution to the debate on how we achieve long-term climate stability, taking account of the principles of equity and sustainability."



Cc David Clayton
Aubrey Meyer. 9/10/98

10 DOWNING STREET
LONDON SW1A 2AA

THE PRIME MINISTER

5 October 1998

Dear Cynog,

Thank you for your letter of 2 September regarding my forthcoming trip to China.

Although the agenda for the visit has yet to be finalised, I am sure, as you say, that climate change will feature in my discussions with the Chinese government.

I note what you say about Aubrey Meyer's Contraction and Convergence proposal. I agree that, in the fight against climate change, this makes an important contribution to the debate on how we achieve long term climate stability, taking account of the principles of equity and sustainability.

Contraction and Convergence is only one of a number of different proposals to address this issue, however. We will examine each carefully, both with our European Union colleagues and other countries. Ultimately, we will have to take this work forward through the forum of the United Nations Convention on Climate Change.

I note your kind offer of a briefing by GLOBE on Contraction and Convergence but, because of other commitments between now and my departure for China, I regret that I cannot take up this offer.

Yours ever

Tony

Cynog Dafis Esq MP

NOVEMBER

Globe International
Global Equity & Climate Change

A History of the UNFCCC Negotiations for a GLOBAL SOLUTION

http://www.gci.org.uk/consolidation/UNFCC&C_A_Brief%20History_to1998.pdf

NOVEMBER 5

Buenos Aires
Global Equity is at the Heart of the Solution

By Aubrey Meyer, Director of GCI, based in London.

Correcting global inequity is at the heart of the solution to global climate change. Without this, there is no role for developing countries. Without this and without all of us, there is no solution to climate change.

The impact of expanding human greenhouse gas (ghg) emissions on the climate system is causing global temperature to rise, putting everyone at risk. The patterns of global consumption behind this impact are deeply divergent. Globally and historically, it is a minority of people that has caused these impacts. Emissions of ghgs have been accumulating in the atmosphere since the beginning of industrialization. 80% of this accumulated impact has come from the less than 20% of global population living in the industrial north.

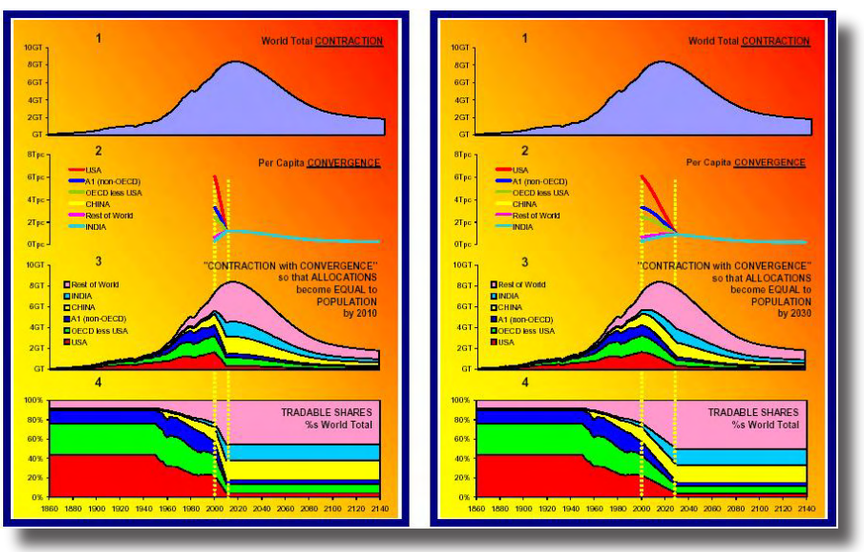
> Since the money supply and ghg emissions are closely correlated, those making the money have been making the mess.

At present, one third of the global population has 94% of the global purchasing power, the other two thirds the remaining 6. Most, but not all of that upper third live in the industrialised countries benefiting from the institutions of their accumulated wealth. A fatalistic maxim says the rich get richer while the poor get poorer.

> This now misses the point. All of us - rich and poor - have a dwindling future because of these impacts. While there may historically be no justice between the divergent rich and poor, global climate changes now threaten all of us with chaos. The global environmental justice of climate change will be either correcting inequity and preventing climate change, or living in conditions that become unbearable for all. How do we achieve the former path?

The objective of the United Nations Framework Convention on Climate Change (UNFCCC) is to stabilise rising concentration of greenhouse gas (ghg) in the atmosphere. By definition this requires a global contraction of ghg emissions from human sources to 60 to 80% less than at present. The sooner this is achieved, the lower the ultimate concentration -and therefore temperature and damage - level will be. The Kyoto Protocol created in December 1997 was a first flawed and inadequate attempt to introduce legally binding commitments to begin this contraction. Industrial countries are supposed to take this lead. But the wrangling continues as . . .

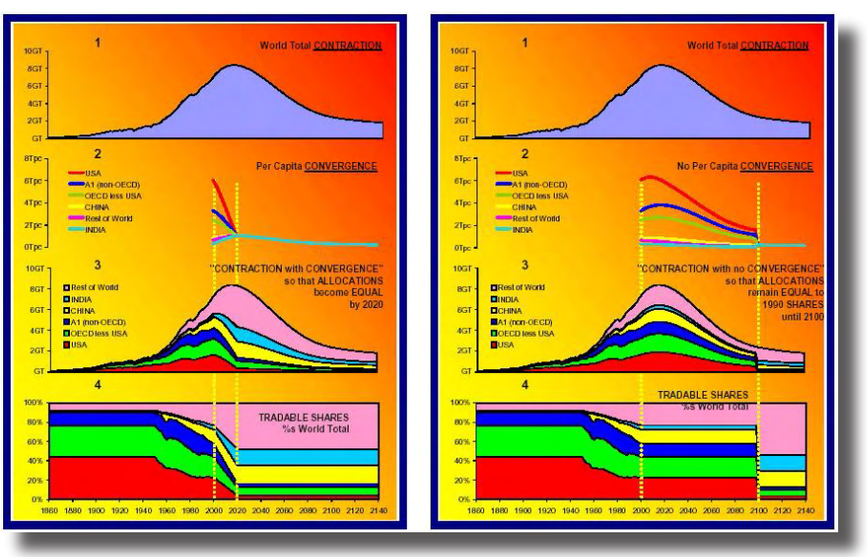
the US has refused to ratify the Protocol saying that unless all countries are involved the effort will be futile because it is one-sided. They say to be effective we must have “globality” or “meaningful participation by developing countries.” They also specify “maximum flexibility” or the “international tradability of these commitments,” so they are achieved “efficiently” or at lowest cost. These are rational arguments. Effectiveness and efficiency are indeed two of the three pre-conditions of success. However the third is global equity, the founding principle of the Climate Convention.



Without this point, the inevitable moral basis of any global rationale - we face continuing political division and deepening ecological adversity. Global equity here simply means how is the global ghg contraction budget shared internationally? Taken together, how do we effectively calculate and equitably share this budget? And then how also do we efficiently manage these shares, so that the whole operation succeeds at least damage cost and abatement cost globally? The answer is “Contraction, Convergence Allocation and Trade”.

COP agrees to a safe global atmospheric ghg concentration target. This, by definition creates a long-term global ghg emissions contraction budget. Inside it shares are legitimate and outside it they are “hot-air.”

When necessary it can be revised, but it is an unavoidably necessary step. COP also agrees that the international shares of this budget are negotiated using the principle of convergence to equal per capita shares globally by an agreed date, with pro rata reduction thereafter. Again revision over time may be required. The combination of these operations result in an internationally complete and equitable set of ghg allocations that are legally binding limitations of reductions and also fully internationally tradable shares. The international distribution of shares is most sensitive to the rates of “Contraction and Convergence” as the graphic examples show. The faster the convergence the greater the share to the low per capita consumers. Noting the “historic responsibility of the Industrial Countries” and using the “maximum flexibility” and acting positively in unison as a majority the developing countries can negotiate an ‘accelerated convergence’ and acquire the majority shares in a future carbon budget that is also globally safe. They can then also sell their surplus shares to the industrial countries in what will be a very lucrative market to determine their future sustainable development. This is equity and survival in a nutshell. Clearly the opportunity to do this is better than ever. The Heads of State at the September Summit of the 113 countries of the Non-Aligned Movement (NAM) in Durban, South Africa signalled for the first time as a majority bloc of countries their positive engagement with regard to globality, efficiency and equity.



The final NAM resolutions state terms for an equitable global partnership to solve climate change. “Emission trading for implementation of (reduction or limitation) commitments can only commence after issues relating to the principles, modalities, etc. of such trading, including the initial allocations

of emissions entitlements on an equitable basis to all countries, has been agreed upon by the Parties to the Framework Convention on Climate Change."

"Contraction, Convergence Allocation and Trade" is already a widely known way of negotiating this. The European Parliament recently voted for this approach with a majority of ninety percent in favour. The Africa Group of Nations had already adopted this position before COP3.

Article 17 of the Kyoto Protocol (KP) is directly a result of the Chinese and Indian delegations rightly demanding equitable allocations at the end of COPS, and the NAM statement now consolidates that.

Before during and since Kyoto, GLOBE International has campaigned for this with a growing number of parliamentarians and with growing success in over one hundred countries, including the US.

The NAM grouping adopting this rationale can now begin the end of global apartheid in what becomes everyone's rational campaign for equity and survival.

NOVEMBER

US Congressman John Porter
Chair GLOBE USA

GLOBE stands for Global Legislators Organisation for a Balanced Environment. It is an international network of Parliamentarians committed to working in a global non-partisan manner for legislation to protect the environment.

"Meaningful progress on confronting the challenge of climate change will only occur when countries from the North and the South are able to collaborate in issues of significant and sustainable development. The GLOBE Equity Protocol -

Contraction and Convergence - and its mechanism for financing sustainable development is the only proposal so far which is global, equitable and growth-oriented.

It is these issues that were endorsed at the GLOBE International General Assembly in Cape Cod, and form the thrust of our paper (Nov 1998), "Solving Climate Change with Equity and Prosperity."

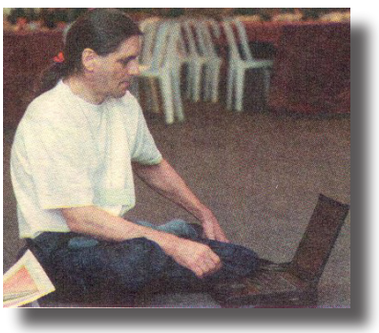
NOVEMBER 12

Buenos Aires Herald
Will Mandela end 'global apartheid'?

By Genevieve Cooper

Among the international government figures and advocates of every stripe present at the UN climate change conference here, Aubrey Meyer stands out.

A passionate and intense advocate of a unique idea to head off an environmental disaster and create global equity, Meyer has attracted more attention than ministers and environmentalists. The conference's official newsletter described him serenading cleaning staff and security guards with the violin past midnight on Friday. A columnist in the newsletter of an environmental group depicted him as "a tall, pony-tailed type," "on the brink of a psychotic episode."



Meyer, 51, is the director of the London-based Global Commons Institute (GCI). GCI is an organization dedicated to global environmental issues with a small budget derived from philanthropist donations. He also is an independent policy consultant for Globe International, an organization of some 500 legislators from around the world who cooperate on global environmental issues.

Meyer's personality and background, including the way he got involved in environmental issues, are unusual. What led to his founding GCI was his wish to write a write a musical, he said in an interview with the Herald.

Born in the United Kingdom, Meyer was raised in South Africa where he studied music. He then left South Africa to continue his music studies in London and over the years performed as an orchestra violinist in England, Ireland and Portugal.

In the early 80s Meyer wrote an orchestral score for the Royal Ballet in London which was successful in England and abroad.

In 1988 while he was thinking about writing a musical, Meyer came across the story of murdered Brazilian ecologist Chico Mendez. At first thinking Mendez would be a good subject for a musical, he found himself drawn to a budding green movement. Having avoided activism against apartheid in his native country, he decided it was time to get involved in the environment issue, he said. GCI was born in 1989.

Since then, GCI has devised an organizing principle with which to approach the climate change problem, and Meyer came to the conference to persuade others that his plan would both control global warming and also end what Meyer refers to as "global apartheid" — the disparity between developed and developing countries.

Delegates at the conference are wrangling to determine how developed and developing countries will share the burden of stabilizing rising greenhouse gas emissions believed to be responsible for global warming. Under the 1997 Kyoto Protocol, developed countries adopted what, if ratified, will become legally-binding targets to reduce emissions. Developing countries have not yet committed to emissions reductions and there are differences among developing countries over whether and how they will participate.

In Meyer's view, the Kyoto Protocol, "creates a very inequitable and unsustainable precedent." Developing countries' participation is essential, he says, but adds, "how the problem is going to be shared has got to be equitable or there's not going to be a solution."

Meyer's plan is to cap global emissions worldwide. Of that amount, each country — industrialized and developing - would have a permit to emit a certain share. In time, a country's permits to emit CO2 would become proportional to its population, meaning that the industrialized nations which now have approximately 20 percent of the population but produce 80 percent of the greenhouse emissions would have to reduce their emissions to match their populations or buy permits from developing countries.

"If they (the US) can't deliver cuts at that rate, they don't have to. They can buy back from the credit available in other people's surplus," Meyer explained.

The tradability of emissions rights is controversial. Meyer says when emission rights are assigned and traded they become property rights.

Environmentalists say it is a right to pollute and therefore not a property right. He and environmentalists also disagree on the timing of phasing out fossil fuels. Some environmentalists want fossil fuels eliminated immediately. Meyer's plan allows time to phase them out.

The US has not been enthusiastic about "Contraction and Convergence, Allocation and Trade," as Meyer's idea is known. However, the scheme grew partially out of US demands for emissions trading and "meaningful participation" of developing countries in emissions reductions.

Meyer has been lobbying with more success in other regions. China, India, the Africa Group of Nations, the European Parliament and the Non-Aligned Movement have each made statements or resolutions in support of per-capita emission rights distribution, he said.

South African President Nelson Mandela is the current president of NAM and is aware of the Contraction and Convergence argument. Mandela is in a position, according to Meyer, "to open the political space necessary to end global apartheid."

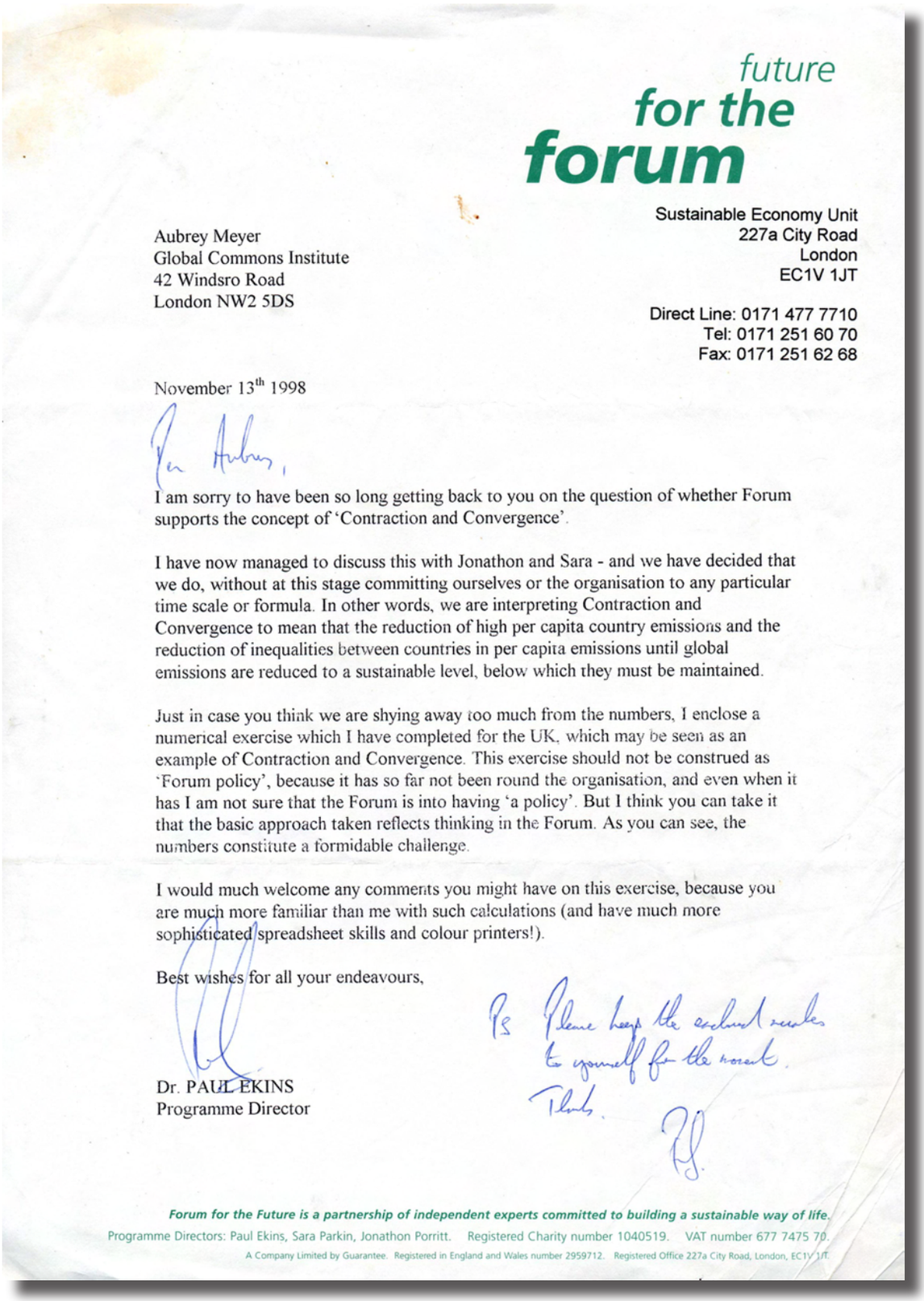
At the conference, Meyer is promoting Contraction and Convergence with seemingly everyone he meets, distributing colourful graphs and devoting hours to explaining the complicated plan. He also has been trying to get Mandela and US Vice-President Al Gore to come to the conference and shake hands. A handshake between Mandela and Gore could push the Convention toward full participation and an equitable approach to mitigating climate change, Meyer believes.

Although Mandela and Gore have so far not heeded his plea, Meyer is a very persuasive man and has shaken up NGOs with the rapid spread of his idea and his certainty that his idea is the way the world should go - so much so that a columnist in the newsletter of an environmental group coalition called him a “dangerous madman” who, “seems to believe he is the only person who knows THE Truth about the climate.”

Meyer thought the critique was amusing and gave the newsletter to the Herald.

Globe International will hold a forum to discuss Contraction and Conversion today at noon.

Forum for the Future



future for the forum

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227a City Road
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Direct Line: 0171 477 7710
Tel: 0171 251 60 70
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Aubrey Meyer
Global Commons Institute
42 Windsro Road
London NW2 5DS

November 13th 1998

Dear Aubrey,

I am sorry to have been so long getting back to you on the question of whether Forum supports the concept of 'Contraction and Convergence'.

I have now managed to discuss this with Jonathon and Sara - and we have decided that we do, without at this stage committing ourselves or the organisation to any particular time scale or formula. In other words, we are interpreting Contraction and Convergence to mean that the reduction of high per capita country emissions and the reduction of inequalities between countries in per capita emissions until global emissions are reduced to a sustainable level, below which they must be maintained.

Just in case you think we are shying away too much from the numbers, I enclose a numerical exercise which I have completed for the UK, which may be seen as an example of Contraction and Convergence. This exercise should not be construed as 'Forum policy', because it has so far not been round the organisation, and even when it has I am not sure that the Forum is into having 'a policy'. But I think you can take it that the basic approach taken reflects thinking in the Forum. As you can see, the numbers constitute a formidable challenge.

I would much welcome any comments you might have on this exercise, because you are much more familiar than me with such calculations (and have much more sophisticated spreadsheet skills and colour printers!).

Best wishes for all your endeavours,

Dr. PAUL EKINS
Programme Director

PS Please keep the enclosed numbers to yourself for the moment.
Thanks.

NOVEMBER

UNCTAD
Elements of a "Buenos Aires Mandate"

". . . meaningful participation by key developing countries will loom large in the post-Kyoto period. Much attention will focus on efforts to (a) further define and operationalise the Clean Development Mechanism (CDM) and to (b) agree possible criteria for the participation of developing countries in international emissions trading. Drawing on the Kyoto experience, some possible elements for a mandate regarding participation of developing countries in emissions trading could include the following: -

1 Participation in emissions trading should be on a voluntary basis. (While the trading system can be designed to benefit all developing countries, it seems that the larger industrially advanced, fast-growing developing countries might be the primary beneficiaries of the system).

2 Legally binding limits (for countries that wish to join the emissions trading system) should be based on emissions growth, not on emissions reductions. The principle was recognised during the Kyoto negotiations. Growth limits would enable the developing countries to continue to pursue their industrialisation but on a more environmentally sustainable basis.

> In principle, emissions growth in Non-Annex One countries should be compensated for by deeper reductions by Annex One Parties leading to 'Contraction and Convergence' of per capita emissions between both sides.

3 Negotiations could be based on national offers from developing country Parties. Offers by regional groupings such as ASEAN and MERCOSUR should also be considered.

In addition to existing flexibility mechanisms, developing countries should be allowed to introduce 'partial caps' which, for example, could be based on industrial sector limits and coupled with joint implementation in the uncapped sectors, as a form of progressive restriction towards the imposition of a national cap.

1999

MARCH

Ecologist
Contraction & Convergence

BY JOHN BROAD -

The adoption of a global programme of 'Contraction and Convergence' offers the potential to break the stalemate in the international negotiations on climate change and to set in place a far more effective and inclusive political mechanism to curb the consumption of fossil fuels in all countries.

The climate change negotiations being held under the auspices of the United Nations are stuck in an apparently intractable impasse. The US Congress refuses to allow ratification of the Kyoto protocol until major developing countries commit themselves to curbing their own greenhouse gas emissions. Congress argues that if energy demand continues to rise on current trends, developing countries will be responsible for more than half of global emissions by 2020. Hence they have the potential to undermine any cuts, however dramatic, undertaken by the industrialised countries.

Developing countries, meanwhile, argue that historically, emissions from industrialised countries are the main cause of global warming; that, on a per capita basis, developing countries emissions are up to 30 times less than those of industrialised states; and that their priority is development, for which they want to use fossil fuels as the North has done; and that the North should use its accumulated wealth to solve the problem.

Partly as a result of this impasse, the Kyoto Protocol, which is the culmination of eight years of negotiations, and which in some respects is a historic achievement, is totally inadequate by comparison with the kind of comprehensive long-term global agreement that is necessary if humankind is to solve the problem of climate change. Target reductions in greenhouse gas emissions are set only for the industrialised countries, and at implied rates of reduction which are much lower than that which climatologists have suggested is necessary. Nothing is said about the cuts which must be achieved globally, or about a target date for achieving them. Even if the industrialised countries all ratified and implemented the treaty, global

emissions are likely to grow. Who is to say whether this would result from industrialised countries not cutting their emissions sufficiently or from the developing countries letting their emissions rise too much?

If the current logjam is to be unblocked the diplomatic process must find a means of answering this question. The only one so far proposed is called "Contraction and Convergence". This is a programme devised by the Global Commons Institute and advocated by GLOBE International (the Global Legislators Organisation for a Balanced Environment). An increasing number of governments in Europe and the south are signalling that they too see it as the basis of a long term solution.

How would '"Contraction and Convergence" work? "Contraction" refers to the need to reduce global emissions of greenhouse gases to a level that would result in establishing what science regards as a probably tolerable atmospheric concentration. Effectively this would create a global "budget" of greenhouse gas emissions. This budget necessarily declines over time until a stable point is reached (and as the science improves, our perception of what that point is may change, so any treaty must contain provisions for changing the global budgets).

"Convergence" allocates shares in that budget to the emitting nations on the basis of equity. This has three components. First, the budget is global; every country has shares in the atmosphere and any treaty that allocates its absorptive capacity only to a selection of countries effectively deprives the others. Second, the current situation whereby allocations are generally proportional to wealth would cease. Third, allocations should converge over time to a position where entitlements are proportional to population. After convergence, all countries would contract their greenhouse gas emissions equally until the necessary contraction limit is reached. No inflation of national budgets in response to rising population would be permitted after an agreed set date.

The fundamental advantage of this approach is that its per capita basis provides an organising principle for the negotiations which all the parties recognise as fair and equitable. Essentially, humanity is facing a global security crisis and needs to drastically ration what is currently a vital resource, the absorptive capacity of the atmosphere. As Europeans discovered in two World Wars, a rationing system works best when it is perceived to be fair. As the Global Commons Institute puts it, this is equity for survival.

The fundamental advantage of this approach is that its per capita basis provides an organising principle for the negotiations which all the parties recognise as fair and equitable. Essentially, humanity is facing a global security crisis and needs to drastically ration what is currently a vital resource, the absorptive capacity of the atmosphere. As Europeans discovered in two World Wars, a rationing system works best when it is perceived to be fair. As the Global Commons Institute puts it, this is equity for survival.

Implementation of this mechanism could help overcome the current international stalemate by addressing a number of the key concerns of the major players. Acceptance by Northern governments that the global emissions budget should converge to equity would be a major step and would encourage Southern governments to accept a cap on their own emissions. This in turn would fulfil the demands of the US for an international process which committed all countries to reduce or limit their greenhouse gas emissions, as stipulated by the Byrd-Hagel Resolution passed unanimously by the US Senate.

There are practical implications of reaching a long-term global agreement on an equitable basis which quickly become apparent. Developing countries would have a direct incentive to conserve energy and transfer quickly to renewable, non-fossil-fuel-based energy paths. For under the "Contraction and Convergence" mechanism, they will acquire surplus emission entitlements which they can sell on the open market to finance the creation of renewable energy infrastructures. These in turn will increase their surplus entitlements.

Industrial countries, with their much higher per capita energy use and thus greenhouse gas production, may choose to buy emission permits to gain a little time. But they will need to make major cuts and their main efforts would need to go into conservation and renewable technologies. With appropriate monitoring, verification and enforcement, this trading mechanism, administered by a democratically accountable international body, could help achieve overall contraction more rapidly and cheaply, and certainly it should not suffer from the "leakage" expected to result from the sub-global mechanisms set up under the Kyoto protocol. But the result might be much more positive. The world might discover, for the first time, that it is possible to cooperate at a global level and work towards a common goal; it might prove to be much easier than expected to de-link the historic connection between the burning of fossil fuels and the creation of human wealth.

"Contraction and Convergence" thus has the potential to be the most rational, effective and rapid means to end the consumption of fossil fuels globally. In the words of Aubrey Meyer, Director of GCI, "The integrated implementation of this 'Contraction and Convergence Allocation and Trade' programme can turn a presently dangerous global vicious circle of political stalemate and ecological dissipation into virtuous cycles of recovery and renewal. The consensus for survival needs this structure. Political and ecological anarchy is an alternative that guarantees nothing but increasing tragedy."

John Broad, Chairman
Global Commons Trust, Charitable Foundation

1999

Christian Aid
Who owes who? - Climate change, debt, equity and survival

"The history of the climate talks is one of division between developing countries wanting entitlements to be proportional to population, whilst the industrialised countries want entitlements proportional to the size of their economies' GDP. The path to get from one to the other, from grand fathering - unequal rights drawn down by historical precedent - to equal per capita shares, is contraction and convergence. Entitlements in this analysis are based on people rather than on economic wealth."

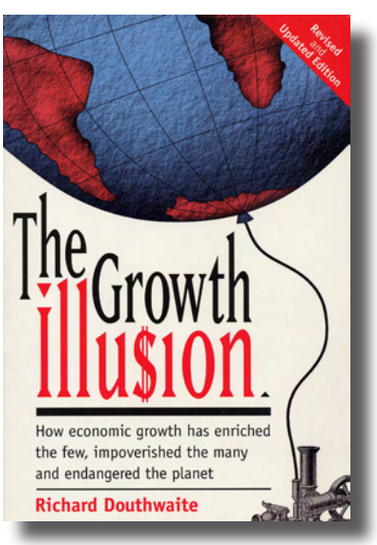
1999

Richard Douthwaite
The Growth Illusion

Publisher: Green Books ISBN: 1870098765

GROWTH IN THE GREENHOUSE

The right to burn 500 kilograms of oil (or its equivalent in other fossil fuels) each year belongs to every human being, not just those who by hard work or good fortune have the money to pay to do so. Thinking along these lines, Michael Grubb of the Royal Institute of International Affairs in London suggested in 1989 that the right to emit CO2 should be allocated to governments on the basis of their population rather than the amount they are emitting at present." The under-consuming nations would then sell their unused rights to the over-consumers, giving them the incentive to become energy-efficient, too.



Aubrey Meyer came up with the same simple idea independently some time later and developed it into the "Contraction and Convergence" concept, which by 1999 had gained the support of the EU and the 113 countries in the

Non-Aligned group – in other words, a majority of the nations of the world. Getting such widespread agreement was a remarkable achievement for GCI, which has less than a dozen active members, and for Globe, the international network of parliamentarians, which has taken the idea up.

Under the C&C approach, the first step is for the international community to agree how much the CO2 level in the atmosphere can safely be allowed to rise. There is considerable uncertainty over this. The EU considers a doubling from pre-industrial levels to around 550 parts per million (ppm) might be safe, while Bert Bolin, the former chairman of the IPCC, has suggested that 450 ppm should be considered the limit. Even the present level of roughly 360 ppm may prove too high because of the time lag between a rise in concentration and the effect it has on the climate.

Setting an ultimate CO2 concentration target automatically sets the number of years the world has left to reduce its present emissions by the 60 to 80 per cent necessary to bring them into balance with the rate at which the gas is absorbed by natural sinks such as forests and the sea. Delaying acting now simply means that we have to make more drastic cuts later on if we are to reach the target. Once the starting date is set and the CO2 target agreed, the percentage rate by which worlds emissions have to be cut each year to reach the target can be calculated, and the figure for each year's allowance divided up among the nations of the world on the basis of their population in an agreed base year. Every country would therefore know how many emissions permits it was likely to be allocated in each year for many years into the future and could plan accordingly. Over-consuming countries would seek to buy permits (to the extent they were allowed to do so) and under-consumers would have every incentive to abide by the system because of the income these sales would bring. India and China have already indicated that they would sign up to such a scheme. The main resistance to it is coming from the Middle East oil states, for reasons which will become apparent shortly, and from the US, Canada and Australia.

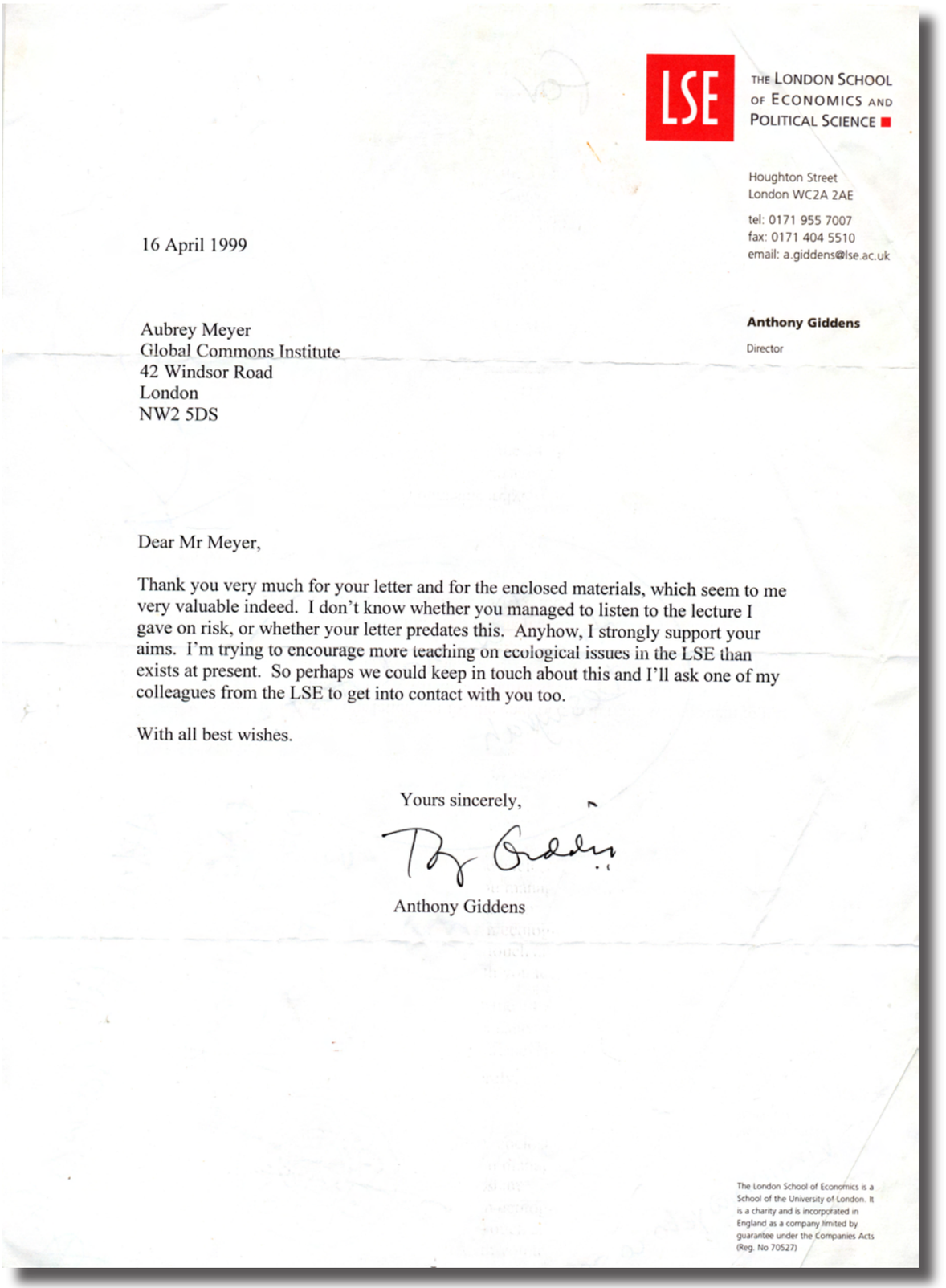
In the first edition of this book I wrote about the desirability of distributing: "fossil fuel ration cards to everyone on earth, giving us all the same basic entitlement; [so that] when we want to buy a litre of petrol or a tonne of coal we pay over a specific number of coupons to the merchant before we receive our supply. If such a system were implemented, an unofficial market in the coupons would quickly spring up. No attempt should be made to discourage this because it would enable people who were prepared to organize their lives so that they could manage without using some of their coupons to be well paid for their efforts by others who were more profligate." I felt rather silly writing this at the time because it seemed like a pipe-dream. Now, however, there is a reasonable possibility it will come about. David Fleming, an independent economist

living in London, calls the coupons "domestic tradable quotas" and wants to see them used in exactly the way I hoped, although they will probably not be issued to people in technologically-advanced countries in the paper form I had in mind but on the rechargeable plastic money cards being developed by many European banks. EU research funds are being sought to develop the idea.

Fleming envisage that rights to 45 per cent of the carbon dioxide a country is allowed to emit under Contraction and Convergence would be shared out among its population. All forms of fuel and energy, including renewables, would be rated for their emissions of global warming gases, and when people bought fuels and energy, their plastic cards would be used to surrender emission entitlement units in line with those ratings. Those who were able to stay within their allocation would be able to sell their surplus units while those who needed to buy more would be able to do so on the open market. The remaining 55 per cent of the national allowance would be auctioned to all other users, such as industry, institutions and the government itself, and the revenue used to finance an emergency renewable energy development and conservation programme. The system would not only set a 10-year rolling timetable for deep reductions in fossil fuel use, but would guarantee it was achieved. The fact that fossil fuels are running out might well make the US more receptive to the Contraction and Convergence approach as well.

> [So] two conclusions arise from all this. One is that whether the Kyoto Protocol is implemented or not, we are going to have to make a substantial move towards non-fossil energy sources within the next twenty years, as ARCO, Shell and BP recognize. The second is that if an unregulated market is allowed to allocate fossil fuel to users on the basis of price, the producing countries will reap vast windfall profits. Huge sums will end up in bank accounts controlled by the OPEC countries, just as happened in 1973 and 1979. On the other hand, if the allocation is done by the Contraction and Convergence mechanism, the additional money that people will have to pay for their energy will go to under-consuming countries and to finance energy-conservation measures in the industrialized world. Once this is recognized, self-interest alone should be enough for the US to side with the angels and let C&C happen.

Anthony Giddens
London School of Economics



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Anthony Giddens
Director

16 April 1999

Aubrey Meyer
Global Commons Institute
42 Windsor Road
London
NW2 5DS

Dear Mr Meyer,

Thank you very much for your letter and for the enclosed materials, which seem to me very valuable indeed. I don't know whether you managed to listen to the lecture I gave on risk, or whether your letter predates this. Anyhow, I strongly support your aims. I'm trying to encourage more teaching on ecological issues in the LSE than exists at present. So perhaps we could keep in touch about this and I'll ask one of my colleagues from the LSE to get into contact with you too.

With all best wishes.

Yours sincerely,

Anthony Giddens

APRIL

Michael Meacher
UK Minister of the Environment

"I do believe that contraction and convergence provides an effective, equitable market-based framework within which Governments can co-operate to avert climate change, and again congratulate you on your campaigning to bring this about."

MAY

Simon Read
Regional EP Manager, Environment Agency, UK

I am writing to express my sincere thanks for your efforts in making the recent staff meeting at Henley a great success. It is very seldom that a speaker generates as much debate and reaction amongst all the different types and varieties of staff that we employ.

Several staff have said that it was the most interesting talk they have heard since they joined the Agency. There has been as much debate since as to how things can be taken forward.

Some staff have expressed the view that faced with such global problems, are we going to make a difference or are we destined to a very hot and sticky fate. At least by raising the profile we can help by keeping the issue high in people's minds. At the end of the day it is only by capturing sufficient minds that the necessary action will happen.

I am glad that you found my suggestion of using the mayors of major cities as a useful conduit. We have already raised the issue the GLA and the recent launch of the study on the impacts of climate changes on the south east has highlighted the issue of sea level rise with many people at an influential level in the Region.

Once again I would like to thank you for taking the time to join us for the day and making such an impact on us.

Sir Robert May
Office of Science and Technology

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Albany House 94-98 Petty France London SW1H 9ST
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From the Chief Scientific Adviser and Head of Office of Science and Technology
Sir Robert May FRS

S5387

Mr Aubrey Meyer
Director
Global Communications Institute
42 Windsor Road
London
NW2 5DS

12 May 1999

Dear Mr Meyer

Thank you for your letter of 23 April and for the information on the "Contraction and Convergence" policy and your efforts through GCI and GLOBE to build up global support for it.

These matters are clearly of great importance and I would agree that this approach merits full consideration, including at the senior international political level, along with other ideas contributing to the development of a workable global climate change strategy.

Yours

Sir Robert May

JUNE 9

David Chaytor MP

> "In many analysts' opinion, a policy of contraction and convergence provides the way out of the logjam.

Under such a policy, each nation would be allocated a quota of emissions based on population, and set in the context of agreed environmental limits. Over time, industrial nations would be required gradually to reduce emissions, while developing countries would be permitted gradually to increase theirs, until a point was reached at which the emissions quotas of all countries were relatively equal.

> That seems to provide the only practical and principled resolution of the conflicting interests of the developed world and the developing world, based on equal rights for all human beings.

I urge the Government to present the case for contraction and convergence as a realistic means of facilitating the ratification of the Kyoto protocol. I commend the research conducted by the Global Commons Institute in developing that model. "

JUNE

Atmospheric Environment

New Directions: Rebuilding the Climate Change Negotiations

Philippe Pernstich

The Buenos Aires round of climate change negotiations have demonstrated that the Kyoto Protocol is a landmark on the road to nowhere. The continuing divisions over the details of the so-called Kyoto Mechanisms are an indication that the Protocol is not only inadequate in addressing the scientific facts of climate change, but it is also politically unworkable.

The debate over voluntary targets, emissions trading and Clean Development Mechanism (CDM) have distracted attention away from the 2nd review of the adequacy of commitments under the Convention.

Consequently, the only conclusion to emerge from Buenos Aires on this point was an acceptance that the Kyoto Protocol was not sufficient to prevent harmful climatic change. Any talks about more meaningful measures, however, have been postponed.

The present impasse in the negotiations is the result of a failure to address the fundamental problem of distribution of a limited resource that is far outstripped by demand. By taking an historic perspective on the matter and trying to agree on cuts of emissions from present and past levels, we are bound to miss both the scientific goal of concentration stabilisation and the political requirement for equity.

Instead, we should be looking at the resources safely available to us in the future and solve the question of distribution from that angle.

Equity has so far been the greatest stumbling block of negotiations since the very beginning of the process in 1990. The resulting division into Annex I and non-Annex 1 countries along the North South divide seemed the obvious answer from the historic perspective. Taking this division into the future, however, will preserve the imbalance without slowing down the climatic change. There is no question that developing countries will not be able to increase emissions indefinitely, so any delay in the shift towards more sustainable development paths ultimately represents a loss of opportunity for these countries. No one can deny the Untied States' claim that climate change is a global problem and the conclusion that it therefore requires a global solution should be obvious.

The problem of distributing a scarce resource on a global scale can only be solved on an equitable basis. This is not for any ethical considerations, but simply because it is the only chance of reaching an agreement that all major parties can accept. There are five criteria which will determine the success of any distribution model:

The basis of allocation must be known to each party and known to be known by other parties (Barret. 1992 in: Combating Global Warming, Study on a global system of tradeable carbon emission entitlements. United Nations, New York).

Moral arbitrariness should be avoided (Kverndokk, Environmental Ethics, 4 (2) 1995, pp. 129-148).

The system should follow a simple allocation rule (Kverndokk, 1995 and Barret 1992). It should be consistent with other international policy goals, e.g. poverty alleviation in developing countries (Rose. 1992 in: Combating Global Warming).

Any reallocation of emission permits should cause minimal disruption in the short term.

The targets set in the Kyoto Protocol clearly fail the first three of these criteria. The complete lack of any underlying structure to the Protocol means that it can only lead to a dead-end. The focus of negotiations needs to shift towards establishing a framework upon which to build a long-term, efficient and effective solution to global warming.

One proposal for such a framework that arises out of the consideration of the five criteria listed above is known as 'Contraction and Convergence'.

Unlike the present approach, this takes the ultimate objective of emission stabilisation as its starting point to determine a global emissions curve over a fixed period of 50-100 yr. or more. This global budget is then allocated to countries according to a convergence path to equal per capita entitlements by an agreed date. The entitlements are allocated in budget periods of up to five years and start out in the first period with the current distribution of per capita emissions, in each subsequent period the allocation is adjusted to narrow the present inequity in emissions until all countries receive equal per capita entitlements.

'Contraction and Convergence' is a political framework that can only work if all parties accept the need to compromise in order to achieve the Convention's ultimate objective. If this is achieved, then 'Contraction and Convergence' is the structure that can form the basis of negotiations regarding global budgets and target dates. Without it, the acceptance of compromise will never he turned into commitments if each of the 160 countries apply their own criteria.

In practical terms, for a stabilisation scenario of CO2 at 450 ppmv, for example, this would mean that most developing countries would be allocated an increasing budget up to 2030 (see Fig. 1).

In the case of the least developed countries, entitlements would grow well beyond any reasonably realistic growth of actual consumption, resulting in a surplus of entitlements. At the same-time industrialised countries would face quite rapid cuts in their entitlements reflecting the present gross over-consumption. Under a regime of convergence of emission entitlements, trading of emissions is not only efficient but necessary. Reductions are achieved at least cost, a transfer of resources to developing countries occurs and even those countries without any real constraints on emissions in the near future have a real incentive to minimise their emissions.

Trading under these circumstance would he very different from the present proposals, where a weak trading regime including 'hot air' amongst industrialised countries only is further undermined by hypothetical savings achieved through the CDM and Joint Implementation. If credits from these mechanisms can he used to offset domestic action, the Kyoto commitment of a 5.2 reduction may well turn out to be stabilisation at best.

If the climate change negotiations are not to fail or become meaningless in the next few years, it will be necessary to take a big step back before progressing on a more principled basis. Politically, the challenge will be to achieve this without a seeming loss of face on any side. For this reason, the new approach would have to be initiated in parallel with the conclusion of the Kyoto Protocol.

SEPTEMBER 8

Guardian

Spinning Out of Control

World economy expanding, greenhouse gases reducing. Good news? Don't you believe it, warn Aubrey Meyer and Richard Douthwaite

When BP-Amoco announced at the end of last month that the 6.5bn tons of fossil fuel the world burnt last year was half a per cent less than the year before, the Worldwatch Institute in Washington greeted the statement as uniquely good news.

For the first time in history, the institute said, greenhouse gas emissions had fallen in a period in which the world economy, which grew 2.5% in 1998, had continued to expand. This suggested that economic expansion was being "de-linked" from carbon emissions, undercutting arguments that reducing emissions would damage the economy.

In the past two years, Worldwatch explained, the global economy had grown by 6.8%, while carbon emissions had held steady. This had led to "an impressive 6.4% decrease in the amount of carbon emissions required to produce $1,000 of income". The improvement in energy efficiency had come about as a result of higher standards and the removal of energy subsidies.

The British media gave the Worldwatch press release generous and uncritical coverage. The BBC even produced a graph, which is now on its website, showing that almost 250 tons of carbon had had to be burnt in 1950 to produce $1m-worth of "wealth", but that it now took only 150 tons to do the same thing.

The only thing which can be welcomed wholeheartedly is the fact that CO2 emissions in 1998 were less than the previous year. All the rest is spin applied by Worldwatch to convince US politicians that the consequences of ratifying the Kyoto Protocol - an international agreement which would legally bind the US to cutting its greenhouse gas emissions - might not be too bitter a pill to swallow.

What the statement overlooks, however, is that emissions of greenhouse gases from fossil fuel burning, which are principally CO2, accumulate in the atmosphere. It is this increasing concentration of gases which is causing the world's temperature to rise and the climate to become less stable.

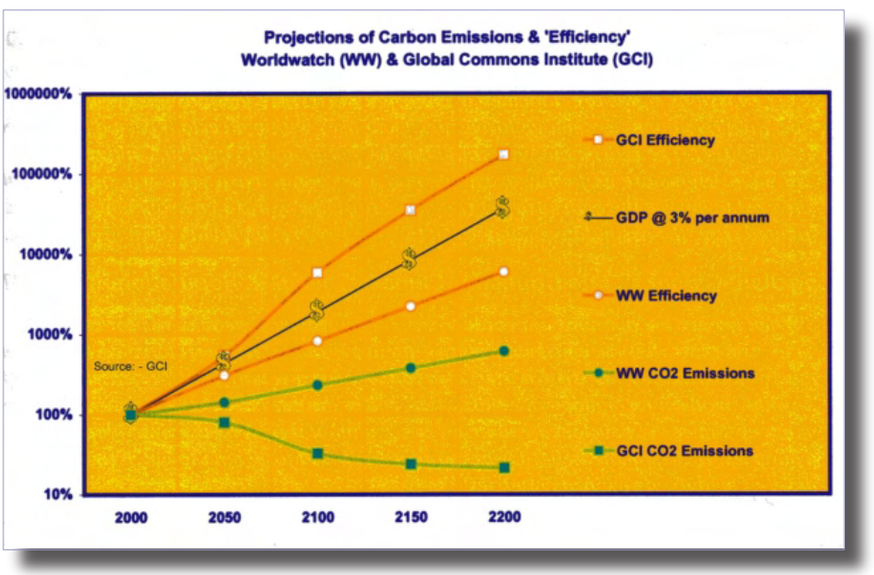
To stabilise these rising concentrations, emissions have to fall not by half a per cent or even 10%. They must be cut by 60-80% as soon as possible.

The longer the delay, the hotter the planet will become. At the Global Commons Institute we decided to calculate what would happen to levels of CO2 in the atmosphere if the rate of improvement in energy efficiency detected by Worldwatch

continued for the next 200 years while at the same time the world economy continued to grow at 3%, the sort of rate that the World Bank and other authorities would be pleased to see.

The results are staggering. Global income would be 369 times above the present level in 2200 and the efficiency with which fossil fuel was being used would have increased sixtyfold. Unfortunately, the level of carbon dioxide in the atmosphere would be rising beyond 3,000 ppmv (parts per million by volume) - 10 times the pre-industrial concentration - with incalculable effects on the world's climate. Indeed, 45bn tons of carbon would be emitted annually, compared with 7bn tons at present. In other words, the rate of efficiency improvement hailed by Worldwatch is nothing like fast enough. So we did another calculation to determine what the rate of efficiency gain had to be to keep atmospheric concentrations of CO2 below 450ppmv if growth continued at 3%.

The 450 ppmv figure is a current international target for CO2 levels, despite the fact that it is 70% above the pre-industrial level and takes the world's climate into totally unknown territory since it would be the highest CO2 concentration for 220,000 years.



Our results showed that world energy efficiency has to be improved by between 4-5% a year every year for 100 years until the 450 ppm level is reached, and then by 3% a year to maintain that level for as long as the 3% rate of economic growth continues. In total, we would have to increase our efficiency of carbon energy use by 173,000%, which is clearly absurd. The question to be asked, therefore, is whether growth can continue. Certainly, it would be much easier to reduce our CO2 emissions by the required amount if growth stopped. According to Prof Malcolm Slesser, of the Resource Use Institute in Edinburgh, around 55% of all the fossil energy we use is

required to make the growth process happen. It is used to build the new factories, roads, shopping centres and all the other things that economic expansion entails.

Moreover, it doesn't make sense to continue trying to grow economically if, by doing so, we cause more damage to our planet than the growth we achieve brings in benefits. This could be happening already because, while the fossil fuel we burn produces just this year's income, the gases that get released from that fuel stay in the atmosphere and will cause damage every year for, perhaps, 100 years.

It is more than 10 years since Worldwatch pointed out that protecting ourselves against rising sea levels and the other consequences of climate change would take more resources than the burning of the fossil fuels had created in the first place.

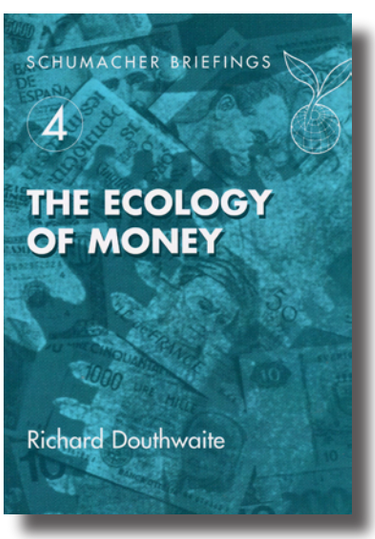
And what is the quality of the growth that is currently being generated? Is it doing us, or anyone else, much good? It's certainly not curing global poverty. Year after year, the United Nations Development Project produces figures to show that the gap between rich and poor is widening, both within countries and between them. Growth as we know it is making the world's divisions more extreme.

Thanks to its spin, the Worldwatch statement gave the impression that a real turning point had been reached on the road to solving the climate crisis and that hard decisions need not be taken.

In other words, it suggested that radical change could be avoided and that economic growth could go on. Whatever its political motives, it could not have been more wrong.

Aubrey Meyer is a founder of the Global Commons Institute www.gci.org.uk.

An expanded edition of Richard Douthwaite's book, The Growth Illusion, will be published in October.



Richard Douthwaite
The Ecology of Money

Publisher: Schumacher Society / Green Books

ISBN: 1870098811

Which scarce resource?

Chapter one argued that every economic system should establish the scarce resource whose use it seeks to minimize, and then adjust its systems and technologies to bring the least-use solution about. Since people always try to minimize their

expenditure, an international currency should be based on the global resource whose use it is highly desirable to minimize. If that link was made, anyone minimizing their use of money would automatically minimize their use of the scarce resource.

One Country, Four Currencies

If we accept that view (and not everyone does), what resources do we need to use less of? Certainly not labour or capital goods. There is worldwide unemployment and, in comparison with a century ago, our capital stock is huge and underused. But the natural environment is grossly overused, particularly as a dump for our pollutants. In particular, the Intergovernmental Panel on Climate Change (IPCC) believes that 60-80 cuts in emissions of greenhouse gases - pollutants which are produced largely a result of fossil fuel use - are urgently needed to lessen the risk of a runaway global warming. This is one of humankind's most serious problems, and I therefore believe that the base of the world currency should be selected accordingly. But how can a link between a currency and lower fossil fuel use be made? If the currency we have in mind were linked to a unit of energy that would effectively encourage more energy production throughout the world. We want to achieve quite the reverse and to link our monetary unit to something that discourages fossil fuel use even when there is pressure for an expansion of the amount of money in circulation. How can this be done? Contraction and Convergence (C&C) is a plan for reducing greenhouse gas emissions developed by the Global Commons Institute in London; by early 1999 it had gained the support of the majority of the world's nations. Under the C&C approach, the international community agrees how much the CO2 level in the atmosphere can be allowed to rise. There is considerable uncertainty over this. The EU considers a doubling from pre-industrial levels to around 550 parts per million (ppm) might be safe, while Bert Bolin, the former chairman of the IPCC, has suggested that 450 ppm should be considered the absolute upper limit. Even the present level of roughly 360ppm may prove too high, though, because of the time lag between a rise in concentration and the climate changes it brings about. Whatever CO2 concentration target is ultimately chosen automatically sets the number of years within which the world must reduce its present emissions by whatever amount is necessary to bring them into line with the Earth's capacity to absorb the gas. So, if a decision to cut emissions by a fixed proportion each year is made, a maximum level of CO2 emissions for the world for each year for at least the next fifty years can be calculated.

Once the annual global limits have been set, the right to burn whatever amount of fuel has been fixed for each year would be shared out among the nations of the world on the basis of their population in a certain base year. In the early stages of the contraction process, some nations would find themselves consuming less than their allocation, and others more, so it

is proposed that under-consumers should have the right to sell their surplus to more energy-intensive lands. This is a key feature of the scheme as it would generate an income for some of the poorest countries in the world and give them an incentive to continue following a low-energy development path. Eventually, it is likely that most countries will converge on similar levels of fossil energy use per head. But what currency are the over-consuming nations going to use to buy extra CO2 emission permits? If they used their reserve currencies, they would effectively get the right to use a lot of their extra energy for free. This is because much of the money they paid would be used as an exchange currency around the world, rather than being used to purchase goods from the country that issued it. To avoid this, GCI has devised a plan under which an international organization such as the International Monetary Fund (IMF) would assign Special Emission Rights (SERs)—the right to emit a specified amount of greenhouse gases and hence to burn fossil fuel—to national governments every month according to the C&C formula.

SEPTEMBER 21

Independent
Paying for pollution

Sir: For the last 200 years, wealth creation in the industrialised countries has been running up an environmental debt on the global account ("Too late to stop global warming ,16 September).

The scale of this debt dwarfs the financial debt owed by developing countries to their polluting creditors. Because of this, such 'external' debts should be cancelled forthwith.

This global debt arises with the accumulation of pollution from fossil fuel consumption in the "commons" of the global atmosphere. This pollution mirrors the wealth and shows that those making the money have been making the mess.

The scale and rate of this build up of greenhouse gases are completely without precedent. To an alarming degree, we are all already locked into long-term global trends of increasing and potentially unqualifiable social and environmental damages.

This is the real debt crisis.

Continuing with this increasing chaos may well trigger the ultimate threat to human society a runaway greenhouse effect beyond the relevance of human policy to avert or adjust to it. In this context of rising risk, it is simply absurd to continue to uphold the legitimacy of the unrepayable external debts of very poor countries.

> The debts were odious without climate change. These countries that are repeatedly 'restructured' to repay them are now additionally exposed to the increasing risks and traumas of climate changes caused by accumulating pollution from their "creditors".

Developing countries - in their own as well as everyone's interest- will have to become part of the arrangements for the restraint of global greenhouse gas pollution. However, as a precondition of developing countries negotiating future commitments to restrain their pollution, the 'external' debts should be cancelled outright and immediately.

AUBREY MEYER

OCTOBER

Jonathon Porritt
Programme Director, Forum for the Future

Thanks very much for your recent letter and update materials on Contraction and Convergence. Good to see the latest information.

As regards my own influence, I don't take over as Chairman of the Sustainable Development Commission until our first meeting at the end of October, and until then I think I'd probably have to write as a private individual rather than in any formal capacity. But it's just possible that there may be a meeting with the Prime Minister before then, in which case I shall certainly raise the issue.

NOVEMBER

Sustainable Development Agenda
Correction of Global Inequity - COP4

The correction of global inequity is at the heart of the crisis of global climate change. Like it or not, the time for sorting this out is now, at the Fourth Conference of the Parties (COP4) in Buenos Aires in November I998

The impact of expanding human greenhouse gas (GHG) emissions on the climate system is causing global temperatures to rise, putting everyone at risk. The patterns of global consumption behind this impact are deeply divergent. Globally, it is a minority of people who have caused these impacts. Emissions of GHGs have been accumulating in the atmosphere since the beginning of industrialisation, and 80% of this accumulated impact has come from less than 20% of the global population - those living in the industrial north. Since money supply and GHG emissions are closely correlated, those making the money have been making the mess. As things stand, the high-impact one-third of global population have

94% of global purchasing power, the other two-thirds at very low impact have the remaining 6%, and things are getting worse, The fatalistic maxim says the rich get richer while the poor get poorer. Maybe, but this now misses the point. While there may historically be no justice between them, rich and poor alike are now threatened with the worsening impacts of global climate changes. Conditions will become unbearable for all unless we now deliberately correct this ever more unsustainable and inequitable mess together, The United Nations Framework Convention on Climate Change (UNFCCC) was created in 1992 for this purpose. Its objective is to stabilise the rising concentration of GHG at a level that is not dangerous to ecosystems and humanity. Such is the behaviour of the climate system that this objective requires a contraction of GHG emissions from human sources to 60~80% less than at present. The Kyoto Protocol created in December 1997 was the first attempt to introduce legally binding commitments to begin this contraction.

The industrial countries are supposed to be "taking the lead", but the wrangling continues.

The USA has refused to ratify the protocol, saying that, unless all countries are involved, the effort will be futile because it is one-sided. To be effective they say we must have "globality" or ''meaningful participation by developing Countries', as well as "flexibility'', or the "international tradability of the commitments"', so that they are achieved ''efficiently'' or at lowest cost.

Effectiveness and efficiency are indeed two of the three preconditions of success.

However, the third is global equity, the founding principle of the Climate Convention. With this we can share and then trade a GHG contraction budget internationally, enabling the operation to meet the objective of the convention - at least damage cost and abatement cost globally.

To do this, Globe, the international network of parliamentarians, proposes "contraction, convergence allocation and trade", the model created by the Global Commons Institute (GCI). Based on the best available science and the convention's precautionary principle, the COP could agree a safe global atmospheric GHG concentration target. This, by definition would create a global GHG emissions contraction budget. The international shares of this could then be negotiated using the equity principle of convergence to equal per-capita shares globally by an agreed date, with pro rata reduction thereafter.

Once these global principles had been agreed and applied, the resultant equitable international GHG shares could be tradable.

The sale of surplus shares from developing to developed countries could generate revenue for the former to "leap-frog" fossil fuel dependency to clean technology; with an interim "price buffer" for the latter against prematurely retired assets,

while the whole exercise accelerates the avoidance of future global damage to everybody's benefit. In short, the effectiveness of combining equity and efficiency is the "third way", because for the first time third parties also win.

Some people have responded saying "contraction and convergence" is intellectually perfect but politically impossible.

But is what is currently deemed politically possible under the UNFCCC and the Kyoto Protocol also ecologically sustainable? And the answer is no. The USA will inevitably continue to oppose sub-global arrangements; the developing countries will obviously continue to oppose the disunity of global inequity; and the absurd quarrel will go on.

COP4 Buenos Aires is now an opportunity to put things right. "Contraction, Convergence, Allocation and Trade" is a widely known rationale for negotiating a global package for avoiding the dangerous changes. The Africa group of nations adopted this position before Kyoto. The Chinese and Indian governments declared for this position at the end of Kyoto. Before, during and since Kyoto, Globe International has campaigned for it with a growing number of parliamentarians and growing success in over 100 countries worldwide, in conjunction with organisations such as the Environmental Justice Network Forum. The European Parliament has just voted for it with a majority of 10:1. And now the majority Non-Aligned Movement (NAM) group has, in effect, adopted this rationale for global equity and survival as well. The heads of state, at the September summit of the 113 countries of the NAM in Durban, South Africa, signalled for the first time, as a majority block of countries, their positive engagement with regard to globality, equity and efficiency. The final NAM resolutions state terms for an equitable global partnership for emissions trading.

This means that the USA can have the effectiveness of globality and the efficiency of emissions trading, but only in exchange for equitable allocations of emissions entitlements for all countries agreed by all countries.

Global equity is the key to this fair exchange, and the opportunity to mandate it exists at COP4 in Buenos Aires.

Simon Read
Environment Agency

Our ref: SVR/SRE
Your ref:

Date: 10 December 1999

ENVIRONMENT AGENCY

Aubrey Meyer
Global Commons Institute
42 Windsor Road
LONDON
NW2 5DS

Dear Aubrey

THAMES REGION ENVIRONMENT PROTECTION STAFF MEETING

I am writing to express my sincere thanks for your efforts in making the recent staff meeting at Henley a great success. It is very seldom that a speaker generates as much debate and reaction amongst all the different types and varieties of staff that we employ.

Several staff have said that it was the most interesting talk they have heard since they joined the Agency. There has been much debate since as to how things can be taken forward. Some staff have expressed the view that faced with such global problems, are we going to make a difference or are we destined to a very hot and sticky fate. At least by raising the profile we can help by keeping the issue high in people's minds. At the end of the day it is only by capturing sufficient minds that the necessary action will happen. I am glad you found my suggestion of using the mayors of major cities as a useful conduit. We have already raised the issue with the GLA and the recent launch of the study on the impacts of climate changes on the south east has highlighted the issue of sea level rise with many people at an influential level in the Region.

I understand that Tim Reeder has discussed the issue of expenses with you. I am anxious that if possible we can at least cover your costs for the day.

Once again I would like to thank you for taking the time to join us for the day and making such an impact on us.

Yours sincerely

S. Read

SIMON READ
Regional EP Manager
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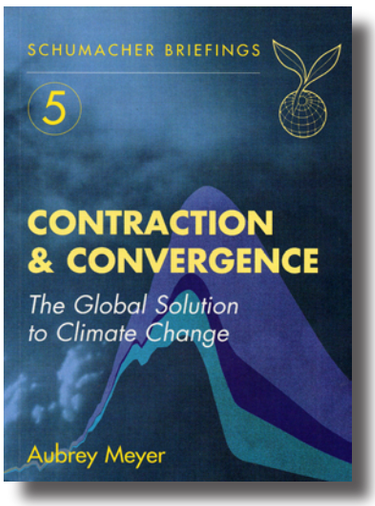
1999

Anthony Giddens
Director, London School of Economics

Thank you very much indeed for your letter and for the enclosed materials, which seem to me very valuable indeed.

I strongly support your aims. I'm trying to encourage more teaching on ecological issues in the LSE than exists at present. So perhaps we could keep in touch about this and I'll ask one of my colleagues from the LSE to get into contact with you too.

2000



Aubrey Meyer
Contraction & Convergence
The Global Solution to Climate Change

Publisher: Green Books / Schumacher Society

ISBN: 1870098943

Author's Note

I've never been anything other than a musician. How I ended up devising a global policy concept at UN climate negotiations for the last ten years is still a bit of a mystery to me. But a clue is that both writing and playing music are largely about wholeness and the principled distribution of 'effort' or practice. Responding to the climate challenge seems much like writing or playing music, where balance on the axes of reason and feeling, time and space, can only come from internal consistency. If practice is unprincipled there is no coordination and there is discord. When it is principled, there is balance, harmony and union. Perhaps all life aspires to the condition of music.

Ten years ago, I was feeling crushed and frightened by the realisation that humanity's pollution was destroying the future by changing the global climate. A sympathetic friend told me I wasn't being 'Zen' enough. I didn't know what he meant, had a good laugh and then decided he must be right.

So I went to the UN just as the negotiations began to create the Climate Convention. There I discovered tensions between Taoists, Marxists, economists, musicians and other human beings. This was only just funny enough, often enough, to rescue me from the powerlessness and despair that otherwise captures those who are not being Zen enough at the UN, or anywhere else. 'Being Zen' probably means caring, but enough to grasp reality by letting go of 'duality'.

The 'equity and survival' case argued at the UN tries to express this through 'Contraction and Convergence'. This starts from the oneness of the global picture and creates a framework with subdivision by principle. The precautionary principle is about survival. It says we have to unite in order to try and prevent damages and death from dangerous climate changes. This recognises the singular purpose or 'one-ness'. That is the Convention's 'objective'. That is why humanity created it. The

equity principle says this must be fair across time and space between people in very different situations. This recognises 'two-ness' and shows the need to keep the feedback between ourselves and the earth in balance. It also recognises that the practice that flows from these principles of responsibility, must be flexible and responsive rather than rigid. This is the 'three-ness' but is only a product of the responsibilities and the rights created by oneness and twoness. And then, and only then, come the 'ten thousand things' of prosperity in the traditional goals of life, health and happiness with harmony in all these because we have united to prevent damages and do no harm.

So C&C is a globalisation of consciousness and creates an internally consistent view of what has happened and what needs to be done. So it is a framework for organising our efforts to prevent global death and damage costs from climate changes rising out of control. This reflects the UN Convention. However, when we have failed to unite around these principles and pursue instead analysis of the 'costs and benefits' amid the noise of the 'ten thousand things', a divisive almost paranoid picture emerges ending up with the randomness of unresolved quarrels and guesswork. Working this way is not illuminating and encourages people to see preventing the damages and death as less important than preventing the pollution that is causing them. Sadly the Kyoto Protocol to the Convention reflects this approach.

This global conflict between the one and the many is at the heart of the policy quarrel. The effort recalled here has been about resolving the tension between this one over-riding purpose of damage prevention and the 'ten thousand' protests' this has raised. It has been about transforming the friction between framework and guesswork back to this purpose.

While I hope this Briefing will appeal to the hearts and minds of a wide range of people, writing about C&C for a potentially diverse readership has been difficult. This is because, although we are all in the same boat in relation to climate change, we live in and see very different parts of it. Try addressing an audience made up of the anxious, the agnostic, sybarites and over-worked mothers. Then there's academia, 'policy makers' and bureaucracy. How do you persuade them, and especially the economists among them, about anything, let alone the logic of global equity in climate policy or letting go of guesswork? With honourable exceptions, those in a position to develop a response to the threat have chosen to remain captive to the very forces that now threaten us. Rather than seeking to calm the global climate, they have sought to calm us instead with mere economic management dogma. And while some of these have preened and quibbled, islands are threatened by rising seas and more and more people die from droughts, floods and other extreme events.

If this makes you just want to run away, I do too. But where do we go? Al Gore says to solve the problem we have to 'step out of the box'. But once again, step out into what? If this Briefing succeeds in making the case for C&C, staying means joining the effort for equity and survival. Both morally and logically, equity simply won't be unglued from survival and survival from equity. As in a marriage, the two are one. In fact, you can look at the UN climate negotiations as just a little haggle over an ante-nuptial contract in the shot-gun marriage that climate change forces on us all.

We have seen the future. We have the idea. We have to make an effective deal. If the right framework is adopted there can be a new growth of economic opportunity where prosperity is achieved by greener means for greener ends. This will necessarily involve all sorts of guesswork . . . . but within a framework that keeps us secure.

As another expression of Indian philosophy - the 'Yoga Sutras' of Patanjali - says, 'Heyam duhkam anagatam'.

The pain that has not yet come can be avoided.

Aubrey Meyer, October 2000.

2000

Tom Spencer
Professor of Global Governance, Surrey Uni, President of GLOBE International 1994-99

If you read only one book on climate change - its past and future, politics and solutions - read this one. This is the global picture and the key to a global solution.

2000

Jonathon Loh
WWF International

Dear Aubrey,

Many thanks for your letter of 8 May 2001 and the copy of C&C The Global Solution to Climate Change. I have to say that I think that it is brilliant. It reads like a novel. I particularly liked your interpretation of the Tao Te Ching. And the policy analysis is of course as sharp as ever. Also your analysis of how the climate negotiations leading up to and beyond Kyoto went off track is spot on.

With best regards,

Jonathon Loh Conservation Policy Department WWF International

2000

Mayer Hillman
INDISPUTABLY ESSENTIAL READING

Review by Mayer Hillman published in the March issue of Town and Country Planning

To be or not to be. That is the question posed for mankind in the face of awesome predictions of the consequences of accelerating climate change caused by the greenhouse gas emissions from our profligate energy-intensive lifestyles and the fact that they remain in the atmosphere for several generations. The stark choice presented in this concise book is a continuing '... combination of naked economic and military power and climate disasters' with 'some unscriptable allocation of carbon entitlements (to limit the disasters) with uncalculable costs'. Or it is 'a sharing (of these entitlements) between people globally, equitably and sustainably' in order to deliver a clean and green form of prosperity which does not seriously prejudice the future of the planet.

As is pointed out, if the reduction of greenhouse gas emissions to a relatively safe level is more important than the pursuit of economic growth - a point of departure that I presume nearly all readers of Town and Country Planning accept - then it is clear that a framework for action is needed within which the reduction can be achieved.

This book profoundly and lucidly spells out this framework which its author, Aubrey Meyer, founder and director of the Global Commons Institute (GCI), logically calls 'Contraction and Convergence'. It requires the reduction to be completed within a timetable determined by scientific evidence whilst at the same time programming the reduction towards an end-state of equal per capita emissions. He argues convincingly that this is the only way of avoiding ecological catastrophe.

In addition to a devastating critique of the failure of economics to treat with the subject of the welfare of all mankind and the global environment, he provides a fascinating history of the process by which a transition has been made in the space of ten years from what was at first ridiculed as a totally unrealistic and impractical solution to a centre stage proposition at the heart of current climate change negotiations.

The effectiveness of his argument is reflected in the growing consensus that 'Contraction and Convergence' may indeed be the only realistic route to ecological salvation. For instance, last summer, the Royal Commission on Environment and Pollution and Jan Pronk, the Netherlands Environment Minister and Chairman of the Hague Conference of the Parties to the UN Framework Convention on Climate Change, supported the case for an international agreement based on the principle. In his environment speech in the City of London in the autumn,

Prime Minister Blair acknowledged that the massive reduction in greenhouse gas emissions must be achieved on 'an equitable basis'. A month later, in the Hague, President Chirac stated that 'France proposes that we set as our ultimate objective the convergence of per capita emissions'. It is extraordinary that acknowledgement by these two world leaders and others of the relevance of the concept of equity to the subject, with its seismic implications for the future of economic growth, was not reported in the media. Nevertheless, the message is now reaching an ever-widening audience. Only a few weeks ago in this country, the Loss Prevention Council, the Building Research Establishment, and the Chartered Insurance Institute, have published reports on the problem that climate change poses for the insurance industry. All of them have joined in advocating 'Contraction and Convergence'.

It is clear that urgent changes are called for not only in the policies and practices of government, industry and the business community generally, but also in our own lifestyles. If these are to be conducted according to principles of conscience and survival, our responsibilities on this portentous issue cannot continue to be side-stepped or ignored. I can think of no better investment of time and no more effective means of jolting people out of their complacency on the ramifications of global warming than to read this remarkable book.

Mayer Hillman Senior Fellow Emeritus, Policy Studies Institute
February 2001

Aubrey Meyer, Contraction and Convergence: The Global Solution to Climate Change, published by Green Books on behalf of the Schumacher Society. ISBN 1 870098 94 3. £5.

2000

David Cromwell
A Just Solution to Global Warming

Human-induced climate change is the greatest environmental threat today. Rising to this terrible challenge means overturning the global apartheid between rich and poor. For example, the United States, with a twentieth of the world's population, usurps a quarter of the global atmosphere to dump its pollution. Such inequity motivates this book's author - Aubrey Meyer, a musician who grew up in South Africa. In 1990 he helped found the Global Commons Institute to promote a simple and powerful concept that may yet break the deadlock of climate negotiations.

Simply put, everyone in the world has an equal right to emit greenhouse gas emissions. First, take the Intergovernmental Panel on Climate Change figure of 60 per cent cuts to stabilise global atmospheric carbon dioxide levels by 21 00. Second, calculate the level of pollution each nation should be allowed

on the basis of population. The book's eye-catching graphics illustrate past emissions and future allocation by country, achieving per capita equality by 2030. Emissions thereafter fall to reach safe levels by 2100. There will still he climate damage, but disaster should be averted.

This 'Contraction and Convergence'(C&C) framework has gathered the support of a majority of countries, including China and India. It may he the only approach that developing countries are willing to accept. That, in turn, may one day tempt a post-Bush US back into the fold of the Kyoto protocol. However, Meyer warns that the 'sub-global framework' of the protocol, with its 'guesswork' of market mechanisms and inadequate cuts, could prove worse than useless because the public would be lulled into a false sense of security that something is at last being done. The crux of the matter is whether grassroots support for equity will defeat the powerful elite interests that profit from the status quo: accepting C&C would require that the developed world eschews dirty economic growth for good.

2000

Moni Malhoutra
Rajiv Gandhi Foundation

Dear Aubrey,

I have now had a chance to read your books on Contraction and Convergence.

Thank you for sending them to me. Both are extremely well written and persuasive and I am delighted to find more support than I expected for the rights-based approach.

Thank you for the notable role you have played in promoting C&C.

With regards,

Moni Malhoutra

Secretary General Rajiv Gandhi Foundation New Delhi INDIA - 110 001

2000

Michael Meacher
UK Minister for Environment

Man-made climate change is probably the most serious environmental threat we face. This book offers interesting and useful ideas exploring the concept of 'Contraction and Convergence' as one way to address the global climate challenge.

2000

James Bruges
CLIMATE NEGOTIATIONS

James Bruges sees the immense potential in Contraction and Convergence.

Contraction & Convergence, Aubrey Meyer, Schumacher Briefings, Green Books, Totnes, 2000, £5.00

The wilful destruction, with foreknowledge, of entire countries and cultures represents an unspeakable crime against humanity." The President of Nauru said this as he contemplated the obliteration of his Pacific island state due to rising sea levels. Climate change is serious, and poor nations are suffering disproportionately.

Withdrawal of the United States from the Kyoto process need not prevent governments representing the vast majority of the world's population from implementing policies that address the crisis.

Aubrey Meyer, of the Global Commons Institute, describes an equitable framework that is inclusive of all countries, called Contraction & Convergence. It was widely discussed and well received at the November 2000 negotiations in The Hague. Building on Meyer's Contraction & Convergence framework, the economist Richard Douthwaite is now proposing an economic framework to keep human activity within the environmental limits of the planet. Once these two frameworks have been implemented by the majority nations, it would be in the interests of others, including the US, to participate, whether or not they had taken part in the negotiations.

Contraction & Convergence separates principles from all the confusing detail into which the 1997 Kyoto protocol has sunk. It establishes rules by which the game should be played, rather than calling for arbitrary deals. Meyer declares, passionately, that we are dealing with nothing less than the survival of humanity. And he insists that the ordering of human affairs must be based on equity. When thinking about the negotiations and the clarity Meyer brings to them, I find it helpful to use the image of a tree its trunk formed of core principles from which the branching discussions grow. There are bound to he arguments over detail but these are twigs and leaves that should not harm the main structure. Meyer's core principles, the trunk, are survival and equity.

For survival, greenhouse gas emissions must reduce (contraction): but how quickly? The Economist magazine takes a relaxed view that "it is a hundred-year problem" so don't do anything to upset the economy just yet. The Royal Commission on Environmental Pollution, in its report dated June 2000, says that the concentration of carbon dioxide in the atmosphere is approaching the highest it has ever been in forty million

years so we cannot predict what will follow; in other words, concentrations are already too high to be safe and we should cut emissions as quickly as possible.

Equity must he the guiding principle for agreement on how reductions will be made. The carbon cycle was in balance before human intervention. All land areas were net emitters of carbon dioxide and only the oceans were net absorbers. What has changed is the increase in emissions since the start of the Industrial Revolution. It is only these emissions that are relevant to the negotiations.

If we set on one side the damage already done by countries that have grown rich bringing us to the present crisis, a huge concession to ask of poor nations, the only fair approach to rationing the future use of fossil fuel is through equity an equal-per-capita allocation (based on 1990 population figures). Negotiations that do not take everyone into account on the basis of equal rights are like a tree with a rotten heart doomed to collapse.

The first branch is that convergence from unequal use to equal per-capita allocations will take time industrial economics could not survive a sudden massive reduction in their use of oil and gas. So a convergence period will be necessary. Thirty years has been suggested but it may need to be much less.

A second branch: it will be virtually impossible for some societies to reduce their emissions adequately, whereas others are at present within their allocation. So allocations should be traded, but only if the total of all emissions is within the reducing target. Each country would be issued with Standard Emission Rights (SERS) coupons by the International Monetary Fund XIMF) for this purpose. Industrial nations will want to cut their emissions as quickly as possible in order to reduce the number of coupons they need to buy from those with coupons to spare. Poor nations will want to reduce the growth in their use of fossil fuel so that they have coupons to sell.

China, India and most African countries endorsed the policy of equal-per-capita allocation at The Hague. President Chirac specifically stated that this is France’s goal. The Royal Commission on Environmental Pollution has said “the UK should he prepared to accept the contraction and convergence principle as the basis for international agreement.” If world affairs were democratic, this would now be an adopted policy.

Some commentators accept the logic of equal-per-capita allocations but question whether the US will ever sign an agreement based on equity it is only commercial incentive that will bring the US on board. The majority nations should recognize this as a fact of life and change the financial architecture of the world. This sounds ambitious but it is just a question of revisiting the Bretton Woods agreement.

So the third branch is about monetary reform. At the 1944 Bretton Woods conference, John Maynard Keynes argued for an international currency, independent of national currencies, but the United States overruled him. The Majority Nations should now establish an international currency for trade across boundaries.

A fourth branch (which relates to monetary reform): adequate reductions will not be achieved unless the monetary system rewards those who reduce their emissions. In 1944 currencies were based on gold. The gold standard was subsequently abandoned in 1971 so currencies are now free-floating and unstable, a highly unsatisfactory situation. The new international currency should be linked to carbon, or the emission of carbon. It would be issued in proportion to standard emission rights. Douthwaite calls it the 'emissions based currency unit'(ebcu).

A fifth branch: developing nations should take the initiative (and Europe would probably join in). They have great power most of the world's commodity resource is located in them, India does most of America's accountancy overnight, and these nations could drag the rest of the world into climate chaos if they adopted our coal and oil technologies. But they also have the incentive to make changes emissions-trading would cause money to flow to them from rich nations as of right not as aid, and monetary reform would enable them to use the dollars sitting idly in their banks.

An export tax, levied in proportion to the amount a country exceeds its emissions allocation, would establish a fund to encourage carbon sequestration. Contraction & Convergence allows the Kyoto protocol to be taken forward; it meets the reasonable US requirement that all nations should be involved; and it supersedes the protocol's arbitrary allocations that favour historically high polluters. If the policy is linked to monetary reform, it will be in the interest of all nations, including the US, to participate.

Contraction & Convergence addresses the two great issues of our time climate change and inequality. It would provide the incentive for all nations to reduce emissions. And it would result in a progressive tendency towards equality between nations, thus relieving poverty, encouraging trade and removing many causes for conflict. Hopefully it will be centrestage at Bonn.

James Bruges is author of The Little Earth Book (Alastair Sawday Publishing, £4.99)

ECONOMIST

The world in 2000
As things hot up

Global warming will preoccupy the next generation, predicts Sir John Houghton of the intergovernmental Panel on Climate Change.

One hundred years ago Claude Monet painted scenes of London through its smoggy atmosphere. That was local pollution. What is relatively new and more worrying is global pollution—that is pollution emitted by people locally that has global effects. The first example to emerge was damage to the earth's ozone layer. International action was promptly taken through the Montreal Protocol to phase out the use of the chemicals responsible. Although full recovery of the ozone layer will now happen. It will take at least a century.

Another example is pollution that leads to global warming and climate change. Carbon dioxide and other "greenhouse" gases such as methane are released into the atmosphere through the burning of fossil fuels (coal, oil and gas) and also through deforestation. These gases absorb "heat" radiation emitted by the earth's surface that would otherwise be lost to space, so maintaining the surface and the lower atmosphere at a warmer level than normal.

The amount of carbon dioxide in the atmosphere has already increased by over 30% since 1750 and. If no action is taken to stem the increase, it will reach double its pre-industrial value during the second half of the 21st century. As a result, the average rate of warming of the climate is expected to be greater than at any time during the past 10,000 years. This is not of itself necessarily bad; some communities will experience a net benefit. But many ecosystems as well as humans will find it difficult, if not impossible, to accept.

Although there is a lot of uncertainty concerning the detail, the basic science underlying global warming and climate change is well understood. It is not in question. Hundreds of scientists from over 50 countries have contributed as authors or reviewers to the assessments of the Intergovernmental Panel on Climate Change (IPCC). Because of the uncertainties it is easy either to exaggerate the possible impacts to calamitous proportions or to suggest that too little is known to justify any action. What the IPCC has done is explain clearly what is known together with the major uncertainties. Then taking account of all relevant scientific data, best estimates have been provided of climate change and its impact over the next century. Here are a few of the IPCC'S main findings and an outline of the agenda for the years ahead.

First, largely because of the thermal expansion of ocean water and the accelerated melting of glaciers, sea levels are likely to rise by approximately half a metre by 2100. Therefore, sea defences in many coastal regions will need to be improved, albeit at considerable cost. However, adaptation is just not possible for countries with large river deltas such as Bangladesh, many island states in the Pacific.

A second major result of global warming will, be on average a more intense hydrological cycle leading to impacts on water distribution and availability. In many areas heavy rainfall will tend to become heavier while some semi-arid areas will receive less rainfall. There will be more frequent and more intense floods or droughts, especially in sub-tropical areas. Since, in many places, water is rapidly becoming a critical resource and since floods and droughts are the natural disasters that already cause most deaths, misery and economic damage, these could represent the most damaging impacts of global warming. When combined with the rise in sea levels, a recent study has estimated that this could lead to 150m environmental refugees by 2050.

Three widely accepted principles will govern the international agreements needed to meet this threat. The first is the "Precautionary Principle", already clearly embedded in the UN Framework Convention on Climate Change agreed at the Earth Summit in Rio in 1992. This states that the existence of uncertainty should not preclude the taking of appropriate action. The reason for such action is simply stated as the stabilisation of the concentrations of greenhouse gases (such as carbon dioxide) in the atmosphere in ways that allow also for necessary economic development. The second principle is the "Polluter Pays Principle", which implies the imposition of measures such as carbon trading arrangements. The third is the "Principle of Equity (both intergovernmental and international)" which is the most difficult to apply.

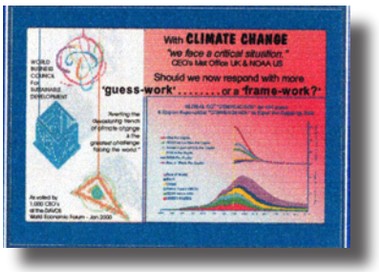
The action agreed at Kyoto in 1997 is a first step. Necessary post-Kyoto action, however will be more demanding. The rate of increase of global emissions must first be substantially slowed: then there must be reductions in these emissions to well below 1990 levels before the end of the next century. Many of the required technologies to bring about these reductions are already available, but they require adequate resources for investment and development. Studies show that the necessary action may cost around 1% of the total world product, much less than the likely cost of damage and adaptation if there is no action. If human communities are to be fulfilled and creative, they not only need goals related to their economic performance but also moral and spiritual goals. Care for the overall health of the planet), is such a goal. It demands action by scientists to provide better information about likely climate change, by governments to set the necessary frameworks for change, by business and industry to seize the opportunities for innovation and the introduction of new technologies, and by all world citizens to support the action being taken and contribute to it.

JANUARY 2000

GCI
Guesswork Framework

GCI's submission to the IPCC Third Assessment of Climate Change, Working Group Three.

www.gci.org.uk/consolidation02.html



FEBRUARY

Nicholas Low
Global Ethics & Environment

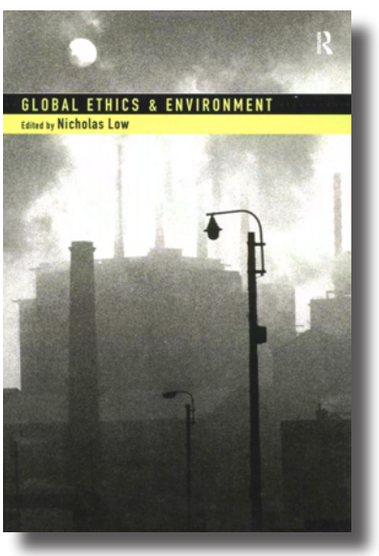
Publisher: Routledge **ISBN:** 0415197368

Justice, the market and climate change [Page 103]

As we have seen, developing countries did not, and were never expected to agree to mandatory targets for their emissions. At the meeting of the parties . . .

> in Bonn in June 1998 an intriguing discussion took place over the use of the words 'rights' and 'entitlements' in debates over emission trading.

The United States opposed the use of these words, arguing that the Protocol does not refer to these concepts but simply to assigned amounts that may be traded.



The use of the notion of rights clearly implies an allocation of control over a common property resource, namely the Earth's atmosphere. As a wealthy and powerful nation, the United States feels uneasy in the face of the assertion of rights over the atmosphere by some very poor people. The next step to flow from the assertion of rights is the principle of equal per capita entitlements for every citizen of the world.

> This proposal for 'global justice', known as 'contraction and convergence', is already forcing itself on to the international agenda. It has been endorsed in principle by the European Parliament. It would mean that if a rich country wanted to pollute at higher than average levels
>
> then it would need to purchase the right to do so from poor countries that own them. We can anticipate some convoluted arguments in an attempt to discredit this proposition.

FEBRUARY

Ambassador Raul Estrada
Chair Kyoto Negotiations

"Long before the end of the Framework Convention negotiation, the Global Commons Institute has presented a proposal on "Contraction and Convergence", aimed to reach equality in emissions per capita. We all in this room know the GCI model where contraction is achieved after all governments, for precautionary reasons, collectively agree to be bound by a target of global GHG emissions, making it possible to calculate the diminishing amount of greenhouse gases that the world can release each year in the coming century, subject to annual scientific and political review. The convergence part of the proposal means that each year's global emissions budget gets shared out among the nations of the world so that every country converges on the same allocation per inhabitant by an agreed date. Countries unable to manage within their shares would be able to buy the unused parts of the allocations of other countries. The entitlement of rights transferred in this trading is legitimised by the per inhabitant criteria. Level of contraction and timing of convergence should be negotiated on the basis of the precautionary principle. Suggestions for emission reductions are well known and convergence should be achieved at medium term to satisfy legitimacy."

APRIL

Charter 99 Declaration

Inter alia

" . . . . Declare climate change to be an essential global security interest and establish a high-level international urgent action team to assist the UN Conference of the Parties on Climate Change to set a scientifically based global ceiling on greenhouse gas emissions, to allocate national shares of permissible emissions based on convergence to equal per capita rights, and to work with governments, companies, international agencies and NGOs to cut emissions of greenhouse gases to a sustainable level."

www.charter99.org/charter/signatories.html

APRIL

Svend Auken
Danish Environment Minister

"The approach of "Contraction and Convergence" is precisely such an idea. It secures a regime that would allow all nations to join efforts to protect our global commons from being over-exploited, . .

without the risk that any country would be deprived of its fair long-term share of the common environmental emission space. And it allows for consistent and efficient management of the global emissions that would enable us to strive for constraining global interference with the climate below fixed ceilings, such as the max 2 degrees temperature rise, and the max. 550 ppmv CO2-concentration, recommended by the European council of ministers."

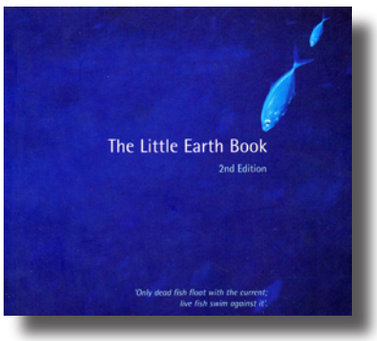
MAY

Sir John Houghton
Chair IPCC WG1

"Three widely accepted principles will govern the international agreements needed to meet the threat of climate change. (1) The Precautionary Principle, already clearly embedded in the UNFCCC agreed at the Earth Summit in Rio in 1992. This states that the existence of uncertainty should not preclude the taking of an appropriate action. The reason for such action is simply stated as the stabilisation of the concentrations of greenhouse gases (such as CO2) in the atmosphere in ways that allow for necessary economic development. (2) The Polluter Pays Principle, which implies measures such as carbon taxes or carbon trading arrangements. (3) The principle of Equity, both intergenerational and international - the most difficult to apply.

However a proposal of the Global Commons Institute - "Contraction-and-Convergence" (C&C)" - that is being widely discussed applies these principles by allowing eventually for the allocation of carbon emissions to nations on an equal per capita basis while also allowing for emissions trading."

2000



James Bruges
The Little Earth Book

Publisher: Alastair Sawday Publishing ISBN: 1901970264

Contraction and Convergence - The logical step after Kyoto

The USA has a convenient excuse for not ratifying the Kyoto protocol: there is no 'substantial participation' by the majority-nations. India and China will be major polluters in the coming years and any agreement, it says, is useless if they are not included in the process. Also, poor nations obviously will not agree to the Kyoto process if their already tiny contribution to carbon dioxide pollution has to be reduced. So is there stalemate?

The Global Commons Institute (GCI) believes that reconciliation can only be based on the two incontestable principles of survival and equity.

For survival, greenhouse gas concentrations in the atmosphere must be reduced. The natural 'sinks', such as plants and plankton, which absorb them, can probably only handle 20% - 40% of our present emissions. (These figures may reduce due to deforestation and fires).

Equity requires that everyone in the world has the right to a fair share of the carrying capacity of the atmosphere. The poor nations will never agree to be second class citizens in perpetuity. Therefore the rich nations either have to agree to a principle of worldwide fairness or plunge the world into runaway global warming. 'Fairness' is, of course, built into the Universal Declaration of Human Rights (and into the US Declaration of Independence). An equal-per-capita allocation of the right to emit carbon is the only equitable basis for agreement.

• All nations, rich and poor, must participate fully. (failure to achieve this was a valid reason for America to reject the Kyoto protocol).

• Emission rights can be traded between nations using normal market mechanisms (this will benefit poor nations).

• There will be an adjustment period during which nations will move from the present unequal use of carbon to an allocation that is proportional to their 1990 population.

The GCI calls this process Contraction and Convergence and considers the following to be politicially realistic targets: Contraction to 20% of current emissions by 2080 and convergence to equal per capita shares by 2030.

The targets may be adjusted in the light of further scientific understanding. The GCI suggests that Special Emission Rights coupons (SERs) be issued to nations by the International

Monetary Fund (IMF). Producers would only be allowed to sell carbon-based fuels once they receive SER coupons from those nations. This would be easy to control at the point of fuel-sale, since 80 of all carbon fuel comes from only 122 producers.

The 'Contraction & Convergence' formula therefore provides a scientific and fair framework for intergovernmental agreements on reducing carbon dioxide emissions to a sustainable level and it has the added advantage that it will lead to greater equality between nations.

The formula has been accepted by India, China and most African states. And the Royal Commission on Environmental Pollution says: "The UK should be prepared to accept the contraction and convergence principle as the basis for international agreement on reducing greenhouse gas emissions". Participating nations should proceed on this basis using an international currency based on the SER coupons (releasing their dollar reserves). There are reasons why other nations, including the US, will wish to join in once the system has been established democratically.

MAY

Environmental Finance
Climate Change, Risk & Global Emissions Trading

The potential costs of climate change are staggering.

But, argue Aubrey Meyer and Tony Cooper, current international policy is inadequate. The answer lies in a truly global and equitable solution.

Global weather patterns are becoming increasingly variable and violent as a result of the higher temperatures caused by humankind's pollution of the global atmosphere.

> According to figures released from German reinsurer Munich Re, economic losses from natural disasters have been doubling every decade, from $53 billion in the 1960s to $480 billion in the 1990s.

80% of these are from weather-related events. There is now great concern about these damages and the reasons for their increase. What can we do to limit further increases in these damages?

The objective of the United Nations Framework Convention on Climate Change (UNFCCC) is to stabilise the rapidly rising concentrations of greenhouse gases (ghgs) in the atmosphere at a level that prevents disaster.

The Kyoto Protocol - yet to be ratified - will impose collectively slight but legally binding commitments only on 'Annex Parties' to the UNFCCC, in other words on those from the developed

country group only. They alone will have to reduce or limit their net GHG emissions by an average of 5.2% below 1990 levels, by the period 2008-2012.

As part of the process, the Protocol proposed the international trading of emissions permits and the so-called 'Clean Development Mechanism' (CDM).

The questions are will this trading happen, how will it be structured and will it help?

If the planet's climate system is to be protected from dangerous disruption, a rapid and orderly retreat from fossil fuel dependency in favour of clean and renewable forms of energy is needed. Emissions trading must be primarily structured and directed to this end. It will become a vital part of the process preventing the climate from changing catastrophically if it is. If it is not, it will make matters worse.

We argue that the answer is "Contraction, Convergence, Allocation and Trade" [C-CAT]. In a nutshell, countries agree a reviewable global greenhouse gas emissions 'contraction budget' to match a precautionary and safe future stable value for the rising (ghg) concentrations. The internationally tradable shares in this budget are then agreed on the basis of 'convergence' from now, where shares are proportional to income, to a target date in the budget time-line after which they remain proportional to an agreed base year of global population.

Since 1860 the global economy has grown exponentially as a result of fossil fuel fired industrialisation. During this period humanity has released an accumulated 250 billion tonnes of this carbon from the burning of oil, coal and gas to the global atmosphere (chart). These fossil fuel emissions have been increasing at an average rate of 2% a year, to a current annual output of around six billion tonnes of carbon from CO2.

CO2 emissions from fossil fuel burning represent the principal contribution to human enhanced global-warming. Half of these emissions have remained in the atmosphere, raising CO2 concentrations there by 35%, from the pre-industrial 280 parts per million by volume (ppmv) to a current 370 ppmv and with it, temperature by almost 1ºC. These trends are set to continue unless a major effort is made to change them.

Climate scientists agree that to stabilise these rising concentrations - and hopefully thereby rising temperature - requires cuts of 60%-80% of these emissions globally as soon as possible. The longer the delay the higher the concentrations will be. The risk of temperature rising at a rate that dangerously accelerates the rate of global climate changes increases exponentially proportional to delay.

Because of positive feedbacks, delay potentially takes us beyond our ability to prevent damages at all.

In this worst case scenario, increasingly huge numbers of people will die in these.

Extrapolation and guesswork about the future effects of climate change misses the point. For dangerous changes in global climate to be avoided, a precautionary framework for practical, commercial-assisted action has to be devised, agreed and implemented.

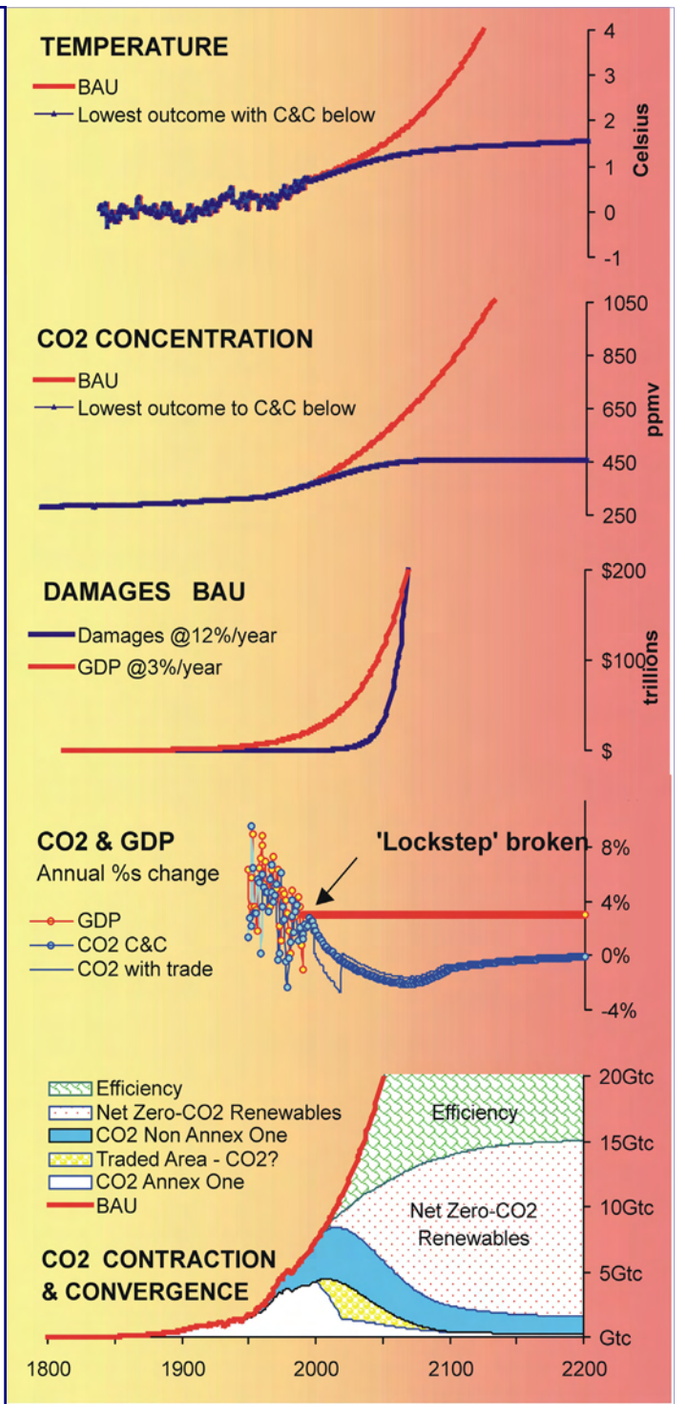
Recorded surface temperature has risen by 0.9°C between 1860 and 2000. Future projections follow CO_2 emissions and atmospheric ghg concentrations (in ppmv - parts per million by volume). The red line shows how temperature will rise with a Business-as-Usual (BAU) 2% annual growth in emissions. The blue line shows the lowest possible climate sensitivity - a total rise of 1.5°C - assuming a 60% global emissions contraction by 2100.

The recorded rise in atmospheric CO_2 concentration from 1860 until 2000 shows an increase of 34% over pre-industrial levels. This is a rise both higher and a faster than anywhere in the ice-core sampling back 440,000 years before now. Concentrations are rising as the result of accumulating emissions. The red line shows the worst case scenario. The best case sees this rise stabilised at twice today's level due to a 60% global contraction in the underlying emissions by 2100.

Damages here are the global economic losses (Munich Re) for the four decades past for all natural disasters projected at the observed rate of increase of 10% a year in comparison to global $GDP at 3%. If the global trends continue BAU, damages will exceed GDP by 2065. The risks will soon become uninsurable beyond the capacity of the insurance industry and governments to absorb and the damages will be beyond the capacity of societies to cope. Damages will rise for the century ahead even with emissions contraction, but the rate can be reduced if C-CAT is rapid and orderly.

For the past four decades, the output of CO_2 and GDP from global industry have been correlated nearly 100% (known as the 'lock-step'). Future GDP is projected here at 3% a year. Future CO_2 goes negative equal to the retreat from fossil fuel dependency shown below, that limits CO_2 concentrations to 70% above pre-industrial levels, shown above. Breaking the lock-step needs up to minus 5% annual emissions globally to reduce the probability of appalling damages.

The redline shows BAU CO^2 emissions. The solid segments show "Contraction, Convergence, Allocation and Trade" [C-CAT] to manage emissions down by at least 60% within a given time frame with an agreed 'contraction budget' (here 680 billion tonnes of carbon). The internationally tradable shares of this budget result from convergence to equal per capita by an agreed date and population base year (here 2020). The 'traded area' is the difference between that and convergence by 2100 (here, 100 billion tonnes). Ideally these are avoided emissions as well due to investment of the proceeds of trade in zero-emissions technologies. Thus lowering risk and damages further.



The UNFCCC identified potentially dangerous climate changes as a global problem. Its global objective is seen as dependent on observing the principles of precaution and equity along with the need for 'cost-effective' measures.

In a literal sense the UNFCCC can already be seen as the "United Nations Framework Convention for Contraction and Convergence", because it embraces the: -

precautionary imperative of contracting human emissions of greenhouse gases globally by 60%-80% as soon as possible;

diplomatic imperative of 'convergence', that is having a framework to share this international task on the basis of global equity; and

potential efficiency benefits of using market mechanisms – such as international emissions trading and the CDM – to maximise globally equitable emissions reductions per unit of expenditure.

However, because emissions reduction under Kyoto are restricted to the industrialised world, the US is ambivalent about ratification, saying that it is 'anti-competitive.' Its position has been that this global problem requires a global solution, including participation – that is, with binding emissions limits – by developing countries. These have justifiably argued that as the industrial countries have grown rich emitting an accumulated 80% of the emissions so far, they should take the lead in cutting the emissions now without seeking to impose limitations on the rest of the world.

This argument has dogged negotiations at the UN for the last ten years. Even if it is temporarily overcome at the 6th Conference of the Parties to the UNFCCC in the Hague in November this year, approval of the US Senate is required for US ratification of the Kyoto Protocol. Without this the Protocol seems unworkable.

And even if this US veto is overcome, or if some key developing countries are persuaded to accept legally binding emissions restraint now and the Protocol is ratified, the problem won't have gone away. It is obviously global and global participation in global GHG reduction is obviously needed.

For the moment the international dispute is further complicated by the fact that rules about tradable emissions rights – which are presently sub-global in scope – are under the UNFCCC's global governing principles. Can the rules for sub-global emissions trading envisaged under Kyoto be viable if they are in conflict with the global principles of precaution and equity already agreed in the UNFCCC? Emissions trading can only occur between countries that have accepted emission reduction or limitation commitments. This means strictly that the principles of this new form of 'ownership' must be pre-defined, quantified and internationally accepted before it can be traded.

Developing countries are sometimes portrayed as seeking to influence the rules governing a scheme they have refused to join. In fact their position has evolved over the past few years. The position that developed countries must take the lead has come to seem that just as 'rights' and 'responsibilities' are two sides of the same coin, that 'commitments' are also 'entitlements'. And in many recent statements they have said - consistent with the sequenced logic of cap-and-trade - international emissions trading should be a priori dependent on equitable entitlements to all countries, agreed by all countries. This was the key battle in the run-up to Kyoto that led to Article 17 on trade and COP-6 remains pointed at this battle much as before.

If international trading of such emissions 'commitment/ entitlements' is to occur and in a way that lowers the overall damage costs and of avoiding the damage, resolving this argument is of fundamental strategic importance.

The parliamentarian's network GLOBE International has realised this and are consequently advocates of C-CAT. As their president Tom Spencer said at COP-4 in Buenos Aires in 1998, we must now move from the half-truth of sub-global commitments to the whole truth of global entitlements.

Despite the fact that global rights and global responsibilities are obviously inseparable, key developed countries - such as the UK - have remained slow to recognise it.

> 'Commitments' obviously become 'entitlements' as soon as they become tradable, as trading what you don't own is theft.

As if to prove the point, the UK recently announced their option to sell an 8% 'over-achievement' against the UK's emissions reductions commitment agreed in Kyoto (1990 levels minus 12% by 2008 - 2012), to the US for around £100 million.

From a developing country perspective, this actually amounts to profiting from 'under-commitment' rather than 'over-achievement', at a time when increasingly violent cyclones are causing damages and death in places like Venezuela, Orissa and Mozambique. In other words the UK should have held to their original commitment of minus 20% reductions as the Germans and the Danes have done as its part of the deal in Kyoto.

GLOBE and GCI are part of a growing network of individuals, institutions, parliaments and governments North and South who recognise that C-CAT is the straightforward way to resolve all this. Because all countries must have targeted and timetabled commitment/entitlements to control emissions to achieve the objective of the UNFCCC, a global method of applying its global principles of precaution and equity is inevitably required.

Contraction means that, for precautionary reasons, all governments collectively agree to be bound by an ultimate global target for safe and stable atmospheric ghg concentration.

It would remain subject to annual scientific and political review. This makes it possible to calculate the diminishing amount of carbon dioxide and the other greenhouse gases that the world can release for each year in the coming century while staying within this target.

Convergence means that each year's ration of this global emissions budget gets shared out among the nations of the world so that every country converges on the same allocation per inhabitant by an agreed date. This rate of convergence is negotiable. This method recognises that logic requires a pre-distribution of the rights to the 'global commons' of the atmosphere based on globally equal rights per capita.

Once agreed, countries unable to manage within their shares would, within limits, be able to buy the unused parts of the allocations of other, more frugal, countries. Sales of unused allocations would give the countries of the South the income to purchase or develop zero-emission ways of meeting their needs. The countries of the North would benefit from the export markets this restructuring would create. And the whole world would benefit from the slowing the rate at which damage was being done.

Because this is an effective, equitable, efficient and flexible framework in which governments can co-operate to avert climate change, even some fossil fuel producers have begun to demonstrate positive interest in the concept.

The under-recognised irony is that this matches the positions taken by the; -

(1) US Government in June 1997 in the so-called Byrd Hagel Resolution

(2) Africa Group of Nations during the pre-Kyoto negotiations

(3) Non-Aligned Movement at their Summit in Sept. 1998

(4) European Parliament in '99

(5) An increasingly numerous list of organisations and individuals around the world who explicitly advocate "C-CAT" model.

As an example, if GDP continues to grow at 3% a year for the next hundred years while the damages continue to grow at 10%, global damages exceed global GDP by 2065! The imperative of avoiding this trend is self-evident.

The 'traded area' between 2000 and 2100 in the accompanying C-CAT graphic represents a potential exchange between the North and the South. It is equivalent to 100 billion tonnes of carbon or one sixth of the total carbon budget - and a significant fraction of the damages - avoided for that period, if it

is an exchange of no-emissions technology and know-how. The carbon is equal to 500 trillion 1995 global $/tonnes, but this is merely an average of 2% GDP a year for the next century.

The imperative now is to direct the larger % of this into this clean energy transition up front, because the risk is all front-end loaded. The obvious need for this is disguised only by the fact that 'economics' is a snap-shot discipline that also regards the poor (Orissa Mozambique) as being an 'affordable' damage cost. Since there's no net meaningful GDP 65 years out, this discipline destroys us all in the end.

The central challenge to governments is establishing the precautionary global framework of C-CAT now. The central challenge to industry, and especially the insurance sector, is in realising the global economic value of becoming supporters and advocates of such a framework, by realising the global market opportunity that the rapid, orderly retreat from fossil fuel dependency creates.

> With the framework agreed, we have a chance of avoiding the worst of the immense damages to come. Without it we haven't got a chance. Moreover, as soon as the fossil fuel producers and the associated technology producers know that there is a global emissions cap secured by an international long-term agreement to share on the basis of convergence, the real value of emissions trading is secure.
>
> The greatest incentive in trade under these conditions will not – as at present – be to filibuster and cheat. It will be to conserve both the value of carbon permits and the possibility of prosperity everywhere by switching to the capture and potentially endless use of renewable energy.

In the polarised world of North/South relations, some members of GLOBE have called C-CAT the "trade for equity swap". Using emissions trading to avoid carbon by funding no emissions technology and development instead, particularly to start with in the developing world, lowers the global bill for damages while buying time for the orderly retreat from fossil fuel dependency in the North. However, with C-CAT up and running, this is trade for equity and in the best sense – global equity, survival and prosperity for everyone.

JUNE

Int Red Cross/Crescent
World Disasters Report 2000

"No one owns the atmosphere, yet we all need it. So we can assume that we all have an equal right to its services – an equal right to pollute. On the basis of the minimum cuts in total carbon dioxide pollution needed to stabilize the climate, estimated by the Intergovernmental Panel on Climate Change to be between 60 to 80 per cent of the pollution levels reached in 1990, and assuming that we all have an equal right to pollute, rich countries are running up a massive climate or 'carbon' debt. By using fossil fuels at a level far above a threshold for sustainable consumption, year after year the carbon debts of rich countries get bigger.

Any political solution to climate change will need to be based on reductions in emissions, otherwise known as contraction. As the climate is owned by no one and needed by everyone, we will also have to move towards equally sharing the atmosphere, known as convergence. Collective survival depends on addressing both."

www.ifrc.org/

JUNE 28

BBC online
The human price of Mozambique's disaster: Red Cross warns on climate

By environment correspondent Alex Kirby

The world's largest non-governmental aid organisation says the developed countries' polluting lifestyles represent a massive debt owed to the poor.

The charge comes in the World Disasters Report 2000, published by the International Federation of Red Cross and Red Crescent Societies.

The report says the developed world's pollution is heating the planet, with potentially drastic consequences for all on Earth.

And it argues that everybody, rich and poor, should have an equal right to pollute the atmosphere.

The report says: "Reckless human use of fossil fuels - overwhelmingly by industrialised countries - has helped raise the spectre of climate change, which darkens everyone's horizon.

"But poor people in poor countries suffer first and worst from extreme weather conditions linked to climate change. Today, 96% of all deaths from natural disasters occur in developing countries.

Increasing disasters

"By 2025, over half of all people living in developing countries will be 'highly vulnerable' to floods and storms."

The report says this year's floods in Mozambique were just the latest example of climate-induced disasters. Others were the flooding in Bangladesh and eastern India, storms in Venezuela, and the effects of El Nino.

> "When Hurricane Mitch hit Central America, the Honduran president commented: 'We lost in 72 hours what we have taken more than 50 years to build'.
>
> "According to the re-insurance giant MunichRe, the number of great weather-related and flood disasters quadrupled during the 1990s compared to the 1960s, while resulting economic losses increased eight-fold."

The report acknowledges the recurrence of natural cooling and warming cycles in the Earth's history, but says humanity is now "moving beyond natural climatic variations".

It argues that all nations will have to live within "one global environmental budget", which will mean a drastic change from the situation today, when

> "industrialised countries generate over 62 times more carbon dioxide pollution per person than the least developed countries".

The report contrasts the monetary debts owed by developing countries to their wealthy creditors with the rich world's climate debt.

"By using fossil fuels at a level far above a threshold for sustainable consumption, year after year the carbon debts of rich countries get bigger."

It says the poorest states, the heavily indebted poor countries, are owed up to three times as much in carbon credits as they owe in dollars.

But the world's richest nations have amassed a climate debt totalling $13 trillion, the report says.

Compelling respect

The Federation argues for a policy to match the structural adjustment programmes imposed on many developing countries, which force their economies into line with Western norms.

It says there is a need for sustainability adjustment programmes, which would compel rich countries to respect the common environment. And it endorses the idea of contraction and convergence, which would mean that citizens of every

country, rich or poor, would be entitled to emit the same amounts of climate-changing pollution, an idea pioneered by the London-based Global Commons Institute.

Aubrey Meyer of GCI told BBC News Online:

"This endorsement by the Federation, which is a fairly cautious group, shows that contraction and convergence is an idea whose time has come."

Some researchers still doubt that human activities are inducing rapid climate change.

They highlight the inconsistencies between the temperature records taken at the Earth's surface, which show rapid warming over the last century, and the data produced by satellite and balloon studies.

These show little if any warming, in the last two decades, of the low to mid-troposphere - the atmospheric layer extending up to about 8km from the Earth's surface.

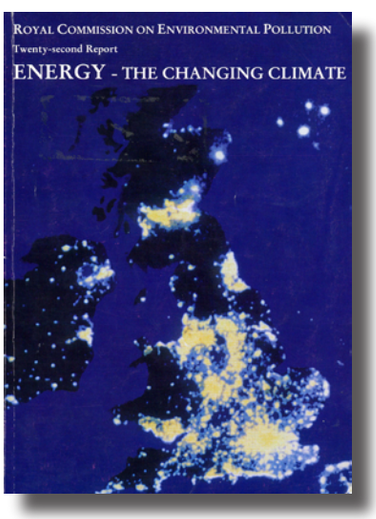
Climate models generally predict that temperatures should increase in the upper air as well as at the surface if increased concentrations of greenhouse gases are causing the warming recorded at ground level.

JUNE

Royal Commission on Environmental Pollution (RCEP)

"The Need for an International Agreement", "Contraction & Convergence"

"3. The government should press for a future global climate agreement based on the 'Contraction and Convergence' approach, combined with international trading in emission permits. Together, these offer the best long-term prospect of securing equity, economy and international consensus (4.69)."



4.47 Continued, vigorous debate is needed, within and between nations, on the best basis for an agreement to follow the Kyoto Protocol. Our view is that an effective, enduring and equitable climate protocol will eventually require emission quotas to be allocated to nations on a simple and equal per capita basis. There will have to be a comprehensive system of monitoring emissions to ensure the quotas are complied with. Adjustment factors could be used to compensate for differences in nations' basic energy needs. Those countries which regularly experience very low or high temperatures might, for instance, be entitled to an extra allocation per capita for space heating or cooling.

4.48 A system of per capita quotas could not be expected to enter into force immediately. At the same time as entitling developing nations to use substantially more fossil fuels than

at present (which they might not be able to afford), it would require developed nations to make drastic and immediate cuts in their use of fossil fuels, causing serious damage to their economies.

4.49 A combination of two approaches could avoid this politically and diplomatically unacceptable situation, while enabling a per capita basis to be adhered to. The first approach is to require nations' emission quotas to follow a contraction and convergence trajectory. Over the coming decades each nation's allocation would gradually shift from its current level of emissions towards a level set on a uniform per capita basis. By this means 'grandfather rights' would gradually be removed: the quotas of developed nations would fall, year by year, while those of the poorest developing nations would rise, until all nations had an entitlement to emit an equal quantity of greenhouse gases per head (convergence). From then on, the quotas of all nations would decline together at the same rate (contraction). The combined global total of emissions would follow a profile through the 21st and 22nd centuries that kept the atmospheric concentration of greenhouse gases below a specified limit.

4.50 The upper limit on the concentration of greenhouse gases would be determined by international negotiations, as would the date by which all nations would converge on a uniform per capita basis for their emission quotas, and the intermediate steps towards that. It would probably also be necessary to set a cut-off date for national populations: beyond that date, further changes in the size of a country's population would not lead to any increase or decrease in its emission quota.

4.51 In table 4.1 17 we have applied 'Contraction and Convergence' approach to carbon dioxide emissions, and calculated what the UK's emissions quotas would be in 2050 and 2100 for four alternative upper limits on atmospheric concentration.

We have assumed for this purpose that 2050 would be both the date by which nations would converge on a uniform per capita emissions figure and the cut-off date for national populations. If 550 ppmv is selected as the upper limit, UK carbon dioxide emissions would have to be reduced by almost 60% from their current level by mid-century, and by almost 80% by 2100. Even stabilisation at a very high level of 1,000 ppmv would require the UK to cut emissions by some 40% by 2050.

4.52 The UK-based Global Commons Institute has taken the lead in promoting 'Contraction and Convergence', and has developed a computer model that specifies emission allocations under a range of scenarios.

The concept has been supported by several national governments and legislators. Some developed nations are very wary of it because it implies drastic reductions in their emissions, but at least one minister in a European government has supported it.

Commentators on climate diplomacy have identified contraction and convergence as a leading contender among the various proposals for allocating emission quotas to nations in the long term.

4.53 The other ingredient that would make an agreement based on per capita allocations of quotas more feasible is flexibility of the kind already provided in outline in the Kyoto Protocol. Nations most anxious to emit greenhouse gases in excess of their allocation over a given period will be able and willing to purchase unused quota at prices that incline other countries to emit less than their quota, to the benefit of both parties. The clean development mechanism, which allows developed nations to claim emission reductions by sponsoring projects that reduce emissions in developing nations to levels lower than they would otherwise have been, can also be seen as a form of trading.

4.54 In the longer term trading by companies in emission permits, drawn from national emission quotas determined on the basis of a contraction and convergence agreement, could make a valuable contribution to reducing the global costs of stabilising greenhouse gas concentrations while transferring resources from wealthy nations to poorer ones. Trading needs to be transparent, monitored and regulated, and backed by penalties on nations that emit more than they are entitled to. If it became merely a means of enabling wealthy nations to buy up the emission entitlements of poor countries on the cheap, thereby evading taking any action at home, trading would not serve the cause of climate protection. Nor would it if developing countries that had sold quota heavily went on to emit in excess of their revised entitlements.

JUNE

Independent
Little man's big idea could save the world

A ROYAL Commission report will this week confirm that one ordinary person, working alone and with little resources, has the power to change the world.

He is Aubrey Meyer, a musician from London, and his idea on how to cut emissions of carbon dioxide world-wide will be endorsed at length by the Royal Commission on Environmental Pollution.

It is already the official policy of India, China and many African countries and is getting increasing attention from Western ministers. His idea was that everyone on earth should have

the right to emit the same amount of carbon dioxide. He then worked out what each nation would be entitled to, on this basis, if emissions were cut by 60 per cent world-wide. Rich countries - who have been responsible for 80 per cent of the pollution to date - would have to make big cuts. Developing ones would be allowed to emit more, but would have to moderate their planned increase. And they could sell their emission rights to rich countries to get money to develop clean technologies. Mr. Meyer, 53, has devoted more than a decade, with virtually no resources, to promoting the concept.

The Commission will also conclude that new taxes are needed to wean Britain off oil, gas and coal and help save the world's climate, putting it into conflict with the Government by proposing a "carbon tax" on fossil fuels to combat global warming - something ministers have opposed.

The commission's report, to be published on Friday, will call on the Government to draw up plans to cut Britain's carbon dioxide emissions - the main cause of global warming, from burning coal, gas and oil, by 60 per cent over the next 50 years.

JUNE

ENDS Report 305
RCEP's energy futures under a CO_2 ceiling

The Royal Commission on Environmental Pollution (RCEP) has set out a radical agenda for transforming the UK's energy supply system and reducing energy demand. Massive development of renewable energy and other alternative sources will be needed, it says, to achieve the 60 reduction in carbon dioxide emissions which may be necessary within 50 years to contribute to a globally equitable solution to the problem of climate change.

The RCEP must have been stung by the outcome of its latest quinquennial review earlier this year, which concluded that many among its target audiences were only "vaguely aware" of its work.

Members will be happier with the publicity their new report received. And they will also be pleased that Industry Minister Patricia Hewitt quickly promised that the Government will aim to respond within a year.

The report is likely to be one of the Commission's most important, ranking alongside the 1994 report on transport, the 1983 report on lead and the 1976 report on nuclear power. The latter is still remembered for advising against a large nuclear programme until a method of containing long-lived radioactive waste indefinitely into the future had been demonstrated.

Successive Governments took no notice, and the consequences are all too alive today - as the RCEP makes clear with a recommendation couched in similar terms.

"Contraction and Convergence"

The report takes the threats posed by climate change as a given. The RCEP received submissions from the right-wing Institute of Economic Affairs and "a major oil company" that the science was too uncertain to justify policy changes. It disagrees.

There is, the report says, "a very strong likelihood" that the impacts of climate change will be "seriously damaging". And there is a possibility that "abrupt changes in the climate system might be triggered and have even more dramatic impacts."

The appropriate reaction, the report says, must be to improve the UK's energy efficiency drastically and reform its energy supply and distribution system beyond recognition over the next half-century - starting very soon.

The programme envisaged by the RCEP was shaped by its acceptance of the "Contraction and Convergence" approach to reducing greenhouse gas emissions. This was developed by a former musician, Aubrey Meyer, whose Global Commons Institute (GCI) has promoted it over the past decade to the point where it is a leading concept in international thinking about how emissions should be controlled beyond the Kyoto Protocol's "commitment period" of 2008-12.

Under contraction and convergence, each country would receive an emission quota at its current emission level. The quotas of developed nations would be gradually reduced, and those of developing countries increased, until they converged at a uniform per capita global figure. Thereafter, each national quota would be reduced so that global emissions contracted and atmospheric concentrations of greenhouse gases did not exceed an agreed level.

The RCEP's concern was with CO2 only. Atmospheric concentrations of CO2 have risen from 270ppm in pre-industrial times to 370ppm today. The RCEP chose 550ppm as the ceiling which CO2 should not be allowed to break through - though some, like the GCI, argue that the figure should apply to all greenhouse gases. A limit of 550ppm could be met along many paths. The RCEP took 2050 as the year by which each country's emissions will have converged to a uniform per capita figure. On this basis, the UK's emissions of CO2 would have to fall by almost 60% from the 1997 level by mid-century.

JULY

Jan Pronk
Chair COP 6, Dutch Environment Minister

"Contraction and Convergence" - most equitable . . . easier & cheaper than alternatives. "

. . .The debate about broadening participation of developing countries in the global effort to stabilize greenhouse concentrations in the atmosphere at sustainable levels has the tendency to focus first on the most advanced developing countries. Suggestions have been made for commitments for those developing countries in the period after 2012 in terms of increased energy or greenhouse gas efficiency. In other words: not an absolute cap, but a relative efficiency improvement in the production structure of developing countries. This strategy would imply that developing countries gradually start participating, as they achieve a certain level of economic development. That is a reasonable and realistic option. However, it can be argued that such gradual participation would only lead to a slow decline of global emissions, even if current industrialized countries would drastically decrease their emissions. As a result global average temperature increase would significantly exceed the 2 degrees centigrade limit that could be seen as the maximum tolerable for our planet. There are alternatives for this scenario. Some developing countries have argued for an allowance of equal emissions per capita. This would be the most equitable way to determine the contribution of countries to the global effort. If we agree to equal per capita emissions allowances for all countries by 2030 in such a way that global emissions allow us to stay below the 2 degrees global temperature increase (equivalent to about 450 ppmv CO2), then the assigned amounts for Annex B countries would be drastically reduced. However, due to the fact that all countries would have assigned amounts, maximum use of global emissions trading would strongly reduce the cost of compliance. So, in such a scenario, industrialized countries would have to do more, but it would be cheaper and easier . . "

Sir Tom Blundell FRS
Chairman, Royal Commission on Environmental Pollution

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From the Chairman
Sir Tom Blundell FRS

5 July 2000

Mr. A. Meyer,
Director,
Global Commons Institute,
42 Windsor Road,
London NW2 5DS.

Dear Aubrey Meyer,

Thank you for your letter about our report "Energy – the Changing Climate". I am pleased that you felt that the Royal Commission made the case clearly. I do agree that Nick Schoon has been tremendously helpful in improving our communication with others.

May I take the opportunity of saying how much we value the pioneering work you have done over the years in making the case for contraction and convergence. It is work such as yours that has allowed to develop our own arguments more effectively.

With respect to the Sixth Conference of the Parties to the UNFCCC in the Hague in November, I am unable to contribute myself as I have teaching commitments in Cambridge at that time. However, I will ask colleagues at a monthly meeting later this week, to see if there is anyone who would be able to make a contribution.

Yours sincerely,

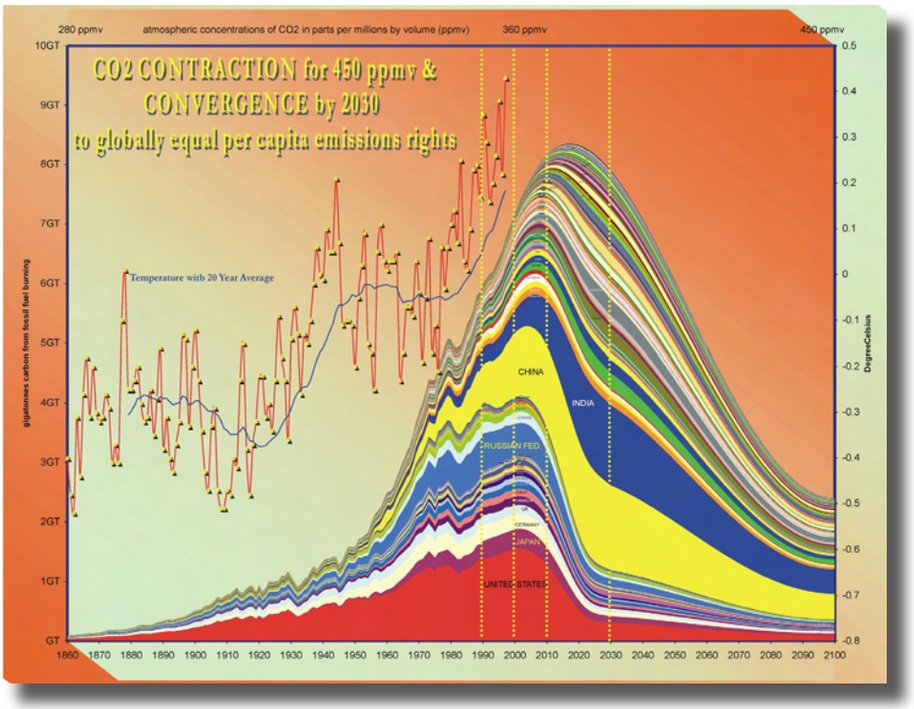
p Tom Blundell.

(signed in Professor Blundell's absence from office)

AUGUST

Parliamentary Monitor
"Contraction and Convergence" and the changing climate

By David Chaytor MP, Chair GLOBE UK



On Friday the 16th of June the UK Royal Commission on Environmental Pollution (RCEP) published its 22nd report "Energy - the changing climate".

They made 87 recommendations to the government. The third of these says: -

"The government should press for a future global climate agreement based on the 'contraction and convergence' approach, combined with international trading in emission permits. Together, these offer the best long-term prospect of securing equity, economy and international consensus."

These are meaningful words. They concur in the UK with those of Michael Meacher and John Gummer, and many others including GLOBE UK and Alan Simpson MP who made the case for "Contraction and Convergence" in the Parliamentary Monitor two years ago.

The Royal Commission's advocacy of this assists its growing international support.

In a nutshell, countries agree a reviewable global greenhouse gas emissions 'contraction budget' to match a precautionary and safe future stable value for the rising (ghg) concentrations. The internationally tradable shares in this budget are then agreed on the basis of 'convergence' from now, where shares

are proportional to income, to a target date in the budget time-line after which they remain proportional to an agreed base year of global population.

The United Nations Framework Convention on Climate Change (UNFCCC) gave rise to the Kyoto Protocol in 1997. Interim negotiations to finish this have just halted in Bonn. So far business left unfinished in Kyoto is still unfinished. Charged with establishing the 'principles, rules and modalities' governing the Protocol's so-called 'flexible mechanisms' - such as international emission trading and the 'clean development mechanism' - negotiators struggle because these principles must be subordinate to the global objective and principles of precaution and equity on which the Convention is based.

Remembering this and acting on the Commission's 'global' advice, the UK Government could play a unique role in saving the Protocol from failure in The Hague. The stakes are high. If it fails, the 'sub-global' arguments that destroy it threaten the Convention itself.

If completed and ratified the Protocol will impose collectively slight but legally binding commitments only on 'Annex One Parties' to the UNFCCC, in other words on those from the developed country group only. They alone will have to reduce or limit their net greenhouse gas emissions by an average of 5.2% below 1990 levels, by the period 2008-2012. While quantitatively inadequate, this could be justified as a 'first-step'.

Because emissions control under the Kyoto Protocol is still restricted to the industrialised world only, the US is hostile to ratification, saying that it will be ineffective.

The Byrd Hagel Resolution of the US Senate insists that developing countries must also reduce or limit their emissions if US ratification of Protocol to occur. In effect the US advocates "Contraction and Convergence", as any other way of addressing this issue would replicate the very randomness to which they sensibly object.

Developing countries on the other hand, have correctly argued that as the industrial countries have grown rich emitting an accumulated 80% of the emissions to date, they should 'take the lead' in cutting the emissions now without seeking to impose equal emissions responsibilities on the rest of the world unless and until the rights upon which these are based are recognised as equal as well. Saying that these must be 'equitable for all countries', many explicitly invoke the "Contraction and Convergence" approach. This stand off is resolvable quite simply in terms of "Contraction and Convergence" as the Royal Commission has also now affirmed.

As envisaged at present - by and for the industrial country group only - rules for emissions trading are ineffective because they are only sub-global in scope and thus inconsistent with

the global governing principles in the Convention. This reflects the error of seeing 'cost-effectiveness' in terms of 'sub-global' emissions abatement cost only.

In other words if - as at present - the question, "how cheaply can my sub-global emissions be avoided or off-set?" is answered, "by growing low-cost trees in poor countries and by spinning under-commitment as over-achievement," this simply compounds controversy. As if to prove the point, the UK recently announced their option to sell an 8% 'over-achievement' against the UK's emissions reductions commitment agreed in Kyoto (1990 levels minus 12% by 2008 - 2012), to the US for around £100 million.

> As the Royal Commission recognises, 'cost-effectiveness' is a charade unless and until it is understood first as global damage-cost effectiveness, designed to halt the damages caused by climate changes.

This necessarily sees the cost-effectiveness of sub-global emission abatement as important but as subordinated to the global purpose of avoiding damages. As the UK example cited above reveals, such sub-global abatement-cost effectiveness actually neutralizes global damage-cost effectiveness by attempting to re-legalize the structural conditions that prolong the inequitable and thus unsustainable global status quo. As presently 'consolidated' for The Hague, the negotiating text out of Bonn could not be clearer on this point, or that "Contraction and Convergence" is seen by many as the obvious way to clarify and resolve this for this long term.

Munich Re-Insurers show climate change related damages rising at up to 10% a year over the last 40 years. The graphic demonstrates this amongst factors relevant to understanding why global damage-cost-effectiveness needs "Contraction and Convergence." We need very soon to collectively agree to enact this framework for solutions based on equity and survival and faster than we create the warming problem we are trying to solve otherwise our charades will end in tragedies.

A commitment in the Hague to proceed this way in future negotiations should be enough to rescue the process now for the larger process of rescuing the planet and all it's peoples through generations ahead. Tony Blair should be a natural champion in this cause.

AUGUST 22

Jonathon Porritt
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22 August 2000

Dear Aubrey

Thanks very much for your recent letter and update materials on *Contraction and Convergence*. Good to see the latest information.

I don't doubt you'll get a response from Tony Blair, especially if you keep nibbling away at Bob May, who I suspect will be centrally involved in the briefings before COP-6.

As regards my own influence, I don't really take over as Chairman of the Sustainable Development Commission until our first meeting at the end of October, and until then I think I'd probably have to write as a private individual rather than in any formal capacity. But it's just possible that there may be a meeting with the Prime Minister before then, in which case I shall certainly raise the issue.

Very best wishes

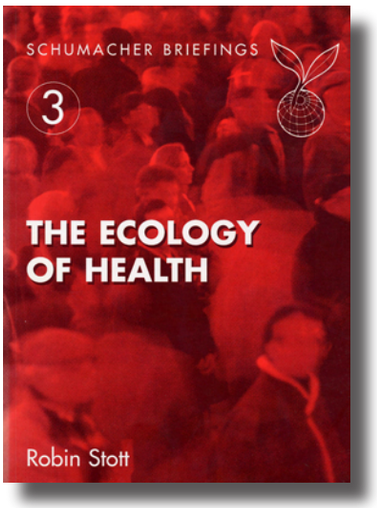
Jonathon Porritt

pp **JONATHON PORRITT**
Programme Director

The mission of Forum for the Future is to accelerate the building of a sustainable way of life, taking a positive, solutions-oriented approach.

2000

Robin Stott
The Ecology of Health



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Ecological footprints and environmental justice

As sustainability is put at greatest risk by our present energy use, the drive towards the efficient use of energy and towards renewable energy sources is imperative. By reducing our use of fossil fuels, each of us moves towards appropriately sized footprints, and both the local and global environment become cleaner and healthier. Appropriately sized footprints for all the world's inhabitants will constitute environmental justice. For those of us in the rich North the pathway to environmental justice will require us to contract the environmental space that we presently occupy. Thus contraction used in this sense implies a move toward environmental justice. In summary, a succinct definition of a society in good physical and mental health is therefore one in which the level of social capital is high, the physical environment is health-promoting, and both are developed within environmental footprints that are sustainable. Convergence— the move towards social justice— will have been achieved at the same time as contraction—the move towards environmental justice.

Contraction: how we get there

Contraction is a shorthand for the move to environmental justice. We need to contract our excessive consumption back down to a sustainable footprint. This will improve the environment, and so benefit the public's health. But contraction must not take place without convergence (shorthand for the move to social justice) through a more equal sharing of resources.

Pricing mechanisms such as 'polluter pays' and carbon taxes may fall most heavily on those who have little disposable income—the poor. In technical terms, they will be regressive taxes. A regressive tax designed to nurture aspects of health through environment improvement may create further poverty, and so undermine other aspects of health. To resolve this problem, some of the money raised through taxation may be used as a direct subsidy to the poor.

An alternative policy is carbon credits. Domestic CO2 emissions account for around 50 of total carbon dioxide emissions. Each person would at the beginning of each year be given the same number of carbon credits. The credits would be in the form of carbon units, each of which would be the equivalent of 1 kg of CO2 emissions. The 50 of CO2 attributable to public sector and commercial activities would be put on the market to be competed for by the relevant agencies. Initially carbon credits would only be used to buy primary energy sources (petrol, oil,

gas and electricity made from non-renewables). As the scheme progressed, every commodity would have a CO2 amount attached to it. The appropriate amount of each individual's carbon credits would then be used for each transaction. Any extra carbon credits that an individual had left at the end of the year could be traded. This would give a major incentive to activities of all sorts that minimise CO2 emissions. The total number of carbon credits available would be set by an independent body, and the amounts gradually decreased over a period of 20 years to bring our footprints down to an appropriate size.

SUMMER

Corporate Watch
Keeping the climate in the common treasury

The Global Commons Institute is calling for equity to be at the core of the global movement to stop climate change. To entrench this it advocates a pattern of 'Contraction and Convergence'.

Aubrey Meyer explains.

Changes in global climate have never until now been caused by human beings. Now, human pollution to the atmosphere is accumulating so fast it is trapping increasingly more of the sun's heat than is released back to space. It is this rise in global surface temperature that is implicated in the more and more variable and violent weather events and damages around the world, in places like Honduras, Orissa and Mozambique.

These are as much social as environmental disasters, and the trend of their increase is well established and getting faster. Even within corporations' own criteria for success - the financial bottom line - the situation is rapidly becoming untenable.

Insurance industry figures for 'economic losses' from 'natural disasters', show damages growing globally at a staggering 8% a year since the 1960s. This is 5% faster than the rate at which we supposedly 'create wealth' measured as GDP (Gross Domestic Product). If this continues, the gross global destruction of wealth from climate change will actually exceed its alleged creation each year.

A failure to act despite this glaringly obvious impending disaster demonstrates how fixed are the blinkers on the energy industry. The level of change needed is profound.

The scientific evidence linking these damage trends to human pollution is now accepted by most major scientific, political and commercial institutions.

And yet they have failed to come forward with effective plans to slow the damages and to help the victims of those damages that aren't prevented. The dominant priority of business and governments remains the growth of financial profits in spite of this growing negative impact. A profit to whom, we might ask?

Contraction and Convergence means, in a nutshell, that all the countries that make up the United Nations Framework Convention on Climate Change (UNFCCC) would agree a revisable global greenhouse gas emissions 'contraction budget'. This would secure a precautionary and safe future stable value for the rising greenhouse gas concentrations – say 80% cuts globally by 2060. If we were lucky this level of cuts would return atmospheric concentrations to today's value within a hundred years and limit the worst of the damage.

The international shares in this budget would then be 'pre-agreed' on the basis of 'convergence' from now, where shares are proportional to income, to a target date in the budget time-line - say 2030 - after which they remain proportional to an agreed base year of global population. This means that 'over-consumers' like the US contract sharply, while 'under-consumers' like Bangladesh can continue to rise for a while. This is a politically feasible way of instituting a precautionary and equitable global framework, by applying the principle of 'equal rights'.

A rapid and orderly retreat from fossil fuel dependency in favour of clean and renewable forms of energy is obviously needed. And if there is any agreement to have international emissions trading, it must be structured to this end and secured on the basis of equity, as Contraction and Convergence, and even the UN's own Climate Convention, require. As such, trade may play a vital part in preventing catastrophic changes in the climate by hastening the avoidance of emissions.

Contraction and Convergence is just a framework for the numerous and diverse practical actions and changes that are necessary to save the planet from climate change disaster. It is not a cure-all. But it may well be politically necessary if there is to be an effective, precautionary agreement at the global level.

Key to Contraction and Convergence is the need for it to also be empowering at a local level. With reference to the larger scheme, people can use the same argument to organise for equity within their societies and communities in their own countries. This is a radical approach - one which re-normalises equity at each level of political discourse.

Locally, nationally and globally, we all need an agreement to secure fragile and finite resources. Strengthening broad strategies to reach some agreement will not be easy. However, continuing our current behaviour is no more than an endgame for humanity with the rich finally committing suicide by continuing to rob the poor.

It is morally but also practically sensible to avoid this. Contraction and Convergence thus presents the simple idea of equity for survival. It puts the need to protect people and planet ahead of the need for profits. In practice we all do have equal responsibilities in this but it can only work as part of an overall agreement that is sustainable in total secured on the principle of equal rights.

The founding statement for this and the Global Commons Network is at http://www.gci.org.uk/indlet.html

Aubrey Meyer works with Global Commons Institute www.gci.org.uk

CO2 concentrations Recorded rise in atmospheric CO2 concentration from 1860 until 2000 shows an increase of 34% over pre-industrial levels. This is a rise both higher and faster than anywhere in the ice-core sampling back 440,000 years before now. Concentrations are rising as the result of accumulating emissions. In future, the worst case is the upper line as Business-As-Usual (BAU).The best case sees this rise stabilised at twice today's level due to a 60% global contraction in the underlying emissions by 2100.

CO2 emissions The upper line shows Business-As-Usual CO2 emissions. The solid segments show "Contraction, Convergence, Allocation and Trade" [C-CAT] to manage emissions down by at least 60% within a given time frame with an agreed 'contraction budget' (here 680 billion tonnes of carbon). The internationally tradable shares of this budget result from convergence to equal per capita by an agreed date and population base year (here 2020). The 'traded area' is the difference between that and convergence by 2100 (here, 100 billion tonnes). If this is invested in no-emissions technologies, risk and damages are lowered further as the budget is then net of these emissions as well.

OCTOBER

John Ruggie
Assistant Secretary-General, UN

On behalf of the Secretary-General, I should like to thank you for your letter dated 1 September 2000 and the Contraction and Convergence Report you kindly attached.

The Report contains useful information and will provide valuable input for the Rio+10 preparations. We have sent a copy to Under-Secretary-General Klaus Toepfer, Director of the United Nations Environment Programme.

NOVEMBER

Jaques Chirac
President of France - COP6

"Since 1992, we have fallen too far behind in the fight against global warming. We cannot afford any further delay. That is why, I can confirm to you here, Europe is resolved to act and has mobilized to fight the greenhouse effect. Europe calls upon the other industrialized countries to join with it in this fight. And Europe proposes to the developing countries to join it in a partnership for sustainable development. Let us start thinking about the post-Kyoto period without further ado. Tomorrow, it will be up to us to set forth the rights and duties of each, and for a long time to come. To move forward while respecting individual differences and special circumstances,

France proposes that we set as our ultimate objective the convergence of per capita emissions. This principle would durably ensure the effectiveness, equity and solidarity of our efforts."

DECEMBER 8

Guardian
Going to war against climate change

The post-Hague hiatus may provide an opportunity to address the problems of climate change, says Andrew Simms

After the Hague summit, a meeting in Bonn, in May 2001 will provide the next opportunity for politicians from industrialised countries to agree how to reduce greenhouse gas emissions. The current target for developed countries is a 5.2% overall emissions reduction. The Intergovernmental Panel on Climate Change (IPCC) says that 60 - 80% is needed, while the head of the UN Environment Programme puts the figure at 90%. Fogged by diplomatic incidents the way forward becomes harder.

The potential loopholes in the Kyoto Protocol meant that a bad agreement in the Hague could have been worse than none. The original negotiating position of the United States allowed for a deal that might have led not to a cut in greenhouse gas emissions, but a 14 per cent increase over the period 1990 - 2010.

Some said that the manipulation of so-called carbon sinks was a form of carbon laundering.

Indeed, the current hiatus could turn out to be an opportunity. Firstly, because people are increasingly aware that the consequences of declining fossil fuel resources and climate change cannot be avoided. And secondly, because more coherent solutions than the Kyoto Protocol are being promoted and gathering support.

In 1965 discoveries of new oil sources peaked. Thirty-five years later the growth in oil production has also peaked and begun its long decline. In 1998, adding together total world energy demand over the next few decades with known or anticipated available fuel sources, the International Energy Agency noticed there was a gap between supply and potential demand.

To fill the gap it used something called "unidentified unconventional" fuel sources. But this fuel didn't actually exist, it was an exercise in creative accounting to stop policy makers from worrying. Looking ahead for the next few decades, uncertain comfort is now available from new projections that fill the supply-demand gap with fossil fuels that have only a 5% chance of discovery.

Statistically, neither sinks nor better efficiency can make the necessary cuts in emissions, or deal with declining oil supplies. Over a 200 year period efficiency would need to improve nearly 200 thousand per cent. It seems we must brace ourselves for the equivalent of an environmental war economy in order to reduce consumption.

Past experience shows that the shift to a low-energy economy needn't be all bad. The alternative of business-as-usual also looks far worse. Projections based on data collected by the reinsurance giant Munich Re show that by about the year 2065 the economic costs of climate change could surpass the value of total world economic output. Already by 2025, half of all people living in developing countries will be vulnerable to extreme weather events, floods and storms according to the UN.

Conventional economic growth is hard-wired to rising greenhouse gas emissions and concentrations - the so-called lock-step. The question is how to break that lock-step and manage our withdrawal from fossil-fuels in as painless a way as possible, within an orderly framework?

Transport, trade and agriculture are the parts of our economy that are especially fuel-addicted. But given the right approach and the necessary policy tools there is no reason why we cannot turn things around and benefit from the process. During the Second World War we adapted to measures for radical resource conservation. Even in the United States fuel was strictly rationed to eliminate unnecessary travel.

At the moment the internal dynamics of globalisation are making us more, not less, fuel dependent. Air freight, the most polluting transport mode, has gone from virtually zero fifty years ago, to the equivalent of flying one ton of goods over 100 billion kilometres a year. New generations of planes are being built, thirsty for fossil fuel, which will need to fly for decades still to pay-off construction costs.

There is a model called contraction and convergence rapidly gaining support. Already backed by many developing countries, its principles were endorsed in The Hague by Belgium, France and Sweden and it accords with the US desire for a truly global solution. Pioneered by the London-based Global Commons Institute it was also recently endorsed by the Royal Commission on Environmental Pollution. It works by setting a global cap on greenhouse gas concentrations, with an emissions budget that is reduced over time. Tradable emissions rights are then pre-distributed on a per-capita basis, converging globally to equal shares per person by an agreed date, for example 2030.

While the city of Bonn may no longer house the German government, next May it will be at the centre of the most important international negotiation there is.

Andrew Simms is head of the global economy programme at the New Economics Foundation and co-author of: Collision Course - Free trade's free ride on the global climate

2000

Jean Francois Verstrynge
Acting Director-General, Directorate-General Environment, EC

The Kyoto Protocol is only the first step, and in further commitment periods wider participation and deeper emission cuts will be necessary to achieve the ultimate objective of the Framework Convention…….In these negotiations, all options to limit and reduce emissions in a fair and equitable way will be discussed. Contraction and Convergence is one of the interesting alternatives in this regard.

2000

Tom Athansiou
EcoEquity, California

If CSE has been the key Southern advocate of a per-capita climate treaty, the honor for main Northern advocate clearly goes to Aubrey Meyer of London's Global Commons Institute, which has put "Contraction and Convergence" on the map, particularly in Europe.

2000

SCHUMACHER AWARD 2000

"I am Alison Pritchard and I am a Council Member of the Schumacher Society.

As many of you will know, the Schumacher Society has been presenting the Schumacher Awards at the Bristol Lectures since 1994. They were founded by our past President, Diana Schumacher to whom I would like to pay tribute. She organised them with her usual flair and dedication until last year, and it is with some trepidation that I attempt to follow her act.

The Award honours people and grassroots organisations in the UK whose work is making a significant contribution to human scale sustainable development - I like to think of them as Schumacher pioneers, offering solutions to our contemporary crisis. And it symbolises those countless other unsung heroines and heroes who are working away, often with little or no support. The citation on the Award trophy is It is better to light a candle than to curse the darkness.

All Schumacher Society members are eligible to nominate for the Award; another reason to join the Society for those who are not already members. And the Award is judged by the Schumacher Society Council. I hope you all have a copy of the shortlist. You will see that it is an excellent list. Thank you to members for your nominations.

The Council had a difficult task to choose the Award recipient for the year 2000. The shortlist includes:

PAUL MOBBS, a tireless public interest campaigner over many years with expertise in areas including planning, development, and pollution control and waste management. His help and advice has been invaluable to local groups dealing with vitally important environmental issues, and his Environmental Activism website is designed to be easily accessible to people all over the world.

O-REGEN and their project CLICK. This charity, based in a deprived area of east London, is bringing information technology to socially excluded and marginalised young people. It is an extraordinary, innovative and replicable project giving skills, self-motivation and self-esteem.

SPIL (SOME PEOPLE IN LEICESTER) is a city-based co-operative whose members are dedicated to rebuilding community in an urban environment. It is a shining example of the sort of co-operative action vital for building socially, economically and environmentally healthy communities.

However, as always, a decision must be made. And it is now my pleasure and privilege to announce that we have decided in this year 2000 to give the Schumacher Award jointly to AUBREY MEYER and to PLATFORM.

AUBREY MEYER and his GLOBAL COMMONS INSTITUTE, receive the Award for his campaign to bring the threat of global warming to the attention of the public and policy-makers, and for his formulation of a pioneering solution which he calls 'Contraction and Convergence'. Sadly Aubrey is unable to be here today to collect his Award, but his absence is in a good cause.

He has sent us a message which reads:

Dear Friends and colleagues in the Schumacher Society and others attending today's Lectures, I am pleased and honoured to receive this Award.

The Schumacher Award and the Society's good name can only help to develop the campaign for 'equity and survival' in the face of the awesome threat that global climate change represents.

The Award recognises the efforts I have made over the last ten years, with my small organisation, the Global Commons Institute.

I regret not being with you to show my appreciation personally. But I thank you with this message instead, and also congratulate the others whom the Society has chosen to honour.

My absence is because the effort for equity and survival continues. As you meet for today's Bristol Schumacher Lectures, I am in the Philippines advising a meeting of the Climate Action Network of South East Asia. They are joining with the broader movement of the Global Commons Network in the advocacy of a global policy framework based on the logic of 'equity and survival'.

My forthcoming Schumacher Briefing is about this logic and the campaign to establish it. It is based on the principles of "Contraction and Convergence". It aims for an agreed global contraction of greenhouse gas emissions by over 60% in less than 100 years, and convergence towards greater equality of emissions between today's rich, high pollution countries, and poor and vulnerable countries.

I realise with some concern that this is probably neither small nor beautiful. However, by helping to avert a global climate disaster, it could enable the possibility of small and beautiful things to continue to grace and enrich all our lives.

I thank you again. Aubrey Meyer. "

2001

2001

A BRE/LPC Publication

The Implications of Climate Change for the Insurance Industry

Contraction and Convergence (C&C)

Professor Tom Spencer, winner of the 1999 European Parliament "Green Ribbon Award" for his work with GLOBE International parliamentarians network, has been promoting the concept of Contraction and Convergence (C&C), developed by Aubrey Meyer of the Global Commons Institute (GCI).

The concept has won support from other influential experts around the world, and has been praised by Michael Meacher, the UK Minister of Environment (see: - www.gci.org.uk).

The concept has been supported by the Royal Commission on Environmental Pollution (RCEP) and the World Disasters Report 2000, published by the International Federation of Red Cross and Red Crescent Societies.

The aim of the Contraction and Convergence (C&C) initiative is to break the North/South deadlock in the UN negotiations over the Kyoto Protocol. The following description is based on an open letter published in the Independent on the 24th of December 1999.

Contraction

Sir John Houghton, Chair of the Intergovernmental Panel on Climate Change (IPCC) recently told the British Association for the Advancement of Science, global greenhouse emissions need to be reduced by at least 60% in less than a hundred years.

If governments agree to be bound by such a target, the diminishing amount of carbon dioxide and the other greenhouse gases that the world could release while staying within the target can be calculated for each year in the coming century.

Convergence

If the IPCC recommended global reduction scenario was adhered to, each year's tranche of this global emissions budget gets shared out among the nations of the world in a way which ensures that every country converges on the same allocation per inhabitant by, say, 2030, the date Sir John suggested.

Countries unable to manage within their allocations would, within limits, be able to buy the unused parts of the allocations of other, more frugal, countries.

Sales of unused allocations would give the countries of the South the income to purchase or develop zero-emission ways of meeting their needs. The countries of the North would benefit from the export markets this restructuring would create. And the whole world would benefit by the slowing the rate at which damage was being done.

Relevance to the Insurance Sector

Kyoto is a good start but there is a danger that it could degenerate into a market for trading carbon emissions. There is a need for a long-term global strategy which is fair to all the regions of the world and which has a clear reference path to a long term stable solution to rising concentrations of greenhouse gas emissions.

> Contraction and Convergence (C&C) seems to be a sensible framework to proceed: the concept first was developed by the Global Commons Institute (GCI) in 1990, and it is probably the most widely accepted formula for a long term strategy to control greenhouse gas emissions.

Policy makers in the insurance industry would be wise to study the concept and ideas in some detail because insurers would be well placed to benefit from any effective scheme to limit the growth in greenhouse gas emissions. Not only does the Global Commons Institute (GCI) scheme have the potential to limit the likely increases in the natural disasters from climate change, the concept of Contraction and Convergence (C&C) offers the added potential benefits of greater investment opportunities in the clean energy industries. As the Royal Commission on Environmental Pollution (RCEP 2000) points out, to achieve convergence by 2050 would imply a reduction of 60% in carbon dioxide emissions, but would bring many benefits in addition to mitigating climate change. For example a reduction in air pollution which harms human health and a reduction in the congestion and pollution caused by rising levels of road traffic, are all issues that have an indirect benefit to insurers.

2001

Sir Tom Blundell FRS
Chairman of the Royal Commission on Environmental Pollution

May I take the opportunity of saying how much we value the pioneering work you have done over the years in making the case for contraction and convergence. It is work such as yours that has allowed us to develop our own arguments more effectively.

FEBRUARY 28

BBC online

Climate panel urged to 'get real'

By environment correspondent Alex Kirby

A damaging row is threatening to envelop a panel of United Nations experts charged with recommending the best ways of softening the impact of climate change.

The panel starts work on 28 February in Accra, Ghana, to finalise its report to governments. The report will be the third issued in 2001 by the Intergovernmental Panel on Climate Change (IPCC).

Its two earlier reports this year said unambiguously that there was greater scientific confidence that the world was warming, that human activities were at least partly responsible, and that the consequences would be serious.

But this third report, by contrast, by the IPCC's working group 3, looks likely to dwell instead on the remaining uncertainties around climate change, and on the consequent difficulty of choosing suitable mitigation policies.

Unwillingness or inability?

A copy of the draft which the Accra meeting will be seeking to finalise was passed to BBC News Online. It urges "a prudent risk management strategy" and "careful consideration of the consequences, both environmental and economic".

It says policymakers should be ready for "possible revision of the scientific insights into the risks of climate change". The draft says: "Climate change decision-making is essentially a sequential process under uncertainty . . . it should consider appropriate hedging" until there is agreement on the level at which greenhouse gas emissions should be stabilised.

But the panel's apparent unwillingness - or inability - to be as forthright as the authors of the two earlier reports has been attacked by a UK-based group, the Global Commons Institute. This argues for a policy of "contraction and convergence" (C&C) as the fairest way to tackle climate change.

C&C insists, in essence, that everyone in the world, from rich and poor countries alike, has an equal right to emit greenhouse gases, but that total emissions should be kept below the level where they intensify global warming.

French support

The advocates of contraction and convergence include most of the European Union's environment ministers, the European Parliament, and the UK's Royal Commission on Environmental Pollution.

It was given a significant boost at the climate conference last November in the Dutch capital, The Hague, when President Jacques Chirac of France spelt out his support for it.

Now, Aubrey Meyer, the director of the GCI, has written to Bert Metz, who co-chairs the IPCC group meeting in Accra, urging him to include a recommendation of C&C in the policy-makers' summary which the meeting will issue.

Mr Meyer writes: "Failing this, a residual character of randomness and drift in the summary will continue to dissipate the process that the IPCC exists to inform.

> None of us would want the IPCC reports or their summaries to be ridiculed for being vague or evasive on this point in this increasingly critical climate.
>
> Aubrey Meyer, GCI

"Such an outcome is irresponsible, unnecessary and dangerous."

Dissenters' view

Support for the GCI stance has come from an influential climatologist, Sir John Houghton. Sir John is a former head of the UK Met. Office, and now co-chairs the IPCC's working group one, the team which last month said it was more confident that global warming was happening, and that average temperatures might rise twice as fast by 2100 as had been thought.

Global ice cover is diminishing, but are humans really to blame?

He told BBC News Online: "I hope contraction and convergence will find some part in working group three's report. I think these ideas are important because of their logic, and because of their appeal on grounds of principle. C&C does actually address three distinct principles: that we should take a precautionary approach, that the polluter should pay, and that we must be concerned with equity.

"Because it addresses these, C&C needs to be taken very seriously."

However, there are also those observers who will want the scepticism that has crept into the IPCC's working group three draft to be maintained. Those scientists who doubt the global warming hypothesis, and humankind's part in it, were delighted to see what they regarded as some realism enter the thinking of the UN body.

2001

Schumacher Newsletter
Global Solution to Climate Change

Schumacher Briefing No.5

'Contraction & Convergence: a global framework to cope with climate change based on precaution and equity' was published last autumn amidst apocalyptic weather.

Its publication couldn't have been more timely as the reality of climate change began to hit public consciousness while relentless floods and storms swept the UK.

Author, Aubrey Meyer, co-founder for the Global Commons Institute (GCI) in London, has spent the last decade campaigning at the United Nations negotiations on climate change to win acceptance of the global ethic of 'equity and survival' and the policy framework known as 'Contraction and Convergence' (C&C).

C&C is now becoming the most widely supported global framework within which to resolve policies and measures to avert dangerous climate change.

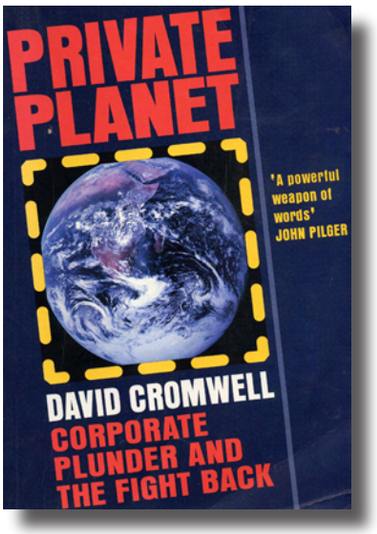
However, in spite of being endorsed by governments representing the majority of the world's population, this briefing is the first time C&C has formed the subject of a book. Aubrey Meyer was co-recipient of the Schumacher Award 2000.

"If you read only one book on climate change — its past and future, politics and solutions - read this one. This is the global picture and the key to a global solution."

Tom Spencer, Professor of Global Governance, University of Surrey and President, GLOBE International 1994-99

2001

David Cromwell
Private Planet



Publisher: Jon Carpenter Publishing ISBN: 1897766629

Contraction and Convergence

Behind the scenes, British climate negotiators were already exasperated at American stonewalling, even before President Bush ditched the Kyoto agreement. Cook's initiative, which was jointly agreed with John Prescott's Department of the Environment, represented one possible way to get the developing world and, by implication, the US, on board the climate train. However, it is not the only way or, for that matter, the sustainable way. Environmentalist Aubrey Meyer believes that he has a more comprehensive 'world-saving idea' that could really cut the Gordian knot of international climate negotiations. Under the auspices of the Global Commons Institute, the London-based lobbying group set up with friends from the Green Party in 1990, Meyer has been promoting a simple and powerful concept which has already had a major impact on senior politicians and negotiators.

What it boils down to is that everyone in the world, according to the GCI, has an equal right to a share of greenhouse gas emissions. Taking as their starting point the IPCC figure of 60 per cent cuts to stabilise atmospheric carbon dioxide levels, Meyer and mathematician friend Tony Cooper calculated what level of greenhouse gas pollution each nation would be allowed. Their eye-catching computer graphics illustrate past emissions and future allocation of emissions by country, achieving per capita equality by 2030, for example. After this date, emissions drop off to reach safe levels by 2100. This so-called 'contraction and convergence' in emissions has gathered the support of a majority of the world's countries, including China and India. It may be the only approach that developing countries are willing to accept.

But will the Americans, who would have to make real cuts, buy it? Not so far. Climate talks in November 1999 in Bonn, they said that they would not match by Europe and Japan to ratify the Kyoto Protocol by 2002; the US first 'wants more action from developing countries'. The previous year, was set down by the Byrd-Hagel resolution - which states that the United States should not be signatory to any protocol which excludes legally binding commitments from developing countries, or which would seriously harm the US economy. The resolution was passed by a vote of 95-0 in the Senate. So much for President Clinton's warning on Earth Day (April 22), 1992, that 'our addiction to fossil fuels is wrapping the earth in a deadly shroud of greenhouse gases'. As David Edwards has pointed out, the Global Climate Coalition is not the only US business group that opposes the Kyoto protocol. The United States Chamber

of Commerce and the National Association of Manufacturers, representing the interests of just about every large corporation you've ever heard of, have both urged Congress to reject the agreement reached at Kyoto. In other words, the mainstream US business community en masse is implacably opposed to even modest measures to combat climate change. In this context it is hardly surprising that Bush took the stance he did. It remains to be seen whether other countries will press on without the US.

MARCH 6

Royal Institute of International Affairs

After PM Tony Blair's Green Speech, Mr Malhoutra Secretary General of the Rajiv Gandhi Foundation made a speech including the following remarks.

" . . . . the basis of global governance architecture for sustainable development must begin to be addressed.

What principles should determine issues such as entitlements, resource allocations, consumption practices and so on? The climate negotiations have given the issue immediacy. On what basis will drawing rights to global common goods such as atmospheric space be established?

Will developing countries be brought to the table on the principle of equity i.e. convergence of per capita emissions over an agreed period of time?

The impact of global warming will fall much more heavily on developing countries, introducing yet another factor of inequity in the North-South relationship.

Climate change is not just about economics and keeping the world safe for corporate and personal capitalism, but about very complex ethical and social justice issues that civil society must address in a proactive manner. Where does the northern NGO community stand on this issue? And why is there not more public anger at the wanton and utterly irresponsible behaviour of industrialized countries? They have ignored the precautionary principle for a very long time and continue to pass the buck.

Nero fiddled while Rome burned: what shall one say of the West when Earth caught fever?"

Contraction & convergence

The most realistic way to bring about the required reduction in ghg emissions (which will have the combined effect of reducing the damage imposed on the insurance industry and encouraging the transition to renewable energy) is that proposed in the concept of Contraction and Convergence (C&C).

This concept was created by the Global Commons Institute (GCI) and is incredibly simple in its detail. Essentially, everyone has the right to emit an equal amount of pollution (in this case CO2) to the Global Commons (atmosphere).

At present society emits six billion tonnes of carbon a year (6Gtc) to the atmosphere. Coincidentally there are six billion people alive today—hence everyone should be entitled an equal right to emit 1 tonne/yr. To achieve the required global reduction in ghg emissions an agreed target of say 2Gtc by 2040 could be set and the system allowed to contract to that global budget by converging on an agreed per capita allowance. Those states that need to emit more than their share will have to buy emission entitlements from those that have an excess. This would operate in much the same way as the envisaged emissions trading scheme to be set up within the Kyoto Protocol.

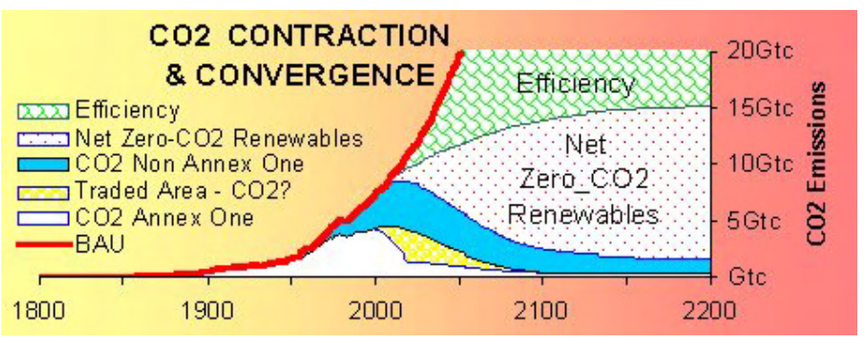


Figure 10.9 illustrates this process, showing that by the year 2100 emissions will have fallen to well below today's levels, and will emanate from what are, today, developing countries. Since economic progress is dependent on energy, the shortfall from 'Business as usual' energy consumption will need to be met from two directions: efficiency gains, and a rapid growth in renewable energy sources. It is clear from this that emissions trading can only be an intermediate stage, since the total volume of emissions must fall.

The only blockage to this simple system is the absence of political will to 'step outside the box' instead of conducting a tortuous round of negotiations of the Kyoto Protocol.

One way to unblock this impasse is to amass a large enough consensus of stakeholders behind the concept of contraction and convergence, persuading governments to supersede the Kyoto Protocol.

The insurance industry is an obvious place to start such a campaign as it has so much to lose and so much to gain. If society continues down the fossil/Kyoto route, future economic losses are likely to become

Figure 10.9. Contraction and convergence

The red line shows Business as usual CO2 emissions (BAU). The solid segments show 'Contraction, Convergence, Allocation and Trade' to manage emissions down by at least 60% within a given time frame and 'contraction budget'. The renewables opportunity is worth trillions of dollars—the biggest market in history.

Annex One is the developed World. Gtc: trillions of tonnes of carbon equivalent.

unsustainable: the current rate of increase in damage from natural hazards is 12% pa and the rate is accelerating. Given that the global sum of such losses was $100bn in 1999 (Munich Re, 2000), it would outstrip global GDP (growing at 3% pa) by 2065, if the trends persist.

If the insurance industry rallies behind C&C, it not only reduces that risk, but it is well placed to invest in the future renewables market. In fact one could argue that as the insurance companies own the oil companies (through equity ownership), insurers form the only industry that has the collateral and the need to adopt the C&C logic.

The desired sequence of events is shown in Figure 10.10.

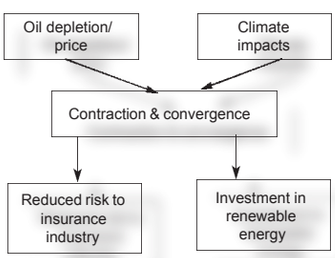


Figure 10.10. Contraction and convergence and risk

Who pays ?

As Figure 8.1 (page 71) shows, risk to property from catastrophic and non-catastrophic events is at present transferred from the individual property owner (via a policy at a given price) to the primary insurer. In 1998 the value of revenues flowing through the non-life part of the global insurance market amounted to $891bn (Swiss Re, 1999). The primary insurer retains most of this risk on an annual basis, but will off-load some of that risk (for a secondary premium) to a reinsurer.

However, when climate change impacts on the insurance industry, it will be the individual who eventually pays the price of the damage, whether it be through the direct mechanism of increased premiums or failed insurance companies or reduced values of equities on the markets linked to individual savings and pension plans.

Other opportunities for insurers

As well as the insurance industry's involvement in managing both catastrophic risk and investment, climate change will present it with a number of other business opportunities, and 'early movers' might be able to gain an advantage.

Superior risk knowledge

Earlier, this study highlighted potential developments in the field of forecasting. It is possible that within five years these may have progressed to the point where they become the basis for commercial decisions, eg, on reinsurance programme design (attachment levels, rating, etc). Such forecasts could be used as input to more detailed simulation models, already commercially available, but limited by the absence of information specific to the period of risk. Because of the cost of developing such complex techniques, most insurance companies will need to buy this information, but they could still gain an advantage over others through (i) better information on exposure, (ii) use of in-house wisdom to supplement the models and (iii) will-power—there will often be strong commercial or political reasons to ignore the advice.

New insurance markets

Chapter 1 identified a wide range of implications for the insurance industry arising from climate change, apart from the most obvious one of changes in property damage risk. For instance, political initiatives to deal with global warming will result in a variety of major infrastructure projects, under the heading of 'adaptation'—accepting and managing the transition to a warmer world—or 'mitigation'—altering the trend in climate. Adaptation could involve flood defence, as well as water supply, agriculture and construction. Examples of mitigation projects could be afforestation or solar energy. Like any enterprise, these new developments will require financial services, including insurance, and they will present new technical risks to be underwritten. One area of risk which UNEP-III considered and rejected was the insurance of liability for default on Kyoto emission targets (UNEP-III, 1998b). This rejection was because of the long exposure period, and the fact that the risk was fundamentally a political one.

On a more positive note, chapters 8 and 9 noted that the environment is becoming an important business issue, and this change is filtering into the asset management world. Already there are a variety of 'green funds' for consumers to invest in, and the number can only grow as public awareness of global warming improves.

Diversification

Besides providing new markets for supplying traditional services, climate change is likely to bring about an increase in activity in other industries closely related to insurance activities,

and therefore might open the door to diversification. Firstly, as exposures escalate, traditional sources of capacity will be exhausted, and thus accelerate the move towards alternative risk transfer. This transition will be reinforced by the redefinition of 'insurable risk' as regards weather sensitivity. Chapters 4–7 revealed that customers have an unsatisfied need for protection which is not being met by traditional insurance products, with their emphasis on indemnity. We may be on the brink of a renaissance of the product into a holistic risk-coping service, tailored appropriately for the various corporate and mass markets.

Finally, the increasing severity and frequency of natural disasters will create a growth in emergency management/recovery services, which could become a significant separate business, not one simply dependent on insured damage. The tendency for governments to divest public services could reinforce this. Another interesting avenue might be resource management. As insurers grow in size, the sheer scale of their internal costs will elevate them into an object worthy of serious management attention. When allied to the political and public pressure for environmental efficiency, some insurers might see an opportunity to create an independent profit centre to provide third party services in the field of office and transport management.

Conclusions—a proactive response to climate change

The insurance industry will need to make big changes in its strategies to adapt successfully to climate change. Ignoring the issue will lead to serious problems and even corporate failure, while recognising the challenge could generate entire new profit-streams.

From a societal viewpoint, risk will grow, and this means a greater demand for risk transfer. If the industry does not supply the products, either someone else will, leading to a loss of markets, or there will be a painful process of adjustment often at the behest of other parties with different aims in mind. While there are great opportunities for expansion in the life and pensions markets, it is a moot point whether they will remain more attractive than the property/casualty market, currently so out of favour.

Beyond technical issues, the insurance industry should take an active part in climate change politics to ensure that the threat of natural disasters is attended to urgently. This can be done partly by communicating with national politicians, but since politicians have to reconcile a wide range of opinions in arriving at a negotiating stance, it is still imperative for insurers to be involved in international lobbying through associations like the UNEP Insurance Industry Initiative.

The focus of negotiation is on 'mitigation' —limiting ghg emissions—rather than 'adaptation'—coping with the inevitable impacts of climate change as the weather and the sea respond. Funds are to be made available for adaptation through the Global Environmental Fund, but there has been little work in the area of natural hazard management.

As argued in chapter 9, the trend to giant, global companies brings with it new responsibilities and stakeholder expectations.

> Above all, the industry must show some leadership by coming out in support of the principle of Contraction and Convergence.

The Kyoto Protocol is purely tactical, and unless more fundamental strategies are agreed soon, there is a real possibility that dangerous levels of climate change could occur. Figure 10.11 summarises the comprehensive programme which is required.

CHAPTER 11: ACTION PLAN Research Group

To cope with climate change, corporate bodies and individuals will need to move the issue up the agenda by regular action. The guiding principle is

INFORMATION—acquire it, use it, share it.

The various stakeholders all have interlocking roles for which they must take responsibility, like the players in a football team. To carry out their action plan will require resources. Allocating these resources means either demoting other issues, sequestering more funds or becoming more efficient, and the various bodies therefore need to remember this aspect, not merely make pious statements about the desirability of the work. Whether sufficient resources are being allocated will become evident to observers seeking timescales for the completion of the action plan.

However, the actions should not be viewed as additional burdens which prevent 'real work'. If they are not addressed, there will be considerable disruption to 'normal' activity.

Government

• Seek international and domestic agreement on climate change mitigation and adaptation policies, in particular

—advocate 'contraction & convergence'

—set challenging domestic targets for emissions reduction

—seek to provide assistance for less developed countries at risk.

• Implement 'no regret' strategies, in particular

—support the development of renewable energy.

• Provide information to stakeholders on climate change.

• Consult on climate change strategies.

• Formulate policy and embed it in practical regulations, procedures and guidelines, in particular

—define an appropriate framework for land development and construction design which will identify, quantify, and respond to the risk of natural hazards, now and in the future.

Individuals

• Consciously monitor and learn about climate change

—seek information on the internet, read articles in the press.

• Apply this knowledge in your work

—include climate change/weather variability on the checklist of items for each project or process.

• Conserve energy directly and indirectly.

• Lobby politicians to ensure that climate change receives proper priority.

• Ask how the companies you invest in are planning to

—cope with climate change

—help to decelerate global warming.

Media

• Give the issue regular coverage, both as news and review items.

• Reflect the overwhelming scientific consensus that there is a discernible human influence on the climate system.

Association of British Insurers

• Continue and extend the programme of research into the risk management of natural hazards associated with climate change, particularly flood.

• Improve communication on these initiatives

—by systematic inclusion in public relations work outside the industry

—by a coherent strategy of passing information to members and providing them with opportunities to access scientists.

• Become proactive with other stakeholders on insurability issues in high-hazard areas

—in particular influence local and central government on planning control and building design

—initiate discussion of the issues with other European insurance associations.

• Address the issue of environmental policy more actively (eg, briefings for members).

• Address the issue of asset management and the mitigation of climate change (eg, briefings for members, dialogue with government on energy and transport policy).

Chartered Insurance Institute

• Raise the profile of climate change as an issue with members (eg, journals/conferences/seminars).

• Identify any CIP and ACII syllabuses where climate change might be assessed.

• Commission further studies on issues related to climate change (eg, economic exclusion, renewable energy, alternative risk transfer).

• Commission a review of the climate change issue in 2005, perhaps in conjunction with other professions.

Enterprises (insurance underwriting)

• Collect information on exposure and claims to improve the knowledge base for climate change impact studies —in particular consider adopting common procedures, which will also facilitate claimshandling.

• Engage with external bodies on regulatory issues in support of industry strategies.

• Address insurability issues responsibly, recognising the needs of different stakeholders.

• Develop products and services to improve society's robustness in the face of climate variability and change (eg, to deal with weather variability, not only 'events').

• Adopt environmental policies.

• Communicate the issues to staff, customers, intermediaries and suppliers.

Enterprises (asset management)

• Actively seek to influence the detail of how to implement the UN Framework on Climate Change Convention, in particular through support of the 'contraction and convergence' principles.

• Develop products and services to improve society's robustness in the face of climate variability and change (eg, support for renewable energy investment).

• Adopt environmental policies.

• Communicate the issues to staff, customers, intermediaries and suppliers.

• Exert pressure as shareholders to ensure other enterprises take climate change seriously.

New Scientist

Give us a plan

We know we can beat climate change. Just one thing is missing

SHI PENGFEI is bemused. His country, China, leads the world in installing wind turbines—a technology UN scientists said this week is vital for fighting global warming. More than 100,000 farmers run their own wind generators in Inner Mongolia. And Shi, who works for China's State Power Corporation, wants to harness Mongolia's winds to power Beijing. There is World Bank cash, Inner Mongolia wants to sell, but Beijing, a city choking on coal fumes, won't buy.

Why has the wind gone out of the industry's sails? Local political wrangling has stopped China meeting its national targets for installing turbines. Shi's problem is mirrored in the latest report this week from the Intergovernmental Panel on Climate Change (see p 12).

The report looks at fixes for global warming and says that "known technological options" could help the world to prosper while preventing greenhouse gas concentrations rising higher than twice pre-industrial levels. The IPCC argues that progress in fuel cells and wind turbines has been far faster than anyone imagined.

Great news, except that the panel also argues that politicians don't yet know how to implement the technologies.

Those Chinese wind turbines typify the problem. China is not the main generator of greenhouse gases. But any plan for saving the world's climate must let countries like China—which has the world's largest coal reserves—get rich on other energy sources. How do we make it happen?

Here is one blueprint. First world governments agree on a ceiling for greenhouse gas levels in the atmosphere—say, twice pre-industrial emissions. Then emissions entitlements are calculated for every country to ensure we keep below the ceiling. Setting these targets will depend on governments "converging" on a formula based on national populations. To minimise disruption, overpolluters could buy spare permits from "underpolluters".

Such a system, called "contraction and convergence", would be fair and economically efficient, and create incentives for clean energy technologies. Its backers include France's Jacques Chirac and Britain's Royal Commission on Environmental Pollution. But not the IPCC's policy wonks. Their summary for policy makers ignores this eminently sensible blueprint. The authors, fighting shy of saying anything "political", do not even clearly back a ceiling on greenhouse gas concentrations.

This is madness. Clearly, the IPCC can't endorse one blueprint. But it should lay out the options. And contraction and convergence is only one. This report is the third in recent weeks from the IPCC's various working groups. The first two, on the science and impacts of climate change, courageously explain the risks the world runs. This third one fails to take up the challenge.

All is not lost. In September, the three IPCC groups will complete a "synthesis" report on their work. They must take this chance to put things right, and spell out clearly how the world should head off climate catastrophe. Once politicians can see the method and the benefits, they can get back to work.

MARCH 20

UK Liberal Democrats
Rt Hon Charles Kennedy MP, Leader

Green Alliance 20th March 2001

" . . . So I think we have to think differently on climate change. And I want to flag up two areas, that I think we must consider ways of taking more effective action on climate change.

The first area embraces the principle of equity.

> On a planet where the most precious of commodities, a stable climate, is under threat, emissions could be rationed, through contraction of emissions, and convergence of national use of energy.

That means that every citizen could in the long run have an equal emission quota. There could hardly be a more obvious application of the notion of Universal Human Rights enshrined in the United Nations Charter. There are many different options for implementing a scheme. Quotas could be introduced gradually, and they could be tradeable. But whatever options are adopted, it is a proposal that may well offer the way forward.

The second area I want to flag up, is the role of Europe in climate change. Europe has shown the way before. In 1945, European nations realised that to revive yet also contain Germany there must be a community of equals.

Half a century later the key problem for the planet is climate change and Europe must again lead in the co-operative game.

Europe should take the initiative to invite all the major nations and regions to form a Global Climate Community on the basis of commitments to reducing emissions and then ensuring that the emissions of different countries reach a happy medium. Contraction and convergence.

To be useful, such an initiative must include from the start, not only Europe but major developing nations such as India. America and some others may not join at first. But they will have a major incentive to join or they will be excluded from the massive emissions market which will develop. Britain is in a unique position to ensure that the project gets off the ground. Britain's own experience and Atlantic and worldwide links could make it a valuable initiator of such a scheme."

www.gci.org.uk/speeches/Kennedy.pdf

APRIL

New Scientist

Bad move, Mr Bush

The alternatives to Kyoto may be even harder to swallow

GEORGE BUSH is right about one thing: the Kyoto Protocol is a flawed treaty. But for Europeans looking on in horror as he tries to destroy it, one thing really sticks in the craw. Most of the flaws were put there by US negotiators trying to make the treaty palatable to business. Now, having made this rumpled bed with its mass of complicated "flexibility mechanisms", they refuse to lie in it.

Bush insists that he is not against action on global warming—only the Kyoto formula. So, putting disbelief and frustration to one side, maybe we can help him.

We wrote here a month ago about a plan called "contraction and convergence".

It works like this. Initially, the world sets a ceiling on the maximum acceptable concentration of a greenhouse gas. Then it sets out a realistic timetable for keeping global emissions below that ceiling. Finally, it apportions to nations the rights to make those emissions according to their populations. Over 50 years, we could cut the global entitlement to perhaps half a tonne of carbon per person per year—about half what it is today. If nations want to emit more than this, they would have to buy permits from countries with emissions to spare.

Most greens have traditionally rejected this formula as too idealistic. They preferred the Kyoto process, in which industrialised countries picked a figure and then haggled. But things are different now. And, oddly enough, contraction and convergence meets the main criticisms that Bush and fellow critics make about Kyoto. First, it includes developing countries, which get emissions entitlements like everyone else. Second, it meets most criteria of economic efficiency. Countries shopping around for emission permits will make every dollar count. Third, unlike Kyoto, it is scientifically coherent, as it is aimed at stabilising greenhouse gas concentrations in the air.

Every American is responsible for about 5 tonnes of carbon emissions a year, so this formula will still cost the US dear. But if Bush is serious about global warming, he should be thinking along these lines.

APRIL

United Nations Association UK Resolution 8.10, 56th AGM

"We applaud the government's leadership role in the international climate change negotiations and shared the disappointment at the failure to secure an adequate agreement at the last conference.

We urge Her Majesty's Government to pursue a long-term framework for reducing global CO2 concentrations based on the principle of Contraction and Convergence to equal percapita emissions levels worldwide by a specific date to be negotiated."

** with the European Union Commission and the Commonwealth to create an alliance of countries committed to cutting CO2 emissions based on Contraction and Convergence;

APRIL

Parliamentary Monitor Policing Pollution

Aubrey Meyer examines the current political thinking on the major environmental question

TONY BLAIR addressed issues of potentially devastating significance in his recent major environment speeches. For the first time anywhere in the industrial world, our prime minister gave voice to the dreadful dilemma we now face.

"Climate change is the greatest threat to our environment today...if there is one issue that threatens global disaster it is the changes in our atmosphere...we have to face a stark fact, neither we here in Britain, nor our partners abroad, have succeeded in reversing the overall destructive trend. The challenge continues to grow and become more urgent." In the more recent speech he said, "the process is accelerating. For some parts of the world, particularly the poorer parts, the effects will be catastrophic."

Drawing on the latest data now available from the Intergovernmental Panel on Climate Change IPCC) science group (reflected in the graphics alongside), he acknowledged that the trends of global climate changes - due to the human pollution behind global temperature rise - are now worsening towards potentially catastrophic outcomes.

Inexorably, and from now on, the supreme test of any government's policy and performance is whether they are acting effectively to reverse these trends. The test is both national and international. Failing in either dimension means our other efforts will be progressively overwhelmed by the consequences of this failure. The 0.02 per cent of UK GDP - essentially new money Tony Blair proffered to "kick- start self-sustaining markets" in renewable energy developments to deal with this coming catastrophe - was risible.

It implied a degree of somehow getting lucky with the globalization of climate disruption that is obviously just not on the cards. Getting hurt or getting seriously organized to prevent this hurt, is all that counts now. World business leaders meeting a year ago at the World Economic Forum in Davos described the trends as already "devastating", asking, "Why had more not been done to avert them?"

Sadly, based on the latest summary of the IPCC policy group, the impression given is that there is no certainty that averting them is possible at all. This reflects the views of a largely outdated and myopic group of economists that absurdly prioritizes the pursuit of economic growth ahead of the global environmental security on which this so obviously depends. It also reflects, however, the alarming properties of the devastating trends themselves. It can be said that these are possible to miss precisely because their enormous implications are so hard to absorb, let alone rationalize in policy terms.

While discreet events of local devastation - such as violent storms and flooding - are costs rather than benefits, in conditions of overall global climate and temperature stability, we understand and cope with these as parts of the swings and roundabouts of global "weather" patterns. When, as now however, they become inexorably fiercer and more frequent with the passing of time -because of increased heat being trapped in the atmosphere by accumulating pollution - this growing instability constitutes a trend into a global climate equilibrium shift, potentially a runaway greenhouse effect.

Averting this is not an everyday policy challenge. And, if difficult to accept, it is perhaps easy to understand why the political response to climate change to date has been so far short of what is really needed. For example the sub-global proposals passionately championed by John Prescott in the Kyoto Protocol - to semi-randomly pursue policies and measures to limit, reduce and also trade pollution entitlements amongst the industrial countries only - are correctly understood as inadequate and merely a first-step.

However hope for even this inadequate first-step to be taken appears now to have been crushed by the refusal of the new US President, George Bush, to submit any version of this Protocol to the US Senate for ratification. The world's largest

polluter reminded us all that in June 1997 the Senate had voted unanimously for the so-called Byrd-Hagel Resolution that insists on emissions reduction, or at least limitation commitments, being undertaken by all countries - not just the industrial countries. Intriguingly no clues were given as to how these would actually be quantified.

While Bush's move may really betray his overriding loyalty to the fossil fuel industry whatever the environmental cost, a reason cited for his refusal was that it would have exempted developing countries from such emissions control. At the same time, in response to this refusal, a recent CNN poll in the US showed that two thirds of its citizens believed that Bush should come up with a plan to save the climate. Once again no clues were given as to what this might be.

This would however appear to be asking for a plan that shows how developing countries can integrate their contribution into the global effort to control emissions needed to prevent a runaway greenhouse effect. And to avert this does require committing globally to a rate of implementing the solution that is faster than the rate at which we are collectively creating the problem. Our own Royal Commission on Environmental Pollution (RCEP), joined recently by the liberal Democrats, has forcefully advocated to government how this should be done through the formal procedures of "Contraction and Convergence" explained in their exemplary report from June last year, Energy, the Changing Climate.

If we are to stabilize rising global temperature, we are going to have to rapidly stabilize the upward acceleration of greenhouse gas concentrations in the atmosphere. According to the RCEP, and many others, this in turn means that we must effect a global contraction of emissions of greenhouse gases by 60 to 80 per cent from human sources. This must be achieved internationally through a global transition - or convergence - to develop goals based upon per capita calculations.

> The problem is cumulative. This means, simply but devastatingly, that the atmosphere retains at least half of any year's emissions semi-permanently. Consequently, contracting emissions only slows the upward rise of their concentrations in the atmosphere. Thus it can be argued that unless we become organized soon in a global programme that is committed to this end, we might as well not bother to try and solve the problem at all as we may just remain caught in the randomness of partial, and effectively, symbolic emissions control while the problem continues to accelerate to the point of becoming insoluble altogether.

As the developing countries accurately say that they did not precipitate and will not prosper in this growing climate crisis, the diplomacy required to sell such a global programme will be a challenge made easier if the global emissions gas emissions from the global entitlements created by C&C are assumed to

be readable. And whatever way we do it, the problem is by definition based on the a prior need for a "pre"- distribution of entitlements, (as you can not trade what you do not own) and tradability makes possible an "accelerated" rate of convergence with potentially much more generous entitlements, and therefore revenues, accruing to those countries than would otherwise be the case. Moreover much of the long-standing global economic dysfunction such as the debt crisis could be addressed this way. This is a more honest approach than indulging the view that a long game works in their favour.

The graphics alongside give an overview of this new battleground of the rates of change. It was in this context that the insurance industry made media headlines at the UN climate negotiations last November with their stark projection of damages. Fossil fuel consumption had averaged two per cent growth a year since the end-of the war. During this period, while the GDP dependent on this energy expenditure had averaged three per cent growth a year, the damages from the climate change related disasters caused had been rising at 10 per cent a year. Unless, they said, the dependency of this economic growth on fossil fuel burning was now fundamentally broken, the damages (or wealth destruction measured as uninsured losses) will overtake gross wealth-creation in real terms within the next 65 years. This, the insurance industry pointed out, is obviously unsustainable and joined the RCEP in the advocacy of the global "Contraction and Convergence" procedures - an example of which is portrayed in the bottom graphic.

While Mr. Blair has yet to respond to this advice from the RCEP, Michael Meacher did recently instruct his negotiators in the IPCC policy forum to promote C&C in the summary output from the group.

Ludicrously, considering their recent contribution, the Americans blocked this at the key meeting.

In the big picture we all have real cause for concern as there is little mainstream discourse at this time upholding the notion that we will have curbed and stabilized the upward rise of global temperature within less than 100 years from now. To do this would require nearly complete removal of greenhouse gas emissions from the global economy within the next 50 years. Noting the exceptional contributions of Amory Lovins, of the Rocky Mountain Institute and Greenpeace, few have argued for this and been seriously listened to so far. Yet not to argue for this suggests that we will all lose in the battle of rates of change.

It is these comparisons that are at the heart of the "devastating trends" of climate change. To do enough to avert the trends requires now a globally coordinated rate of the organized

transformation of human behaviour and development techniques on a scale for which there is no precedent – except perhaps nationally in wartime.

Averting devastating global climate change is going to be like fighting a hundred years' war.

Unless the total notion and process of governance is reconfigured to the over-riding purpose of winning this war, Mr. Blair's strong words will gradually become a self-fulfilling prophecy.

Aubrey Meyer is the Director of the Global Commons Institute and author of Contraction and Convergence – the Global Solution to Climate Change.

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MAY

Ecologist
Contraction and Convergence the global solution to climate change

We are capitalists,' is the revelation of Turner and O'Connell on page one of 'The Whole World's Watching'. But Aubrey Meyer can match that. 'I've never been anything other than a musician,' he declares at the start of 'Contraction and Convergence'. Two new books; two proposed solutions to humankind's greatest ever challenge. Both claim to be founded not on environmentalists' fantasies but on harsh realities. Which one has the answer?

Both books start from the premise that global warming is real, and that it is already happening.

> 'I am not being alarmist,' says Meyer. '[But in] the worst case scenario, the survival of all but a tiny minority of the human race comes into question.' This is not simply because of the increasing amounts of CO2, methane and other greenhouse gases that humans are still pumping into the atmosphere, but because the earth's natural regulating systems are themselves in danger of being knocked out of kilter.

In a recent model, the UK-based Hadley Centre found that warming temperatures would kill tropical rainforests in Brazil - turning vast swathes of Amazonia into desert and grassland, and pouring still more carbon into the atmosphere. Several more 'positive feedbacks' threaten to have just as much of a catastrophic effect.

So can Armageddon be averted? Yes: if we stop listening to environmentalists, and start talking the language of capitalism, say Turner and O'Connell. Greens are great at diagnosing

problems, but when it comes to proposing solutions - forget it. And don't worry either about the whole messy Kyoto Protocol business, because the US isn't playing ball. 'The possibility is not realistic, even if snow became a distant memory in Alaska and the state of Florida became an underwater theme park.' With the Democrat and Republican parties representing ideologies which are essentially the same, even a total global meltdown won't convince Americans to get out of their sports utility vehicles and take to their bikes. So there's only one option left - to harness the power of technology, industry and finance to shift the US and the world onto a no-carbon economy.

Fair enough, you might think. But here things start going a little weird. 'Windmills... are impractical, uneconomic and environmentally unfriendly. They may produce no greenhouse gases, but the saving represented is so minimal that it barely merits mention.' Huh? 'Biomass is a classic example of a good idea gone horribly wrong.' Hello? 'Solar power is the stuff of romantic books and fairy tales.' Hang on a minute. If renewable energy sources are going to be so thoroughly dismissed, how are we ever going to reduce carbon dioxide emissions? You guessed it - we're back to nuclear power. Read on with mounting dismay as Turner and O'Connell go on to point out that Chernobyl and Three Mile Island weren't nearly as bad as we all thought and that nuclear waste, 'if stored properly, does not pose any danger to mankind.'

After voicing such shrill complaints about the subsidies at last going into wind power, it seems a little cheeky for the authors to plump for nuclear - surely the most bloatedly subsidised industry of all time. And after condemning renewables as unproven and uneconomic, it seems even more surprising that the book finally touts some new 'pocket' South African reactor for large-scale power generation and far-off fuel cell technology for cars as heralding the long-awaited green panacea. Controversial? Definitely. Thought-provoking? Absolutely. But maybe Turner and O'Connell, who are both financial analysts, should stick to what they do best - figuring out the rather tedious intricacies of a global carbon trading market.

Thank God, therefore, for Aubrey Meyer. 'Contraction and Convergence' was never the most catchy title (imagine-it on a banner: 'Contraction and Convergence -now!'), but . . .

hidden within this short book is a proposal which could and should alter the course of history.

In its essential principles, it's really very simple. The Earth's biosphere only has the carrying capacity to absorb a certain amount of carbon per year - and humans have to cut their emissions to a safe level within it. That's 'contraction'. Within this carbon 'budget', every human being on the planet has an equal right to the use of the atmosphere, so countries which

emit more than their per-capita fair share must reduce their emissions, whilst those which emit too little are allowed an increase. That's 'convergence'. In a world where 4 per cent of the world's population, in the US, are able to emit 25 per cent of its CO2, this brings the concept of equity - fairness, basically - to the fore.

For many, equity is a moral standpoint. But it also acts at the level of realpolitik bringing into the climate process those heavily-populated countries like India and China which are planning to dramatically increase their fossil fuel consumption in the near future. Remember: even if the Kyoto cuts are implemented in full (which they won't be), world carbon emissions are set to increase anyway by some 30 per cent, mainly because of the 'developing' world. Why, runs the argument, should these countries deny themselves electricity, heat and transport simply to support the profligate consumption of rich Europeans, Australians and Americans? In contrast, by recognising these countries' per capita emission rights, and even allowing them to acquire a tradeable market value, Contraction and Convergence establishes an incentive for clean development. (There is a legitimate argument about whether this kind of emissions trading can be conducted fairly or whether it could end up representing 'carbon colonialism', but we won't go into it here.)

In short, these books both present us with a choice. Is tackling climate change so urgent that we should use all means at our disposal, even ones that promote corporate power? Or can the global warming crisis not be solved anyway, except through the establishment of a fairer and more ecological society? We can't all duck this thorny question forever. And both books are a valuable contribution to the debate.

Mark Lynas

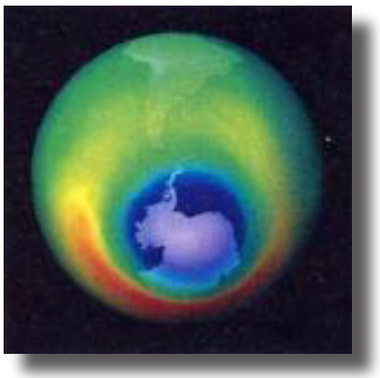
MAY

FoE Finland on Climate Equity
The Whole Climate Report

The "Whole Climate Project" originated in 1999 with the three Finnish NGOs Dodo, FoE and Service Centre for Development Cooperation. They take up the global equity/survival challenge of climate change and seek to resolve it in terms of environmental space and formulations of contraction and convergence.

www.maanystavat.fi

MAY



Prospect
Fresh Air

BY ALEX EVANS

The policy framework "contraction and convergence" offers President Bush a way to save face and the planet

AMIDST THE PANIC and recrimination over President Bush's decision to withdraw from the Kyoto Protocol, the startling fact is not that the US should have pulled out. It is that a credible alternative policy framework exists that can encompass the apparently incompatible demands made by the EU, US, developing world and others; and yet the media and the environment NGOs have been almost silent about it.

The concept, known on the international climate scene as "contraction and convergence" (C&C) was developed ten years ago by the Global Commons Institute, a tiny British organisation with virtually no resources that was set up (and is still run) by Aubrey Meyer, a professional violinist and composer.

Unlike any other option on the agenda, C&C meets US demands for developing country participation, developing world equity concerns, private sector needs for flexibility and efficiency, and (most importantly) EU and NGO calls for a framework with environmental integrity.

The logic of C&C is simple and transparent, in contrast to the extravagant complexity so typical of Kyoto. The "contraction" refers to a global emissions reduction trajectory for specific greenhouse gases. The trajectory could be modified at any time in line with the emergence of new data.

The next question is how to allocate the emissions available under this trajectory, and this is the "convergence" part: national emissions entitlements are deliberately designed to converge by an agreed date at equal per capita emission entitlements for all countries, so that emissions allowances are then proportional to population.

Crucially, C&C also allows for full emissions trading between countries: so if the US wishes to, it can purchase credits from, say India, as long as India is willing to sell them. This allows for the efficiency that the private sector demands in order to be able to meet climate change abatement in the lowest cost manner available.

C&C would yield significant cashflows to the developing world from the sale of spare emissions, but would also give them an incentive to invest some of this income into additional energy efficiency projects, since this would allow them to sell still more emissions. And, since all trading would take place beneath the global cap on emissions, trading would not undermine the environmental integrity of the system.

The political implications of C&C in the current situation are enormous. The US Administration has made clear that it takes climate change seriously and that its opposition is not to precautionary action per se, but to the Kyoto Protocol in particular. This is due largely to long-standing US demands that developing countries accept emissions limitation commitments, not least in the famous 1997 Senate Resolution (passed 95-0) that decreed that the US would not ratify any climate treaty that did not include developing countries.

However, both EU and developing country governments have made clear that there is no question of fully global commitments until developed countries have "taken a lead," as enshrined in the 1992 Climate Convention: rich countries have far higher per capita emissions and a greater share of historical culpability for climate change. Why, after all, should developing countries be forced to pay the price of a problem that is not of their making especially when they are heavily burdened in other ways?

Right question; wrong answer.

> A cap on emissions, such as those accepted by the developed world at Kyoto is, by definition, also a property right and one that can be traded. The EU, in committing to reduce its emissions to 8 per cent below 1990 levels by 2010, has acquired a tradeable right to pollute up to that level. What Kyoto in effect did was to initiate a form of atmospheric enclosure: the privatisation of the climate, with property rights accruing solely to the richest, highest per capita emitters. The developing world, vastly more energy efficient in per capita terms than the north, is on the verge of missing out on an unprecedented windfall.

Therefore, rather than opposing US calls for their participation, developing countries should be rushing to congratulate President Bush on his offer of a share of the climate cake. For the end point of Bush's stance is unavoidable: if developing countries are to have atmospheric allocations, the only logical, transparent and fair basis for emissions entitlements is equal per capita emission rights. It was only just possible to agree differentiated commitments for 38 countries at Kyoto, and as recent events have shown, even this deal may yet unravel. With 180 or more countries participating, one straightforward rule for allocations will be needed if negotiations are not to sink back into a morass of complexity and horse-trading.

> Yet C&C offers massive advantages to the US as well. Economic efficiency, President Bush's top priority, is provided for in that full emissions trading would be allowed. C&C would allow Bush to defer domestic emissions reduction for two full presidential terms through purchasing developing world emission quotas, if needed; the net environmental integrity and emissions contraction of the global framework would remain.

Above all, environmental integrity, the main concern of EU governments, is ensured by the presence of the overarching global cap on emissions, which would taper downwards over time to aim at a specific, safe concentration of CO2 in the atmosphere. This factor, more than any other, is the key strength of C&C. No one in the climate debate has yet come up with a way of solving the problem faster than it is being created.

It is essential to start with the question not of "what reductions are countries prepared to offer?" but of "what level of atmospheric CO2 concentration is safe, and what is the path to get there?"

EU governments and mainstream environment NGOs are making an appalling tactical error in attacking the US for being "unfair" or "immoral." Such attacks on the US are doomed to failure since rebutting them confers upon Bush a positive advantage with climate hawks in Congress and industry. Instead, the world should respond to Bush's withdrawal from the protocol by pushing the US to take a position on developing world participation, and then playing the debate on purely logical grounds.

The outlook for C&C has improved dramatically in recent months. The framework has been backed by governments as diverse as those of France (Jacques Chirac proposed the framework as the ultimate objective in the Hague), India, Sweden, Belgium, the Africa Group and the Non-Aligned Movement. It is supported by John Houghton, head of the science working group on the UN Intergovernmental Panel on Climate Change, by Raul Estrada-Oyuela (chair of the Kyoto talks), and by Jan Pronk (chair of the Hague talks). In Britain, too, C&C is advancing up the agenda rapidly. It was put forward as the best international climate framework by the Royal Commission on Environmental Pollution in its report on climate change last year and advocated recently by Liberal Democrat leader Charles Kennedy. Perhaps most interestingly, C&C now has the backing of the insurance industry, waking up at last to the potential of climate change to sink it altogether.

In a report on climate change published earlier this year, the Chartered Insurance Institute (the largest professional body for insurers in the world), argued that "above all, the industry must show some leadership by coming out in support of the principle of C&C," adding for good measure that "as the insurance companies own the oil companies (through equity stakes), insurers form the only industry that has the collateral and need to adopt the C&C logic."

As to why C&C has remained the best kept secret in international climate change, the responsibility lies in no small part with mainstream environment NGOs. For forgivable but strategically flawed reasons, the international arms of organisations such as Greenpeace, the WWF and the World

Resources Institute took a decision in the late 1980s and early 1990s to push for the principle of developed countries "taking a lead"; even now, they can be seen defending this tenaciously. Perhaps these organisations were unable to compute the dramatic implications of allocating property rights to the atmosphere, and consequently tried to defer the issue; yet, as Kyoto shows, there is no way around the question of how to allocate these entitlements. Like it or not, Kyoto is a rights-based framework and one that confers no rights at all on developing countries.

In walking on eggshells around the question of atmospheric rights for developing countries, with all of the implications that this has for northern consumption, southern equity and the future of the climate, we have ended up with a fudge that suits no one.

Alex Evans

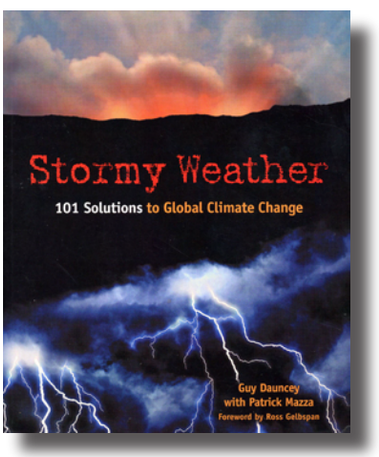
The Global Commons Institute website is at

http://www.gci.org.uk

2001

Guy Dauncey, Patrick Mazza
Stormy Weather

Publisher: New Society Publishers ISBN: 0865714215



The Global Commons Institute has developed a model called "Contraction and Convergence" that would suit this purpose. It proposes that all nations should contract their emissions towards an agreed-upon global goal, with the per capita emissions of individual nations converging towards an equitable sharing of the atmosphere's ability to absorb pollution. The model allows for an increase of C02 in the atmosphere that would peak at 450 ppm (compared to today's 370 ppm), and stabilize at an ecologically safe level by 2100.

MAY

Resurgence
A Thousand Loopholes

ALEX EVANS

Although the Climate Change talks at The Hague collapsed, there are signs that an alternative proposal is gaining support.

MANY environmentalists must be shaking their heads in bewilderment after the collapse of the climate talks in The Hague and asking themselves what they are expected to do next about global warming.

The UN's Intergovernmental Panel on Climate Change, due to present its Third Assessment Report in June 2001, has revised upwards its estimates of temperature change over the next century, from 1-3.5 degrees Celsius to 1.5-6 degrees.

There have been the floods, in the UK, Italy, Thailand, Malaysia, Australia and elsewhere — even before we recall Mozambique. The financial community is waking up to the scale of the problem: a director of one of the world's six largest insurance companies, CGNU, said in The Hague that on present trends insurance damages would exceed the gross domestic product of the entire world by 2065. And still no deal.

Just what went wrong?

Environmentalists, at least, are in no doubt about what happened: the US, Canada, Japan and Australia tried to kill the treaty through a death of a thousand loopholes.

Concerns about equity raised by India and others at the end of the Kyoto talks were derided by the US, which accused the developing world of risking the best deal that was available at the talks.

A deal at The Hague would have disadvantaged poor countries still further: the Clean Development Mechanism would have allowed rich countries free rein to pick the so-called "low hanging fruit" — the cheapest emission-saving projects — thus denying developing countries the opportunity to make these cheap savings themselves when the time came for them to adopt their own commitments.

The Hague talks were any case a wholly inadequate response to the problem. With its global target of a 5.2% reduction from 1990 emission levels by 2010, it falls hopelessly short of the 60% reduction called for by the UN's international panel of scientific experts. Defenders of the Protocol reply that, whilst they acknowledge that it is not in itself sufficient (even before "loophole accounting"), it is necessary to maintain momentum in the process.

What is clear from the failure of The Hague talks is that it will not be possible to move forward on climate change unless we institute a proper constitutional framework for the process.

> The lesson to draw from The Hague is that focusing on intricate minutiae before there is agreement about the principles that underpin the process will simply not work.

There is widespread agreement on what the constituent elements and drivers of the debate are. They are precaution, equity, efficiency and prosperity. Precaution in that something needs to be done, and fast: a cap on global emissions is required, and a shift towards a carbon-free economy. Equity because of the still unanswered question of developing nations' role in action as well as their even more urgent need for reductions by the big emitters. Efficiency in the need for markets to be involved in the solution, together with all of the questions about emissions-trading and so on that the term implies. And prosperity in that all countries are keen to maintain and improve their standards of living as far as possible under the new regime. But, although all agree on these four elements, the fundamental problem with the Kyoto Protocol as it stands is that it has these priorities the wrong way around. Prosperity is being put before Precaution, and Efficiency before Equity. There are only two possible outcomes: bad deal or no deal.

THERE IS, HOWEVER, an alternative approach that made significant advances in The Hague and may yet emerge as the constitutional framework that the Kyoto process so badly needs. It is an idea known in the international climate change game as "contraction and convergence" and was developed ten years ago by a UK-based organization called the Global Commons Institute.

Although the approach was in the past regarded as Utopian by some, it has been supported by many authorities including the last chair of the UN Intergovernmental Panel on Climate Change, Sir John Houghton; the UK Royal Commission on Environmental Pollution; and the governments of many developing countries including China and India. Now, with the endorsement of the concept by Jacques Chirac at The Hague talks, it looks as though Contraction and Convergence may shift from idea to deal.

The Contraction refers to a global cap which would be set on world wide emissions, together with an overall reduction trajectory for the century ahead. This trajectory could be modified at any time in line with new data emerging from scientists. The system thus regards precaution as the highest priority.

The next question is therefore how to allocate the emissions available under this cap, and this is the Convergence part: emissions entitlements converge over time towards equal per capita emission rights for all countries, so that emissions

allowances are proportional to population. This is the only logical and fair way to proceed, and these terms are also the only ones that allow the gulf between the US position and that of developing countries to be bridged. There is meaningful participation by developing nations, as demanded by the US Senate; but developing countries can support the system since it puts them on an equal footing with other countries.

Crucially, the framework also allows for full emissions-trading between parties: so if the US wishes to, it can purchase credits from (say) India, as long as India is willing to sell them. This allows for the efficiency that companies demand in order to be able to meet climate change abatement in the least-cost manner available. Of course, deep Greens have long been sceptical of emissions-trading. They argue that it would privatize the global climate commons in a modern version of enclosure of common land.

These concerns are well-founded, especially in the light of the emissions-trading system proposed under the Kyoto Protocol, and it is to the credit of deep Greens that they put these issues on the map in The Hague. However, these concerns would be met by a system of equal per capita entitlements to the atmosphere. This is not only equitable — and in this sense the antithesis of colonialism — but also heralds the way to a new global market which would facilitate huge transfers of wealth from the developed to the developing world as rich countries buy up developing countries' spare emissions. At the same time, since the overall global emissions cap would remain, this trading would not compromise the environmental integrity of the system.

Action would be taken to save the climate whilst simultaneously setting up a mechanism for paying the rich countries' "carbon debt" to the developing world.

The final element of the equation, prosperity, enters the picture in that a contraction and convergence structure would enable the market to have transparent conditions in which to anticipate and work towards future development of alternative energy sources. The sheer unpredictability of global climate change policy has meant that demand for renewable energy is still not high enough for renewables to be able to compete with fossil-fuel sources. Prosperity under contraction and convergence is thus prosperity by other means: the lockstep between economic growth and fossilfuel consumption is broken, so that the economy can at last be built on sustainable foundations.

Contraction and Convergence does not offer a total solution. Countries would still need to decide the rate of contraction and the date of convergence, and the approach does not offer a panacea for the question of sinks. What it would provide, though, is the constitutional framework and level playing field that has been so sorely lacking from the Kyoto process so far. It would meet US concerns about the participation of

developing countries and access to emissions-trading without compromising developing nation demands for equity and transparent frameworks. Above all, it would provide a structure in which the world could agree a trajectory of global emissions reduction and a clear path towards a carbon-free economy.

> Contraction and Convergence gives the world a chance to back out of the mess that it has created on international climate change policy. It is time politicians and Greens alike took the initiative and argued for a return to the original 1992 UN Climate Change Convention goals of equity and environmental protection.

Alex Evans

JUNE 24

Dave Bradney
Member, Ceredigion Green Party

A THEORY WHOSE TIME HAS COME

Over the last decade, nothing in Green politics has given me as much pleasure as the rise of my friend Aubrey Meyer's campaign to rescue the planet from escalating climate change and bone-headed politics.

From its beginnings as a wholly implausible one-person pressure group, his organisation Global Commons Institute has developed into the Only Game in Town for damping down climate change.

I have watched and been impressed as Aubrey, with help from a small group of GCI colleagues - most of them Green Party activists - mastered the complex number-crunching and communications technology needed to run a campaign of this type.

I have watched and been amazed as Aubrey developed a network of contacts and influential supporters within the science community and international diplomacy, and made intervention after key intervention, at venues all over the world, in the ongoing climate change negotiations.

I have watched with disbelief as Aubrey broke the growing hold of the economics profession over the climate change negotiating process, by exposing for what it is the theory that human lives in the Third World should be deemed to have substantially less value than lives in the over-developed nations.

• GCI's success has been based on an unswerving adherence to the scientific and geopolitical realities, viz:

• A minimum 60% reduction in 1990 CO2 emission rates is needed to stabilise climate change.

• Developed countries, particularly the US, are the source of the problem and consequently the places where most of the changes need to be made.

• Developed countries, particularly the US, will only be willing to enter into a process which applies equally to all countries.

• Third World countries will only be willing to enter into such a process if they can feel confident that the inequities inherent in existing international arrangements will not be perpetuated in the new system.

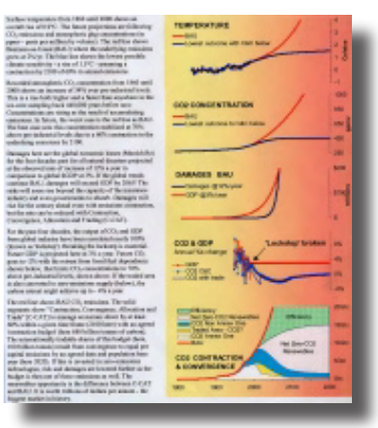
All this leads with inexorable logic and childlike simplicity to the GCI solution of Contraction and Convergence - every nation signs up to play its defined part in achieving a global reduction of 60% in CO2 emissions, over a period of time, based on the principle of equal per capita entitlements to emit what CO2 can be emitted.

Aubrey's strength has been to cling to the logic and simplicity through successive giant waves of political cynicism and academic put-down, asking again and again the question: "If not this, then what?" The only lasting answer that has ever come back has been: "Something will probably turn up"!

When it became clear that Contraction and Convergence had become the Only Game in Town, it seemed like an enormous success, but one wondered what would happen next. It has now been the Only Game in Town for so long that it must be on the verge of becoming mainstream thinking. When that happens the attendant political implications will be incalculable. And what's more, we will continue to enjoy a planet on which mammals can still live and politics can still be done.

This, then, is the book of the GCI campaign. Read it and learn, and marvel!

JUNE



GCI
Contraction and Convergence

A Policy Briefing on Climate Change to the UNEP Financial Institutions.

JUNE

Tom Spencer
Former Chairman of the Foreign Affairs Committee of the European Parliament, President GLOBE International

"Aubrey has run the whole operation on less than a shoe string, from his front room, occasionally stopping to busk as a violinist on the Underground to raise money!

If I had to name ten people who have made an original contribution to life on the planet, Aubrey would be one of them. He is now consulted by Prime Ministers and the World Bank on a regular basis.

When I finish my book on Global Governance, the central chapter is about Aubrey and the Contraction & Convergence campaign. Financial support will make a huge impact on his fiercely independent organisation."

JUNE 26

John Oliver
Lord Bishop of Hereford

My Lords . . . . .

. . . We need to take to heart the advice of the Royal Commission published last year to put in place a programme which takes account of the legitimate needs and aspirations of the developing countries and works on the principle of contraction and convergence of greenhouse gas emissions.

JUNE

Resurgence
Climate Negotiations

James Bruges sees the immense potential in Contraction and Convergence.

Aubrey Meyer

Schumacher Briefings, Green Books, Totnes,

THE WILFUL destruction, with foreknowledge, of entire countries and cultures represents an unspeakable crime against humanity." The President of Nauru said this as he contemplated the obliteration of his Pacific island state due to rising sea levels. Climate change is serious, and poor nations are suffering disproportionately.

Withdrawal of the United States from the Kyoto process need not prevent governments representing the vast majority of the world's population from implementing policies that address the crisis.

Aubrey Meyer, of the Global Commons Institute, describes an equitable framework that is inclusive of all countries, called Contraction & Convergence. It was widely discussed and well received at the November 2000 negotiations in The Hague. Building on Meyer's Contraction & Convergence framework, the economist Richard Douthwaite is now proposing an economic framework to keep human activity within the environmental limits of the planet. Once these two frameworks have been implemented by the majority nations, it would be in the interests of others, including the US, to participate, whether or not they had taken part in the negotiations.

Contraction & Convergence separates principles from all the confusing detail into which the 1997 Kyoto protocol has sunk. It establishes rules by which the game should be played, rather than calling for arbitrary deals. Meyer declares, passionately, that we are dealing with nothing less than the survival of humanity.

And he insists that the ordering of human affairs must be based on equity. When thinking about the negotiations and the clarity Meyer brings to them,

I find it helpful to use the image of a tree — its trunk formed of core principles from which the branching discussions grow. There are bound to be arguments over detail but these are twigs and leaves that should not harm the main structure. Meyer's core principles, the trunk, are survival and equity.

For survival, greenhouse gas emissions must reduce (contraction). But how quickly? The Economist magazine takes a relaxed view that "it is a hundred-year problem" so don't do anything to upset the economy just yet. The Royal Commission on Environmental Pollution, in its report dated June 2000, says that the concentration of carbon dioxide in the atmosphere is approaching the highest it has ever been in forty million years so we cannot predict what will follow; in other words, concentrations are already too high to be safe and we should cut emissions as quickly as possible.

Equity must be the guiding principle for agreement on how reductions will be made. The carbon cycle was in balance before human intervention. All land areas were net emitters of carbon dioxide and only the oceans were net absorbers. What has changed is the increase in emissions since the start of the Industrial Revolution. It is only these emissions that are relevant to the negotiations.

If we set on one side the damage already done by countries that have grown rich bringing us to the present crisis, a huge concession to ask of poor nations, the only fair approach to rationing the future use of fossil fuel is through equity — an equal-per-capita allocation (based on 1990 population Figures). Negotiations that do not take everyone into account on the basis of equal rights are like a tree with a rotten heart — doomed to collapse.

The first branch is that convergence from unequal use to equal-per-capita allocations will take time — industrial economies could not survive a sudden massive reduction in their use of oil and gas. So a convergence period will be necessary. Thirty years has been suggested but it may need to be much less.

A second branch: it will be virtually impossible for some societies to reduce their emissions adequately, whereas others are at present within their allocation. So allocations should be traded, but only if the total of all emissions is within the reducing target. Each country would be issued with Standard Emission Rights (SERs) coupons by the International Monetary Fund (IMF) for this purpose. Industrial nations will want to cut their emissions as quickly as possible in order to reduce the number of coupons they need to buy from those with coupons to spare. Poor nations will want to reduce the growth in their use of fossil fuel so that they have coupons to sell.

China, India and most African countries endorsed the policy of equal-per-capita allocation at The Hague. President Chirac specifically stated that this is France's goal. The Royal Commission on Environmental Pollution has said "the UK should be prepared to accept the contraction and convergence principle as the basis for international agreement." If world affairs were democratic, this would now be an adopted policy.

Some commentators accept the logic of equal-per-capita allocations but question whether the US will ever sign an agreement based on equity — it is only commercial incentive that will bring the US on board. The majority nations should recognize this as a fact of life and change the financial architecture of the world. This sounds ambitious but it is just a question of revisiting the Bretton Woods agreement.

So the third branch is about monetary reform. At the 1944 Bretton Woods conference, John Maynard Keynes argued for an international currency, independent of national currencies, but the United States overruled him. The Majority Nations should now establish an international currency for trade across boundaries.

A fourth branch (which relates to monetary reform): adequate reductions will not be achieved unless the monetary system rewards those who reduce their emissions. In 1944 currencies were based on gold.

The gold standard was subsequently abandoned in 1971 so currencies are now free-floating and unstable, a highly unsatisfactory situation. The new international currency should be linked to carbon, or the emission of carbon. It would be issued in proportion to standard emission rights. Douthwaite calls it the 'emissions based currency unit' (ebcu).

A fifth branch: developing nations should take the initiative (and Europe would probably join in). They have great power — most of the world's commodity resource is located in them, India does most of America's accountancy overnight, and these nations could drag the rest of the world into climate chaos if they adopted our coal and oil technologies. But they also have the incentive to make changes — emissions-trading would cause money to flow to them from rich nations as of right not as aid, and monetary reform would enable them to use the dollars sitting idly in their banks. An export tax, levied in proportion to the amount a country exceeds its emissions allocation, would establish a fund to encourage carbon sequestration.

Contraction & Convergence allows the Kyoto protocol to be taken forward; it meets the reasonable US requirement that all nations should be involved; and it supersedes the protocol's arbitrary allocations that favour historically high polluters.

If the policy is linked to monetary reform, it will be in the interest of all nations, including the US, to participate.

Contraction & Convergence addresses the two great issues of our time — climate change and inequality. It would provide the incentive for all nations to reduce emissions.

And it would result in a progressive tendency towards equality between nations, thus relieving poverty, encouraging trade and removing many causes for conflict. Hopefully it will be centrestage at Bonn.

James Bruges is author of The Little Earth Book (Alastair Sawday Publishing, £4.99).

JUNE

Guardian

Emissions that count

If the Kyoto agreement collapses, which thanks to Bush, looks increasingly likely, a 3rd way has emerged that may yet save the planet.

In less than five weeks, countries will reconvene in Bonn to thrash out the Kyoto treaty, which aims to reduce global warming emissions by an average of 5.2% on 1990 levels by 2012. It looks bad. George Bush has returned to Washington more than ever convinced that it is unworkable, unrealistic and against American interests.

The US argues that because there has been such a tremendous growth in its economy since 1990, the treaty as it stands would require a 25-30% reduction in US greenhouse gas emissions and that this in turn would mean a 1-2% reduction in US GDP by 2010 - comparable, the US argues, to the oil shocks of the 1970s. The US also insists that the Kyoto targets are unrealistic and that many countries are unlikely to meet them. It believes the treaty to be fundamentally flawed because it excludes developing countries - 80% of the world, including China and India - whose emissions will inevitably grow as they develop.

On the other side there is Europe, which agrees that the treaty is flawed, but argues that it has taken 10 years of long and complex negotiations just to get to this point and the chance of addressing a phenomenon which potentially threatens all life on earth must not be lost. Europe has pragmatic reasons for not wanting to see the treaty unravel. It negotiated as a unit and agreed an overall EU target cut of about 7%, using a complex process known as "the bubble", whereby different countries agreed to different levels of commitment. Portugal, for example, is allowed an increase in emissions, whilst the UK agreed to cuts of 12.5% and Germany to cuts of around 21%. If the Kyoto process were reopened, it could prove difficult, perhaps impossible, to ever put back together. The gaps between the two sides are now greater than even six months ago. Indeed, there is a growing acceptance that both not only agree to disagree, but that nothing is immediately resolvable.

If this is the case, then Bonn could become a global anti Americana-fest. If other countries can agree on the precise mechanism of how to achieve their commitments and then sign up to Kyoto, with the US reduced to observers, then the US would become a pariah state. The popular theory goes that it would then, perhaps under a new president in 2005, be forced to join. But this is by no means certain, and is diplomatically unacceptable.

It is far more likely that the whole Kyoto agreement will fall apart before it is ever ratified by 55 countries, so ensuring a stalemate and taking the blame away from the US. This could happen in any number of ways. The US has a long history of twisting arms and making deals. It might try to isolate countries such as Italy, most vulnerable under rightwing president Silvio Berlusconi, or pull all the strings it can with friends such as Britain, whose diplomatic loyalties in this case are stretched between Europe and the US.

If Kyoto collapses, the options for addressing climate change are limited. It would take years to piece together another treaty of the same complexity and many countries would balk at the idea of going through it all again. But hovering in the wings is a proposal, known to be acceptable to almost everyone in the developing world and increasingly by the developed countries. It would seem to resolve almost all US objections to the Kyoto agreement, and

-has the advantage of being demonstrably fair, pragmatic and politically neutral.

"Contraction and Convergence" (C&C), dreamed up by the small Global Commons Institute in London, is based on two principles: that global emissions of greenhouse warming gases must be progressively reduced and that global governance must be based on justice and fairness. Rather than look at emissions on a country by country basis, C&C proposes reducing emissions on a per capita basis.

It means agreeing internationally how rapidly greenhouse gas emissions should contract each year and then allocating permits to emit them to all countries on the basis of their populations. The permits would be tradeable, so that those countries which could not manage within their allocations could buy extra ones from those with a surplus. It would strengthen the global economy and address many of the concerns of the WTO, the IMF and the World Bank by channelling money to poor countries not as aid but as a right. Its simplicity and its potential is appealing and it has powerful supporters, including Svend Auken, the Danish environment minister, his counterpart Jan Pronk in Holland, Michael Meacher in Britain, Jacques Chirac and Klaus Topfer of the UN environment department. The British royal commission on environmental pollution has advised the government to press for an approach like this, and many developing countries, including China and India and the Africa group, have voiced support. Insurers and MPs from various countries, even US senators, have publicly shown enthusiasm. Even Tony Blair said the C&C approach "merits full consideration".

It is unlikely that C&C will make a late surge to the top of the climate talks agenda, but it shows that there are ways beyond the present impasse and that there could be a creative basis for long-term cooperation between countries.

JULY

USS Research Report No 1
Universities Superannuation Scheme

Climate Change, A Risk Management Challenge for Institutional Investors

Beyond Kyoto - 'Contraction and Convergence'

"It is important to recognise that any agreement can be only the first step in what will be a major journey. It is clear that even if the Kyoto targets are met, global emissions will continue to rise because of rapidly rising emissions in the developing world. Substantial further steps will have to be taken to curb emissions globally. Such cuts will inevitably begin to involve poor countries and at the same time rich countries are likely to have to commit to much more serious emission reductions themselves. As a result further emission reduction agreements are likely covering the period 2012-20 and beyond. Indeed, the IPCC in its first assessment reports in 1990 recommended emissions cuts of at least 60% to stabilise CO2 concentrations at 1990 levels and thereby be likely to avoid serious climate disruption. Its subsequent reports have not altered this position.

In the longer term, 'Contraction and Convergence' (C&C) is likely to become increasingly supported as a policy option.

C&C was initially advocated by a small UK think tank, the Global Commons Institute (www.gci.org.uk), but has since gained widespread and authoritative support, including that of some poor country governments and also the recent Royal Commission on Environmental Pollution report which recommended that, 'the government should press for a future global climate agreement based on the contraction and convergence approach'.

Ironically, while C&C offers a more robust framework than that outlined by Kyoto, and addresses the issue of equity, it also meets the fundamental objection of the US in that it also requires commitments from the developing world. As a global operational framework it also avoids many of the technical problems of Kyoto (such as defining baselines for emissions trading in countries not subject to an overall target, or the extent of international emissions trading that is permissible). However, much will depend on the detail. Done well, C&C could provide a framework for a genuine, equitable, long-term solution to climate change, which reduces political risks and provides businesses and investors with the sort of predictable framework they prefer.

But if agreement is hard to reach, C&C might serve to highlight injustices and end up exacerbating tensions. For example, some campaigners have argued for a third 'C': 'compensation' from the rich world for using up the climate's absorptive capacity. Whilst this claim is understandable, such a development could well become an emotive issue that could make agreement far harder to reach."

JULY 7

New Scientist
Calling the tune

With the Kyoto Protocol on the verge of collapse, the search is on for a formula to get us off the hook of global warming. One of the main contenders is a proposal by a professional violinist with no scientific training. Aubrey Meyer has entranced scientists and enraged economists and many environmentalists with his idea, but it is winning high-profile backers, such as China and the European Parliament. He says it embraces science, logic, fairness, even art. Could it yet save the world? Fred Pearce gets to the bottom of it

How did a musician get into the high politics of global warming?

I had been a practising musician and composer for 20 years. In 1988, I wanted to write a musical about Chico Mendes, the assassinated Brazilian rainforest campaigner. I began to explore rainforest politics and was overwhelmed by a sense of tragedy. I could not understand why anyone would want to murder a butterfly collector. Soon afterwards I joined the Green Party, where four of us formed the Global Commons Institute in London to fight to protect the planet's shared resources—the forests, the atmosphere and so on. We scraped together money from supporters, and I've never stopped since.

Did you have any background in science?

I didn't have any background in maths or science. My only real contact with numeracy until GCI got going was the kind of kinetic numeracy of music, its structure, and the discipline which goes with that.

You developed the formula called contraction and convergence. What is that?

At the early conferences on fighting climate change I saw this hideous charade being played out in which the politics was divorced from the science. The UN's Intergovernmental Panel on Climate Change said we needed a 60 per cent cut in emissions of greenhouse gases to halt global warming. But the politicians had no plan even to stabilise emissions, let alone cut them. So I did some simple calculations. To do what the IPCC wanted meant reducing global emissions to an average 0.4 tonnes of carbon per person per year. That was the contraction part. It seemed to me that the only politically possible way of achieving that was to work towards national entitlements based on size of population. Today, some nations are emitting 20 times more per head than others. The US, for example, emits 5.2 tonnes per head, Britain 2.6 tonnes, India 0.2 tonnes. This means that India could double its emissions while the US would have to come down by more than 90 per cent. That is

the convergence part. Clearly no country is going to be able to make those changes immediately, but the beauty of the system is that it allows them to trade in emissions permits.

Other people, like Anil Agarwal, the Indian environmentalist, had similar ideas at that time. Why did yours stick?

Yes, Anil had got very angry when some leading American environmentalists tried to suggest that India, which has one of the world's lowest per capita emissions, was one of the leading causes of global warming because of its large population. But the case against such crazy views wasn't getting anywhere—we needed a new language. I had become fascinated with the graphics capabilities of computers as I saw them as the visual equivalent of musical communication, a universal language. So at GCI we produced large colour graphics showing how countries could converge towards equal per capita emissions while bringing overall emissions down by 60 per cent. You could argue about the rate of the contraction and convergence, of course—whether it should take 20 or 50 years—but basically we had synthesised the whole problem and the whole solution onto a single graphic (www.gci.org.uk).

For musicians, mathematicians, scientists, it was, frankly, beautiful. I took 300 of these graphs to a climate meeting and put them outside the conference door. They went in 30 seconds. I think contraction and convergence cuts to the chase. It flushes all the politicians out of their hidey-holes.

Why did it take a musician rather than scientists to come up with it?

Many scientists have taken to it, but perhaps it needed a musician to produce it. Maybe the idea is not intellectual in the usual scientific sense. It has rules but it is also active, and it embraces creativity. It has harmony, rhythm and form. And it embeds an ethic—of equity and survival. We musicians spend a lot of time on repetition and variation. I kept taking variants of these graphics to UN climate meetings.

But it sounds rather idealistic. It may be a fair carve-up of the atmosphere, but the world doesn't really work fairly, does it?

Initially, fairness was just what we were pushing for. I remember quizzing a woman economist at the World Bank on her cost-benefit analysis of cutting greenhouse gas emissions. I pointed out that small island states like the Maldives would almost certainly disappear under her plan. She said: "What's all the fuss about small island states? They will just be compensated; and we can send lifeboats." She had no sense of the depth of disregard for real people contained in that. But the truth is that the rich are as vulnerable as the poor to climate change.

So while the fairness of contraction and convergence is a powerful argument, I personally don't think it is the key. The stronger argument is the purely logical one. It doesn't solve all our problems at a stroke, but it creates the framework in which we can solve them. If people disagree, then the challenge for them is to think of something better.

Presumably, the big environmental groups embraced the idea.

Far from it. Many have refused to talk to us or even acknowledge our existence.

How come?

I think they took a judgement at the start of the climate debate that the enormity of what we faced was so devastating that you couldn't spring it on ordinary people all at once. And they didn't want to frighten the politicians with grand strategies. They thought contraction and convergence would do that. Instead, they called for sharp cuts in the emissions of developed countries only. It may have been politically correct, but the approach was random and timid.

Greenpeace, timid?

Yes. They were part of this timid approach. They avoided facing the global dimension of the problem. It was tokenism.

But broadly that was the route taken by the Kyoto Protocol. So the timid approach worked, didn't it?

Well, I'd say that the timid approach is why we are in the mess we are in today. The US has ripped it up.

You have annoyed the economists, too.

They annoyed me. The analysis produced by the mainstream economists suggested that this problem was insoluble; that it was too expensive to save the planet. This is because their work conceals daft and immoral assumptions not only about the expendability of natural resources but also of human beings. Climate change is not an economic problem. It is an organisational problem to do with protecting the real atmosphere, the only one we have. It is not good enough for them to just nod at the scientists and say: "Thank you, now we'll tell you how the world works."

What response do you get from scientists?

They really do make an effort to remain calm and neutral in their judgement. Many see that contraction and convergence tries to mirror that objectivity by attempting to respond directly to what scientists say is the situation. But many identify with us in a moral as well as a logical sense. They are also human beings. They have children and think about the future.

Politically, your ideas have not got far yet. By criticising the Kyoto Protocol, have you played into the hands of its opponents, like President George W. Bush?

Bush acknowledges the problem is real and serious and like everyone else he has to face this. Kyoto is probably better than the chaos that is now on the cards, but the odds for getting this deal are dwindling. Anyway, as I see it, the protocol is Plan A. At best, it will moderate increases in emissions a bit—until 2012. So, regardless of what happens to it, there has to be a Plan B. The real question is whether contraction and convergence follows on from the protocol or picks up the pieces when it falls apart.

Who backs it today?

The European Parliament, China, the non-aligned movement, many African nations, the Red Cross, Britain's Royal Commission on Environmental Pollution and Jacques Chirac have all said they support the idea in principle. Many economists say they have no real quarrel with it, provided it allows countries to trade their emissions entitlements. If the revenues from trade are spent on renewable energy, it will bring the efficiency gains that the economists are so keen on. And it will allow the poorest countries with the low emissions to sell their spare entitlements for profit.

What about the US government?

Some senators already support it. It is the only practical proposal that does what they've asked for, namely simultaneous emissions controls on all countries. It promotes economic efficiency through emissions trading and enables progressive American firms to get involved and make money. That's certainly what I would tell George W. Bush.

That makes you sound like an arch-capitalist, rather than the communist you have sometimes been labelled. How come the Chinese like it?

False dichotomy.

The Chinese came on board, at least tentatively, when they realised I was talking about distributing emissions rights.

They liked the idea of equal rights rather than equal restrictions. But this is high politics. The US Energy Department got very interested when I said I was going to Beijing. They said: "You'd better watch your back because you're gonna be watched." I got quite nervous. I'm not a diplomat, I'm just a musician. But the idea is not leftist, or even rightist. The morality you can take or leave, but the logic is inescapable.

But don't developing countries have the right to tell the rich countries that they created the problem and should solve it?

So far, most developing countries have indeed united around that message. That may be morally valid, but it is a disastrous strategy for them as well as for the rich world. The carrot for them in adopting contraction and convergence, apart from saving the climate, is that in return for controlling emissions they could get paid to convert their economies to run without fossil fuels.

So your formula meets the needs of both the US and the developing world?

Yes. It's a framework for the retreat from our dependency on fossil fuels.

The way I see it, the world starts a race to get out of carbon rather than a race to get into it.

Fred Pearce

JULY

Guardian

Blueprint to avert global disaster

Larry Elliott

In one respect, Tony Blair is like every British prime minister since Churchill - he believes in a unique bond between Downing Street and the White House. The existence of the so-called special relationship is much disputed, but one thing is certain; if London does exert any influence in Washington then next weekend will be the time to wield it.

Today in Bonn talks begin that are designed to keep alive the Kyoto agreement on cutting greenhouse gases. Plan A is to browbeat the Americans into supporting the protocol, even though it has been rejected as fundamentally flawed by the new Bush administration.

Despite complaints from the rest of the world that the US will be held responsible if the continued build-up of greenhouse gases causes irreparable damage to the global environment, the strategy has two big drawbacks. The Americans are unlikely to budge and there's no plan B.

Actually, that's not quite true. There is but for it to have a chance of succeeding the politicians in Genoa this weekend may have to face up to one uncomfortable truth: whatever is cobbled together in Bonn, Kyoto is dead.

It is true that the United States is responsible for 25% of global emissions with only 4% of the world's population. It is true that the developed world (not just the US) has a moral duty to sort out the problem it has created. But it is a fantasy to believe that

the Bush administration is going to change its mind on Kyoto. Only when it is accepted that the Americans are not going to roll over will the way be cleared for some new thinking.

Better alternative

The desperate attempts to hold Kyoto together with sticking plaster are understandable because the feeling is that the alternative to Kyoto is no deal at all. But the alternative is better and possible, given political will.

Blair is well placed to provide the sort of leadership that is now required. He knows from the Labour party's experience that the moment of total, dismal failure is the moment when new ideas have their greatest potency. He likes thinking "outside the box" and is good in negotiations at seeing the big picture.

Blair also knows the environment is the big challenge facing today's global leaders. As he once said:

"If there is one issue that threatens global disaster it is the changes in our atmosphere ... we have to face a stark fact, neither we here in Britain, nor our partners abroad, have succeeded in reversing the overall destructive trend. The challenge continues to grow and become more urgent."

There are, of course, those who argue strongly that climate change caused by CO2 emissions is a myth, and that the increase in global temperature over recent decades is simply a natural phenomenon that occurs from time to time. But even if the optimists are right, the consequences will be so dire if they are wrong that it is worth adopting a precautionary approach. Insurance companies certainly think so.

The US government has never sought to deny that climate change is a problem, simply that Kyoto is the wrong way of dealing with it. In particular, Washington has argued that a global problem needs a global solution, which means including countries in the developing world, too.

Fortunately, a blueprint exists which not only answers the US objections to Kyoto but offers a coherent strategy for cutting greenhouse gases.

The plan, known as contraction and convergence, is simpler than Kyoto's Byzantine complexity, offers a way of getting the Americans to come on board, has built-in flexibility, and a market mechanism built into it.

Although C&C was the brainchild of green activists, the irony is that it would be good for business. It is hardly surprising that it is winning new supporters all the time, including Michael Meacher, the environment minister.

Contentious issue

So how would it work? Aubrey Meyer, founder of the Global Commons Institute says the plan has three distinct phases.

First, governments get together and, on the basis of the best scientific advice, decide how much further the level of CO2 in the atmosphere can be allowed to rise before the environmental damage becomes too great. Given the lack of scientific unanimity, this is certain to be a contentious issue, but it need not be insuperable.

Once the overall limit has been agreed, Meyer says the next step is to use an estimate of the proportion of the gas released which is retained in the atmosphere to determine the speed at which emissions have to be cut in order to hit the target.

Finally, once we know by what percentage emissions have to be reduced, there has to be agreement on how to allocate the fossil fuel consumption that lead to those emissions.

In his pamphlet (Contraction & Convergence; Green Books, £5), Meyer argues that the correct and fair approach would be to enshrine the right to emit carbon dioxide as a human right "that should be allocated on an equal basis to all of humankind".

Clearly, this would be far more attractive to countries that are consuming smaller quantities of fossil fuels per head (poor countries) than those that have relied on the burning of fossil fuels to grow their economies (rich countries).

One solution would be for over-consuming countries to be allowed an adjustment period - of say 25 years - to reduce their emissions to the convergence level. In addition, those countries that were unable to live within their allocation would be able to buy extra permits from those countries which were more efficient in the use of fossil fuels.

This would have a number of benefits. It would lead to a flow of funds from rich to poor countries that would not be contingent on the willingness of creditor nations to sanction debt relief; it would encourage those countries in the south to run their economies in energy-frugal ways, so that they continued to have pollution permits to sell; finally, it would provide a considerable boost to the development of sophisticated environmental technologies in the north, which could be as important to capitalist development in the first half of the 21st century as was oil in the first half of the 20th.

Considerable thought has been given to the C&C proposal. The economist, Richard Douthwaite, has developed the idea of a new currency, the emissions-backed currency unit, which would operate rather like a green Gold Standard. Ebcus would be used for trading in greenhouse gas emissions permits, and if the price of permits started to rise the international body responsible for policing the system would sell more permits and then withdraw the currency permanently from circulation, thereby limiting further damage to the environment.

Are there any objections? You bet. The plan relies on the fact that politicians can focus beyond the next election; it requires a willingness for us in rich northern countries, consumers as well as producers, to change our lifestyle and for developing countries to come off the sidelines; it means facing up to the fact that Kyoto is a barely twitching corpse. C&C, in other words, is no magic bullet.

But crude anti-Americanism is not either; it is the equivalent of firing blanks, since it plays into the hands of those in Washington who want to defend the status quo and drowns out the voices of deeply concerned US citizens who recognise that there is a problem and want their government to be part of the solution.

This is not the time for the blame game but for some fresh thinking.

JULY 17

Guardian

How to rule the world

Rich nations should stop running the planet and give way to global democracy

George Monbiot

The leaders of the free world present a glowing example to the rest of the planet.

Of the eight men meeting in Genoa this week, one seized the presidency of his country after losing the election.

Another is pursuing a genocidal war in an annexed republic. A third is facing allegations of corruption. A fourth, the summit's host, has been convicted of illegal party financing, bribery and false accounting, while his righthand man is on trial for consorting with the mafia.

Needless to say, the major theme of this week's summit is "promoting democracy".

But were the G8 nations governed by angels, they would still be incapable of promoting global democracy. These eight hungry men represent just 13% of the world's population.

They were all elected to pursue domestic imperatives: their global role is simply a byproduct of their national mandate. The decisions they make are haphazard and ephemeral.

Last year, for example, the G8 leaders announced that they were determined to achieve the goals of the Kyoto protocol limiting climate change and that they would preserve and strengthen the anti-ballistic-missile treaty.

One man is replaced and all is lost.

Similar problems delegitimise almost every global body. The World Bank and IMF, which apportion votes according to the money they receive, are governed by the countries in which they don't operate.

The five permanent members of the United Nations security council, charged with maintaining world peace, also happen to be the world's five principal arms traders.

The UN general assembly represents governments rather than people: a poor nation of 900m swings, in practice, less weight than a rich nation of 50m.

The G8 leaders know that the "global democracy" they are due to discuss is a sham, and they will do all they can to keep it that way.

There is, we are told by almost everyone, no alternative to the rule of finance and fear.

Writing in the Guardian last week, Philippe Legrain, a former World Trade Organisation official, argued that world elections to a world parliament are not realistic. "Sixty million Britons would not accept 1,300m Chinese outvoting them."

Mr Legrain has, unintentionally, presented the anti-globalisation movement with its central challenge.

If those of us in the rich world who are protesting against the inordinate powers of the G8, the World Bank or the WTO are serious about overthrowing unaccountable power, then we must rise to his bait.

In 1937, George Orwell observed that "every revolutionary opinion draws part of its strength from a secret conviction that nothing can be changed". Bourgeois socialists, he charged, were prepared to demand the death of capitalism and the destruction of the British empire only because they knew that these things were unlikely to happen.

"For, apart from any other consideration, the high standard of life we enjoy in England depends upon keeping a tight hold on the Empire - in order that England may live in comparative comfort, a hundred million Indians must live on the verge of starvation - an evil state of affairs, but you acquiesce in it every time you step into a taxi or eat a plate of strawberries and cream."

The middle-class socialist, he insisted, "is perfectly ready to accept the products of Empire and to save his soul by sneering at the people who hold the Empire together".

Since then, empires have waxed and waned, but that basic economic formula holds true: we in the rich world live in comparative comfort only because of the inordinate power our governments wield, and the inordinate wealth which flows from that power.

We acquiesce in this system every time we buy salad from a supermarket (grown with water stolen from Kenyan nomads) or step into a plane to the climate talks in Bonn.

Accepting the need for global democracy means accepting the loss of our own nations' power to ensure that the world is run for our benefit.

Are we ready for this, or is there lurking still some residual fear of the yellow peril, an age-old, long- imprinted urge towards paternalism?

Global democracy is meaningless unless ultimate power resides in a directly elected assembly. This means, of course, that a resident of Kensington would have no greater influence than a resident of Kinshasa.

The Ethiopians would have the same number of representatives as the British (and rather more as their population increases). The people of China would, collectively, be 22 times as powerful as the people of the United Kingdom.

In a truly democratic world, the people's assembly would, unlike the European parliament, be sovereign. All other global bodies would report to it and act on its instructions.

The UN, WTO and other bodies, if they survived at all, would be reduced to the status of the parliament's civil service. But, as the World Citizen Foundation has pointed out, to preserve local democracy its scope must be limited by subsidiarity.

It could not interfere in strictly national decision-making, in other words, but would seek to do only what existing global bodies are attempting - and failing - to do today: resolving disputes, tackling global poverty, defending people from oppression and protecting the world's resources.

But it's not hard to see how a world parliament could bypass and undermine dictatorships. Just as proportional representation in European elections has encouraged us to start questioning our own, flawed system, genuine global democracy would highlight democratic deficits all over the world.

The danger, of course, is that the world parliament might make decisions we don't like very much. We may discover that people living in the world's most populous nations don't want to tackle global warming or to control nuclear weapons. But danger is what democracy is all about.

And it's hard, in truth, to imagine a people's assembly making a worse fist of these issues than the G8 and the warmongers of the security council.

China has curbed its carbon dioxide emissions while energy use in the US has soared. Indeed, the only fair and lasting means of reducing CO2 (namely "contraction and convergence", which means working out how much pollution the planet can take, then allocating an equal pollution quota to everyone on Earth) would surely be impossible to implement without a world parliament.

The very existence of a global assembly could help to resolve disputes: people often take up arms only because they have no other means of being heard. I suspect, too, that the World Bank and IMF, whose role is to police the debtors on behalf of the creditor nations, would disappear almost immediately.

A democratic assembly would almost certainly replace them with something like Keynes's "International Clearing Union", which would force creditors as well as debtors to eliminate third world debt and improve the balance of trade.

But the democratisation which may or may not result in such changes cannot even be widely discussed until we, the new world order's prosperous dissidents, are prepared to take our arguments to their logical conclusion, and let go of the power our nations possess and the disproportionate wealth which flows from it.

I hope that we, unlike Orwell's bourgeois socialists, are ready for this challenge. If not, we may as well as cancel our tickets to Genoa and stay at home eating strawberries and cream.

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JULY 23

E-Finance News
Universities Superannuation Scheme

An article in E-financial news, quotes Colin Maltby, head of investments at BP pension fund as saying:

"The authors of the USS (Universities Superannuation Scheme) Climate Report) have put forward a framework that could enable us as institutions to assess and manage more effectively the risks to our investment portfolios."

www.efinancialnews.com/story.cfm?passedref=170000000000165 17&xsection=16

JULY 26

Guardian Letters

Martin Quick writes: -

While Japan and some other countries may be criticised for weakening the Kyoto agreements, to criticise countries for being reluctant to face fines for non-compliance with their targets (Leaders, July 24) seems unreasonable while the biggest polluter of all, the US, is outside the agreement. Unless some means of charging the US for additional damage to the environment caused by its opting out of the agreement is devised, the US will have an unfair advantage.

The agreement to allow emissions trading while Russia has huge surpluses of "reductions" to sell, will lead to a low price per ton of carbon traded, discouraging the introduction of renewable energy and energy efficiency measures.

> Trading will only become fair when national targets are set in a rational way. The principle of "contract and converge", as proposed by the Global Commons Institute, where all countries' emissions quotas converge to a per-capita amount that can be sustained by the atmosphere's carrying capacity is such a framework. The Russian "surplus" would then be rapidly eroded.

Martin Quick, Stroud, Glos,

www.guardian.co.uk/letters/story/0,3604,527366,00.html

AUGUST

British Telecom

Chris Tuppen of BT (British Telecom) wrote to Mathis Wackernagel of the California-based "Redefining Progress"

> "I think there is lot of benefit that could arise from offering a per capita CO2 budget (eg the contraction and convergence theory of GCI).
>
> But that's not to say that people shouldn't then have a choice in how they spend their CO2 budget. Such an approach would automatically lead to people selecting more energy efficient products and cause companies to change via natural market forces."

AUGUST 2

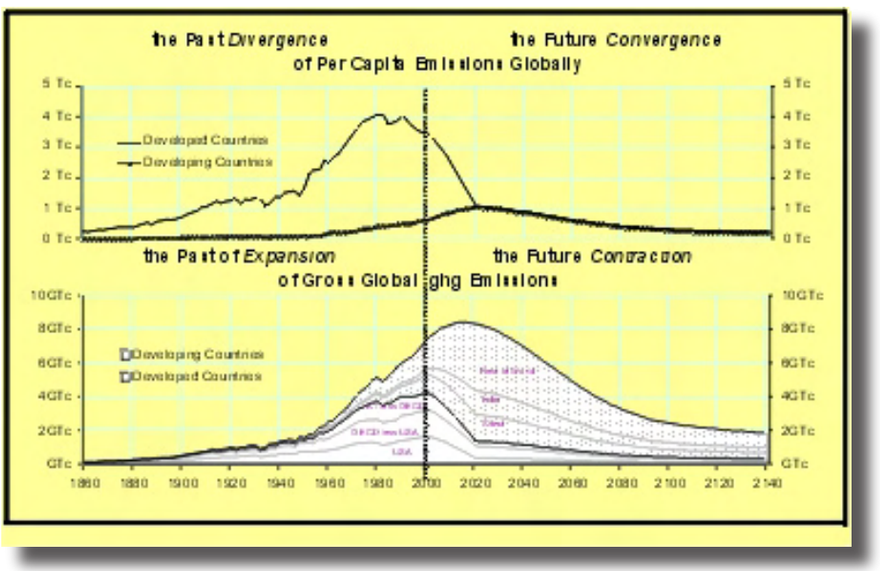
Commonwealth Human Ecology Council Journal

Why Contraction & Convergence is The Framework to Solve Global Climate Change

Aubrey Meyer, Alex Evans

Introduction

In spite of the deal on the Kyoto Protocol in Bonn, a long-term global solution for climate change appears almost as far away as ever. How can US demands for participation by developing countries and full use of market mechanisms like emissions trading be reconciled with the South's demands for equitable treatment – and with assurance of making the necessary reductions in emissions?



Developing countries argue that they have minimal historical emissions compared to the North, still have much lower per capita emissions, stand to lose out most from climate change, and above all that developed countries should "take a lead" in tackling the problem.

In the background, meanwhile, climate change itself grows steadily worse, still with no approach in evidence that can solve the problem faster than it is being created. Climate change is truly the Gordian knot of our times. Is there any ray of sunlight amidst all the dark clouds?

Yes, says the London-based Global Commons Institute (GCI), which has developed a policy framework called "Contraction & Convergence" (C&C) - a proposal advocated in the past by the governments of China, India, the Africa Group, France, Belgium, Sweden, and the Non-Aligned Movement; by Climate Network Africa (a network of African NGOs), UN Environment Programme CEO Klaus Topfer, the science chair of the IPCC,

Sir John Houghton, the UK-based Chartered Insurance Institute, the European Parliament, and most EU environment ministers. C&C has also been supported by the Red Cross, Jubilee Plus (the successor organisation to the Jubilee 2000 developing world debt relief campaign) and most recently the Climate Action Network federation of NGOs, which called in its publication "Eco" for a C&C approach.

The concept

Under C&C, all countries would collectively agree an annually reviewable target for a stable atmospheric concentration of carbon dioxide in the atmosphere, and then work out the rate at which emissions must contract in order to reach it. The need for a specific concentration target to be set is absolutely critical, as the UN Climate Secretariat's Executive Secretary, Michael Zammit Cutajar, made clear in a recent interview. Without a clear global trajectory towards a specific level of CO2 in the atmosphere, action taken to address climate change is no more than a spin of the roulette wheel in a climate casino.

Lack of certainty about the precise safe level of atmospheric concentrations is no reason for delaying action – on the contrary, it makes action more urgent, and requires C&C's stipulation of an annual scientific review of the concentration target.

Once the concentration target and the resulting "contraction curve" have been defined, the next question becomes how to share out the slices of this carbon "cake". Under C&C, the allocations would converge by a specific date (such as 2030) from current shares of emissions – broadly proportional to GDP - to allowances proportional instead to national population.

This approach is based on the realisation that one logical and equitable allocation formula will be needed in order to distribute entitlements between more than 180 countries if negotiations are not to sink once more into a morass of horse-trading.

Full international emissions trading would be possible under C&C, so that countries unable to meet their targets could purchase permits from countries with spare emissions to sell.

Why it would work

Beneath the US policy reversal on Kyoto and the outraged reaction from all quarters to this announcement, a more significant shift has taken place across the Atlantic. President Bush has accepted that climate change is real, and called for an approach consistent with stabilizing atmospheric concentrations. More than this, he has called for a return to the first principles of the 1992 Climate Convention – precaution and equity.

The US has recognised that a global problem needs a global solution, which by definition means including all countries. At the same time,

-President Bush has also acknowledged that there are no military solutions to climate change.

This means that a co-operative approach is needed, which in turn requires that all countries recognize the policy framework as equitable (as Secretary of State Colin Powell conceded explicitly in a recent television interview).

As President Bush and other leaders are discovering, the logical endpoint of his Administration's position on climate change is Contraction & Convergence. It is the only framework there is that can fulfil the need for stabilization of atmospheric greenhouse gas concentrations whilst encompassing at the same time Northern demands for flexibility and Southern demands for equitable treatment.

Since developing countries have much lower per capita emissions than the developed world, convergence at equal per capita emission rights would allow developing countries to sell their surplus emissions to the developed world at a profit. (This would not compromise the environmental integrity of the system, unlike the Kyoto system of emissions trading with its "hot air" since all trading would take place beneath the one overarching global "contraction curve" and one standard allocation formula.)

This trading would also help to establish clean technologies, especially in the South. The South would have a clear incentive to reinvest the proceeds of its permit sales into zero emissions technologies, since this would allow it to continue to sell permits; whilst businesses would benefit from a long-term framework that would allow them to plan effectively their capital investment in clean technology, which would become a vast growth sector.

What about Kyoto?

Kyoto, for all that it represents a first step of sorts, is neither science-based nor equitable. Its emissions quotas are the result of political haggling rather than any obvious correlation with the cuts being called for by the Intergovernmental Panel on Climate Change, and even these have been watered down through concessions made at the last climate summit in Bonn.

An even more fundamental mistake enshrined in Kyoto was the principle of developed countries "taking a lead" in tackling climate change. Worthy though the principle sounds, it does not work in Southern interests.

First, it excludes developing countries from the pre-allocation of a new asset – tradeable atmospheric property rights – worth trillions of dollars annually. This means that developing countries are being excluded from an opportunity to profit from their far lower per capita emissions, even as the UK (a far higher per capita emitter than most Southern nations) stands to make billions of dollars from the emissions it saved by switching to gas rather than coal-fired power generation.

Secondly, there is no escaping the fact that all nations will at some point have to be included in global binding targets. The risk for the South is that in the future, worsening climate disasters will lead to urgent demands for their participation – at a time when the scale of emissions reductions needed globally may mean that they have no surplus to sell, even with immediate per capita convergence.

Developing countries would face enormous pressure in such a situation, and even risk being perversely blamed for climate change if they stayed out. This would be despite the fact that in such a situation, the North would be doing precisely what it had always said it would not do – 'pulling the ladder up after it', with no space for developing countries to develop or for consensus to be achievable.

The only alternative to this political nightmare is to conduct the climate change debate openly and honestly from this moment on. This means that all countries, and especially those in the North, must be very clear about three basic truths:

1. Climate change will definitely get worse unless we address it now;

2. A global problem needs a global solution, and developing countries must be involved;

3. Any workable solution must therefore treat all parties fairly or it will stand no chance of being agreed upon globally.

C&C is the only way forward in this situation. By specifying a date for convergence at equal per capita emission entitlements, it gives a clear assurance of equitable treatment and creates a virtuous circle in which Southern countries benefit from an income flow with a clear incentive to invest the proceeds in clean technology.

It is now necessary that the world learns the hard lessons of the Kyoto Protocol. First,

-it will in future be essential to start not with the question of "what reductions do countries think they can afford?", but "what is a safe atmospheric concentration of CO2, and what is the path to get there?".

Second, a constitutional framework is needed to reduce the morass of complexity and horse-trading that so typified Kyoto. C&C reduces negotiations down to a manageable two variables: what is the rate of contraction, and what is the date of convergence?

As the world moves towards Earth Summit 2002 and the Commonwealth Heads of Government Meeting in Brisbane in October, attention will once more focus on the interconnections between equity and sustainability. This is not equity for its own sake, based on purely moral grounds. It is equity for the very pragmatic and down-to-earth reason that a framework that is inequitable will not be agreed by all countries. No amount of rhetoric, worthy sentiment, aid programmes of a few million dollars or communiqués from the OECD will change this.

Johannesburg must be used to agree a long-term, equitable global framework to solve climate change. For as EU environment Commissioner Margot Wallstrom recently observed, while countries can negotiate with each other, they cannot negotiate with the weather.

Aubrey Meyer is the Director of the GCI.

Alex Evans is the director of communications GCI

AUGUST

Nyier Abdou
Al Ahram Newspaper

"This point is stressed by Aubrey Meyer, director of the UK group the Global Commons Institute (GCI) and author of - Contraction and Convergence: the Global Solution to Climate Change (Green Books). Without a feasible and binding plan for dealing with global warming, Meyer predicts climate change will wreak havoc on the developing world. Talking to the Weekly, Meyer noted that population increases will inevitably increase the number of people affected by natural — and, indeed, "unnatural" disasters. "If these occur [in places] where there are already local conflicts over the use of land and other resources — as with storms in Orissa or droughts in the Middle East, for example — these impacts can only aggravate such conflicts."

.....

"The level of greenhouse concentration in the atmosphere at this time is higher than anywhere in data sets going back half a million years," says GCI's Meyer. "Historically these levels have varied but at significantly lower average value than the levels we have achieved since the industrial revolution began around 200 years ago. It is possible — perhaps probable — that continuing this unrelenting pulse of human emissions will

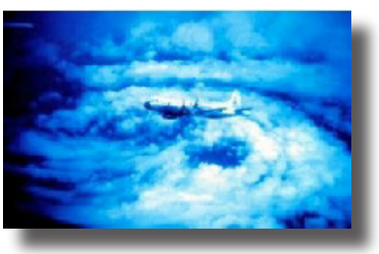
trigger global climatic upheaval." Referring to the claim that it is not clear that anything has indeed gone "wrong," Meyer insists, "The point [Lindzen] makes is simply: if there isn't a problem, don't fix it. However, it is obvious that there is a problem, and that we are all going to be broke if we don't fix it."

AUGUST 23

Al-Ahram
The Heat is on

Scientists are conjuring fire and brimstone, but where does the science end and the paranoia begin? Nyier Abdou traces the panic over global warming

In the last couple of years, it has increasingly seemed like the apocalypse is nearing: hurricanes, floods, earthquakes and volcanoes wreak havoc with greater frequency. In November 1998, Hurricane Mitch took some 10,000 lives in Central America and deadly earthquakes have ravaged the globe. Turkey, India, Venezuela and Taiwan are just some of the countries that have suffered catastrophic earthquakes in the last two years resulting in significant loss of life. Flooding, from the Mississippi to the Yangtze, from England's Yorkshire, to Africa's Mozambique, has drawn a chilling picture of what reports on rising sea levels and melting ice caps may mean.



Fear of the unknown is a powerful thing, and it is this terrible uncertainty that has driven the global interchange on one of the more elusive issues of our time: climate change. Were it not for conservationists' and environmentalists' ability to paint global warming as a common foe it would have been near impossible to put climate change on the international agenda. But with world leaders pulled into the debate, politics has driven the science, rather than the other way around. The results have been both edifying and discontenting.

The landmark 1992 Earth Summit, in Rio de Janeiro, Brazil, was the birthplace of the UN Framework Convention on Climate Change (UNFCCC), signed by 153 nations swept up by the call to keep the earth a liveable place. Governments sounded the alarm about global warming and worrying predictions veered into view.

An increase in so-called greenhouse gases could spur a runaway "greenhouse effect," warming the earth in ways ecosystems cannot cope with. Increased levels of greenhouse gases like carbon dioxide (CO2), methane, nitrous oxide combined with chlorofluorocarbons (CFCs), which eat away at the earth's protective ozone layer, are the product of the industrial age. Concentrations of these gases allow sunlight through, but keep some of the subsequent radiation emitted by the earth in. The greenhouse effect is what makes life as we know it possible on the planet, but it is a delicate balance.

The burning of fossil fuels like coal, oil and natural gas — our main energy sources — increases the build up of greenhouse gases in the atmosphere. Models based on the current rate of greenhouse gas emissions (GGEs) portend global warming running out of control.

Because emissions do not distribute themselves evenly, they are denser in some areas, forcing warmer weather patterns. The difference in temperature then creates turbulence in the atmosphere. The basics of global warming are straightforward: more GGEs mean more trapped heat, which means more violent weather patterns. Warmer overall temperatures means the melting of polar ice caps, glaciers and permafrost. Ice traps CO2, but once melted, more CO2 is released into the air, in a vicious cycle. The warming of surface waters causes the seas to expand, encroaching on coastal cities and possibly sinking small island nations.

Flirting with disaster: changing weather patterns have been blamed for nature's increased wrath. from top) Flooding in Mozambique last year; at the eye of a hurricane; searching for survivors of Taiwan's devastating Typhoon Toraji earlier this month; Greenpeace protesters at the climate talks in Bonn

The UN Inter-governmental Panel on Climate Change (IPCC), set up to monitor policy development and produce an informed body of knowledge on the slippery topic of global warming, has repeatedly issued dire predictions of accelerated heating of the atmosphere and the possible repercussions we face: severer weather extremes, lengthened periods of drought in some areas and increased rainfall in others. A report on climate change released in February by an IPCC working group warns that we can expect more "freak" weather conditions and pointed to strong evidence for human culpability.

It has been widely noted that the 20th century was the hottest stretching back a millennium, and numerous reports, including a joint US Department of Energy and UK Natural Environmental Research Council study issued in May of 1999, and a London Imperial College study comparing satellite data from around the globe released in March of this year, claim strong evidence that the warming trend will continue. The World Meteorological Organisation (WMO) tagged 2000 as the fifth warmest year on record.

Warmer weather year round might seem a bonus for cooler climates, but when you consider that this would also allow insects and rodents to survive the winters and multiply, you can begin to imagine mosquito-borne diseases like malaria infiltrating countries like England and Canada. Countries already suffering the drying of lands, like the countries of southern Africa, could become uninhabitable. China is already losing thousands of square kilometres of cultivated lands and

marshlands each year to desiccation. Meanwhile, the erosion of coastal areas and natural barriers would leave coastal populations open to storm surges. No country is immune: the United States — the world's largest producer of GGEs — has been reluctant to implement emissions reducing policies, but scientists have warned that the country's eastern and western seaboards would be hard hit. Manhattan could become Atlantis.

The greatest impact will beset the developing world, particularly in densely populated coastal areas (Egypt is one of the countries the IPCC thinks is in danger). Already, more people are dying of natural disasters (the world's largest re-insurance company, Munich Re, says that its figures indicate a three-fold increase in natural disasters in the last quarter century) and, of course, more people are pushed into disaster-prone areas by economic hardship. A University College in London study estimates that a staggering 120,000 people a year are killed by earthquakes, tidal waves, volcanoes, floods and the like. The annual World Disasters Report for 1999, issued by the International Federation of Red Cross and Red Crescent Societies, noted that natural disasters were the leading cause of refugee crises, more so than armed conflicts.

Prodded by instant coverage of natural disasters by international news channels, these tragedies seem more real to us than they have in the past. And this may be leading us to think things are worse than they are. As the dissemination of information becomes increasingly advanced and immediate, we are prone to believe that the world is collapsing around us. It becomes easy to assume that extreme weather is rising, and the next logical step is to finger global warming as the cause. But most scientists agree that events such as earthquakes, volcanoes and other such phenomena are not connected to global warming. Rather, increased awareness, coinciding with heavy coverage of the climate change issue, has brought the two together.

Russell Schnell, director of observatory operations at the Climate Monitoring and Diagnostic Laboratory (CMDL) in Boulder, Colorado — an arm of the US National Oceanic and Atmospheric Administration (NOAA) — notes that a change in the intensity of severe storms "would have to be large and persistent over long time scales to be detectable." But Schnell argues that recordings of storm intensity before a few decades ago are insufficient to make this kind of judgment. He suggests that sharp population increases over the last half-century have pushed people into places more susceptible to weather hazards, like flooding and tornadoes, and hence, "storm detection and storm fatalities are both going up — when in reality, storm numbers and intensity are probably changing little."

Which is to say, the layman's perception is one thing, and scientific data are quite another. Herein lies the heart of the debate about climate change.

Since the Rio Earth Summit, worst-case scenarios issued by the IPCC and other scientific studies have been steadily worsening. With the UNFCCC already in place, and the threat of global warming burning a hole in international convention agendas, it would seem that a mechanism for reducing GGEs will soon follow. But policies are not set by scientists; they are agreed on by politicians and ministers, who have to answer to angry taxpayers if fuel prices go up and powerful companies, like the oil industry players who poured money into the campaign of US President George W Bush.

Once the glow of collective do-goodism wore off, governments became less enthusiastic about the reality of cutting down CO2 emissions and commitments were stretched and carefully worded. Two meetings of the countries party to the UNFCCC (in Berlin, in 1995, and in Geneva, in 1996) stressed the importance of action, but quibbled over the means to the end. And yet, despite tough negotiations and the highly charged atmosphere of the third conference of parties (COP3), in Kyoto, Japan, the only document on the table about climate change — the Kyoto Protocol — was adopted.

It was at the Kyoto summit that the main bargaining points of an international agreement were delineated — and they remain today. The US introduced the highly controversial concept of "flexibility mechanisms" (FMs), which treat the amount of carbon emissions allotted to a country under the protocol like currency. A country over its GGE limit can trade emissions or promote projects believed to "absorb" CO2 emissions (so-called carbon sinks), like forests or grasslands, in other countries. They might also fund projects in developing countries that would eventually decrease their emissions (known as clean development mechanisms). Negotiations over FMs dissolved the COP6 talks in The Hague in November 2000, and threatened to do the same when the Conference of Parties met again last month in Bonn, Germany. But a tightly crafted deal saved the last remnants of the Kyoto Protocol, despite significant watering down of the original deal and the US's refusal to sign.

Though it is a pale shadow of the original UNFCCC, most scientists feel that a weak agreement is better than no agreement, even without the US. The CMDL's Russ Schnell was pragmatic on the subject. "Something is better than nothing in this case, if one accepts that we have a major problem with CO2," he told Al-Ahram Weekly. "Agreements and treaties can be amended and modified. What one calls a treaty is not as important as what it does or where it could lead to. When it is in its economic interests, the US will do more on CO2 control."

Given the claims of so-called skeptics, one has to wonder if the doomsday scenarios are a way of provoking lethargic governments into action for a cause that is undeniably noble, even without global warming: a reduction of pollutants and a shift to cleaner energy sources. David R Easterling, principal

scientist at the NOAA's North Carolina-based National Climatic Data Center (NCDC), goes a step further. "The end goal is an admirable one — to reduce pollution and dependence on a fossil fuels, since these are a finite resource," he told the Weekly, noting that since there will be warming, it is a matter of how much we are willing to risk. "The question is how much it will warm and how fast. The issue is, we don't know how sensitive the climate is, and it is just as likely that we will have significant warming than little warming."

Others are even less equivocal. In her State of the World 2001 chapter, "Averting Unnatural Disasters," Janet Abramovitz, senior researcher at the Worldwatch Institute in Washington, DC, wryly notes that although the United Nations had earmarked the 1990s as the "International Decade for Natural Disaster Reduction," this period "may go down in history as the International Decade of Disasters."

"Not every natural disturbance is a disaster, and not every disaster is completely natural," writes Abramovitz. "We have altered so many natural systems so dramatically that their ability to bounce back from disturbance has been greatly diminished." The idea that Abramovitz drives home is that we cannot wait until the disaster strikes, we must consider not having a "disaster" at all.

This point is stressed by Aubrey Meyer, director of the UK group the Global Commons Institute (GCI) and author of Contraction and Convergence: the Global Solution to Climate Change (Green Books). Without a feasible and binding plan for dealing with global warming, Meyer predicts climate change will wreak havoc on the developing world. Talking to the Weekly, Meyer noted that population increases will inevitably increase the number of people affected by natural — and, indeed, "unnatural" disasters. "If these occur [in places] where there are already local conflicts over the use of land and other resources — as with storms in Orissa or droughts in the Middle East, for example — these impacts can only aggravate such conflicts."

With more and more parties pulled into the debate, it seems that more questions are generated, more data is amassed and more agendas are plugged, while inaction remains constant. How to pin down a goal so elusive? This is a question the political establishment has never been able to answer.

2001

Foina Strens
Ministry of Defence, UK

I found your supporting pack on "Contraction and Convergence" persuasive and would encourage you to ensure that the DETR staff involved in climate change policy are aware of its contents.

AUGUST 23

Al-Ahram
Who's talking about what?

Not only do they disagree, they disagree about whether they agree. Al-Ahram Weekly examines the state of the debate among scientists about climate change.

There are three separate issues often lumped under the all-purpose heading "climate change." The foundation of the debate is that average temperatures, including figures for land and ocean surface temperatures have risen over the last century. A significant increase in Greenhouse Gas Emissions (GGEs), particularly CO2, has also been recorded. These two facts together have led scientists to conclude that damage to the earth's ozone layer, along with the increased GGEs, are warming the earth. The first observation, which simply recognises a change, is "climate change"; the second deduction from that to a theory of global warming.

Though there are many scientists who question our ability to make this deduction, it is the nexus on which the whole debate about climate change depends. It places the blame for warming squarely on man — hence implying culpability for all the human suffering caused by changes in weather patterns. The UN framework for climate change (UNFCCC) assumes this culpability and tries to lessen it by controlling emissions in a way that gives ecosystems enough time to adapt and cope with increased temperatures.

According to the Environmental Protection Agency (EPA), global temperatures have gone up between 0.3oC and 0.6oC. This roughly concurs with UN Inter-governmental Panel on Climate Change (IPCC) estimates, which suggest a 0.6oC increase, plus or minus 0.2oC. Evidence that the earth is warming seems overwhelmingly strong, but some scientists argue that the earth goes through phases and that what is currently dubbed "global warming" is simply part of the natural ebb and flow of the earth's atmosphere — a worldwide pattern of cooling and heating. And though the scientific community is often lumped into a collective voice heralding the earth's destruction, there are many researchers and climatologists who question the direct relation between GGEs and climate change. These scientists are labelled "sceptics" and are often dismissed as being on the cusp of the scientific community or having a hidden agenda.

The logic of global warming seems difficult to dispute. Even if GGEs did not spark the warming trend, they can only aggravate it. The majority of scientists in the field are persuaded that the evidence linking emissions and warming is incontrovertible. Environmental groups insist that denying human culpability is to persist in wilful ignorance and to resist constructive change in the way human civilisation draws its energy.

But asked about increased disasters due to climate change, Fred Singer of the Science and Environmental Policy Project was adamant that the media misrepresents scientists as unified in the contention that global warming is a reality, implying that only a few, rogue malcontents depart from this view. "I don't know of any responsible scientist who would link earthquakes, volcano eruptions, etc., to increases in atmospheric greenhouse gases," Singer told Al-Ahram Weekly. "In fact, many scientists are becoming convinced by the data that [global warming] is negligible." This opinion has been echoed by several scientists in the field. MIT climatologist Richard S Lindzen, who took part in a report issued in June by the National Academy of Sciences, said as much last month in his comments published in the US magazine The New American, and environmental scientist Patrick J Michaels wrote a scathing op-ed deconstruction of the myth of scientific consensus in a July issue of The National Review.

Russ Schnell, of the US Climate Monitoring Diagnostic Laboratory (CMDL), admits that not all scientists agree about global warming, but adds that many do. He told the Weekly that there is equal dispute over the effects of CO2 build-up and how it will manifest itself. "But, no scientist disputes that CO2 is increasing faster today than in the past million years or so," Schnell notes. "Climate change has always been part of the natural cycles of earth and atmosphere. It is just that the current CO2-induced change may be faster and more dramatic than has occurred in the past and that man, plants, and animals will not be able to adapt fast enough to handle the change gracefully."

"Mr Singer does not speak for most climatologists," remarked David R Easterling, principal scientist at the NOAA's North Carolina-based National Climatic Data Center (NCDC), the world's largest active archive of weather data. "He chooses only evidence that seems to support his position, ignoring most credible evidence. Most climatologists in climate change research do not think that global warming is 'negligible'. On the contrary it is becoming more clear that climate change is real." Citing the most recent IPCC report — "a product of many hundreds of scientists actively working in climate research" — Easterling notes that the evidence is becoming very clear that "humans are impacting the climate, resulting in climate change."

"The science behind the IPCC report is the best available in the field," says Schnell. "There is no doubt that humans have the capability to change climate. Just look at deforestation and

desertification. There is debate on how the whole CO2 scenario will play out, but the basic physics of the phenomenon are not in question."

Aubrey Meyer, director of the London- based Global Commons Institute (GCI), agrees. "The laws of physics and thermodynamics are universal and apply regardless of the number of people who may or may not recognise them," he told the Weekly. "If the earth had no atmosphere, and therefore no greenhouse gas concentration and warming effect, the planet would be sub-zero temperature at night and above boiling during the day. In these conditions — as on the moon — life as we know it would not be possible. The atmosphere, aided by its interactions with the oceans and the biosphere, moderates these extremes. However, the global temperature increases now reported by most serious scientists are a simple result of the uncontested increase of greenhouse gas concentrations in the atmosphere, which result from the uncontested increase of human emissions of these gases."

Simon Torok, of the UK-based Tyndall Centre for Climate Change Research, is equally certain of the case for warming. While he dismisses connections between disasters like earthquakes to global warming, he does suggest that "future increases in severe weather events are likely, and the vast majority of scientists believe climate change is happening and that humans have been a contributing factor."

In an article in The New American, MIT's Richard Lindzen argues that the period of time during which we have studied trends in climate change — roughly 20 years — is too short to be able to determine if there is a real threat, or, in fact, anything extraordinary going on. The article also notes that temperatures were similar to present conditions in 1940, and that in the 1970s, people were even worried about a new ice-age. But the NCDC's Easterling rejects this claim, saying that climatologists look at the past 120 years, not 20 years. Refuting the claim that temperatures in the 1940s were much cooler worldwide, Easterling noted that "climate science has advanced a lot since the mid- 1970s, and what was believed then is not relevant today."

"The level of greenhouse concentration in the atmosphere at this time is higher than anywhere in data sets going back half a million years," says GCI's Meyer. "Historically these levels have varied but at significantly lower average value than the levels we have achieved since the industrial revolution began around 200 years ago. It is possible — perhaps probable — that continuing this unrelenting pulse of human emissions will trigger global climatic upheaval." Referring to the claim that it is not clear that anything has indeed gone "wrong," Meyer insists, "The point [Lindzen] makes is simply: if there isn't a problem, don't fix it. However, it is obvious that there is a problem, and that we are all going to be broke if we don't fix it."

However, it is obvious that there is a problem, and that we are all going to be broke if we don't fix it.

AUGUST

IPCC Third Policy Assessment

Chapter One section 3.2

> "A formulation that carries the rights-based approach to its logical conclusion is that of 'contraction and convergence'.
>
> [Intergovernmental Panel on Climate Change]

Chapter Ten section 4.5

"The concept of 'contraction and convergence' is the entitlement of ghg emissions budget in terms of future emissions rights. Such a global future emissions budget is based on a global upper limit to atmospheric concentration of CO2, for instance 450 ppmv (contraction). This budget is then distributed as entitlements to emit CO2 in the future, and all countries will agree to converge on a per capita emissions entitlement (convergence). Level of contraction and timing of convergence are subject to negotiations with respect to the precautionary principle."

AUGUST

The UN Observer
Risk Management of Climate Change

. . . . . Contraction & Convergence" would be the driving principle behind the new approach.

Contraction & Convergence targets (upper global cap on emissions and convergence point) would be adjusted according to the latest scientific findings emenating. from the IPCC. The upper carbon cap could be adjusted downwards if the latest findings showed that climate change was increasing at a dangerous rate.

Two new protocols would be created to deal with the issue of sinks (forestry) and new technology (renewables). Carbon credits for enhanced sink capacity and use of renewable energy would be overseen by a Carbon Credit body.

Emissions trading would still exist but initial allocations of credits would be based on the equity principle (population based).

Ideally, the ultimate end time-frame for completion of the "C&C" process would be 2050 or sooner if possible. Emissions contraction should start immediately to be effective. Time is of the essence."

Julian E Salt - of the LPC Centre for Risk Sciences, BRE

SEPTEMBER

Kjell Larsson
Swedish Environment Minister

"On the issue of equity, Sweden strives for a global convergence, meaning that the long term objective of the international community should be a per capita emissions target equal for all countries. The work towards sustainability embraces the right for the poorest countries to continue their development and requires that the developed world contribute to this. In other words the industrialised countries must reduce their emissions in order to enable the least developed countries to develop."

SEPTEMBER

The Corner House
Democracy or Carbocracy

"In addition to slighting or ignoring many existing climate-friendly local practices, negotiators' technical advisers have also been slow to acknowledge an important and growing international climate movement. This movement demands both that the discussion of rights in the atmosphere be brought out of the shadows and that a scientifically meaningful programme of aggregate emissions cuts be undertaken. It calls for all countries to agree, in line with evolving wisdom on climate, how rapidly world greenhouse gas emissions should contract each year. It proposes then allocating permits to emit to all countries in proportion to the number of their citizens. Countries unable to keep their emissions in line with their per capita allocations could buy extra ones from those whose emissions were under the limit.

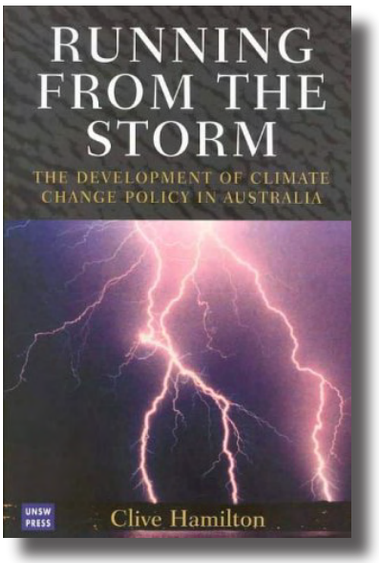
This equitable, flexible "contraction and convergence" framework has been endorsed by many Southern countries including China, India and the nations of the Africa Group; European government ministers including Michael Meacher of the UK, Jacques Chirac of France and Svend Auken of Denmark; insurance industry associations; and organizations ranging from the Royal Commission on Environmental Pollution to India's Centre on Science and Environment and Climate Network Africa.

Unlike any other proposal on offer, the framework would enable the US's bluff to be called on all three of its objections to the Bonn climate agreement: that it doesn't commit the South to emissions limitations; that it's "unfair"; and that it doesn't address sources of future emissions.

It would thus advance the discussion in a way which could result in a better future agreement."

SEPTEMBER

Clive Hamilton, Director of The Australia Institute
Running From The Storm



Publisher NSWP, ISBN: 0868406120

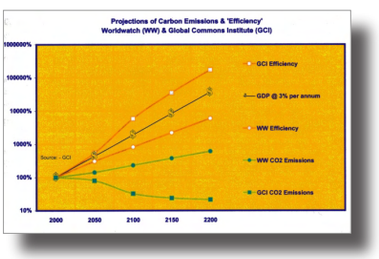
The Development of Climate Change Policy in Australia

" . . . . the longer time frame and the more broadly accepted ethical underpinnings of C&C ought to make negotiations less fraught than those leading up to and subsequent to Kyoto.

Is contraction and convergence pie in the sky? There is no doubt that it is a radical approach with far-reaching implications for the management of the Earth's common resources. It would redraw the legal and ethical relationships between nations and initiate an era of supranational management of those environmental issues that cross national borders. Difficult, yes; but what is the alternative?"

SEPTEMBER

GCI
Contraction and Convergence



A Policy Briefing on Climate Change to the Performance and Innovation Unit of the UK Government Cabinet Office.

OCTOBER

John Porter
US Parliamentarian Chair GLOBE USA

"Meaningful progress on confronting the challenge of climate change will only occur when countries from the North and the South are able to collaborate in issues of significant and sustainable development.

> The GLOBE Equity Protocol - Contraction and Convergence - and its mechanism for financing sustainable development is the only proposal so far which is global, equitable and growth-oriented.

It is precisely these issues that were endorsed at the GLOBE International General Assembly in Cape Cod, and form the thrust of our recently released (Nov 1998) paper, "Solving Climate Change with Equity and Prosperity."

OCTOBER 30

Early Day Motion 325
International Terrorism, The Energy Review, The Kyoto Protocol and Rio +10 Conference

80 signatures

Mr David Chaytor,
John Austin,
Mr Harry Bames,
Mr A J Beith,
Tom Brake,
Malcolm Bruce,
Mrs Patsy Calton,
Mr Martin Caton,
Ann Clwyd,
Mr Tony Colman,
Jeremy Coribyn,
Valerie Davey,
Mr Terry Davis,
Mrs Janet Dean,
Sue Doughty,
Julia Drown,
Mr Bill Etnerington,
Mr Don Foster,
Mr Neil Gerrard,
Jane Griffiths,
Mr Mike Hancock,
Paul Holmes,
Simon Hughes,
Mr Nigel Jones,
Norman Lamb,
Mr David Lepper,
Chris McCafferty,
Mr Alan Meale,
Mr Michael Moore,
Dr Nick Palmer,
Syd Rapson,
Joan Ruddock,
Phil Sawford,
Mr Andrew Stunell,
Matthew Taylor,
Mr Mark Todd,
Jon Trickett,
Dr Desmond Turner,
Dr Rudi Vis,
Brian White,
Ms Diane Abbott,
Norman Baker,
John Barrett,
Mr Harold Best,
Mr Colin Breed,
Mr John Burnett,
Mr Menzies Campbell,
Mr Michael Clapham,
Harry Cohen,
Frank Cook,
Mrs Ann Cryer,
Mr lan Davidson,
Mr Hilton Dawson,
Jim Dobbin,
Mr David Drew,
Jeff Ennis,
Paul Flynn,
Andrew George,
Matthew Green,
Mr Win Griffiths,
Nick Harvey,
Mr Kelvin Hopkins,
Lynne Jones,
Mr Archy Kirkwood,
Mr Mark Lazarowicz,
Alice Mahon,
Mr Kevin McNamara,
Laura Moffatt,
Dr Doug Naysmith,
Mr Gordon Prentice,
Mr David Rendel,
Mr Adrian Sanders,
Mr Alan Simpson,
David Taylor,
Mr Simon Thomas,
Dr Jenny Tonge,
Mr Paul Truswell,
Mr Paul Tyier,
Mr Robert N Wareing,
Mr Roger Williams

That this House welcomes the Government's commitment to resolve asymmetric conflicts such as global terrorism and climate change through the process of international coalition building; further welcomes the launch of the Energy Review and

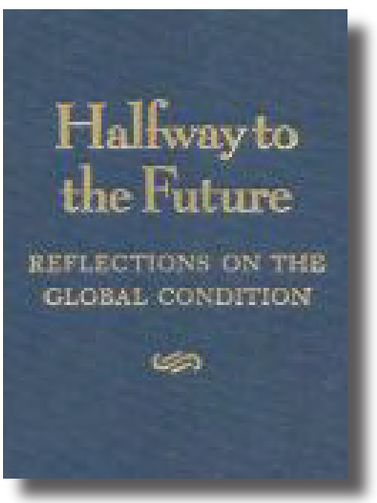
the Government's commitment to respond to the 22nd Report of the Royal Commission on Environmental Pollution, 'Energy- the Changing Climate'; notes that terrorism is more likely to flourish in conditions of social injustice and environmental degradation; further notes the significant disparities in energy consumption and greenhouse gas emissions between developed and developing countries; further welcomes Recommendation 3 of the RCEP's 22nd Report that 'The Government should press for a further global climate agreement based on the Contraction and Convergence approach, combined with the international trading in emission permits; is seriously concerned at the vulnerability to terrorist attack of Britain's nuclear power stations and facilities and the related transportation of radioactive materials; is encouraged by the rapid development of renewable energy technologies which offer the prospect of security and self sufficiency in energy supply to developed and developing countries; and, therefore, calls on the Prime Minister to demonstrate further global leadership at next year's World Conference on Substainable Development by arguing the case for a policy of contraction and convergence of greenhouse gas emissions as the only realistic means of managing the transition from a carbon economy in a way that allows for equitable access to safe, renewable, low-intensity, self-sufficient and decentralised forms of energy supply.

OCTOBER

Tellus Institute
Halfway to the Future

Publisher: Tellus. ISBN: 0-9712418-0-5

"A good two pronged approach is a constraint on global emissions and a path toward allocation of emission allowances among the nations of the world on an equal per capita basis."



OCTOBER

Robert Stavins
JFK School of Government, Harvard

"This (Contraction and Convergence) is a long-term standard that is difficult to find fault with, and has much to recommend it on ethical grounds and in terms of parsimony.

I think it's quite reasonable that the ultimate greenhouse-gas emission standard (i.e. allocation mechanism of targets among countries) toward which the entire community of nations might work over the long term would be one linked with equal per capita emissions assuming that cost-effectiveness could still be achieved through simultaneous provision for international trading or some other mechanism that would facilitate the equating of marginal abatement costs."

OCTOBER

Michael Meacher
UK Minister of the Environment

"I find it an appealing concept. It is obviously absolutely profound in its implications.

It is normally known under the title of Contraction and Convergence, in other words the developed countries contract their emissions, which is what Kyoto is all about, and we get convergence with the developing countries as they industrialise and increase their emissions....

I do not think it is pie in the sky. It is certainly not just a conceptual philosophy. We are moving remorselessly in that direction"

OCTOBER

UK Green Party
Policy Statement

The Green party of England and Wales strongly endorses the GCI/GLOBE campaign for Contraction and Convergence (C&C) as the key ingredient in a global political solution to the problem of Climate Change, and urges the UK and other governments use it as the basis for negotiations at the Conference of the Parties organised by the Intergovernmental Panel on Climate Change.

2001

UNEP Finance Initiatives
Climate Change and the Financial Sector

www.gci.org.uk/Insurers/ClimateChangeFinancialRiskOptions.pdf

NOVEMBER

Libdem News
Green Justice in a Climate of Terror

In his ground-breaking Green Alliance speech in March this year Charles Kennedy coined the phrase Green Justice to sum up the ethos which inspires Liberal Democrats as we address the global challenges of poverty and environmental degradation.

> A key step to endorse and give shape to that strategy was taken by Party Conference when it called for "a Europe-South initiative for a long-term global framework to cap CO2 concentrations by contraction of greenhouse gas emissions down to the level needed to stabilise the climate, and convergence to equal emission quotas per head of population".

In so doing it gave timely political backing to the Royal Commission on Environmental Pollution which has urged this strategy of "Contraction and Convergence" as the best prospect of achieving "equity, economy and international consensus" and whose report is a key element in the Government's current energy review.

The policy has urgent relevance to the deeper global issues raised by the suffering of Afghanistan and the struggle with terrorism. Though a modified Kyoto climate deal has been rescued from oblivion, the world's carbon emissions will still be over 20 per cent higher than the 1990 level in 2010.

Meanwhile climatic upheavals continue to take their grim toll, not least in the drought and famine which have gripped Afghanistan and large parts of central Asia in the last three years.

Halting climate change implies a 60 per cent reduction in greenhouse gas emissions during this century and even bigger cuts in the rich north. That sounds daunting. Yet the technologies are becoming economically available to make that shift - through wind, tidal, solar and hydrogen power, through energy efficiency and decentralised combined heat and power. The need is for a strong political framework which gives clear market signals for a longterm investment effort by the world business community.

As for equity, the talk of world community in face of terrorism has starkly exposed the failure of a global system that relies on hegemony instead of solidarity and forced a complacent West to acknowledge the need for a fairer sharing of world wealth and resources. What sharing could be more fundamental than a fair sharing of the limited capacity of our atmosphere to absorb the polluting emissions which, until now, have been the concomitant of economic growth?

The US justifies its failure to act on climate change by claiming that a solution to a global problem must involve all countries. Yet the developing countries which have a vital interest in action cannot commit to play their part if restrictions on emissions are designed to freeze the gulf between rich and poor.

Contraction and Convergence of greenhouse gas emissions to equal quotas for every world citizen will meet the need for equity but give the world time to plan and develop its response through new technology and ways of life, while trading of emission quotas will maximise the efficiency of change.

In his Green Alliance speech Charles Kennedy pioneered the idea of a global Community on these lines. Today the Government's energy review, together with mounting cross-bench support in the House of Commons, offer an opportunity to press the Government to adopt this strategy. If the Prime Minister takes it up he would find ready collaborators amongst other states of the EU and an opportunity for global leadership at the Earth Summit next year.

The US under Bush may continue to hang back. That is why Europe and the South must lead the way. But recent events have underlined the surreal geopolitics of a US energy policy

which will rely on Saudi Arabia and central Asia for over half its oil supplies and puts its faith in expanding nuclear power. As the US learns painfully that it is not omnipotent, it too will need the security of a sustainable energy policy in solidarity with the rest of the world. Once again Liberal Democrats are pointing the way.

by Chris Layton

NOVEMBER 1

UNEP Finance Initiatives
Climate Change Working Group Position Paper

4.1.3. Construct a long-term framework to reduce emissions globally in order to achieve the necessary transition to sustainability. The approach of Contraction and Convergence, which the IPCC TAR described as "the logical conclusion" of a rights-based approach, provides a possible example of such a basis.

http://www.gci.org.uk/Insurers/FINALDRFTUNEPFI.pdf

NOVEMBER 22

Michael Meacher
UK Environment Minister

At the UK Environment Council's climate conference for business in London, Michael Meacher was the keynote speaker.

In answering questions from the Loss Prevention Council regarding the relationship between Kyoto Protocol and C&C, Mr Meacher gave a detailed explanation of C&C saying,

'C&C is not 'Plan B', it is 'Plan A-Plus'.

NOVEMBER

Olivier Delouze
Belgian Environment Minister

"We are conscious that in the end, we will have to inevitably evolve towards a more equitable partition between the north and south, of the capacity of our common atmosphere to support greenhouse gases, by a gradual convergence of the levels of emissions on a per capita basis."

NOVEMBER

UNEP FI - Statement COP7
The UNEP Financial Institutions position paper

"4.1.3. Construct a long-term framework to reduce emissions globally in order to achieve the necessary transition to sustainability.

The approach of Contraction and Convergence, which the IPCC TAR described as "the logical conclusion" of a rights-based approach, provides a possible example of such a basis."

www.gci.org.uk/papers/FINALDRFTUNEPFI.pdf

The financial organisations associated with this are listed at the end.

NOVEMBER 30

Financial Times

" . . . . Many politicians - and businesses making long-term investment plans - would prefer to agree on some overarching principles that would determine future emissions targets.

For some policymakers, the answer is "contraction and convergence", an ambitious proposal for stabilising greenhouse gases under which every country would converge on the same emissions allocation per inhabitant by an agreed date.

This simple, bold approach has commanded support from many sources, ranging from President Chirac of France to the Chartered Insurance Institute of the UK. But wealthy countries may baulk at the stringency of the cuts it implies, which could be as much as 80 per cent by 2100.

Given the controversy surrounding the Kyoto Protocol, the international community has already achieved a stronger agreement than many sceptics thought possible. But as countries start to prepare the ground for the next stage of the global agreement on climate change, it is clear that past achievements are dwarfed by the magnitude of the challenges ahead."

NOVEMBER

NEF/Jubilee Plus

> "… the US, committed by its own declaration of independence to human equality, can embrace the contraction and convergence model pioneered by the London-based Global Commons Institute.

Contraction and convergence

According to Sir John Houghton, chair of the Intergovernmental Panel on Climate Change, global greenhouse emissions need to be reduced by at least 60 per cent in less than 100 years. If governments agree to be bound by such a target, it is possible to calculate for each year over the next century the (diminishing) amount of carbon dioxide and other greenhouse gases the world can release, to stay on target for a 60 per cent reduction. This is the contraction part of the equation.

Convergence describes how each year's tranche of the global emissions budget is shared out among the nations of the world. The process is managed to ensure that every country converges on the same per capita allocation of carbon dioxide – the same personal emissions "allowance" – on the same date. The date is negotiable – Houghton suggested 2030.

Countries unable to manage within their allocations would, subject to agreed limits, be able to buy the unused parts of the allocations of other, more frugal, countries. Sales of unused allocations would give the countries of the South the income to purchase or develop zero-emission ways of meeting their needs.

"Contraction and convergence" provides an effective, equitable and efficient framework within which governments can work to avert climate change. The countries of the North would benefit from the export markets created by restructuring. The whole world would benefit by slowing the rate of damage. Its potential as an antidote to global warming has been widely endorsed, not least by industries such as insurance which are in the front line of climate change. Even some of the more progressive fossil fuel producers have acknowledged that it may offer a promising way forward. But "contraction" has a disturbing sound to it – it implies less rather than more. The next chapter explains why less may, in practice, turn out to be more."

www.jubileeplus.org/ecological_debt/Reports/War%20Economy.pdf

NOVEMBER

British Petroleum

In the BP Glossary

"Some have promoted the idea of 'contraction and convergence' as a long-term strategy for managing global GHG emissions. Contraction refers to a global cap which would be set on worldwide emissions, together with an overall reduction trajectory for the century ahead. Emissions entitlements would be allocated on a per capita basis under the global cap and trading would be permitted. Emissions entitlements would converge over time towards equal per capita emission rights for all countries, so that total emissions allowances to countries are proportional to population. Proponents of the system of contraction and convergence argue that it is equitable (being based on population) and that it would be truly global, involving the participation of all countries."

www.bp.com/key_issues/environmental/climate_change/information_centre/glossary_of_terms.asp

DECEMBER 15

ZEW
Contraction of Global Carbon Emissions

ZEW Discussion Paper No.01-65

CHRISTOPH BOHRINGER

HEINZ WELSCH

Abstract:

The allocation of emission entitlements across countries is the single most controversial issue in international climate policy. Extreme positions within the policy debate range from entitlements based on current emission patterns (CEP) to equal-per-capita (EPC) allocations. Convergence (COV) from an initial CEP allocation towards EPC emission rights represents a reconciliation of the two. This paper maintains that the acceptability of alternative entitlement schemes depends on their implications for economic welfare and uses a dynamic multi-region general equilibrium model for a comparative economic assessment of the above allocation rules. We find welfare implications for the various regions to be strongly influenced by changes in the terms of trade. Especially, regions may experience considerable welfare losses even under entitlement schemes which impose no binding emission constraint on them. Among the arrangements examined, COV cum emissions trading stands out for offering the developing countries substantial incentives for participation in the international greenhouse gas abatement effort without imposing excessive burdens on the industrialized countries.

UK Tyndall Centre

3.3 Strategic Assessments

"The climate change literature is studded with fragments of scientific evidence as the typical products of disciplinary, methodology-oriented and funding-driven research activities of rather small teams of investigators. Comprehensive surveys exploring, for instance, the climate vulnerability of an entire region or sector are extremely rare. Even the three IPCC Assessment Reports produced so far are not really integrated studies, but carefully edited compositions of thousands of disconnected results emerging from the research machinery in a more or less stochastic manner. What the crucial decision-makers request (and genuinely need), however, are strategic investigations that provide panoramic, but state-of-the art, views of complex issues, preferably condensed in a 10-page summary. The Tyndall Centre is, at present, the only institution in the UK which can generate such assessments that combine vertical integration (through problem and solution orientation) with horizontal integration (through trans-disciplinary capacity). There are many big topics that need to be approached this way, for example the differential vulnerability of the British coastline to sea-level rise and changing extreme-events regimes, the overall potential for slowing global warming offered by large-scale carbon sequestration, or the future design of the national built environment in view of climate change adaptation as well as climate change mitigation policies.

Some of the strategic assessments urgently needed could be initiated, or even drawn up, by special "Tyndall Symposia" convening the essential and representative communities on issues like: 1) nuclear power, 2) geo-engineering, 3) contraction-and-convergence. "

www.tyndall.ac.uk/research/research_strategy.pdf

2002

JANUARY

New Internationalist
A Parliament for the Planet

"The only fair and lasting means of reducing CO2 (namely 'contraction and convergence',

-which means working out how much pollution the planet can take, then allocating an equal pollution quota to everyone on earth) would surely be impossible to implement without a world parliament."

George Monbiot, Author Captive State

www.newint.org

JANUARY

Green Futures
The Just Capitalist

Martin Wright talks to Adair Turner, former CBI head,

(His) " . . . . analysis really starts to pack a punch when he turns to the environment. Here, after all, is a case of massive market failure.

Take climate change, which "is likely to impose massive economic costs... The case for being prepared to spend huge resources to limit it is clear," he says, arguing that the cost will be repaid many times over by the avoidance of disaster.

In any case, "the developed world does not have the moral right to increase the risk of flooding in Bangladesh", and, he adds acidly, "European executives worried about the cost of action should perhaps consider it the necessary price for preserving at least some skiing in the Alps."

Long term, says Turner, the only sound strategy is that of 'contraction and convergence' – cutting greenhouse emissions to the point where they are shared equally, worldwide, on a per capita basis."

www.greenfutures.org.uk/features/default.asp?id=905

JANUARY

SERA
International Climate Change Position

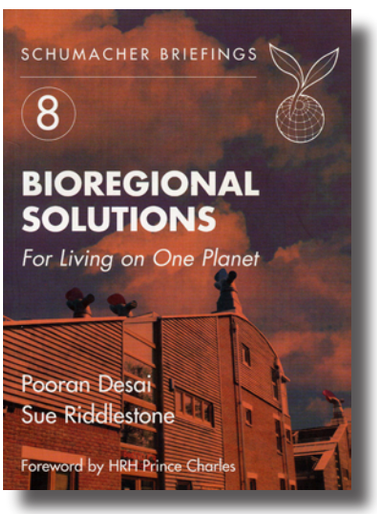
"SERA recommends to the UK Government:

5. Champion an accelerated round of UN negotiations leading to emissions reductions based on safe, global per capita limits to greenhouse gases (so-called Contraction and Convergence)....."

www.gci.org.uk/papers/globalclimate.pdf

2002

Desai, Riddlestone
Bioregional Solutions



Publisher: Schumacher Society ISBN: 903998 077

Our target to reduce the UK's ecological footprint by two-thirds is mirrored in a recent report by the Royal Commission on Environmental Pollution funded by the UK government.2 The Commission investigated the need to stabilise C02 in the atmosphere and the possibility of reducing C02 levels by locking it up through planting trees. However, planting trees, even on a global scale, could only compensate for a small amount of the rising emissions. Therefore, in order to stabilise C02 levels, the Commission recommended that the UK should reduce fossil fuel use by 60 by 2050. This would also allow us to converge to a global per capita quota. Global quotas, based on the principle of Contraction and Convergence, were seen as the only viable basis for agreeing international limits in the atmospheric C02. Technological fixes alone will not allow us to reduce our ecological footprint. For instance, increases in agricultural productivity brought about by the Green Revolution have been achieved by using mineral fertilisers, themselves requiring fossil fuel inputs. As a result, modern farming has a much bigger ecological footprint per tonne of food produced than many traditional forms of agriculture and so is less efficient. Another example is modern car engines, which have increased in efficiency over the years. But because there are more cars (and more big- engine cars) on our roads than ever before, any possible environmental benefit has been cancelled out. Technology will not save us from having to confront the simple issue of limits to consumption.

FEBRUARY

Berk & den Elzen
Future Options

"Options for differentiation of future commitments in climate policy: how to realise timely participation to meet stringent climate goals?"

"Where climate change limits are stringent, a C&C regime seems to provide more incentives for a timely participation of developing countries, and better opportunities for an effective and efficient regime for controlling global GHG emission control than increasing participation."

Netherlands National Institute for Public Health and the Environment (RIVM), P.O. Box 1, 3720 BA Bilthoven, The Netherlands

www.gci.org.uk/papers/berkelz.pdf

FEBRUARY

Swedish Foreign Ministry
Financing and Providing Global Public Goods

"Inter-generational justice also enters the climate change equation. Many of the rationales for taking costly action now in order to tackle a problem whose worst effects may not be felt for many decades, is that we have a responsibility to future generations.

Both the 'precautionary principle' and the principle of 'contraction and convergence', which has entered the climate negotiations in recent years are aimed at addressing these problems. They provide a road map for policy responses, by, in the latter case, establishing ceilings for GHG emissions

-above which dangerous climate change is likely, and then devising a global carbon budget within which nations have a per capita entitlement to use carbon. Moving towards an optimal and safe level of carbon usage requires that some nations, in the first instance developed countries, would have to contract their use of carbon-intensive activities and others, primarily developing countries, would be entitled to expand their use of fossil fuels to meet basic development needs and so converge towards a per capita entitlement, which applies equally to all countries."

www.ud.se/prefak/files/gpg.pdf

JANUARY

New Internationalist
Going Down in History

"The legacy of ecological debt can be recognized and dealt with by adopting a forward-looking plan on climate change. Developing countries can argue for a global deal that acknowledges their logical entitlement to an equal share of the global commons of the atmosphere. Instead of the historical expansion of greenhouse-gas emissions and divergence between the world's rich and poor, there needs to be a plan for both contraction and convergence.

Fortunately, just such a plan, stemming from the London-based Global Commons Institute, is gaining favour among governments, the financial community and in developing countries.

Contraction and convergence requires setting a maximum greenhouse-gas concentration target for the atmosphere. After that, all countries logically claim their right to share the 'emissions pie', but can trade their entitlements if they wish.

This way, if rich countries want to continue taking up more than their fair share of the world's environmental space, they will at least have to pay for the privilege, generating much-needed resources for countries that need them."

Andrew Simms,

Policy Director, New Economics Foundation, LONDON

www.newint.org

JANUARY 15

Euromoney.com
Emissions

"It seems like the perfect marriage of market forces and global ethics.

Emissions trading reduces greenhouse gas levels while giving companies and countries room to manoeuvre if they are willing to pay. And there's money in it for the brokers that get involved early . . . . . This method, which moves beyond Kyoto, is known as Contraction and Convergence."

FEBRUARY

Hans H.Kolshus
Cicerone

"While the Kyoto Protocol may represent an important political achievement, its expected impact on the climate is marginal at best. The agreement is nowhere near sufficient for stabilizing or reducing the concentration of greenhouse gases in the atmosphere, partly because developing countries have not committed to reducing their emissions in this round.

Future climate negotiations must therefore contain more ambitious targets as well as the participation of developing countries. In an attempt to realize this aim, the Global Commons Institute has proposed that emissions entitlements be allocated on a per capita basis....

The method, called "contraction and convergence" (C&C), was first developed by Tony Cooper and Aubrey Meyer in the spring of 1996....

A team from GCI then presented the idea to the second Conference of the Parties (COP 2) in Geneva, in July 1996. Since then, the idea has garnered support from more and more governments and NGOs."

www.cicero.uio.no/media/549.pdf

FEBRUARY

Delhi Summit
Challenges for Rio+10

"The UNFCCC addresses the equity issue through 'common but differentiated responsibility'.

Per capita energy consumption and GHG emissions of developing countries are far lower than that of the industrialized world.

In a convergence of emissions at a sustainable level, developing countries can increase emissions to a safe limit while developed ones reduce to the same level."

www.teriin.org/dsds/dsds2002/day4/plenary8.htm

2002

UNEP Finance Initiatives
Climate Risk to Global Economy

For the long term, the agreement of an international policy based on the principles of precaution, equity and economic efficiency is critical if we are to reduce the risk and engage all parties in the endeavour. A number of approaches have been proposed, including the 'historical' method, under which a nation's future emissions goals would be determined by its past GHG output; the carbonintensity approach, in which future emissions goals would be indexed to GDP; and "Contraction and Convergence"2 which would aim to achieve equal per capita emissions for all nations by an agreed date. Up to now, however, most of the work under the United Nations Framework Convention on Climate Change (UNFCCC) has been directed at finalising and ratifying the Kyoto Protocol.

http://www.gci.org.uk/Insurers/ClimateCEOBriefing_ccwg_unepfi.pdf

FEBRUARY

Dutch Parliament
second chamber, meeting doc 27801

"It is left to the next cabinet (there will be national elections in the Netherlands in spring 2002) to develop a formal position on a preferred option for the future differentiation of commitments, but it closes off in stating that

> -a distribution of global emission space on a per capita basis in the course of the century (2030/2050) seems an obvious choice."

FEBRUARY

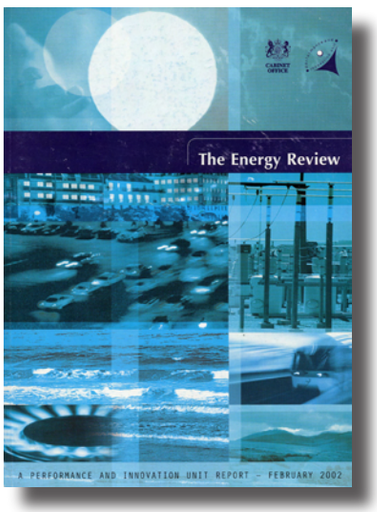
UK DTI
Inter Agency Group

"The Royal Commission on Environmental Pollution (RCEP) recommends that the Government should press for a future global climate agreement on a contraction and convergence (C&C) approach, allowing also for emissions trading.

It selects one path for achieving stabilisation of CO2 concentrations in the atmosphere at 550ppm that implies a convergence date of 2050. Many other paths to stabilisation at this level could be taken. The Government is keen to establish a dialogue on possible approaches to future target setting."

www.gci.org.uk/UKGovernment/DTIIAG.pdf

FEBRUARY



PIU Energy Review
UK Cabinet Office

"The project's outputs will be a key input to the UK Government's future policy on security and diversity of energy supply and on climate change including its response to the Royal Commission on Environmental Pollution (RCEP) report on 'Energy, the Changing Climate.

The UK practices a 'leading' approach to climate change. This approach to climate change implies 3 separate policy timelines: measures to: -

1 comply with agreed targets;

2 prepare for future targets not yet agreed but probably involving not all countries and operating for limited time periods, and

3 prepare for a world of long-term emission limits agreed between all countries, possibly based on the principles of contraction and convergence."

"The centrality of carbon and the climate change issue"

3.69 A "leading" approach to climate change implies three separate policy timelines:

- measures to comply with agreed targets;
- measures to prepare for future targets not yet agreed but probably involving not all countries and operating for limited time-periods;

measures to prepare for a world of long-term emission limits agreed between all countries, possibly based on the principles of contraction and convergence. (16)

3.70 There is no clear dividing line between these phases.

Post-Kyoto targets affecting the UK could be finalised by 2005 but agreement might take longer, perhaps a lot longer, and the scale of the next targets is uncertain. Likewise, it is possible that we could be in a world of long-term universal targets by 2010.

There is even a remote possibility of moving directly to the final phase from the current position.

3.71 In the same way, it is far from clear what the scale of future targets will be. The RCEP suggested that a 60% reduction for the UK by 2050 would be needed within a contraction and convergence agreement, but the exact figure is very uncertain.

All that is certain, whether we move to a contraction and convergence world, as suggested by the RCEP, or follow the guidance produced by the IPCC about global levels of emission reductions that will be needed to avoid dangerous climate change, is that developed countries will need to make very substantial cuts from current emission levels over the century ahead.

FEBRUARY

IIED/RING

International Institute for Environment and Development (IIED) with the Regional and International Networking Group (RING)

"Even if the Kyoto Protocol is implemented in full, the impacts of global climate change will start being felt within the next few decades and the most vulnerable communities and countries are those which are already the poorest and least able to adapt to these changes.....

It is time now to refocus on the longer-term objectives of the UNFCCC, particularly its stated goals regarding sustainable development..

WSSD provides an opportunity to re-initiate the discussion on the larger architecture of the future climate regime. The goal of the post-Kyoto phase should be clearly tied to atmospheric stabilization with a defined focus on emissions limitation and a clear sense of the rules for the future entry of developing countries into the regime.

In all likelihood this will require moving to per capita emission targets and a 'contraction and convergence' policy scenario."

http://www.gci.org.uk/papers/C&CIIEDShort.pdf

http://www.gci.org.uk/papers/C&CIIEDLong.pdf

FEBRUARY

World Bank

Summary of the E-Discussion on the Environment and Poverty Linkages: Week 1 - February 1 – 7, 2002

4. Climate change, greenhouse gas emissions and environment

A binding environmental agreement that effectively and equitably reduces emissions calls for "Contraction and Convergence"

-(C&C) to be the framework in which this development should take place. The potential of C&C to use a deliberate poverty reduction strategy to arrest dangerous rates of climate change needs to be explored.

The big reinsurance companies (Swiss Re and Much Re) have kept records of estimates of the 'uninsured losses' from 'great weather disasters' over the last 50 years (such as Honduras, Mozambique, Orissa). These show rates of damages exceeding the economic growth rate by a factor of four. This is one reason why the Institutions of the UNEP Financial Initiative have come out in favour of arrangements such as C&C. It would be appropriate for the present discussion to took a look at the potential of this proposition.

Authors' Responses to the Summary of the e-Discussion on Environment and Poverty Links – Week 1

4. Climate change, GHG emission:

Thanks for drawing our attention to the approach for "Contradiction and Convergence" and providing several useful references to sites where this is further discussed. This is the kind of constructive feedback that we hope to get more of! We will pursue those as a team, and discuss how we might discuss this approach in the final version of the paper. In our final summary of the e-Dialog in July, we will come back to the details of this.

Jan Bojö

The World Bank

On behalf of the authors of the Consultation Draft.

FEBRUARY 25

American Prospect
Beyond Kyoto Lite

The Bush administration's absence from the global-warming talks could actually lead other nations to pursue a bolder approach.

At the end of the hottest October on record, delegates from 165 countries met in Marrakech last fall to finalize the Kyoto Protocol on global climate change. At first glance, the Kyoto goals seem negligible: By 2012, greenhouse gases must be cut to slightly below 1990 levels—a reduction to be realized through a loophole-ridden system of emissions trading. And thanks to the Bush administration, the 165 signatory nations do not include the United States, the superpower superpolluter that emits a quarter of the world's greenhouse gases.

But the agreement's puny goals may have masked the beginning of a seismic shift in the global balance of political power—away from the United States and toward the European Union. "The view is nonetheless widespread in Europe," Jessica Tuchman Matthews wrote recently in Foreign Policy magazine, "that the U.S. decision on Kyoto could become a turning point in trans-Atlantic relations." Some European officials actually exulted because U.S. delegates were not present. Indeed, with the United States not involved, the agreement may prefigure more aggressive solutions to global warming. The European Union has already insisted that the World Trade Organization address environmental impacts—a requirement that could dampen President Bush's ability to make use of his anticipated new trade-negotiating authority from Congress.

Time and again, the Bush administration has isolated itself by refusing to join international agreements on everything from land mines and international criminal courts to biological weapons and global climate change. Domestically, Bush reneged on a campaign promise to cap carbon emissions from power plants. His energy plan calls for construction of at least 1,300 new plants over the next 20 years. Bush's withdrawal from the six-year-old international climate negotiations, then, epitomized his views both on energy and on international agreements.

Bush's dismissal of Kyoto sparked hostile demonstrations in Madrid, Stockholm, and Geneva, and drew angry words from EU officials. Even Tony Blair, America's staunchest ally in the antiterrorism campaign, declared just weeks after September 11 that "we could defeat climate change if we chose to. We will implement [Kyoto]," he said. "But it's only a start. With imagination, we could use technologies that create energy without destroying our planet."

In the face of the U.S. withdrawal, the other nations gamely struggled to produce a consensus plan to address the climate crisis. Having already made significant concessions in a futile effort to secure U.S. participation, negotiators inserted more loopholes into the Marrakech version to overcome objections from Russia, Australia, and Japan.

Critics dubbed the resulting product "Kyoto Lite." On its face, the treaty obligates the world's 38 industrial nations (minus the United States) to reduce carbon emissions an average of 5.2 percent below 1990 levels by 2012. But given the additional loopholes—chiefly, the inflation of allowances for carbon absorbing trees—the real reductions will barely amount to 3 percent below 1990 levels, several analyses show. (The use of forests to offset global warming is dubious at best. If all the world's forests were preserved and its deforested areas reforested, all those trees would absorb only about 15 percent of the fossil-fuel emissions necessary to stabilize the climate, according to the UN-sponsored IPCC, the Intergovernmental Panel on Climate Change, which includes more than 2,000 scientists from 100 countries.) Most European nations will meet the Kyoto Lite goals through such relatively painless domestic efforts as increased energy efficiency, small carbon taxes, or internal emissions trading.

Still, the Kyoto Protocol was a real diplomatic accomplishment. Despite its loopholes, minimal goals, and lack of an enforcement mechanism, it does at last provide an international framework for diminishing the climate crisis. And with the absence of recalcitrant, foot-dragging U.S. delegates, other countries may find it easier to promote more aggressive approaches to reversing climate change.

There is, in fact, a range of cost-effective solutions that could both pacify the climate and begin to reverse the grotesque economic inequities that fuel anti-U.S. hostility in the third world. Three years ago, more than 2,500 economists, including six Nobel laureates, declared that we can cut our emissions—up to 30 percent, by some estimates—simply through efficiencies and conservation, with a net gain in jobs and productivity. A report issued in early December 2001 by the Tellus Institute, the Union of Concerned Scientists, and the American Council for an Energy-Efficient Economy, found that by 2020, the United States could meet 20 percent of its electricity needs with renewables, save consumers $440 billion, and avoid having to build 975 new power plants.

The world needs global strategies that will enable countries like India, China, Mexico, and Venezuela to replace their coal and oil-based energy economies with wind, solar, hydrogen, and biomass sources—and provide sufficient clean energy for future development. That transition would create huge numbers of jobs abroad and allow the world's poorest citizens—many of

whom feel abused and exploited by the wealthy nations—higher living standards, without the assault on the environment that characterized Western development.

> One such plan, called Contraction and Convergence, was developed by the Global Commons Institute in Britain. It addresses a fundamental inequity embedded in the Kyoto Protocol, which essentially allows high-polluting nations to keep on polluting by using their past emissions levels as a baseline. The burden of reducing global emissions would fall disproportionately on less-developed nations. Not surprisingly, those nations want a single global per capita allowance for carbon emissions so that they have room to develop.

Contraction and Convergence provides an ingenious mechanism for the world both to set a maximum carbon limit by a date certain and to achieve convergence in the nations' emissions rights, which would gradually be redistributed so that the world would achieve a uniform per capita allocation. This would put appropriate pressure on rich nations, which generate the most pollutants, to shift to nonpolluting renewables.....

Ross Gelbspan

MARCH

World Bank Report
Globalization, Growth & Poverty

"Global warming requires international collective action. There are many ways of achieving effective restraint. The Kyoto protocol approach is for rich countries to set themselves targets for emissions reductions, and the recent agreement between European nations and Japan to move ahead with the protocol is a positive step forward. Looking further down the road, it is critically important to get at least all of the G-7 involved.

The Global Commons Institute, an NGO, has come up with an innovative proposal for how to do this. The proposal entails agreeing on a target level of emissions by the year 2015 and then allocating these emissions to everyone in the world proportionally. Rich countries would get allocations well below their current level of emissions, while poor countries would get allocations well above. There would then be a market for emission permits.

Poor countries could earn income selling some of their permits; rich and poor countries alike would have strong incentives to put energy-saving policies into place; and private industry would have strong incentives to invent new, cleaner technologies.

> One of the hopeful things about globalization is how an innovative idea like this can quickly gain currency and support."

Koos Richelle
Director, EC Development

EUROPEAN COMMISSION
DG DEVELOPMENT

The Director-General

Brussels, 08 -03- 2002
B4*2(02) D/942

Mrs Audrey Meyer
Global Commons Institute (GCI)
37 Ravenswood Road
London E17 9LY
United Kingdom

Subject: Linking Poverty Reduction and Environmental Management

Dear Mrs. Meyer,

I would like to thank you for your interest in the discussion document on "Linking Poverty Reduction and Environmental Management", and I find it heartening that this document receives such positive response.

Furthermore, I fully agree that our tasks will become easier as the political and financial community become advocates of "Contraction and Convergence". In this respect, however, I believe that we have still a long road ahead of us.

Yours sincerely,

p.p. Koos RICHELLE

Commission européenne, B-1049 Bruxelles / Europese Commissie, B-1049 Brussel - Belgium. Telephone: (32-2)299 11 11.
Office: G-12 8/94. Telephone: direct line (32-2)296.65.56. Fax: (32-2)299.29.08.

MARCH 19

Jan Bojo
World Bank

The World Bank
INTERNATIONAL BANK FOR RECONSTRUCTION AND DEVELOPMENT
INTERNATIONAL DEVELOPMENT ASSOCIATION

1318 H street N.W.
Washington, D.C 20433
U.S.A.

(202)477-1234
Cable Address: BAFRAD
Cable Address: INDEVAS

March 19, 2002

Aubrey Meyer
Global Commons Institute
37 Ravenswood Road
London E 17 9LY
United Kingdom

Dear Aubrey Meyer:

Your letter to Mr. lan Johnson of February 5, 2002 on "Contraction and Convergence"

Thank you for your letter and the enclosed documents making your case for Contraction and Convergence. I have been asked to respond on Mr. Johnson's behalf, as one of the co-authors of the report on "Linking Poverty Reduction and Environmental Management."

Your agreement with the report's main statements on climate change, poverty impact, and the need for an international agreement on greenhouse gas emissions, is noted.

As the Consultation Draft version of our paper will be revised, I will discuss with my co-authors how we might introduce the notion of C&C in this context. However, many reviewers have encouraged us to maintain a brief, accessible style, and not expand further into a number of tempting subjects that have been suggested. I would therefore expect that any extensions on this subject in the final version of the paper would be rather limited in scope.

A better opportunity for your C&C approach to be fully discussed might open itself shortly. There is interest within the World Bank, DFID, EC, and UNDP, to pursue a separate, joint paper specifically on Climate Change. The Bank's contact person for this discussion is Mr. Ajay Mathur, Sr. Environmental Specialist (amathur@worldbank.org). I will share your communication with him.

Thanks again for your endorsement of the key climate change messages in "Linking Poverty Reduction and Environmental Management" and for sharing a selection of supporting documents with us.

Sincerely,
Jan Bojo

Lead Environmental Economist
Environment Department

Cc: lan Johnson, Ajay Mathur

RCA 248423. WUI 64145 £3 FAX (202) 477-6391

MARCH/APRIL

Green Futures
Energy.....Environment

If we want to create a more secure and sustainable world, we need some pretty fundamental rethinking of traditional policy divisions. So is it happening?

Caspar Henderson scans Whitehall for signs of some strategic joinery, and comes out sceptical. But, over the page, Foreign Office Minister is more optimistic . . . .

Energy - where we get it and how much pollution it causes - lies at a crossroads of many concerns about security and the environment. Wars are fought over oil, and climate change threatens the security of millions. How, then, to deliver durable and affordable supplies of energy to British industry and consumers, while reducing the risks of conflict over resources and the impacts of climate change?

This is a bigger challenge than, say, making the trains run on time or organising a system to recycle refrigerators. Some call it the ultimate test of joined-up government, requiring reform in everything from transport to toasters. Making links between energy solutions and security strategy has been a popular pastime since at least the late 1980s. In the green hats, environmentalists call for a new 'Manhattan Project' (bringing the same scale of commitment and urgency to building a renewable economy as was applied to making the atomic bomb in the early 1940s). In the tin hats, military analysts point to the dangers of relying on energy supplies from far flung sources, and acknowledge in forward strategy documents that climate change may lead to serious destabilisation of nations and whole regions.

So who's pulling these together into a coherent policy framework?

Britain, with roughly 1% of the world's population, consuming 2% of its energy and producing 3% of GDP, is a small to middle-sized player, which nevertheless likes to see itself at the forefront of finding solutions. We have a climate strategy intended to deliver a 20% cut in greenhouse gas emissions on 1990 levels by 2010 - one of the most ambitious targets of any industrialised country. We have a cautious, yet solid and growing commitment to renewables. The Foreign Office has a team dedicated to finding solutions to energy challenges with both an environment and a security aspect. Looks like a pretty coherent agenda. So are we on target for a more peaceful, renewable world? After 11 September, almost nobody thinks that. Speaking to military analysts a few weeks after the event, Peter Hain painted a telling image: "A significant proportion of the funding for the Taliban came from consumer choices made in our midst, the sale of heroin in our backyard funded

Bin Laden." But there is another consumer choice made by millions every day that links us even more strongly than drugs to the Middle East and Central Asia: the oil habit. For all our carping about American gas-guzzlers, Europeans are actually more dependent on this supply than the New World. Britain has its own, rapidly dwindling stash, and is teetering on the edge of becoming a hungry importer. In the two months after 11 September, British purchases of large, fuel-hungry vehicles grew by a massive 15% - a growth rate exceeded only in the US itself. Oil, and to a lesser extent gas, is at the heart of the matter, because the hyper mobile economies of the West are ineluctably dependent on these fuels, and are set to remain so. Even the most optimistic forecasts for technological innovation don't see a phase out of oil within 30 years. And the serious money in capital investment - from Airbus's new generation of super-planes designed to cater to the anticipated annual 5% growth in demand for long haul flights, to the next generation of motor cars (including those that will run on fuel cells) - is predicated on a virtually endless supply of affordable petroleum.

What to do? Price rises may be an option, but they're hardly seen as politically feasible. In Britain, the government notoriously ran for cover when one of its most progressive environmental taxes, fuel price escalator, started to hurt. Even in Germany, with its comparatively excellent public transport alternatives, environmentalists got clobbered at the polls when they tried to raise fuel prices to a degree that would affect demand.

In the light of this, some suggest that only a price rise somehow imposed from outside could do the trick. Islamic fundamentalist activists in the Gulf have of course been touting this for years. Osama Bin Laden, no less, proposed $144 as a fair price - at which rate the hydrogen economy so beloved of environmentalists would become the cheap, and much more cheerful, alternative. Such a scenario is, of course, unlikely - to say the least. Even if the Saudi oil fields fell under the control of a fundamentalist regime, OPEC is notoriously fickle, and the global market would doubtless deliver a price well within the realms of affordability, whoever held the reins in Riyadh. There is also the small matter of a hefty western military presence in the region.

Britain's self-appointed role as leading peacekeeper in Afghanistan may indeed be a noble thing. But it is not the whole story: companies such as BP have major interests in this area and the French have not positioned a nuclear-powered battle group in the Arabian Sea for humanitarian purposes. Whatever our differences with the US over, say, the Kyoto Protocol, or the wisdom of gung-ho interventionism, British defence policy still looks to be fused at the hip to that of America.

OK, you might say, the situation is far from ideal, but we have to start from where we are. The answer is clear strategic goals for the longer term, and incremental steps in the meanwhile.

The government's review of energy supply, which aims to set a framework for the next 50 years, looks like a good place to start. This recommends 20% of electricity should come from renewables by 2020 - a less ambitious target than most of the EU, but a big change for Britain. Absent from the review, however, is transport - the fastest growing source of greenhouse gas emissions. National programmes to increase fuel efficiency in the vehicle fleet will at best marginally reduce the race of growth in the consumption of fuel that will increasingly be imported from further away. The 10-year transport plan is predicted to knock one minute off journey times, but will not reduce petrol consumption. The energy review also skates around some knotty concerns to do with nuclear power. The House of Commons Defence Committee hears that a terrorist attack on Sellafield could take out a large part of northern England. The government tells us that the, er . . . . Territorial Army will help prevent such an eventuality, keeps fighters on standby at northern airfields to shoot down any rogue airliners - and clears the decks for a large programme of nuclear new build.

Meanwhile, the Ministry of Defence gives a good impression of a left hand not knowing what the right is up to. Its performance in countryside management on its ranges wins plaudits from wildlife groups; its willingness to engage in peacekeeping and conflict prevention is a welcome contrast to some of the more bellicose rhetoric from its Ministers. But where is the link for example, the visionary concern expressed in its strategy documents about insecurity and climate change, and its opposition to the construction of offshore wind farms?

Nor is our record overseas anything to shout about. Since the Rio Summit in 1992, the Export Credit Guarantee Department has supported £15 billion or more in fossil fuel and nuclear projects in developing countries, effectively accounting for additional greenhouse gas emissions around one third the size of the UK's own. Over the same period, it has supported virtually no renewable energy schemes. Only in the last year has the ECGD, together with other leading export credit agencies, begun to take steps to monitor emissions from the projects it supports. The Department for International Development is estimated to spend less than 0.7% of its assistance on renewables. But there are 2 billion people living off grid whose lives could be greatly improved by the deployment of technologies such as solar panels to schools and hospitals. So the recent signs of a priority shift in Foreign Office policy in this direction is both welcome, and overdue.

Indeed, it is perhaps ironic that some of the most promising signs of joined-up thinking in government come from the diplomatic, rather than domestic, quarters of Whitehall.

But if government efforts to turn round the super tanker are only beginning, could investors, chastened by deteriorating security and hardened by market discipline, stimulate more rapid change? Tough commercial interests have fostered fast growth in renewables. Generation from wind power, the premier renewable, jumped a stunning 58% worldwide last year. So has the changed atmosphere of the last six months made any difference?

"No," says James Stetler, head of renewables at Dresdner Kleinwort Wasserstiens London office. "September 11th and security issues more generally have had no discernible effect." Such matters are beyond the horizon of most investors, he thinks. And in any case, for all their fast growth rate, almost no one believes renewables are near to a scale where they could make a meaningful difference to the energy demands of industrialised economies as a whole. (Stetler suggests wind power growth will slip to a 'mere' 17% this year.)

So what would help?

"A production tax credit for renewables - especially in the US, the market with far the biggest potential," says Stetler, placing the ball firmly back in a government court.

Nick Robins, head of research at the Socially Responsible Investment team at Henderson Global Investors, points to other problems. "Most fund management operates on a very short term view, which simply does not take account of this sort of thing. Tracking and index funds make it hard to pick out renewable energy even if you want to, and there are very few "pure plays' in renewables that are not tied up in energy companies with other operations".

Add to that "the performance of renewable energy stocks over the last year has been abysmal - worse even than other speciality stocks like high technology. It's been a sobering year." Like Stetler, Robins says a clear lead from government is crucial.

"Ultimately, it is only government that can change market conditions - integrating long-term security questions into the City's time horizons. The challenge for socially responsible investors is to move beyond micro-questions of which is the best renewable stock, and get our voice heard there."

And there are indeed rumblings that some major investors are beginning to speak with a coherent voice to government.

Signs, for example, that some big insurers and pension funds may endorse ideas as radical as 'contraction and convergence' - the quiet revolutionary in the ranks of climate change strategies, which requires equal greenhouse gas emissions for all, and big cuts for the rich countries.

Meanwhile, notions of rapid and radical change look set to remain peripheral to the 'real' economy and the awareness of most voters, many of whom will be climbing on those extra long haul flights. While some hope that a rising wave of popular awareness, coupled with technical advances in areas such as renewables and energy efficiency, might indeed be enough to affect a smooth about turn of this rogue super tanker, others are not so sanguine.

In the words of Paul Hirst, author of War and Power in the 21st Century, a dispassionate, and rather scary view of the future,

"it will take something that frightens the pants off people" to change things.

Caspar Henderson is senior correspondent for GREEN FUTURES

APRIL 18

Christian Ecology Link
Contraction and Convergence

Contraction and Convergence provides a framework within which the world's emissions can be reduced safely and fairly. It proposes that countries agree a safe global greenhouse gas emissions budget and agree a date by which all countries will have the same emissions rights per capita. Countries unable to reduce their emissions by this date would be able to buy the unused rights of other countries, giving less developed countries the income to fund development in zero-emission ways.

The idea is well accepted as the best way forward by the experts. According to the Royal Commission on Environmental Pollution "The government should press for a future global climate agreement based on the Contraction and Convergence approach, combined with international trading in emission permits. Together, these offer the best long-term prospect of securing equity, economy and international consensus." The recent Third Assessment Report of the IPCC (Intergovernmental Panel on Climate Change) observes "...the formulation that carries the rights-based approach to its logical conclusion is that of Contraction and Convergence."

FEASTA
Global Monetary Reform

4. The supply of the new currency should be limited in a way which ensures that the overall volume of world trade is compatible with the most crucial area of global sustainability.

To deliver the maximum level of human welfare, every economic system should try to work out which scarce resource places the tightest constraint on its development and expansion. It should then adjust its systems and technologies so that they work within the limits imposed by that constraint. In line with this,

> -an international currency should be linked to the availability of the scarcest global resource so that, since people always try to minimise their use of money, they automatically minimise their use of that scarce resource.

What global resource do we most need to use much less of at present? Labour and capital can be immediately ruled out. There is unemployment in most countries and, in comparison with a century ago, the physical capital stock is huge and under-utilised. By contrast, the natural environment is grossly overused especially as a sink for human pollutants. For example, the Intergovernmental Panel on Climate Change (IPCC) believes that 60-80% cuts in emissions of one category of pollutants - greenhouse gases, which come largely from the burning of fossil fuels - are urgently needed to lessen the risk of humanity being exposed to the catastrophic consequences of a runaway global warming. Feasta believes that this is the most serious resource threat facing humankind at present, and that, consequently, the basis of the new world currency should be selected accordingly.

> Contraction and Convergence (C&C), a plan for reducing greenhouse gas emissions developed by the Global Commons Institute in London, provides a way of linking a global currency with the limited capacity of the planet to absorb or break down greenhouse gas emissions.

Under the C&C approach which has gained the support of a majority of the nations of the world, the international community agrees how much the level of the main greenhouse gas, carbon dioxide (CO2), in the atmosphere can be allowed to rise. There is considerable uncertainty over this. The EU considers a doubling from pre-industrial levels to around 550 parts per million (ppm) might be safe while Bert Bolin, the former chairman of the IPCC, has suggested that 450 ppm should be considered the absolute upper limit. Even the present level of roughly 360ppm may prove too high though, because of the time lag between a rise in concentration and the climate changes it brings about. Indeed, in view of the lag, it is worrying that so many harmful effects of warming such as melting icecaps, dryer summers, rougher seas and more frequent storms have already appeared.

www.earthsummit-ireland.org/feastaproposals.htm

APRIL 24

DTQs

"There are a number of reasons for believing that Domestic Tradable Quotas (DTQs) could play an important role in combating climate change.

DTQs - with their annual reduction in the carbon budget and equal per capita emissions entitlements - are in keeping with the principles of contraction and convergence recently endorsed by the Royal Commission on Environmental Pollution."

www.dtqs.org/summary.htm

APRIL 24

EC Letter

"Thank you for your letter of 5th February and appended information on the contraction and convergence approach, which I studied with interest.

The negotiations on the next commitment period will have to start by 2005 and to finish by the end of 2007, In these negotiations, all options to limit and reduce emissions in a fair and equitable way will be discussed. Contraction and convergence is one of the interesting alternatives in this regard."

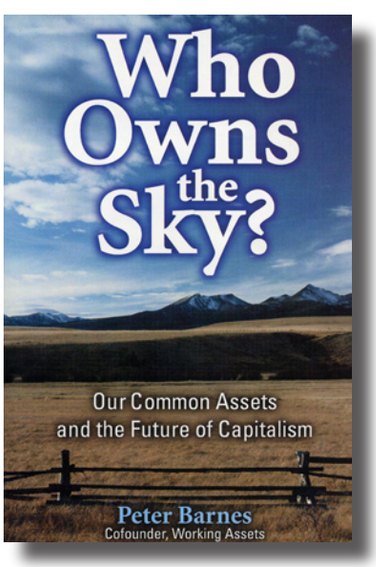
Jean-Francois Verstrynge

Acting Director-General, DG Environment,

European Commission

www.gci.org.uk/correspondence/Verstrynge1.pdf

APRIL



Peter Barnes
Who Owns the Sky?

Publisher: Island Press. **ISBN:** 1-55963-855-9

On the question of global equity, which I have avoided in this book, the reader may want to explore the Web site of the London-based Global Commons Institute. GCI is promoting the concept of "contract and converge" as a way to resolve the dispute between rich and poor countries about how to share the global atmosphere. Under "contract and converge, the per capita emissions of the rich and poor would converge to equality over' say fifty years. During this time, total global emissions would contract. But because poor countries per capita emissions are far below the rich countries' (the average American emits six times as much carbon dioxide as the average Chinese person), the poor countries' emissions would actually rise at first. Though considered a radical idea just a few years ago, "contract and converge" is slowly gaining acceptance.

MAY

Heinrich Boell Foundation
Report for WSSD

The Heinrich Boell Foundation published a detailed report on the issues for the World Summit on Sustainable Development (WSSD) taking a clear position in favour of C&C beyond Kyoto.

> "The vision of "contraction and convergence" combines ecology and equity most elegantly;

-it starts with the insight that the global environmental space is finite and attempts to fairly share its permissible use among all world citizens taking into account the future generations as well."

(Contraction &Convergence – The Global Solution to Climate Change, Meyer 2000)

www.worldsummit2002.org/publications/memo-mF.pdf

MAY 23

Richard Douthwaite
Fossil Energy/World Monetary System

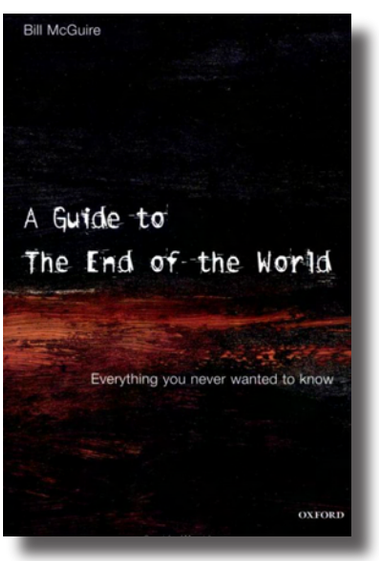
Presented at the International Workshop on Oil Depletion

"Contraction and Convergence (C&C), a plan for reducing greenhouse gas emissions developed by the Global Commons Institute in London which has gained the support of a majority of the nations of the world, provides a way of linking a global currency with the limited capacity of the planet to absorb or break down greenhouse gas emissions."

www.gci.org.uk/papers/EBCUS.pdf

MAY

Bill McGuire
A Guide To The End Of The World



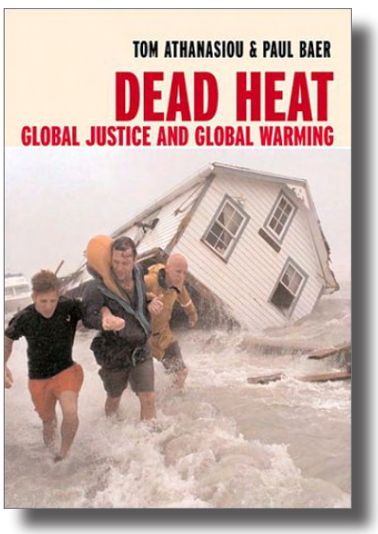
Publisher: Oxford University Press ISBN: 0192802976

[Page 62]

Despite the gloom after the collapse of the Kyoto Protocol, there is an alternative plan to reduce greenhouse gas emissions on the table that might just start things moving on the long road to stabilization and even reduction. Called "Contraction and Convergence" or simply C&C, the new way forward was thought up by London's Global Commons Institute. This ingenious plan is based upon two principles. First, that greenhouse gas emissions must be reduced and second, that the means by which this is accomplished must be fair to all. C&C therefore proposes reducing emissions on a per capita basis. International agreement will

determine by how much emissions must contract each year, and then permits to emit will be allocated to all countries on the basis of their populations. The emission permits would be tradable so that countries such as the USA and Australia that could not manage within their allocations could buy extra ones from populous developing countries with a surplus. This remarkably simple scheme has not yet entered the limelight, but it does have many powerful supporters in the UN, Europe, and China, and even amongst developing countries and US senators.

It is now inevitable that we and our descendants are going to face a long and hard struggle as our temperate world draws to a close and we enter the time of hothouse Earth. Perhaps, however, C&C can help to make the transition a little less desperate.



Athanasiou & Baer
Dead Heat

Publisher: Seven Stories Press, **ISBN:** 1583224777

"Contraction & Convergence"

The idea here is not ours. The merits and demerits of a climate treaty based on tradable per capita emissions allocations have been discussed in academic, activist, and policy circles for more than a decade, though it was Global Warming in an Unequal World, published in 1991 by the late Anil Argawal and Sunita Narain of New Delhi's Centre for Science and Environment (CSE), that put the core idea- equal per capita rights to the atmospheric commons—into political motion.2

The best-known articulation of the idea is "contraction and convergence," which Aubrey Meyer, director of London's Global Commons Institute, has been tirelessly promoting for many years.3 The term "contraction" refers to a reduction of global emissions from today's unsustainable levels to future "safe" levels, while "convergence" implies that at the same time, developing country emissions allocations would be allowed to increase in the interests of development, while rich-world allocations would drop. The result of these transitions would be a global convergence to equal, and low, per capita allotments.

The contraction-and-convergence framework assumes that convergence takes place over some transition period (by, say, 2030) and that allocations are tradable, so that per capita emissions themselves may or may not actually converge.

This is a key point, so note that it's not some sort of rich-world trick, and that, for example, India's Centre for Science and Environment takes the same position. The goal is convergence of emissions rights, and decarbonization of energy systems, not convergence of emissions themselves.

Beyond particular schemes, key Southern voices have long insisted on rights-based (per capita) allocations. Examples are many, but the declaration of the 1998 meeting of the Non-aligned Movement can perhaps stand for them all:

> Emissions trading for implementation of (CHG reduction/limitation) commitments can only commence after issues relating to the principles, modalities etc., of such trading, including the initial allocations of emissions entitlements on an equitable basis to all countries, has been agreed upon by the Parties to the Framework Convention on Climate Change.

Also, it's worth noting that Dr. R. K. Pachauri, the new chairman of the IPCC, is the director of the Indian group TERI, which called, in early 2002, for climate action

> through comprehensive international participation and agreement on the final level at which to stabilize the concentrations of GHGs and on medium-term targets for reducing emissions. Carbon trading

arrangements based on an equitable per capita allocation also need to be adopted.

The idea, in other words, is pervasive, though not, so far, within the climate negotiations themselves. An increasing number of organizations and politicos, including a bloc of European environment ministers, a variety of international environmental nongovernmental organizations (NGOs) as well as traditional NGOs such as the Red Cross and Christian Aid, Britain's influential Royal Commission on Environmental Pollution, the former co-chair of the IPCC's Working Group One, and a rich variety of Southern politicians, have explicitly endorsed it, and many others have adopted the per capita framework, though not the term "contraction and convergence." Further, both India and China have repeatedly signalled (or so we've heard, for these things are rarely written down) that when the time comes for them to accept emissions targets, nothing but per capita allocations will even be considered. The terms by which allocations are defined must, as a Chinese delegate to the climate negotiations once insisted, be "rational."

We agree. For, from the point of view of both basic ethics and enlightenment philosophy, the case for equal per capita rights is an obvious one. Yet, at the same time, human rights are under siege around the world, and this proposal implies a radical expansion of such rights, one that actually expands

them into the new territory of economic rights to global environmental resources. Why, then, do we imagine that the idea will find political traction in the "real world"?

The easy answer is that, as the references to India and China imply, nothing else will yield a global climate accord.

A historic choice will be made during the next decade, as the next phase of the climate treaty is thrashed out, and appeals to "realism" and incremental decision making do nothing to alter this rather brute fact. Explosive as the per capita issue is, we do not believe that it can be finessed.

JUNE 1

Rodney R. White
University of Toronto

Today I am going to take the position that an essential part of a successful implementation phase for the (Kyoto) Protocol is a progressive reduction in emissions, moving towards equal per capita emissions rights throughout the world.

This position is sometimes called 'contraction and convergence'. It may seem like the other end of the traditional ideological spectrum compared with a position that espouses emissions trading.

Contraction and convergence is based on equity – in the justice sense. It may seem absurdly optimistic. However, I think it has to be part of the plan, so that we can all share a common sense of direction."

www.gci.org.uk/papers/SilvLining.pdf

JUNE 6

Climate Change Knowledge Network
A Quickly Changing Tune

"The mixed response to the Bush administration's move partly reflects the perception that tackling climate change will create winners as well as losers. Some companies would benefit from curbs on carbon dioxide emissions. Others might not benefit but would prefer governments to face the issue rather than be left in a state of uncertainty about when and how it will be tackled. Continuing support for limits on carbon emissions comes largely from companies that make energy-efficient products and sophisticated controls. A more surprising source of support comes from certain car companies, despite the industry having to cope with more stringent regulations. The explanation, according to an article in Harvard Business Review in July, was that companies such as General Motors and Ford Motor "see climate change as an opportunity to gain advantage over their less technologically sophisticated rivals." Some go so far as to claim that Bush's stance could damage the US economy because it would give its competitors a head start in developing and using climate-friendly technologies. They draw an analogy with the oil price shock of the 1970s, which spurred the Japanese car industry into producing highly efficient cars that won new markets.

At the other end of the spectrum, some companies are now lobbying for surprisingly radical solutions to the problem of climate change.

> The Chartered Insurance Institute, a professional body for the UK insurance industry, recently called on governments to replace the Kyoto protocol, which calls for a 5 per cent cut in emissions by 2010, with a proposal known as "contraction and convergence",

-a longer-term plan to reduce global emissions by 60 per cent. The Respect Group, a Europe-wide business network based in Stockholm, is putting another business initiative forward. It says it is "critical" that the EU introduce policies that make the use of fossil fuel more expensive. Most businesses will take the opposite tack. Lobbying efforts will center on avoiding extra taxation and promoting flexible, cost-effective ways of reducing emissions."

www.cckn.net/compendium/business_background.asp

JUNE 8

Uranium Institute
Climate Change Policy & Nuclear Power

Jonathan Cobb at 25th Annual Sumposium 2000

"In order for atmospheric greenhouse gas concentrations to be stabilised at a sustainable level it will be necessary to reduce missions by around 60% from the 1990 level. Advocates of a policy of "convergence and contraction", where developed and developing countries are to be allowed similar levels of emissions on a per capita basis, state that developed countries may have to reduce emissions by 80%."

www.world-nuclear.org/sym/2000/cobb.htm

JUNE 8

Tyndall Centre UK
Saving or Sinking the Kyoto Protocol?

Suraje Dessai

4. The Bonn Agreement

> "The other 'crunch issue' the Bonn Agreement tackles are the Kyoto mechanisms. Surprisingly, the text's language referring that emissions should be reduced "in a manner conducive to narrowing percapita differences between developed and developing countries" paves the way for a contraction and convergence framework (Meyer, 2001)."

www.tyndall.ac.uk/publications/working_papers/wp12.pdf

JUNE 8

Tyndall Centre UK
Integrated Assessment

Simon Shackley and Clair Gough

Box 1 - The Dilemma of Complexity

" . . . . by contrast, the 'Contraction and Convergence' idea developed by the Global Commons Institute has been rather widely adopted (Meyer 2000).

It connects well with the more explicitly political formulation of the climate change issue in equity terms of the North-South divide, and allows for national differences to be acknowledged in the short to medium term.

Its lack of integration (e.g. through not including analysis of the economic costs of mitigation) may be an advantage in its acceptability to policymakers.

Interestingly, the contraction and convergence concept has engendered significant political support as well as attracting support from assessment organisations (e.g. the influential Royal Commission on Environmental Pollution in the UK (2000)) without recourse to a complex numerical model.

www.tyndall.ac.uk/publications/working_papers/wp14.pdf

JUNE 13

Le Monde Diplomatique
C&C The Global Framework Solution

" . . . . Asymmetric conditions in the economy make 'carbon' cheap and renewables expensive. They also decrease sustainability and increase poverty.

However, imagine a future where climate change has been avoided and humanity's longterm prospects are more secure than now. Looking back from there we see that by definition greenhouse gas emissions have contracted to a safe level and that within this contraction, the per capita emissions levels of different countries have converged.

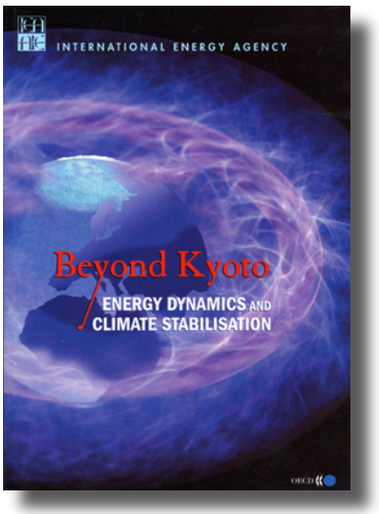
The fact is this "Contraction and Convergence" process is intrinsic to any emissions scenario that stabilises the rising concentrations of greenhouse gases in the atmosphere.

So the real questions are only, does this come about by chance and guesswork or by building it formally into an international framework. This largely determines the second question; - at what rate will C&C occur?"

www.amisuk.f9.co.uk/ourarticles/Apr02art4.html

2002

IEA
Beyond Kyoto



Publisher: OECD/IEA ISBN: 9264198385

Contraction and Convergence (CO2 emissions in GtC)

Source: Global Commons Institute, 2000.

Contraction and convergence

Given the obvious shortcomings of an immediate "equal per capita" allocation of emission rights that would be compatible with scenarios leading to stabilising GHG concentrations at low levels, their proponents usually see it as a longer-term objective (see, e.g., Agarwal & Narain, 1998; Meyer, 2000).

Allocation for near-term targets would thus be an interpolation between current emission levels and a longer-term equal per capita allocation (see Figure 11). Others recognise that per capita allocation does not fully account for differing national circumstances, and suggest that a better solution to the allocation problem would be to mix per capita and other criteria (see, e.g., Aslam, 2002). This view is partly reflected in the Marrakech Accords (Decision 15/CP7) that states that Annex I Parties shall implement domestic action " with a view to reducing emissions in a manner conducive to narrowing per capita differences between developed and developing country Parties while working towards achievement of the ultimate objective of the Convention". If this is the case for domestic action, it may, a fortiori, also be the case for emission allocations. Berk and den Elzen (2001) suggest distributing emission allowances with a global C02 emission profile for stabilising CO2 concentration at 450 ppm, with a linear convergence in per capita emission rights either in 2030 or in 2050. In the case of convergence as early as 2030, allocations for countries like China and India remain constantly above baseline needs, while for industrialised countries reductions by 2030 would be in the range of minus 60 per cent (Western Europe) to minus 75 per cent (North America). In comparison with the "multi-stage" approach (see above), Berk and den Elzen find that the "convergence regime offers the best opportunities for exploring cost-reduction options as all parties can fully participate in global emission trading. There may be excess emission allowances (hot air), but this will not affect the effectiveness nor the efficiency of the regime, only the distribution of costs. Second, there will be no so-called carbon leakage" However, it should be noted that these advantages are those of any scheme allowing immediate global participation in emissions trading - and not necessarily those of the suggested distribution. This "contraction and convergence" proposal has some of the shortcomings of an equal per capita allocation — although to a lesser extent - notably creating hot air that

should be bought back by industrialised countries. Such an approach might be superior to the "multi-stage" approach in delivering the desired concentration level, as it requires that actual emission reductions begin in developing countries before they reach a given threshold. However, as with all longer-term commitments, there is a problem in ensuring that future governments in these countries will feel bound by such agreements after they cease to deliver surplus allowances but instead become constraints. In actual practice, this discussion may be entirely moot: developing countries are currently refusing to take on fixed and binding commitments, and no proposal for short-term generous allocation seems to have much likelihood of being accepted. The fear (with this as with other proposals for current commitments, no matter how weak) is of a progressive "ratcheting" process leading at some future point in time to real constraints on their economic development - and even worse, that such constraints would begin to take effect long before they reach current industrialised countries' levels.

JUNE

Wilton Park Conference
Climate Change: What Can Be Done?

Roger Williamson

Report based on Wilton Park Conference WP663 13-17 May 2002:

Contraction and convergence

One candidate for the comprehensive framework and overarching vision for climate change policy is "Contraction and Convergence", advocated by the Global Commons Institute.1 If this approach were to be adopted, it would require considerably more far reaching commitments than those developed within the Kyoto framework.2 The key elements of contraction and convergence are outlined as follows by the initiator of the proposal, Aubrey Meyer:

'essentially, it has three steps: (1) an international agreement is reached on how much further the level of carbon dioxide (CO2) in the atmosphere can be allowed to rise before the changes in climate it produces become totally unacceptable. Fixing this target level is very difficult, particularly as concentrations are too high already. (2) Once the ultimate overall limits to CO2 concentrations has been agreed, it is a simple matter to use an estimate of the proportion of the gas released which is retained in the atmosphere to work out how quickly we need to cut back on the current global emissions in order to reach the target. This cutting back is the Contraction part of Contraction and Convergence. (3) Once we know by what percentage the

world has to cut back its CO2 emissions each year to hit the concentration target, we have to decide how to allocate the fossil fuel consumption that those emissions represent.

The contraction and convergence approach says that the right to emit carbon dioxide is a human right there should be allocated on an equal basis to all of humankind. This might appeal to a majority of the countries of the world, but the over-consuming countries would have to be allowed an adjustment period in which to bring their emissions down before the Convergence on the universal level.3

In more detail, the essential proposition of contraction and convergence has four elements.

'After the initial agreement by countries for a reviewable global greenhouse gas emissions 'contraction budget' targeted at a precautionary, stable value for atmospheric greenhouse gas concentrations, the internationally tradable shares of this Budget are then agreed on the basis of convergence from the current situation; the shares should be broadly proportional to income. The convergence should be towards a target date in the budget timeline after which they remain proportional to an agreed base year of global population. Revenues from this trade can be directed to the deployment of zero emissions technology.

Contraction: on the basis of precaution, all governments collectively agree to be bound by such an atmospheric target. This makes it possible to calculate the diminishing amount of greenhouse gases that the world can release for each year in the coming century. Subject to annual review, this event is the contraction part of the process.

Convergence: On the basis of equity, convergence means that each year's ration of this global emissions budget is shared out so that every country progressively converges on the same allocation per inhabitant by an agreed date, for example by 2030. It recognises the need for access rights to the Global Commons of the atmosphere with the fundamental principle of globally equal rights for per capita, to be achieved by smooth transition.

Emissions permit trading: Countries unable to manage within their shares would, subject to agreed rules, be able to buy the unused parts of the allocations are other countries. Sales of unused allocations would give the less developed countries the income to fund development in zero-emission ways. Industries in the developed countries would benefit from the export markets this restructuring would create.

Sustainable growth: Contraction and Convergence does not place a straitjacket on growth per se by its limitation on fossil fuels. Instead it averts catastrophic losses by promoting the development and growth of zero carbon energy technologies necessary for prosperity and sustainable development.4

The strength of this model, to quote the IPCC Third Assessment (2000), is that it represents '... the logical conclusion of a rights based approach'.

Most of the objections which can be made questioning the practicality of the model are, simultaneously, objections to any scheme radical enough to achieve a long-term stabilisation of greenhouse gas concentrations in the atmosphere.

Taking standardised per capita emissions as the basis for calculation fulfils the equity criterion, but raises concerns that populous countries, in particular China and India, will increase their emissions at the same time as developed (OECD) countries have radically to decrease theirs. Proponents of the contraction and convergence thesis contrast it with the current approach of 'expansion and divergence' which is increasingly recognised as unsustainable. The fundamental dilemma of long-term climate change negotiations is that developed countries, and the main emitters among the industrialising nations of the South (particularly those with large populations including China, India and Brazil) are likely to resist signing up to targets which are sufficiently far-reaching to stabilise greenhouse gas concentrations at a sustainable level but, if these countries do not accept radical proposals for reductions to their emissions, the cumulative effects of global warming will continue. The impacts on all countries, but most obviously among developing countries (whose societies are more vulnerable) will be increasingly severe.

Much of the US opposition to the Kyoto Protocol approach has been focused around the argument that it is unfair for industrialised countries to have to cut their emissions while industrialising countries are under no such restriction. The Byrd-Hagel Resolution, passed 95-0 in the US Senate in 1997, expresses this concern , but in the framework of seeking a solution to global warming by determining which countries should limit and which should cut their emissions. The approach is consistent with Contraction and Convergence.

JULY

UNPO
Indigenous Peoples & Climate Change

"18. Balance narrow econometric and technical approaches in the climate negotiations by applying the principles of contraction and convergence, full and effective participation of indigenous peoples and civil society and complementary scientific and indigenous knowledge."

JULY

DFID
Select Committee Report

Setting (greenhouse gas) emissions targets fairly - "82. Both atmospheric stabilisation of greenhouse gases and the entry of developing countries into the climate regime are likely to require a move to per capita emission targets. [243] David Crichton and the Corner House both suggested DFID should consider the 'contraction and convergence' model set out by the Global Commons Institute. [244] Contraction and convergence is based on per capita emissions and offers an opportunity to address issues of equity. With emissions shared on a per capita basis, developed and developing countries could trade surplus emissions rights.

> [245] Advocates of contraction and convergence point to its inherent equity and its ability to bring together developed and developing countries in a single framework.

However, contraction and convergence recognises that emissions from developing countries will grow and does *not* hold back their development in order to rectify damage caused by developed countries." [246]

JULY 2

World Nuclear Association
Directors Speech

> " . . . . . A serious climate regime – if one is to evolve – must go far beyond Kyoto, by encompassing all nations and by employing some variation of the concept known as "contraction and convergence":

Contraction means that over the century ahead we must plot a path that will reduce overall global emissions by at least 50% – even as populations and economies expand.

Convergence means that, in this process, we must accept the principle that every person on Earth is entitled to an equal per-capita level of emissions.

Stated in this stark manner, the goal of 50% contraction seems draconian, while the principle of equal entitlement to emissions seems utopian. In fact, both concepts are eminently practical.

As to contraction, nothing short of a 50% emissions reduction offers any hope of averting catastrophic climate change. This cutback – entailing a 75% reduction in today's advanced economies – accomplishes no more than stabilizing global greenhouse gases at a level over twice that which existed just two centuries ago.

As to convergence, nothing other than the principle of equal entitlement offers a basis for the global consensus on which an effective climate regime must depend.

Equal entitlement does not mean equal emissions; it is, rather, the basis for an allocation of rights on which a fair and rational emissions trading system can be built.

A system based on this principle – and, I venture to say, only a system based on this principle – can be designed to produce the sense of equity, the predictability, and the sound economic incentives needed for smooth transition into a clean-energy future.

These incentives can work constructively in developed and developing countries alike.

In this schema, the sense of equity and predictability are created at the very outset of the regime. A nation's population size at an agreed point would be the basis for establishing its long-term emissions ceiling, toward which it would be committed to move on a steady path.

To facilitate a smooth and economically rational transition toward that goal, emissions trading would enable countries and companies to chart their own best path – selling permits where possible, buying them when necessary.

The rate of convergence to a common level would be designed to ensure that, during the long transition, already-industrialized nations as a whole would find it advantageous to purchase emissions permits from countries less developed.

This capital flow could serve the common interest in sustainable development by financing clean-energy infrastructure in the developing world.

Building this regime is not beyond human wit. Indeed, its simplicity and feasibility stand in favourable contrast to the chaos, social dislocation, vast expense and human misery that unrestrained climate change could bring – and from which no nation would be immune."

www.world-nuclear.org/speeches/bnes2002.htm

Nicci Collins
DEFRA

DEFRA
Department for
Environment,
Food & Rural Affairs

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Mr A Meyer
Director
Global Commons Institute (GCI)
37 Ravenswood Road
London
E17 9LY

18 July 2002

Dear Aubrey Meyer

Thank you for your letter dated 5th July enclosing the material on "Contraction and Convergence" (C&C) – it makes interesting reading. As you stated, our officials within the Global Atmosphere Division are aware of these proposals but it was kind of you to bring this to my attention.

Yours sincerely,

pp Amanda Stark

Nicci Collins
Special Adviser
to Rt. Hon. Margaret Beckett, MP

(Dictated by Nicci Collins
and signed in her absence)

L:\Advisers/Nicci/AMeyer 18-07-02

JULY 19

World Review of Books
C&C, The Climate Solution

Schumacher Briefing number 5 by Aubrey Meyer

Some comments by the author on the book, the issues and the state of play.

In 1989 I made a decision that rearranged my life. I joined the efforts by the Greens to prevent global ecological collapse.

For years prior to that decision, I had been a professional musician. At the time I had wanted to write a 'musical' and unexpectedly, the search for subject matter got out of control. The assassination of Chico Mendez reported in the Observer the previous December had seemed like a possible idea for the musical. But researching this horrible murder became a crash course on the growing environmental crisis. In a moment of revulsion and anxiety that has never really gone away, I joined the UK Green Party. Instead of writing the musical, I read things like Jonathon Porritt's, "Seeing Green" and the 'Penang Manifesto' of the World Rainforest Movement and so became involved in what was already called, the struggle to save the planet.

"Contraction and Convergence – the Global Solution to Climate change" is the little book I wrote ten years later about what happened because of that decision. With three friends from the Green Party I formed the Global Commons Institute (GCI).

From the outset Dave Bradney, Jim Berreen, Tony Cooper and I agreed that more than anything else, by changing the global climate, humanity was on a collision course with itself and with the planet. We adopted the simple formulation of "Equity and Survival". And as we analysed the destructive trends of expansion and divergence in the global economy, we came to formulate and campaign for "Contraction and Convergence" (C&C) as the remedy.

Looking at the data, it was obvious from the outset that the wealthy countries of the world had grown rich and powerful while running up on the global account a massive environmental debt that exposed the countries already impoverished by this process to shrinking development opportunities and a growing vulnerability to damages from climate change.

The book recalls getting to grips with this. It describes how for ten years GCI reasoned with the diplomats, negotiators, experts and policy makers all over the word. It explains how and why C&C evolved in the light of this considerable struggle. It details how we won a great struggle of ideas in the policy debate in the mid 1990s in the Second Assessment of the Intergovernmental Panel on Climate Change (IPCC). The book

also reproduces miniatures of some of the quite startling mural-size graphic C&C imagery we created for use at the UN climate negotiations and recalls the effects of this and how reactions to the campaign changed as a result over the years. However the C&C book was published before the Third IPCC Assessment was published (June 2001) in which we had built on that success to the IPCC's recognition that, "C&C takes the rights-based approach to its logical conclusion."

Increasingly in recent years the reactions are positive. The Financial and Insurance Initiative of the UNEP has adopted a position in favour of C&C. Numerous ordinary and eminent individuals and institutions have added their support. But early on there were very trying times as everyone struggled to confront this awesome new problem with arcane and archaic habits. In essence,

> -GCI challenged the formulations of the neo-classical economists who had presumed to dominate the policy debate, for what they were - marginal.

We sought to enclose their methods within the more durable formulation of securing prosperity through precaution, equity and efficiency in that order. This is what C&C does and while real policy thinking matures slowly in favour of C&C, lack of its real application keeps us on the collision course.

As it grows, the global economy has become almost seamless, because money - like air - penetrates all the available space.

And there is no pretending that people don't go after both. At the same time, because of interdependence, this now means that every unit of activity in this economy is in some measure linked to the effects of burning fossil fuels. In other words, rich or poor and whether we burn fossil fuel or wood copiously or frugally, we are all now linked via the economy and the environment to both the causes and the effects of human induced global climate change.

The 'greenhouse-gas' (ghg) emissions from this fossil fuel burning are accumulating in the global atmosphere and slowly but surely trapping more and more of the sun's heat as time goes by. While the rise in global temperature is uneven over time and space, altogether this trend of enhancing of the natural greenhouse effect is causing global weather patterns to become progressively more violent and erratic with more floods, droughts, storms and sea-level rise. According to the estimates of the big re-insurance companies, this overall syndrome is causing a rate of economic losses that is now rising at four times the rate of economic growth. In a nutshell, this is already a death knell for low-lying coastal areas in Holland, Bangladesh, Egypt and the South Pacific because of rising sea level. In a hideous asymmetry, while the GDP rich get richer, the CO2 poorer get moved on and even wiped out. Tuvalu is already being evacuated and hundreds of thousands of people living on

the margins have already died in catastrophic climate-change-related hurricanes in Central America and cyclones in Africa and in Asia.

Worse, much worse, is yet to come. If we project the current rates of GDP/CO2 growth and climate related damages, the value of the damages will exceed the value of the global economy within about 60 years.

If humanity succeeds in stopping this from running completely out of control, construction of the Great Wall of China will seem by comparison like a weekend in Lego Land. The post-war Marshall Plan will seem like the redeeming of so many book tokens. If we succeed, security through rigorously planned international cooperation will have superseded economic competition, coercion, conflict and terror as the primary framework of security with the ethos of conserving and sharing the resources that preserve civilization.

In its report "Energy – the Changing Climate" (June 2000) the Royal Commission on Environmental Pollution made the advocacy of C&C the third of its 87 recommendations to the UK Government. A leading British broadsheet claimed, "little man's big idea could save the world" and I winked. Now that the recent UK Energy Review by the Cabinet Office has broadly supported C&C, some people feel the argument has won. Campaigners are joining hands in calling for it to be part of Tony Blair's 'big idea' at the World Summit on Sustainable Development in Johannesburg later this year. While the Kyoto Protocol is seen as 'a first step' it is widely recognized as a profoundly inadequate response to this looming crisis.

Sadly though, winning the argument is not winning the war. As the C&C book only partly records, it already had many powerful backers around the world at the time it was published in November 2000 and it has acquired many more since then.

As a single coherent proposition it probably now has more support than any other.

At the same time, getting off the collision course to catastrophic global climate change is going to require much more than this and the advocates of C&C face the numbing counter-culture of military-commercial priorities centered in Washington DC. Recent developments show how incongruously easy it is to be blind to the enormity of the obstacles against rising effectively to the global climate challenge.

President George Bush has just aptly - if unintentionally - demonstrated again that leading with economic 'efficiency' (in his parlance 'intensity') arguments can be utterly misleading. As a US 'alternative' to what he called the 'unfair' Kyoto Protocol, he recently had the sauce to commit the US to 'voluntary' gains against their current efficiency value of $5,464 per tonne of carbon rising to $6,623 per tonne over the next ten years.

While this roundly commits the US to carry on with business-as-usual, this is held up by the administration as, "a more practical way to discuss goals with developing countries."

However, with their currencies corrected for exchange rate distortions, developing countries (on this measure) remain consistently orders of magnitude more efficient than the countries of the OECD. In other words they may be poor, but the awkward bit for the US is that they are more efficient.(1) At the rate of gain projected by the White House, the US might become as efficient as Nepal or Namibia ($100,000/tonne) by the late 22nd Century.

Furthermore, depreciating for the energy content of its imports, the US produces net probably nearer $3,000 than $5,000 of income per tonne of fossil fuel burned domestically.

With the US' global trade deficit alone now accumulated at nearly three trillion dollars, this is equivalent to 1 billion tonnes of the extra atmospheric carbon now forcing Tuvaluans to flee the rising seas of climate change. To get some sense of perspective, 1 billion tonnes is almost what the US emits annually. This is the figure that by mid-term the world should limit emissions to annually if rising ghg concentrations, temperature and damages are to be slowed and stabilised.

As if that wasn't bad enough, Dr. Thomas Barnett(2) in U.S. Naval Institute, 2002 (January issue, pp. 53-56) under the title 'Asia: The Military-Market Link' clearly foresees that this little 'deficit' ensures we're all on our way to Tuvalu . . . . .

He says: -

"The good news is that there's plenty of fossil fuel to go around. Confirmed oil reserves have jumped almost two-thirds over the past 20 years, according to the Department of Energy, while natural gas reserves have roughly doubled. Our best estimates on coal say we have enough for the next two centuries. So supply is not the issue, and neither is demand, leaving only the question of moving the energy from those who have it to those who need it - and therein lies the rub.

U.S. naval presence in Asia is becoming far less an expression of our nation's forward presence than an "exporting" of security to the global marketplace. In that regard, we truly do move into the Leviathan category, for the "product" we provide is increasingly a collective good less directly tied to our particularistic national interests and far more intimately wrapped up with our global responsibilities.

And in the end, this is a pretty good deal. We trade little pieces of paper (our currency, in the form of a trade deficit) for Asia's amazing array of products and services. We are smart enough to know this is a patently unfair deal unless we offer something of great value along with those little pieces of paper.

That product is a strong U.S. Pacific Fleet, which squares the transaction nicely."

[Dr. Thomas Barnett,

U.S. Naval Institute]

Is it any wonder the US Government slipped that little clause in just before the original Kyoto meeting in December 1997 which established that military emissions would be on the global account.

However valiant the many and varied efforts to rebut this litany of complacency are, they will remain divided and ruled by this arrogance until there is a really coherent and united global campaign for C&C based on the realisation of equity and survival.

But then I'm just a musician and what do I know?

Aubrey Meyer

Director

Global Commons Institute (GCI)

www.gci.org.uk/images/Efficiency.pdf

2 Professor at the U.S. Naval War College, currently serving as the Assistant for Strategic Futures in the Office of Force Transformation within the Office of the Secretary of Defense

Aubrey Meyer was born in Bradford in 1947. He grew up in South Africa and studied music at the University of Cape Town during the 1960s, from where he graduated B. Mus. in 1968 and later M. Mus. After a brief period at the Royal College of Music in London in 1970, he played as Principal Viola in the Ulster Orchestra in Belfast, the Gulbenkian Orchestra in Lisbon, the CAPAB Orchestra in Cape Town and then as a section player in the London Philharmonic Orchestra in the 1980s. Intermittently throughout this period he wrote music for various ensembles including two prize-winning orchestral ballet scores.

It was while searching for a subject for a musical in 1988 that stories of the death of the Brazilian social activist Chico Mendez led him to join the UK Green Party in 1989 and then to co-found the Global Commons Institute (GCI) in London in 1990.

He spent the next decade contributing to the policy working group of the Intergovernmental Panel on Climate Change (IPCC), and campaigning at the United Nations negotiations on climate change to win acceptance of the global ethic of 'equity

and survival' and the policy framework known as 'Contraction and Convergence' (C&C). C&C is now becoming the most widely supported global framework within which to resolve policies and measures to avert dangerous climate change.

In 1998 he won the Andrew Lees Memorial Award with the following citation: "Aubrey Meyer, almost single-handedly and with minimal resources, has made an extraordinary impact on the negotiations on the Climate Change Treaty, one of the most important of our time, through his campaign for a goal of equal per capita emissions, which is now the official negotiating position of many governments, and is gaining acceptance in developed and developing countries alike." In 2000 he received the Schumacher Award for the continuation of these efforts.

JULY 30

Panel on Public Affairs (POPA)

Report for American Physical Society

http://www.aps.org/index.html

WA Edelstein, Rensselaer Polytechnic Institute, Troy, NY, and GE R&D, Schenectady, NY (retired), POPA Member.

wede-@nycap.rr.com

LC Davis, Ford Motor Co., Dearborn, MI (retired), POPA Member. ldav-@peoplepc.com

CJ Walcek, State University of New York, Albany, NY. wal-@asrc.cestm.albany.edu

"The world population was 6.1 billion in 2000. If we divide the total C emissions in 1990 (5.8 GtC, Fig. 7) by his figure we get 0.94 tC per capita per year. Thus, if the 1990 global Carbon emissions were spread uniformly over the globe, the world average per capita Carbon emissions in 2010 and 2020 would be about what people in China and South America are producing now (Fig. 9).

There is little room for increase for the Chinese or South Americans, and people in the USA would have to cut back their Carbon emission by a factor of five from present levels in order to achieve the required world average.

The idea that the developing world might be willing to consider limiting their Carbon emissions if, in the long run, everyone will have the opportunity to use approximately the same amount of energy is the issue of "equity."

The Global Commons Institute of the UK advocates this idea in their plan of "Contraction and Convergence," and their graphs show the US reducing its output by a factor of 10 or more to achieve equity [20]. The basic idea is that the goal

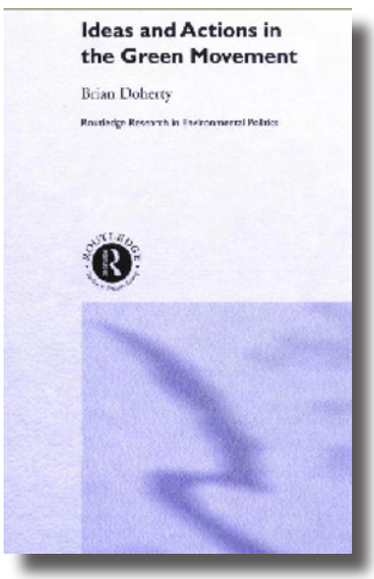
is to equalize C output, and the pace of change would be internationally negotiated. While inequality exists, Carbon emission rights could be bought, sold and traded. In general this would result in a flow of money from rich to poor countries.

Exactly how the Carbon reduction would occur is not specified, but rich countries would be highly motivated to reduce Carbon emission through technology. It must be noted that this kind of reduction is at least an order of magnitude greater than the Kyoto figures, so correspondingly more ambitious and longer-lasting steps must be taken. This could include, for example: a massive increase in electric power production by non-burning methods, i.e., wind power, hydro power, solar power or nuclear power; a widespread use of H fuel; a highly successful way of capturing Carbon output and putting it back into the ground, trees, water, etc (C sequestering).

Figure 11 shows a "C&C" scenario that gets everybody in synch by 2030. It is hard to envision the world accomplishing such a radical change by this time, but it may be desirable to keep this goal in mind, even if it is carried out over a longer period."

www.aps.org/public_affairs/popa/reports/kyoto-energy6-1.pdf

AUGUST



Brian Doherty
Ideas and Action in the Green Movement

Publisher: Routledge ISBN: 0415174015

[Page 216]

"The green movement as analysed in this book is very much a product of western structures and culture. There are points of connection and common interest between western greens and radical environmentalists in the south, but also major differences of context and tradition. More certain is that the agendas of western greens and non-western environmentalists will continue to change as a result of mutual contacts and engagement with global ecological governance.

Although they have long been committed to seeking global solutions, the main challenge faced by radical environmentalists is how to build an argument that combines social justice in a form that is acceptable and persuasive in both north and south.

Ideas such as contraction and convergence, developed by the Global Commons Institute, in order to seek a means of furthering international agreement on climate change, have widespread support in the green movement.

Contraction and convergence is based on the idea that the western countries need to reduce their emissions of greenhouse gases in order that non-western countries can expand economically, but this redistribution must occur within a framework compatible with sustainability Through this and similar ideas such as that of "environmental space" which, as the Danish group NOAH puts it, means "that every person in the world has the right (but not the duty) to use the same amount of natural resources and produce the same amount of pollution" and 'ecological debt', according to which the West owes other countries for the greater ecological damage it has produced, the greens are seeking ways to develop the arguments for global ecological solutions alongside a recognition of the need for the west to reduce its consumption."

AUGUST

World Council of Churches two requirements:

1. Stabilisation of greenhouse gases in the atmosphere at a level that is in accordance with the overall objective of the Climate Convention.

> 2. A fair distribution of rights and obligations, i.e. establishing per capita emissions rights for all countries as proposed in the 'Contraction and Convergence' scheme.

The goal is to prevent increasing dangerous interference with the natural climate system. The IPCC Third Assessment Report indicates that the six Kyoto greenhouse gases, measured as carbon dioxide equivalents, should not exceed the level of 450-550 ppm.

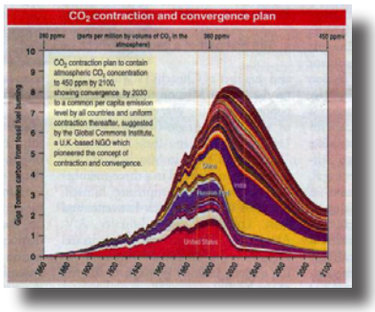
This leads us to the conclusion that the next commitment period must start building a system for targets related to a specific "secure" greenhouse gas concentration in the atmosphere and an equity burden of the emissions that allows for this. We foresee targets related to per capita emissions.

Proposals of the Global Commons Institute (United Kingdom) on

> "Contraction and Convergence" have gained support from churches and Christian development agencies.

For high emitters this would lead to a step-by-step approach over the commitment period during which the emissions are reduced, while for the least developed countries and low emitters, a step-by-step approach for the possibility to increase emissions, while at the same time building up and investing in sustainable energy use, could be foreseen."

AUGUST 2



Frontline Magazine - The Hindu

For climate justice

If the world is to be saved from an environmental catastrophe, it is essential for the civil society in Third World countries to take an active role in pressuring their governments and in moulding opinion to move in the direction of a solution based on the principle of equal atmospheric rights for all.

The final part of a three-part series.

THE atmosphere, like the air we breathe, belongs to everyone. It has now become obvious that the extent to which it can be polluted by carbon dioxide (CO2) and other greenhouse gases (GHG) in the course of our normal living has a ceiling; that is, the pollution space that we collectively possess is finite and limited.

The only enduring basis by which this space can be shared is to divide it equally among all human beings. Any method that is established on the strength of the present power relations, and is thus iniquitous, cannot be sustained for long.

It is this realisation that has made far-sighted persons such as French Environment Minister Dominique Voynet support the strategy of contraction and convergence.

According to this strategy, all countries will be allotted entitlements to pollute on the basis of a single per capita allowance. While the rich countries will have to contract their emission levels to reach this target, the poor countries will be allowed to develop their economies by increasing their emission to that level. This convergence target will have to be reached in a given time-period and, thereafter, will decline uniformly for all countries.

The per capita emission and the time for convergence will have to be negotiated internationally, taking into account the safe levels of CO2 concentration that can be allowed in the atmosphere. If these entitlements are permitted to be traded, developing countries can get substantial resources as a matter of right and not as handouts. These resources would help them leapfrog into clean technologies for power and transport and for overall development as well, without having to worry about losing their bargaining positions.

A sub-text to this argument is that within countries, depressed sections of people have an ecological debt that the affluent sections owe them and they have a right to claim it. A study by the Indira Gandhi Institute for Development Research found that in 1989-90 the per capita carbon emission of the top 10 per cent of the urban population in India was 13 times that of the bottom half of the rural population. It is the poverty-stricken Dalit woman who fetches headloads of shrub from long

distances for the day's kitchen fire and her children who pore over their books in the glow of the kerosene lamp who have saved this planet from a worse disaster than it faces now. If the excluded and oppressed sections in the Third World countries demand their rightful share of equitably distributed CDM (Clean Development Mechanism) funds for their own development, it could lead to social dynamics that are different from what these societies are used to at present.

But, for now, the dominant discourse in the dominant country is focused on the 'non-responsible' emissions by the populous developing nations. Green movements in that country are quick to point out to their government that it is the countries that are non-accountable to Kyoto that are behaving more responsibly than those that are accountable to it. For instance, according to researchers at the Lawrence Berkeley National Laboratory in California, China has reduced its emission by 17 per cent since the mid-1990s, a period when its gross domestic product increased by 36 per cent. Said Zhou Dadi, Director of the Energy Research Institute, China: "Strategically, we have adopted climate change as an important concern in our energy planning. Before 1980, China's energy use increased 1.6 times as fast as the economy. But in the last 20 years, energy use has grown at less than half the rate of the economy... Our per capita energy use is just one-tenth of that in the United States and one-seventh of that in Europe. Americans drive cars while we ride bicycles; you live in houses while we live in dormitories."

India has also done much to conserve, though its record is not as spectacular as that of China. India is now the world's fifth largest fossil-fuel CO2-emitting country; the emissions having grown at 6 per cent a year since 1950. It is the world's third largest coal-producing country and coal accounts for 70 per cent of fossil emissions. However, at less than 0.3 metric tonnes of carbon emission per head, it is the lowest for any large country, far lower than the global average of 1.13 tonnes and one-twentieth of the U.S. per capita emission.

There have been several studies of the impact of global warming on India, especially on food production and on coastal areas. The United Nations Environment Programme (UNEP) lists India among the 27 countries that are most vulnerable to a rise in sea level. A study by the Jawaharlal Nehru University in 1993 found that a one-metre rise in sea level would inundate approximately 5,800 square kilometres of coastal area and directly affect 70 lakh people; the economic loss would range from Rs.2,30,300 crores for Mumbai to Rs.400 crores for Balasore, at current prices. India is already reeling under weather disasters of unprecedentedly large scales. Most environmentalists link this to global warming. A heat wave in Orissa in 1998, the hottest year of the millennium, claimed 650 lives; the next year, 10,000 people perished in Orissa's worst-ever floods.

This year's heat wave was worse than that of 1998 and claimed more than 600 lives in Andhra Pradesh alone, despite prior warning to the people and some preparations. A UNEP team that went to the Himalayas recently found that a glacier near the first camp that Edmund Hillary and Tenzing Norgay set up during their conquest of the Everest in 1953 had receded by 5 km and that a series of small ponds had now formed a big lake.

The lack of sufficient data and research on the impacts of climate change has prevented India, and other developing countries, from playing an assertive role in global negotiations. India cannot hope to make the kind of investment that the U.S. has made. (Two national laboratories in the U.S. have launched a $20 million project, with 1.5 teraflops of computing power, to evaluate scientifically the policy options on climate change.) Also, the 'expert' advice India gets on policy matters is less than neutral. In a briefing paper sent by the Centre for Science and Environment to the Members of Parliament in India before The Hague conference, the late Anil Agarwal pointed out that Bill Clinton's principal environmental adviser Kathleen McGinty stationed herself at the Tata Energy Research Institute in Delhi for a year and went round the country to paint an alluring picture of the CDM, without pointing out its inequity in the absence of established entitlements. According to him, the Confederation of Indian Industry (CII) was among those who fell for her argument. It is only to be expected that private industry everywhere will be short-term-oriented.

The government and the politicians too have little incentive to take a long-term view. In fact, the subject gets very low priority and the public awareness of the issues involved is also abysmally low as compared to the awareness levels in the industrialised countries. Besides, when push comes to shove, the only superpower of the world will not hesitate to apply open pressure on national governments, using its leverage. In fact, some non-governmental organisations (NGOs) in the North, such as the World Resources Institute in Washington D.C., want international financial institutions to use aid, loan and trade to pressure developing countries to adopt climate-friendly, and obviously costly, technologies. Thus one cannot assume that the Indian government will automatically act in such a way as to protect the long-term interests of the people.

So, if the world is to be saved from a looming catastrophe and international and inter-generational justice is to be maintained, it is essential for civil society in Third World countries to take an active role in pressuring their own governments and in moulding world opinion to move in the direction of a swift 'equal rights for all' solution. In this effort, they need to contend with, and engage in dialogue, even well-meaning NGOs in the North, which, in their anxiety to get some action off the ground, are prone to seek accommodation from the nations in

the South. Attending a conference of northern NGOs on climate change, an activist from the South found to her dismay that the question equity ranked lowest in the delegates' priorities.

The forces ranged against a credible and just solution are many and mighty. One silver lining is that the extremism of the Bush variety is creating a backlash of public opinion and pulling together environmentalists for vigorous joint actions. An example is the largest ever paid media campaign by any environmental group during August and September 2001 in the United States. Americans in 23 States were educated by a clutch of environment groups on how their Congressmen listened when (oil) money talked, how they voted for $30 billion in taxpayer handouts to oil, coal and nuclear power companies, how they "voted time and time again for more pollution, and more global warming" instead of for lower energy bills and a healthier environment, how they should not now allow their Senator to do the same when the bills come up for approval.

There is a need for similar concerted action by the NGOs of the South. This need not be, and probably ought not to be, limited to advocacy of the equal-rights-to-the-air-above principle; it can extend to the issue of reparations for the damage caused to the environment in the past. Even as voices are raised now for reparations for slavery and colonialism, just recompense for environmental imperialism is bound to become a major issue several years hence. But raising it now has the advantage of driving home the equal rights message with greater force. In fact, the current environmental intransigence of the U.S. President can be countered by taking him to court for the economic costs of the disasters faced by the poorer countries because of climate change - up to $9.5 trillion over the next two decades, according to one estimate by development groups. The Red Cross suggests in a report that poor countries could seek legal compensation to pay for reconstruction through an "international tort climate court". It says: "Increasingly sophisticated analysis of climate change means that ignorance of the consequences of industrial consumption and pollution can be no defence for inaction."

In a recent article in The Guardian, Stephen Timms of the Global Economy Programme at the New Economics Foundation points to the establishment of a principle in a U.S. court that no State had the right to cause injury to another by emitting "fumes". This was in a case relating to a Canadian smelter plant damaging crops and livestock in Washington State in the U.S. Timms says: "The next message G-7 heads of state receive from their poorer cousins may not be an invitation to a reception, or a plea for more aid. It may be much more abrupt: 'We'll see you in court for global warming.' A concrete step towards this was taken recently when two dozen lawyers representing environmental groups met in Washington to explore the possibility of class-action lawsuits against the U.S. government and corporations on behalf of Tuvalu - whose

10,000 residents are emigrating to New Zealand as the island nation faces total submergence by 2050 - or the Maldives or Jamaica, like those filed by the Holocaust victims or those filed against the tobacco companies. Tuvalu's new Prime Minister has signalled his intention to sue.

The principle of contraction and convergence is gaining ground, albeit very slowly. The Environment Ministers of Denmark, the Netherlands and the United Kingdom have voiced their personal support to it; Britain's Royal Commission on Environmental Pollution, in a report on climate change published recently, has endorsed it. However, it is nowhere near claiming serious attention at Kyoto discussions. A large part of the responsibility to see that this happens rests on the NGOs in India and in the other countries of the South.

C.E. Karunakaran is an engineer who has studied and worked on issues relating to carbon credit trading.

AUGUST 6

Matthew Gold
Office of Science and Technology

Office of Science and Technology

Aubrey Meyer,
Global Commons Institute,
37 Ravenswood Road,
London,
E17 9LY

6 August 2002

Dear Aubrey,

Professor King would like to thank you for the information on "Contraction and Convergence". He feels that the reduction of global greenhouse gas emissions is an urgent matter and welcomes ideas, including the C&C concept, which could contribute to a global climate strategy.

We would be pleased to receive any updates.

Yours sincerely,

Matthew Gold

23.09.02 MG has left
now Adrian Butt

John Fawcett | Climate Change
7215 3921

1

AUGUST 8

Michael Meacher MP
Minister for the Environment

FROM THE RT HON MICHAEL MEACHER MP
MINISTER FOR THE ENVIRONMENT

Copy Aubrey Meyer
Simon -

DEFRA
Department for
Environment, Food
& Rural Affairs

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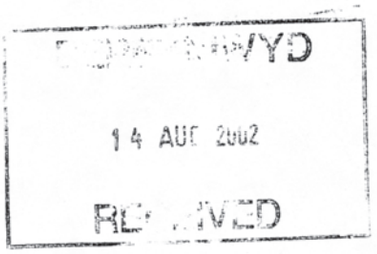


Our ref: 166031

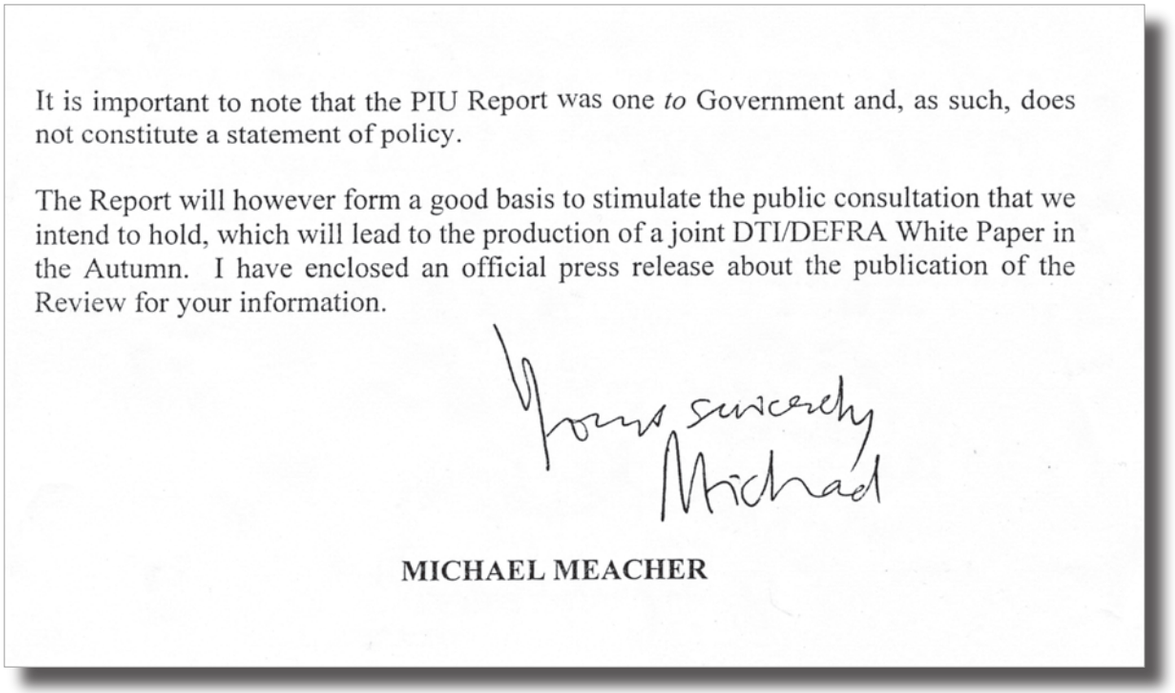
8 August 2002

Dear Cynog

Thank you for your letter of 18 December to the Prime Minister, which advocates the "contraction and convergence" model as a potential mechanism for tackling climate change through international agreement. As Environment Minister, I have been asked to reply. I am sorry for the delay in replying.

I understand that you were keen for contraction and convergence to be acknowledged in the Performance and Innovation Unit's Energy Review. I can confirm that the briefing paper from the Global Commons Institute on contraction and convergence was sent to the PIU, and that it was considered alongside other submissions received. The published Review does in fact mention contraction and convergence (paragraph 3.69). However, the main aim of the PIU Review was to set out objectives for UK energy policy, and to develop a strategy that ensures current policy commitments are consistent with longer term goals. As such, the Review, which was published on 14 February 2002, has not analysed options for how the international community as a whole might respond in future to the challenge of climate change.

Tackling the global climate change threat will require a future approach which leads to significant emissions reductions while being acceptable to as many countries as possible. Some aspects of the contraction and convergence model are certainly attractive. However, the debate is still in its very early stages, and other ideas and approaches have been proposed that warrant careful consideration. One of our main concerns at present must be to build on comprehensive world-wide support for the Kyoto process. The UK intends to play a proactive role in the debate on future commitments and we are already engaging our international partners on this issue.



It is important to note that the PIU Report was one *to* Government and, as such, does not constitute a statement of policy.

The Report will however form a good basis to stimulate the public consultation that we intend to hold, which will lead to the production of a joint DTI/DEFRA White Paper in the Autumn. I have enclosed an official press release about the publication of the Review for your information.

Yours sincerely
Michael

MICHAEL MEACHER

AUGUST 23

Church Times
Anglicans urge greater concern

by Vanya Walker-Leigh in South Africa

BISHOPS attending the Anglican Congress on the Stewardship of Creation at Hartebeestpoort Dam, near Johannesburg, this week, urged the Anglican Communion to take a stronger stand on climate change and related environmental issues.

"Christian theology drives us. As partners with God in Jesus, we Christians are responsible for the whole created order," the Bishop of Canberra & Goulburn, the Rt Revd George Browning, told one of the sessions. He was echoing the Archbishop of Canterbury's message to the Congress, that "We have an inescapable obligation to cherish the living planet entrusted to us by our Creator."

The Congress, which ends today, intends to submit a statement to the forthcoming World Summit on Sustainable Development, which begins next Monday in Johannesburg. It will also submit a policy document to the next Anglican Consultative Council meeting, in Hong Kong, in September.

Bishop warns of "desperate plight"

Bishop Browning's appeal was endorsed by the Bishop of Hereford, the Rt Revd John Oliver, who is the Church of England's spokesman on environmental affairs in the House of Lords. "We are in a desperate plight as regards global warming and climate change. The planet is going to the buffers very much sooner than people realise," the Bishop said.

He strongly supported the "Contraction and Convergence" (C&C) approach to cutting emissions of greenhouse gas. This meets US concerns, "and is supported by China, India, France, Belgium, Sweden, the European Parliament, the Non-aligned Group, and South Africa", he said. "I hope the Anglican Communion will formally endorse C & C in Hong Kong."

A grim picture of the present state of world agriculture and rural poverty emerged in presentations to sessions on food-security and water. Peter Mann, a former Benedictine monk and a director of World Hunger Year, said that the world needed to make a transition from "the agribusiness-dominated 'industrial agriculture', which is destroying soil quality, and rural livelihoods".

The co-ordinator of the emerging Anglican Environment Network, Canon Eric Beresford, a geneticist, said that, though it was suggested that genetically modified (GM) crops might feed the world, their yields were 15-20 per cent below those of non-GM crops. The earth's produce and species must not be patented for corporate profit, he said.

The 50 participants from 20 Churches had gathered on Monday at the Good Shepherd Roman Catholic Retreat Centre, a hillside collection of small African thatched buildings set in gardens, with a panoramic view of the Hartebeespoort dam and the Magaliesberg mountains, near Pretoria. The daily eucharists were held in a mixture of English and one of South Africa's nine native languages.

Calls to prayer and action

The World Bank on Wednesday urged a more global approach to development. In its World Development Report, it urged rich nations to stop spending $1 billion a day on agricultural subsidies, to accelerate the transfer of new technologies, and to provide more aid, particularly to sub-Saharan Afria. This would help the poorest in the world boost their incomes.

New alliances were needed, at national and global levels, to address these issues, the World Bank said. Governments must act now to avert a growing risk of damage to the environment.

Four Christian environmental organisations have joined in urging Christians to support the Summit with prayer. There are briefings, for those interested, at www.churchesearthsummit.org.uk, and also a "Creation Care" prayer that they hope churches will use in services on Sunday, which is the eve of the Summit.

AUGUST

Open Democracy
Meyer corrects Müller on C&C

Benito Müller :

> "As for the issue of an equitable distribution of (global) emission targets, there have been, as you know, numerous proposals.
>
> One of the best known is the 'contraction and convergence' model suggested by the Global Commons Institute."

Open Democracy :

"This is based on the idea that, ultimately, everyone in the world has an equal right, as it were, to emit greenhouse gases; and that the expression of this right must be limited, so that the aggregate amount of emissions is safe for the global climate . . . . "

Benito Müller :

"In my view, the main drawback with 'contraction and convergence' is that it starts out with a 'grandfathering' allocation – essentially a uniform percentage target across the board – and only moves towards presumably the fair per capita solution over time.

Depending on the speed of the convergence and the contraction, it is thus not only likely to impose initial reduction targets on even the least developed countries, but it deprives them of their legitimate surplus permits at the time when they need these most in their quest to reach a path of sustainable development – namely now.

In contrast, I think it would be feasible, affordable, fair and sensible to give everyone in the world an equal per capita allocation now. Each person would also have the right to trade emissions so that the poor low emitters could benefit from this legitimate asset . . . . . "

Aubrey Meyer:

"In fact, the C&C model remains possibly the only calculating device put forward so far that not only embraces exactly what Benito is arguing for, but which is capable of calculating in full the necessary international accounting figures.

It is not accurate to say that C&C "starts out with a 'grand-fathering' allocation, essentially a uniform percentage target across the board".

From day one, C&C removes grandfather rights at a rate that is determined by the disparate initial per capita emissions levels internationally, in favour of equal rights by an agreed date.

However, this process would apply the principles of C&C at rates that have been negotiated by the parties themselves, rather than those pre-determined and handed down by experts and observers.

If the international community commands an immediate convergence within a staged contraction, the model will calculate it.

It is not GCI's role to decree the content of decisions that can only be reached by negotiation, but it is our role to point out their detailed consequences in the light of the C&C model."

www.opendemocracy.net/forum/document_details.asp?CatID=99&DocID=1638&DebateID=177

www.opendemocracy.net/forum/Message_Details.asp?StrandID=83&DebateID=177&CatID=99&M=1308&T=1308&F=177

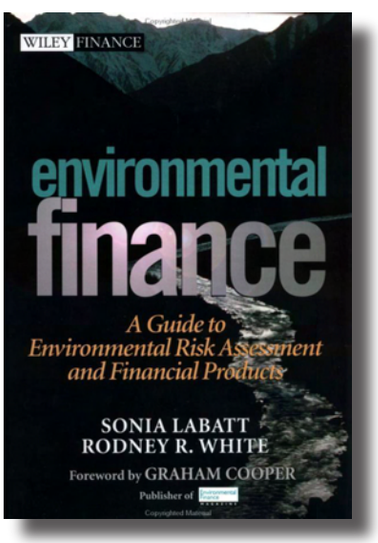
2002

GCI
Wilton Park Slide Show

With Notes

www.gci.org.uk/slideshow/C&CSlideshow.ppt

SEPTEMBER



Labatt & White
Environmental Finance

Publisher: John Wiley & Sons. ISBN: 0471123625

[Page 210]

Developing, or poorer countries are Annex One are not signatories to the Kyoto Protocol and therefore have been placed under no obligation to reduce their emissions. Their sole obligation, at this time, is to measure those emissions. This lack of commitment has been criticized by the governments of the United States and offered as a reason for its withdrawal from the negotiations. For the obvious reasons stated earlier, at some point there must be a commitment from every country, poor as well as rich. The question revolves around the timing and the distribution of responsibilities for reducing emissions.

One such proposal is know as "Contraction and Convergence" (Global Commons Institute 1999; Meyer and Cooper 2000). It is based on the principle of equal per capita rights to use of the atmosphere as a sink for greenhouse gas emissions. As with all other approaches, there would be a need for capping of emissions and the steady reduction of this cap, hence "contraction". Eventually everyone will be accorded the same right either to use or to sell, hence "convergence".

SEPTEMBER

Architects & Engineers for Social Responsibility
Response to: PIU Energy Review

The UK should take a leading role in reducing greenhouse gas emissions. We believe that Contraction and Convergence (where over a period of time, all countries emissions quotas per capita converge within a global total that reduces to a value that should avoid catastrophic climate change) could form an equitable basis for such a framework. It has been inferred from the IPCC reports that a global reduction of ~60% in greenhouse gas emissions is needed to stabilise emissions at a level which will limit the risk of catastrophic climate change. Because the UK, along with most other industrialised countries, produces significantly greater emissions per capita than the world average, on a basis of equity of per capita emissions between countries, the UK would require even deeper reductions in the long term, unless it buys emissions credits through emissions trading.

In negotiations within the UNFCCC the UK should press for a framework of Contraction and Convergence to come into effect after the Kyoto first commitment period, within which international emissions trading could be beneficial to countries at different stages of development.

SEPTEMBER

Ethics Science Politics
The challenges of energy

A Response to Sir Mark Moody-Stewart by John Houghton

" . . . . A feature of the Contraction and Convergence proposal is that, because of its comparative simplicity, it can concentrate the minds of decision makers on the scale of the problem and its challenge."
http://www.int-res.com/articles/esep/2002/E15.pdf

SEPTEMBER

Dept. Physical Resource Theory
Göteborg University, Sweden

"An allocation approach based on contraction and convergence is suggested in the Paper. The allowances are assumed to follow a linear trend from their present per capita level for industrial regions and the per capita emission by 2012 for developing regions towards an equal per capita allocation by 2050. The per capita emission allowances are then assumed to follow the per capita emission profile towards the stabilization target."

SEPTEMBER

New Economy
Towards a global new deal?

from the Institute for Public Policy Research (IPPR)

" . . . . perhaps the single most useful action that negotiators could take at WSSD would be to acknowledge explicitly the need for this logic to be applied to the most pressing environmental challenge of all: climate change. The London-based Global Commons Institute, which originated the concept of Contraction & Convergence, has assembled a wide coalition of support for applying the proposal to the area of climate change, which would involve defining a safe upper limit for greenhouse gas concentrations in the atmosphere (which would by definition require all countries to accept emissions targets), and a date by which national emission entitlements would reach per capita equality."

SEPTEMBER

World Bank
Development Report for WSSD

The Bank's annual World Development Report (WDR) for 2003 published for WSSD.

The WDR 1992 was published in time for the Rio Summit. In this the bank said "grandfathering" emissions rights was "the most feasible option".

In the current report they say . . .

"How can emissions reductions—beyond those that pay for themselves—be financed? This remains the most contentious issue in climate change mitigation. In carbon markets, for instance, the allocation of emission allowances determines who pays for reductions.

In the view of many, equal per capita allocation of allowances across the world—perhaps entailing transfers from rich emitters to poor countries—would constitute an equitable allocation. But such an allocation rule, if imposed abruptly, might disrupt the rich emitters' economies and thus would not secure their participation in the scheme. On the other hand, a strong link between past emissions and current allowances, applied globally, would hurt the development prospects of poor nations and thus be unacceptable.

Hybrid allocation schemes that blend per capita and "grandfathered" allocations and shift toward the former over time have been proposed as a compromise."

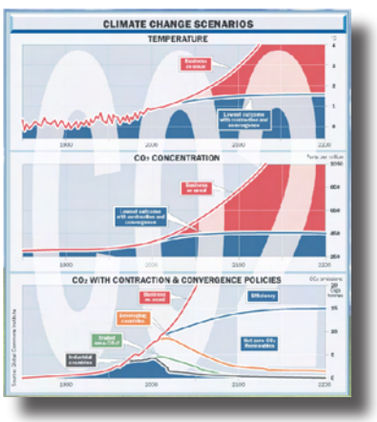
SEPTEMBER 3

Times

Capitalism best way to save the planet

Economic View by Anatole Kaletsky

THE Johannesburg summit on sustainable development has been widely ridiculed for emitting more hot air than a coal-fired power station. Tony Blair's African speeches have certainly left us no wiser about his personal plan to save the world. Yet behind all the empty rhetoric, the cynical photo-opportunities and the bureaucratic self-indulgence, some enormously important issues have been opened up for discussion in the past two weeks.



In saying this, I do not mean to contribute to the hysteria about mankind's survival and the threat posed by global warming to life on earth. Still less do I believe that "Africa is a scar on the conscience of our world and the world has a duty to heal it", to quote Mr Blair.

Global warming may well be a serious threat to human welfare. The poverty, disease and barbarism rampant in much of Africa is certainly an indictment of the way that almost all African countries have been run in the colonial era and the post-colonial decades. But the outside world has neither the moral authority nor the will to stop Africans committing mass suicide through Aids. The true scale of climate change and its effect on mankind's future, will be unclear for many decades, probably until most of us are dead.

Both as an economist and a human being I have always believed in focusing on the present and the immediate future, leaving the long-term to look after itself. The reason for doing this is not a contempt for future generations, but quite the contrary. Any attempt to look many decades ahead and then to inflict our flawed ideas on future generations, is an exercise in overweening arrogance.

Moreover, the experience of the past two centuries suggests that the generations of the future will be infinitely cleverer than we are. They will devise solutions to their problems with an ingenuity that we cannot begin to imagine today. It is not just lazy and selfish to leave the solution of many long-term problems to future generations; it is rational. It is right to delay difficult decisions as long as possible in the hope that "something will turn up" and only to make painful choices at the eleventh hour.

Having laid out this sceptical credo, let me jump straight to my personal conclusions from Johannesburg. The homilies on aid, disease and sanitation will be of little value until we see dramatic political changes in the poor countries themselves. The fact is that competent and honest economic management, plus the avoidance of wars, are infinitely more important conditions

for development than any conceivable inflow of external aid. But turning from the pieties on poverty to the environmental negotiations which were the summit's real issue, Johannesburg could go down in history as one of the major events of the early 21st century, eclipsing even September 11.

Firstly, the summit has made progress on such urgent environmental issues as fish stocks, deforestation and water supplies. The damage to human welfare from overfishing, uncontrolled logging and water pollution has gone so far and has become so palpable that these problems easily pass the eleventh-hour test suggested above. Secondly, and even more importantly, the summit has brought climate change to the centre of attention. It could mark the start of a period of much more intensive government intervention and business activity on carbon emissions and energy policy, at least outside the US.

Despite my general scepticism about long-term planning, I think such action could be beneficial, not only to our children's environmental future, but also to our own prosperity and safety and even to global economic growth.

The idea that trying to control the human contribution to climate change could be an economic opportunity, and not just a sacrifice, has long been the missing element in the global warming debate. The fact is that a concerted global campaign against climate change could present opportunities of at least three kinds.

The first benefit would be scientific and technological progress, as moribund industries such as carmaking and energy extraction were given incentives to move to the cutting edge of technological progress. Government subsidies for energy research could have far more productive spin-offs than defence and space programmes. It has always struck me that car manufacturers and oil companies reveal extraordinary managerial incompetence when they oppose government regulations to reduce emissions, increase fuel economy and develop new zero-emission engines. These companies are at present stuck in commodity businesses with ever-dwindling profit margins, few competitive advantages and a dinosaur image among investors, leading to extremely low stock market valuations. They would be far better off emulating computer companies and competing in the development of new technology. Government regulations to reduce emissions would help them to limit competition, thereby increasing, rather than stunting, their profits.

The second benefit would be geopolitical stabilisation, as fundamentalist Islamic countries such as Saudi Arabia and Iran lost their grip on the world's jugular through the oil price.

The third benefit would be greater trade integration and the possibility of a moderate redistribution of income from rich countries to poor.

To see why this might be so, consider the ambitious target for reducing carbon emissions suggested two years ago by Britain's Royal Commission on Environmental Pollution. Its proposal was to reduce emissions by 60 per cent by 2050, possibly through an international agreement called Contraction and Convergence, which has been much discussed in Johannesburg. This would give every country a quota for carbon emissions, based on its population and would allow countries to trade these emission rights. This would gradually reduce worldwide carbon emission and encourage the development of more efficient technologies. In the meantime, it would ensure a flow of funds from rich countries to poor ones, which, because of their lower levels of car ownership and industrialisation, would have surplus emission rights.

This Contraction and Convergence concept, illustrated in the charts above from the website of the Global Commons Institute, is only one of many market-based proposals designed to create incentives for big emissions cuts without unduly disrupting global economic growth.

Yet politicians, business lobbies and anti-growth environmentalists have all, for their own reasons, emphasised the economic sacrifices required to control climate change. We hear constantly of the limits to growth implied by energy conservation and the mind-boggling trillions of dollars that will have to be sacrificed either to reduce global warming or to cope with its destruction.

Yet all these horrific figures are meaningless unless presented in context. For example, Mr Blair noted in Africa that the Kyoto protocol would only reduce greenhouse emissions by 1 per cent, whereas the British Government believes that a 60 per cent reduction is needed. Given that President Bush has put the cost of meeting the Kyoto targets at several hundred billion dollars, a price he regards as unacceptable, what hope could there possibly be of making any worthwhile progress? But what Mr Blair has failed to point out in his messianic fervour, is that the ambitious 60 per cent target is only due to be achieved by 2050. The magic of compound interest could make this quite feasible without any undue economic sacrifice. According to the authoritative report published in February this year by the DTI's inter-departmental analysts group for Britain to meet the 60 per cent target would require a reduction of 4.3 per cent a year in the intensity of carbon emissions, assuming GDP growth continued at its long-term trend rate of 2.25 per cent.

This would be only slightly higher than the historic trend of carbon intensity reduction, which has been running at 3 per cent a year since 1970. Using a slightly different methodology, the same report concludes that the cost of reducing carbon emissions by 60 per cent in 2050 and then stabilising them from that point onwards would be equivalent to between 0.2 per cent and 1.5 per cent of GDP.

Even in the absence of firm evidence on the precise scale or effects of global warming, this would be a very small price to pay for the potential benefits of reducing air pollution, not to mention the political and technological breakthroughs mentioned above.

In Johannesburg, the concept that global action on climate change could be an economically beneficial exercise, instead of an immense sacrifice began to make an appearance.

This was partly because many environmental organisations started to engage in a more constructive economic dialogue with businesses and governments instead of trying to turn the global warming issue into a weapon in a global war against capitalism and modern science.

Modern science and market economics, far from being the enemy of the environment, are by far the most powerful mechanisms ever developed for achieving human objectives. If the world needs to be saved, they are by far the best tools available to mankind. It is time to put them to good use.

OCTOBER

The German Advisory Council
World in Transition 2

Raising and Allocating Funds for Global Environmental Policy
E 3.2.3.1

"The Earth's atmosphere may be understood as a global common resource. As global warming shows, the global community is jointly affected by impacts upon the atmosphere. Increasing scarcity raises questions concerning how to manage this scarce resource efficiently and how to finance the necessary measures to reduce emissions.
A starting point is to define rights of use with regard to the Earth's atmosphere. This is the hotly debated granting of emissions rights in climate policy.

In the first instance, the Conference of the Parties (COP) must define and allocate emissions rights.
Here, the key political problem with emissions rights trading is the initial allocation of emissions rights.

If allocation were based on a country's emissions per head of population, then all developing countries would remain sellers in this market in the long term, with the result that there would be a significant north south transfer of funds.
If, on the other hand, emissions rights were allocated on the basis of existing emissions ('grandfathering'), industrialized countries would be able to profit from their already considerable emissions level."

OCTOBER 7

UNEP-FI CEO Briefing
Climate Risk to the Global Economy

Published for Swiss Re Climate Conference in Zurich: -
"Policy-makers should reach consensus on a global framework for climate stability based on precaution and equity.
A number of approaches have been proposed, including the: -

(1) 'historical' method [1], under which a nation's future emissions goals would be determined by its past GHG output;

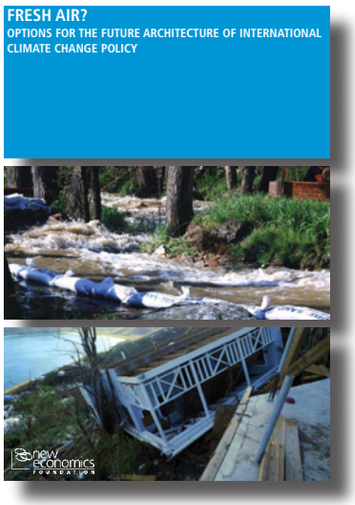
(2) carbon-intensity approach [2], in which future emissions goals would be indexed to GDP; and

(3) "Contraction and Convergence" [3] which would aim to achieve equal per capita emissions for all nations by an agreed date." [1] - "The 'historical' approach (sometimes called the 'Brazilian Proposal'), which holds that on the basis of equity, each country's responsibilities are proportional to the emissions it has Accumulated in the atmosphere since industrialization began. Initially only the long-term emitters i.e. Annex 1 (developed) countries formally accept emissions controls. The proposal replaces full international emissions trading with a Clean Development Mechanism, which enables less developed countries to barter emission credits to the value of clean technology provided. The Kyoto Protocol is closest to this approach, but it features the use of emissions trading along with other market mechanisms.

[2] - The "carbon-intensity" approach, that - on the basis of cost-effectiveness - disregards the past and advocates future voluntary emissions targets indexed to the GDP in each country. Under this approach, for the foreseeable future all countries voluntarily accept the need to limit the growth of their GHG emissions per unit of national economic output (via reduced fossil fuel dependency and greater energy efficiency) while pursuing economic development. This essentially waives the equity argument in favour of efficiency, but it does not guarantee contraction to safe emission concentrations

[3] - "Contraction and Convergence" (C&C) which on the basis of precaution advocates the adoption of a "safe" steady-state level for GHG concentrations in the atmosphere. The approach demands that global emissions will contract progressively through a budgeting process to deliver the predetermined "safe" level of GHG Concentrations. On the basis of equity, these emission budgets will be distributed so that entitlements converge from today's very different national levels to a figure that is equal per capita for all nations by an agreed date. To satisfy the aim of cost-effectiveness, surpluses or deficits in emissions entitlements would be internationally tradable, ideally redeemable for clean technology."
http://www.unepfi.net/cc/ceobriefing_ccwg_unepfi.pdf

OCTOBER 28



New Economics Foundation
Fresh Air - Evaluating Climate Policy Options

Written by Alex Evans of the Institute for Public Policy Research.
Conclusion - Why delay is not an option

The decision to undertake Contraction and Convergence will require a level of political resolve which hasn't been seen so far in multi-lateral environmental negotiations. Many will argue that while international policy will in the end need to rest on the principles of Contraction and Convergence, a climate policy like that is unrealistic in the short-term. Would it not be better to opt for an evolutionary approach in the meantime, perhaps along Kyoto lines? Even if such proposals are not the definitive answer to climate change, aren't they at least a step in the right direction?

But this 'softly softly' approach is increasingly untenable. First, atmospheric concentrations of greenhouse gases are rising inexorably, and so is the damage caused by climate change. The longer a fixed target is delayed, the higher atmospheric concentrations will climb. There is therefore a high risk that carrying on prevaricating will rule out any possibility of stabilising concentrations at 450 or even 550ppmv.

Second, positive feedbacks in the climate system could start any time, with the potential for a catastrophe 'runaway greenhouse effect' scenario.

Third, we don't know what atmospheric concentration these positive feedbacks will start at. Despite the fact that scientists' understanding of these dynamics is improving all the time, we are still essentially working without a clock, and no-one knows how much time we have left.

The political need for urgency

Environmental drivers are not the only reason why delay is no longer an option. There is also a strong political basis for proceeding with Non-Annex I participation on the terms outlined above sooner rather than later, and for distrusting evolutionary approaches.

. . . . it is often argued that developed countries should take a lead in combating climate change, to be joined in due course by developing countries accepting quantified targets. But, whilst many G77 countries may be happy enough with such an approach for now, the ever increasing risk of catastrophic

climatic events means that they have to take part sooner or later.

Despite all of the uncertainties about climate science, there is every chance that the projections will become worse as the decades go by. As time goes by, it will probably become necessary to make faster and deeper reductions. In other words, the downward slope of the contraction curve will become steeper – and the size of the global carbon budget diminish – just when participation by developing countries in quantified commitments would be most urgent.

In this scenario, therefore, the diminished carbon budget would mean that developing countries would have far lower entitlements – even under an immediate convergence scenario – than they would have done had they been allocated quantified commitments at an earlier stage.

> A climate policy based from the outset on a constitutional framework for formal convergence would provide the additional benefit of offering developing countries a surplus that could be sold on the international emissions market. In a late participation scenario, on the other hand, the smaller carbon budget would mean that any surplus for developing countries would be far lower – if indeed there was one at all.

The reaction of developing countries to such a situation would be fairly predictable. The surplus emissions they could have owned and sold had, in effect, been used up by Annex I countries, without any payment. Developing countries might reasonably feel that Annex I countries were doing precisely what they had said throughout the climate process that they would not do – 'pulling the ladder up after them'.

The irony of such a scenario would be painful. By persevering with a strategy geared towards making sure developing countries take part, the climate process would have lost any chance of 'taking the lead' after all.

This is the central reason why we have to implement both a managed contraction curve, aimed from its inception at a specific CO2 concentration in the atmosphere, and a convergence date within this that is capable of being accelerated. The alternative means waiting until feedback kicks in and then having to make sudden, sharp adjustments in the overall emissions profile and dealing with the distributional chaos that would result.

The world has no time to waste on short-term palliatives offered for purposes of political expediency. As the EU Commissioner for the Environment, Margot Wallstrom, said before this year's Bonn talks: "We can negotiate with each other, but we cannot negotiate with the weather." The people

of Tuvalu know this truth better than most. Whether the rest of humanity realises it early enough is ultimately a simple matter of choice."

www.gci.org.uk/consolidation/freshair.pdf

OCTOBER

Positive News UK
C&C - AMEN to Climate Change

For the last twelve years scientific reports have demonstrated that human pollution has begun to change global climate. Carbon emissions from fossil fuel burning are accumulating in the atmosphere and trapping more of the sun's heat. As the climate becomes less stable what the insurance industry calls 'Great Weather Disasters' are causing more damages through floods, storms, droughts and crop failures. Coastal areas are being lost and small islands are disappearing in the rising seas.

Twelve years ago, I interrupted a musical career to co-found the tiny organisation GCI (Global Commons Institute) based in London to undertake a mission to avert these devastating trends. By 1992 the UN Climate Convention had been created on principles GCI - and others - believed were fundamental: - precaution and equity. For the next three years GCI struggled against mainstream economists at the UN whose cost/benefit analysis of prospects under climate change tried to subdue these principles in favour of profits and pollution - on slippery slopes called 'no-regrets' and 'efficiency'. Many people will die because of climate disasters and we sank the cost/benefit exercise not least by exposing its daft global dictum that fifteen dead poor people equalled one dead rich person. Planetary Connections - the predecessor of 'Positive News' - published a cartoon to celebrate this saying, "Triumph for GCI – climate economists told to try again." We didn't give up. We kept on with our main climate mission, which was to synthesize the principles of precaution and equity into a fully international framework for policies and practices to avert the devastating climate trends.

In June 1996 GCI launched the first images of this synthesis at the UN. The programme was called "Contraction and Convergence" (C&C).

In a nutshell C&C simply shows the fossil fuel consumption or emissions for all countries into the future. As the very much-simplified graphic above shows the global total of emissions is shrinking - contraction - by an amount that stops the rise of their atmospheric concentration. At the same time the international sharing of this goes from the present distribution that is proportional to income to a future distribution that has become proportional to population - convergence - after an

agreed date. This has the virtues of equity, logic and simplicity. This value of this in a negotiation that has been marred by intense inequity and discord is immense.

> C&C is like a perfect cadence in music. While the notation of C&C is little more elaborate. In principle it is as simple as singing Amen.

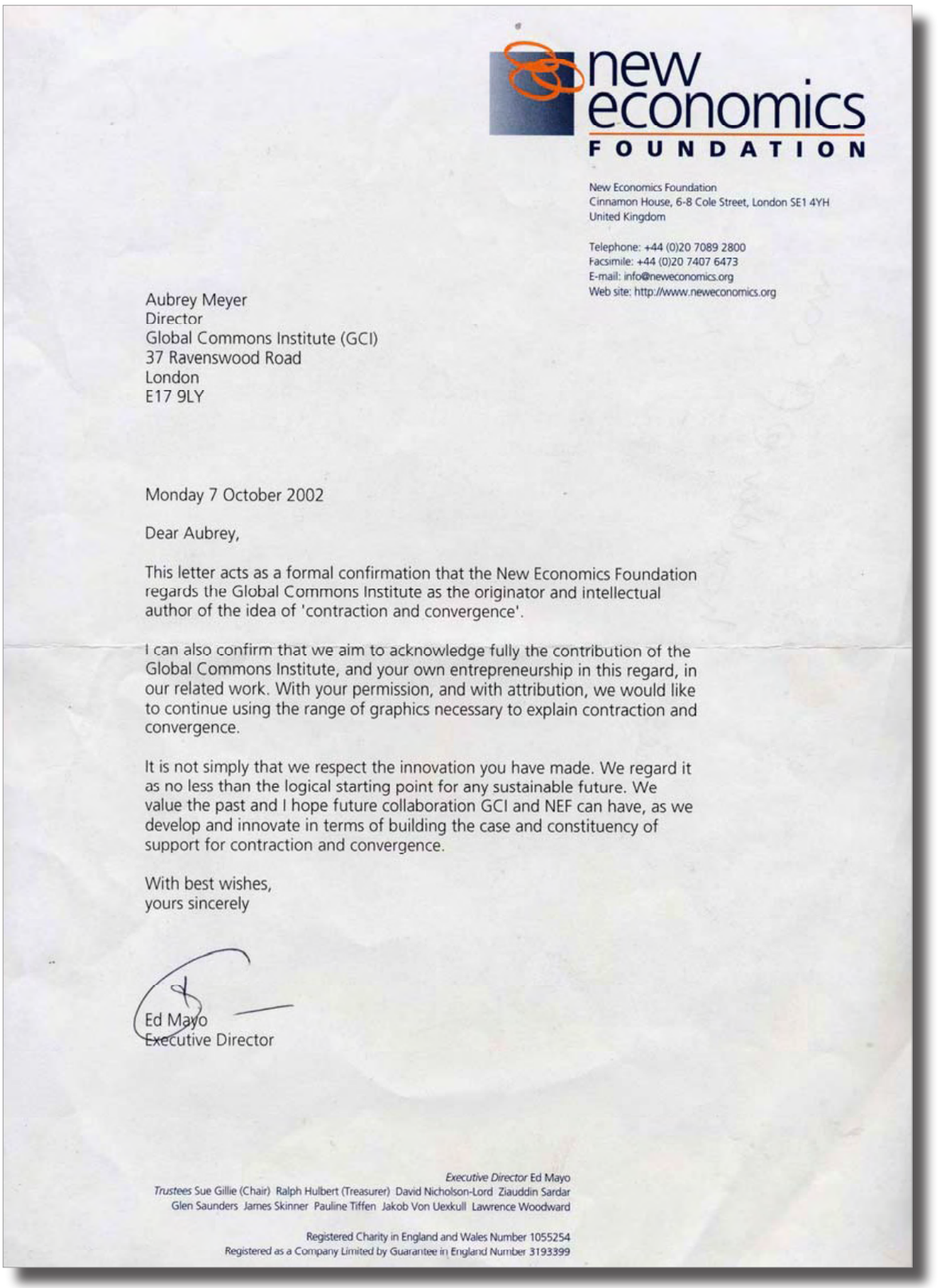
As the dangers of climate change become ever more apparent, the insurance industry has revealed that the rate at which damages are occurring is considerably faster than the rate of growth in the economy. Consequently, governments and policy makers begin to accept C&C as the sensible way ahead in the negotiations. It provides a simple way of synthesizing precaution and equity into a science-guided political agreement. Once the tradability of the international shares that are created by C&C is added, an economics of avoiding climate damages becomes possible guided by a shared sense of what is safe and how the asymmetric conditions that are changing the climate can be resolved.

C&C is now attracting numerous supporters from all over the world from individuals and institutions both eminent and ordinary. The government here are poised to accept the recommendation of the Royal Commission on Environmental Pollution to champion C&C at the UN. This would sit nicely with the rest of the degrees of enthusiasm for the concept. The UK Environment Minister Michael Meacher: - "C&C is a very powerful idea and we are moving remorselessly towards it." All this reflects the growing realisation that

> the "Contraction and Convergence" process is intrinsic to any emissions scenario that stabilises the rising concentrations of greenhouse gases in the atmosphere. The only questions are will it come about by chance or by formally building it into an international framework.

GCI believes that to start as soon as possible with this contraction of ghg emissions and the logical consequence of international convergence is prudent behaviour. In reality it is as simple as saying, "Amen to climate change." And as someone never said, "all life aspires to the condition of music."

Ed Mayo
New Economics Foundation



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Aubrey Meyer
Director
Global Commons Institute (GCI)
37 Ravenswood Road
London
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Monday 7 October 2002

Dear Aubrey,

This letter acts as a formal confirmation that the New Economics Foundation regards the Global Commons Institute as the originator and intellectual author of the idea of 'contraction and convergence'.

I can also confirm that we aim to acknowledge fully the contribution of the Global Commons Institute, and your own entrepreneurship in this regard, in our related work. With your permission, and with attribution, we would like to continue using the range of graphics necessary to explain contraction and convergence.

It is not simply that we respect the innovation you have made. We regard it as no less than the logical starting point for any sustainable future. We value the past and I hope future collaboration GCI and NEF can have, as we develop and innovate in terms of building the case and constituency of support for contraction and convergence.

With best wishes,
yours sincerely

Ed Mayo
Executive Director

OCTOBER

Financial Times

Looking beyond Kyoto

Vanessa Houlder

The United Nations is on the brink of achieving a cherished ambition. Despite its near-fatal rejection by the US, the Kyoto Protocol on climate change is likely to come into force within months.

The protocol has been described by one government as, "probably the most comprehensive and difficult agreement in world history." But policymakers are now beginning to debate the design of what could be an even more comprehensive and difficult agreement: a successor to the Kyoto Protocol that could embrace the US and developing countries.

The impact of implementation

Achieving the protocol's targets for greenhouse emission cuts is likely to spark controversy by requiring countries to transfer billions of dollars to the former Soviet Union.

Formal negotiations are due to begin in three years' time to decide what will happen in the post-Kyoto period after 2012. But already, a number of radical proposals with far-reaching economic and political implications are being discussed within governments. Substantial reports on the issue by organisations such as the International Energy Agency, the New Economics Foundation and the World Resources Institute have been published in recent weeks.*

It is a formidable challenge: a new agreement needs to avoid causing economic disruption and allow developing countries to rise out of poverty, while promising sharp, long-term reductions in the greenhouse gases that are a ubiquitous by-product of industrialised societies. Those cuts could be as much as 60 times deeper than those likely to be achieved under Kyoto, according to a recent speech by Tony Blair, UK prime minister. Mr Blair lamented the fact that Kyoto, while not radical enough, "is at present the most that is politically doable". Getting 185 countries to agree on a fair way to share the burden of curbing climate change is a political minefield, especially as the worst impacts of climate change are expected to affect future generations, rather than today's voters.

The magnitude of the task has provoked demands that new strategies be considered. "The fact is that alternative approaches have not had a serious hearing among natural scientists or among policymakers," says William Nordhaus, a Yale University professor.**

Prof Nordhaus proposes a globally harmonised carbon tax as an alternative approach. Another radical option under discussion is a technology-based successor to the Kyoto Protocol, in which

countries would contribute to a collaborative R&D effort. Yet another mooted approach would shift the short-term emphasis away from carbon dioxide towards other global warming culprits such as soot and methane, which might yield faster results.

But most of the designs for a post-Kyoto agreement involve amending rather than replacing its framework. Many of Kyoto's sternest critics applaud some aspects of its framework, such as its use of "emissions trading", which allows emission cuts to take place where they cost the least, and the so-called clean development mechanism, which promotes "green" investments in developing countries.

However, a radical overhaul of the Kyoto framework may be needed if it is to succeed in its next phase. "The challenge is to find a formulation that builds on Kyoto but is sufficiently different to get the major players into it," says Eileen Claussen, president of the Pew Centre on Climate Change, a US non-profit organisation. "You have to rethink all the parts of it."

A new agreement might not involve Kyoto-style quantified, absolute targets for reducing greenhouse gas emissions. It could, for example, use the "emissions intensity" approach adopted by the US, which would limit greenhouse gas emissions per unit of output. A more promising approach might involve setting tough, quantified targets subject to a "safety valve" that would prevent them from becoming excessively costly to implement.

Perhaps the single most difficult challenge is to design a framework that could prove acceptable to both the US and developing countries. Even the strongest advocates of the Kyoto Protocol acknowledge that it is an inadequate basis for future agreements unless more countries are drawn in. Less than 35 per cent of the world's global emissions are controlled by the protocol.

This issue will be enormously difficult to resolve. Limiting the emissions of developing countries, which by 2030 will replace the industrialised world as the largest group of energy consumers, is widely seen as crucial and may be a condition for US involvement. Yet poor countries are adamant that they will not take on commitments until the industrialised world, most notably the US, has shown leadership by cutting emissions.

Will the US return to the negotiating table? Some experts believe that now it has shrugged off the onerous obligations of the Kyoto Protocol, it may well re-engage in an international agreement later this decade. "The door is completely open for the US in the second budget period to shape a protocol that it could call its own," says Philip Clapp, president of the National Environment Trust, a US environmental organisation.

If the US participated in the agreement, developing countries might agree a timetable by which they would become involved, possibly dependent on their stage of development and possibly not involving quantitative commitments.

New Delhi conference

India on Wednesday highlighted the growing tension between rich and poor countries over climate change when it criticised calls for developing countries to curb greenhouse gas emissions.

But many developing countries - particularly India - fundamentally object to any agreement that lacks a reference to long-term emissions entitlements. As they bear little responsibility for the global warming problem, they believe it would be deeply unfair to accept emissions limits that are many times less than those of developed countries.

The developing countries have put forward radical proposals to redress the balance. Brazil has argued that the burden of emissions reductions should be distributed according to countries' cumulative contribution to the rise in global temperature from 1840 onwards. This formula would give the UK - the birthplace of the industrial revolution - the toughest target; the US target would be relatively light.

> Another idea, which was forcefully promoted during the 1997 Kyoto negotiations by India, China and African countries, would require the right to emit greenhouse gases to be allocated equally to every world citizen

-or at least offer the prospect that these rights would be allocated equally at some point in the future.

This proposal, dubbed "Contraction and Convergence", would involve sharing out each year's ration of a global emissions budget so that every country converges on the same allocation per inhabitant by an agreed date. An international trading scheme would allow countries to buy and sell unused allocations from other countries.

This concept, which has been developed and promoted by the London-based Global Commons Institute, has won widespread support. In 2000, it was endorsed by Jacques Chirac, president of France, who declared that it would "durably ensure the effectiveness, equity and solidarity of our efforts".

But there are potential drawbacks. One concern is that it would be unfair. Different countries have different needs: people in cold countries need more energy to keep warm, while those in sparsely populated countries need more energy for transport.

Limiting the emissions of developing countries is widely seen as crucial and may be a condition for US involvement. Yet poor countries are adamant that they will not take on commitments until the industrialised world, most notably the US, has shown leadership by cutting emissions.

Another concern is that it would give a large share of emissions permits to a very small number of countries - those with the largest populations - which could potentially collude to maintain an artificially high price.

The system might also encourage corruption. "It would probably become common practice for dictators and corrupt administrators to sell part of their permits, pocket the proceeds, and enjoy first-growths and song along the Riviera," says Prof Nordhaus.

Another more fundamental drawback of using a formula of this sort is that it would be resisted by many countries, particularly those required to make rapid, dramatic cuts in emissions.

An unwanted agreement could not be enforced. Countries that opted out of the agreement would suffer few penalties, although consumer boycotts, exclusion from international events such as the Olympic Games and, possibly, trade sanctions might be considered.

If a formula such as Contraction and Convergence is rejected, the next climate agreement is likely to be negotiated in the same way as the Kyoto Protocol, an ad-hoc political process involving hard-bargaining and little transparency.

There is a potential advantage in allowing countries to negotiate targets that they believe are credible. People are more likely to believe that credible commitments will be enforced, giving them more incentive to innovate and change their behaviour.

But by focusing on drawing up a politically acceptable agreement, there is a clear risk of not doing enough. This risk is hard to quantify in the absence of a scientific consensus about what constitutes a dangerous level of warming.

The option of preventing dangerous climate change may close more quickly than often assumed. Even delaying reductions by industrialised countries beyond 2010 may make it impossible to prevent the long-term disintegration of the West Antarctic Ice Sheet and sea level rises of 4 to 6 metres, according to a recent paper in the journal Science.***

Despite the uncertainties about the long-term goal of climate change policy, there is widespread agreement that the Kyoto Protocol is just the first step on a long road. This means that the best test of the efficacy of the agreement is "whether the next steps can be negotiated and if negotiated, can be met," according to the International Energy Agency.

The task of bringing together all the countries required to stabilise greenhouse gas concentrations is urgent. "The longer the US, other industrialised nations and the developing world head down different policy tracks, the harder the necessary participation and co-ordination will be to achieve, says Richard Schmalensee of the MIT Sloan School of Management.****

There is a risk that the controversies and challenges arising from implementing the Kyoto targets will distract attention from the bigger picture. Unless governments turn their attention to the task ahead, the ratification of the Kyoto Protocol could prove a Pyrrhic victory.

* Beyond Kyoto, Energy Dynamics and Climate Stabilisation, by the International Energy Agency; Options for the future architecture of international climate change policy, by the New Economics Foundation; Building on the Kyoto Protocol: Options for protecting the climate, by the World Resources Institute

** After Kyoto: Alternative mechanisms to control global warming, by William Nordhaus, Yale University

*** Dangerous climate impacts and the Kyoto Protocol. Science, vol 296. 14 June 2002

**** The lessons of Kyoto. R Schmalensee, Sloan Management Review. Winter 2002

NOVEMBER

Guardian
A chain reaction

For 30 years Mayer Hillman has been busily turning conventional political thinking on its head. From road safety to renewable energy, he has come up with solutions that are hard to dismiss. Which is probably why you've never heard of him

Anne Karpf

Clip this article. Photocopy it, send it to a friend, file it. In 10 years' time, if the person it's about is right (and doubt doesn't figure in his lexicon), you'll be amazed that the views it expresses ever seemed outlandish or unfeasible. What sounds now like wild ecotopian fantasy will have turned into an unexceptionable statute governing daily life.

.....

Linking all these diverse preoccupations is what Hillman calls "the equity argument". As fellow researcher and activist Stephen Plowden put it, "You have always been interested in the fate of people left behind by 'progress'." Hillman expresses it succinctly: "I abhor exploitation" - a feeling that originated, he readily admits, in being the youngest of three children and the sense that he was being denied his turn.

His current preoccupation is with the social implications of climate change, and here Hillman's conclusions are so dramatic, so jumbo in their tentacles, that they'll probably propel him into prominence. His trigger is the Contraction And Convergence campaign devised by Aubrey Meyer, founder director of the independent Global Commons Institute (GCI). This has charted the vast reduction of carbon emissions required of the western world (that's the contraction bit) in order to equalise it with the rest of the world (the convergence) to avert climate catastrophe and protect the global commons - a process nothing less than "equity for survival". Their calculations make Kyoto look like trying to end a drought with a watering can.

GCI believes that Contraction And Convergence is the only way of resolving the most critical problem that mankind has had to face, and political representatives of both developed and developing countries are reluctantly coming to the same stark realisation.

According to Hillman, our carbon emissions will need to be cut by 10% each and every year for a 25-year period to bring convergence between rich and poor nations. Hillman believes that no sector will feel the impact more than transport. This is how it would work.

Each of us will be allocated an annual fuel allowance, and every time you buy a product or service with a significant energy component - whether paying a gas bill or buying an airline ticket - it will be deducted from your annual account.

There will be trading, of course. If you're clever or frugal, you'll be able sell your surplus fuel coupons on the open market to those willing to buy them. And there'll be takers, since a return flight from London to Florida will consume double the annual fossil fuel ration that each person presently living on the planet can be allowed. Says Hillman, a delightful blend of the libertarian and the interventionist, "You want to fly to America? Fly to America, but you'll be bloody cold for the next couple of years because you'll have run out of coupons."

He's hardly finished talking before I'm in with the objections. How will it ever be implemented? His vision is surely absurdly voluntaristic, as if rich countries and greedy transnationals will simply relinquish their advantages in a grand altruistic gesture for the abstract good of the planet. Where's the politics? Where's the realism? Who will police it on the personal, corporate and international level?

Hillman is undaunted. "I call this carbon rationing because I deliberately want those connotations. When there was a shortage of food in this country during the last war, people didn't say, 'The poor will just have to starve' - it was agreed that the only fair solution was to share it. I'm totally convinced that the same thing will be introduced with fuel over the next 10 years. Increasingly, we'll witness calamitous events, like

when the city of York flooded. If it happens once, people think it's a freak event, but when it happens twice or three times, people will begin to sit up. Already in some southern states of the US, people are finding it difficult to insure themselves against hurricanes."

Hillman professes himself confident that the US will eventually sign Kyoto because September 11 signalled a realisation that the rest of the world impacts upon them. He makes an analogy with apartheid and South Africa refusing to heed international protests until world pressure became irresistible.

"People say technology will solve the problem, for instance, by making more efficient use of fuel, and I say no - if you don't reduce demand first, then by making it more efficient you'll increase demand for it. If you get more miles from the gallon, then you're lowering the cost of travel and effectively promoting it. You've got to reduce demand before you go down the efficiency and renewable energy route, and you reduce demand by rationing. At the start of the war, you didn't have the Tories saying we have to go to war against fascism, and the Labour party saying elect us, we won't go to war against fascism. There was a recognition that there was a joint enemy."

The implications are colossal. Cycling would come into its own. Hillman predicts that the day will come when people in the street will feel sorry for someone passing in a car: it will be a sign of an emergency requiring them to use up a precious part of their annual carbon quota. Bye-bye globalisation and supermarkets (not only couldn't we drive to them regularly, we also couldn't afford foods or other globally traded products that had themselves travelled so far), hello again corner shops and local produce. This is socialism via environmentalism. Will the planet turn out to have been our greatest revolutionary?

"We have no moral right to leave a legacy of damage to the planet. Our children and grandchildren will ask us what we did to prevent global catastrophe." Hillman knows that he'll be accused of exaggerating the risks but maintains, "Governments already realise that they have to deliver their share of reduction. It's a finite amount that the planet can absorb, so you have to set that as your limit, then work out how to get there. Your instinct will be to find fault with these statements.

If you don't think these solutions will work, there's an obligation on you to think up a better one. So often, ideas are rejected on the grounds that they are not perfect in all respects, in favour of the status quo, which is far more imperfect."

As with many crusaders, Hillman's impatience - "I'm increasingly frustrated as I get older at not being able to persuade people to think as I do" - is tempered by his certainty: "I know from experience that ideas need to be floated and then get taken up. I'm not deterred by rejection."

Michael Meacher MP
Minister for the Environment

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defra
Department for Environment
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Aubrey Meyer Esq
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15 November 2002

From the Minister for Environment and Agri-Environment
The Rt Hon Michael Meacher MP

Dear Aubrey

Thank you for your letter of 14 September about references to the "Contraction and Convergence" model in Government publications.

It is unfortunate that the Performance and Innovation Unit's Energy Review omitted to attribute the Contraction and Convergence reference to the Global Commons Institute. I am sure that this was just an oversight and apologise on their behalf.

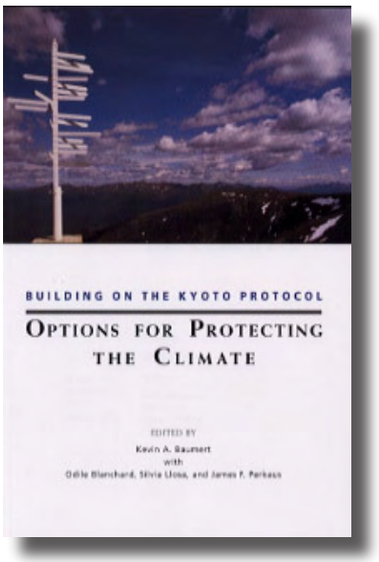
I fully understand your wish to protect the integrity of the Contraction and Convergence model. By this letter, I would like to seek GCI's consent to references to the model in Government publications dealing with climate change and greenhouse gas emissions, and give my assurance that all reasonable steps to ensure that full attribution is given to the GCI in each case. I hope this is acceptable to you and would be grateful if you would confirm in writing that it is.

Yours sincerely
Michael

MICHAEL MEACHER

2002

Kevin A. Baumert et al
Building on the Kyoto Portocol



Publisher: World Resources Institute ISBN: 1569735247
Resource Sharing; Per Capita Entitlements

This approach first establishes an allowable level of global emissions, termed an emissions budget. The emissions budget (i.e., the total "environmental space," as Tynkkynen (2000) terms it) reflects the ultimate level at which to stabilize GHG concentrations over time, or the amount of GHGs that can be safely emitted in the atmosphere while meeting the ultimate objective of the UNFCCC.3 This emissions budget is then distributed equally among the global population, thereby implying an equal right to the atmosphere, with each country getting an entitlement proportional to its population. These global budgets and the subsequent per capita entitlements can also be changed over time as new scientific information becomes available (Table 8.2). Although there are some operational variants of this pure per capita approach, this chapter focuses attention on the "convergence" scheme, which, in political and research circles, has become synonymous with this approach. In any case, all notable variants of this idea follow the generic approach outlined above. The convergence scheme suggests that all countries participate in the emissions commitment scheme after the first commitment period of the Kyoto Protocol, with the ultimate objective of converging to equal per Equal Per Capita Entitlements

This scheme was first introduced by the nongovernmental Global Commons Institute (GCI) in 1990 and has been refined further into what is popularly termed "contraction and convergence." The approach has been consistently advocated at the sidelines of climate politics and, over the years, has received increasing support from some NGOs and governments.6 However, to date, it has not yet been successful in breaking into mainstream climate negotiations.

GCI's approach starts off by defining a tolerable level of climate change based on the scientific assessments of the Intergovernmental Panel on Climate Change (IPCC), which could be adjusted in the future to respond to improved scientific information. Based on such an ecologically sustainable target, a yearly global carbon budget is devised, which "contracts" gradually over time. This contraction continues toward a level where the per capita emission levels of" participating countries "converge" toward an equal level. Thus, convergence claims to allocate shares of the budget to the emitting nations on an equitable basis (GCI 1999), whereby the per capita entitlements of the developed countries decrease while those of most developing countries increase. After reaching convergence, all countries would contract their emission entitlements equally until the requisite global emissions budget is reached. According to GCI, it is not possible to tackle the climate issue without adhering to these two key elements—contraction (environmental integrity) and convergence (equal per capita entitlements) (Meyer 2000).

NOVEMBER 18

Lord Bishop of Hereford
Hansard

Column 209
"The Government's own document about the Johannesburg conference, Reaching the Summit which, incredibly, failed to mention the Kyoto Protocol—although it was doing its best to find some good news stories—emphasised that, "environmental problems affect us all, but they affect the poor most . . . The poor live in the most marginal areas: they are the most vulnerable to natural disasters and they often depend directly on natural resources for their livelihoods".

So for their sake, if not for our own, we must give a higher priority to tackling climate change. Although Kyoto was most welcome as a beginning and the Government's proposed emissions trading Bill is a step in the right direction, all this is totally inadequate to deal with the colossal scale of the problem. I have been involved in correspondence with the noble Lord, Lord Sainsbury of Turville, about this without receiving a lot of satisfaction.

I would urge the Government to look again, with much greater enthusiasm and commitment, at the project called Contraction and Convergence developed by the Global Commons Institute and now vigorously championed by the Institute for Public Policy Research, and specifically affirmed by the Anglican Congress on the Environment,

-which brought together representatives of the 70 million members of the Anglican communion around the world and which met in South Africa in the week before the Johannesburg summit.

In the barest outline, Contraction and Convergence involves calculating the maximum tolerable level of greenhouse gases in the atmosphere—450 parts per million volume. That is a considerable increase on present levels and reflects on what present levels are already doing to the climate. Then one has to calculate the reduction in emissions which would enable us to stabilise that degree of atmospheric pollution by the end of this century. Then one has to allocate to every member of the human race an identical target for per capita emissions—the principle of equity—then place a financial value on that target figure, the "permission to pollute"; and then introduce a system of emissions trading by which the developed countries, which are already grossly exceeding the per capita target which we would have to aim at, would be able to buy from developing countries during the period of convergence the right to continue excessive pollution while they took vigorous measures to bring their own emissions down to the permitted per capita level. That would involve all those wise things which the noble Lord, Lord Ezra, was speaking about, and many others besides, in

terms of biofuels, energy conservation and so on. There would be a dramatic change in our lifestyles and transport systems. It would require an enormous effort.

Contraction and Convergence is scientifically based, as Kyoto was not. It is equitable, as Kyoto is not. It would help developing countries by giving them the means to invest directly in clean energy technology which we in the developed world could provide for them. The most extraordinary thing is that it would overcome every single objection raised by the United States Government to the Kyoto Protocol. It sounds too good to be true, but it is possible.

Let the United Kingdom Government take a vigorous lead in propounding this scheme. There is not much time. Alas, I have not time to quote to your Lordships from an article underlining the desperate urgency of this matter.

But let not the Government of this country simply express vague and polite interest in Contraction and Convergence; let them make every possible effort to bring it about for the salvation of the planet."

http://www.parliament.the-stationery-office.co.uk/pa/ld199697/ldhansrd/pdvn/lds02/text/21118-08.htm

Sir John Oliver
The Bishop of Hereford

THE BISHOP OF HEREFORD
THE RT REVD JOHN OLIVER

THE BISHOP'S HOUSE,
THE PALACE,
HEREFORD HR4 9BN.
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Mr Aubrey Meyer
Director
GCI
37 Ravenswood Road
London E17 9LY

20 November 2002

Dear Aubrey

Thank you for your message of the 15th November about my exchange with Lord Sainsbury of Turville about Contraction and Convergence.

I did follow it up, and I am very happy to enclose copies of the correspondence. The Government's attitude towards C & C is lukewarm, to say the least. I suppose the opportunity to have a real debate about it will be in the Energy Bill which is coming to Parliament probably in the New Year.

But I did have another go at them in my contribution to the debate on the Queen's speech on the environment in Parliament yesterday, so you could look that up in Hansard if you were interested. It was simply another attempt by me to outline what C & C is all about, and to encourage a bit more enthusiasm for it on the part of the Government.

I had a copy of Alex Evans' article (I think in something published by the New Economics Forum?), which points out the extreme danger of delaying any implementation of a serious attempt to reduce green house gas emissions. Unfortunately I didn't have time to quote from that document, because I also had to go on and talk about farming.

I have the impression that there is some movement on the part of the Government, but they are not really ready at the moment to grasp the mettle of taking the lead in something as far reaching and demanding as Contraction and Convergence. However, we can but keep on trying.

With best wishes

Yours sincerely

+John

NOVEMBER

Heinrich Boell Foundation Evaluation of World Development Report

”The Report is to be commended for its recognition that climate change poses major threats to developing countries including serious risks of catastrophic and irreversible climate and ecosystem disruption. While the WDR authors propose switching to zero emissions energy sources, a more energy-efficient long-lived capital stock, and increasing incentives for agricultural intensification and forest conservation, etc., they duck the vital debates on equitable global institutional arrangements and approaches to achieve them.

In light of a widely acknowledged impossibility of solving the global warming problem with uncoordinated market-based activity,

-what is a proper constitutional basis for solving the problem the basis of precaution, prevention and equity, as required by the UN Climate Change Treaty?

The Global Commons Institute argues that “Contraction and Convergence” (Meyer, 2000) is logically the only way of resolving this set of problems.

Why does the WDR fail to pick up on today’s vigorous debate about “ecodebt”? Surely, the answer to this question lies in the power politics and industrial lobbying, of which the Report is a “victim”.

What are the consequences of operationalizing notions such as eco-debt vis-à-vis the North/South divide in production and consumption patterns?

Why has the Report’s (potentially powerful) plea for “improved equal access to assets” been compromised by its buying into the Kyoto Protocol’s in egalitarian theory of property rights?

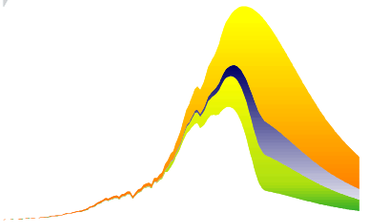
Is it not the case that industrialized societies were allowed such extensive property rights in the world’s carbon dioxide dump, while other countries, which had made sparing historical use of the dump, were given no rights whatsoever (Lohmann, 2002)?

Further, why warrant no mention of the Protocol’s spurious scientific basis and the new carbon-industrial complex it gives rise to (Lohmann,2001)?”

www.boell.de/en/nav/275.html

Aubrey Meyer
Global Commons Institute

GCI - *"equity and survival . . . . . "*



25/11/2002 12:07

The Rt. Hon. Michael Meacher MP
Minister of State (Environment)
Department of Environment, Food and Rural Affairs
Nobel House
17 Smith Square
LONDON SW1P 3JR

Dear Michael

"Contraction & Convergence"

Thank you for your letter of the15th of November seeking consent to reference C&C in Government publications. Thank you also for understanding of GCI's principal concern, which is to protect the integrity of the C&C model. It is afteral an approach now widely recognised as constructively focused on the point of the UNFCCC.

I am told that the Government's White Paper on Energy and Climate will be at least part of the Government's response to the Royal Commission on Environmental Pollution (RCEP) and therefore the RCEP's advocacy of C&C.

I imagine Government policy to deal with climate must involve most departments of Government and that Government as a whole will want to speak with one consistent voice on this and the C&C dimension in the White Paper and other related material.

The record to date does show some inconsistent presentation by different parties, inter alia DTI and DFID (see enclosures). There have been erroneous assertions about the properties of C&C that occasionally not only contradict each other, but also the generic epistemology embodied in the C&C model. In a recent letter to the Bishop of Hereford, the Under Secretary of State for DTI even implies that C&C is the problem, rather than a solution to the problem of climate change.

This seems a good moment therefore to protect the integrity of the model. Having C&C correctly presented for what it is, carefully distinguished from the erroneous constructions put on it, seems the sensible basis on which to progress debate.

With this in mind and also in the light of your letter, a member of the White Paper drafting team has asked me to provide some C&C text and imagery that can be used by them as appropriate. I enclose a GCI draft of this with this letter.

Please will you indicate to me whether you feel the Government could regard this as an acceptable basis for their presentation of C&C in the White Paper, or whether there are concerns that need to be resolved?

Yours sincerely

Aubrey Meyer
Director

c.c. Sarah Hendry – DEFRA Global Atmosphere, Peter Brunt DTI.

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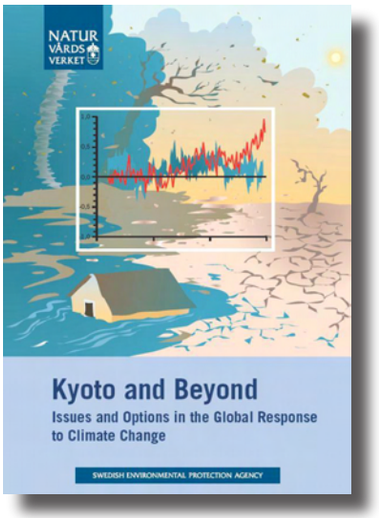
NOVEMBER

Swedish EPA
Kyoto and Beyond



"A good starting point in the search for equitable solutions is the proposal to equalise per capita emissions at some point in time, meaning in effect, to assign everyone the same property rights to the atmosphere. Equalising or converging per capita emissions is the stated objective of the "Contraction and Convergence" proposal developed by the Global Commons Institute (see Box 6)."

> Box 6: Contraction and Convergence
> "Contraction and Convergence is a proposal that was developed by the Global Commons Institute (GCI) several years ago. It is a proposal for burden sharing which has been promoted as an alternative framework for global action on climate change (Evans 2001)."
>
> "Contraction" refers to a global emissions reduction trajectory designed not to exceed a specific greenhouse gas concentration in the atmosphere. "Convergence" refers to national emission entitlements designed to converge at an agreed date at equal per capita emission entitlements for all countries. Emission entitlements would be proportional to population from then on."

www.internat.environ.se/documents/issues/climate/report/Kyoto.pdf

NOVEMBER

INTACT
Transatlantic Workshop, Washington

" . . . . the final aim for climate change policy: - at what level do we consider GHG concentration in the atmosphere a non-dangerous anthropogenic interference?

> The stipulation of a reasonable level of GHGs in the atmosphere could be a precondition for the specification of a global emissions cap. This, in turn, would facilitate the development of a global emission trading system, arguably the most effective and cost-efficient instrument for protecting the earth's climate.

To participants the issue of fairness, i.e., the 'ethical reasoning' behind any such future agreement with the developing countries, is enormous. Many experts believe that the developing countries will never accept a baseline-year-based approach for fixed targets as the one taken by the industrialized countries in the existing Kyoto Protocol ('grandfathering principle').

The challenge in the negotiations of a second commitment period will therefore be to search for an approach which is per-capita based.

Should a pure per-capita approach prove not to be politically feasible within the next two decades, one could also think of a mixture of the grandfathering and the per-capita approach for a second commitment period (2020, 2030), and pure per-capita-based commitments by, for example, 2050 or 2060.

. . . the establishment of a final concentration target keeps the door open for the United States to rejoin the international efforts within the UNFCCC, which had originally seemed to be increasingly impossible since the Kyoto path was designed."

NOVEMBER

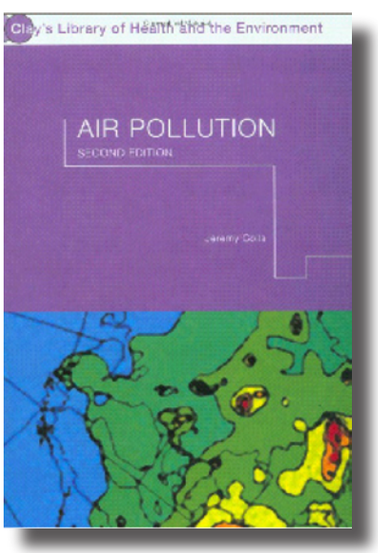
Jeremy Colls
Air Pollution

Publisher: Routledge. ISBN: 0415255651

[Page 470]

The Royal Commission on Environmental Pollution (RCEP) recommended that global CO2 concentration should not be allowed to rise higher than 550 ppm compared to its current value of 370 ppm. In order to 'pull its weight' in achieving this, the UK should cut CO2 emissions by 60% by 2050 and by 80% by 2100.

The RCEP supported the principle of contraction and convergence in which per capita energy consumption would end up the same for all people.

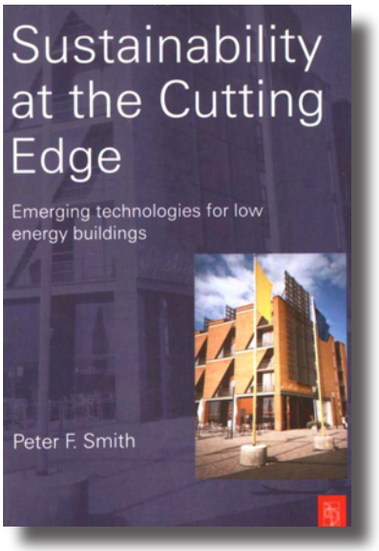


Developed Countries would have to cut their emissions. Developing nations would be able to increase their emissions in order to raise living standards.

Since GHG emissions are mixed into the global atmosphere from wherever they are released, there might be a role for international trading in emission quotas, by which nations that found it costly or difficult to reduce emissions could buy quota from nations that found it easy or cheap to reduce emissions below their quota.

NOVEMBER 20

Peter F. Smith
Sustainability at the Cutting Edge



Publisher: Architectural Press. ISBN: 0750656786

It is not just the problem of us in the developed world reducing emissions, there are developing countries that wish to increase their emissions because they want to industrialize. A great disparity exists in emissions between the rich and the poor nations - that is a big problem and international action is required to address it. The principles that need to underlie such action are the Precautionary Principle, the Polluter Pays Principle (e.g. through measures such as carbon taxes or capping and trading arrangements), the Principle of Sustainable Development and lastly a Principle of Equity across the nations and across the generations.

Figure 1.5 comes from the Global Commons Institute the proposal it describes is called contraction and convergence. It shows emissions of carbon dioxide in the past, in the present and predictions for the next 100 years, the sources of emissions being divided into major country groupings. The overall envelope is an emissions profile that would stabilize carbon dioxide concentrations in the atmosphere at 450 ppm. It peaks within a few decades from now and then comes rocketing down to well below today's value of emissions by the end of the century. An emissions profile stabilizing at 550 ppm has a similar shape but at somewhat higher levels.

How can the burden of emissions reductions be shared equitably between nations? The Global Commons Institute argues that the only fair way to share it out is to give every person in the world the same allocation of carbon dioxide emissions. That is shown in the diagram as applying from the year 2030; between now and 2030 is the period of 'convergence', That is a very radical proposal; for instance the allocation to someone in the UK would be less than 20% of our current average per capita emissions. The only way it could be achieved would be through carbon trading between nations. Industrialized nations would buy carbon credits from countries in the developing world, where the per capita rate of carbon emissions is below the target average so that the carbon gap progressively narrows ultimately to zero,

> This proposal well illustrates the problem and the type and scale of action that is necessary; it is also one that meets to a good degree the four principles we mentioned above.

DECEMBER

Sustainable Development Int.
Climate Change Legislation

The Climate Change Convention in Delhi drew to a close last week, with the final declaration stressing the importance of combining adaptation to the impacts of climate change with traditional mitigation ideas.

The declaration, a result of talks between officials from 170 countries, also pushed for the increased use of less polluting energy sources and other new technologies, together with measures such as governmental promotion of technological advances and the promotion of technology transfers for the reduction of greenhouse gas emissions in major economic sectors, including through public sector approaches.

However, the conference was not without controversy, with Indian Prime Minister Atal Behari Vajpayee saying that developing countries should be exempt from emission cutting targets because they produce just a fraction of the world's emissions and are unable to afford reduction measures. In the last issue of our newsletter we asked our readers' opinions on the subject of exemption.

The replies were varied in their ideas – and unexpected too. Although a large proportion thought developing countries should be made exempt from climate change legislation so that they can foster economic development, many of you had ideas to rival the world's politicians.

"I think the developing countries should be paid to comply with greenhouse gas emission requirements. If they don't comply, they shouldn't get paid," said one reader, who added that funds should be generated by "contributing funds to the worldwide greenhouse account based on the amount of greenhouse gases that are emitted from their countries. The US should contributed 1/4 of the total, since it contributes 1/4 of the total of the world's greenhouse gas emission."

"There should be enough in the account to pay developing countries a dollar for every thousand tons equivalents of GHGs they emit per year that is below the US's, times the ratio of the developing country's population to the US population."

Another wrote that "No one should be exempt from reducing greenhouse gas (GHG) emissions," although he added that the biggest contributors, "should be required to make significant progress in reducing emissions before the developing countries are required to begin implementing previously prepared plans."

"The fairest approach to global emissions targets is contraction and convergence, a strategy proposed by the Global Commons Institute,"

-" said another contributor. "Total emissions should contract to a sustainable level, as advocated by the IPCC, and that the available emissions rights should be shared out on a basis of convergence to an equal per capita level by a specific date in future, such as 2030 or the UN centenary of 2045."

"This means that emissions from countries like India could continue to rise while those of industrial countries would contract." This idea was also echoed by many other readers.

In conclusion, as most of your comments suggested, the most favourable solution seems to be to allow those poorer countries to be exempt for a pre-determined cut off period, until they reach a level of economic security where they can afford to contribute.

Other solutions involve the ploughing of money into the production of alternative energy sources in developing countries, utilising natural resources to ensure the future of poorer countries are less polluting than the developed world.

"If we start investing in alternative energy sources we can start with local production, and instead of developing polluting sources which have to be replaced later, we start developing and expanding on the 'right foot'," said one reader. "In this way, the developing countries can have an advantage over developed countries who are sitting with infrastructures that have to be altered at great cost."

Whatever the solution, something needs to be done drastically. As one reader wrote succinctly we need to change the fact that much of the world's air has become "so thick as to be nearly opaque". So far however, it seems impossible to agree on a definite solution to the problem of human influenced climate change.

Ben Townley

DECEMBER

Quaker Green Action
Friends and Climate Change

Friends have been considering their response to the environmental threats to the planet over a number of years, and climate change is one of the greatest areas of concern. Climate change is likely to lead to droughts, flooding and loss of productive land, affecting particularly poorer countries. In areas like the Middle East, parts of Africa and in South Asia, conflicts over fresh water supplies and productive land would be made worse. Climate change relates directly to Friend's concerns on peace and justice. This note does not try to re-state the facts about climate change, which have been well

covered, for example in papers to the conference in November 2001 organised by the Earth, Our Creative Responsibility Group of QPSW.

This note follows up the enthusiasm shown by a number of those present at this conference, that Friends should consider whether, as well as encouraging in general terms government actions to minimise climate change, we should be specific in pressing for the adoption of the principle of "Contraction and Convergence"

in setting countrys' greenhouse gas emissions quotas. Background Under the UN Framework Convention on Climate Change (UNFCCC) set up at Rio in 1992, virtually all countries agreed on the need to take action to reduce greenhouse gas emissions. Firm targets for emission reductions by the industrialised countries were set at Kyoto in 1997, to be achieved in the first "commitment period", ie by 2008- 2012. These targets were agreed by what might best be described as horse-trading., as reductions (or in some cases, eg Australia, increases) relative to a country's 1990 emissions Thus the larger the level of those emissions, in general, the larger the "Quota" allocated. The overall reduction targets averaged just above 5%, with the UK agreeing to one of the most stringent reductions of 12.5%. Because the emissions from developing countries were relatively low, they were not given any specific emissions targets for the first commitment period. The global reductions agreed were small compared with the reductions implied in the reports of the Intergovernmental Panel on Climate Change (IPCC) as necessary to reduce the risk of catastrophic climate change - a global reduction over a number of decades of ~60%. Even with this quite stringent reduction, there will be significant climate changes. Within the Kyoto agreement were a number of so-called "Flexibility Mechanisms". These include "Emissions Trading" between industrialised countries, whereby a country which has reduced its emissions more than required to meet its target can sell surplus quota to a country which is not meeting its reduction target. At the conferences since Kyoto which were to finalise the details of the agreements, the extent to which emissions trading should be allowed was a major point of difference. The EU wanted a limit on what proportion of a country's reduction target could be met by emissions trading, while the USA, Russia and others wanted unrestricted emissions trading. One objection to emissions trading is that it would allow the USA to take virtually no action to reduce its emissions, by buying Russian "hot air" - ie surplus emissions quotas based on large reductions in Russia's greenhouse gas emissions since 1990 due to massive de-industrialisation. A more fundamental objection is that the trading is on quotas negotiated at Kyoto, based relative to current emissions (see above) . Another flexibility mechanism is the "Clean Development Mechanism" whereby industrialised countries can claim benefits from emissions saved by projects they undertake in developing countries. Despite

negotiating an emissions quota per head much larger than nearly every other country, the USA pulled out of the Kyoto agreement in 2001, one of their objections being that emissions limits were not set for developing countries. It is thought the USA is particularly concerned about the rapid industrialisation of China. Negotiations are needed soon on the framework for setting emissions quotas in the medium and longer term. This framework must be seen as fair, and should be such as to make US participation likely.

"Contraction and Convergence" is a framework which bridges the gap between national emissions targets based on existing emissions and fully equable targets based on equal emissions per head of population. Over a period of a few decades, the global total of emission permits would be progressively reduced to a value reckoned to limit the risk of catastrophic climate change. Within this overall total, each country's emissions target would converge to an equal amount per head of population. This concept was developed by the Global Commons Institute (their web site shows examples of how allocations might develop under different scenarios - www.gci.org.uk) Within this framework, emissions trading would be allowed. This would allow countries whose emissions per head are less than their "quota" to sell any surplus. As indicated above,

> -unlimited emissions trading within the present regime has not been favoured by environmentalists and the EU. However, in the framework of Contraction and Convergence, emissions trading seems more acceptable - the rights being sold would be based on a fairer allocation, rather than what industrialised countries negotiated for themselves -

at Kyoto. Also the Russian surplus would be rapidly eroded as their quota reduces. The Clean Development Mechanism might merge into the overall emissions trading scheme. The inclusion of developing countries could encourage US participation in the framework. Emissions Trading - how might it work? Currently, the UK and Western European countries per-capita greenhouse gas emissions are just over twice the world average, and the USA's are about five times the world average. Even neglecting population increase, if emissions quotas per capita converge and the global total has to reduce by 60%, this would imply the UK and Western Europe having emissions quotas less than one fifth of their present emissions and the USA about one tenth of their present level of emissions. The energy use in Sub-Saharan Africa and other very poor countries is small; their emissions quota would be greater than their current emissions The most significant greenhouse gas is Carbon Dioxide (CO2) from burning fossil fuels - coal, oil and gas. The quantities of other greenhouse gases can be converted to CO2 equivalents by using appropriate conversion factors taking into account their relative effect on climate change. Emissions trading in principle should reduce the cost of meeting a given global reduction,

by implementing emissions reduction actions in whichever country they are most cost-effective. A market in emissions quotas would set a price per tonne of CO2 equivalent. There are many ways of reducing greenhouse gas emissions, and different solutions will suit different countries. The long term effectiveness and environmental soundness of each method should be assessed before it can be used in emissions trading. In the early stages, when the reductions in emissions relative to "business as usual" are fairly modest, relatively low cost measures for improving energy efficiency and the lowest cost sources of renewable energy to substitute for fossil fuels would be used. As emissions quotas are reduced further, more expensive measures would need to be implemented, such as more costly energy efficiency measures or use of more expensive renewables. Who benefits? Emissions trading could be a major benefit to developing countries. Because they are not so totally dependent on private car use they have the opportunity to develop based on efficient public transport. Often they have large parts of the population in areas not served by an electricity grid, and small scale local electricity generation from renewables (eg solar photo-voltaics) is likely to be the most economic means of electricity supply in many cases. In hot countries, traditional ways of building and urban layout can provide a cool environment without the energy hungry air conditioning that most "modern" buildings use in the richer countries. In a country like China, with a high skills base and low labour costs, renewable energy might be significantly cheaper than in the "West". Studies have indicated that average life span (a good indicator of health and well being) approaches the value in rich countries when electricity consumption is about 1/15 of the richer countries. Thus, developing countries could achieve a good quality of life with low fossil fuel use and correspondingly low greenhouse gas emissions more easily than presently industrialised countries which are hooked on massive fossil fuel use. Developing countries are likely to have surplus emissions quotas to sell, gaining funds for development. Industrialised countries have enormous technical and economic resources to develop low carbon technologies. The country most reluctant to sign up to Kyoto, the USA, has a huge potential for renewable energy. Developments in energy storage and transmission can enhance the extent to which variable renewable energy sources can be used at the time and place of demand. Many of the fossil fuel exporting countries are in areas with high levels of sunshine and have plenty of space. They could become exporters of solar based energy.

Conclusion

While technology can be expected to enable major reductions in greenhouse gas emissions to be made, the very large cuts in greenhouse gas emissions needed are likely to require some changes in the rich countries to our profligate life style, particularly in use of cars and in flying. One would hope for

more emphasis on quality of life, rather than quantity of goods and services. Here, Friend's testimony to simplicity seems particularly relevant, showing that a simpler lifestyle can be a positive good for its own sake. The change to an economy based on more efficient use of energy and the development of renewable energy resources would provide creative employment, and could provide the sort of challenge which is lacking in many people lives. The principle of Contraction and Convergence appears to be a reasonably fair way of setting greenhouse gas emissions targets. It is unlikely that any framework agreed would bear exactly equally on every country (however, it can be noted that at present, there is very little correlation between the wealth of countries and the resources they are endowed with), but Contraction and Convergence has the advantage of being relatively simple and already having the backing of a number of countries. It may be that some fine tuning could be carried out once the basic principle is established.

If Friends wished to influence the discussions on climate change issues, "Contraction and Convergence" appears to fit well with Friends testimonies and concerns.

Martin Quick

DECEMBER 5

Mr. David Chaytor MP
Commons debate Report on DFID

Global Climate Change and Sustainable Development
"Given that the hon. Gentleman is talking about the long term, will he accept that, in the long term, the solution lies as much with the Department of Trade and Industry and energy policy as with the practical support that DFID can give to relieve famine?

Does he agree that it might have been useful had his report made a recommendation to the DTI, or a submission to the current energy review, stressing the absolute importance of reducing CO2 emissions, not only to our current commitment of 20 per cent., but to 60 per cent., as the royal commission on environmental pollution recommended?

Recommendations 9 and 30 in the report are about the link between climate change and equity, and suggest that the Government should pursue a policy of contraction and convergence in their approach to CO2 emissions."

http://www.publications.parliament.uk/pa/cm200203/cmhansrd/cm021205/halltext/21205h01.htm#21205h01_head0

Department for Environment, Food and Rural Affairs

FROM THE RT HON MICHAEL MEACHER MP
MINISTER FOR THE ENVIRONMENT AND AGRI-ENVIRONMENT

DEFRA
Department for
Environment,
Food & Rural Affairs

Nobel House
17 Smith Square
London SW1P 3JR
Tel: 020 7238 5404
Fax: 020 7238 5976

Aubrey Meyer
Director
Global Commons Institute
37 Ravenswood Road
London
E17 9LY

Your ref:
Our ref:

23 December 2002

Dear Aubrey

Thank you for your letter of 25 November about contraction and convergence, and for the additional information.

I am sorry if there have been inconsistent descriptions of contraction and convergence by Government Departments. We do our best to describe a complex idea for the layperson and at times, despite our best endeavours, in trying to make it accessible we may be a little inaccurate.

I understand that you have spoken to the officials on the team drafting the Energy White Paper and that they have assured you of their best efforts to correctly describe the contraction and convergence model in it if the model is referred to. I can confirm that all reasonable steps will be taken to ensure that this is so. However, I should point out that the White Paper is likely to focus on domestic energy policy to a much greater extent than on possible future international emissions reduction strategies.

Yours sincerely
Michael Meacher

MICHAEL MEACHER

INVESTOR IN PEOPLE

2002

Globalization, Growth and Poverty
World Bank Policy Research Report

"Global warming requires international collective action. There are many ways of achieving effective restraint. The Kyoto protocol approach is for rich countries to set themselves targets for emissions reductions, and the recent agreement between European nations and Japan to move ahead with the protocol is a positive step forward. Looking further down the road, it is critically important to get at least all of the G-7 involved.

The Global Commons Institute, an NGO, has come up with an innovative proposal for how to do this. The proposal entails agreeing on a target level of emissions by the year 2015 and then allocating these emissions to everyone in the world proportionally. Rich countries would get allocations well below their current level of emissions, while poor countries would get allocations well above. There would then be a market for emission permits. Poor countries could earn income selling some of their permits; rich and poor countries alike would have strong incentives to put energy-saving policies into place; and private industry would have strong incentives to invent new, cleaner technologies. One of the hopeful things about globalization is how an innovative idea like this can quickly gain currency and support."

2003

JANUARY 2003

ECOFYS GmbH
Evolution of commitments

"intriguing, due to the simplicity of the approach".

www.umweltdaten.de/klimaschutz/Climate_Change_01-03_UBA.pdf

JANUARY

Financial Times
Blair Energy Policy Renewed Attack

Tony Blair has come under renewed attack for failing to put long-term climate change objectives at the heart of the government's energy policy. The Institute of Public Policy Research will claim today that the government is "way off track" in meeting its goal of cutting carbon dioxide emissions by 20 per cent by 2010. Tackling climate change should be made the primary policy goal of next month's energy white paper, it says. Meanwhile, several climate experts have written to the prime minister expressing their fears that the white paper will neglect the international dimension of climate policy.

The signatories include Sir Tom Blundell, chairman of the Royal Commission on Environmental Pollution, and Sir John Houghton, the former chairman of the United Nations-appointed panel of climate change scientists.

The letter urges Mr Blair to use the white paper to show international leadership on climate change policy. A "rare window of opportunity" will be provided by the start of discussions about a post-Kyoto climate change agreement later this year, it says. The white paper should address a policy framework known as "contraction and convergence", it says, under which developed countries would cut their emissions to the level of less developed countries.

This approach was recommended by the 2000 Royal Commission's energy report, which called for a 60 per cent reduction in UK carbon dioxide emissions by 2050. The IPPR report says a target of cutting emissions by 60 per cent by 2050 could be achieved while ensuring security of supply and without

compromising affordability. But it says that achieving the goal of a secure and affordable transition to a low-carbon economy would require "a revolution in political commitment".

The report assesses the UK's expected need for extra generating capacity in 2020 following the closure of many ageing nuclear stations and the likely closure of coal-fired stations following the implementation of expensive environmental regulations. It argues against the construction of more nuclear stations and recommends that the white paper be used to announce a target of 25 per cent of electricity from renewable sources by 2020.

JANUARY

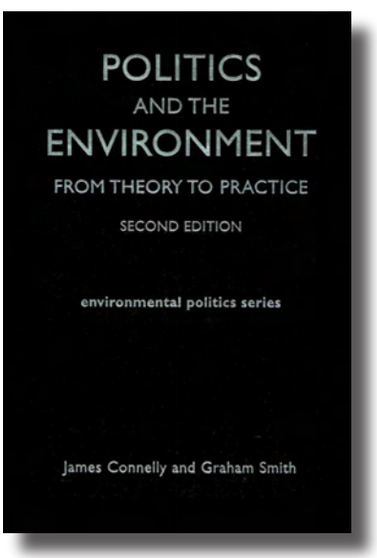
Charter 99
European Convention: proposal 17

"New Article - declaring climate change to be <a global security issue> and committing the EU to work for a stable climate as set out in the UNFCCC through an international agreement based contraction and convergence of global emissions to equal per capita rights by no later than 2045."

www.gci.org.uk/correspondence/EU_Convention_letter.pdf

JANUARY

Connelly, Smith
Politics and the Environment



Publisher: Routledge. ISBN: 0415251451

[Page 254]

From the position of the South climate change is typically considered to be a matter of economic justice. The industrialised countries have benefited from the unrestricted free access to the atmosphere and display a lack of commitment to reduce their impact.

At the same time, Northern states such as the USA argue that all states should be required to reduce their emissions. Given differentiated responsibilities for the current situation, it is no surprise that Southern Nations view this as double standards and demand their equal share of the global atmospheric commons. The claim is that the rich North owes an ecological debt to the poor South.

The Global Commons Institute (GCI) has attempted to develop a plan (C&C) "Contraction and Convergence"; contraction of overall emissions and convergence of

Northern and Southern emissions. The proposal (which is in many ways a return to, and a development of, the principles of the original UNFCCC) is built on the recognition of differential responsibility and embraces two principles; first that every person in the world should have (in the long run) an equal emissions quota; and second, that all emissions quotas would be marketable - but only within a stringent global emissions limit. In other words global tradable permits are proposed, but in a way, but not as a way of relieving individual countries of their responsibilities. Rich countries who wish to continue with more than their share will have to pay for the privilege, thereby generating resources for countries who need them (Meyer 2000).

The contraction and convergence approach counters the US approach which has rejected stringent limits and opposed the adoption of per capita emissions quotas.

Page 257 Details of contraction and convergence can be found at www.gci.org.uk

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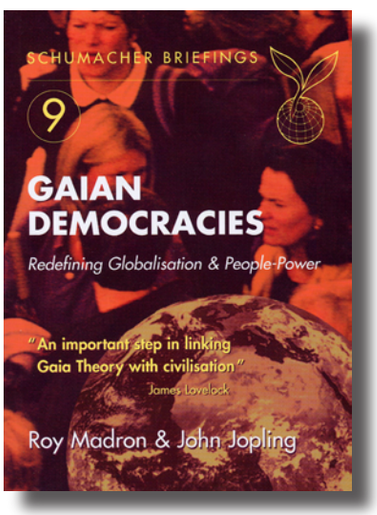
2003



Roy Madron & John Jopling
Gaian Democracies

Publisher: Green Books / Schumacher

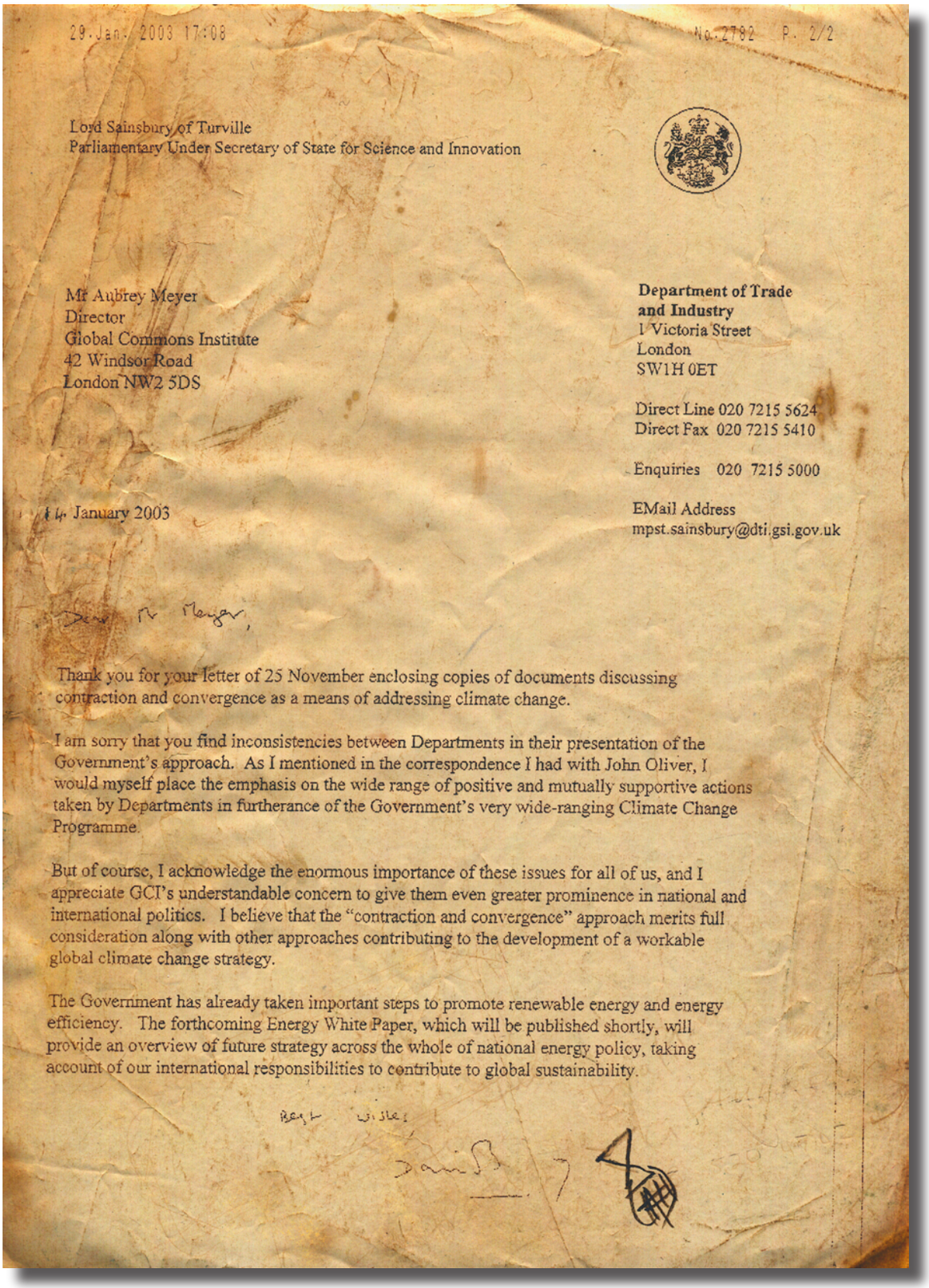
ISBN: 190399828X

There is no lack of ideas about the changes that could be made in the money, currency and tax systems in a world freed from the debilitating imperitives of the Global Monetocracy. Several ecologically and human-friendly systems have been described by James Robertson and Richard Douthwaite in earlier Schumacher Briefings [138]. For example, concurrent money systems, a citizen's income and an international trading currency linked to Gaia's capacity to absorb global warming gases.

[138] Aubrey Meyer, Contraction and Convergence, Schumacher Briefing No. 5.

JANUARY 14

Lord Sainsbury of Turville
Under Secretary of State for Science and Innovation



29.Jan. 2003 17:08 No.2782 P. 2/2

Lord Sainsbury of Turville
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14 January 2003

Dear Mr Meyer,

Thank you for your letter of 25 November enclosing copies of documents discussing contraction and convergence as a means of addressing climate change.

I am sorry that you find inconsistencies between Departments in their presentation of the Government's approach. As I mentioned in the correspondence I had with John Oliver, I would myself place the emphasis on the wide range of positive and mutually supportive actions taken by Departments in furtherance of the Government's very wide-ranging Climate Change Programme.

But of course, I acknowledge the enormous importance of these issues for all of us, and I appreciate GCI's understandable concern to give them even greater prominence in national and international politics. I believe that the "contraction and convergence" approach merits full consideration along with other approaches contributing to the development of a workable global climate change strategy.

The Government has already taken important steps to promote renewable energy and energy efficiency. The forthcoming Energy White Paper, which will be published shortly, will provide an overview of future strategy across the whole of national energy policy, taking account of our international responsibilities to contribute to global sustainability.

Regards

David

JANUARY 27

Guardian

America's crude tactics

Of all the rogue states in the world it is Iraq's oil that makes it a target

Larry Elliott

Let's get one thing straight. George Bush's determination to topple Saddam Hussein has nothing to do with oil. Iraq may account for 11% of the world's oil reserves, second only to Saudi Arabia, but the military build-up in the Gulf is about making the world a safer and more humane place, not about allowing America's motorists to guzzle gas to their heart's content. So, lest you should be in any doubt, let me spell it out one more time. This. Has. Nothing. To. Do. With. Oil. Got that?

Of course you haven't. Despite what Colin Powell might say, it takes a trusting, nay naive, soul to imagine that the White House would be making all this fuss were it not that Iraq has something the US needs. There are plenty of small, repressive states in the world - Zimbabwe for one - where the regimes are being allowed to quietly kill and torture their people. There are plenty of small, repressive states with weapons of mass destruction - North Korea, for example - which appear to pose a larger and more immediate threat to international security. But only with Iraq do you get a small, repressive country with weapons of mass destruction that also happens to be floating on oil.

Moreover, the realities of oil dependency are catching up with the world's biggest economy. The US has long ceased to be self-sufficient in oil and, as the recent shutdown of Venezuela's refineries has proved, is therefore vulnerable to its imported supplies being cut off. The growing imbalance between the

global demand for oil and discoveries of fresh supplies means that the outlook for the US is even more troubling than it appears. As the director of ExxonMobil, Harry Longwell, admitted in an article for World Energy last year, the discovery of oil peaked in the mid-1960s but demand is expected to continue growing by 2% a year - or the world is sucking oil out of the ground faster than corporations are finding it.

Three choices

Bush and his team know all this. They have worked for the oil industry, been bankrolled by the oil industry, and have spent the past couple of years listening hard to what the oil industry would like, then doing it. Faced with the prospect that on current trends the gap between demand and supply will widen inexorably, Bush has three choices. Firstly, he could listen to the lobbying of executives like Longwell, who are convinced that there is still plenty of oil out there provided the exploration teams are given the freedom to find. That is why Bush has been prepared to court the wrath of the environmental lobby in the US to sanction exploration and extraction in the wilds of Alaska.

The second option is to ensure that the US secures a bigger share of diminishing stocks, buying time in which consumption can continue at its present rate. The seizure intact of Iraqi oil fields is a prime war aim of the US in any conflict, and it is likely that once Saddam has been toppled and an army of occupation has control of the country, the big oil companies will be called in to modernise the country's decrepit oil infrastructure. There have been reports in the Wall Street Journal, denied by the administration, that Dick Cheney held discussions last October with ExxonMobil and other firms about the rehabilitation of Iraq's oil industry. It stretches credulity somewhat to imagine that the subject has never been broached.

In one sense, such an outcome would be no bad thing. A modernisation programme that increased the supply of oil through more efficient production would lead to lower global prices and stronger growth. It might also be environmentally less damaging. Nor, lest we are tempted to get too prissy about this, can it be denied that economic factors have played a big, even crucial role, in determining the diplomatic and military strategy of European countries down the centuries.

But while the Bush strategy has its rationale, it is fraught with risks. One is that the war will not lead to the collapse in oil prices that is predicted by the hawks in Washington. Should the conflict follow the example of 1991, crude could fall quickly to around $20 a barrel. Or prices could hit $50 a barrel if Saddam torches the Iraqi fields and manages to land a couple of Scuds on refineries in Saudi Arabia and Kuwait.

The possibility that an American occupation of the Middle East will destablise the whole region, putting pressure on the autocratic rulers of western client states is a second, perhaps greater threat. It would be a bitter irony if the US found itself in possession of 11% of the world's known reserves only to find that the 25% in Saudi had been seized by a regime with no love for America. Worryingly for Bush, there have already been signs that investors in the Gulf states have been withdrawing their assets from the US, helping to keep shares on Wall Street depressed and contributing in no small measure to the dollar's recent fall. This would turn into a rout should the oil-producing states decide that crude should be denominated in euros rather than greenbacks, a development that has already been canvassed publicly by Opec.

Common sense

The third choice for the US and the rest of the developed world is to tackle the imbalance between demand and supply from the other end - by limiting demand rather than by increasing supply. Most governments, including that in Washington, acknowledge the need to take steps to curb emissions of greenhouse gases, and a blueprint for this, known as contraction and convergence, is available. It would involve setting a safe global ceiling on carbon dioxide and the calculation of the emissions consistent with hitting it; providing equal shares of the global emissions budget for each country so that poor countries were not short-changed; and allowing emissions trading in which countries like the US could pay countries like Malawi to pay for the right to pollute by more than the share allocated to the developed world.

The first problem is political will. Britain's forthcoming energy bill should embrace contraction and convergence, but Whitehall conservatism means a golden opportunity will be lost without political backing from the very top. As Alex Evans of the left-leaning IPPR think tank said last week in a paper on the UK electricity industry, the government needs to focus less on setting targets and more on delivery. Evans says that there would be a dramatic fall in emissions and endless opportunities for business if the government took steps to increase energy efficiency by 20% and to commit itself to producing 25% of energy from renewable sources by 2020.

This will be costly, both in terms of money and effort. But wars, too, are costly. The real lesson of the struggle against Iraq is that the depletion of non-renewable energy resources is a problem that will be persist long after the butcher of Baghdad is dead and buried.

larry.elliott.guardian.co.uk

FEBRUARY

Mark Pelling
Natural Disaster & Development in a Globalizing World

Publisher: Routledge. ISBN: 0415279585

" . . . makes clear that there are links between global scale processes and local experiences of disaster, but underlies the difficulty of attributing blame for individual disasters on specific global pressures. It argues that action to reduce disaster needs to be coordinated at the local, national and global scales and that there is a need for greater integration across the physical and social sciences. In this context, the human rights agenda is seen as a way of moving disaster reduction efforts forward."

FEBRUARY

IPPR
The Generation Gap

http://www.ippr.org/research/files/team20/project111/2020fuelmix.pdf

"The Royal Commission made a clear and emphatic recommendation to the Government that in its view, the best prospects for success at international level were offered by the 'Contraction & Convergence' (C&C) policy framework for international climate change policy as the basis of future negotiations; . . .

the PIU, for its part, observed that C&C was consistent with the 'leading' approach to climate policy that the Government has expressed its intention to play. C&C is a simple global policy framework that would work as follows:

1. All countries would agree a safe global ceiling on concentrations of CO2 in the atmosphere (such as 450 parts per million), and then calculate a global emissions budget consistent with reaching it.

2. On the question of national emissions allocations, C&C recognises that developing countries will only accept emissions targets under an emission regime that is equitable. Accordingly, national emissions entitlements would converge from current emissions levels (which are proportional to national income) to an allocation based instead on population, by an agreed 'convergence date' (such as 2040).

3. Full international emissions trading would be allowed so that countries could meet their targets flexibly and at least cost. (The existence of a global price on carbon would also provide each country with a clear incentive to reduce dependency on

fossil fuels as quickly as possible, in order to reduce the number of emissions permits that have to be bought – or indeed increase the number of surplus permits to sell.)

Although it has been widely forgotten since the publication of the Royal Commission's report on energy, the widely discussed UK target of reducing CO2 emissions by 60 per cent by 2050 is in fact derived from a scenario applying C&C (in the Royal Commission's example, with a concentration target of 550 parts per million and a convergence date of 2050).

The most important distinction between C&C and the approach taken by Kyoto is that C&C starts with the question of what global level of emissions is safe, and only then turns to the secondary question of how much CO2 each country is permitted to emit.

Kyoto, by contrast, began by determining national entitlements; assessing the overall level of global emissions came at the end of the process rather than at the beginning.

Interestingly, C&C meets the stated position of the Bush Administration on climate change where Kyoto does not – even though it enjoys very much higher environmental integrity than Kyoto. President Bush has consistently stated that the US desires a global policy that both includes quantified targets for developing countries, which C&C includes but Kyoto does not. Bush has also been equally consistent in emphasising that international climate policy should be consistent with the goal of stabilising atmospheric concentrations of greenhouse gases in the atmosphere (to the extent of actually including this objective in the US National Security Strategy in 2002); again, C&C offers this through its formal atmospheric concentration target where Kyoto does not."

. . . this is formally known as Contraction and Convergence (C&C) and was created by GCI in 1991"

FEBRUARY 10

Michael Meacher
A Statement of Concern

A Speech at Newcastle University " . . . . the world's scientists believe a reduction in CO2 emissions of at least 60% will be needed by 2050.

Kyoto, even if its targets are met, is likely to produce a cut of only some 2% by 2010, and that is only in regard to the developed countries (excluding, at present, the US and Australia).

If the whole world is taken into account, which is of course

the relevant consideration, CO2 emissions are projected to rise substantially by 2020. So the shortfall between scientific theory and political action remains huge.

Furthermore, given that access for CO2 emissions to the global atmosphere needs to be rigorously checked in order to stay within 'safe' levels, no progress has yet been made in obtaining global consent to a politically equitable distribution of such rights.

A programme of Contraction & Convergence, moving towards an allocation of equal per capita emissions for all countries both developing and developed, has been proposed by the Global Commons Institute, but has not yet been widely taken up."

www.gci.org.uk/speeches/Meacher.pdf

www.guardian.co.uk/uk_news/story/0,3604,895067,00.html

FEBRUARY

New Statesman
How Britain can seize the moment

Ministers have to find an energy policy – otherwise they will fail to meet commitments on climate change and they will leave the UK too dependent on foreign supplies.

By ALEX EVANS

Just over ten years ago, John Major abolished the Department of Energy and consigned it to being no more than a directorate within the Department of Trade and Industry. At the time, this seemed only logical. After all, the bulk of the country's power generation capacity had been privatised (as National Power and Powergen), and the role of the state had apparently diminished to little more than appointing the regulator. The age of energy policy had, it seemed, come to an end.

When Labour came to power in 1997, little seemed to change. True, Labour took steps to protect the UK's ailing coal industry, mainly through using the planning regime to suspend the "dash for gas" – the 1990s rush to build cheap and highly profitable gas-fired power stations. But Labour's overriding aim in energy was to increase competition. Today, though, all eyes are once more on the government as its energy white paper approaches publication. The energy sector will be at the forefront of responding to the huge challenge of global climate change. Moreover, the UK's North Sea gas reserves have all but run out, raising the prospect of imminent dependency on gas imported through pipelines thousands of miles long, with inevitable concerns about security of supply. And over the next 20 years, the UK is projected to lose up to half of its existing power

stations – posing the question of how to replace them. Energy policy, it seems, is back. So what is the government trying to do with its energy policy? At present, it

has four objectives: environmental sustainability, competitive markets, security of supply and diversity of generation. These, however, tend to point in different directions. Suppose, for example, that the policy tried to leave as much as possible to "competitive markets". Such a policy would include a lot of gas-fired power stations, which are cheap and quick to build, as well as coal-fired stations, which are costly to build but cheap to operate. But the same policy, being based on fossil fuels, would have high greenhouse gas emissions, thus undermining the environmental sustainability objective. It would also leave the country highly dependent on gas imports, thus reducing security of supply. The challenge is therefore to make clear the order of priority of these objectives. What should happen when they trade off? One answer was provided by the Cabinet Office's Performance and Innovation Unit's Energy Review, published last year. The review suggested that where environmental and economic goals clash, environmental goals "will tend to take precedence".

Most scientists will confirm that climate change is the most serious environmental challenge that the world faces today. Depending on the scale of international commitments, the UK might have to make emissions reductions as steep as 60 per cent or more by 2050. Its present target under the Kyoto treaty – a 12.5 per cent emissions cut in greenhouse gases by 2012 – is no more than a first step. There is also a strong case for giving high priority to energy security: as the Californian energy crisis showed, the need to keep the lights on is something that politicians forget at their peril. We could therefore start by defining the goal of energy policy as "the secure transition to a low-carbon economy, at the lowest possible cost". What would such a goal imply in practice? It would require strong progress on energy efficiency, especially in the domestic sector, with the aim of achieving real reductions in electricity demand by 2020. Lower energy demand leads to lower costs, lower emissions and lower dependence on imported gas.

However, although many energy efficiency technologies can save more than they cost, there are formidable barriers to their implementation. There are as yet no "one-stop shops", for instance, which can advise on the whole range of technologies from efficient condensing boilers to loft insulation.

And for many consumers, energy costs form only a small proportion of monthly spending, making efficiency a low priority. So the government has to act as a catalyst for change. A move to a low-carbon economy will also require much higher levels of renewable energy. At present, only 2.5 per cent of the UK's electricity comes from renewable sources, and the government is unlikely to meet its 2010 target of 10 per cent.

By 2020, Britain will need about ten times as much renewable energy as it has now. That will require sustained political commitment. Leaving it "to the market" will not work when fossil fuels enjoy such strong advantages on cost.

What of nuclear power? Although there is a case for extending the lives of existing nuclear power stations in order to buy more time for the transition to a low-carbon economy, several factors mitigate against new nuclear build. One is that although nuclear is "CO2free", it cannot be called fully environmentally sustainable: the government has made no progress towards solving the problem of radioactive waste management since 1997, for example. Another is that, in the changed security environment since 11 September, there are strong reasons to doubt the wisdom of committing to another generation of such attractive targets for attack. The government must not be complacent about how hard it will be to deliver the low-carbon economy. Of the UK's current climate change policies, virtually all will deliver lower emissions reductions than originally anticipated – from the climate change levy and the fuel duty escalator (both of which have been frozen at current rates) to the UK emissions trading scheme, and the renewables obligation and energy efficiency commitment faced by electricity supply companies. The UK is also unlikely to hit its 2010 goal of reducing carbon dioxide emissions by 20 per cent. Something not far from a revolution is needed.

The international dimension will be crucial, not least because of the national competitiveness issues that arise with energy policy. The year 2003 is when the world's countries start to consider what should come after the Kyoto Protocol's tentative first step. Two challenges dominate. One is the need to make more demanding global emissions reductions, in order to meet the UN Climate Convention's objective of stabilising concentrations of greenhouse gases at a safe level. The other is to find a way of sharing out this "global emissions budget" between all countries.

> The leading (and possibly only) contender to solve this Gordian knot is a proposal called "Contraction and Convergence", devised by the Global Commons Institute, a British based think-tank. Unlike Kyoto, this would start with the question of what global level of emissions is safe. Only once this has been agreed would countries turn to who gets to emit what.

This "contraction" of emissions then leads to the "convergence" part: all countries' emissions entitlements would converge by an agreed date (such as 2040) until they were proportionate to population, so that every individual on the planet had (in theory) an equal right to emissions. Such a system would meet the long-stated US demand for developing countries to accept their own emissions targets, but would also allow them to sell surplus CO2 permits through emissions trading.

"Contraction and Convergence" was one of the central recommendations of the Royal Commission on Environmental Pollution's report on energy in 2001; it was the basis of the Royal Commission's target to reduce UK emissions by 60 per cent by 2050. The Royal Commission's chair, Sir Tom Blundell, and the former chair of the UN Intergovernmental Panel on Climate Change's science team, Sir John Houghton, have recently written to the Prime Minister, challenging the government to respond to this proposal.

With the right objective and the right policies to deliver it, the government's energy white paper could be a landmark. It could be the UK'S first clear statement that it intends to be a world leader in the new global low-carbon economy; it would be a practical example of what the Blair doctrine of global interdependence means in practice, and a clear demonstration of how global governance can link seamlessly to effective delivery at the national level. The UK has everything to play for.

Alex Evans is energy and environment research fellow at the Institute for Public Policy Research. His The Generation Gap: scenarios for UK electricity in 2020 can be downloaded from www.ippr.org

FEBRUARY

New Statesman

Action must start now

If Britain is to do its part in reducing global warming, ministers must not only tackle sources of energy supply, but also levels of energy demand. By TOM BLUNDELL

All forms of energy production have effects on the environment: damaging air pollutants come from fossil fuels; large windfarms intrude on upland scenery; radioactive emissions result from the reprocessing of spent nuclear fuel; and woodlands are destroyed to supply cooking and heating fuels. However, the most serious damage will be done by the carbon dioxide produced from the burning of fossil fuels, the largest single source – accounting for 75 per cent – of greenhouse gas emissions from human activity, and thus the largest cause of global warming. The concentration of carbon dioxide is already higher than at any time for millions of years, and we seem to be experiencing the first effects of global warming.

The Royal Commission on Environmental Pollution, of which I am chairman, supported the proposal that an atmospheric carbon dioxide concentration of 550 parts per million by volume (ppmv) – approximately double the pre-industrial level – should be regarded as an upper limit that should not be exceeded. The current concentration is around 370 ppmv. If all remaining reserves of fossil fuels were burnt during this century, the resulting build-up of carbon dioxide would go well above 550

ppmv, leading to dangerous and destructive climate change. Thus the issue is not whether there are enough fossil fuel reserves, but rather whether we can restrict the use of fossil fuels, starting now.

A sustainable energy policy should protect the interests of generations to come, but it must also try to achieve social justice, a higher quality of life and industrial competitiveness today. Achieving the right balance is formidably difficult; current policies do not strike it. Developing nations produce much less carbon dioxide per head than developed countries such as the UK. Indeed, around 2.5 billion people currently have no access to modern energy services. Such people, and those who have limited access, will seek more. So we need a just basis for long-term international agreement on how to limit each country's emissions.

The most promising solution is to allocate emission rights to nations on a per capita basis – enshrining the idea that every human is entitled to release into the atmosphere the same quantity of greenhouse gases. But because of the wide differences between per capita emission levels around the world, and because current global emissions are already above safe levels, there will have to be an adjustment period covering several decades in which nations' quotas converge on the same per capita level.

In other words, we shall need both contraction and convergence, as proposed by Aubrey Meyer,

-with developed countries reducing their emissions while many developing nations increase theirs. For the UK, an international agreement that prevented carbon dioxide concentrations in the atmosphere from exceeding 550 ppmv and achieved convergence by 2050 could imply a reduction of 60 per cent from current annual carbon dioxide emissions by 2050, and perhaps of 80 per cent by 2100. These are enormous changes. Though the UK points to its own substantial reductions in greenhouse gas emissions when exhorting other nations to act, the truth is that its energy use is still increasing. Moreover, the factors that led to its emission reductions over the past decade are largely coincidental. The major one is the substitution of gas for coal in power stations. This will contribute to further reductions in this decade, but making substantial additional cuts in carbon dioxide emissions will become much more difficult for the UK after 2010. The government's goal of a 20 per cent reduction in carbon dioxide emissions by 2010 (compared to the 1990 level) is far more ambitious than the Kyoto obligation of 12.5 per cent. However, its draft climate change programme will not actually achieve this 20 per cent goal. More radical changes will be needed. The government, for example, will need to give much higher priority to energy efficiency. On the supply side, there is only limited potential for further large-scale exploitation of hydropower in the UK, and environmental concerns may rule out major schemes. Unless new plants are

built, nuclear power will almost have ceased by 2020. But before such plants are built, the problem of managing nuclear waste must be solved to the satisfaction of both the scientific community and the general public. The options for renewables are many, but all have impacts on the environment, sometimes visual and sometimes affecting air quality. Some, such as tidal barriers, would be expensive to construct and do not have the advantage of negative discounting in their costing that is apparently enjoyed by radioactive waste disposal. The abundant wind energy distributed across much of Britain's land mass and the surrounding seas offers a vast resource, and there are very large quantities of energy in the form of waves and strong tidal currents. All should be harnessed for our needs. Despite frequently overcast skies, solar energy could also make a substantial contribution to UK energy needs – through electricity-generating photovoltaic panels, solar panels that heat water for use in buildings directly and building designs that enable sunshine to warm and light interiors. Alternatives to coal, oil and gas can also make a contribution. The growing of energy crops such as coppice willow, which are then burned or gasified and combusted to generate electricity and supply heat, could make a much larger contribution to the UK's climate change strategy. They might also contribute to increasing biodiversity and improving farmland landscapes. But this cannot be achieved without major changes to agricultural support systems. Energy crops should receive the same level of support as other crops, but with improved environmental safeguards.

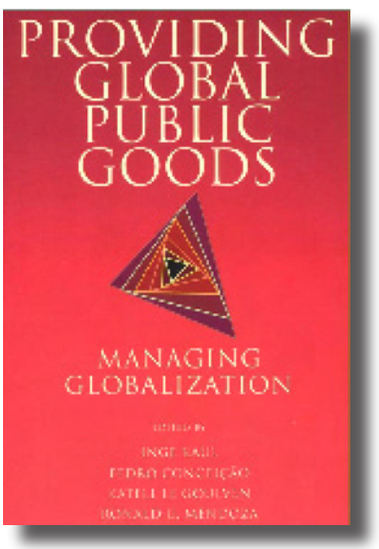
Considering the enormous potential of UK renewable energy resources, it has been slow to make progress. There was an arrogant dismissal of the opportunities by many in the fossil fuel and nuclear industries in the 1980s; the research was not funded and the investment not made in the UK. Furthermore, policies have favoured the generation of electricity in ways that waste vast quantities of heat that could be used to warm buildings. Regulatory and planning policies should encourage the widest possible adoption of combined heat and power technology in urban locations to supply heat. As the proportion of electricity supplied by wind, waves, tides and sunshine increases, the intermittency of these sources will whose growing problems in matching supply with demand. The UK will need to maintain reserve generating capacity (consisting of fossil fuel or renewable fuel plant), add further storage schemes to the grid or develop novel energy carriers, such as hydrogen produced using electricity and then consumed in power-generating fuel cells. The royal commission, however, came to a clear conclusion: energy demand must be curbed to a significant degree. Otherwise, substantial reductions in UK emissions would require an enormous and environmentally intrusive contribution from renewable sources, augmented either by nuclear power or by fossil fuel power stations and the large-scale capture and isolation of carbon dioxide. Such new energy policies will not emerge unless there is a great change

of approach and culture within government. Vision, leadership and action have to begin now. We should be encouraged that the Performance and Innovation Unit's Energy Review has taken up many of the royal commission's themes, as did the recent green paper. The enormous challenge posed by humanity's intervention in the earth's climate, which is threatening generations to come, demands action on a huge scale. If the UK does not show it is serious about doing its part, it cannot expect other nations – least of all those which are much poorer – to do theirs.

Sir Tom Blundell is chairman of the Royal Commission on Environmental Pollution

MARCH

Kaul and Mendoza [Eds] Providing Global Public Goods



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Aubrey Meyer
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24 March 2003

Dear Mr Meyer

C&C – SEMINAR PROTECTING THE INTEGRITY OF THE ARGUMENT

Thank you for your letter of 10 March.

I am happy to meet to discuss the contraction and convergence model, and to invite colleagues who deal with different aspects of climate policy.

I ought, nevertheless, to say that I do not believe that there is any confusion about, at the very least, the broad principles of C&C approach. As I explained on the phone, the Energy White Paper's support for a 60% reduction in emissions comes from a significantly different set of arguments and calculations to those of the C&C model. This is quite deliberate; while there are some elements of the RCEP calculation which remained a little puzzling to us even after discussion with RCEP, the White Paper would not have been any different as a result of those puzzles having been resolved, since the White Paper argument deviates from the C&C one at an earlier stage in the logic.

My secretary will be in touch with proposals for a date.

yours sincerely

Henry Derwent

Henry Derwent
Director, Climate, Energy and Environmental Risk Directorate

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INVESTOR IN PEOPLE

MARCH

Environmental Data Service
Blair leadership claim on climate change

In his most powerful speech on the environment to date, Prime Minister Tony Blair has called for renewed international action to tackle global poverty and environmental degradation - particularly climate change. Mr Blair urged EU countries to join the UK in aiming for a 60% reduction in CO2 emissions by 2050.

The speech was arranged at short notice to slot into the hectic round of international diplomacy prompted by the Iraq crisis.

> Strikingly, Mr Blair drew an explicit link between the current agenda on terrorism and weapons of mass destruction and that concerning global poverty and environmental degradation - "most particularly climate change".
>
> These long-term issues are, "just as devastating in their potential impact, some more so," he warned. Ratcheting up pressure on the US, Mr Blair said that, "there will be no genuine security if the planet is ravaged by climate change."
>
> "There is little point in the UK acting alone," he added. "We need a concerted international effort."

Mr Blair said the challenge was, "to integrate the goal of environmental modernisation into our vision of Britain...bringing the environment, economic development and social justice together."

The Prime Minister described the Kyoto Protocol as, "not radical enough", since "at best" it will reduce global emissions by just 2%. He announced a Government target to reduce CO2 emissions by 60% by 2050, as proposed by the Royal Commission on Environmental Pollution in 2000 (ENDS Report 305, pp 19-22).

The basis for this target is controversial (see below).

Basis of the 60% CO2 target: The RCEP's call for the UK to cut CO2 emissions by 60% by 2050 was based on two key assumptions. Firstly, the world should aim to keep atmospheric CO2 concentrations below 550ppm, twice the pre-industrial level. Secondly, the RCEP said, future global climate agreements should be based on the so-called "contraction and convergence" approach, under which national emission allocations converge towards a uniform per capita figure.

The Government has accepted the RCEP's 60% figure - but not the underlying logic. Contraction and convergence is, "only one of a number of potential models", it says, and it would be "premature" to rule out other approaches. Environment Secretary Margaret Beckett claimed that the concept is, "very violently opposed by many of the developing countries."

[GCI comment - Mrs Beckett's remark is curiously misinformed. Reactions from colleagues in developing countries showed incredulity and contained comments such as, "the opposite is true. C&C is strongly supported by many Developing Countries as it is a strategy that embodies the principles of the UNFCCC, precaution and equity based on common but differentiated responsibilities."]

Alex Evans of the Institute for Public Policy Research commented: "The whole point of contraction and convergence is to offer a fair deal to developing countries in the form of a valid share of a safe emissions budget that can then be traded....Leaving them out until the last minute, when climate change will be far more serious and much of the emissions budget will have been used up, would offer developing countries all stick and no carrot."

2003

Professor Konrad Ott
University of Greifswaldwere

Members of the German Council of Environmental Advisers 2002.

We argue the "contraction-and-convergence" approach will be a decisive component of an overall strategy to implement strong sustainable development."

www.euroecolecon.org/frontiers/Contributions/F2papers/FD2.pdf

APRIL 25

Tessa Tennant
Association for Sustainable &
Responsible Investment in Asia

Association For Sustainable & Responsible Investment In Asia

25th April, 2003

To Whom It May Concern,

Aubrey Meyer is testimony to the fact that individual effort can make a difference. It is absolutely remarkable that the idea of Contraction and Convergence has taken such a firm hold worldwide in such a short space of time, especially when you see the tiny operation which has championed this essential idea. I remember at Kyoto in 1997 when policy-makers derided the proposition without a second thought. That type of response has all but disappeared, certainly within the more thoughtful arenas of climate policy.

Through sheer determination, focus and good manners Aubrey has broken through global ignorance and prejudice to make just, common sense prevail… and he has done so on climate change, the most chronic threat which the world currently faces.

We all have a great deal to thank Aubrey for, and I firmly believe that there is no-one better to receive the Sasakawa Award. Please give Aubrey Meyer your greatest consideration.

Yours faithfully,

Tessa Tennant
Executive Chair

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Email: sweeta@asria.org website: www.asria.org

APRIL 26

Sir John Houghton
Chairman, The John Ray Initiative

THE·JOHN·RAY·INITIATIVE

promoting·environmental·sustainability

From the Chairman: Sir John Houghton CBE FRS
Brynhyfryd, Aberdyfi, Gwynedd, Wales LL35 0SN
Email: john.houghton@jri.org.uk

RE: NOMINATION OF AUBREY MEYER FOR THE SASAKAWA PRIZE 2003.

I have been closely connected with the national and international concern and debate regarding Climate Change for some 15 years, particularly through my involvement with the Intergovernmental Panel on Climate Change (as chair or co-chair of the Science Assessment Working Group 1988-2002), the UK Royal Commission on Environmental Pollution (as chairman 1992-1998) and the UK Government Panel on Sustainable Development (member from 1994-2000). The urgent need for international action to mitigate climate change has become increasingly apparent over this period. How the necessary reductions in global emissions of carbon dioxide over the next few decades can be achieved is a vexing question that is concerning all nations in the context of the Framework Convention on Climate Change (FCCC) which they all have signed.

The Principles that should govern international action are generally agreed namely the Precautionary Principle, the Principle of Sustainable Development, the Polluter-Pays Principle and the Principle of Equity (both intergenerational and international). The problem is to turn these into detailed practical long-term arrangements to which all nations can agree. Aubrey Meyer and the Global Commons Institute that he directs, 15 years ago, proposed an arrangement called 'Contraction and Convergence' that was formulated using the simplest possible logic and that well satisfies the four principles. The proposal is visionary in that it clearly addresses the long-term problem; it is also admirably practical. Further, because at its heart is equal per capita sharing of emissions allocations, it provides a unique solution to the equity principle that is the hardest one for the international community to address.

Since the formulation of 'Contraction and Convergence', Aubrey Meyer has tirelessly and selflessly argued for and promoted it with great energy and tenacity in scientific, economic and political fora. Admiration is frequently expressed regarding its elegance and simple logic and it has been widely accepted by policy makers and by NGOs as a basis that should underlie the next stage of policy formulation. For instance, the UK's Royal Commission on Environmental Pollution, in an influential study on Energy published in 2000 used it at the basis of its recommendations. In fact there is no other proposal in play that meets so many of the required principles and criteria or that has any real chance of succeeding. It is bound to be strongly influential in the crucial round of international negotiations in the FCCC that is about to begin.

The personal dedication of Aubrey Meyer, born of a deep concern for global humanity and its future, is what has brought the Contraction and Convergence proposal to the influential position it holds today. I am most pleased to strongly support his nomination for the Sasakawa Prize. I cannot think of a more appropriate recipient.

JOHN HOUGHTON
26 April 2003

APRIL 26

Christopher Layton
Hon. Director General EU Commission

09/05/2003

Christopher Layton
Hon Director General,
Commission of the European Union
44 Copperfields
Horrabridge
Near Yelberton
DEVON PL20 7UB

**SUPPORTING THE NOMINATION OF
AUBREY MEYER FOR THE SASKAWA PRIZE 2003**

Aged 42 and halfway through a notable career as a violinist and composer, Aubrey Meyer turned abruptly from music to environmental concerns in 1988 after hearing of the murder of Chico Mendez and the plight of Amazonia and its peoples.

In 1989 to address climate change, he founded the Global Commons Institute (GCI) on the principle Equity and Survival serving since then as Director. GCIs mission has been to arrest global warming addressing its unequal human causes and effects, using the ghg emissions management model developed at GCI called *Contraction-and-Convergence(C&C).*

Meyer contributed extensive analytical work to the Second and Third Assessments of the IPCC (1995 and 2000), memorably challenging the short-sighted economic discourse in the Second and establishing a beachhead for C&C in the Third.

C&C has gradually had significant impact and success. In 1997 Meyer was awarded the British Environment Media's Andrew Lees Memorial Award, with this citation: -

"Aubrey Meyer, almost single-handedly and with minimal resources, has made an extraordinary impact on the negotiations on the Climate Change Treaty, one of the most important of our time, through his campaign for a goal of equal per capita emissions entitlements, which is now the official negotiating position of many governments, and is gaining acceptance in developed and developing countries alike."

He received the Schumacher Prize in 2000 for continuing these efforts and writing them up in their briefing number 5,

"Contraction and Convergence - the Global Solution to Climate Change.

His unifying inter-disciplinary analysis, original visual imagery, tenacious and focused messaging, amplified now through the rapidly growing e-list the Global Commons Network (GCN), have now made C&C the most widely known and probably the most widely supported proposal for global solution to the global problem of climate change. C&C has generated tens of thousands of references and citations in the media and academia in at least eight languages and C&C is now a byword in the international debate supported by a growing number of eminent individuals and institutions in the sectors of commerce, politics, academia, civil service, civil society and the faith community.

The campaign is still run on a near voluntary basis with one full and one part time staff member on an annual average budget of £15,000. Against the enormity of the issue, this effort to address it has seen GCI recently described as, *the most efficient NGO in history.*

GCI's director is one of the under-sung heroes of our time.

Roger Doudna
Findhorn Community

The Sassakawa Prize, 2003

Citation of: -

Aubrey Meyer,
Global Commons Institute,

By: -

Roger Doudna
Findhorn Community
Scotland
26/05/2003

We at Findhorn have been keenly aware of Aubrey Meyer's "Contraction and Convergence" (C&C) proposals. Noting the growing support for them for some years, last Easter we asked him to come here and speak at our 'Restore the Earth' conference.

Compelling integration is what his presentation revealed - how to unify and conceptualise an international programme for the avoidance of the greenhouse gas emissions that are causing global climate to change. With C&C he has done this. He has created a well focused, inclusive - and indeed beautiful - language of principles and practice, and demonstrates this language with images and messages that are clarifying, eclectic, universal and extraordinarily powerful. Perhaps because he is a violinist and composer, he also communicates this as an artist - with insight, integrity and compassion.

His proposal unites the diverse aspects of the climate change problem into the flexible but constitutional simplicity of the C&C solution. This is the great strength of C&C; - shaping adversarial detail into a precautionary, cooperative and enabling rights-based whole. It is wholly numerate and counted into an arrangement founded on precaution and equity. Consequently, hopefulness and empowerment replace the despair that is increasingly felt about the faltering present arrangements for avoiding climate change. As Aubrey says, *"this equity in diversity is not just for its own sake; it is also for survival."*

Aubrey has inspired us with this work. He is now the veteran author of, as well as pilgrim for, this approach. Over fifteen years - with conventionally scant resources and against the odds - he has persuaded more and more people of the merits of the C&C approach. As we are increasingly anxious about the enormity and global complexity of the climate change dilemma, we are grateful that he is being increasingly successful at getting the attention, acceptance and support for C&C from all over the world from ordinary and powerful people in a great diversity of institutions, disciplines and cultures.

We commend him and his work to you to be honoured with your award.

Richard Sandbrook
Former Director, IIED

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26 May 2003

To whom it may concern re:
Aubrey Meyer and the Global Commons Institute

I am a private consultant in the arena of Sustainable Development. I am one of UNEP's global 500 award winners and have been associated with the agency since its inception. I was a co-founder of Friends of the Earth and the Director of the International Institute for Environment and Development for 11 years (1988- 1999) I want to support the nomination of the above for the Sassakawa prize.

Contraction and Convergence is the idea of Aubrey Meyer. It is not a complex idea – not at all. But then that is it beauty. It has even been criticised on this basis as if complexity was needed in matters of fairness and global security. It simply has it that all mankind should move progressively toward a common and defined right to emit greenhouse gases. This is the only long-term way to look at the issue and the only long-term way to solve it without discord. To get there we need contraction by some in their emissions and we have to allow for increases by others if they are to develop. We should converge to one level for all.

We cannot achieve the millennium goals and the challenges of Kyoto without contraction and convergence – even if we call it by another name. Aubrey has over the last 15 years persisted in promoting the idea – sometimes to the point of exasperation toward him – sometimes to see the idea renamed and represented under another guise. He is one of those hidden heroes of the environmental movement – unsung and unrecognised - but right.

If this award is about people and institutions that make a real difference then he should be recognised by it. In 50 years time we will talk of Meyer's principle much as we talk about the Kyoto agreements now. I commend him and the Global Commons Institute to you.

Prof. David Crichton
Chartered Insurance Practitioner

PROFESSOR DAVID CRICHTON, MA, FCII,
Chartered Insurance Practitioner

28th April 2003

United Nations
Nairobi

Dear sir/madam,

The UNEP Sasakawa Award

I am a consultant specialising in advising insurance companies on climate change issues. I have advised insurers and governments in four continents on these issues in recent years, and I wish to support the nomination Aubrey Meyer of the Global Commons Institute for this award.

The campaign for "Contraction and Convergence" is fifteen years old this year. The fact that it is now seen by many individuals, governments, and organisations around the world as the only long term equitable and practical solution to global climate change is a tribute to Aubrey's commitment and personal hard work.

The global insurance industry is three times bigger than the fossil fuel industry and controls more than 30% of the world's stocks and shares. The more enlightened sections of the insurance industry, such as those which have signed up to the Statement of Environmental Commitment of the UNEP Insurance Industry Initiative, recognise that it is essential that efforts are made at every level to mitigate future climate change, and Contraction and Convergence is the only effective and fair way to achieve this.

The Global Commons Institute is a very small organisation and if Aubrey were to be awarded a prize, it would make an enormous impact in assisting him in spreading this important message.

Yours faithfully,

David Crichton

APRIL 26

Dr Julian E Salt
Climate Solutions Consultancy

I first met Aubrey Meyer early in 1992 just prior to INC/V being held in New York. He was trying to arrange a conference on climate and equity issues. Throughout our long telephone conversation I was struck by the beauty of the argument now called the "Contraction and Convergence" theory as well as its simplicity.

In addition, Aubrey himself seemed driven by an utter belief in the principle enshrined in the "C+C" approach. When he later sent me copies of the graphics that back up the "C+C" argument I was blown away by their incisiveness and attention to detail. I have been a believer in "C+C" ever since and maintain that it is the only credible answer to a very complex climate problem.

Aubrey has operated without any major funding ever since I have known him. He relies on other people's goodwill and donations. He has never compromised himself or his idea in order to obtain inappropriate funding. This has to be commended in an ever more commercial world. He tirelessly campaigns for the cause and will never give in despite the forces ranged against him.

Climate politics are entering a decisive phase as we approach the adoption of the Kyoto Protocol and it's strengthening by what ever means are deemed politically acceptable. Never before has GCI needed backing, recognition and funding as now.

To miss this opportunity would be a great shame for a beautifully simple idea that could literally change the future of the human race.

Dr Julian E Salt
Director
Climate Solutions Consultancy

APRIL 28

John Rich
Director, World Nuclear Association

World Nuclear Association
Energy For Sustainable Development

From the Director General

28 April 2003

To the Awarders of the Sassakawa Prize:

I am pleased to have the opportunity to express approval of the nomination made by Christopher Layton, Hon Director General of the Commission of the European Union.

I agree that Aubrey Meyer is the outstanding candidate for the Sassakawa Prize, for two reasons:

First is his simple but brilliant constitutional concept of Contraction and Convergence for avoiding catastrophic climate change.

Second is his relentless and increasingly successful international promotion of this concept over the last fifteen years.

At any rates specified, the C&C model plots two simple things:

- Future greenhouse gas emissions on a global path, via a contraction rate – or or contraction budget – that would stabilise the atmospheric concentration at a safe level; and

- The tradable international permits or shares in this budget that become equal per capita globally at a rate of convergence that is deliberately faster than the contraction rate, and so fair against the historic emissions of the industrial countries.

In the debate about climate change, an impression has been created that the problem is too daunting and complex to prevent. Contraction and Convergence provides a way forward that it is both fair and feasible.

It fulfils the stated goals of the UNFCCC. It satisfies the U.S. Senate's Byrd-Hagel Resolution. And it answers the developing countries' demand for equity.

As such, C&C would resolve the North-South stalemate and enable us to achieve our urgent global emissions-reduction imperative.

Aubrey has matched the craft of his C&C model with the skill and guts to fight for – and win – friends for it all over the world. For more than a decade, he has done this independently and with no institutional support.

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His achievement is not just impressive but inspirational. C&C is now at the centre of the IPCC and UNFCC policy debate as the most widely referenced and cited approach. It has been profoundly influential in commercial, religious and academic circles, as well in the civil service, civil society and the media.

C&C is rapidly becoming the most widely recognised successor to the Kyoto Protocol.

Whatever technologies come into play in humanity's quest to make and share a sustainable future, C&C will inevitably be the framework we use.

By recognising Aubrey's achievement, the Sassakawa jury will help speed our quest for a solution to a global crisis without precedent.

I can think of no person and no idea more deserving of your reward.

Yours sincerely,

John Ritch

APRIL 28

Grace Akumu
Director, Climate Network Africa

climate network Africa

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28 April 2003

SASAKAWA PRIZE 2003 NOMINATION

RE: AUBREY MEYER

It is with great pleasure that I support the nomination of Aubrey Meyer of Global Commons Institute for the 2003 Sasakawa prize. It is rare to find people with both drive and determination, pushing for a global cause single handedly, the way Aubrey Meyer has done with the concept of Contraction and Convergence for approximately fifteen years.

Aubrey has demonstrated talent, courage and patience with the concept of Contraction and Convergence throughout the history of the United Nations Framework Convention on Climate Change (UN-FCCC) negotiations. They say patience pays. Yes, it does as today, many governments around the world have accepted the concept of Contraction and Convergence as the only equitable response mechanism to the threat of climate change. Without equity considerations, implementation of the Climate Change Convention and the Kyoto Protocol will continue to elude all countries with the tragic consequences of the devastating impacts of climate change.

Many African countries as well as NGOs are aware that the African continent will suffer the most from the impacts of climate change. It is with this in mind that in 1997, the African Group at the UN-FCCC publicly supported in the plenary, the concept of Contraction and Convergence.

I therefore fully support Aubrey Meyer's nomination for the 2003 Sasakawa Prize.

Grace Akumu,
Executive Director,
Climate Network Africa.

APRIL 29

Dr Clive Hamilton
Australia Institute

THE AUSTRALIA INSTITUTE LTD
FOR A JUST, SUSTAINABLE, PEACEFUL FUTURE

29 April 2003

To Whom it May Concern

The idea of contraction and convergence is destined to be one of the most important principles governing international relations in the twenty-first century. It is a powerful ethic that incorporates global justice and sustainability and thereby bridges the dominant concerns of the last century and this one. It is the only way to accommodate the interests, ethical and economic, of developing countries and rich countries in the struggle to find a solution to the most important environmental problem facing the world.

The widespread international recognition and endorsement of contraction and convergence is due largely to the efforts of Aubrey Meyer and the Global Commons Institute. Aubrey has been an indefatigable advocate of the principle as the only long-term solution to the enormous threat posed by climate change.

His commitment has come at considerable personal cost. If the world did not have a few score individuals such as Aubrey it would be a much poorer place, for all great ideas of history must have their passionate advocates. I believe that we are reaching the end of the first phase of the idea of contraction and convergence and it would be fitting to acknowledge Aubrey's extraordinary contribution thus far.

Yours sincerely

Clive Hamilton

Dr Clive Hamilton
Executive Director
The Australia Institute

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Alex Evans
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Sasawaka Prize
UN Environment Programme
Division of Communications and Public Information
PO Box 30552
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Kenya

29 April 2003

Nomination for Sasakawa Prize 2003: Aubrey Meyer, Global Commons Institute

It is my great pleasure to write to nominate Mr Aubrey Meyer, director of the London-based Global Commons Institute, for the Sasakawa Prize 2003. This written nomination follows my nomination of Mr Meyer both on the UNEP website and via e-mail.

Since 1990, Aubrey Meyer has been the director of the Global Commons Institute, a small, underfunded and yet astonishingly effective think tank and advocacy organisation focussed on international climate change. From a background in classical music, Aubrey has emerged to be at the forefront of the global climate agenda.

He has run an extraordinary campaign on global climate policy – usually single-handed, and frequently in the face of extreme financial difficulties – which has seen him invited to present his ideas in countries all over the world, attracted the support of governments, heads of state and parliamentarians around the globe, and won the admiration of a bewildering array of leaders in environmental advocacy and campaigning.

At the heart of his efforts has been the 'Contraction and Convergence' (C&C) framework for international climate policy, which he devised. C&C is a simple and yet remorselessly logical framework that mandates:

- a contraction in global emissions, consistent with limiting emissions to a safe level of concentrations in the atmosphere (reflecting the objective of Article 2 of the UNFCCC), and
- a concurrent convergence of national entitlements under this 'global emissions budget' so that all countries arrive at equal per capita entitlements to the atmosphere by an agreed date.
- full international emissions trading in order to maximise flexibility as well as to give developing countries an incentive to take part in quantified entitlements.

Despite starting out on his campaign with no prior experience of political advocacy work, no funding, no staff and no idea that we would still be running the same campaign more than a decade later, Mr Meyer has clocked up a sequence of extraordinary achievements in his campaign for the logic of C&C to be recognised and adopted. Indeed, there is every possibility that his idea may come to be the basis of how international climate policy is structured in future commitment periods.

As well as promoting C&C within the UNFCCC and beyond, Mr Meyer has also been a tireless and passionate campaigner for the ability of developing countries to participate fully and meaningfully in international climate negotiations, despite their lower capacity compared to developed countries. He played a critical role in helping developing countries to ensure that their concerns over IPCC WG3's Second

Assessment Report contribution were listened to and acted on – indeed, it is probably no exaggeration to suggest that without Mr Meyer's help, the Second Assessment Report would have gone to press still containing calculations that valued an individual life unequally in developed and developing countries.

I believe that Mr Meyer exemplifies the qualities that the Sasakawa Environment Prize exists to honour. He has shown wisdom, compassion, an understanding of global interdependence that has been an example to me and to many others whom have worked with him, and above all extraordinary and continuing perseverance and tenacity in his campaign. I hope very much that you will consider this nomination positively.

Enclosed is a selection of GCI materials published over the last twelve years (as well as a CD containing the same material), which I hope will be useful to you as background. Please do not hesitate to contact me if I can be of any further assistance to the Selection Committee in its considerations.

Yours sincerely

Alex Evans
Energy and Environment Research Fellow

APRIL 30

Prof. James M Phelps
Chairman, Zululand Environmental Alliance

ZEAL Zululand Environmental Alliance

An alliance of associations and persons pro the environment

P. O. Box 12194 Empangeni South Africa 3880
Phone: 035-772-5967 (Chairman's home)
Email address: jmphelps@iafrica.com

30 April 2003

Per email to cna@lion.meteo.go.ke
This letter went to: -

The Director
Climate Network Africa (CNA)
Wood Avenue, Kilimani
P.O Box 76479
Nairobi 00508 - Kenya

Dear Grace

Re: Nomination of Aubrey Meyer for the 2003 SASAKAWA PRIZE

It is with great pleasure that I support the nomination of Aubrey Meyer of Global Commons Institute for the 2003 Sasakawa prize.

Aubrey has brought to bear exceptional determination in advancing the brilliant concept of Contraction and Convergence, over long hard years with the Global Commons Institute—fifteen in all so far. It has been a frequently solitary struggle, and pursued with very limited resources. But Aubrey has not been daunted. Instead he has persevered, driven by his clear-sighted vision of the workability of Contraction and Convergence. His work offers not only a hope that global warming and environmental catastrophe can be averted, but that human reason can be our guiding star. He is one of the rare and vital people in the world today. He has given his life for others, not for personal gain. In a world deluged by self-centred motivations, Aubrey's efforts stand out as a beckoning call in the right direction.

Aubrey has evidenced outstanding intelligence and patience in advancing the concept of Contraction and Convergence during the history of the United Nations Framework Convention on Climate Change (UN-FCCC) negotiations. His patient efforts have been rewarded because many governments in the world today have accepted the concept of Contraction and Convergence as the only equitable response mechanism to the threat of climate change. Without equity considerations as devised in Contraction and Convergence, the Climate Change Convention and the Kyoto Protocol will remain un-implementable and leave all people on earth facing the devastating effects of climate change.

We in South Africa are aware that although the major industrial nations are causing the greatest air pollution, our own country needs comprehensively and urgently to reform its power generation and energy use systems. Aubrey is a South African by origin, and we would hope that if he should be successful in achieving the 2003 Sasakawa Prize, this would help bring a new awareness to our country about contraction and Convergence, and to the world of the threat of global warming to Africa's lands and peoples.

We wholeheartedly support Aubrey Meyer's nomination for the 2003 Sasakawa Prize.

Yours faithfully

Prof. James M. Phelps
Chairman
Zululand Environmental Alliance (ZEAL)

MAY

Rt Hon Michael Meacher MP
UK Minister for the Environment

FROM THE RT HON MICHAEL MEACHER MP
MINISTER FOR THE ENVIRONMENT AND AGRI-ENVIRONMENT

DEFRA
Department for
Environment,
Food & **Rural Affairs**

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Aubrey Meyer's contribution to the policy debate on how to avoid dangerous climate change has been sustained and outstanding.

Since 1989 he and his tiny organisation - the Global Commons Institute (GCI) - have been successfully challenging officials around the world including politicians like myself to adopt "Contraction and Convergence", GCI's global framework for climate change policies based on precaution, logic and equity

With scant material support and an extraordinary dedication and persistence, he created and communicated this visionary concept for a long-term global framework for negotiating the international allocation of greenhouse gas emissions permits.

He has already convinced numerous leading figures in the international negotiating community, the insurance industry, the scientific community, the environmental media and politics of the absence of effective alternatives to "Contraction and Convergence". So much so that in June 2000, the UK's Royal Commission on Environmental Pollution made it a key recommendation to this government. The concept has been endorsed by the European Parliament and many members of the UK parliament as well, including the former Secretary of State for the Environment, John Gummer and Ministers from practically all European countries. Under GCI's advice the concept was led at the UN negotiations by the Indian Government in 1995 and again by the Africa Group of Nations in 1997. Again as a result of GCI publications, C&C has also been endorsed by numerous eminent individuals and institutions and is more and more widely quoted in prestigious academic publications.

Lest we make the planet uninhabitable, the international community must come soon to an agreement on how to organise the global effort to avoid this. Contraction and Convergence is a very powerful idea and I have no doubt that the concept will continue to be an influential force in discussions, as one model of how greenhouse gas emissions can be allocated in a fair and equitable manner.

If ever there was an initiative that deserved recognition and support, it is the brilliant and relentless campaign waged by this fiercely independent, creative and apparently quite tireless individual.

Dr. Andrew Dlugolecki
Carbon Disclosure Project

**Citation of Aubrey Meyer, Global Commons Institute,
for the Sasakawa Prize,2003**

by
Dr Andrew Dlugolecki
Advisory Board Director, Carbon Disclosure Project
Adviser on Climate Change to UNEP Finance Sector Initiative

Aubrey Meyer's insight into the problem of mitigation of climate change bears the true hallmark of genius: it is simple and robust. His "Contraction and Convergence" model provides a transparent framework that incorporates the clear objective of a safe global level of greenhouse gases, AND allocates the responsibility for achieving this internationally with the irresistible logic of equal shares. At the same time, the model recognises the practical need for an adjustment period to permit nations to conform to the new logic and prepare for a climate-friendly economy. It is no doctrinaire solution, but a brilliantly pragmatic and elegant solution.

Aubrey and his tiny organisation GCI, have laboured tirelessly to bring the concept to every conceivable stakeholder's attention, from governments to NGO's, to the business world, in which I operate. Too often, mitigation is portrayed as being detrimental to economic development. Aubrey has demonstrated through his brilliantly simple graphics, that in fact mitigation is the guarantor of wealth creation, not its nemesis, and that market forces can accelerate the transition to a safer climate. This is a key message in mustering the support of the business world, and already the UNEP Finance Sector Initiative has commended "C&C" to policymakers as a basis for negotiation.

In the forthcoming discussions on how to follow up "Kyoto" with more meaningful action, surely Contraction and Convergence will be the pivotal proposal that reconciles developing and developed nations' ambitions. It is only fitting that Aubrey Meyer should be recognised for creating such a seminal concept, and promoting it so effectively.

Sir Tom Blundel
Royal Commision on Environmental Pollution

ROYAL COMMISSION ON ENVIRONMENTAL POLLUTION
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From The Chairman
Sir Tom Blundell FRS FMedSci

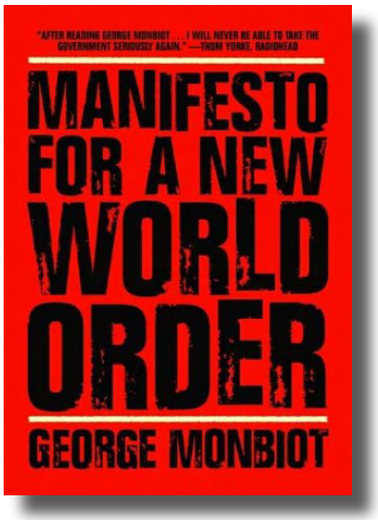
Citation of Aubrey Meyer, Global Commons Institute for the Sasakawa Prize.

I write to support the nomination of Aubrey Meyer for the Sasakawa Prize. Over the past fifteen years Aubrey Meyer has developed the idea of Contraction and Convergence as an international solution to the challenge of global warming and climate change. He has done this through the Global Commons Institute with very little funding and infrastructure. These ideas influenced the Royal Commission on Environmental Pollution in the development of its report "Energy: the Changing Climate" and Contraction and Convergence was the basis of the recommended 60% reduction in carbon emissions. This recommendation has been taken up by the government in its recent Energy White Paper and is now the generally accepted basis for policy by a range of government, industry and non-governmental organisations.

Aubrey Meyer is a visionary, but it has been hard to get the message through to governments. The award of the Sasakawa Prize would give much support to this very important work, and be a splendid recognition his important contributions.

Sir Tom Blundell,
Chairman,
Royal Commission on Environmental Pollution.

2003



George Monbiot
Manifesto for a New World Order

Publisher: New Press ISBN: 1565849086

Contraction & Convergence... "the only just and sustainable means of tackling climate change"

MAY

Robin Chapple [MLC]
Western Australian Legislative Council

In a letter to John Hyslop, Chairman of the Electricity Reform Task Force in Perth Western Australia.
Inter alia . . .

"All parties see Kyoto as merely the first step is achieving reductions of greenhouse gas emissions to ecologically sustainable levels within the next hundred years. Much work has been done in crafting a workable, equitable post-Kyoto process which will need to satisfy a number of agendas:

1. The objective must be to 'stabilise greenhouse gas concentrations in the atmosphere at a level which would prevent dangerous anthropogenic interference with the climate system' (UNFCCC 1992). Such a target will most likely be in the region of 350ppmv atmospheric CO2 by the year 2100, and there is general consensus that the limit can not be forced higher than 450ppmv without causing massive ecological and social dislocation.

2. A global carbon budget must be established, which quantifies the maximum amount of greenhouse gas which can be sustainably emitted globally per year. This defines the level of 'contraction' of emissions required (Meyer 2000).

3. This annual emissions budget is then assigned to each country proportional to population, establishing the principle of 'equity for survival' (Meyer 2000).

4. Over a specified time frame, all nations work toward bringing their emissions into line with their budget. This is known as

'convergence' (Meyer 2000).

and political action remains huge.

Furthermore, given that access for CO2 emissions to the global atmosphere needs to be rigorously checked in order to stay within 'safe' levels, no progress has yet been made in obtaining global consent to a politically equitable distribution of such rights.

A programme of Contraction & Convergence, moving towards an allocation of equal per capita emissions for all countries both developing and developed, has been proposed by the Global Commons Institute, but has not yet been widely taken up."

www.gci.org.uk/speeches/Meacher.pdf

www.guardian.co.uk/uk_news/story/0,3604,895067,00.html

FEBRUARY

New Statesman
How Britain can seize the moment

Ministers have to find an energy policy – otherwise they will fail to meet commitments on climate change and they will leave the UK too dependent on foreign supplies.

By ALEX EVANS

Just over ten years ago, John Major abolished the Department of Energy and consigned it to being no more than a directorate within the Department of Trade and Industry. At the time, this seemed only logical. After all, the bulk of the country's power generation capacity had been privatised (as National Power and Powergen), and the role of the state had apparently diminished to little more than appointing the regulator. The age of energy policy had, it seemed, come to an end.

When Labour came to power in 1997, little seemed to change. True, Labour took steps to protect the UK's ailing coal industry, mainly through using the planning regime to suspend the "dash for gas" – the 1990s rush to build cheap and highly profitable gas-fired power stations. But Labour's overriding aim in energy was to increase competition. Today, though, all eyes are once more on the government as its energy white paper approaches publication. The energy sector will be at the forefront of responding to the huge challenge of global climate change. Moreover, the UK's North Sea gas reserves have all but run out, raising the prospect of imminent dependency on gas imported through pipelines thousands of miles long, with inevitable concerns about security of supply. And over the next 20 years, the UK is projected to lose up to half of its existing power

stations – posing the question of how to replace them. Energy policy, it seems, is back. So what is the government trying to do with its energy policy? At present, it

The principle of contraction and convergence has been endorsed by the insurance sector – a sector whose core business of risk minimisation closely matches the objective of stabilising greenhouse emissions at safe levels and minimising the adverse environmental impacts and potentially huge economic costs of climate change.

While there are difficulties with each approach, it is clear that the international climate change framework of the future, whatever the detail of its related Protocols or other arrangements, will have very important implications for a carbon intensive economy such as NSW."

www.seda.nsw.gov.au/pdf/SEDA_Corp_Plan_2003-2005.pdf

2003

RCEP
Minutes from 3-4 April 2003:

Item 6: RCP(03)109

Analysis of the government's response to the 22nd Report

Energy The Changing Climate.

"18. The Chairman noted that during his talk he had mentioned particularly the difficulty in the government's position of accepting the 60% cut in carbon dioxide emissions advocated in the Report without accepting the principle of contraction and convergence on which it was based.

Professor Clift also asked how the government could justify accepting the recommendation for 60% cut in emissions without agreeing with the principle that had led to it. The Chairman said that the government had not fully rejected the model but said that they wanted to explore other options that might be more attractive to developing countries.

This seemed to misunderstand contraction and convergence."

http://www.rcep.org.uk/minutes/min03-04.pdf

JUNE

DEFRA Magazine

Trading up to Climate Security

Aubrey Meyer, the author of Contraction & Convergence – the global solution to climate change, believes the UK Government is edging towards a C&C framework to avert climate change disaster.

As a musician he was drawn to Brazil in the late 80s in search of a subject for a musical. The experience changed his life. He spent the next decade contributing to the policy working group of the Intergovernmental Panel on Climate Change (IPCC) and campaigning at United Nations negotiations. He is Director of the Global Commons Institute, has been honoured internationally for his work, and in May he addresses Government experts about climate security. By Aubrey Meyer Prime Minister Tony Blair has again called for a concerted international effort to tackle global poverty and environmental degradation – particularly climate change. This time, introducing the Government's White Paper on energy and prompted by the Iraq crisis, Mr Blair compared damage from weapons of mass destruction with global poverty and environmental degradation saying these long-term issues are "just as devastating in their potential impact, some more so. There will be no genuine security if the planet is ravaged by climate change." The urgency is palpable. The reality is also inescapable. The big re-insurance companies have noted that damages – or 'uninsured economic losses' – from (un)natural disasters such as climate change – have been rising at up to four times the rate of economic growth for the past 40 years . (See diagrams on facing page). At this rate it is only a matter of time before the losses reach catastrophic proportions for the industry. Mr Blair rightly described the Kyoto Protocol as, "not radical enough" and announced a Government target to reduce UK CO2 emissions by 60% by 2050. He linked this to the report in 2000 by the Royal Commission on Environmental Pollution who, in and since that report, advocate the global "Contraction and Convergence" (C&C) approach. The London-based Global Commons Institute (GCI) first proposed C&C in 1990. Since then GCI has refined the concept and with lobbying and imagery generated considerable international support for it (see www.gci.org.uk/consolidation).

The C&C methodology(1) puts the objective and principles of the United Nations Framework Convention on Climate Change (UNFCCC) into a constitutional global calculus that is described by the Intergovernmental Panel on Climate Change (IPCC) as, "taking the rights-based approach to its logical conclusion". To meet the objective of the UNFCCC in a precautionary way, C&C first proposes a reviewable global greenhouse gas (ghg) emissions 'contraction budget' targeted at a safe and stable future level for atmospheric ghg concentrations (for example

450 ppmv as in the example shown above) . This also applies the UNFCCC principle of precaution. To embed the principle of equity, C&C then proposes internationally tradable shares in this budget that are calculated on the basis of 'convergence' from the starting point, where shares are broadly proportional to global income distribution, to a target date within the budget timeline, after which they remain proportional to an agreed base year of global population (for example 2030 as in the example below). This reduces the randomness and North/South rancour that has almost fatally flawed negotiations since 1992 over future emissions commitments/entitlements.

C&C resolves constitutionally this conflict between the GDP - growth or 'efficiency'-led approaches favoured by the USA and those, such as the "Brazilian Proposal", that emphasise responsibility for the historic emissions that have caused the rise of atmospheric concentrations, temperature and damages.

(See the graphic, right). Under the influence of Environment Minister Michael Meacher, Defra – the Government's lead agency on climate change – has increasingly engaged with C&C over recent years. Saying that their own methodology is based on C&C, there is still resistance. However, Defra has now indicated its intention to encourage discussion of this at the UN negotiations and has invited GCI to lead a seminar on this for civil servants in May. Here is the essence of that presentation: Precaution recognises that the bigger the contraction budget the greater the risks. So, guided by scientific advice of the Intergovernmental Panel on Climate Change (IPCC), all governments or regional groupings of governments jointly and severally agree to observe such an atmospheric target. With such a target it is possible to calculate the total diminishing amount of greenhouse gases that the world can emit for each year in the coming century. Whatever the rate and subsequent revisions agreed, C&C view's this event as a whole as " Contraction"(2). The example shown limits the rise of atmospheric CO2 concentration to 450 parts per million by volume or no more than 70% above the maximum pre-industrial level. On the basis of equity, convergence means that each year's ration of this global emissions (contraction) budget for each country or group of countries progressively converges on the same allocation per person by an agreed date, as shown by 2030 in the previous graphic. This recognises the principle of globally equal rights per capita to the 'global commons' of the atmosphere, but achieved by smooth transition. Where country-groups do have a diversity of fossil fuel endowments and production/consumption patterns, C&C acknowledges this too by embracing the example of the European Union, which operates as a unit at the international level whilst creating its own internal convergence arrangements. The overall rate of convergence is negotiable independent of the rate on contraction; and can be 'accelerated' so as to provide a

global mechanism whereby developing countries can redress the structural imbalance represented by the historic inequalities of consumption and emissions.

Permits created this way are considered tradable equity and only emissions in excess of the total of permits created under C&C are not permitted – sometimes called 'hot-air'. Countries unable to manage within their agreed shares would, subject to verification and appropriate rules, be able to buy the unused parts of the allocations of other countries or regions. Sales of unused allocations would generate purchasing power in low per capita emitting countries to fund development in sustainable zero-emission ways. High per capita emitting countries would be paying over the odds as they adjusted but would gain a mechanism to mitigate the expensive premature retirement of their carbon capital stock. They would also benefit from the export markets for renewable technologies this restructuring would create. Most importantly, we all benefit from more rapidly avoided global damages as fossil fuel dependence is structurally inhibited and revenues from emission permit sales are recycled into the competitive diffusion of clean energy systems.

At present, as Tony Blair recognises, fossil fuel dependence and climate change increasingly augur chaotic political conditions and catastrophic economic losses. C&C pre-empts this by integrating the key features of global diplomacy, environment and economic development necessary for long-term prosperity and security. This integration can guide the global transition to a new growth and prosperity based on zero carbon techniques and technologies. Without such an agreement we are radar-less and rudderless.

I hope GCI can persuade our civil service experts to make and win this argument at the UN. Unequal commitments by some countries – as with Kyoto – are a half truth that aggravates climate change and conflict. Speaking to the whole truth of equal emissions entitlements under a global cap on emissions – Contraction and Convergence – creates the negotiating conditions that will win peace and prosperity with climate security. This is the basis for Mr Blair's "Climate Covenant".

(1) Aubrey Meyer's book Contraction & Convergence is available from www.greenbooks.co.uk, tel 01803 863260.

JUNE

UK Liberal Democrats
Proposals on Energy Policy

Policy Paper 58

2.4.6

Preparations also need to be made for the longer-term development of the Protocol, beyond the first commitment period of 2008–12.

Liberal Democrats argue for:

• Further and more ambitious emissions reductions targets should be agreed for the second and subsequent commitment periods, based on the principle of 'contraction and convergence' with the long-term goal of equalising per capita emissions across the world.

• Generous assistance with finance and technology transfer must be made available to developing countries to assist them in meeting their targets.

UK Liberal Democrat Working Group on Energy

Andrew Warren (Chair) , Terry Jones Andrew Stunell MP, Richard Balmer , Tamsin Lishman , Cllr Alan Thawley, Duncan Brack , Maria Menezes , Siobhan Vitelli, Cllr Paul Burall , Cllr Bill Powell, Vince Cable MP , Liz Pym Staff, James Cameron , David Simpson, Chris Davies MEP , Sir Robert Smith MP , Christian Moon, Mark Hinnells , Neil Stockley

Note: Membership of the Working Group should not be taken to indicate that every member necessarily agrees with every statement or every proposal in this paper.

www.libdems.org.uk/documents/policies/Policy_Papers/58ConservingtheFuture.pdf

JUNE

New Statesman
It's later than you think

MARK LYNAS has seen the results of man-made climate change across five continents. Only urgent action can now prevent a catastrophe, he argues.

Hardly anyone realises it yet, but the debate about climate change is over. Scientists around the world have now amassed a virtually unassailable body of evidence to support the conclusion that a rapid warming of our planet – caused principally by greenhouse gas emissions from fossil fuel burning – is under way.

The dwindling band of climate "sceptics", a rag-tag bunch of oil and coal industry frontmen, retired professors and semi-deranged obsessives, is now on the defensive. Although names like Fred Singer, Philip Stott and Bjorn Lomborg still appear from time to time in the popular press both here and in the United States, their views are notable by their absence from the expert literature.

Meanwhile the world as we once knew it is beginning to unravel. The signs are everywhere, even in Britain. Horse chestnut, oak and ash trees are coming into leaf more than a week earlier than two decades ago. The growing season now lasts almost all year round: in 2000 there were just 39 official days of winter.

Destructive winter floods are part of this warming trend, whilst in lowland England snow has become a thing of the past. Where I live in Oxford six out of the past ten winters have been completely snowless – something that only happened twice during the whole 30-year period between 1960 and 1990. The rate of warming has now become so rapid that it's equivalent to your garden moving south by 20 metres every single day.

> In other parts of the world the global warming signs are more dramatic. Over the last three years, researching a book on the subject, I have witnessed major climate-driven changes across five continents, changes that are already leaving millions homeless, destitute and in danger.

In Alaska I spent a week in the Eskimo village of Shishmaref, on the state's remote western coast, just 70 miles from the eastern coast of Russia. Whilst the midnight sun shone outside, I listened as the village elder Clifford Weyiouanna told me how the sea, which used to freeze up in October, was now ice-free until Christmas. And even when the sea ice does eventually form, he explained, it is so thin that it is dangerous to walk and hunt on.

The changing seasons are also affecting the animals: seals and the walruses – still crucial elements of the Eskimo diet – are migrating earlier and are almost impossible to catch. The whole village caught only one walrus last year, even after covering thousands of miles by boat.

Shishmaref lives in perpetual fear. The cliffs on which the 600-strong community sits are thawing, and during the last big storm fifty feet of ground was lost overnight. People battled 90-mph winds to save their houses from the crashing waves.

I stood on the shoreline a year ago with Robert Iyatunguk, Shishmaref's Erosion Coordinator, looking up at a house left hanging over the clifftop. "The wind is getting stronger, the water is getting higher, and it's noticeable to everybody in town," he told me. "It just kind of scares you inside your body and makes you wonder exactly when the big one is

going to hit." In July 2002 the residents voted to abandon the site altogether – a narrow barrier island which has been continuously occupied by Eskimos for centuries – and move elsewhere.

In Fairbanks, Alaska's main town in the interior, everyone talks about warming. The manager of the hostel where I stayed, a keen hunter, told me how ducks had been swimming on the local river in December (it's supposed to freeze over in autumn), how bears had become so confused that they didn't know whether to hibernate or stay awake, and that winter temperatures, which in the past used to plummet to 40 degrees below zero now barely touched 25 below.

All around the town roads are buckling and houses sagging as the permafrost underneath them thaws. In one house I visited, the occupants, a cleaning lady and her daughter, showed me how just walking across the kitchen meant going uphill (the whole house was tilting sideways) and how their shelves had to be rebalanced with bits of wood to stop everything falling off. Other dwellings have been abandoned. New ones are built on adjustable stilts.

Scientists have long predicted that global warming will lead to more intense flooding and drought. When I visited China in April last year, the country's northen provinces were in the grip of the worst drought in over a century. Entire lakes had dried up, and in many places sand dunes advancing were advancing across farmers' fields.

One lakeside village in Gansu Province, just off the old Silk Road, was abandoned after the waters dried up – apart from one woman, who lives amid the ruins with only a few chickens and a cow for company. "Of course I'm lonely!" she cried, in answer to my rather insensitive question. "Can you imagine how boring this life is? I can't move, I can do nothing. I have no relatives, no friends and no money." She was tormented by memories of how it had once been, when neighbours had chatted and swapped stories late into the evenings, before the whole place became a ghost town.

Minutes after I had left, a duststorm blew in. These storms are getting more frequent, and even Beijing is now hit repeatedly every spring. During an earlier visit to a remote village in eastern Inner Mongolia, not far from the ruins of Kubla Khan's fabled Xanadu, I experienced an even stronger storm. Day was turned into night as a blizzard of sand and dust scoured the mud-brick buildings. I cowered inside one of them with a Mongolian peasant family, sharing rice wine and listening to tales of how the grass had once grown waist-high on the surrounding plains. Now the surrounding land is little more than arid desert, thanks both to persistent droughts and overgrazing.

The storm raged for hours. When it eased in the late afternoon and the sun appeared again, a loud crowing erupted – the village cockerels thought that morning had come early.

The drought in northwest China is partly caused by shrinking runoff from nearby mountains, which because of the rising temperatures are now capped with less snow and ice than before. Glacier shrinkage is a phenomenon repeated right across the world's mountain ranges, and I also saw it at first hand in Peru, standing dizzy with altitude sickness in the high Andes 5,200 metres above the capital, Lima, where one of the main water-supplying glaciers has shrunk by more than a kilometre during the past century.

A senior manager of Lima's water authority told me later how melting ice is now a critical threat to future freshwater supplies: this city of seven million is the world's second largest desert metropolis after Cairo, and the mountains supply all of its water through coastal rivers that pour down from the icefields far above. It is the snows that keep the rivers running all year round – once the glaciers are gone the rivers will flow only in the wet season. The same problem afflicts the Indian subcontinent, too: overwhelmingly dependent for water on the mighty Ganges, Indus and Brahmaputra rivers that flow down from the Himalayas, hundreds of millions of people will suffer water shortages as their source glaciers decline over the coming century.

Unless alternative water supplies can be secured, Lima will eventually be left depopulated, its people scattered as environmental refugees. This is a category already familiar to the residents of Tuvalu, a group of nine coral atolls in the middle of the Pacific. Tuvalu, together with Kiribati, the Maldives and many other island nations, has made its plight well known to the world community, and an evacuation plan – shifting 75 people a year to New Zealand – is already under way.

I saw at first hand how the islands are already being affected by sea level rise, paddling in knee-deep floodwaters during last year's February spring tides, which submerged much of the capital Funafuti and almost surrounded its airstrip. Later the same evening the country's first post-independence prime minister, Toaripi Lauti, told me of his shock at finding his own crop of pulaka (a root vegetable like taro, grown in sunken pits) dying from saltwater intrusion. He recalled how everyone had woken up one morning a few years previously to find that one of the islets on the atoll's rim had disappeared from the horizon, washed over by the waves, its coconut trees smashed and destroyed by the rising sea.

The worrying truth is that however severe these unfolding climate change impacts seem, they are – like the canary in the coal mine – just the first whispers of the holocaust that lies ahead if nothing is done to reduce greenhouse gas emissions.

Scientists meeting under the banner of the UN-sponsored Intergovernmental Panel on Climate Change (IPCC) have predicted a warming during this century alone of up to six degrees Celsius, which would take the earth into dangerous uncharted waters. A few weeks ago scientists at the UK's Hadley Centre reported that the warming might be even greater because of the complexities of the carbon cycle.

The IPCC's worst-case forecast of six degrees could prove almost unimaginably catastrophic. It only took six degrees of warming to spark the end-Permian mass extinction 251 million years ago, the worst crisis ever to hit life on Earth (expertly chronicled by Michael Benton in 'When Life Nearly Died') which led to the deaths of 95% of all the species alive at the time.

If humanity is to be sure about avoiding a similar fate, global greenhouse gas emissions need to be brought down to 60-80% below current levels – precisely the reverse of emissions forecasts recently produced by the International Energy Agency.

A good start would be the ratification and speedy implementation of the Kyoto Protocol, which should be superseded after the next decade by the 'contraction and convergence' model proposed by the Global Commons Institute in London (http://www.gci.org.uk), allocating equal per-person emissions rights among all the world's nations.

In the meantime, a network of campaigning groups is currently mobilising under the banner of 'No New Oil', demanding an end to the exploration and development of new fossil fuel reserves on the basis that current reserves alone include enough oil, coal and gas to utterly destabilise the world's climate. Searching for more is just as illogical as it is wasteful.

Avoiding dangerous climate change and other large-scale environmental crises will need to become the key organising principle around which societies evolve. All the signs today are that few in power realise this – least of all the current US administration, which has committed itself to a policy of wanton destructiveness, with control and exploitation of oil supplies a central theme.

We must abandon the old mindset that demands an oil-based economy, not just because it sparks wars and terrorism, but because the future of life on Earth depends on leaving it behind.

Mark Lynas's book 'High Tide: News from a Warming World' will be published by Flamingo in March 2004. marklynas@zetnet.co.uk

JUNE

Climate Policy Journal

> ". . . a convergence regime offers the best opportunities for exploring cost-reduction options of the [Kyoto Mechanisms] as all parties can participate in global emissions trading. There may be excess emission allowances (hot air), but this will not affect the effectiveness nor the efficiency of the regime, only the distribution of costs."

Berk and den Elzen indeed said this. They went on to conclude -

"We discussed the two different climate regime options against the requirement of early participation of developing countries in global greenhouse emission control to meet stringent climate targets. Where climate change limits are stringent, a C&C regime seems to provide more incentives for a timely participation of developing countries, and better opportunities for an effective and efficient regime for controlling global GHG emission control than increasing participation."

JULY

House of Commons
Environmental Audit to Government

The 60% target for 2050

11. The Government's commitment to a new direction in energy policy is specifically reflected by its adoption of a long-term carbon reduction target in direct response to the RCEP recommendation.[14] By including in the White Paper a specific commitment to a 60% reduction in carbon emissions by 2050, the UK Government has set a clear goal for domestic policy. It has also led the way internationally by emphasising to other nations the need to address the challenge of global warming. The Government deserves praise for doing so. 12. The impact of this internationally was reflected in comments made by the Chairman and members of the Environment Committee of the Canadian Federal Parliament, when they came to give evidence to us on another inquiry. In referring to the Government's 60% target for 2050, the Chairman stated:

"We would like, as parliamentarians, to congratulate you for your initiative, which we find far reaching and very enlightened and it sends out a signal also to us in Canada, which we will take seriously.

We would like also to congratulate not only you in this room but outside this room those in the Energy Department of the UK who produced the White Paper in which the target of 2050 is elaborated for a reduction of greenhouse gases by 60 per cent. Although the choice of 2050 is a very bold initiative it forces us to think into the future more than we usually do and that 60 per cent reduction is a stunning item".[15] 13. However, the RCEP pointed out that the 60% target was in the context of an international agreement to a "contraction and convergence" (C&C) framework, and it recommended the adoption of such an approach, combined with international trading in emission permits, as offering the best long-term prospect of securing equity, economy and international consensus. The Energy White Paper says nothing about the latter, and the Government response to the RCEP recommendation is non-committal, citing C&C as only one of a number of possible approaches which could be adopted.[16] While we understand the need for some flexibility in international negotiations, we are aware of the difficulties of achieving a consensus. We believe that, just as the UK is setting a precedent in terms of adopting a long-term target, it could also exert greater influence over other nations by setting out and promoting more clearly what approach it favours in terms of an international framework for reducing carbon emissions."

www.publications.parliament.uk/pa/cm200203/cmselect/cmenvaud/618/61804.htm#a3

JULY

Argus Energy Monthly

Big idea

When the Kyoto protocol ends, governments will need a new climate change strategy. Here's one.

One vital question remains unanswered in the world of climate change what will happen when the Kyoto protocol ends?

The protocol only applies to a first commitment period. of 2008-2012. After that, at present, there is only the loosest of political understandings to agree by 2005 a new direction on curbing greenhouse gas (GHG) emissions (see pp14-15).

Given the Bush administration's stubborn abhorrence of Kyoto, the idea of a harmonious future with the world united under one binding agreement looks increasingly unlikely. But times change, political views soften, and the march of big ideas can catch the imagination of the electorate and overwhelm politicians when they least expect it.

Simple

Here is one: contraction and convergence (C&C), devised and championed by South African environmentalist Aubrey Meyer . one of the founders of UK advocacy Global Commons Institute

(GCI) and author of the book Contraction and Convergence. The concept is relatively simple to grasp. Contraction refers to the setting up of a global emissions budget that stabilises the rising GHG concentrations in the atmosphere. All countries agree this is a safer approach than the random national agreements of Kyoto which only apply to developed Annex-1 countries. Convergence refers to the fair allocation of entitlements to this budget so that all nations can help meet the annual contraction target. The heart of the concept is that allocation would be based on emissions per head of the population, to which each country would "converge" by an agreed date. So a populous developing country such as Indonesia with low GHG emissions per person would end up well within its budgeted emissions entitlement, and therefore have credits to sell. Done like this,

C&C would ensure that the growth of global emissions trading was directly linked to climate control.

GCI points out that sales of unused allocations would create purchasing power in the developing nations to fund zero-emissions technologies. This in turn would benefit industries from developed countries which could sell the technology. Yet the later the convergence date relative to the contraction, the less it favours developing nations. And the later the contraction date, the more climate change and damage will be caused.

The idea, though, seems fair and GCI has gathered some impressive support. It claims C&C has wider support than any other proposal. It has been widely discussed in closed sessions at various climate change meetings, and various governments are now trying to brief themselves on its virtues. But the idea runs counter to the thrust of the US position on emissions, which aims to link emissions to dollars, the so-called "emissions intensity" approach. The Bush administration considers that the more dollars generated per ton of emissions burnt, the greater the degree of economic efficiency. It wants this approach to be adopted globally. Whether C&C forms the basis of the post-Kyoto world or is just one of a number of good ideas is not yet clear. But the approach certainly deserves serious consideration.

JULY

Guardian

Global warming is now a WMD

It kills more people than terrorism, yet Blair and Bush do nothing

John Houghton

If political leaders have one duty above all others, it is to protect the security of their people. Thus it was, according to the prime minister, to protect Britain's security against Saddam Hussein's weapons of mass destruction that this country went to war in Iraq. And yet our long-term security is threatened by a problem at least as dangerous as chemical, nuclear or biological weapons, or indeed international terrorism: human-induced climate change.

As a climate scientist who has worked on this issue for several decades, first as head of the Met Office, and then as co-chair of scientific assessment for the UN intergovernmental panel on climate change, . . .

the impacts of global warming are such that I have no hesitation in describing it as a "weapon of mass destruction".

Like terrorism, this weapon knows no boundaries. It can strike anywhere, in any form - a heatwave in one place, a drought or a flood or a storm surge in another. Nor is this just a problem for the future. The 1990s were probably the warmest decade in the last 1,000 years, and 1998 the warmest year. Global warming is already upon us.

The World Meteorological Organisation warned this month that extreme weather events already seem to be becoming more frequent as a result. The US mainland was struck by 562 tornados in May (which incidentally saw the highest land temperatures globally since records began in 1880), killing 41 people. The developing world is the hardest hit: extremes of climate tend to be more intense at low latitudes and poorer countries are less able to cope with disasters. Pre-monsoon temperatures this year in India reached a blistering 49C (120F), 5C (9F) above normal.

Once this killer heatwave began to abate, 1,500 people lay dead - half the number killed outright in the September 11 attacks on the World Trade Centre. While no one can ascribe a single weather event to climate change with any degree of scientific certainty, higher maximum temperatures are one of the most predictable impacts of accelerated global warming, and the parallels - between global climate change and global terrorism - are becoming increasingly obvious.

To his credit, Tony Blair has - rhetorically, at least - begun to face up to this. In a recent speech he stated clearly that "there can be no genuine security if the planet is ravaged by climate

change". But words are not enough. They have to be matched with adequate action. The recent announcement of a large-scale offshore wind generating programme was welcome, but the UK still lags far behind other European countries in developing renewables capacity.

The latest report on energy and climate change by the royal commission on environmental pollution addressed the much more demanding global reductions in greenhouse gas emissions that will be required over the next 50 years (in addition to the Kyoto agreement) and how these could be achieved. Given that the UK needs to take its share of the global burden the commission recommended that we should aim for a cut in these emissions of 60% by 2050.

It also pointed out the urgent need for an adequate mechanism for negotiating each country's emission target and advocated a globally implemented plan known as "contraction and convergence". The energy white paper published earlier this year accepted the royal commission's 60% reduction target, but it is disturbing that it provided no clarity on UK policy regarding the framework for international negotiation.

Any successful international negotiation for reducing emissions must be based on four principles: the precautionary principle, the principle of sustainable development, the polluter-pays principle and the principle of equity. The strength of "contraction and convergence" is that it satisfies all these principles. But it also means facing up to some difficult questions.

First, world leaders have to agree on a target for the stabilisation of greenhouse gases in the atmosphere at a sufficiently low level to stave off dangerous climate change. Second, this target, and the global greenhouse gas budget it implies, has to form the framework for an equitable global distribution of emissions permits, assigned to different countries on a per-capita basis. Countries with the largest populations will therefore get the most permits, but for the sake of efficiency and to achieve economic convergence these permits will need to be internationally tradable.

This is the only solution likely to be acceptable to most of the developing world, which unlike us has not had the benefit of over a century of fossil fuel-driven economic prosperity. And it also meets one of the key demands of the United States, that developing countries should not be excluded from emissions targets, as they currently are under the Kyoto protocol.

Nowadays everyone knows that the US is the world's biggest polluter, and that with only one 20th of the world's population it produces a quarter of its greenhouse gas emissions. But the US government, in an abdication of leadership of epic proportions, is refusing to take the problem seriously - and Britain, presumably because Blair wishes not to offend George Bush - is

beginning to fall behind too. Emissions from the US are up 14% on those in 1990 and are projected to rise by a further 12% over the next decade.

It is vital that Russia now ratifies the Kyoto protocol so that it can at last come into force. But while the US refuses to cooperate, it is difficult to see how the rest of the world can make much progress on the much tougher longer-term agreements that will be necessary after Kyoto's mandate runs out in 2012.

Nor does the latest science provide any comfort. The intergovernmental panel on climate change has warned of 1.4C to 5.8C (2.5F to 10.4F) temperature rises by 2100. This already implies massive changes in climate, and yet the current worst-case scenarios emerging from the Met Office's Hadley centre envisage even greater rises than this - a degree and speed of global warming the consequences of which are hard to quantify or even imagine.

So Blair has a challenge. The world needs leadership, and the British prime minister is well placed to stand at the head of a new "coalition of the willing" to tackle this urgent problem. He is also uniquely placed to persuade Bush to join in this effort, given their joint commitment to making the world safe from "weapons of mass destruction".

But even if he fails to persuade him, there are other allies who would still respond to his leadership - even if this means opposing the US until such time as it no longer has an oilman for president. If Blair were to assume this mantle, history might not only forgive him, but will also endorse Britain's contribution to long-term global security.

· Sir John Houghton was formerly chief executive of the Meteorological Office and co-chair of the scientific assessment working group of the intergovernmental panel on climate change. He is the author of Global Warming: the Complete Briefing.

AUGUST

Argus Energy Monthly
A view from the global commons

Aubrey Meyer is the originator of contraction and convergence (C&C), a global solution to climate change, radically different from the Kyoto Protocol, and heads up the Global Commons Institute (GCI).

Something of a legend in climate change circles, Meyer is a tireless advocate for C&C and a fearless critic of governments and corporations when they appear to ignore the scientific evidence of global warming. C&C advocates a global atmospheric emissions limit with a matching global emissions

"contraction budget" and convergence to equal shares per person by agreed dates. Argus interviewed Meyer at GCI's modest headquarters in London. Edited highlights follow.

Can you describe and define what "global commons" means?

It is something common to all. The atmosphere is global and something we all depend on. It has no vertical boundaries and is a perfect mixer of greenhouse gases (GHGs). GCI has proposed its protection by "shared ownership" of the GHG emissions limits necessary to avoid the concentrations and warming being raised too far.

Is climate change real?

Yes. As we release more GHGs into the atmosphere, the laws of physics being immutable, more heat is trapped by definition. This is changing the climate.

The rate of emissions release is like an uncontrolled explosion in slow motion.

The science arguments are only about the rate and manner at which the heating effect of this is "masked" by various factors.

So who caused this explosion?

The industrial countries did, since around 1800. The unequal GHG emissions and consumption patterns since industrialisation are now key amongst the factors changing the climate.

How dangerous do you think the climate change situation actually is?

I think it is very dangerous, and increasingly so because our response is inadequate and random. If emissions continue to accumulate in the atmosphere at the present rate, consequential damage could break the economy within decades. If we warm the atmosphere too far, the whole climate system will react with potentially runaway greenhouse conditions. We need a roadmap to avoid this.

How did this idea of contraction and convergence (C&C) come to you, you were, after all, a musician?

In 1989, I read about the death of Brazilian social activist Chico Mendez and thought this would be a good subject for a musical. Ranchers clearing the forests murdered him. He was an enigma, but the broader issues were clear and so writing a musical seemed like fiddling while things burned.

About a year later the World Resources Institute (WRI) published a league of polluters. The top five countries were USA, USSR, China, India and Brazil. I was incredulous that the WRI could group those countries together ahead of everyone else. In 1990, the accumulated emissions of the industrial country group alone was around 85pc of the global total. I also compared emissions per capita internationally for that year. My campaigning was focused from then on.

In 1992, the United Nations Framework Convention on Climate Change (UNFCCC) was agreed. Its objective is the restraint of GHG emissions following the principles of precaution and equity. GCI had integrated this formally into C&C by 1996. We added past emissions and a function to project all contraction and convergent emissions futures that stabilise atmospheric GHG concentration at a pre-defined level. This is not predictive or prescriptive. It simply integrates and projects the treaty's objective and principles in a non-random manner.

What's different between a prediction and a projection?

Prediction and prescription are noisy. Prediction says, "This might happen but then again something else might happen". Prescription says, "Do this because I'm telling you to". A projection just signals. On these principles, with this end point, the non-random route between here and there projected forward looks like this. This is what C&C does. The principles are constant, no matter what the rates.

What about critics who say this is just a crazy concept? What makes it a mainstream idea?

Those who say climate change is not an issue, or one you can't do anything about, are the crazy ones. The mainstream has to deal with the imperative of emissions contraction to meet the objective of the UN climate treaty. GCI points out that, by definition, convergence is integral to the contraction. The issue is, do we get C&C going at rates that are effective by chance or by choice, by accident or design?

How does this differ from the Kyoto Protocol?

C&C makes possible a global rate of convergence that can be accelerated relative to contraction, and this can be used to resolve the row about the historic accumulation of GHGs in the atmosphere from the industrial countries. More rapid convergence shifts future equity share to the developing countries to settle this "debt". This makes agreement to work together possible. Kyoto avoids this. It delays global contraction and makes convergence random. But people say that Kyoto, though flawed, is the best that can be expected. Kyoto attempted to bring out leadership from "guilty" countries in the UN treaty. Kyoto-only experts assert that they've created a basis on which we go through to 2100 when GHG concentration will be stabilised. Their claim is to be able to resolve 186 countries' special arguments about why each is the exception during every five-year negotiating period for the next 100 years, while temperature, damage, tempers and panic rise. C&C is the logical continuation of Kyoto or its replacement if it fails. Those proponents of Kyoto who repudiate the C&C framework in favour of perennial Kyotostyle guesswork look silly.

What about the US? Would it support C&C?

They do, but may not have spotted it. The Bush administration made stabilising atmospheric GHG concentration a global security issue last year. Together with the Byrd-Hagel resolution, this is C&C by definition. Technology is crucial, but the C&C roadmap to deliver this stabilisation is indispensable for global success.

What are your relations with the EU?

Good. The EU makes an effort to reduce emissions and create institutional arrangements supporting this. They are seen doing this in front of the rest of the world and they see the logic of C&C.

What are your views on the UK government's energy white paper policy document?

When prime minister Tony Blair introduced the white paper, he said the need to avoid mass destruction from climate change required what he called a "climate covenant" between all nations. He correctly sourced his commitment to a 60pc cut in carbon dioxide emissions by 2050 to the Royal Commission on Environmental Pollution. But the commission's report to government made C&C the key recommendation. Blair didn't acknowledge that the 60pc was a function of C&C. This created the impression that Blair's 60pc was plucked from thin air. He followed bad advice on this point.

What about the EU emissions trading scheme (ETS)?

If it leads to trade under conditions of C&C, it has promise. The danger is emissions trading becoming a law unto itself, progressively delinked from the problem we are trying to solve. Already there are more people waiting to sell emissions credits than willing buyers. This is trouble.

And the UK ETS?

These are just early days, but we must keep focused on why the trading of emissions permits exists. It is to avoid dangerous rates of climate change, not to avoid responsibility for causing climate change. The smart traders are those who realise the biggest money is going to be made when you don't just demonstrate avoided emissions, you demonstrate that emissions never happened because permits are redeemed against emissions free technology.

What about Clean Development Mechanisms (CDMs)?

Like Kyoto, the CDM is more symbolic than structural. It plucks numbers from thin air, which is what some nongovernmental organisations call "hot air".

Can you talk about your interface with big capital, and the multinational companies?

Businesses, especially in energy, want to proceed in a responsible way, but they are in difficulty for lack of a road map. Long-term investments have to be secure, and in the absence of a road map there is uncertainty. People are nervous

of doing what they know is necessary. Banks and insurance companies know we need a habitable planet to have an economy. At present rates of damage increase from climate change, huge swathes of equity will become uninsurable as the risks become too big to carry. Some have already called for C&C as it creates a roadmap for security and prosperity.

They have to underwrite the present system but also have the clout to force C&C. It is only a matter of time.

What is contraction and convergence (C&C)

Contraction: all governments agree to be collectively bound by an upper limit to greenhouse gas (GHG) concentration in the atmosphere. This, subject to a periodic review, makes it possible to calculate the diminishing amount of GHGs that the world can release for each year.

Convergence means that each year's ration of this global emissions budget is shared out so that every country converges on the same allocation per inhabitant by an agreed date, for example by 2020. It recognises the need for access rights to the "global commons" of the atmosphere with the fundamental principle of globally equal rights per person. C&C's smooth transition makes stable climate possible by choice, rather than just by chance.

C&C supporters in Developing nations have warmed to C&C, because under such a system they would have emissions credits to trade. They include a group of African nations, the Non-Aligned Group of Nations, and the governments of India and China. C&C has won support from the European Parliament and UN environmental experts like Klaus Topfer, Jan Pronk and Raul Estrada Oyuela, former chair of the Kyoto negotiations. France's President Jacques Chirac has praised the idea, as do many academic and media experts, and environmental groups like Friends of the Earth. A number of Church groups are pushing for C&C to be the cornerstone of a new campaign.

http://www.gci.org.uk/Insurers/Chap10_CII_(C&C).pdf

AUGUST

Greener Management International
Climate Change the Insurance Sector

"One policy issue that insurers are beginning to examine is the need for agreement on a long-term framework for emissions control...there is a real possibility that climate change will run away, resulting in major disruptions from abnormal weather and sharp, unplanned and inefficient changes in energy policy."

In its position paper for COP7 UNEPFI commends "Contraction and Convergence" to policymakers as a method that tackle these problems."

AUGUST

Christopher Layton
Hon Director Director-General, Commission of the European Union

"Aubrey Meyer is one of those rare individuals whose commitment and practical vision are leaving a decisive positive mark on the future.

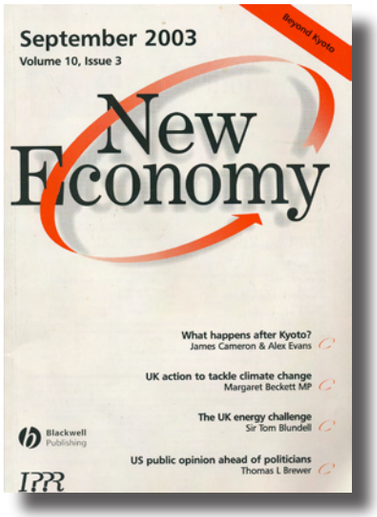
Over the last ten years, while global negotiations on climate change have proved a bitter disappointment, the idea of Contraction and Convergence, which Aubrey and the Global Commons Institute have pioneered, has become accepted, throughout the world, as the key practical long-term solution which could mobilise all nations in an equitable response to the climate challenge.

Aubrey and his tiny Global Commons Institute have achieved this by tenacious personal effort. With no prestigious organisation or status behind him he has lobbied, persuaded, and dialogued with international climate negotiators at every level and in every part of the world, honing the C and C concept in the light of criticism, presenting it with intellectual force and clarity and persuading a growing global body of opinion formers, governments and interest groups that it offers the way forward.

As debate and decision-making on this momentous issue enter a decisive phase, Aubrey surely deserves support for his vital work.

He is one of the unsung heroes of our time."

SEPTEMBER



New Economy
Beyond Kyoto

By pulling out of the Kyoto Protocol in 2001, President George W Bush probably did more to put the issue of global climate change on the map than environmental NGOs had managed to achieve over the previous twenty years. The degree of opprobrium focused on the United States led many to assume that Kyoto was 'the solution to climate change'. In reality, though, Kyoto is little more than a very small first step towards addressing climate change. Taking into account the emissions of developing countries, as well as the withdrawal of both the United States and Australia, the International Energy Agency estimated that total global emissions will rise by around 70 per cent over Kyoto's lifetime.

The crucial question is therefore what happens beyond the expiry of Kyoto's 'first commitment period' in 2012. Under Kyoto, the world must review the adequacy of existing commitments by the end of 2005 at the latest. In practice, the process of defining 'future commitments' will begin in earnest sooner than then, and in particular at the UN climate summit this December in Milan. This special edition of New Economy offers nine articles on climate policy that seek to throw light on the question of what happens beyond Kyoto.

We begin with a correspondence debate on what should follow Kyoto between James Cameron, an international barrister and one of the architects of the Kyoto Protocol, and Alex Evans, energy research fellow at IPPR. Cameron argues for an evolution of the Kyoto approach that emphasises political realism and maintaining gradual momentum in the process. Evans criticises Kyoto as fundamentally unable to deliver the required scale of emissions reductions, and proposes instead the alternative 'Contraction and Convergence' approach, which would first decide on a safe global 'emissions budget' consistent with stabilising greenhouse gas concentrations safely and then allocate this between nations by negotiating a date at which national entitlements converge at equal per capita levels.

Another proponent of Contraction and Convergence is Sir Tom Blundell, the Chair of the Royal Commission on Environmental Pollution. Whilst Blundell welcomes the Government's acceptance in the Energy White Paper of the Royal Commission's proposal of reducing emissions by 60 per cent by 2050, he notes that the White Paper did not explain where the figure came from – leading some commentators to think that it was an 'arbitrary figure'. Nothing could be further from the truth, he continues: the figure was in fact based on an assessment of what the UK's commitment would be under a hypothetical Contraction and Convergence scenario.

Geoff Jenkins, head of climate prediction at the UK Met Office's Hadley Centre for Climate Research, offers a valuable perspective on the latest scientific findings. Alarmingly, Jenkins notes that a 'buffering effect', through which soils and vegetation absorb carbon dioxide and so help to soften the impact of climate change, 'will not last forever' as the biosphere's absorptive capacity becomes saturated. As a result, if for example the world decided to stabilise CO2 concentrations at 550 parts per million, the loss of the buffering effect means that 'we will only be allowed to emit half as much as we thought'.

Meanwhile, Tom Brewer assesses the status of climate change in US political discourse, and argues that public opinion is some way ahead of the Bush Administration: only one fifth of the US public 'do not consider global warming much of a problem'; two fifths consider the problem 'very serious'. Whilst the federal government will not move forward before the next election, Brewer argues that concern and activity on Capitol Hill and in local and state governments, industry and the public will keep the issue salient.

Margaret Beckett, the UK Secretary of State for Environment, Food and Rural Affairs, emphasises that a global problem requires a global solution. Whilst acknowledging that developed countries bear most historical responsibility for climate change and that the developing world has a right to develop and to increase their emissions from current levels, she also underlines that all countries will have to take action at some point. Anju Sharma of the Centre for Science and Environment in New Delhi agrees, and emphasises the need for a rigorous assessment of how future proposals for reducing emissions will affect different regions and countries. Many of our contributors to this issue agree that the role of technology will be crucial in addressing climate change, and David Hone, head of climate change at Shell, offers a critical perspective on this facet of the debate. He suggests that a rapid revolution towards renewable energy is unlikely: 'no new energy source – coal, oil, gas – has ever won ten per cent global market share in less than 30 years from the moment it became competitive'. Hydrogen may have more potential, he suggests – but only with a supportive political framework.

My own article on the growth in aviation emissions argues that the scale of this challenge has been underestimated and that air transport cannot be treated as a special case. Emissions from international flights must be included in the next climate change agreement. Emissions trading, which applies the polluter pays principle and the principle of environmental limits, looks the most promising policy for controlling aviation's carbon dioxide emissions, while regulations and charges are likely to be more appropriate for the other climate change impacts of aviation.

Closer to home, the European Commission has become increasingly concerned that almost all of its member states (with the exceptions of the UK, Germany and Luxembourg) are off course for meeting their Kyoto targets. As a result, it will in 2005 introduce a new EU-wide emissions trading scheme. Bryony Worthington of Friends of the Earth offers an assessment of the scheme in the UK context. Whilst she welcomes the design of the EU scheme, she notes that it has significant incompatibilities with much current UK climate policy, in particular the voluntary agreements associated with the Climate Change Levy.

Climate change is not the only global challenge that respects no national borders in its impacts. Our final article in this edition, by Graham Bird and Alex Mandilaras, examines financial contagion in the context of Latin America's economic crisis. They suggest that whilst contagion has been a factor for some countries, crises are 'rarely uni-causal'. At least as important are more fundamental structural issues, such as a worsening global economic outlook and loss of access to private capital markets.

International climate policy will be a central issue for this Government: not just because of the scale of the environmental challenge, but also because of the fundamental equity implications that the issue presents. A concern for equity has always been the defining feature of politics on the left. To date, the equity debate has always taken place in the context of a consensus between left and right on the desirability and sustainability of economic growth. Today, however, we are hitting a range of environmental limits to consumption growth.

This puts equity in a radically different context. John Rawls' Theory of Justice, for example, suggested that higher levels of inequality could be justified if the poorest in society were distribution. But formulations such as Rawls's only work in a context of economic growth. As soon as we accept the existence of environmental limits to consumption growth – most immediately in the case of climate change – the question of per capita equality in consumption levels arises inevitably. Put simply, once the world agrees a safe global emissions budget, more for the United States will mean less for India and vice versa.

As the scale of the challenge sinks in, many voices will argue that the challenges are too difficult; that we should muddle through rather than tackle the issue head-on; that the equity dilemma should be fudged and swept under the carpet. If the Government truly wishes to show leadership on international climate policy, it must ignore these calls and instead accept the need for a managed process of convergence in North-South emissions entitlements.

Global climate policy offers a concrete opportunity to start defining what global social democracy looks like in practice – not least since the UK Government will hold the rotating EU Presidency in the second half of 2005, the deadline for deciding what happens after Kyoto expires.

> The Prime Minister has already expressed his desire to create a global deal or 'climate covenant' between North and South on the issue of climate change. IPPR's belief is that the Contraction and Convergence framework for global climate policy is the practical application of this aspiration. The Government should rise to the challenge.

Tony Grayling

Associate Director and Head of Sustainability, IPPR

SEPTEMBER

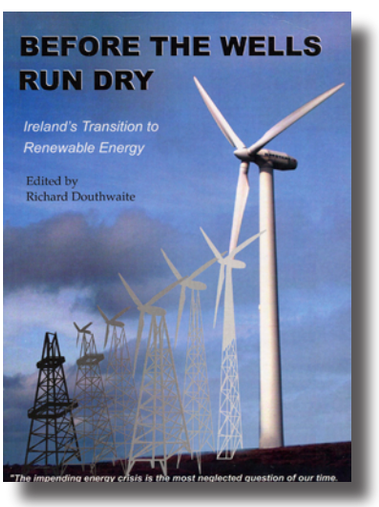
David Warrilow
UK Environment Ministry

Moscow Environment Conference

> "UK Government (climate) policy is consistent with C&C."

SEPTEMBER

FEASTA
Before the Wells Run Dry



Publisher: FEASTA, ISBN: 1843510375

FEASTA Conference essays, edited by Richard Douthwaite. Extract from the editor's conclusions, integrating Oil and Gas Depletion, C&C and International Currency Reform.

CONTRACTION AND CONVERGENCE

"If a country is to enjoy the maximum sustainable level of economy activity, it needs to decide which scarce resource places the tightest constraint on its economy's development and expansion. It should then adjust its systems and technologies so that they automatically observe the limits imposed by that constraint. In terms of our discussion so far it might seem that oil and gas were the scarcest factors of production at present but I don't think that's true. Labour and capital are not the critical factors either. There is unemployment in most countries and, in comparison with a century ago, the physical capital stock is huge and under-utilised. On the other hand, the natural environment is grossly overused especially as a sink for human-made pollutants with the result that a runaway global warming is a real possibility. In other words, the Earth's capacity to remove greenhouse gases from the atmosphere is the scarcest resource and the economic system should be

adapted accordingly.

Contraction and Convergence (C&C) is a way of doing so. It is a plan for reducing greenhouse gas emissions developed by the Global Commons Institute in London that involves the international community agreeing how much the level of the main greenhouse gas, carbon dioxide (CO2), in the atmosphere can be allowed to rise.

http://www.feasta.org/documents/wells/index.htm

SEPTEMBER

New Economy
An energetic welcome

Tom Blundell, Chair of the Royal Commission on Environmental Pollution

The UK energy challenge

Although we give little thought to consumption of energy in the UK and other wealthy countries, access to abundant and instantly available energy underlies our entire way of life. It is central to the affordable motorcar, cheap flights, warm housing, modern manufacturing, intensive agriculture, and so on. It is not surprising that world energy consumption has increased significantly since 1992 and is expected to grow at the rate of two per cent a year in the future.

All forms of energy production have substantial effects on the environment: damaging air pollutants from fossil fuels, large, intrusive wind farms in upland scenery, radioactive emissions from the reprocessing of spent nuclear fuel, and destruction of woodlands to supply cooking and heating fuels. However, the most serious damage will be done by carbon dioxide from the burning of fossil fuels, the largest single source (75 per cent) of greenhouse gas emissions from human activities, and thus the largest cause of global warming. The concentration of carbon dioxide is already higher than at any time for millions of years and we seem to be experiencing the first effects of global warming.

The Royal Commission on Environmental Pollution was one of many to make this point in its report Energy – the changing climate, published in June 2000. We had to wait for two and a half years for the response to our report, but to have a reply along with a White Paper, which follows many of our recommendations, is nevertheless gratifying. In particular we were delighted that our recommendation to reduce carbon dioxide emissions by 60 per cent by 2050 has been taken up by the government.

Why 60 per cent?

Although the White Paper does accept the need to reduce carbon dioxide emissions by 60 per cent by 2050, it does not explain where the figure came from. Many commentators seem to believe it is an arbitrary figure, but nothing could be further from the truth. It was derived from an analysis of the trends in energy consumption, and a very particular view about equity and energy consumption. In Energy – the changing climate we supported the internationally-agreed proposal that an atmospheric carbon dioxide concentration of 550 parts per million by volume (ppmv) – approximately double the preindustrial level – should be regarded as an upper limit that should not be exceeded. The current concentration is some 370 ppmv. Fossil fuels are finite, so people will eventually have to stop consuming them – but, if they are all burnt during the course of this century, the resulting build up of carbon dioxide will go well above 550 ppmv, leading to dangerous and destructive climate change. Even if the global uses of coal, oil and gas are held at current levels the climate will change markedly.

Thus, the issue is not whether there are enough fossil fuel reserves, but rather whether we can restrict the use of fossil fuels, starting now. A sustainable energy policy should protect the interests of generations to come, but it must also seek to achieve social justice, a higher quality of life and industrial competitiveness today. Achieving the right balance is formidably difficult; current policies do not strike it.

Contraction and convergence

> The most promising, and just, basis for securing long-term agreement is to allocate emission rights to nations on a per capita basis – enshrining the idea that every human is entitled to release into the atmosphere the same quantity of greenhouse gases.

But because of the very wide differences between per capita emission levels around the world, and because current global emissions are already above safe levels, there will have to be an adjustment period covering several decades in which nations' quotas converge on the same per capita level. This is the principle of contraction and convergence, first proposed by Aubrey Meyer.

For developing countries it means that many can expand a little before contraction, a point that does not always seem to be recognised. But for the UK, an international agreement along these lines that prevented carbon dioxide concentrations in the atmosphere from exceeding 550 ppmv and achieved convergence by 2050 could imply a reduction of 60 per cent from current annual carbon dioxide emissions by 2050 and perhaps of 80 per cent by 2100. These are massive changes, and it is very good news that the Government accepts the challenge.

The challenge is urgent

But this is not just a challenge for the future, much needs to be done now. The White Paper recognises that there are many opportunities for further, large efficiency improvements in the use of energy by manufacturing industry, commercial and public services, households and transport. Indeed much that has to be done to bring this about will require government to give much higher priority to energy efficiency.

On the energy supply side, there is only a limited potential for further large-scale exploitation of hydropower in the UK and environmental concerns may rule out further major schemes. Further growth in the number of small-scale hydro schemes is possible, but not to the extent that it could make a substantial contribution to UK energy needs.

The options for renewables are many, each with their problems often due to their distributed and intermittent nature, all with impacts on the environment, sometimes visual and sometimes affecting air quality. The growing of energy crops such as coppice willow, which are then burned or gasified and combusted to generate electricity and supply heat, could make a much larger contribution to the UK's long-term climate change strategy. They might also contribute to increasing biodiversity and improving farmland landscapes. But this cannot be achieved without major changes to agricultural support systems. Energy crops should receive the same level of support as other crops, but with improved environmental safeguards. This remains a huge challenge, with much need for Government investment and encouragement.

As the proportion of electricity supplied by wind, waves, tides and sunshine increases, the intermittency of these sources will pose growing problems in matching supply with demand. The UK will need either massive but little used reserve generating capacity (consisting of fossil fuel or renewable fuel plant), or large new energy stores or novel energy carriers. It is good that Government is to stimulate research into hydrogen production, but it must be remembered that if it is produced from fossil fuels it does not solve the problem of carbon emissions although it may make energy use more efficient. Hydrogen is really an energy storage device and carrier, but in this sense it can contribute to solving the problems that large-scale intermittency and embedded generation would pose to the electricity supply.

A further area where major action from Government is required is research. Government funding on research and development decreased by 81 per cent between 1987 and 1998. This must be rectified. In parallel with the decrease in government funding, privatisation and reorganisation of the industry has led to significant decrease in the research investment there also. So, we are starting from a very weak point in terms of implementing new technologies and encouraging innovation.

Scenarios for 2050

The Royal Commission drew up four scenarios for energy supply and demand in the UK, on the assumption that carbon dioxide emissions from fossil fuel combustion must be reduced by 60 per cent from their 1998 level in 2050. We developed these scenarios in numerical terms, because figures impose some discipline even though they are only as good as the assumptions on which they are based. The scenarios assume various degrees of reduction in energy demand, all of them substantial, and various mixes and levels of renewable energy resources. Two of the scenarios assume a large contribution from nuclear power or an equivalent electrical output from large, fossil fuel-burning power stations with carbon dioxide capture and isolation in geological strata. The other two have neither nuclear power nor carbon dioxide capture nor isolation.

In drawing up our scenarios we looked at two different ways of getting a secure base of electricity generation, which was carbon-free. One way is to use nuclear power, and this has received enthusiastic support from the Royal Society and the Royal Academy. The Royal Commission does not consider that nuclear power is absolutely necessary. It is one option, but if we do not plan for nuclear, we do need to look seriously at other options. One on which we focused was carbon dioxide sequestration – carbon dioxide capture and disposal – probably in rock strata under the sea. Thus we need to solve the problems of either nuclear waste or carbon dioxide storage. Both will require more research, and a lot of discussion and thought. It is good that the White Paper does not say that nuclear power is indispensable, and recognises the need for further research both into the disposal of nuclear waste and carbon dioxide. Neither will be easy. All our scenarios assume expansion of combined heat and power (CHP), both small domestic units and larger industrial ones; this will ensure that we use low-grade heat properly and do not throw it to the sky, as we do now in many electricity-generating plants. Policies of the past have favoured the generation of electricity in ways that waste vast quantities of heat - heat that could be used to warm buildings. The Government could have said a little more about regulatory and planning policies to encourage the widest possible adoption of CHP technology in urban locations to supply heat.

Another challenge is that new developments can also increase global warming. One of them is civil aircraft in flight. Even since the publication of our report, we have seen a massive increase of civil aviation, and it is having huge impacts on the environment. If aircraft fly in the tropopause, which is where most planes fly – above the troposphere and lower than the stratosphere – then nitrogen oxides, water vapour and particles all contribute to radiative forcing – increasing the greenhouse effect. The impact is actually a factor of nearly three (2.7) over the carbon levels alone. So, an economic instrument for

aviation should involve more than a carbon tax; it has to be a three times carbon tax in this case. When we pointed this out in our recent report The Environmental Effects of Civil Aviation In Flight the Secretary of State was sceptical and was reported by the Times to have described our report as 'a gallop around the field'. But a Consultation document from the Treasury published in March has now agreed our factor of 2.7 for the radiative forcing of carbon alone and given figures for the increase of civil aviation over the next 20 years which are much greater than we had assumed.

Conclusions

In summary, there remain huge challenges, both in decreasing demand, and in increasing efficiency. We are delighted to see the measures that the minister has proposed in the White Paper. We need much more sophisticated management of energy used for heating and cooling – increased use of CHP and a large deployment of alternative energy sources. Finally, we do need to solve the problem of nuclear waste or carbon sequestration, if we are going to move in either of the two routes for the baseload electricity production

I am grateful to members of the Royal Commission and its secretariat for their contributions in producing the report Energy – the changing environment from which I have drawn extensively in this article.

ROYAL COMMISSION ON ENVIRONMENTAL POLLUTION (2000)

Energy – the changing climate

SEPTEMBER 18

United Nations Environmental Programme

United Nations Environment Programme

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PROGRAMME DES NATIONS UNIES POUR L'ENVIRONNEMENT · PROGRAMA DE LAS NACIONES UNIDAS PARA EL MEDIO AMBIENTE

ПРОГРАММА ОРГАНИЗАЦИИ ОБЪЕДИНЕННЫХ НАЦИЙ ПО ОКРУЖАЮЩЕЙ СРЕДЕ

UNEP

18 September, 2003

Dear Mr. Meyer,

I am writing to you as Director of the Global Commons Institute (GCI) to request that the UNEP Finance Initiatives climate change working group (UNEP FI CCwg) may be given permission to use the GCI copyrighted term "Contraction & Convergence" in a forthcoming study exploring issues pertaining to the finance sector and climate change.

If you are in position to grant such approval, we would appreciate GCI's specific direction on how contraction and convergence should be referred to and attributed to GCI in our study text.

If you are in a position to approve UNEP FI CCwg's use of the term, with appropriate attribution, please sign all three good copies of this letter, return two copies to myself at the address given below and retain one copy for your own records. Please forward the signed copies to:

Mr. Paul Clements-Hunt, Head of Unit, UNEP Finance Initiatives, 15 Chemin des Anemones, CH- 1219 Chatelaine , Geneva, Switzerland

Please do not hesitate to contact me directly if you have any questions. I look forward to your comments and we appreciate fully your assistance on this matter.

Yours sincerely,

Paul Clements-Hunt
Head of Unit
UNEP Finance Initiatives

I hereby give approval for UNEP FI CCwg to use the term "Contraction and Convergence", as copyrighted to the Global Commons Institute (GCI), with appropriate attribution, in the forthcoming UNEP FI CCwg study on the role of the financial services sector in climate change.

Signed: Aubrey Meyer

Aubrey Meyer, Director GCI

Dated: 20 Sept 2003

Aubrey Meyer
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OCTOBER

WCC Climate Change programme

"The Kyoto Protocol must be indeed ratified, but at the same time we urge governments to proceed without delay with a new round of negotiations whose targets must be determined in the light of the long-term perspective. Two basic requirements must be met: -

1. Stabilisation of greenhouse gases in the atmosphere at a level in accordance with the overall objective of the Climate Change Convention.

2. A fair distribution of rights and obligations, by establishing the concept of per capita emission rights for all countries, as proposed in the 'Contraction and Convergence' scheme."

www.wcc-coe.org/wcc/what/jpc/moscow2003.html

2003

Dollar & Collier
Report for the World Bank

"Global warming requires international collective action. There are many ways of achieving effective restraint. The Kyoto protocol approach is for rich countries to set themselves targets for emissions reductions, and the recent agreement between European nations and Japan to move ahead with the protocol is a positive step forward. Looking further down the road, it is critically important to get at least all of the E-7 involved.

The Global Commons Institute, an NGO, has come up with an innovative proposal for how to do this. The proposal entails agreeing on a target level of emissions by the year 2015 and then allocating these emissions to everyone in the world proportionally. Rich countries would get allocations well below their current level of emissions, while poor countries would get allocations well above. There would then be a market for emission permits. Poor countries could earn income selling some of their permits; rich and poor countries alike would have strong incentives to put energy-saving policies into place; and private industry would have strong incentives to invent new, cleaner technologies.

One of the hopeful things about globalization is how an innovative idea like this can quickly gain currency and support."

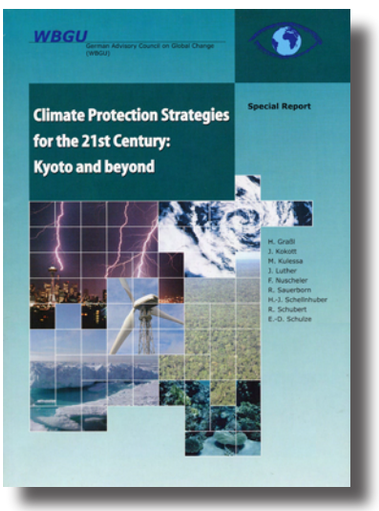
OCTOBER 9

Lewis Cleverdon
Sovereignty & Climate Destabilisation

The viable policy framework for international action to put an end to fossil fuel dependence is already well recognized and respected in capitals around the world, and has the support even of a few US senators. It is known as "Contraction & Convergence, " and in essence requires participant nations to commit themselves to contracting their greenhouse gas emissions while converging to international per-capita parity of those emissions at an agreed level by an agreed date. It is thus based on the principle of equity ~ of all peoples' equal right to make sustainable use of the Atmospheric Commons ~ which is the sole basis on which so contentious an international issue has a fair chance of being resolved.

NOVEMBER 24

German Advisory Council
21st Century Climate Protection



2.3.7 - Conclusions

"Particularly with regard to targetedness in terms of CO2 emissions, in consideration of the fundamentally equal right of all individuals to emissions, and further considering the principle of constancy,

-the WBGU has decided to base its in-depth analysis of the implications of emissions allocation on the contraction and convergence model."

http://www.wbgu.de/wbgu_sn2003_engl.pdf

NOVEMBER

Lord Bishop of Hereford
Final speech to the House of Lords

"The noble Lord, Lord Patten, is in his place. He invited me to respond to some of his remarks in his excellent speech. I thought that he had gone off to make a confession to someone better qualified to hear it than me. Let me assure him that I thoroughly disapprove of theft and boardroom malpractice, but that, as far as capitalism is concerned, my opinion is that, if properly regulated, like hunting, it is morally all right.

I greatly appreciated the speeches of the noble Lord, Lord Tomlinson and the noble Baroness, Lady O'Cathain. Although I had rather hoped to hear more from some of our great captains of industry, it was good to be led into the area of social enterprise by the noble Baroness, Lady Thornton, and to be reminded of the possibilities of breweries and oysters.

My main point is relevant to the topic of today's debate, though some may doubt it. I shall digress just for a moment to express a warm welcome to the announcement in the gracious Speech of the pension protection fund and to the promise of legislation for civil partnerships, particularly in its helpfulness in terms of inheritance and pension issues.

I turn to my main point. Some of your Lordships may recall a short story by H G Wells, which gripped my imagination at the age of 12 or so. I should like, if I may, to read a short quotation from it. It will at least make a change from OECD statistics and the growth and stability pact. It is as follows:

"The master mathematician sat in his private room and pushed the papers from him, exhausted after four days and nights of feverish calculation. "But he appeared calm and unruffled before his students at their morning lecture . . . 'Circumstances have arisen—circumstances beyond my control', he said, 'which will debar me from completing the course I had designed. It would seem, gentlemen'"— forgive the non-inclusive language of 100 years ago —

"'if I may put the thing clearly and briefly, that—Man has lived in vain'".

The "circumstances" referred to are that his calculations have revealed that a star is on course to approach very close to the Earth, or possibly even collide with it—a huge cataclysmic astronomical event. In the end there is no collision—it is only a short story, after all. The star passes the Earth and goes on its way into space. But its near passage has catastrophic consequences for the planet. There are immense floods, great surges of the sea, huge earthquakes, violent and continuing storms, vast mudslides, uncontrollable fires and a colossal rise in temperature to unbearable levels. Most of the human race perishes. A few survivors find that the former polar regions have become fertile while the rest of the Earth is uninhabitable because of the great heat. The event, my Lords, is not good for the economy or for industry and certainly not for pensions.

That is fiction, but the catastrophic effects described so vividly by H G Wells are not wholly unlike what is actually likely to happen as a result of climate change and will certainly grow rapidly worse if we continue with business as usual. The master mathematicians of the Intergovernmental Panel on Climate Change have made their calculations, and they are very scary indeed. The evidence is already all round us:

unprecedentedly high temperatures, drought, rising sea levels, melting glaciers and ice caps, more frequent hurricanes and extreme weather events. Heroic efforts to reduce hunger in the world are frustrated by worsening climatic conditions. The United Nations report published two days ago indicated that 842 million people are going hungry, and that number is now increasing by about 5 million a year in contrast to the improving statistics of the 1990s. The few developing nations which have bucked this melancholy trend have not been the authors of their own good fortunes; they have simply been lucky—lucky to escape the high levels of drought and the natural disasters which have increasingly afflicted the third world in the past decade.

For us the dire effects of climate change may still seem in the future. But as the science fiction writer William Gibson put it:

"The future is already here: it's just that it's unevenly distributed".

And it is nearer than we care to acknowledge: thousands of deaths from extreme heat in France this past summer; and seriously reduced crop yields in central and even northern Europe because of this year's exceptional drought. But was it exceptional?

It is not surprising or novel. We have seen it coming for a good many years, and wise scientists have pointed the way to a solution—a solution which would enable our economy to survive, our industry to flourish in a truly sustainable way, and even our pension schemes to be put on a secure footing. As it is, all three are in very grave danger.

Three years ago, in the executive summary to its magisterial report, the Royal Commission on Environmental Pollution said: -

"The most promising, and just, basis for securing long-term agreement is to allocate emission rights on a per capita basis—enshrining the idea that every human being is entitled to release into the atmosphere the same quantity of greenhouse gases. Because of the very wide differences between per capita emission levels round the world, and because current global emissions are already above safe levels, there will have to be an adjustment period covering several decades in which nations' quotas converge towards the same per capita level. This is the principle of contraction and convergence, which we support".

The commission might have added that contraction and convergence is comprehensive, scientifically based and equitable, unlike the Kyoto Protocol, and that contraction and convergence meets every single objection raised by the United States to Kyoto.

That was three years ago. Two years ago, the Amsterdam Declaration, the report of the Global Change Open Science Conference, said:

"In terms of some key environmental parameters the Earth System has moved well outside the range of natural variability exhibited over the past half million years at least. The nature of changes now occurring simultaneously in the Earth System, their magnitudes and their rates of change are unprecedented. The Earth is currently operating in a non-analogue state".

Just one year ago, I was engaged with the Minister who opened this debate, the noble Lord, Lord Sainsbury of Turville, in correspondence following a Starred Question. The Minister wrote to me:

"The Government is aware of the policy of Contraction and Convergence" -

be thankful for small mercies. He continued:

"As you will be aware, the policy requires industrialised countries to make enormous reductions in carbon emissions (up to 80 per cent). Contraction and Convergence have some appealing qualities, but discussions on future commitments to this policy are at an early stage, and there are likely to be other models which will need consideration. Contraction and Convergence was not in fact raised at the World Summit on Sustainable Development in Johannesburg".

Indeed not, and shame on our Government for not raising it. Leaving aside the confusion in the Minister's letter over whether contraction and convergence should be regarded as singular or plural—although the muddle within one paragraph does not inspire confidence in the grammatical competence of the department's staff—this seemed to me a mealy-mouthed and very inadequate response to the most serious problem threatening the human race and the survival of the planet.

There was yet hope that the energy White Paper earlier this year might grasp the nettle and set out a ringing endorsement of contraction and convergence, or at the very least announce an urgent debate on the matter. Alas, those words did not appear, despite the fact that the Prime Minister's foreword to the White Paper acknowledged:

"Climate change threatens major consequences in the United Kingdom and worldwide, most seriously for the poorest countries who are least able to cope".

Amen to that, and the hunger statistics bear out the truth of that melancholy message.

Interestingly, and very much apropos of the theme of this debate, the Prime Minister went on to say:

"As we move to a low carbon economy, there are major opportunities for our businesses to become world leaders in the technologies we will need for the future".

How very true, and how sad that the United Kingdom has at the moment 4 per cent of the market in environmental technology compared with Germany's 15 per cent.

Prophetic witness and vigorous political action are needed to change the culture of government and of industry, but—rightly used—technology can serve the purposes of environmental concerns and begin to clear up the polluted legacy of two centuries of unbridled and environmentally irresponsible industrialism. The potential for selling green technology to the developing world in terms of clean energy generation, integrated crop management in agriculture, husbanding finite water resources, desalination, not to mention the obvious areas of pharmaceutical and medical resources to cope with the colossal AIDS epidemic all offer the prospect of a very creative partnership between the technologically advanced countries and the poorer nations of the world in a way which positively benefits the environment rather than adding to its degradation.

> If we were to embrace contraction and convergence, with the enormous and comprehensive emissions trading system which is envisaged, the poorer nations would have the means, which at present they do not have, to buy the green technology from us. That would be very greatly to our economic and industrial advantage.

However, that requires the change of culture of which I spoke. At present, the position is getting rapidly worse. There is enormous and accelerating economic growth in India, China and South East Asia. China's oil consumption this year will be 10 per cent higher than it was last year. The Kyoto Protocol—if and when it is implemented—will reduce CO 2 emissions from the annex 1 countries by 2 per cent, but global emissions are projected to rise by 30 per cent by 2012. It has been calculated that if storm damage continues to rise by the present 12 per cent a year—it will probably be worse than that—by 2065, annual damage caused by climatic destruction could equal the entire GNP of the world. That is a very black hole into which every known or imaginable pension plan would certainly fall.

Unless we find a way now to deal with the greenhouse gas problem internationally, growth will slow or stop anyway at very great human cost. By the middle of the century, there will be hundreds of millions of ecological refugees, starving and desperate, who will make our present asylum-seeker problem look very insignificant.

My normal mode of address to your Lordships' House is, I hope, cool and rational. The mantle of the prophet is not one that sits very readily on my shoulders. I recall that the fate of most Old Testament prophets was to be mocked, ignored and driven out of town. I am quite prepared for that but, like Luther, I can say only, "Here I stand, I can do no other", because I know that the threat to our economy and industry and to civilised life is very great indeed.

"Climate change" were the last words in the substantive part of the gracious Speech. I am glad that they were there but I wish they had been at the beginning—in the preamble to the list of legislative proposals—indicating that the Government recognise the urgency and seriousness of the issue and see all other proposals in the context of tackling climate change with an energy and a single-mindedness which have yet to be seen.

The need is for leadership in breaking the straitjacket of short-term electoral cycle and in striving for all-party agreement so that there is no competition or disagreement about the urgency of this matter. There is also a need for leadership in setting up a community for global climate protection, which any and all who will participate are welcome to join. If some dirty dinosaurs such as the United States will not come in now, that is too bad. Someone must give a lead and we cannot afford to wait. There may just be time to act before a terrifying chain reaction of unstoppable, runaway climate change begins.

Klaus Toepfer, the highly respected head of the United Nations Environment Programme, said:

"The scientific consensus presented in the comprehensive [Intergovernmental Panel on Climate Change] report . . . should sound alarm bells in every national capital and every local community".

My fear is that, by the time our Government hear those bells and act on them, it may be too late.

www.publications.parliament.uk/pa/ld199697/ldhansrd/pdvn/lds03/text/31127-05.htm

NOVEMBER 1

Operation Noah
Christian Ecology Link

Christians have launched an ambitious campaign to resolve global warming. 'Operation Noah' will put public pressure on the British Government to broker a global deal to safeguard the interests of poorer countries and future generations.

At the Annual Conference of Christian Ecology Link (CEL) on 1st November 2003, Campaign Co-ordinator Paul Bodenham said,

'The effects of climate change will be catastrophic, particularly for the poor, unless our leaders find the courage to restrain our use of fossil fuels. A few more years of the current apathy, and our grandchildren will not forgive us'.

Operation Noah reaches people through churches and community groups, inviting them to sign the 'Climate Covenant'. This highlights the task of restoring the original Rainbow Covenant which God made after the Flood. The Climate

Covenant calls on the UK to use its unique global position to drive forward negotiations to protect the climate. In return signatories agree personally to take action to reduce their own share of greenhouse gas emissions.

Rt Rev John Oliver, Bishop of Hereford, speaking in the House of Lords, has frequently urged the Government to act on climate change. He described this campaign as 'a breath of fresh air'.

'Operation Noah gets to the root of the crisis. Climate change might seem to be a technical problem, but the solution will need to be much more than a technical fix - it is ultimately moral, even spiritual.'

Paul Bodenham said

'Future generations have no vote', 'We must tell the Government what sort of world we want to leave our children, and our children's children. The challenges are massive - in technology, economics, international relations, lifestyles and expectations. For everyone in the industrialised world today it is going to be a lifelong pilgrimage, but it starts with a simple, positive choice for the future. Operation Noah offers people that choice. Christian Ecology Link urges people to find out about the issues and sign the Climate Covenant.'

Notes to Editors

Climate change - the issues: According to the Royal Commission on Environmental Pollution, the UK must reduce its greenhouse gas emissions by 60% by 2050, and ultimately by 80%. The Kyoto Protocol requires nations to make cuts averaging only 5%. Despite ten years of wrangling it has not yet even taken effect. The aim of Operation Noah is to ensure that by the time it expires, between 2008 and 2012, a new treaty has been agreed which gives all nations equal rights to emit greenhouse gases within safe limits.

> Such a framework is known as 'Contraction and Convergence', and is the only solution endorsed by the World Council of Churches, the Royal Commission and many development agencies.

Campaigners see the UK as having a pivotal role between the US, which has repudiated the Kyoto Protocol, the EU which strongly backs it, and the developing world, where rising demand for energy is fuelling economic growth.

Christian Ecology Link, founded in 1982, is the largest membership organisation in the UK linking faith and environmental concerns. A registered charity, it has approximately 500 members nationwide, including many churches and Christian agencies. Its registered address and Information Officer is at 3 Bond Street, Lancaster LA1 3ER.

DECEMBER

World Nuclear Association
Directors Speech

" . . . . "contraction and convergence" approach as a collective global means to meet the clean-energy challenge. I not only support the C&C concept. I find it inconceivable that we will avert climate catastrophe without a regime built on some variation of this approach."

"Our need is for the kind of comprehensive treaty regime that Aubrey Meyer advocates, a regime in which all the nations of the world developed and developing undertake a binding commitment to use emissions trading as the driving economic incentive for a long-term evolution to a global clean energy economy."

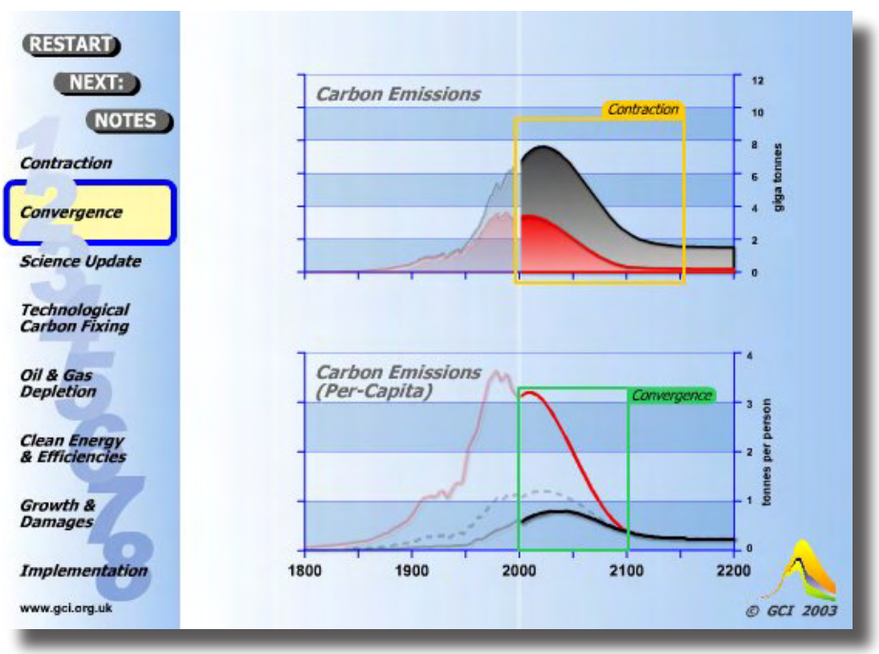
http://world-nuclear.org/dgspeeches/wiltonpark2003.htm

www.gci.org.uk/correspondence/EnvAgency.pdf

DECEMBER 2003

GCI
Animated Presentation

Delivered at GCIs COP-9 side event



Environment Agency
Sir John Harman, Chairman

ENVIRONMENT AGENCY

Our ref: SJH/KK/Meyer4879/1203.04

Date: 9 December 2003

Aubrey Meyer
Director
Global Commons Institute
37 Ravenswood Road
London
E17 9LY

Dear Mr Meyer

CONTRACTION AND CONVERGENCE

Thank you for your letter of 5 November enclosing documents on Contraction and Convergence. I would like to apologise for the late acknowledgement of these – I have been very busy recently.

You are correct in thinking that I support the concept of Contraction and Convergence as does the Environment Agency. I have taken liberty of giving your contact details to Merylyn Hedger (Climate Change Policy Manager) who you may already know.

Thank you once again for sending me this material.

Yours sincerely

SIR JOHN HARMAN
CHAIRMAN

Chairman's Office
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Millbank Tower, 25th Floor, 21-24 Millbank, London, SW1P 4XL
Tel: 0207 863 8720 Fax: 0207 863 8722

DECEMBER

The Guardian
Hot Topic

Mark Lynas, preparing for another meeting on the Kyoto agreement, examines whether there is an alternative that could reduce global warming

Several hundred optimists are this week having their annual reunion in Milan. They do not belong to some weird humanist sect but to the dwindling band of people who still believe that the Kyoto Protocol, the global treaty committing countries to take measures against global warming, will one day be ratified and go on to make a positive contribution towards tackling climate change.

I am one of them. Having been to three of the eight UN meetings so far (officially called conferences of the parties to the UN framework convention on climate change), I have watched the birthing pains of the international agreement in The Hague, Bonn and Marrakech. But this year even my faith will be sorely tested.

Although 118 countries have signed up, Russia has still not ratified Kyoto, and without its assent the protocol will continue to languish in political limbo. But how much longer can the world wait?

Why the Russian president, Vladimir Putin, is stalling is a mystery. Margaret Beckett, Britain's environment secretary, maintains that he will sign, as does the European environment commissioner, Margot Wallstrom. But repeated promises of imminent ratification have come to nothing, and the latest leaks suggest that the decision will be put off until after the Russian presidential elections next March.

There are rumblings that Russia is now not so keen on the agreement. At a climate change conference two months ago in Moscow, Putin mused that perhaps global warming "would be good" for such a cold country as his. There are also murmurs from the oil sector. Russia is the world's second largest producer, after Saudi Arabia, and industry moguls fear that international action on climate change could depress world oil prices.

In the past, Russia's motivation for staying on board Kyoto has always been financial. Following its post-communist economic collapse, greenhouse gas emissions - mainly from burning fossil fuels such as oil and coal - plunged, leaving it with spare "hot air" to sell to other Kyoto parties likely to have trouble meeting their targets. The US was supposed to be the biggest buyer, but with George Bush's refusal to sign up to Kyoto, the potential market for emissions quotas has crashed. Moreover, Putin's plans to double Russia's GDP by 2010 would bust the emissions budget and leave it with no unused quota to sell.

If Russia makes a negative decision and Kyoto dies, more than a decade of international progress will have been lost and the world will find itself back with the failed voluntary commitments first advanced at the 1992 Earth summit. Everyone, bar a few climate sceptics and the US rightwing, agrees this would be a disaster for the planet - not because Kyoto in itself did much to address the problem of global warming, but because it provided a vital first step on which future efforts could be built.

It also provided the beginnings of a policy framework, which would show industry that countries were serious about addressing climate change, greatly altering the investment climate. Who would build a coal-fired power station with a projected lifetime of 30 years if it was seen as likely that, within 20 years, carbon dioxide emissions would become so expensive as to make the whole thing uneconomic? But without this certainty, there is nothing to stop business as usual, and carbon emissions are projected to soar over the coming decades.

None of this would be a problem if the US had ratified Kyoto. But Bush's abrogation of the treaty was expressly intended to kill off international climate negotiations, and the chance of a change in policy under the current administration is zero.

There is a chance that Bush, who has had his poll ratings shot to pieces by the Iraqi resistance, will be defeated in the presidential elections in November 2004, but a dose of realism is useful: none of the Democratic contenders for the presidency have pledged to ratify Kyoto either. "It doesn't ask enough of developing countries," complains John Kerry, widely supposed to be the greenest of the candidates.

This is a frequent US refrain, first advanced by the Senate in 1997, that forbade American negotiators (then at Kyoto negotiating the protocol) from signing up to a treaty that did not include greenhouse gas commitments for developing countries.

At the time, this was seen as a deliberate attempt to torpedo Kyoto - but the sponsors of the bill, Senator Robert Byrd in particular, have since made statements showing concern about global warming and arguing that the time has come for action.

> "We will all suffer from the consequences of global warming in the long run because we are all in the same global boat,"
>
> [U.S. Senator Byrd]

-Byrd declared during the recent debate on the McCain-Lieberman bill, which would have brought US emissions down to 2000 levels by 2010. The bill failed, but only by 12 votes - a victory of sorts for global warming advocates.

Given that the US accounts for a full quarter of global emissions, it is clear that no long-term solution can be reached if the world's only superpower continues to act as a free

rider. Hence the growing interest around one proposal that would address American concerns over developing country participation at the same time as establishing a strong global framework for dealing with global warming once and for all: contraction and convergence (C&C).

C&C is a global solution: once an upper-level limit is set for atmospheric concentrations of carbon dioxide, the global budget this implies would be divided among the world's countries on the basis of their populations. This would happen over a convergence period, throughout which emissions permits would be tradeable. Countries that underconsume (a Bangladeshi, on average, emits only one-fiftieth as much carbon as a Briton) would be able to increase emissions up to a fair level, but not indefinitely.

Given that all countries would have commitments, the concerns of America would be addressed, and at the same time dangerous global warming would be avoided.

This plan has gathered support from within Britain and the developing world. The former environment minister, Michael Meacher, is a supporter, as are Sir John Houghton (Britain's most eminent climate scientist), the Royal Commission on Environmental Pollution - and many African governments. But

C&C is hampered by a fear that it represents an alternative, and therefore a threat, to Kyoto.

There is no reason why this should be the case: advocates of C&C, originally of the Global Commons Institute in London, emphasise that the plan is waiting in the wings as a next step after Kyoto is implemented, or as an alternative if it fails.

This should comfort my fellow optimists meeting in Milan between December 1 and 12. We can continue to press for Kyoto's ratification by Russia, in the knowledge that all is not lost without it. The task of saving the world's climate is too important for us to admit failure at such an early stage.

· Mark Lynas is the author of High Tide, News From a Warming World, to be published by Flamingo in March 2004.

DECEMBER

The Independent on Sunday
Kyoto: There is no alternative

"The future of the planet now rests in the hands of three people: President George Bush, President Vladimir Putin - and the unlikely figure of one Aubrey Meyer, a former concert violinist from east London.

President Bush has set out to kill the Kyoto Protocol. Despite growing support in the US for addressing climate change, he has spared no effort in stopping it coming into effect. He is putting the screws on President Putin. Under the protocol's rules, it now only needs Russia's ratification to come into force. The signals from Moscow are mixed, but Putin is thought to be waiting to see whether the US or the European governments, who support Kyoto, will come up with the best price.

And Mr Meyer? He is the still relatively unknown originator of a body that is fast becoming the leading contender in the fight against global warming, after Kyoto. To that end, he has set up the Global Commons Institute. Michael Meacher, the former Environment minister, endorses the plan - dubbed "contraction and convergence" - on page 22. The Royal Commission on Environmental Pollution, the World Council of Churches, and African governments have all adopted it. Under the plan, every person on the planet would have the right to emit the same amount of carbon dioxide, which is the main cause of global warming. Each nation would be set quotas, adding up to a figure the world's climate could tolerate. They would be expected to meet them, say by 2050, and could buy and sell parts of them.

Kyoto must first be brought into force: there is no alternative. Then nations should start negotiating bigger cuts in pollution on this equitable basis - worked out in an unprepossessing London flat."

DECEMBER

Independent
Meacher:Russia's Kyoto roulette

At times last week it looked as if the Russians were playing roulette with the world's climate. On the first spin of the wheel the future looked bleak: a senior official said that his country would not ratify the Kyoto Protocol to combat global warming. But the next day, it spun again: the deputy economics minister said that Russia was "moving towards ratification" after all.

What are the world's environment ministers, meeting this week in Milan to discuss the protocol, to think? The disagreement in the Russian government is worrying. For under its own rules,

the treaty cannot come into force until Russia joins. Up to now Russia has had an incentive to ratify: it would stand to make huge gains of some $10bn (£6bn) from the sale of "hot air". It would sell part of its allowance for emissions of carbon dioxide (the main cause of global warming) to countries that exceed their levels.

President Putin, however, is coy, either because he is waiting to get the best deal or becausegrowth of 7-10 per cent a year since 1999 has increased Russian CO2 emissions, rapidly draining the reservoir of "hot air". One estimate is that by 2008 Russian emissions could be 6 per cent higher than in 1990, so it might instead face restrictions. The US and Australia, accounting for nearly one-third of industrialised countries' greenhouse gas emissions, seem likely to remain outside the protocol as long as the Bush Administration lasts.

As a result, US emissions - instead of being reduced by 7 per cent as agreed at Kyoto - are likely to grow 30 per cent by 2010. Developing nations have made it clear they will not take on the targets until the industrialised countries, who initially caused the problem, take effective action. That is serious because developing countries' emissions are growing four times as fast as those of the OECD, and will overtake them within 5-7 years. If nothing is done, world CO2 emissions, instead of being cut by 60 per cent by 2050 - as the scientists say is necessary - will instead increase by 75 per cent by 2020.

How can this logjam be broken? One idea is for the EU, hopefully led by the UK, to partner developing countries to take significant measures without the targets. To a degree this is already happening. China, which accounts for 14 per cent of world CO2 emissions, recently tripled them, mainly through a huge growth in coal-fired power. It then heavily cut coal and petroleum subsidies, reducing them by 70 per cent of what it would have been.

By the mid-1990s, 12 per cent of China's electricity generation capacity was provided by energy-saving combined heat and power, compared to less than 1 per cent in the UK. Similarly, India has more windpower (6,000 megawatts) than the US. A second proposal has been mooted by the Red Cross - that poor countries might seek legal redress from countries causing global warming.

Recent Australian-Canadian research has identified the cause of the Sahel and Ethiopian droughts of the mid-1970s and the mid-1980s - when a million people died - as pollution and power generation in industrialised countries, disrupting weather patterns across Africa.

However desirable these proposals, they do not offer a watertight framework to deliver what the scientists demand. Can Kyoto deliver them? Unlikely, when the US and Australia

remain outside and when developing countries show few signs of signing up to targets which could limit their economic prospects.

> How then can we secure a global cap on emissions while allowing reasonable growth in developing countries?
>
> The best proposal so far is the "Contraction and Convergence" from the Global Commons Institute and Globe Parliamentarians.

This notes, for example, that Chinese emissions per head are still only one-eighth - and Indian about one-twenty-fifth - of the average American. China and India will only commit when they have a fair share of a limited global facility - generating greenhouse gases without putting the world's climate at risk. Nor is this merely the dream of radical idealists. Adair Turner, a former President of the CBI, said in 2001 that "the only equitable and politically feasible long-term vision would give each country a roughly equal right to emissions per capita". There is consensus that the amount of carbon dioxide emitted should not exceed 450-500 parts per million (compared to 375 now). That would require steadily reducing annual CO2 emissions to about 2.3bn tons of carbon by 2100, compared to 7.5bn tons now. Convergence to equal entitlements should be completed within a given timescale, perhaps 2030.

Once in place, trading of the entitlements could safely occur as the most efficient means to achieve it. Will it happen? Not if the US can stop it, but if the EU and developing nations forged a voluntary partnership - a "coalition of the virtuous" - they could create a viable strategy to confront global warming. As someone once said, there is really no alternative.

Michael Meacher was Minister for the Environment 1997-2003

DECEMBER

Christian Ecology Link
Global Warming

Roger Shorter of Christian Ecology Link attended the Meeting on Global Warming held on 19th November 2003 at St James's Church Piccadilly during the period of the visit to London by George W Bush, and writes:

A discussion entitled 'Much more than a Hot Air Debate' was held at St James's Church, Piccadilly, during the visit to London by US President, George W. Bush. The publicity leaflet for the meeting asked the challenging question: 'How might Countries and individuals respond effectively?' – It went on to report that: 'The world is divided on the issue of how carbon emissions may be cut', and pointed out that the Kyoto Agreement had not been ratified by the USA.

Before the meeting, Ruth Jarman, from CEL's Steering Committee, distributed leaflets about Operation Noah to the 100 or so people present, sitting in this church built by Christopher Wren in 1684.

Aubrey Meyer, Director of the Global Commons Institute, a musician by training, with a beautifully modulated speaking voice, and a clear and calm speaker, opened proceedings by explaining that the term 'Contraction and Convergence' being promoted by his organisation, was rather like singing the word "Amen". It was, he said, a bit like harmonising emissions so that matters could be brought to an harmonious conclusion by stabilising the situation so that we are not faced with disastrous climate change. His Power Point presentation, full of graphs, and very clearly illustrated - at least for those with good eyesight, or in the front pews - the complexity of the problem, and showed that the most polluting state of the most polluting nation in the world is - by extraordinary coincidence, given this week's famous visitor to England - Texas.

The Rt Hon. Michael Meacher, former Minister for the Environment, said that in his view, the problem of climate change is the most - serious one facing the world. The US, he said, with only 5% OF the world's population, is producing 25% of the world's emissions, but had opted out of the Kyoto Protocol. Russia he added, was another major player, and was likely to be also part of the problem now because of the rapid economic growth that they had experienced over the last 4 years. He said that a major opportunity for progress may be available via the Insurance Industry, since they were likely to be losers, economically, as the result of extremes of weather, and the claims that inevitably then were made. He advocated a global pact: on emissions, with emphasis on local partnerships between countries.

He said that the concept of 'Contraction and Convergence' was, in his view, the one that showed the best way forward.

[Rt Hon. Michael Meacher]

Professor Michael Grubb, of Imperial College, London, had been asked to pose 'difficult questions' concerning the whole subject and process. He said that the whole subject: was a moral issue, but found it difficult to offer much hope, given the fact that the American electoral climate was, in his view, unsympathetic to this issue, because the average American voter knew little about the rest of the world and was unlikely to be prepared to make economic sacrifices for their benefit. This, he said, goes some way to explaining the potential difficulties facing those who wish to encourage George W. to take the political action that people in other parts of the world would wish to see

The Rt Revd John Oliver, Bishop of Hereford (for the next 10 days) eloquently argued that self-interest was not to be underestimated as a means by which others could be

persuaded of the importance of the subject. He said that he expected his last speech in the House of Lords next week, to be on this topic. Unlike Aubrey Meyer's "calm" (as AM described it) but incisive approach to the matter, rather than one that made people fearful of the implications of climate change, the Bishop said that he felt that people were actually more likely to take action concerning the subject if they were, indeed fearful.

DECEMBER 5

Ann Pettifor
Real World Economic Outlook 2003

Publisher: Palgrave Macmillan. ISBN: 1403917957

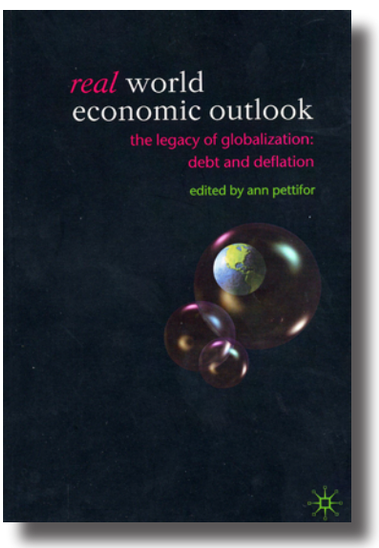
The Legacy of Globalization: Debt and Deflation

66 GLOBAL TRANSFORMATION AND GLOBAL OUTLOOK

> It is never likely that everyone in the world will use identical amounts of fossil fuels. However, any future settlement will have to be based on the principle that, in a carbon-constrained world, everyone should have equal entitlements to their share of the atmosphere's ability to safely absorb pollution.

Under that agreement, those people and nations that take the economic benefits by polluting more than their fair share will have to somehow pay compensation to the 'under-polluters' by purchasing their spare entitlements. Otherwise they run up a huge ecological debt. The process will have to involve capping total emissions, progressively reducing them, and sharing entitlements using a formula that will, over an agreed time frame, mean they converge to be equal per person.

> If chaos is to be avoided, this process—given the name 'Contraction and Convergence' by the London-based Global Commons Institute—is unavoidable. In essence, the world has a limited carbon cake and the only way to begin negotiations on how to cut the cake is to start with the principle of equal access rights.



What we do with them is another matter. This has enormous, and from a development perspective, very positive consequences. Based on IPCC assumptions in 1995, to stabilize atmospheric greenhouse gas concentrations at 1990 levels implied a global, equal, per-capita entitlement of about 0.43 tons of carbon. Action to combat global warming cannot be delayed because, over time, emissions grow, populations rise, and the sustainable size of a carbon cake slice will get smaller and smaller. There has to be a rapid, managed retreat from fossil fuel addiction because there is no other way to escape impending climate chaos.

DECEMBER 12

Myron Ebell
CEI reports on COP-9

" . . . . the third approach is to decide that every person on the Earth has a right to emit the same amount of greenhouse gases. So the way to do it is to assign everyone an equal emissions quota. If people in America or France want to use more energy, then they will have to buy quotas from people who wish to live a more authentic way of life-that is, from poor people in poor countries.

The kicker to this truly zany idea is that the emissions quota to which each person has a right will keep going down until it's at the level of a poor person in a poor country. Then those who wish to use more energy will be out of luck. No more quotas to buy! Everyone will then be blessed with an authentic lifestyle and get to go to sleep when the sun goes down.

This so-called "Contraction and Convergence" approach appeals to both unreconstructed communists and to human rights absolutists. It has a certain moral force for those lost souls who have completely lost their bearings in the world. So it ought to be the winner in these darkening times."

http://www.globalwarming.org/cop9/cop9e.htm

DECEMBER

New Scientist
GHG 'plan B' gaining support

The Kyoto protocol is dying a death of a thousand cuts. Last week, the US reiterated that it wants nothing to do with the sole international agreement designed to save the world from runaway global warming.

The European Union, Kyoto's main promoter, revealed that most of its members will not meet their treaty's obligations. And Russia once again seemed to be on the point of wrecking the protocol completely.

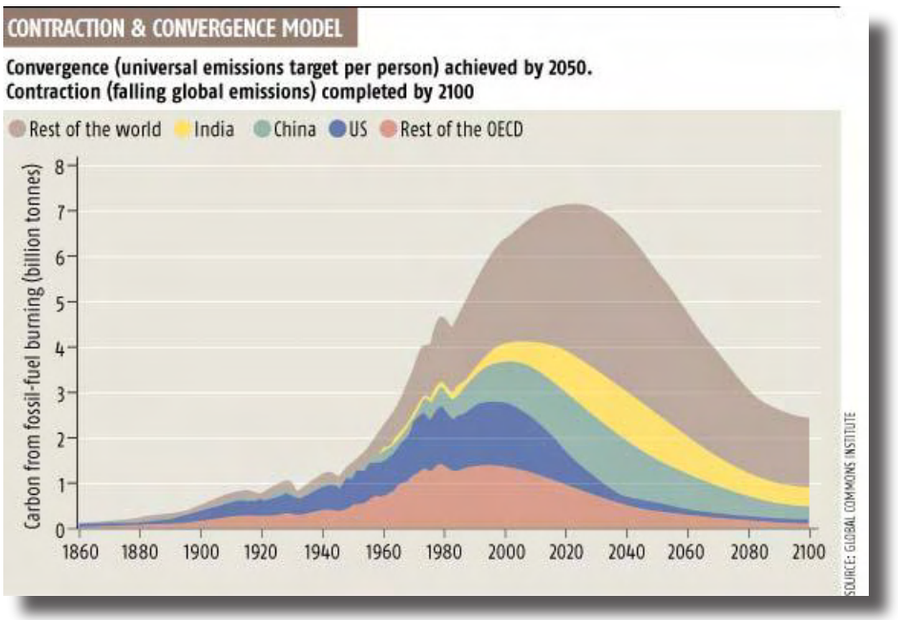
These blows follow a history of bureaucratic squabbling and political posturing by the protocol's signatories, and many observers now fear that it has been damaged beyond repair. So does the world have a plan B for bringing the emissions of greenhouse gases under control?

Contraction & Convergence model

The answer is yes, and it goes by the name "contraction and convergence", or C&C. The idea has been around for a decade, but lately it has been gaining ever more influential converts, such as the UK's Royal Commission on Environmental Pollution,

the UN Environment Programme, the European Parliament and the German Advisory Council on Global Change, which last week released a report supporting the idea.

A source within the German delegation in Milan said this week that his government was taking the idea "very seriously indeed". Even observers outside the environmental establishment, such as the World Council of Churches, back the proposal.



Simple and fair

For the past two weeks, representatives from around the world have been in Milan, Italy, for COP9, the ninth annual meeting of signatories to the 1992 Framework Convention on Climate Change. Many of them now privately admit that C&C is what we have been waiting for.

While Kyoto has become a convoluted, arbitrary and short-term measure to mitigate climate change, C&C could provide a simple, fair, long-term solution. And above all, it is based on science rather than politics.

The "contraction" in C&C is shorthand for reducing the total global output of greenhouse gases. At the Earth Summit in Rio in 1992, the world's governments agreed to act to prevent dangerous climatic change. The Kyoto treaty was their first fumbling attempt to meet that pledge, and if implemented would set emissions targets for industrialised nations for the period 2008 to 2012.

But increasing numbers of delegates are viewing Kyoto as part of the problem, not part of the solution. Its labyrinthine rules allow nations to offset emissions with devices such as carbon-sink projects, and are so complex they are virtually

unenforceable. Even if Kyoto becomes international law, it cannot be the blueprint for future deals beyond 2012. A new start is needed.

These delegates argue that it is time to get back to first principles to find a formula to fight the "dangerous" climate change mentioned in the Rio treaty. And there is an emerging consensus that "dangerous" means any warming in excess of 2 °C above pre-industrial levels; so far temperatures have risen by 0.6 °C.

Drastic cuts

To keep below the 2 °C ceiling will mean keeping global atmospheric concentrations of carbon dioxide, the most important greenhouse gas, below about 450 parts per million. But because CO2 and other greenhouse gases linger in the atmosphere for a century or more, staying below that ceiling will mean drastic cuts in emissions over the next 50 years.

The Royal Commission on Environmental Pollution has decided that a 60 per cent cut in global emissions by 2050 is needed, which the British government has adopted as its national target. But if the world is to manage such a transformation, then hard choices will have to be made.

And that is where the "convergence" part of C&C comes in. Industrialised nations have so far done most of the polluting. The US emits 25 times as much CO2 per head as India, for example, but if pollution is to be rationed, that cannot carry on.

So under the C&C proposals, national emissions will converge year by year towards some agreed target based upon each country's population (see graph). In effect, by a target date that the Royal Commission and Germany's advisory council agree should be 2050, every citizen of the world should have an equal right to pollute.

Emerging technologies

The average global citizen is responsible for pumping just over a tonne of carbon into the air each year. To prevent dangerous climate change, while allowing for some population increase, the world has to reduce that figure to around 0.3 tonnes per head.

That target is not quite as daunting as it sounds. Emerging technologies for generating energy without burning fossil fuel and for increased energy efficiency suggest it is achievable within a few decades without serious damage to the world's economic health.

But because some nations will find it harder than others to meet their targets, especially early on, the C&C formula also embraces the idea of countries trading emissions permits. This

is already part of the Kyoto formula, but with every nation in the world involved, and with far more stringent targets, it would be a much bigger business.

Many of the politicians and diplomats most intimately involved in negotiating the Kyoto Protocol targets six years ago have emerged as supporters of C&C in Milan.

> "We should not be fixated on Kyoto but on the climate change problem itself and what comes after Kyoto,"

said Raul Estrada, the Argentinian diplomat who chaired the crucial Kyoto negotiations. And that, he says, is likely to mean C&C.

> The chief climate negotiator for the US under President Clinton, Eileen Claussen, says that "almost any long-term solution will embody a high degree of contraction and convergence." She predicts it will become "an importance force in the negotiation".

Pollution for sale

On the face of it, C&C seems anathema to countries like the US, which would have to buy large numbers of pollution credits in the early years. But it does meet most of the criticisms made by the Bush administration of the Kyoto protocol.

In particular, Bush called it unfair that Asian trading competitors, as developing nations, had no targets. Under C&C every nation would ultimately have the same target. Some, such as China, already have per-capita emissions in excess of targets they might have to meet by mid-century.

But perhaps the greatest attraction of C&C is the complete break it would make from the horse-trading, short-term fixing and endless complications that have plagued efforts to bring the Kyoto protocol into effect. In 2002, the US shocked the world by refusing to ratify the treaty, and just last week the EU, its biggest cheerleader, admitted that only two member states, Sweden and the UK, were on course to meet the targets laid down in 1997.

As business grinds on in Milan, the bureaucratic tangles of the Kyoto protocol are becoming ever more convoluted as nations discuss matters such as whether rubber plantations might, like forests, count as a "carbon sink" for which they can claim credit.

Six years after the heady Kyoto night when 171 nations thought they had signed up to save the world, the disconnect between the science and the politics remains huge.

Fred Pearce

DECEMBER

Reason Online
After Kyoto; personal carbon permits?

Ronald Bailey

Milan —Yesterday, activists from the World Wildlife Fund held a short demonstration in the main hallway of the UN climate change conference (COP9) here urging Russia to hurry up and ratify the Kyoto Protocol so that it will come into force. But even if the Russians do eventually sign onto Kyoto that will not be the end of climate change negotiations and programs.

As the Climate Change Secretariat of the United Nations Framework Convention on Climate Change (UNFCCC) acknowledges, "The Kyoto Protocol was never expected to solve the problem of climate change in the first commitment period, the 5 years between 2008-2012. It is just the first step. Negotiations as to what should be done next will have to start soon."

So whether Kyoto is dead or alive, climate change negotiations are here to stay.

Under the Kyoto Protocol, rich industrialized nations were supposed to reduce their emissions of greenhouse gases like carbon dioxide by an average of 5 percent below their 1990 levels by 2012. Even if such a reduction could be achieved, it would spare the planet an inconsequential 0.07 degrees centigrade of warming by 2050. So, whether or not Kyoto comes into force, the UNFCCC will launch new negotiations seeking new commitments from signatories like the United States to further reduce their emissions of greenhouse gases. However, the model for those negotiations is unlikely to be the Kyoto Protocol. The Kyoto Protocol has produced a rat's nest of complicated mechanisms and proposals that are constantly being interpreted and reinterpreted. My personal favorite for irrelevancy at the COP9 is a discussion in the UNFCCC's Subsidiary Body for Scientific and Technological Advice on whether or not genetically modified trees should be allowed as a way to absorb and sequester carbon.

Wandering the hallways of the Milan Convention Center, one encounters stacks of publications devoted to explaining elaborate and convoluted schemes to trade carbon or offset carbon emissions through development projects in poor countries.

To cut through these multiplying complications of the Protocol, a simple idea is taking hold among activists and some climate negotiators—contraction and convergence (C&C).

The core of the idea is to set an appropriate level to which greenhouse gas concentrations in the atmosphere will be allowed to rise and then allocate globally the right to emit carbon on a per capita basis. The UNFCCC commits signatories,

including the United States, to the "stabilization of greenhouse gas concentrations in the atmosphere at a level that would prevent dangerous anthropogenic interference with the climate system." "Dangerous" has never been defined, but the proponents of contraction and convergence suggest that levels of greenhouse gases be stabilized at 450 parts per million (ppm) to 550 ppm. In order stop at those levels it is estimated that global carbon emissions will have to be cut by between 40 and 60 percent—the contraction part of the scheme. Under a C&C regime, each country would initially be allocated a portion of an overall declining carbon budget based on its share of the global distribution of income. Over time, to achieve convergence, each year's ration of the global carbon emissions budget for each country progressively converges to the same allocation per person until they become equal by an agreed upon date. This will allow poor countries relatively greater freedom to use carbon energy sources to fuel their further economic development.

The C&C concept has been endorsed by a variety of environmental groups. For example, Legambiente and Forum Ambientalista in Italy want to establish in principle an emissions limit of the equivalent of one ton of oil per person by 2005. They note that the average European currently emits 3 tons annually and each American emits 8 tons annually. The Global Commons Institute in London, longtime proponents of the contraction and convergence approach, suggest that eventually each person on earth would be allowed to emit 0.3 tons of carbon annually. Presumably, under a C&C regime, the carbon dioxide produced while breathing would not be counted against one's overall carbon allocation. The idea is that contracting carbon allocations will encourage the development of non-carbon based energy sources.

Under a C&C regime, high per capita emitting countries could purchase unused allocations from low per capita emitting countries. Proponents point out that buying such allocations from poor low emission countries could fund their economic development. One cautionary note: the Hamburg Institute of International Economics in Germany observes that the immediate introduction of such a C&C scheme "would lead to very high North-South transfers that would be politically difficult to achieve."

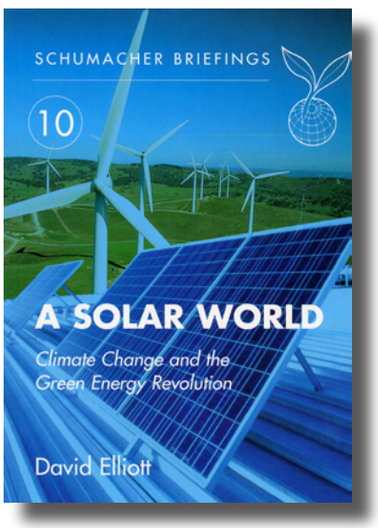
Still, with few new ideas on the table,

> it's good bet that the environmental movement and the international climate change bureaucracies will be pushing contraction and convergence proposals in post-Kyoto negotiations.

Let's hope that it doesn't come down to needing to buy a carbon permit each time you want to barbecue a steak.

Ronald Bailey, Reason's science correspondent, is the editor of Global Warming and Other Eco Myths (Prima Publishing) and Earth Report 2000: Revisiting the True State of the Planet(McGraw-Hill).

2003



David Elliott
A Solar World

Publisher: Green Books / Schumacher

ISBN: 190399831X

If the whole world is to 'Contract and Converge' to a sustainable level of consumption, albeit in a phased and equitable way, as Aubrey Meyer argues in his Schumacher Briefing (No. 5), then we have all got to learn to live differently.

DECEMBER

Pew Centre
Equity and Climate

Beyond Kyoto: Advancing the International Effort Against Climate Change

"The "Contraction and Convergence" proposal, developed by Aubrey Meyer . . . almost any conceivable long-term solution to the climate problem will embody, at least in crude form, a high degree of contraction and convergence.

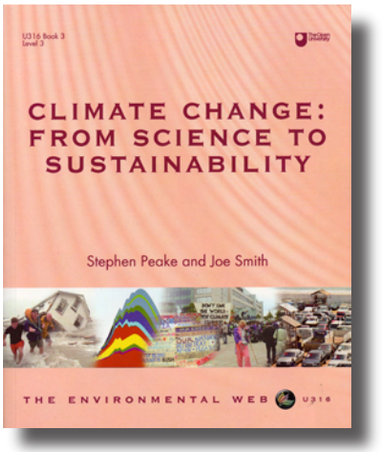
Atmospheric concentrations of GHGs cannot stabilize unless total emissions contract; and emissions cannot contract unless per capita emissions converge.

The contraction and convergence proposal plays an important role in the climate process. It focuses attention on the ethical questions at the heart of the climate problem, which no long-term solution can afford to ignore.

If supported by a critical mass of countries, it would become an important force in the negotiation."

2003

Peake & Smith
From Science to Sustainability



Publisher: The Open University ISBN: 07492 5680X

Contraction and convergence approach to climate equity

One way of ensuring climate equity or justice assumes equal rights to the global commons—that is, the oceans, Antarctica, space and the atmosphere. One influential example of this way of thinking is the contraction and convergence approach. In this case, the goal is to see net aggregate emissions decline over time below some maximum threshold level that stabilizes greenhouse gas concentrations, with per capita emissions of Annex I and non-Annex I countries arriving at equality. A key assumption within this approach is that international climate-change agreements should be based on equitable distribution of rights to emit greenhouse gases.

In other words, everybody carries around an imaginary budget of carbon emissions. There is something about this per capita approach that has immediately struck the right note with many people engaged with this problem. It is interesting to note then, that the idea did not come from a well-resourced international NGO, or one of the international agencies, but was forced on climate-change negotiations by the determination of a small number of campaigners. One of the most audible was Aubrey Meyer, a former classical musician. Determined individuals make a difference: Meyer and his colleagues could be seen as the Robin Hoods of climate negotiations.

2004

JANUARY 7

Anderson & Starkey
Tyndall Report

"The DTQs scheme is premised on the assumption that stabilising greenhouse gas concentrations in the atmosphere at a level that will prevent dangerous anthropogenic interference with the climate system will require very large reductions in global greenhouse gas emissions.

[2]

Furthermore it is assumed that these reductions will be achieved through some form of international agreement establishing binding national emissions reduction targets. The Domestic Tradable Quotas (DTQs) Scheme is a new instrument designed to enable nations to meet the component of their emissions reduction targets that is related to energy use . . . .

Whilst there is considerable support for allocating emissions rights between nations on an equal per capita basis, [14] there has been little or no discussion as to whether this allocation should be applied within nations. Consequently no attempt has been made to ground such an allocation within the academic literature on distributive justice."

[2] For example, in its 22nd report, the Royal Commission on Environmental Pollution (RCEP) recommends that atmospheric concentration of carbon dioxide be stabilised at 550ppmv. Under the Contraction and Convergence approach advocated by the RCEP this would require cuts of 77% in UK emissions by 2100 (RCEP, 2000, p53, 56-7).

14 The equal per capita allocation forms the basis of the "Contraction and Convergence" proposal (Meyer, 2000). The RCEP endorses this proposal on the basis that "every human is entitled to release into the atmosphere the same quantity of greenhouse gases" (RCEP, 2000, p2). For an extensive list of those who support the Contraction and Convergence proposal see Meyer (2000).

http://www.tyndall.ac.uk/whatsnew/dtqs.pdf

JANUARY

Illinois Energy Forum
Russia's Ratification Of Kyoto Uncertain

WHILE negotiators at a United Nations-sponsored climate conference in Milan, Italy continued to work on new rules to control greenhouse gas emissions, Russia gave mixed signals regarding whether the country would ratify the Kyoto Protocol on climate change.

Because the United States has indicated it will not consider ratifying the treaty, Russian support is necessary for its emission control terms to go into effect.

Within days of each other, one Russian minister said his country would definitely not ratify the protocol while another minister said it might ratify an amended version.

Meanwhile, the U.S. Department of Energy pressed its policy of voluntary greenhouse gas reductions by launching a new web site that will serve as a resource for the public and industry associations participating in the agency's Climate VISION program Voluntary Innovative Sector Initiatives: Opportunities Now.

The web site will allow participants to track progress in meeting their voluntary commitments under the program.

Because of uncertainty of Kyoto ratification, there was talk at the Milan meeting of using a "contraction and convergence" model as an alternative. Chief U.S. climate negotiator Eileen Claussen urged consideration of this option.

"Contraction" under this model means reducing the total global emission of greenhouse gases, while "convergence" would have national emissions converging year by year toward agreed targets based on each country's population.

The Contraction and Convergence model also includes an emissions trading program involving all nations.

www.gci.org.uk/articles/January2004Newsletter.pdf

JANUARY 29

The Lord Bishop of Manchester
House of Lords

My Lords, are the Government adopting contraction and convergence as the just and intelligent way forward on global emissions?

JANUARY

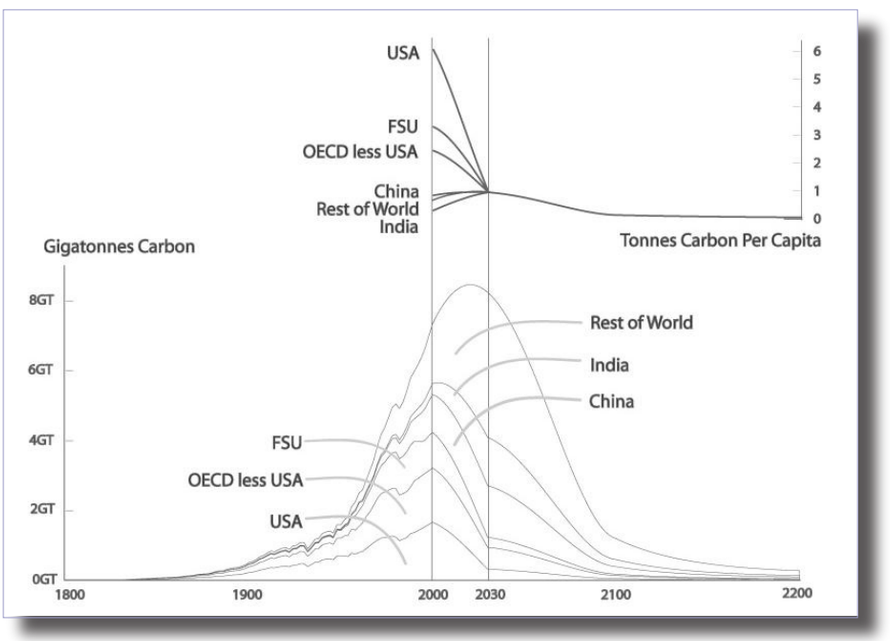
HERO
Shrinking the Carbon Economy

Global purpose: carbon reductions under C&C

"The United Nations Framework Convention on Climate Change (UNFCCC) was agreed in June 1992.

Its objective is to stabilise the rising concentration of greenhouse gas (GHG) in the atmosphere before this becomes 'dangerous'. Unlike the Kyoto agreement, which is partial, Contraction and Convergence (C&C) addresses this in its entirety.

GHG concentrations have been rising for the last two hundred years in response to emissions from industry and land use change and are influencing global temperature upwards. At present these trends are towards dangerous rates of global climate change.



The rising concentrations are the result of emissions accumulating in the atmosphere. Consequently the contraction of future emissions globally is by definition required to stabilise concentrations. Climate scientists have been calling for an emissions level that is at least 60 percent less than the level in 1990. This means that at rates to be agreed, an international convergence of the future shares to this contraction – both gross and per capita – arises by definition. With C&C, GCI has formalised the options, and an example of this can be see in the diagram.

Since such a process is required by definition to achieve the goal of the UNFCCC and the risks from failure to do this are great, why is there delay? Damage from already altered climate is increasingly apparent and we are caught in long-term trends that augur worse is to come.

The first reason is that the economic wealth and growth we have come to take for granted has been dependent on burning increasing amounts of coal, oil and gas. The GHG emissions from this – weighed as carbon – amount at present to over 6 billion tonnes a year. This trend continues to rise at 2 percent a year, when a fall at around 2 percent a year is required to lessen danger.

To deal with this, there is no choice but to substantially decrease dependence on these fuels by pursuing clean sources of energy such as solar and wind power.

The second reason is that within this expansion there has been a marked global economic divergence. Two thirds of current global population have only six percent of purchasing power in the newly global market place. Most of these people are in the poorer countries. Their GHG emissions still barely register in the global accounts, and they are the most vulnerable to the damage – such as droughts and floods – that global climate change brings.

As the trends worsen the growth becomes increasingly uneconomic. To deal with this the UNFCCC gave rise to a subsidiary agreement – the Kyoto Protocol – in which the wealthy countries are required to lead the technological changes by example, not require emissions control of developing countries, and assist poorer countries in coping with the opportunity costs that climate change is already causing.

However, the United States, the world's largest emitter of GHGs – 35 percent of accumulated – has refused to support this agreement. The rules are such that now unless the Russian Federation does support it, the Protocol will not be ratified.

Under President Clinton the US said that unless the agreement was global it wouldn't work. The US Senate unanimously passed the 'Byrd Hagel Resolution' in June 1997 to make this point. Since then President Bush has also accepted arguments saying that controlling emissions must be subordinate to the growth of the economy. So in the US and globally, GHG emissions, concentrations and consequential damages will rise as well. This is locking us deeper into the trends towards dangerous rates of climate change, not to mention the trends of increasingly uneconomic growth.

As early as 1990, GCI proposed the C&C basis to prevent this deadlock. We presented the first detailed proposals in 1996 and have sustained our effort to increase awareness of C&C. Its main virtues are that it is simple and easy to understand

and not random. Governed by the goal of stabilising GHG concentrations in the atmosphere, the model will calculate any rate of contraction. Applying the simple moral within this logic, the model will also calculate any rate of convergence to equal per capita shares globally.

Unless we prefer disaster by international bluff and blackmail, this is by definition what the situation requires. And it is encouraging to see how the uptake of C&C has grown steadily and the proposal has an increasing number of high-level backers and new advocates."

Aubrey Meyer

JANUARY

Rising Tide On-line
What planet are we on?

Imagine a planet that once held great oceans. Which had the warmth and water needed to support life. Now a freezing wind howls across rock strewn deserts whipping its red earth around high peaks and deep into valleys. With January's latest expeditions to Mars this, the Red Planet, is once again under scrutiny. For the first time, the robotic envoys of the human race will be searching for a history of water, a prerequisite for life on Mars. And although the planet's atmosphere is currently too heavy with carbon dioxide to sustain human life and the plants that would meet many needs, the question again rears its head - what would it take for human beings to live on Mars?

To start with, it would take at least couple of thousand years of dwelling in biodomes while the right conditions to live in the open air were created. For Mars lacks Earth's 'greenhouse effect', a layer of 'greenhouse gases' that trap solar energy, creating an atmosphere in which humans can live. Without this Earth would be as cold and barren as Mars. However, the greenhouse effect needs to be carefully balanced to support human life. Too high a concentration of greenhouse gases and the planet would overheat, leading to unpredictable weather behaviour, loss of plant and animal species, and serious disruptions to the chain of life on Earth. This is human beings' most urgent habitat problem today - the concentration of greenhouse gases in Earth's atmosphere, particularly carbon dioxide, is currently on the rise, pushing the temperature up with it. In the last two decades in particular the Earth warmed at a rate faster than at any point in at least the last 1000 years. And, while scientists have tested alternatives to the idea that human beings are affecting global climate, none of the factors such as the climate's natural variability or changes in solar radiation fit the 20th century's observed warming so well as increases in greenhouse gases generated by human activity. The question of what it would take to support human life is

more pressing for planet Earth than for Mars - as a species we are having difficulties taking steps to ensure that we can carry on living in our present home.

International political response to the deterioration of support systems for human life on Earth comes in the form of the UN's Kyoto Protocol, a set of negotiations that calls for token cuts in greenhouse gas emissions. Ratification of the Protocol is stalled by Russia's vacillating over whether to sign the agreement. Meanwhile the US has simply refused to play, an unsurprising stance given that the main cause of climate change is too much carbon dioxide in the atmosphere. This carbon dioxide comes from the burning of fossil fuels, most notably oil, and the US is at least as addicted to oil as is the rest of the global North.

How disturbing: the resource that fuels contemporary society and defines international relations is the same resource that most severely impacts on the ability of our species to survive.

Carbon dioxide is emitted in the manufacture of almost every product that we buy and in every journey we make by motorised vehicle. For the past four decades, the output of carbon emissions and Gross Domestic Product from globalised industry have increased almost exactly in proportion to each other - a dramatic cut in emissions would mean a correspondingly dramatic shift in our understanding of 'business as usual'. The scale of changes that are implied, even if motivated by an interest in future human generations being able to live on this planet, seem difficult to accept. Such measures are hardly vote-winners. This is why a meaningful attempt to tackle climate change is not at the top of most politicians' agendas.

This is also what makes questions over a radical transformation of society immediate and practical, rather than abstract. It is less a case of whether transformation should happen, and more of a case of what sort of changes are required. Thus, to avoid panicked measures and an increasingly authoritarian state, human beings need to find a way of practising politics that allows for participation in this significant political transformation. What mechanisms need to be developed to allow people to decide on the limits to carbons emissions? How will those limits be applied in a truly free and fair manner?

Fortunately, there is no need to start from scratch on this last question. The UK-based Global Commons Institute has put forward an initiative, Contraction and Convergence, which would provide a way for the global community to move towards the 80% emission cuts necessary to prevent carbon dioxide levels from exceeding twice what they were before the industrial revolution.

And Contraction and Convergence is based in the principle of equity, recognising that such vast change needs a political framework.

The Kyoto Protocol is often criticised for being 'too little, too late' but it is predictably so, given that it challenges none of the economic or political assumptions of a capitalist system. It relies on the extension of the market to the Earth's carbon dioxide recycling facility - the atmosphere - to get us out of this mess. It allows those who usually use more than their fair share of the world's resources to continue doing so.

As a step beyond Kyoto, Contraction and Convergence recognises that safeguarding life support systems for future generations has to involve a different way of working from the current, clearly defunct, system.

Contraction and Convergence proposes that international 'shares' of greenhouse gas emissions be allocated on the principle of equity, whereby a human being in an over-consuming country has no more nor less right to Earth's atmosphere than a human being in an under-consuming country. From this understanding the initiative proposes that countries in the United Nations Framework Convention on Climate Change agree a global greenhouse gas emissions 'contraction budget', aiming to limit atmospheric concentrations of these gases. Shares of greenhouse gas emissions would be proportional to an agreed base year of global population. In practice this may mean that over-consumers of greenhouse gases would have to contract sharply, while under-consumers could continue to rise for a while until their overall consumption 'converged' at the pre-agreed level.

Contraction and Convergence has solid scientific grounding with the aim of fair distribution, and with the atmosphere afforded the status of a common resource for all life on Earth.

In a January 2000 report, Greenhouse Gangsters vs. Climate Justice, the US-based group CorpWatch [2] summed up the changes needed as being about more than weather stabilisation. They called for 'climate justice', including the recognition that communities hit hardest by the extraction, refining and distribution of fossil fuels are not only some of the most severely impacted by climate change catastrophes but are also some of the least capable of responding to them. As part of a movement for climate justice CorpWatch's stance included opposition to "military action, occupation, repression and exploitation of lands, water, oceans, peoples and cultures, and other life forms, especially as it relates to the fossil fuel industry's role." They accused multilateral development banks, transnational corporations and governments in the global North of compromising the democratic nature of the United Nations as it attempts to address the problem. The obstacles to achieving weather stabilisation as part of a larger goal of climate justice are, after all, both institutional and political. Despite a potentially bleak prognosis for the survival of human beings

on Earth, hope lies in understanding that climate change is the result of a tangible set of events and political decisions. And, as such, it does not have to be inevitable.

Melanie Jarman

[1] Global Commons Institute, www.gci.org.uk

[2] corpwatch, www.corpwatch.org

FEBRUARY

Mayor of London
Green Light to Clean Power

policy 2:

The Mayor supports the principle of contraction and convergence as a long-term international policy objective.

[page 74]

Box 3: Contraction and convergence [page 49]

Contraction and convergence is a simple approach to distributing the total greenhouse gas emission reductions required internationally, between various countries or groups of countries. The approach is based on two principles: -

i) that there is an upper limit to acceptable global atmospheric greenhouse gas concentration, beyond which the damage from climate change would not be acceptable

ii) that the atmosphere is a global commons, so that as individuals we all have equal rights to emit greenhouse gases.

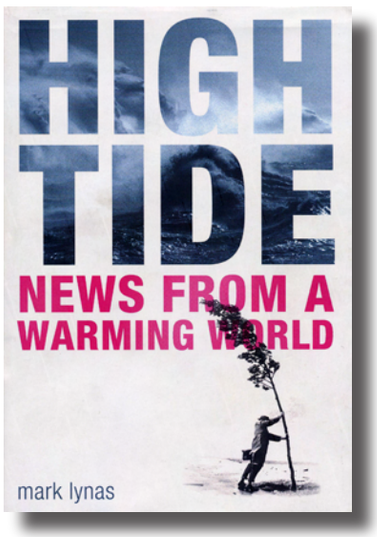
These principles are applied to the problem of distributing internationally the right to emit greenhouse gases, as follows. First, the target atmospheric concentration is agreed, and a date is set at which point the atmospheric concentration will be stabilised at the agreed level. From these factors, the global annually allowable greenhouse gas emissions can be calculated for each year of the stabilisation period. This will be a decreasing number over time, as global emissions contract to the sustainable level defined by the target concentration.

An individual person's emissions entitlement for a given year is the global allowance for that year divided by the global population. From this, national entitlements are calculated on the basis of national population. Therefore, a population cut-off point is required, after which additional population growth does not generate emission entitlements. To achieve these emission reductions via gradual transition, there would be a period during which emission entitlements for all nations converge to an equal per capita share globally. This period is independent

from the stabilisation date for atmospheric greenhouse gas concentration: rates of both contraction and convergence would both be agreed through negotiation.

Emission entitlements created through contraction and convergence could be internationally tradable, so that the resulting system would be compatible with global carbon trading.

2004



Mark Lynas
High Tide

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. . . . In the meantime, to begin the halting first steps towards protecting the Earth's climate, the Kyoto Protocol must be brought into force - and soon. We must urge the Russian government to ratify Kyoto, and other governments to implement it seriously once it comes into effect.

2. Sign up to 'contraction and convergence'

Only industrialised countries are active participants in Kyoto: developing countries have refused to take on their own cuts on the reasonable grounds that it could freeze their development and worsen global inequalities. But Third World countries account for an increasing share of global emissions: China is the second largest polluter after the US, and India is also in the top ten. Clearly greenhouse gas emissions from the developing world will also need to be reduced soon if dangerous global warming is to be avoided. However, discussions on this have not even started, and attempts to begin negotiations at the Delhi Climate Conference in 2002 were rejected. One crucial reason for this rejection is equity. Why should India and China - whose citizens on average emit respectively only a tenth and a quarter as much as the average British citizen - agree to limit their consumption now, when the industrialised world has got rich on the back of a century or more of carbon-based development? The issue is likely to cause deadlock for years into the future, unless someone can find a clever way around it. Luckily, a workable solution is currently on the table, one which recognises that equal rights to the atmosphere are integral to efforts to protect the climate from major destabilisation. First developed by Aubrey Meyer of the Global Commons Institute in London, it has begun to receive tacit support from within the British government, adding to support from the European Parliament, the Africa Group of Nations and the governments of India and China. This solution has an elegant logic which cuts right through all the UN jargon and complexity which has blighted international climate policy so far. It's called 'contraction and convergence'.'22 The way it works is simple. First, the world agrees an atmospheric greenhouse gas

concentration target which will keep global warming within safe boundaries. This target then translates into a global emissions budget, which is parcelled out on an equal per capita basis across the world. Every Chinese, American, Bangladeshi and Greek would get the same entitlement, phased in over an agreed convergence period. These entitlements should, Meyer insists, be tradable - both to ease the transition and to generate much-needed revenue flows from rich to poor countries. (This will differ from current emissions trading, which takes place without there being a clear budget to ensure that overall emissions decline, and which also fudges the crucial issue of who owns the atmosphere.) With carbon permits - which will increase in value as they gradually decline in numbers to meet the global contraction budget - becoming prized property, there will be strong incentives for efficiency and the rapid uptake of clean energy technologies. So whilst tackling global warming, 'contraction and convergence' would also go a long way towards reducing the appalling inequalities of today's world. Nor need it usurp the Kyoto Protocol: it could instead become a logical extension to the climate negotiations once the Kyoto 'first commitment period' mandate runs out in 2012.

I am convinced that 'contraction and convergence' provides the only solution to the problem of global warming which is both workable and logical, and which establishes a clear framework for deciding where we want to be in the future rather than simply relying on the guesswork of countless piecemeal measures. But in order for it to be accepted, governments first have to be persuaded to sign up to its provisions, something which can only be achieved with widespread popular support.

JANUARY - MARCH

Crucible
Equity in Adversity

The CRUCIBLE editorial observes; -

"The poor, less industrial countries are largely those that will suffer the consequences of global warming: 'worsening and greater frequency of storms, floods, desertification, crop failures, famines, eco-system collapse, species migrations and extinctions, disease vectors, refugees, social tensions, economic failures and large-scale political conflicts . . . [with] the rising of sea levels through warming of the waters . . . [to] cap all of these tragedies'. [Aubrey Meyer's article "Equity in Adversity"] compares the global apartheid, with the few offering a legacy of poverty - in the widest sense - to the many, with the political apartheid with which he grew up in South Africa. In the end, the only solution that ensured a future of any description was one that involved every citizen of the country.

The visionary genius and transcendental forgiveness of Nelson Mandela made that possible. Similarly, the solution to global warming has to be planet-wide, or it will not work. Contraction and Convergence answers this call to unity."

Main Article by Aubrey Meyer

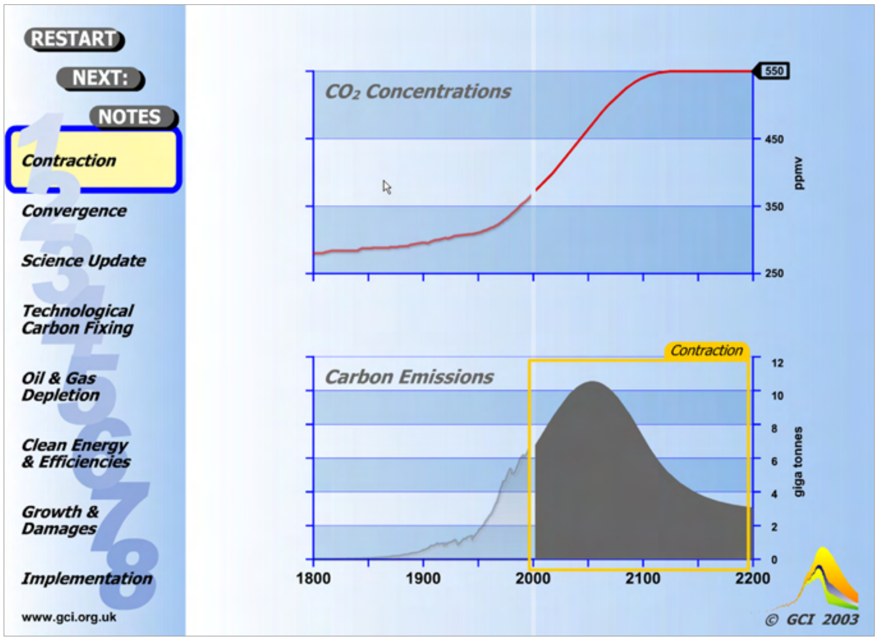
From 1952, aged five, I grew up in South Africa during the 'apartheid' years. Apartheid means 'separateness'. As public policy, apartheid meant 'separate development' for white people and 'nonwhite' people. To a child, this construct was definitely 'adult' and strange, as South Africa's national motto was, 'eendrag maak mag' or 'unity is strength'. When you put the two ideas together you got 'separateness is weakness'. This flawed logic was pervasive.

During those post-war years economies worldwide grew steadily. We were, so the story goes, becoming wealthier and wealthier. While South Africa was no exception to this, its society was polarised, racially and economically, more than anywhere else in the world. Land and wealth were concentrated in the hands of the few. Poverty was their gift to the many, and most of the poor were indeed separated, for not being white skinned.

We had centres of wealth and 'Bantustans' of poverty; in practice this separation was into a vast periphery of moneyless people and a core of people-less money. With unintended irony and percipience, the South African Tourist Board attracted visitors to our 'beloved country' with the slogan that, 'South Africa is a World in One Country'. The economics, if not the politics, was just like the larger world.

The tension in this contradiction, more than anything else, drove the ultimate defeat of white South Africa nationalism and the election victory of the ANC after Nelson Mandela was released from prison. Rejecting segregation took years, but the nation did finally come together, believing that integration and inter-dependence were the better and safer option. There is an object lesson here for the UN climate negotiations.

By 1989 I had been living in London for ten years working as a musician. Looking for the subject of a musical, I became aware of the issue of global climate change. It suddenly seemed possible that the Greens were right. They argued that with our greenhouse gas (GHG) emissions, human beings have been causing changes in the atmosphere that - if continued - are capable of bringing civilization to its knees. The enormity of this insight was paralysing and it as good as overwhelmed me. The music in me was silenced.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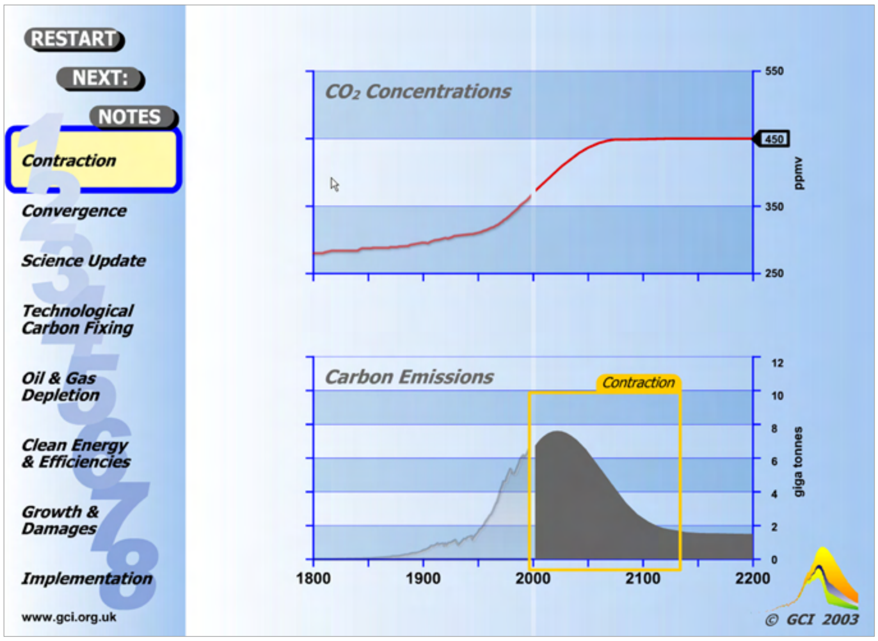
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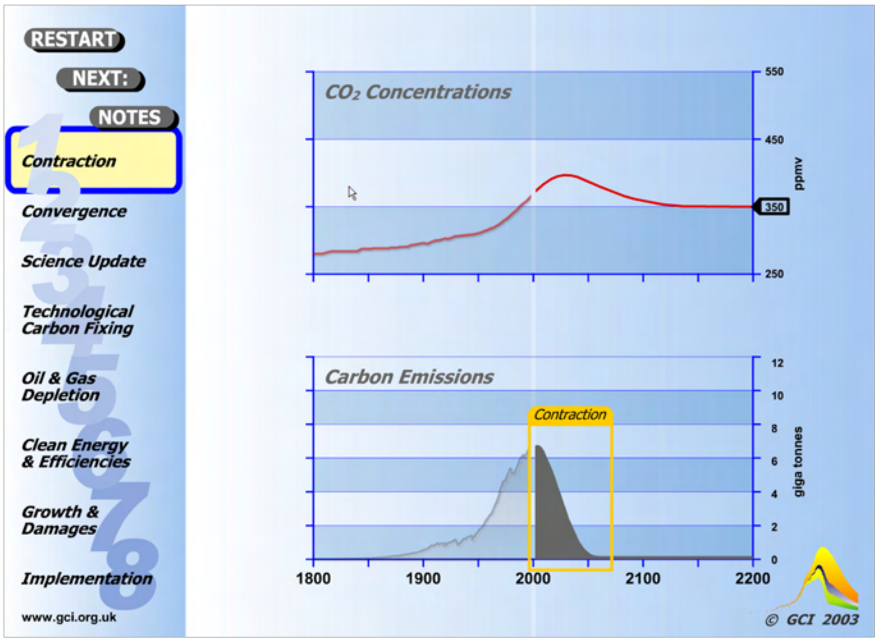
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A little investigation revealed that the human story behind this was all too familiar. Here again were moneyless people and people-less money, but at a planet threatening level. It was clear that getting beyond this delusory separateness globally was imperative. It seemed obvious that integration and interdependence would be central to any story of success that humanity as a whole would be writing, if we learned how to stop causing these climate changes. Apartheid doesn't work.

With three friends from the UK Green Party, I co-founded the Global Commons Institute (GCI) in London. Our mission was 'equity and survival'. In June 1990 we published a statement based on this. It was the first of hundreds of widely supported GCI statements in the UK press and elsewhere over the following years.

As the story unfolded, we found we were engaging in the climate change debate in numerous fora including climate negotiations, meetings with experts, off the- record meetings, and meetings in Switzerland, New York, Delhi, Washington, Beijing, Bonn, Nairobi and even beloved Cape Town.

With the help of Tony Cooper, I produced a response to the global challenge of climate change and the inequity of which it was a symptom. 'Contraction and Convergence' (C&C) is a proposal that overall global emissions must contract, while overall the amount of emissions per capita must converge across the world. Primarily about GHG emissions, C&C is actually like a musical score. It is a global framework arising from basic principles.

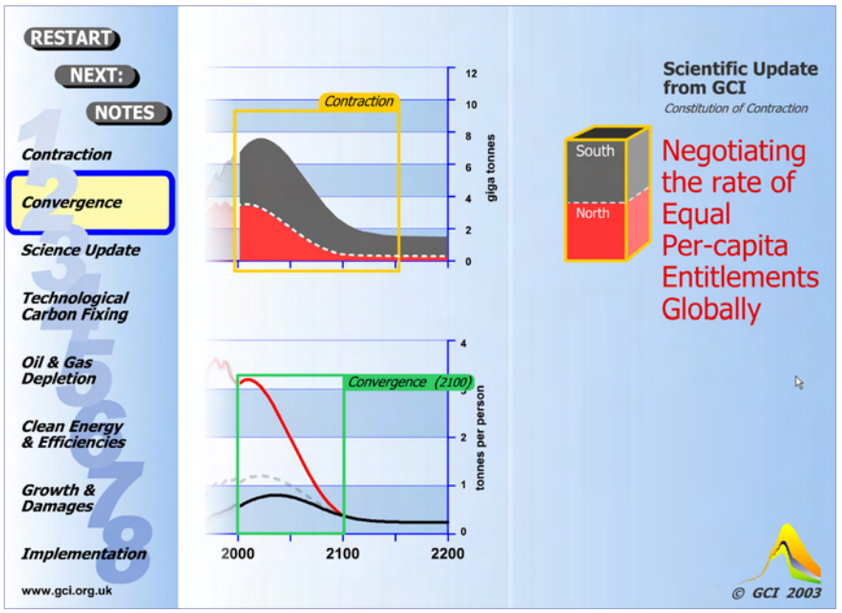
It is mathematically a resolution, like an 'Amen' cadence. In the language of the mediaeval churches, C&C is e pluribus unum, unity-in-diversity. I have called it equity-in-adversity, a just response to the global crisis.

C&C makes possible projections of how to cope with the changes ahead by keeping in tune and in time with each other and the natural world. It shows how we might integrate through equity-in-adversity across the years so that we, and children yet to come, may survive and prosper in our increasingly fraught but interdependent future.

Human enhanced global warming Since around 1800, the industrial economies of the Western world have been growing by burning fossil fuels, first coal, then oil, and more recently gas.

When these are burned to generate electricity, for example, greenhouse gases such as carbon dioxide, nitrous oxide, sulphur dioxide and methane are emitted to the global atmosphere, where they stay.

CO2 is the most abundant of these and it remains in the atmosphere for decades, even hundreds of years. This means that:-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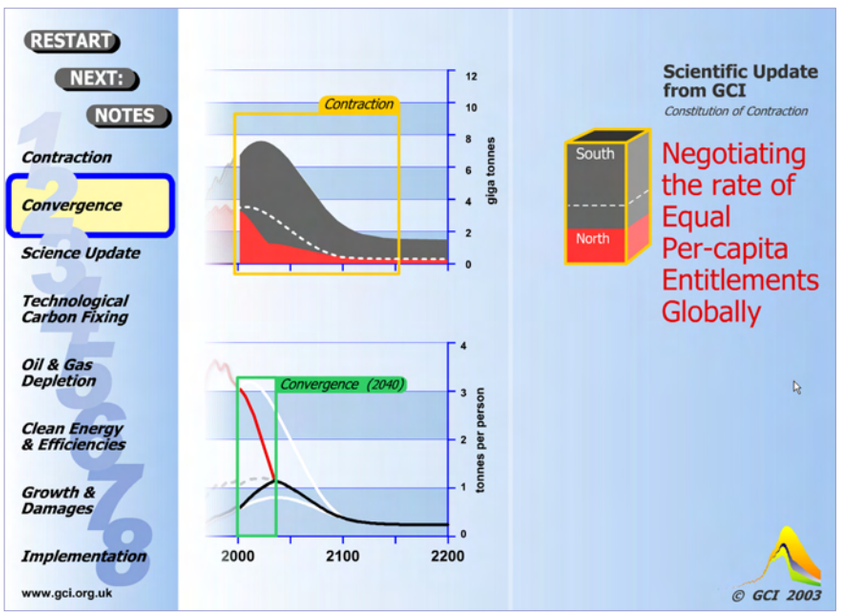
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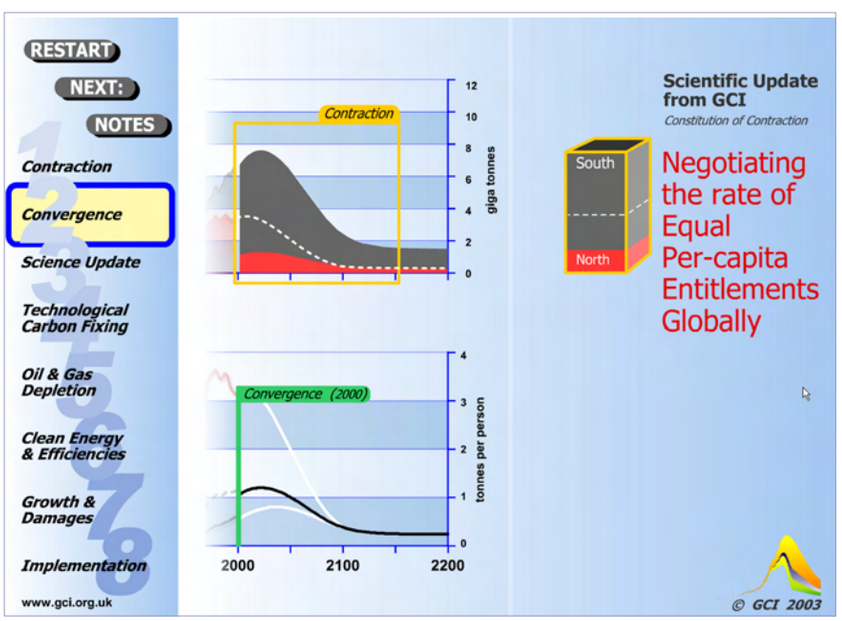
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19th Century emissions have lingered into the 20th Century atmosphere, while 20th Century emissions have simply added to the total.

We know this because measurements of the atmospheric concentration of, for example, CO2, have shown a steady increase since we started burning fossil fuels. The increasing CO2 emissions shown in the image below are measured in 'Giga' (billions) of Tonnes of Carbon (GTC) only. The concentrations shown are measured in atmospheric parts per million by volume (ppmv). The concentration in 1800 was 280 ppmv. Today it is rising through 373, a rise of over 35% in the last 200 years. Natural cycles notwithstanding, this contemporary rise is higher and faster than anything in the geological record of the last 500,000 years.

Sunlight to planet earth includes a radiation frequency that is faster than the visible rainbow spectrum. It is called ultraviolet (UV) light. When the UV light rebounds off the surface of the earth, it re-radiates at a wavelength slower than the visible spectrum called infra-red. CO2 is called a greenhouse gas (GHG) because, like all gas molecules comprised of three atoms, it is excited by this infra-red radiation. This means in other words that the gas traps heat. The outcome therefore is straightforward: the more greenhouse gas that accumulates in the atmosphere, the more the temperature on average will be influenced upwards. This is the basis of what is called 'human-enhanced global warming'. On the balance of available evidence, this GHG accumulation is substantially responsible for the almost one degree Celsius increase of global temperature that has been observed over the last 200 years. It is what Mrs Thatcher correctly referred to in 1989 as "the vast uncontrolled experiment we have begun with the global atmosphere". It is common knowledge that applying more heat to anything makes it increasingly turbulent and unstable. Think of how agitated water becomes as you increase heat to it in a pan on the stove.

Since at least 1989, climate scientists have been telling us that these trends of increased emissions, concentrations and temperature are moving towards 'dangerous' rates of climate changes. The use of the word dangerous is deliberate. It points to a worsening and a greater frequency of storms, floods, desertification, crop failures, famines, eco-system collapse, species migrations and extinctions, disease vectors, refugees, social tensions, economic failures and large-scale political conflicts over the years ahead. The rising of the sea levels through warming of the waters will cap all of these tragedies. The event as a whole will be 'stochastic', that is, very hard to predict in local detail but easy to explain and predict in general global terms. I shall call it here simply 'damages'.

Because of all this, the scientists' message to us has consistently been: unless we act collectively and decisively to reduce greenhouse gas emissions to the atmosphere by 60% to 80% of current levels as soon as we can, the upward rise of GHG concentration in the atmosphere will continue.

The United Nations Framework Convention of Climate Change
Recognising this awesome potential, the nations of the world came together between 1991 and 1992 to create the 'United Nations Framework Convention of Climate Change' (UNFCCC). It was signed at the Earth Summit in Rio de Janeiro in June 1992 (Rio 1992). Its objective "is to achieve . . . stabilization of greenhouse gas concentrations in the atmosphere at a level that would prevent dangerous anthropogenic interference with the climate system".

This is Article 2. It recognises that greenhouse emissions have to contract globally.

The Principles of Precaution and Equity Part of our present and terrible dilemma is that we can't prove that dangerous climate change is going to occur, any more than it is not. The future is about probabilities especially including human behaviour. We can't sensibly adopt a strategy of simply observing passively whatever happens as it happens. Neither can we adopt a de facto policy of 'global apartheid' where peoples, their economies and nations simply have to make their various ways forward separately, hoping to adapt as best they can to whatever happens separately.

> The reasoning for this is simple. If various local and even regional efforts to adapt to climate change are to be meaningful, there have to be global measures to avoid the worst outcomes, since, in the light of the above, mere adaptation will be a hiding to nowhere.

At the same time, if various local and even regional efforts to limit and reduce emissions are to be meaningful, some collective account of global action to control greenhouse gas emissions as a total contraction event is required. If it happens it will by definition be in a precautionary equitable framework of inter-dependence. It won't happen in conditions of increasingly random guesswork.

> If there was to be market activity in this regime, it would be a framework-based-market, not a marketbased- framework. When this overall goal is clear, principle has to inform practice.

Those who negotiated the UNFCCC engaged with these difficulties. The treaty document states the global principles of precaution and equity as follows: -

The Parties, "should take precautionary measures to anticipate, prevent or minimize the causes of climate change and mitigate its adverse effects. Where there are threats of serious or irreversible damage, lack of full scientific certainty should not be used as a reason for postponing such measures . . ." (Article

3.3) . . . The Parties, "should protect the climate system for the benefit of present and future generations of humankind, on the basis of equity". (Article 3.1).

They note that, "the largest share of historical and current global emissions of greenhouse gases has originated in developed countries and that per capita emissions in developing countries are still relatively low" (Preamble). They therefore conclude that, "in accordance with their common but differentiated responsibilities and respective capabilities the developed country Parties must take the lead in combating climate change and the adverse effects thereof" (Article 3.1), while "the share of global emissions originating in developing countries will grow to meet their social and development needs" (Article 3.3). This recognises convergence. The document goes on to say that, "policies and measures to deal with climate change should be cost-effective so as to ensure global benefits at lowest possible cost" (Article 3.3). This points to 'market-mechanisms', such as the global trading of emissions rights. Overall, however, a framework based on precaution and equity was being established, with efficiency introduced in a subsidiary role purely to assist achievement of its objective. There was political tension, the essence of which was this: was the objective of the treaty merely an aim, or something to which we were collectively committed?

Just before Rio 1992, Michael Howard, then the UK Environment Minister, inserted the word "aim" in the clause on commitments. The tension between guesswork and framework continues to dog the debate.

Challenging 'Expansion and Divergence' and the 'Economics of Genocide' Without formalising contraction and convergence, the UNFCCC had in a loose form laid out the preconditions for it. The globally safe and fair future allocation of emissions or emissions permits was coming to the fore. While this was not fully seen at the time, awareness of this and its political dynamics had increased. With our early graphic imagery, GCI had maintained a lobbying presence throughout the negotiations publishing these points for 'equity and survival' as best we could. Still short of a real deal, we felt that progress had been made.

Between 1993-95 we became involved in a stark effort to challenge the counterthesis to 'equity and survival' launched by economists. They suddenly descended on the UN, very well-resourced and in great numbers, with the slogan 'efficiency with no regrets'.

Climate change was correctly seen by them and their sponsors as a threat to continued economic growth. Instead of denying the reality of climate change and its origins in fossil fuel dependent economic growth, they suggested that generating more units of economic growth per unit of fossil

fuel consumption was 'efficient' as it meant paying less for the energy content of 'growth'. They argued about what carbon tax levels should be introduced and devised a global costbenefit analysis of climate change to help determine this figure. The figure was identified as the 'social cost' of carbon, and their cost-benefit-analysis claimed to determine how much tax people were willing to pay to avoid a unit of damage caused by climate change. However, this seemingly innocent approach ended in farce and diplomatic scandal. These economic experts brought humiliation on themselves with two fundamental errors.

The first was their valuation of the planet's resources as a whole as threatened with increasing and potentially catastrophic damages. Insurance company data show these damages have been growing steadily at 12% a year for the last 40 years. But the economists, blind to this and any projections of such trends, spot priced their entirely petty damage estimates well below the value of the economy as a whole.

They reasserted that its incontestable purpose was to grow at three or more percent per annum ad infinitum. The climate spin was that damages would be negligible, and there would be no regrets if we could find a way of burning less carbon in the process; apart from the benefit the planet might experience from less pollution, we would be saving on fuel bills as well. In short, they advocated selling the planet to the economy.

The second error was their failure to recognise the enormity of global economic apartheid. Their handling of mortality due to climate change was bathetic and shameless. They valued these statistical deaths as functions of the disparate incomes of the people involved. Crudely, poor and rich globally were valued fifteen to one; on average fifteen dead Indians had the same value as one dead Englishman. Normal to the economists perhaps, but it caused outrage.

> The Intergovernmental Panel on Climate Change (IPCC) asked GCI to undertake a study of the unequal use of the global commons. This study demonstrated that the economies of the world have been jointly and severally growing in a persistent pattern of expansion and divergence since the war. By 1990 this pattern showed the distribution of global purchasing power between people-less money and moneyless people as follows; (1) the one third of global population who had consistently on average emitted more than 0.4 of a tonne per capita of carbon from fossil fuel burning had 94% of hard currency equivalent purchasing power and (2) the two thirds of global population who had consistently on average emitted less than 0.4 of a tonne per capita of carbon from fossil fuel burning had the remaining 6%. This is what I mean by global apartheid.

The link between fossil fuel burning and income was nearly 100% in 1990. The two thirds of the global population in our study were people in the poor countries of the South who rightly said they had not triggered this global crisis. They

denounced cost-benefit, global economic apartheid and the absence of policy to prevent climate damages and deaths that suggested the poor were "too poor to worry and too poor to worry about".

GCI ran a successful campaign to discredit this economics of genocide. We then formalised and established 'Contraction and Convergence'. The economists were furious and called it the stupidest campaign in history.

Establishing 'Contraction and Convergence' and 'the Economics of Survival'

We returned to the UN climate negotiations in 1996 with the first version of this image. It shows all countries past CO2 emissions in a pattern of 'Expansion and Divergence' and the 'Contraction and Convergence' of these in a future where rising atmospheric CO2 concentrations are held to no more than 450 ppmv (parts per million per volume). Convergence to equal per capita shares globally is complete by 2030 under an overall regime that brings emissions down to 40% of 1990 values by 2100. It is GCI's resolution or, if you will, our 'Amen' in the face of climate change.

We enlarged this beautiful image to billboard size and put it on the wall in the restaurant area. The effect on the negotiators was salutary; everybody could see themselves full-term in relation to everyone else. Moreover, the very basis of the negotiation could actually be seen!

Questions were asked by delegations. Helpful organisational suggestions were made. The following year we received invitations from many parties, including the US and Chinese governments, asking us to visit their capitals and brief their officials. We accepted them all. The Africa Group of Nations collectively passed a resolution in favour of Contraction and Convergence.

The Indian government repeated statements that they would accept no other basis for a solution. The Chinese government issued a similar statement.

The US Senate unanimously passed the famous Byrd Hagel Resolution effectively endorsing Contraction and Convergence. Then, just before the Kyoto meeting in December 1997, members of the US Senate Armed Services Committee arrived. "We won the cold war; C&C is Communism!" they said. "Maybe so," we countered, "but at least you get a Capitalist management system."

A globally inclusive and full-term climateframework- based-market is what everyone knew was needed. 'Contraction and Convergence' is the only idea that has ever been presented for the interdependent future that makes development sustainable. We so nearly got agreement for it in principle at the climax of Kyoto. Instead we got the Kyoto Protocol with all

permit allocation postponed. It has since been so enfeebled by disputes that it may not now hold up. Beyond that, a new plague of internet-based 'carbon-carpetbagging' (carbitrage) has infected it with such fraudulent economics, that many are now more nervous of having it than not.

Contraction

GCI calls a global reduction of emissions, in its entirety, a global contraction 'event'. This is strictly with regard to the sum of GHG emissions per se. It is not necessarily to do with analysis of technologies and techniques, or cultural, economic and political affairs. It is concerned purely with the overall reduction of carbon emissions necessary to avoid dangerous climate change as assessed by Working Group One (WGI, the 'science group') of the Intergovernmental Panel on Climate Change (IPCC).

Following IPCC 1994, here are three examples of different rates of CO2 emissions contraction, leading to three different levels at which atmospheric CO2 concentration could be expected to stabilise: 550 ppmv, 450 ppmv, and 350 ppmv. The comparison shows that the slower we complete the contraction event required to stabilise the concentrations, the higher their ultimate level will be. The concentrations' influence on temperature upwards will therefore be greater the lower the target rate we set, as will the resultant stream of damages.

What is certain is (1) to stabilise concentrations, a full contraction event is required by definition (2) the volume of damages will, more or less sharply, rise throughout the contraction event, whatever its rate.

This makes much less certain what rate of contraction-delay we can get away with, taking account of modernity's near total dependence on fossil fuels, aggravated in turn by the absence of clean alternatives commensurate in scale.

If full contraction is not fast enough, runaway climate changes can come upon us and future generations with unavoidable and drastic consequences for all living species.

> As Professor Michael Benton of Bristol University has observed, during the Permian Extinction 251 million years ago, 95% of living species were obliterated in what is estimated to have become a runaway greenhouse event when vast and sudden natural methane release augmented a warming triggered by volcanic activity in Siberia.

Convergence Within such a global contraction event, a convergence process will happen by definition. Even UK climate bureaucrats from DEFRA are beginning to be heard saying that Contraction and Convergence is a mathematical inevitability if dangerous climate change is to be avoided.

Here are three examples of different rates of emissions convergence: by 2100, 2050 or 2000. Because no other indicator is globally or morally viable, the convergence is measured to equal per capita sharing of this global resource. It shows that

-the faster we agree the convergence within the contraction event, the larger is the future share to the countries whose historic share was smallest but whose exposure to future damages is greatest.

The C&C model will calculate any rate of convergence at any rate of contraction.

There is an additional function that enables users to run or to freeze, at any date, future population projections for the first fifty years. Just as we have reserved our views about the rates of C&C that are needed, we have reserved our views about population projections. The latter function is included simply to assist technical analysis of our collective options.

Again, convergence is strictly about any non-random international sub-division of the GHG emissions or emissions entitlements defined in the contraction event per se. For simplicity, the world is subdivided into the industrialised country group (in red) and the rest (in black). Red and Black shares start where they were in 2000 i.e. proportional to income, and converge by an agreed date to being proportional to population or base year thereof.

Here, unlike the micro-deliberations of Working Group Three (WG3, the 'policy group') of the Intergovernmental Panel on Climate Change (IPCC), 'convergence' is concerned with the constitutional properties or rights of sharing carbon permits in a future contraction event in a non-random manner. WG3 IPCC has in fact recorded in their 3rd Assessment Report that, 'Contraction and Convergence' takes the rights-based approach to its logical conclusion.

Armed with this simple moral logic, GCI has won many skirmishes since 1989 when the campaign for equity and survival began. However, we recognise that the larger global battle with climate change has hardly begun.

At the same time the way ahead is clear at least to some, as indicated in the words of Clive Hamilton, Director of the Australia Institute, when he nominated GCI for the Sasakawa Award this year: -

"The idea of Contraction & Convergence is destined to be one of the most important principles governing international relations in the twenty-first century. It is a powerful ethic that incorporates global justice and sustainability and thereby bridges the dominant concerns of the last century and this one. It is the only way to accommodate the interests, ethical and economic, of developing countries and rich countries in the struggle to find a solution to the most important environmental problem facing the world."

In the words of former UK Environment Secretary Michael Meacher, advance in the direction of C&C is "remorseless".

Meanwhile, global climate is changing and at present reinforcing the trend into global apartheid. For countering these trends, the 'unity in diversity' of C&C is a great strength. The campaign for it is increasingly active.

Aubrey Meyer is Founder and Director of the Global Commons Institute. For more of the detail of C&C in graphics and animations and detailed evidence of the considerable and growing support it enjoys, please visit the GCI website www.gci.org.uk

FEBRUARY

Wilton Park Climate Conference
Chairs' summary

"Advocates of Contraction and Convergence argue that the approach provides an overall framework which provides a basis for negotiation towards solution of the climate crisis. Advocates argue that the only alternatives to a framework are guesswork and, at best, partial solutions. Contraction and Convergence seem to be consistent with the United Nations Framework Convention on Climate Change (UNFCCC).

www.gci.org.uk/consolidation/WiltonPark11_03.pdf

FEBRUARY 9

The Lord Bishop of Leicester
Maiden Speech in UK House of Lords

"My Lords, may I take this opportunity to express my gratitude to the Members of this House and to its officers and staff for the way in which I have been welcomed and guided both at my introduction and subsequently? It was particularly gratifying tonight to follow the noble Baroness, Lady Byford. I thank her for her kind and welcoming remarks.

As the noble Baroness, Lady Miller, pointed out, the Chief Scientific Adviser has drawn our attention to the overwhelming significance of the issues before us today. As he put it, they are,

"more serious even than the threat of terrorism".

It is therefore difficult to imagine a more significant moral as well as scientific and political issue facing the human race. In the United Kingdom, we have not yet really felt the pain of global warming, so our response to the challenge can at times seem worryingly lackadaisical. The danger is that, when we do feel the full impact, it may be much too late.

The European heatwave of 2003, record temperature rises since 1991 and a 40 per cent thinning of the Arctic ice cap leading to rising sea levels, are evidence of this phenomenon. Our natural environment is being asked to cope with humanity's pollutants to an extent that simply cannot be sustained. We may say things and repeat them often, but the words become so familiar that they stop having an impact. Today's debate with its call for action rather than words is entirely apposite.

It is good to report, therefore, that the Churches and other faith communities are waking up to the need to respond to this global challenge. We have two great advantages in coming to address the issue.

First, we deal in matters of the spirit, of the heart and the emotions. Global climate change is of course a scientific matter, but it is also something that needs to touch us deeply and personally. To respond, we have to feel part of a global community not just of humans, but of all God's creatures and the planet itself. We have to feel responsible for all that is, and respond even though the real pain of global warming may not be experienced in our own backyards. The faiths are used to this kind of language, and we can and will use it to protect God's creation.

Secondly, our organisations are both global and local. Perhaps in recognition of these qualities, Defra has funded the Conservation Foundation to run workshops throughout the country for concerned Church people and others to learn what their faith teaches—spiritually and practically—about reducing humanity's ecological footprint. In my own diocese of Leicester, we will be organising such a workshop as an inter-faith event, because the issue brings the religions together like nothing else. Churches are taking up the Eco-congregation challenge. Dioceses are undertaking environmental audits and adopting environmental policies.

The former Bishop of Hereford, who recently retired and is much-missed already, has championed contraction and convergence at every opportunity. He has persuaded the Anglican Communion and, most recently, called on the leaders of Churches Together in Britain and Ireland to support the campaign.

Those are some examples of attempts that the Churches and other religions are making to encourage action to reduce greenhouse gas emissions. There are many other examples of action by local agencies to address climate change, including in my county of Leicestershire and in the East Midlands. As an environment city, and in partnership with the organisation Environ, Leicester has initiated the "Keep Leicester Cool" campaign, promoting 10 steps that local people can take to protect the environment as well as providing advice to the business and education sectors. The East Midlands Community Renewables Initiative is also working with local communities

such as former mining areas and local housing estates to integrate environmental technologies, using energy from biomass sources.

> As the Chief Scientific Adviser pointed out, the Kyoto Protocol, although important, is not enough. We are now obliged to think carefully and urgently about what our post-Kyoto strategy will be. Sir David King has invited alternative ideas for future agreements about emissions control. Contraction and convergence is one such idea—a simple yet far-reaching proposal to deal with greenhouse gas emissions effectively and justly.

Your Lordships will be aware of the solution to global warming devised by Aubrey Meyer of the Global Commons Institute. Contraction refers to the movement towards a formal stabilisation target of emissions that is sustainable: a 60 per cent reduction by 2050 is the often-repeated suggestion. Convergence is the sharing out of permission to pollute among all the people of the Earth. On a per capita basis, countries would be allocated their share of permits to pollute. As we well know, post-industrialised countries emit far more greenhouse gases then those in the developing world, yet have smaller populations. The richer countries can buy permits to pollute from the poorer countries and offer much needed development aid thereby.

> Contraction and convergence, therefore, is a simple yet radical solution, and one that I suggest we should be brave enough to support.

Next year, the UK enjoys simultaneously the presidency of the EU and G8. An opportunity that will not be repeated for decades is before us.

> The Prime Minister has said that he wishes to do something about climate change and about Africa, which is off-track for every one of the millennium development goals. Contraction and convergence is a solution that offers hope to both desperate situations.

Climate change and sustainable energy use cannot be more pressing for the UK and the planet. It is in everybody's interest that these issues are debated and action initiated at all levels for the sake of our common future."

http://www.publications.parliament.uk/pa/ld199900/ldhansrd/pdvn/lds04/text/40209-10.htm#40209-10_head0

2004

Woodin & Lucas
Green Alternatives to Globalisation

Publisher: Pluto Press, ISBN: 0745319327

[Page 87]

"Finally, a robust emissions-trading scheme should be introduced as part of a new international treaty to cut greenhouse gas emissions, based on the Contraction and Convergence (C&C) model. Under the C&C model each country would be allocated the same per capita allowance for greenhouse gas emissions. The per capita allowance would be reduced over time so that total global emissions would contract to an environmentally sustainable level. Initially, industrialised countries would vastly exceed their total budget. For example, the US hosts approximately 4 per cent of the world's population, yet produces a quarter of global greenhouse gas emissions. The C&C model sets a time limit for countries to converge on the per capita allowance and permits them, within limits, to complete the element of convergence that they cannot achieve through technological innovation and energy conservation by purchasing surplus emissions budget from other countries. Thus, given the 1990s estimate of the value of the industrialised countries' annual output that was dependent on emissions in excess of their budget ($13-15 trillion), very substantial sums of money would flow to the least developed countries with the greatest emissions budget surpluses."

[Page 198]

"One radical idea for a new neutral global currency is the Emissions-backed Currency Unit (Ebcu), proposed by Richard Douthwaite as a development of the Contraction and Convergence (C&C) method of cutting greenhouse gas emissions. 46

Under C&C, each country would receive an annual allocation of emissions permits on a per capita basis. Over an agreed period of time, the total annual allocation would be reduced until it no longer exceeds the planet's ability safely to absorb the emissions it permits. Countries would be able to trade in emissions permits using Ebcus, which would also be allocated on a per capita basis. Until they became more energy efficient, rich countries that emit more than their fair share of greenhouse gas emissions would need to buy emission permits from poorer countries. Poor countries would have an incentive to invest the Ebcus they receive in the development of energy-efficient economies so that they retained a surplus of tradable permits. Ebcus could also be used as a global reserve currency, as the dollar is now. Thus, the Ebcu would operate within an environmentally sustainable economic framework as a neutral

and redistributive means of international exchange, deriving its value from a universally useful commodity, the right to emit greenhouse gases.

The Ebcu proposal is still at an early stage of development and, in common with any other proposals to replace the dollar, US opposition would hamper its implementation. Nevertheless, the economic implications of that opposition would become less powerful as self-reliance increased under economic localisation."

FEBUARY 11

House of Commons
Evidence to Audit Committee

MR JEFFREY GAZZARD

DR ANDREW SENTANCE

Evidence heard in Public Questions 171 - 272

submitted by Aviation Environment FederationExamination of Witnesses

Witness: Mr Jeffrey Gazzard, Project Manager, Aviation Environment Federation, examined.

Q212 Mr Chaytor: Could I just ask one final thing of a more general nature. Looking beyond 2012, the next period for considering global CO2 reductions, what is your view about the concept of contraction and convergence as an international solution to the emission reduction challenges beyond 2012?

Mr Gazzard: It is a lovely theory! We have discussed this with Aubrey Meyer, whose personal concept it is, and it was mentioned in the RCP report, their energy policy report. If I could just make a quick aside on that, one of the big criticisms we have of the Government is that we have energy policy reviewed by the RCEP, audited by the Number 10 PIU and set in stone by the DTI and that is an area that anybody would say is a really good process, whether it is aspirational or not. Then we have the same body, the RCEP, sending out its views on air transport which are absolutely disparaged by the DfT, which I do find amazing and I would like the Committee to comment on that, if it can. The point about contraction and convergence is that in an ideal world it would be lovely. We could sit round a camp fire and, you know, balance lentors(?) until the cows come home! But it is a bit like what I said about emissions trading. You can have contraction and convergence only when you have set a platform of the highest possible technological and environmental protection standards, a kind of benign capitalism, as it were. That is not a political statement, that is the best phrase I can come up with. It is a journey and it is

such a leap in terms of imagination, let alone the practicalities of how you go from where we are today to contraction and convergence. It is a very nice idea.

Q213 Mr Chaytor: Beyond 2012 what else is there, expansion and divergence?

Mr Gazzard: Well, a good question.. That seems to be what we have got in the current Kyoto process. What Tim and myself have tried to do in all of this is to try to find some kind of profit and loss system that industry, policy makers and society as it stands at the moment can understand. That is why we were very keen to put before the Committee this issue of reinsurance companies and UNET's financial programme because I think that is an area where you can see that balance being struck in a better analytical framework than I could provide. What we tend to do is to work at the coalface of sort of everyday environmental impacts. So the answer is, the RCEP said that it was a great idea but some way off, so I think I am going to back out of that one by saying I support what the RCEP have to say about it.

Chairman: Good. Well, thank you very much indeed. We are grateful to you for your time and thoughts. It has been very helpful indeed.

Memorandum submitted by British Airways plc

Examination of Witness

http://www.parliament.the-stationery-office.co.uk/pa/cm200304/cmselect/cmenvaud/uc233-iii/uc23302.htm

FEBRUARY 23

New Statesman

Earth entering uncharted waters

The century's big issue is not equality in the conventional sense. It is whether we can share with other species and with future human generations. Neither left nor right understands. By Mark Lynas

I write this as a former left-winger. No, I haven't made the long, lifetime trek from Trot to Tory, like so many highly placed newspaper columnists (more of them later). My contention is, I hope, a little more rational: that the "left-wing" label no longer implies an acceptable position on the most crucial issue facing the world today. A new challenge has arisen which - by transcending the older and less significant divides - will eventually define the course of 21st-century politics. In comparison, today's "big" issues, on top-up fees, foundation hospitals and the Blair-Brown relationship, recede like bar-room chatter into the background hubbub.

This new challenge does not have an easily recognisable name. E O Wilson, one of the greatest contemporary biologists, calls it "the bottleneck". Most of its sub-issues are familiar, but the bigger picture is not. Piece together the disparate elements and the product is terrifying. The shadow thrown by this looming crisis is everywhere, its darkness growing slowly, almost imperceptibly, as it creeps over our planet.

The crisis is this: within the earth's biosphere, a single species has come to dominate virtually all living systems. For the past two centuries this species has been reproducing at bacterial levels, almost as an infectious plague envelops its host. Three hundred thousand new individuals are added to its numbers every single day. Its population of bodies now exceeds by a hundred times the biomass of any large animal species that has ever existed on land since the beginning of geological time.

The species is us. Now numbering more than six billion souls, the human population has doubled since 1950. Nothing like this has happened before in the earth's entire history. Even the dinosaurs, which dominated for tens of millions of years, were thinly spread compared to the hairless primate Homo sapiens.

Inevitably, our productive and consumptive activities displace other living species from the planetary food web. The result is mass extinction, which has historically accompanied human expansion everywhere, from North America to Easter Island. Wherever humans dwell, other species die out - displaced from land cleared for agriculture, killed for their flesh, or simply allowed to disappear as an unnoticed by-product of the thriving primate economy.

We are now in the early-to-middle stages of the sixth mass extinction to hit the planet since complex life began 2.1 billion years ago. Species are disappearing at between 1,000 and 10,000 times the natural background rate. A fifth of birds are threatened with extinction, as are 40 per cent of mammals and fish, a third of amphibians and up to half of all plant species. Humans now appropriate 40 per cent of the planet's organic matter produced by photosynthesis. The number of humans born in a single day almost equals the total global population of great apes.

Again, this situation is un- precedented: never before has an agent of mass extinction emerged from within the living systems of the planetary biosphere. Previous mass extinctions have been caused by external factors, such as the aster-oid that likely wiped out the dinosaurs 65 million years ago or the volcanism that seems to have caused the Permian mass extinction (when up to 95 per cent of species died out) 251 million years ago. In the lottery of evolution, as Wilson writes, Darwin's dice have rolled badly for Planet Earth. We are entering a new geological era: the Anthropocene.

All this would be bad enough. But there is more. Since the early 1800s, humans have been using buried carbon - first in coal, later in oil and gas - as a form of energy. When combusted in our oxygen-rich atmosphere, this carbon becomes the potent greenhouse gas carbon dioxide - the same gas that keeps Venus's surface temperature at a searing 460oC. Levels of carbon dioxide in the earth's atmosphere have risen by a third since the start of the industrial revolution, and global temperatures are rising in tandem. We are now on track to change the globe's average surface temperature by anything up to six degrees Celsius within a century, taking us into a climate regime last experienced between one million and 40 million years ago, well beyond the evolutionary experience of many creatures alive today - including humanity.

Add these trends together and Wilson's "bottleneck" sounds like an understatement. It is inconceivable that humanity and natural species can pass together through this bottleneck unscathed. And here lies the challenge. Will we emerge at the end of the century with a depleted, devastated planet, inhabited only by remnant super-adaptable species and artificial ecosystems created to support the remaining human population centres? Or will humanity take sufficient remedial measures to ensure that a reasonable proportion of the living biosphere survives?

This is the shadow under which the battle lines are forming in modern-day politics. On one side stands a loose and ragged coalition of those who want to see the survival of nature, not just for the sake of human survival, but because they believe in its intrinsic worth. On the other side stand those who don't know or don't care, or who actively oppose efforts to get us through the bottleneck unscathed. Let's meet these people.

First under the spotlight is the United States. Its current government is dedicated to environmental destruction on a scale hitherto unimaginable. President Bush and his vice-president, Dick Cheney, both deny the reality of global warming. They have approved legislation to speed up the logging of forests, and they are trying to gut the Endangered Species Act, among numerous other blindly destructive measures. Several of the most powerful US senators - including James Inhofe (Republican, Oklahoma, and chair of the Senate committee on environment and public works), Larry Craig (Republican, Idaho) and Craig Thomas (Republican, Wyoming) are dedicated anti-environmentalists. Inhofe calls global warming a "hoax", and alleges that the Kyoto treaty "is an economic weapon designed to undermine the global competitiveness and economic superiority of the United States". In evidence to support this contention, he cites numerous pseudo-scientific studies, many of them supported by fossil fuel interests and by far-right think-tanks such as the Competitive Enterprise Institute and the George C Marshall Institute.

Britain, too, has a powerful establishment of anti-environmentalists. The Adam Smith Institute is one of the most prominent, with strong connections to new Labour, despite its Thatcherite political creed. Of similar bent is the Institute of Economic Affairs, which has published several pamphlets denouncing "climate alarmism", opposing the Convention on International Trade in Endangered Species and accusing those who try to protect tropical forests of "eco-imperialism".

These viewpoints are popularised by media pundits, primarily but not exclusively attached to the right-wing press. Their empress dowager is the Daily Mail's Melanie Phillips, who claimed recently that "there's no correlation between rises in climate temperature and sea levels". This is untrue, even at the level of basic physics - heat makes water expand, raising sea levels at the same time that water from melting ice on land adds more mass to the global ocean. But the mistakes - and Phillips's article is full of them - are not the point: this is a statement of ideology, based not on scientific rationality or empirical evidence, but on a particular world-view. It is vital to understand this, because it reminds us that those with truth on their side will not necessarily emerge triumphant as this conflict deepens.

Joining Phillips on the far right is the self-parodying twitterer Peter Hitchens. He writes: "The Kyoto treaty is a silly waste of time. The greenhouse effect probably doesn't exist. There is as yet no evidence for it." Given that the greenhouse effect is basic atmospheric physics (and that, without it, the average global temperature would be well below freezing), this is a very stupid statement indeed. Again, truth is secondary.

But it is no use looking to the left for a more rational approach. Communists have always regarded nature as little more than raw material to be scraped up and melted down into pig-iron by an emancipated proletariat, marching in step to a glorious techno-industrial future. Variants of this view persist among the Socialist Workers Party and its various front groups in the Socialist Alliance and anti-war movements. Indeed, anti-environmentalism is such an article of faith among the extreme left that the cultish cabal which used to publish Living Marxism magazine, and which has now moved into the electronic media, called its Channel 4 series Against Nature.

More moderate leftists neglect ecological concerns in favour of their enduring obsession: human equality. Worthwhile as this objective may be, any consideration of how resources are to be shared with other species or with future human generations is excluded as irrelevant. Moreover, both left and right agree that economic growth can and should go on for ever.

For anyone with a basic understanding of mathematics, the impossibility of everlasting growth based on a finite resource base should be obvious. And this is the core of my argument: that it is time to de-prioritise the struggle over fair shares to the global economic pie, because the very existence of this pie is increasingly at stake. If global warming accelerates enough to turn the world's breadbaskets into dust bowls (as is already happening in northern China), then our squabbles over how to divide the spoils from the rape of Planet Earth will look very short-sighted.

Like cockroaches, human beings can scrape a living almost anywhere. The total extinction of our species is unlikely. But human society is complex and fragile, especially in an age where few people in rich countries have any experience of fending for themselves. Indeed, those who are most dismissive of environmental concerns are precisely those whose meal tables are likely to include green beans from Kenya, prawns from Bangladesh and beef from Argentina. The system of long-distance food transportation is far more vulnerable to ecological collapse than they realise.

Moreover, we are all deeply dependent on the "ecosystem services" provided free by the natural world. These include the purification and retention of fresh water (and flood control); the formation and enrichment of soil; the detoxification and recirculation of waste; the pollination of crops; the production of lumber, fodder and biomass fuel; and the regulation of the atmosphere and climate. The monetary value of these ecosystem services has been costed at $33 trillion a year, roughly the same as combined world GDP. If natural systems are mostly wiped out, we will need to replace these services artificially, which is a physical and economic impossibility.

So who is to blame for this blindness? It is tempting to follow the anti-globalisation movement in castigating multinational corporations, the World Trade Organisation and rampaging capital markets. I believe that something much baser is happening. The NS essayist John Gray gets it about right: "The destruction of the natural world is not the result of global capitalism, industrialisation, 'western civilisation' or any flaw in human institutions. It is a consequence of the evolutionary success of an exceptionally rapacious primate."

That is why we need to abandon the left-right battle lines. They offer us no guidance on how to survive the century ahead. Neither does Gray, for that matter. For him, all grand plans are by definition doomed to fail. Looking at history, one can see his point. But we have got to survive the bottleneck, and just muddling through won't do.

Thinking up solutions is not the problem. The "contraction and convergence" proposal for tackling climate change (global emissions contract to a sustainable level; per capita

emissions converge between countries) knits both human equality and ecological survival into an elegant equation. Similarly, we can protect biodiversity by stopping habitat destruction and countering the spread of invasive alien species around the world, especially in highly biodiverse "hot-spot" areas. And increasing women's control over their fertility is a straightforward way to reduce population growth.

Yet these proposals are so vast and all-consuming as to require a strong and durable consensus before they can be agreed or implemented. Biodiversity protection cannot be bolted on to existing growth-oriented economics. Contraction and convergence would require enormous resource transfers from rich to poor countries, as the developed world pays the developing nations not to follow in its own dirty footsteps.

Hence the failure of the various UN environmental summits: they take place in a political vacuum, with little public knowledge or interest to support or enforce their decisions. It is the formation of any durable political consensus towards ecological survival that the anti-green movement is determined to prevent.

In the meantime, the rest of us get side-tracked. I still believe that Tony Blair, for all his faults, remains unusually committed - compared to other government leaders - to tackling global warming. But by joining Bush's war on Iraq, Blair helped deliver the world's second-largest reserves of oil into the hands of the only major country fully under the control of climate change deniers. Rather than chasing all over the desert in search of a few mouldering old canisters of mustard gas, those seeking weapons of mass destruction need only have drilled down a few hundred metres until they hit oil, the most potent and destructive WMD of all.

The government's chief scientist, Dr David King, recently found himself at the centre of controversy when he said global warming is a more serious threat than terrorism. Of course it is: just add up the numbers. Global warming: 150,000 deaths annually from the increased disease caused by higher temperatures, according to the World Health Organisation. Terrorism: 1,000 a year (at a guess). So why is terrorism the apocalyptic threat we all have to mobilise against? You're more likely, in a poor country at least, to die of flood-related diarrhoea. And the rich won't be safe for long. The much-vaunted "clash of civilisations" is at best a distraction, at worst a racist fiction. Preventing the clash between human civilisation and nature is the battle we ought to be fighting.

APRIL 5

New Statesman

Time to forgive Tony Blair?

It pains me to write this. I marched with the best of them last year on the Stop the War rally through the cold streets of London, and at that time my hatred of the Bush'n'Blair "axis of evil" knew no bounds. I still feel the same about Bush. But I now see new dangers, and as a result, new opportunities in politics this side of the Atlantic. It may be time, I suggest reluctantly, to move on, and to offer Tony Blair one last chance to earn our support.

The importance of Iraq can be overstated. Compared to other wars, relatively few people have been killed. In the Democratic Republic of Congo, there were no "embedded" journalists to watch while rebel armies committed cannibalism, raped thousands, and recruited children as young as seven for military service. An estimated four million people lost their lives, against 10,000 or so civilian casualties in the invasion of Iraq. Moreover, some good has come out of the Iraq campaign: most Iraqis, despite mixed feelings about the humiliation of military occupation, remain grateful - according to a recent BBC poll - for the removal of Saddam Hussein's tyranny.

Continual attacks on Blair from the left can lead only to more bitterness and cynicism. Instead, we should invite Blair to rise to a new challenge. This one, if he meets it, would give him the place in history that he craves so much.

In 2005, Britain will assume the presidencies of both the G8 and the EU. No 10 has already indicated that it wants to make climate change and Africa - including the UN Millennium Development Goal of halving world poverty by 2015 - the two big themes of the presidency. The growing impacts of global warming, from drowning Pacific islands to disappearing Alpine glaciers, create added urgency on the first issue, as does the recent report that a quarter of the earth's species might become extinct by 2050 because of climate change. Yet the Kyoto Protocol is increasingly imperilled by lack of Russian ratification.

On the second issue, only slow progress has been made towards meeting the UN targets for 2015, which include achieving universal primary education; reducing child mortality by two-thirds; reducing maternal mortality by three-quarters; and stopping the spread of Aids and malaria. At the current pace, according to the UN, sub-Saharan Africa will not meet the goals for poverty until 2147, nor those for child mortality until 2165.

Ministers and their advisers are always casting around for a "big idea" that might stand out against the usual stream of targets that are forgotten almost as soon as they are announced. Yet

a single big idea - one that could solve the twin crises of global poverty and global warming - is already in circulation, and rapidly gaining steam in policy-making circles. First proposed by the London-based Global Commons Institute more than a decade ago, "contraction and convergence" (C&C) is now being taken seriously: Geoff Mulgan and David Miliband, the current and former heads of the No 10 policy unit, have both highlighted the idea publicly. More explicit support has come from Sir John Harman, chairman of the Environment Agency, Sir John Houghton, the UK's most eminent climatologist, and the MPs' environmental audit and international development committee. C&C aims to move gradually to a position where global greenhouse-gas emissions are reduced to sustainable levels but where every human being has an equal right to consume fossil fuels. So rich countries would "contract" their emissions, while the poorest could increase theirs, so that both sides ultimately "converge" on per capita equality.

C&C's biggest selling point is that it offers a science-based framework with reliable outcomes at the end of a process that must stretch for decades into the future. Although Kyoto is a good first step, there is no long-term planning: nothing else on the table can tell us with certainty where we will end up in 2050 or 2100.

C&C gets back to first principles. First, it asks how much climate change we are prepared to tolerate, and pins this to a specific, scientifically valid commitment, mandating an upper limit to the concentration of greenhouse gases in the atmosphere. (The current level is the highest on earth in more than 420,000 years.)

Once this "cap" has been agreed, it implies a budget for the remaining emissions of greenhouse gases as fossil fuels are phased out. No longer will the atmosphere be a free-for-all dumping ground. This budget must be divided up fairly among the world's population - nothing less will be acceptable to the countries of the south, which will rightly be suspicious of any treaty that might freeze their development. It is like food rationing during the Second World War - with a limited amount of atmosphere to go round, sacrifices will be accepted only if they are fairly shared.

A frequent objection to C&C is that America will never sign up to a global agreement based on equity. But opposing fairness will be a difficult negotiating position to sustain, and the US objection to Kyoto - that developing countries are not given targets - is tackled head on by a C&C regime where everyone has a converging target. Indeed, the US spoke in favour of C&C at the original Kyoto negotiations, saying it could be the basis of the next agreement.

Moreover, if the US or any other western country wants to go on consuming more than its fair share, that's fine - but it will have to pay for the privilege. C&C distributes atmospheric ownership rights fairly, and you can't use what you don't own. This is a quantum shift. Suddenly we are away from aid - where the rich condescendingly give a few pennies to the poor - and into trade, with hard-nosed commercial bargaining for mutual benefit. The rich will have to buy "emissions rights" from the poor - recognising the "ecological debt" we already owe for a century of fossil fuel-based growth, and generating potentially billions a year in revenue flows to the south.

So carbon trading could eventually bridge the yawning income gap that has opened up with globalisation, bringing the Millennium Development Goals out of the conference circuit for the first time and into the realms of practical possibility. There is no reason why income generated from carbon trading should not be earmarked specifically for providing access to safe water to the 1.1 billion people who currently lack it, for getting the 115 million young children who are currently excluded from school into lessons and for helping developing countries pay for clean generation of power.

But C&C needs a champion. Someone who can sell it to the EU. Someone who can go on to build an alliance between the EU and the south. Someone who can recruit the recalcitrant Americans, with a new president at the helm, one hopes. What better role for Blair?

Britain already has one of the most far-sighted climate change policies in the world. The UK's Kyoto commitment of 12.5 per cent reductions in carbon emissions by 2012 is one of the toughest in the EU, and the government's long-term target of 60 per cent reductions by 2050 is exactly what climate scientists and environmentalists alike have long been calling for. Meanwhile, the renewables sector is booming, again partly due to sustained government support. Although the wind-power industry is still behind that of Germany and Spain, capacity is expected to triple over the next two years, with much of the growth coming from huge offshore developments.

I have heard from several different sources that Blair is strongly committed to tackling climate change, and believes it poses the greatest long-term threat to humankind. At a speech to mark the launch of last year's white paper on energy, Blair said global poverty and climate change were "just as devastating in their potential impact" as weapons of mass destruction and terrorism. "There can be no genuine security," Blair rightly asserted, "if the planet is ravaged by climate change."

The man often pilloried as George Bush's poodle has never wavered in his opposition to American intransigence on global warming, even telling Congress last June (during his "history

will forgive us for the Iraq war" speech): "Climate change, deforestation and the voracious drain on natural resources cannot be ignored. So America must listen as well as lead."

It now seems that Blair hopes some of the political capital he gained with his support of US policy on Iraq might be spent on shifting its policy on climate. Indeed, the energy white paper sets "as a key objective of . . . foreign policy" a 60 per cent cut in emissions throughout the developed world by 2050.

Blair's presidency of the G8 in 2005 could provide a forum for serious discussions on climate and poverty, assuming the PM can use his political capital to avoid a US veto. As I write, the forces of civil society are gathering for street demonstrations around the summit that could generate the same momentum as the Jubilee campaign in 2000. I would guess that almost all these people were alienated by the Iraq war, and many have turned away from what they see as repeated betrayals by new Labour. Yet they could - and should - be Labour's core support base. All it needs is for Blair to show commitment and vision. Then, having turned from a warmonger into a champion of the poor and the planet, he may find even the war's strongest opponents ready to forgive him for Iraq.

APRIL 24

Guardian
Apocalypse soon

Michael Meacher appreciates Mark Lynas' timely warning against ignoring the consequences of climate change, High Tide

High Tide: News from a Warming World

by Mark Lynas

If you are among those who think climate change is an uncertain, remote issue over which scientists are unsure, politicians talk endlessly to little effect, and mere individuals have no power at all, this book may be for you.

Mark Lynas has abandoned the scientific disputes and the political wrangling, and spent three years travelling to find out from ordinary people how massive changes to the climate are devastating their lives, not in the future, but now. He recounts in meticulous detail the realities of life for indigenous Alaskans as the ice melts and their food supply disappears, Tuvaluan fishermen as their islands slip beneath the waves, Mongolian herders faced with blinding sandstorms, Peruvian cities facing the decimation of their water supply as a result of fast-retreating glaciers, Caribbean victims of hurricanes of unprecedented violence, and British families flooded out by the worst river eruptions in a century.

There are myriad other examples. But, as he says, all the impacts he describes are just the first whispers of the hurricane of future climate change bearing down on us. Like the canary in the coal-mine, those living closest to the land - the Eskimos in Alaska and the Pacific islanders - have been the first to notice. But they won't be alone for long.

Even the Pentagon has noticed, and if there are two groups the Bush administration listens to, they are the oil lobby and the Pentagon. Climate change "should be elevated beyond a scientific debate to a US national security concern", it says, predicting that climate change could bring the planet to the edge of anarchy as countries develop nuclear arsenals to defend and secure dwindling food, water and energy supplies. It recognises that this threat to global stability vastly eclipses that of terrorism.

This is no rhetorical exaggeration. About 2,900 died in the Twin Towers on September 11 2001, and just over 200 died in Madrid. But the London School of Hygiene and Tropical Medicine has estimated that 160,000 people are dying each year from the consequences of climate change - malaria, dysentery and malnutrition. And even that excludes some of the most extreme storm disasters plausibly linked to climate change, notably the tropical cyclone in Bangladesh in 1991, which killed 138,000, as well as Hurricanes Mitch and Andrew in the Caribbean, both hyper-intense category-five typhoons.

What is really chilling about the catastrophes occurring with increasing frequency across the globe is that they have happened, as the overwhelming majority of the world's scientists confidently believe, after a warming of only 0.6C over the past century. Imagine the consequences if, as predicted by the inter-governmental panel of the top 3,000 scientists on climate change, global temperatures rise by 1.4C-5.8C over this century.

Even that is not the end of the story. A conference of top climate scientists concluded last year that previous models had underestimated the cooling effect of smoke and other particles in the atmosphere, so that if it hadn't been for the smoky haze from forest fires and coal-burning power stations, the world would have warmed up three times more than the 0.6C rise actually experienced. Now that smoke pollution is in decline, mainly due to efforts to tackle acid rain, the scientists calculate that global warming could rise by 7C-10C this century.

That would be without precedent in recorded geological history. Yet it could still be intensified by two more factors. One is the die-back of the drought-stricken Amazon forests in the second half of this century, as predicted by the UK Hadley Centre, which would release all their locked-up carbon into the atmosphere, thus raising global warming by another 1.5C. But the most frightening scenario is a feedback effect whereby fast-rising temperatures unlock other global warming sources -

notably vast quantities of methane in the oceans, equal to more than double the world's fossil-fuel reserves - which could trigger a heating-up that would be unstoppable.

To put all this in perspective, Lynas ends his book with an epilogue recalling the mass extinctions at the end of the Permian era 251 million years ago. It was the worst crisis to strike life on Earth, killing 95% of the world's species. It was caused not by an asteroid strike like that which wiped out the dinosaurs, but by global warming. Siberian volcanoes discharged enormous clouds of carbon dioxide in colossal eruptions, thus warming the climate enough to trigger vast methane "burps" out of the oceans and releasing a runaway greenhouse effect. What increase in temperature produced this catastrophic, near-total extinction of life? The oxygen isotopes in the end-Permian rocks indicate it was 6C. Draw your own conclusions.

So is apocalypse inevitable? It isn't, but this is certainly the greatest threat mankind has ever faced, and the signs that we are facing up to it are not good. Lynas sets out five demanding proposals.

The first, obviously, is to ratify and implement the Kyoto protocol, which is only awaiting Russia. But that is complicated by the diminishing gains Russia would earn from the sale of "hot air".

The second is to sign up to "contraction and convergence". As Adair Turner, former president of the CBI, put it: "The only equitable and politically feasible long-term vision would give each country a roughly equal right to emissions per capita." Any such idea is bawled out of court by some countries, especially the US, but in the end is probably inevitable. But will it be adopted soon enough to save the world?

Lynas's third proposal is to stop all further fossil fuel exploration and development. Just how hard it will be to secure this is shown by the fact that the US was prepared to fight a war to take over the Iraqi oilfields, the second-largest reserves in the world, rather than raise the absurdly low price of petrol for the American motorist and make a decisive switch to renewables.

With his fourth idea, Lynas brings the whole issue to the individual. UK per capita emissions of CO2 are running at 9.6 tonnes a year, whereas a "sustainable" quota is estimated at 2.45 tonnes. So each of us needs to reduce our emissions by no less than three-quarters on average. That will affect every aspect of our lives - energy use, heating, transport (especially air travel) and home design. Are we prepared to make these changes, and what taxes/benefits are necessary to motivate us?

Last, Lynas tells us to keep repeating the climate change message. Read his book, and that is exactly what you will do.

Michael Meacher is former environment secretary and MP for Oldham.

APRIL 23

Climate Network Africa [CNA] Dialogue on Climate Change and Sustainable Development issues with the East African Legislators

3. Kenya should ratify the Kyoto Protocol in three months, effective from 1st May, 2004;

4. As a possible basis of the international climate change negotiations at the UNFCCC, Contraction & Convergence, the 1997 African Group proposal on equity be analysed and evaluated by the SBSTA of the UNFCCC;

APRIL 23

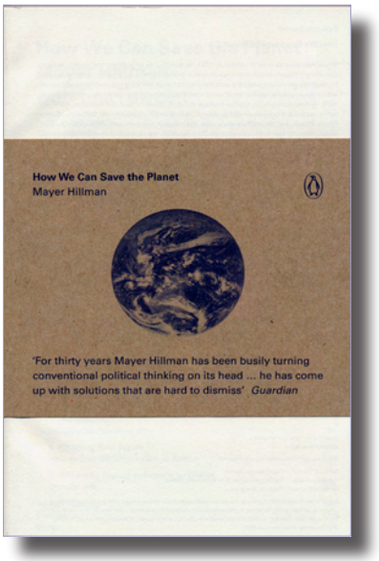
HON. ANYANG' NYONG'O, Kenyan Minister for Planning and National Development

It is now apparent that the world has to urgently agree to a more equitable method of reducing greenhouse gas emissions based on per capita emission rights allocations. This brings me to the concept of Contraction and Convergence. This concept embodies the principles of precaution (contraction of greenhouse emissions) and of equity (convergence at to equal share per head through a globally agreed date) in the reduction of greenhouse gas emissions between industrialized countries and developing countries.

The world must go an extra mile to avoid climate change, as it is cheaper than adapting to the damages. This in no way under estimates what the Kyoto Protocol aims to achieve from the flexible mechanisms. Kyoto should continue but due to the increasing and unbearable negative impacts of climate change on developing country economies, in particular Africa, the world must begin to evaluate other globally equitable approaches. The concept of Contraction and Convergence therefore needs to be assessed and evaluated by the United Nations Framework Convention on Climate Change particularly, its Subsidiary Body for Scientific and Technical Advise or the Intergovernmental Panel on Climate Change. I am certain that our Ministers for Environment here present will see the need to bring this agenda very urgently to the attention of the Climate Change Secretariat.

2004

Mayer Hillman
How We Can Save the Planet



Publisher: Penguin, ISBN: 0141016922

Description of the global solution: Contraction & Convergence

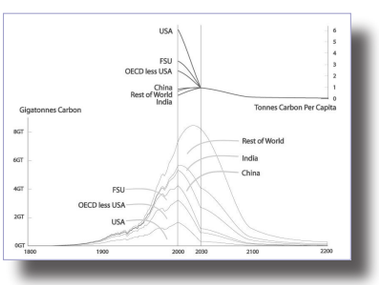
A brilliant, imaginative and simple means of reaching a just global agreement on emission reductions is called Contraction and Convergence (C&C). It was first proposed by the Global Commons Institute (GCI) in 1990. Recognition of its unique qualities as a framework for combating climate change has grown at an astonishing rate since that date. C&C is founded on two fundamental principles: first, that the global emission of greenhouse gases must be progressively reduced and second, that global governance must be based on justice and fairness.

However, this latter requirement has not been included for moral reasons alone; GCI also claims that it would be key to getting agreement from developing countries to take part in global emissions reduction. In its phrase "equity is survival", there can be no global security unless climate change is restricted to a manageable level, and this cannot be achieved without all countries of the world sharing this common objective.

C&C consists of:

Contraction: an international agreement is reached on how much further the level of carbon dioxide can be allowed to rise before the changes in the climate it produces become totally unacceptable. Once this limit has been agreed, it is possible to work out how quickly current global emissions must be cut back to reach this target.

Convergence: global convergence to equal per capita shares of this contraction is phased towards the contraction target by an agreed year.



C&C is a set of principles for reaching agreement. In fact, it simplifies climate negotiations in a remarkable way to just two questions. First, what is the maximum level of greenhouse gases that can be permitted in the atmosphere? Second, by what date should global per capita shares converge to that level? Using C&C does not entail a particular concentration of greenhouse gases as being the safe limit, nor a time scale for reductions. Based on the science and projections we already know about, GCI suggests that it would be irresponsible to adopt any concentration higher than 450ppmv. However, it acknowledges that the 450ppmv target might well have to be revised downwards in the light of new evidence.

GCI argues that C&C offers a 'framework' to replace the 'guesswork' involved in the Kyoto agreement. The targets in the Kyoto agreement are not based on any reliable understanding of the safe, or at least not-too-dangerous, limits of greenhouses gases in the atmosphere. Rather, the reductions agreed were determined by what was considered to be politically possible at the time of the negotiations between the 37 countries involved. By contrast, C&C would use the best current scientific knowledge to set maximum levels of greenhouse gas emissions in the atmosphere, and hence maximum cumulative emissions. While the date of convergence would be subject to agreement, the principle of equal rights for all would remove the potentially endless negotiations that would otherwise occur, with each country making out a case that its contribution to global reductions should be modified in light of its special circumstances.

Another important element of the C&C proposal is the ability of countries to trade carbon emissions rights. Countries unable to manage within their agreed shares would, subject to verification and appropriate rules, be able to buy the unused parts of the allocations of other countries or regions. The lifetime of permits would be restricted (to, say, five years) to discourage futures speculation and hoarding. Sales of unused allocations would generate purchasing power in vendor countries to fund their development in sustainable zero-emission ways. Developed countries, with high carbon emissions, would gain a mechanism to mitigate the expensive premature retirement of their carbon capital stock. They would also benefit from the export markets for renewable technologies that this restructuring would create. At the same time, the application of the C&C proposal would not only have the virtue of making a major contribution to shrinking the gap between rich and poor, both within and between countries, but also encourage the adoption of low carbon energy paths.

APRIL 26

Anyang' Nyong'o
Minister for Planning and National Development - Kenya

Bringing to a close the intensive two-day climate meeting for Ministers and Legislators in Nairobi over the weekend, Mr Nyong'o said: -

"It is now apparent that the world has to urgently agree to a more equitable method of reducing greenhouse gas emissions based on per capita emission rights allocations. This brings me to the concept of Contraction and Convergence. This concept embodies the principles of precaution (contraction of greenhouse emissions) and of equity (convergence at to equal share per head through a globally agreed date) in the reduction of greenhouse gas emissions between industrialized countries and developing countries.

The world must go an extra mile to avoid climate change, as it is cheaper than adapting to the damages. This in no way under estimates what the Kyoto Protocol aims to achieve from the flexible mechanisms.

Kyoto should continue but due to the increasing and unbearable negative impacts of climate change on developing country economies, in particular Africa, the world must begin to evaluate other globally equitable approaches.

The concept of Contraction and Convergence therefore needs to be assessed and evaluated by the United Nations Framework Convention on Climate Change particularly, its Subsidiary Body for Scientific and Technical Advise or the Intergovernmental Panel on Climate Change.

I am certain that our Ministers for Environment here present will see the need to bring this agenda very urgently to the attention of the Climate Change Secretariat."

APRIL 29

Guardian

That'll be £17 and 10 carbon points

Tradable quotas are the best way to tackle domestic CO2 emissions, write Richard Starkey and Kevin Anderson

It's 2025 and you've just filled the car with unleaded petrol and handed over your credit card. Nothing unusual so far. Now imagine you also hand over a second piece of plastic - let's call it a "carbon card" - for the attendant to swipe. It's not cash being debited this time, but "carbon units" from your personal allowance. Welcome to life under carbon rationing.

We believe that carbon rations - or to use our preferred term, domestic tradable quotas - are the fairest and most practical way to cut emissions of the greenhouse gas carbon dioxide. The government has pledged that the UK will cut CO2 emissions by 60% by 2050. That's a hugely ambitious target achievable only if each of us limits the CO2 emitted in our name.

Climate change is "more serious even than the threat of terrorism", according to David King, the government's chief scientific adviser. The Royal Commission on Environmental Pollution says curbing the threat requires a reduction in global greenhouse gas emissions of about 70% by the 22nd century.

There is substantial disagreement about how this should be done. The commission took the view that "every human is entitled to release into the atmosphere the same quantity of greenhouse gases" and endorsed a policy of "contraction and convergence" under which nations gradually move towards sharing emissions. The commission says this would require a cut in our CO2 emissions of 60% by 2050 - government policy since the 2003 energy white paper.

Much thought has been given to applying the per capita principle to the allocation of emissions between nations, but almost none to applying it within nations.

Here's how our scheme works. First, the government sets an annual carbon budget - the maximum quantity of emissions permitted from energy use - which reduces year on year until the 2050 target is reached.

Each year's budget is broken down into carbon units (say 1 unit = 1 kg of CO2). Households are responsible for about 40% of energy emissions, so this proportion of units is allocated equally and without charge to every citizen over 18. The remaining units are auctioned to organisations.

Then, when citizens or organisations purchase fuel or electricity they surrender corresponding units from their carbon card.

Now comes the clever bit. Each card links to a national database allowing individuals to trade their carbon units. Say, for example, you need to drive to work, but have no carbon units left. No problem, the garage simply goes into the national market and buys the number of units needed. The cost is added to your bill.

Or perhaps you don't own a car? Then you can sell your surplus units into the market for hard cash. And because the size of the cake is fixed, these trades will not affect the overall emissions produced.

How does carbon rationing measure up as a mechanism for emissions reduction? The standard test for a proposed environmental policy measure is to assess it against the three Es: equity (is it fair?), effectiveness (will it achieve its target?) and efficiency (will it be cost-effective?).

If the atmosphere is viewed as a common resource then it seems fair that people have equal shares. Allocating emissions on this basis is surely fairer than by ability to pay, as, for example, under a carbon tax. According to government figures, there are about three million households in fuel poverty, that is without sufficient income to heat their homes adequately. Fuel-poor households generally use less energy and so, as below-average emitters, most would be better off because they could sell their surplus units.

To be effective, the scheme would need to be technically and administratively feasible and acceptable to the public. Clearly it requires a central database to hold the carbon accounts and record transactions. Computer experts say such a database is not a problem using current technology, and neither is linking our 11,000 garages to it in real-time.

There is one obvious sticking point: the government would need a list of individuals entitled to carbon units. In other words, it would need a population register: but one would be created for the proposed ID card scheme. In fact, the ID card could act as the carbon card.

Finally, the scheme scores well for efficiency. According to economists, its market approach is the most cost-effective route to reduce emissions.

· Richard Starkey and Kevin Anderson are scientists at the Tyndall Centre for Climate Change Research, UMIST

APRIL 30

Aubrey Meyer
EPA - Bridging the Gap Conference: Plenary Key note Speaker

Contraction and Convergence - A Constitutional Framework for Avoiding Dangerous Climate Change

Having recently become a father some fifteen years ago, I came to a painful realization and made a life-changing decision.

I realised that we were failing to prevent the degradation of the world's environment. This was particularly true of changing the global climate with the growth of industrial emissions. It was clear to me that the present generation was creating the future conditions for which our children would come to curse us.

I made a decision to put aside my musical career and began a campaign at the United Nations aimed at averting these conditions.

There, two things soon became apparent to me: -

[1] The problem was politically aggravated by the worsening asymmetric conditions between the rich and the poor. North and South. This seemed just like a larger version of the flawed and conflict-based conditions of the 'apartheid' South Africa in which I grew up.

[2] The global political solution needed for this would reconcile us with each other, future generations and the fundamental laws of providence and commons sense. This seemed to be just like the conditions of music-making I had just put aside.

In a nutshell, it is all for one and one for all. If the chaotically widening gap of 'expansion and divergence' of emissions and economy is the problem, the solution is 'Contraction and Convergence' [C&C].

C&C is not chaotic, it is based on resource conservation, sustainable systems and global rights. It is equity in adversity. Like music and Mandela's New South Africa, it is 'constitutional'. It bridges gaps between civil society, the civil service and governments. It addresses the dichotomies between rich and the poor in this and future generations. It is deliberately and systematically aimed at avoiding future conditions in which our children might come to curse us. It responds to their call as in the poetry of Louis MacNeice, "I am not yet born. Oh Hear Me."

As the eminent Australian economist Dr. Clive Hamilton, Director of the Australia Institute observed last year: - "The idea of 'Contraction and Convergence' is destined to be one of the most important principles governing international relations in the 21st century. It is a powerful ethic that incorporates global justice and sustainability and thereby bridges the dominant concerns of the last century and this one. It is the only way

to accommodate the interests, ethical and economic, of developing countries and rich countries in the struggle to find a solution to the most important environmental problem facing the world."

Just as all life aspires to the condition of music, C&C is the basis of all solutions to the problems we now face.

Extensive evidence of growing international support for this will be provided at "Bridging the Gap".

APRIL 30

Raphael Hanmbock
Président, Association des Clubs des Amis de la Nature du Cameroun

EPA - Bridging the Gap Conference - Dublin

1. The African Continent is already suffering and will suffer more because of the impact of climate change.

2. To prevent this worsening out of control, we must urgently enact the principles of Precaution and Equity as already agreed in the "United Nations Framework Convention of Climate Change" (UNFCCC) signed in Rio in 1992.

3. Only the approach of "Contraction and Convergence" (C&C), as developed by the GCI and adopted by African Civil Society and Governments meets these principles.

4. Since 1997, the Africa Group position at the UNFCCC has been presented in these terms.

5. The position was accepted in Kyoto.

6. Europe's contribution to NEPAD's Climate Change programme for the new millennium will only be sustainable if it based on these principles, as they embody, good governance, global justice and the eradication of poverty.

7. At the regional summit in Kenya on the 23rd and 24th of April, the government of Kenya restated the Africa Group position.

8. The Director General of the ruling National Rainbow Coalition in Kenya encouraged this be conveyed to the civil service and society events in Dublin.

9. The North South Gap can only be bridged when it is put on the foundation of Contraction and Convergence.

MAY 4

Dr Andrew Dlugolecki

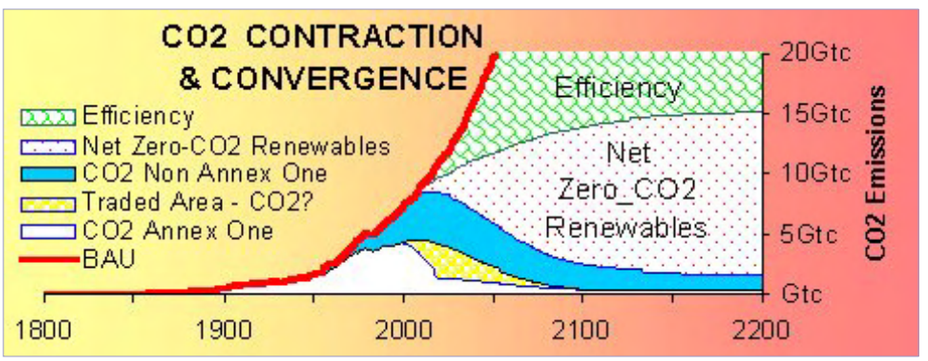
Climate Change and Mounting Financial Risks

Background Paper for "The Hague Conference on Environment, Security and Sustainable Development" 9-12 May 2004

The unifying policy : "Contraction and Convergence"

The most important step in reducing the risk of climate change, is to create a common understanding and will to solve the problem. This can only be done with a policy that is simple, fair and effective. The one which offers the best hope of doing this is "Contraction and Convergence", devised by the Global Commons Institute. It is based on the idea of agreeing a "safe" level of atmospheric greenhouse gas concentrations, and allocating the right to emit ghg's equally percapita to all nations. Since we are not at the equal stage currently, with rich countries above the safe level and poor countries below, a future

convergence date has to be agreed also (see Figure 8). The merit of this simple approach is that it is clearly "fair" (equal percapita shares) , pragmatic (allows time to adapt), it avoids "blame" (no retrospective differentiation), but at the same time it creates the possibility to redistribute wealth and transfer technology (emissions rights could be traded between over- and under-compliers), and it provides the incentive to develop RE and more efficient energy applications (by setting a clear direction).



Without an overarching framework like Contraction and Convergence to operate within, the financial sector will always be rather hesitant to commit its resources to a seemingly distant problem like climate change, when there are so many other urgent issues clamouring for attention.

MAY 5

Michael MacCarthy

Dear Mr. Meyer

I heard you speak at the "Bridging the Gap" Conference in Dublin on Friday last, where I found your talk to be the highlight of the conference.

For my own part, I was greatly disappointed with the manner in which your presentation was so crudely terminated by the facilitator. I wish to let you know that I was not alone in feeling that the conference would have benefited from hearing your Cameroon colleague complete his speech.

Please be good enough to convey this sense of disappointment. Although I was not involved in organising the event, I couldn't feel other than embarrassment as an Irishman and as a member of the host country of the EU Presidency, for the manner in which he was treated.

Perhaps you would make a copy of his speech available on your website.

Regards

Michael Mac Carthy

Waterford, Republic of Ireland

MAY 11

Aubrey Meyer
HECA Conference - Cardiff

Contraction and convergence (C&C) is a scheme to provide a framework for a smooth transition to a low level of CO2 emissions from human activity. It can either follow or replace the Kyoto protocol. The first step in C&C, contraction, is based on agreeing a safe target concentration level and the determination of global annual emission levels which should take the global atmosphere to that target. The second step, convergence, defines allocations to each country, assuming annual emission allowances that vary per-capita of population. This seminar will look at the links between global, international and national policy and how these can be strengthened.

MAY 28

Guardian

An idea whose time has come

By tackling global warming, Blair can show he is not a US poodle

Larry Elliott

A month ago, Tony Blair made a big speech about global warming. The prime minister's message could not have been clearer. The Kyoto treaty, for all the haggling, fell far short of what was needed to crack the problem, and time was running out. "The issue of climate change is now very, very critical indeed," he said.

Clearly Blair has been listening to Sir David King, the government's chief scientist, who says that within a century the last humans will be sharing Antarctica with the penguins. Others, however, appear deaf to the warnings.

The Department of Transport has been lobbying furiously to stop the Office for National Statistics publishing data showing an 85% increase in pollutants from the airline industry and a 59% rise from freight transport since 1990. Joined up government or what?

It's easy to see why the mandarins would find the ONS report a tad embarrassing. This, after all, is the department that has sanctioned a fifth terminal at Heathrow and a third London airport to cope with the seemingly insatiable demand for air travel. It would not - as they say in Whitehall - be "helpful" to have this information in the public domain.

Actually, it's helpful to find out which bits of Whitehall are subject to capture by pressure group, and it's helpful to understand the conceptual problem to be overcome if action is to follow rhetoric. In essence, this boils down to whether modern industrial capitalism is compatible with a healthy planet. Does it make sense, for example, for the G8 to pressurise Opec into pumping more crude in order to bring down the cost of a scarce resource? Is it right that airlines pay no tax on aviation fuel, thus aiding their attempts to boost demand by keeping prices low?

Make no mistake, the forces of conservatism arguing for business as usual are powerful. The good news is that they are opposed by an even stronger lobby - the insurance sector - that sees climate change as a real and immediate threat. These guys have seen weather-related claims rise over the past decade; they believe the planet is warming up and they fear the risk of ruinous losses in the not-too-distant future. The latest evidence shows an accelerated rise in CO2 emissions over the

past three years, seen by scientists as a sign that the carbon sinks that soak up a proportion of the gas have started to shut down.

Insurance companies, quite rightly, feel that Kyoto is not the solution - even if the Russians now ratify the treaty, as they almost certainly will. They are among the critics who say that the 1997 deal is timid and based on questionable science, and fails to bind every country in the world into solving a global problem. Kyoto is plan A, but the need - as the prime minister correctly argues - is to use it as a springboard to plan B.

The good news is that plan B already exists, and stands to be the long-term solution that Blair is looking for, provided he has the political courage to back it fully. Contraction and convergence (C&C) provides a three-stage blueprint for coping with climate change. Initially, there would be an international agreement on how much further the level of CO2 in the atmosphere could be allowed to rise before the changes in climate became unacceptable. Once that had been worked out, estimates of how much of the gas was retained in the atmosphere would be used to work out how quickly global emissions needed to be cut in order to meet the target. This is the contraction part of the process.

Finally, once a target was established for cuts in greenhouse gases - one figure is 60% - it would be possible to allocate the fossil fuel consumption that those emissions represented. Although people in rich countries pollute far more per head than people in poor countries, supporters of C&C say that everybody should have a basic human right to emit the same amount of greenhouse gases, and that a date - say, 2050 - should be fixed for arriving at this point. This is the convergence part of the equation. Rich states would be given time to adjust, and in the meantime could buy the right to pollute from poor countries, providing resources for development.

C&C is an idea whose time has come. The Americans have backed the idea, and if Blair has built up political capital in Washington as a result of Iraq, he should think about cashing it in next year when Britain holds the G8 presidency.

Britain’s recent experience, the prime minister should point out, shows that countries can cut emissions and enjoy growth. An even better example is China, the fastest growing economy in the world. China is not just switching from coal to gas, but has been investing heavily in alternative energy sources while the UK has been in thrall to the transport lobby: a lesson Blair would do well to heed.

• Larry Elliott is the Guardian’s economics editor

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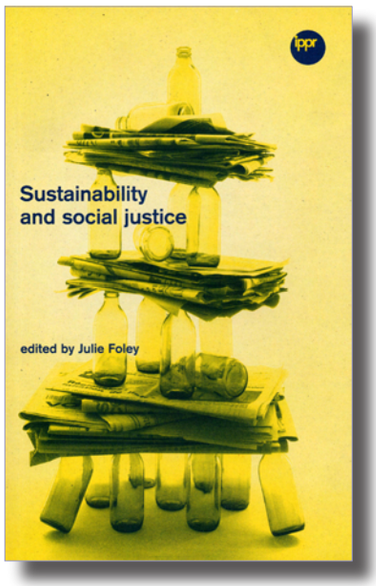
http://politics.guardian.co.uk/columnist/story/0,9321,1226568,00.html

MAY



Tony Juniper
Sustainability and Social Justice

Publisher: IPPR **ISBN:** 1860302327

Strengthening the Link between Climate Change,

International Development and Social Justice "A fair approach to allocating emission entitlements If the world is to stabilise concentrations of greenhouse gases at a safe level, a 'global emissions budget' consistent with the target concentration will need to be implemented.

At some point therefore a 'global deal' on sharing our atmospheric property rights will also have to be agreed. This in turn raises questions about how to allocate this global emissions budget in a manner that is fair and reflects developing country concerns that they have adequate room for their economies to grow."

"Agreeing emission limits on a 'per capita basis' would, as a guiding principle, ensure that every person is entitled to release into the atmosphere the same quantity of greenhouse gas emissions.

Without a long term guarantee of equitable emission entitlements, developing countries are likely to continue to refuse to participate in international action on climate change which would provide an excuse for further procrastination by the US.

Perhaps the best chance of getting developing countries on board would be to allocate emission entitlements on a per capita basis rather than in proportion to national wealth or even existing emissions. This approach has already received some support from developing countries including India and the African Group of the Non-Aligned Movement.

An immediate per capita allocation of emissions would probably not stand much chance of being implemented as it would mean that industrialised countries would have to cut their emissions by far more, while many developing countries could increase theirs.

Because of the very wide differences between per capita emissions levels around the world, there will have to an adjustment period covering several decades in which nations' quotas converge on the same per capita level (Blundell 2002).

This transitional framework is known as 'Contraction and Convergence' and was first proposed by the London based Global Commons Institute."

MAY 27

Independent
A modest proposal to save the planet

Our leaders are finally waking up to the fact that climate change, far from being a 'green' fantasy, is a real, imminent and potentially catastrophic threat to humanity. Yet preventative action seems to be as remote as ever. Isn't there something we could be doing? In an extract from his acclaimed new book, Mayer Hillman advocates radical changes to the way we conduct our daily lives that would ensure a future for our children

Climate change is the most serious environmental threat the human race has ever faced; perhaps the most serious threat of any kind. The dangers can hardly be exaggerated. Within 100 years, temperatures could rise by 6C worldwide. Much of the earth's surface could become uninhabitable, and most

species could be wiped out. In the UK, over the next 50 years, we will experience hotter, drier summers, warmer, wetter winters and rising sea-levels. In most of our lifetimes, millions of British people will be at high risk from flooding; there will be thousands of deaths from excessive summer temperatures; diseases from warmer regions will become established; and patterns of agriculture and business will have to change for ever.

This is not the view of alarmists, but the considered opinion of the overwhelming majority of international climate scientists. It is acknowledged by most governments and their advisers. Last mo nth, government-funded scientists at the University of Washington in Seattle made the key admission that the troposphere is indeed warming at 0.2C per decade - precisely as predicted by the main global-warming models. The UK Government's chief scientist warned the same month that if global warming continues unchecked, by the end of this century Antarctica is likely to be the only habitable continent.

The World Health Organisation blames climate change for at least 160,000 Third World deaths last year. Tony Blair admitted that climate change was "probably the most important issue that we face as a global community". The message is clear. Doubting the imminence of significant global warming may once have been an intellectually defensible position. It isn't now.

Decisions must be taken as a matter of urgency. We cannot rely on optimism. We need to think beyond energy efficiency and renewable energy, towards ideas of social and institutional reform and personal changes that require much lower energy use. Yet government action is only scratching the surface, and current policies on transport and growth can only make things worse. We are on the road to ecological Armageddon, with little apparent thought for the effects on the current population, let alone those who follow.

It doesn't have to be like this. Nor does anyone want it to be. The UK government said in 1990 that it was "mankind's duty to act prudently and conscientiously so that the planet is handed over to future generations in good order". This is crucial. As well as posing the most demanding challenges to the character and quality of our way of life, the issue has to be seen and acted on from a moral perspective.

Taking this as a starting point - that it is a matter both of necessity and of responsibility to try to save the planet - only one solution has a realistic prospect of success. This article is an attempt - made more fully in the book I have written with Tina Fawcett, How We Can Save the Planet - to bring that solution to the centre of public debate.

The direction is simple and generally agreed: cuts must be made to greenhouse-gas emissions. The difficult part, where moral as well as scientific questions arise, is deciding by

how much, by when and by whom. Should the most "energy profligate" nations and individuals be obliged to bear the greater burden of emissions reductions?

The solution set out here - first at a global level and then at a local, individual level - is radical. But it can achieve a sufficient decrease in emissions, by a set date, transparently and fairly, so that it can command wide public and political support. For the UK to adopt this strategy will mean that it can meet its own commitments to greenhouse-gas reductions and show global leadership.

The most plausible way to reach a just - and thus realistic - global agreement on emissions reduction is the system known as Contraction and Convergence (C&C). This brilliant and simple method was first proposed by the Global Commons Institute (GCI) in 1990, and its unique qualities have been widely recognised. A large number of national and international bodies have endorsed it, including - in the UK - the Royal Commission on Environmental Pollution, the Cabinet Office" Performance and Innovation Unit, and the Greater London Authority.

C&C is founded on two principles: first, that global emissions of carbon dioxide must be progressively reduced; and second, that the reductions must be based on justice and fairness, which means that the average emissions of people in different parts of the world must ultimately converge to the same level. This latter requirement has not been included for moral reasons alone; climate change cannot be restricted to a manageable level without all countries sharing this common objective.

C&C simplifies climate negotiations to just two questions. First, what is the maximum level of carbon dioxide that can be permitted in the atmosphere without serious climate destabilisation? Second, by what date should global per capita shares converge to that level?

The targets in the Kyoto protocol are not based on a reliable understanding of the safe limits of greenhouse gases: rather, the reductions were determined by what was considered to be politically possible in developed countries. By contrast, C&C would use the best scientific knowledge to set maximum safe levels of carbon dioxide emissions in the atmosphere (now estimated at 450 parts per million), and hence the maximum cumulative emissions.

While the date of convergence would be subject to agreement, the principle of equal rights for all would remove the potentially endless negotiations that would otherwise occur, with each country making a case that its contribution to global reductions should be modified in light of its special circumstances.

Another important element of the C&C proposal is the ability of countries to trade carbon-emissions rights. Countries unable to manage within their agreed shares would, subject

to verification and rules, be able to buy allocations of other countries or regions. Sales of these unused allocations, almost invariably by vendor countries in the Third World, would fund their development in sustainable, zero-emission ways. Developed countries, with high carbon-dioxide emissions, gain a mechanism to mitigate the expensive early retirement of their carbon capital stock, and benefit from the export markets for renewable technologies this restructuring would create.

The next step is for our government to adopt the principle of C&C, and to lead diplomatic efforts to establish it as the basis of future international agreement. The UK cannot act unilaterally. But this does not mean it cannot be in the vanguard. What would happen if it did? Or, put another way: how can a reducing emissions quota be shared out?

Based on the equity principle in C&C, the obvious answer is for a system of personal "carbon" rationing for the 50 per cent of energy that is used directly by individuals. Indeed, as part of a global agreement, per capita rationing would be the obvious mechanism for all countries.

The main features of this would be:

* Equal rations for all adults (and an appropriate fraction for children);

* Year-on-year reduction of the annual ration, signalled well in advance;

* Personal travel (including travel by air and public transport) and household energy use to be included;

* Tradeable rations between individuals; and

* A mandatory, not voluntary, arrangement, instituted by government.

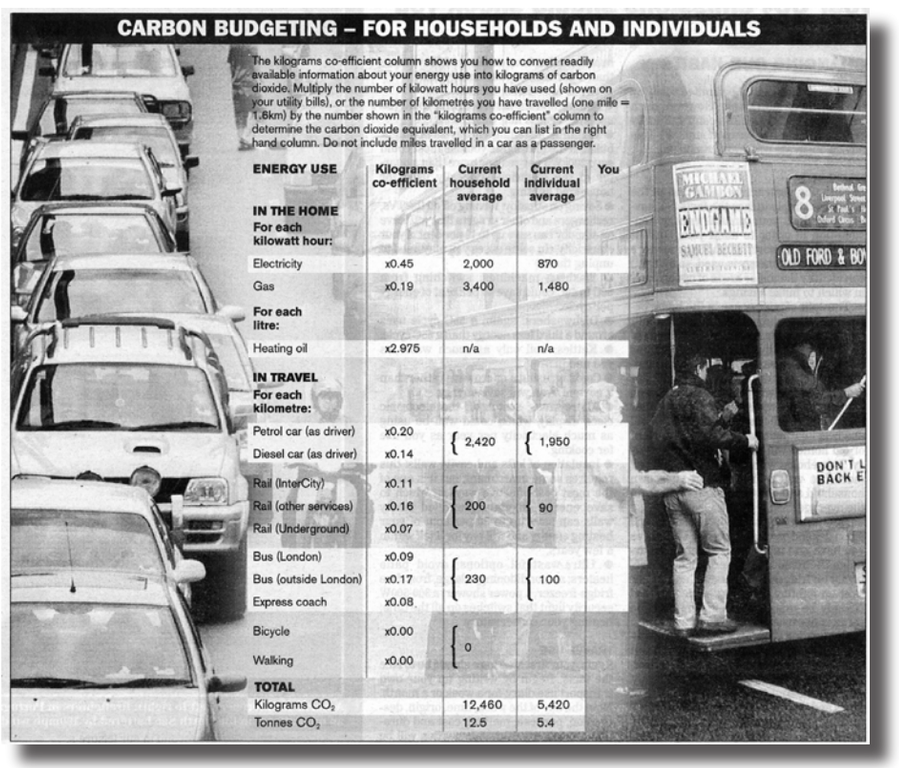
Clearly, giving people equal carbon rations - an equal "right to pollute", or an equal right to use the atmosphere - is equitable in theory and reflects the international equity principle in the C&C proposal. There may have to be some exceptions to this rule. However, in general, it will be better for society to invest in provision for the energy efficiency of "exceptional" cases so that they can live more easily within their ration, rather than to keep tinkering with the ration. The more exceptions granted, the lower will have to be the ration for the rest of the population.

The rations will have to decrease over time, in response to the need both to reduce emissions and to allow for a rise in population. Giving due warning of future ration reductions would allow people to adapt homes, transport and lifestyles at the least cost and in the least disruptive way to them individually. Experience has shown that industry has been able to produce more effici- ent equipment (fridges, washing

machines) at no extra cost if given time to adapt the design and manufacturing processes. The same is likely to be true of people adapting to low-energy, low-carbon lifestyles.

With personal travel and household energy use included, half of the energy-related emissions of carbon dioxide (CO2) in our economy is covered. The other half comes from the business, industry, commerce and public sectors, which produce the goods and services we all use.

In theory, it might be possible to manage this half by calculating the "embodied" emissions in each product or activity (such as all the emissions from the processes entailed in the production, transport and disposal of, say, stereo equipment, or cars) and give consumers a further allowance for buying products. But this would be very complex and data-intensive, as well as being very difficult to apply to some goods and services - how could you "carbon rate" a haircut, or a hospital stay? It would be much simpler to make the non-domestic sector directly responsible for reducing its share of CO2 emissions (for which a separate rationing scheme, on similar lines but not described in detail here, would be needed).



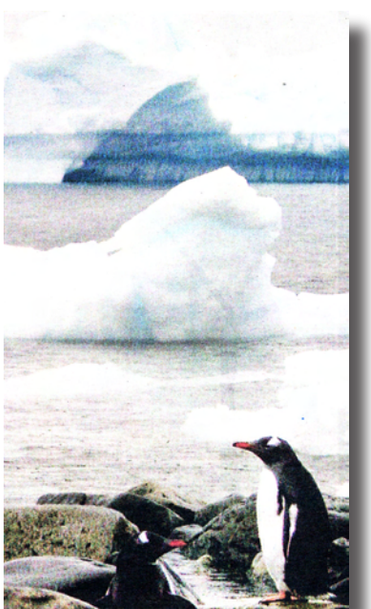
Not everyone will need to use their full carbon ration. Those who lead lives with lower energy requirements, and who invest in efficiency products and energy renewables, will have a surplus, which they can sell. Those who travel a lot, or live in very large or inefficient homes, will need to buy this surplus to permit them to continue with something like their usual lifestyle. Thus people will want to trade carbon rations.

Economic theory says that by allowing trading, any costs of adapting to a low-carbon economy will be minimised. Price would be determined by availability of the surplus set against the demand for it. For this purpose, a "white" market would be created, possibly via a government clearing "bank", or a version of the online auction system eBay (cBay?). There would be little chance for a "black" market to develop.

History suggests that appeals to reason and conscience have not been sufficiently effective in achieving major changes in our irresponsible patterns of behaviour and consumption. To be effective, therefore, carbon rationing would have to be mandatory. A voluntary approach would not succeed: the "free-rider" would have far too much to gain.

But managing carbon rationing should be simple. Each person would receive an electronic card containing that year's carbon credits. The card would have to be presented on purchase of energy or travel services, and the correct amount of credits would be deducted. The technologies and systems already in place for direct-debit systems and credit cards could be used.

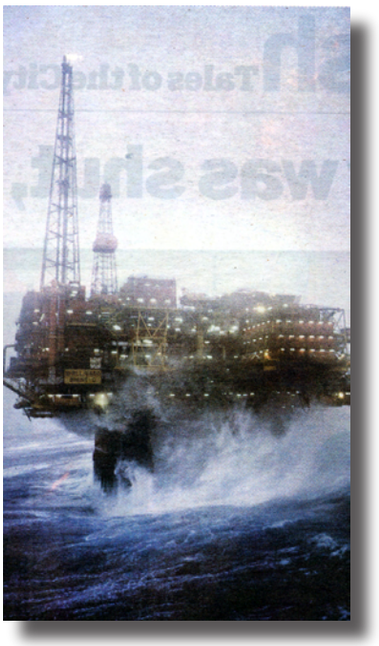
A number of social, technical and policy innovations would be needed to make it possible for people to live within their carbon allowances. On the technical side, these could include "smart meters" that inform people how much of their annual ration is left; which appliances are using most energy; and how much carbon could be saved by, for example, reducing the time spent in the shower, or by heating bedrooms only in the late evening. Alternatively, energy companies could install sophisticated carbon-management systems in houses, which take these decisions automatically and guarantee carbon savings. In terms of policy, equipment that uses less energy could be favoured through devices such as VAT, labelling, minimum standards and subsidy.



At present, the purchase of the most efficient types of equipment is encouraged, whether it be cars, refrigerators or washing machines. In future, the emphasis will be on items using the lowest amount of energy or with the lowest emissions, with much better information available at the point of purchase of everything that uses energy, from new and existing homes to televisions and mobile phones. It will thus be in the economic interest of manufacturers to supply goods that make the lowest use of carbon. Socially, one would envisage that attitudes would change so that thrift rather than profligacy in energy use and carbon emissions was increasingly preferred

There has been no recent experience of long-term rationing (other than by price) in the UK. The nearest comparison is the food rationing introduced in the Second World War, when the availability of food, clothing and other goods had to be reduced drastically. Despite difficulties, contemporary opinion polls showed that rationing and food control were, on the whole,

popular. Equity - the principle of a flat-rate ration for all - was a key feature of its introduction and maintenance and was widely accepted as the only fair approach, to which no one could reasonably object.



In the case of climate change, the principles of carbon rationing are far more straightforward than the quite complicated wartime system. But the benefits would be less immediately obvious. It is therefore particularly important that a cross-party consensus be achieved on the benefits of C&C and the adoption of carbon rationing. The future of the planet is too important an issue to be treated as a political football. It would be devastating if there were no common purpose, and instead political groupings vied with each other to obtain electoral support by making less demanding commitments on climate change in manifestos.

However, the likelihood of achieving such co-operation is by no means remote - it is just that a consensus has not yet been sought. None of the main UK parties has expressed reservations about either the significance of climate change or the need for serious, concerted action to limit its impacts. The challenge now is to convince politicians - and the electorate they represent - that the time for concerted action has arrived.

Carbon rationing is not a perfect solution. It will have its losers as well as its winners. Energy-intensive industries, such as motor manufacturing and international tourism (dependent as it increasingly is on flying, which is the most damaging of all human activities from a climate-change perspective), will no doubt object strongly to the concept of C&C. Its adoption will lead to a steady reduction in demand for their products and services, with consequent job losses. The future of international events attracting participants from across the world - whether for sporting, cultural, academic or business purposes - is, clearly, threatened. But such consequences cannot be considered a sufficient justification to reject what is so obviously the only assured solution to a planet-threatening problem.

The rationing system will bring rising environmental benefits in its wake, particularly in terms of the imperative of limiting damage from climate change, while spheres of the economy that are not energy-intensive - such as education, non-motorised travel, local shopping and leisure activities and domestic tourism - are likely to prosper. The important thing to remember is that this proposal is for a phased reduction, over a sufficiently long period to ease the transition towards ecologically sustainable patterns of activity.

And if a world with personal carbon rationing seems unacceptable, just imagine how much less acceptable would be a world in which effective action had not been taken to tackle

climate change. The point of departure must be that, if we do not make substantial alterations to our lifestyles, the problem of climate change will intensify.

Education will be vital to break the cycle of denial. The media, too, will have a role to play - although given the proportion of their income derived from advertising "high carbon" products and activities, they are unlikely to lead the way. Meanwhile, anyone who cares about our future wellbeing and that of the planet should not turn a blind eye to the likelihood that the consequences of inaction will be awesome.

For most readers, the notion of calculating one's own carbon-dioxide emissions will be an unfamiliar one. The tables are intended to aid the development of what might be called "carbon literacy" - a vital first step towards adopting energy-thrifty lifestyles. The concept is not very different from the familiar idea of a household budget in which we manage our expenditure so that we do not run into debt. We must now learn to apply the same kind of simple management skills to energy-dependent aspects of our lives - at home, at work, in our travel and in our leisure activities.

There are three stages to the process: first, to calculate the carbon emissions from the energy we currently use; second, to calculate how much we can actually be allowed; and third, to work out how best to make the necessary transition from our current emissions to sustainable emissions.

CURRENT HABITS

DIRECT HOUSEHOLD ENERGY USE

Most of the energy used in households is gas and electricity. In each case, your usage will be indicated on your bill, in kWh (kilowatt hours). To calculate your carbon dioxide emissions, multiply your annual consumption of electricity in kWh by 0.45; and multiply your annual consumption of gas in kWh by 0.19. This will establish your emissions from these sources in kilograms of CO2. (For heating oil, the multiplier is 2.975.) Finally, you should divide each total by the number of people in your household to give you your individual emissions.

TRAVEL USE

First, estimate the annual distance you travel, in kilometres, for each method of transport: car, rail, bus, bicycle, air, etc. The table shows all the options. For car travel, discount journeys in which you were not the driver (to convert miles into kilometres, multiply the miles by 1.6). Next, multiply each annual total by the "kilograms co-efficient" shown in the table. You can make this calculation both for yourself as an individual and, if you like, for your household.

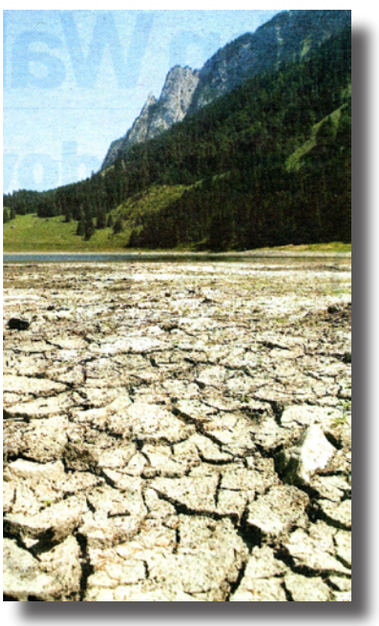
When you have added up all your major sources of personal CO2 emissions shown in the table, you will know your approximate annual emissions from direct energy use. Compare

this with the current British individual average of 5.4 tonnes CO2 to see how you are doing. However, remember that about half the energy in the UK economy is used by the industrial, commercial, agricultural and public sectors to provide our goods and services. So, your total should actually be doubled to cover your share of these non-domestic sectors of fuel consumption. For the projections in the rest of this article, however, we will focus simply on your domestic consumption.

SUSTAINABLE USE

* The UK government's 60 per cent reduction target for 2050 would stabilise carbon concentrations at 550 parts per million (ppm). A more realistic view, in the light of current scientific knowledge, is that the maximum concentration in the atmosphere that should be considered safe is 450ppm. The table shows the degree of reduction required for both targets. Either will require substantial changes in our lifestyles.

Compared with expected average emissions figures for 2005, the 550ppm scenario requires a personal reduction of 63 per cent by 2050, and the 450ppm scenario requires an 80 per cent reduction by 2050. In both these scenarios, the ration shown would be equal for everyone in the world by 2050. For the 450ppm scenario, which requires a faster rate of change, the ration would be equal by 2030.



The figures in our tables, including the total you have calculated of your own emissions - should shock you. Under the 450ppm scenario, a single return flight from London to Athens would exceed your entire personal carbon ration for the year in 2030. Even on the less rigorous 550ppm scenario, your annual ration in 2030 would not be enough to cover a return flight from London to New York.

Yet there is no need to despair. Energy-use patterns have changed considerably in recent decades. Energy used for personal travel has almost doubled since 1970. Under the 450ppm scenario, CO2 emissions from personal travel would have to halve over the next 20 years. If a significant reduction in motorised travel is made in parallel with energy efficiency and low-carbon technologies, this will not represent a much greater rate of change in mobility than the UK has already experienced in recent memory - it will just be moving in a different direction. The change isn't going to be easy, but it is not unrealistic.

CHANGING OUR HABITS

Climate change cannot be limited solely by the actions of individuals. However, each individual needs to make a contribution by reducing his or her "carbon impact". This advice suggests ways you can do so.

HOME USE

As with any destructive habit, part of the answer is simply to face the facts. So, having looked at your annual energy consumption in order to audit your current emissions, it is worth considering in more detail how that energy is used, so that you can identify the major areas of opportunity in which to make savings.

The split of energy use in the home between heating and hot water depends very much on your house and style of life. For gas central-heating, the average split has been estimated as: 70 per cent space heating; 28 per cent water heating; and 2 per cent for cooking with gas. This split between heating and hot water also applies to other fuels. A more efficient or newer house will use less heating energy; large, inefficient or old homes will use more heating energy; households with more people will use more hot water. Think about your own household and how you might differ from the average.

How electricity is used in your home will again depend on what lights and appliances you have and how you use them. The average UK home uses 24 per cent of its electricity on fridges and freezers, and 24 per cent on lighting. Lighting can easily and cheaply be made more efficient, but the same is not true of fridges and freezers.

But heating is where we are most wasteful. Many people can make very significant savings simply by learning to use their heating and hot-water systems more efficiently. Are you making the best possible use of times and thermostats? Are there minor adjustments you could make to be less profligate with heat? Simply switching off your heating half an hour earlier could save more than 5 per cent of your energy bill.

Areas to consider include:

* Bathing and showering options: could you use less, or less hot, water?)
* Lighting: installing energy-saving light bulbs in the four lights you use most could save 200kWh per year, or more than a quarter of the electricity typically used for household lighting.
* Saving on standby: turning off all the TVs, rechargers and other gadgets that you leave on standby can save up to 10 per cent of your electricity. (In some cases you may need to unplug them.)
* Washing machines: switching from 60C to 40C could save 40 per cent of energy per cycle.
* Dishwashers: again, a 55C cycle uses around a third less energy than a 65C cycle.
* Kettles: boil only as much water as you need.
* Cooking: using a microwave rather than a normal oven will save energy.

* Microwaves: switch off the electronic clock display, which could well be using as much electricity per year as you use for cooking.

* Insulation of lofts and cavity walls: this requires some investment, but it is one of the most cost-effective ways in which to save energy. Insulating unfilled cavity walls can save up to 30 per cent of your heating energy and will pay for itself within a few years.

* Ultra-wasteful options: avoid patio heaters; air conditioning; a large, frost-free fridge-freezer; a power shower; a 300-500W security light that switches on all the time; heating your conservatory.

TRAVEL USE

Again, your first step here should be to face the facts. Begin by writing up your own transport use diary, for a week or a month. Note the day of the week, time, origin, destination, purpose, method, cost and duration of each trip. This information will be critical in helping you to prioritise changes in your patterns of travel.

Having understood your patterns, you may find it easier to see ways of making them less carbon-expensive. Flying needs to be drastically reduced: it is not only the most damaging means of travel per mile but is also associated with the longest journeys, and thus adds both considerably and disproportionately to climate change

Other changes might include walking and cycling for local trips; using more buses; combining several purposes in one journey; or simply cutting out less essential long-distance car and rail journeys.

It is also possible to reduce your own carbon emissions when you do travel by car. Government advice includes:

* Plan ahead: choose uncongested routes, combine trips, share cars.

* Cold starts: drive off as soon as possible after starting.

* Drive smoothly and efficiently: avoid harsh acceleration and heavy braking.

* Travel at slower speeds: driving at 70mph uses 30 per cent more fuel than driving at 50mph.

* Use higher gears.

* Switch off the engine when stationary.

* Don’t carry unnecessary weight.

* Use air conditioning sparingly.

GENERAL USE

Individuals are also responsible for, and can control, their indirect energy use as consumers. Modifications to consider include:

* Buy food and drink that has not been transported over long distances. Where possible, buy local, or at least British, produce.

* Choose more seasonal food, which is less likely to have been grown abroad or in heated greenhouses in the UK.

* Buy recycled products, or those with a high recycled content.

* Buy products that are recyclable, and whose packaging can be recycled.

ESTIMATED CARBON RATIONS – FROM 2005 TO 2050

The table shows projected rations under two different reduction scenarios: the official one and the recommended one. In each case, the figure shown is for all energy use, with individual energy use in brackets. The current figures for average carbon emissions per person in the UK are 10.4 tonnes per year (all energy use) and 5.2 tonnes per year (personal use).

Future carbon rations per person
tonnes of CO_2

	Government proposal (550 parts per million, convergence by 2050)	Author's recommended proposal (450 parts per million, convergence by 2030)
2005	10.4 (5.2)	10.4 (5.2)
2010	9.6 (4.8)	8.9 (4.5)
2020	8.2 (4.1)	6.0 (3.8)
2030	6.8 (3.4)	3.0 (1.5)
2040	5.3 (2.7)	2.6 (1.3)
2050	3.9 (2.0)	2.1 (1.1)

But they run counter to current trends in society, and require thought and commitment. The challenge facing us is to invest that thought and commitment today, while there is still time. It is all too clear that we cannot go on as we are now, paying little more than lip service to this most critical of issues.

If we in the developed world do not agree to substantially restrict our own carbon dioxide emissions, there are only two possible outcomes. Either we will witness and bear the costs of an inevitable and devastating intensification for future generations of the problems caused by climate change - as well as the burden on our consciences. Or poorer people, mainly in developing countries, will have to be prevented from having their fair share of the fossil fuels required to maintain even a basic standard of living. Burying our heads in the sand on this topic to avoid facing reality cannot continue.

Responsibility lies with government to take the lead in international negotiations for the urgent adoption of the contraction and convergence framework, and for the early introduction of an equal per capita annual carbon ration.

We have to choose a better future.

Dr Mayer Hillman is Senior Fellow Emeritus at the Policy Studies Institute. This article is an edited extract from 'How We Can Save the Planet', by Mayer Hillman, with Tina Fawcett (Penguin, £7.99)

JUNE

Charles Kennedy, Tony Blair
Priminister's Question Time

Kennedy:

"On Monday you acknowledged that you have got little expectation that this US Government is going to sign-up to the Kyoto treaty in terms of climate change. This further emphasises the need for Europe to be seen to be taking a lead,"

"Will you commit the Government to join with France, Sweden, Holland and Denmark, in pressing the principle of contraction and convergence as the fairest way forward in controlling greenhouse gas emissions?"

Blair:

"We're already working very strongly with the EU in order to make the case for a reduction in greenhouse gas emissions. Indeed, this Government has been leading the way. In fact, the Kyoto treaty in many ways would not have been negotiated but for the negotiating skill of the Deputy Prime Minister (John Prescott).

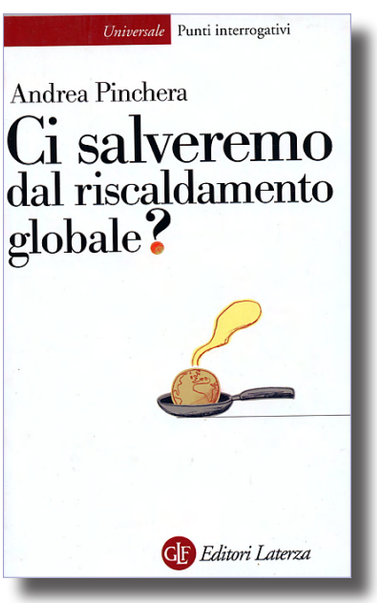
"In the end what is important, as well as those measures you mentioned, is the investment in science and technology and energy efficiency which give us the best chance in the long term of combining economic growth and a reduction in greenhouse gas emissions."

JULY

Andrea Pinchera
Ci salveremo dal riscaldamento globale?

Publisher; Gius. Laterza & Figli

ISBN: 8842072869



JULY 5

Dr Rowan Williams, The Archbishop of Canterbury,

"The prime minister has already declared

that his international priorities for 2005 will include climate change and the future of Africa; contraction and convergence addresses both of these. It seems the moment to look for a new level of public seriousness about environmental issues."

"This kind of thinking appears utopian only if we refuse to contemplate the alternatives honestly."

http://www.gci.org.uk/speeches/Williams.pdf

http://www.guardian.co.uk/uk_news/story/0,3604,1254684,00.html

http://news.bbc.co.uk/1/hi/sci/tech/3866543.stm

JULY 25

Benfield Hazard Research Centre
Climate Change - Evidence - Reality/ Recovery?

from the Executive Summary

Looking ahead, however, any serious attempt to tackle the climate change issue is likely to involve the contraction and convergence model.

http://www.gci.org.uk/articles/Benfield_Hazard_CandC.pdf

JULY 7

DTQs

Colin Challen Introduced his Domestic Tradable Quota Bill in the UK House of Commons on the 7th of July 2004.

"Emissions trading schemes generally work partly on the principle of what is known as contraction and convergence—we set a target to reduce or contract our emissions each year, and eventually our emissions are no greater than anybody else's. The concept of convergence means that we have a right to use only our fair share of carbon-emitting resources."

http://www.publications.parliament.uk/pa/cm200304/cmhansrd/cm040707/debtext/40707-04.htm

JULY 15

Early Day Motion [EDM] 1529
The Archbishop of Canterbury's Views on Contraction & Convergence

Chaytor/David

"That this House welcomes the Archbishop of Canterbury's call for the Government to take the lead internationally in pressing for contraction and convergence of greenhouse gas emissions as the underlying principle of its policy on the Kyoto Protocol during the Prime Minister's chairmanship of the G8 and presidency of the European Union in 2005."

So far signed by . . . .

Labour Party

Barnes/Harry	Best/Harold	Burden/Richard
Caton/Martin	Chaytor/David	Colman/Tony
Corbyn/Jeremy	Dean/Janet	Dobbin/Jim
Drew/David	Edwards/Huw	Flynn/Paul
Gibson/Ian	Griffiths/Win	Jenkins/Brian
Jones/Lynne	Lewis/Terry	Marris/Rob
McNamara/Kevin	Morgan/Julie	Prentice/Gordon
Simpson/Alan	Turner/Dennis	Vis/Rudi
Williams/Betty		

Conservative Party

Bottomley/Peter

Liberal Democrats

Breed/Colin	George/Andrew	Hancock/Mike
Jones/Nigel	Stunell/Andrew	Tyler/Paul

Plaid Cymru

Thomas/Simon

Ulster Unionist Party

Smyth/Martin

http://edm.ais.co.uk/weblink/html/motion.html/ref=1529

JULY 28

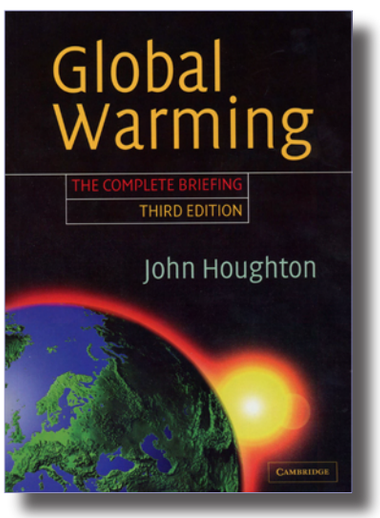
BBC News Online
ARE THERE ALTERNATIVES?

One approach gaining increasing support is based on the principle that an equal quota of greenhouse gas emissions should be allocated for every person on the planet.

The proposal, dubbed "contraction and convergence", states that rich countries should "contract" their emissions with the aim that global emissions "converge" at equal levels based on the amount of pollution scientists think the planet can take.

Although many commentators say it is not realistic, its supporters include the United Nations Environment Programme and the European Parliament.

http://news.bbc.co.uk/1/hi/sci/tech/3927813.stm



AUGUST

Sir John Houghton
Global Warming
The Complete Briefing - 3rd Edition

Publisher; Cambridge University Press, ISBN: 0521817625

The 'Contraction and Convergence' proposal addresses all of the four principles mentioned above. In particular, through its equal per capita sharing arrangements it addresses head-on the question of international equity - and the proposed trading arrangements ensure that the greatest 'polluters' pay. Its simple and appealing logic means that it is a strong candidate for providing a long-term solution.

http://www.gci.org.uk/books/Houghton_Book_C&C.pdf

AUGUST

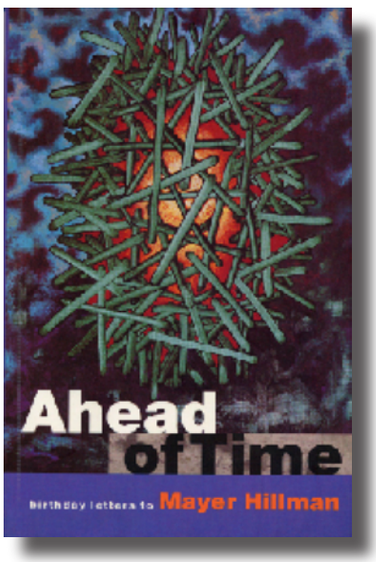
TIEMPO Magazine
Aubrey Meyer & Raphael Hanmbock

"The UNFCCC set out to defend the planet against the devastating uneconomic growth of the rich. The Kyoto Protocol reversed this trend in favour of those whose interests are vested in this growth at the expense of the poor and the planet." "Former consultants to the Small Island States now broker emission permits under the Protocol, while the homes of their former island clients are made uninhabitable by the rising seas." "Former climate action radicals, who denounced the original Kyoto Protocol at its birth in 1997 as a 'tragedy and farce', now defend its horse-trading and weakened revisions as a basis on which to continue to the Kyoto Protocol's second commitment period."

http://www.gci.org.uk/articles/TIEMPOlayout.pdf

2021

30 OCTOBER 2021



Ahead of Time
From Ian Christie

Publisher: Policy Studies Institute ISBN: 0853747873

Few prophetic voices with uncomfortable things to say are given a welcome by the public and the policy-makers. So it proved for Hillman in the 1990s, confronted by governments unsympathetic to his arguments. At the time, he was especially preoccupied by the dangers of climate change from global warming, arguing strongly for far more radical measures to curb greenhouse gas emissions than policy makers were prepared to contemplate.

Hillman made two particularly unwelcome proposals. First, that we should begin to establish carbon allowances on a per capita basis, to promote more sustainable consumption of fossil fuels in an equitable fashion nationally and worldwide. Second, that airlines should be taxed for the first time to reflect the environmental damage done by airliners' emissions, and especially to take account of their contribution to greenhouse gases and global warming. Typical reactions to these proposals were that Hillman and others like him were 'Jeremiahs', systematically exaggerating the risks and obsessed with a hairshirt approach to life, yearning for the chance to issue everyone with ration books for their carbon allowances. He was also written off by many as someone peddling naive ideas that could never be politically feasible.

In this, of course, Hillman's critics were mistaken, as we know now. It is one of the great satisfactions of reading his book that one notes the many reforms that have been adopted over the last 20 years which have their roots in ideas which Mayer developed and promoted. Of course, many others have taken them up and refined them, and perhaps few policy makers know how much they owe to thinkers and researchers such as Hillman, but it is nonetheless a pleasure to consider how influential he has ultimately proved to be. And one suspects that on his 70th birth- day 20 years ago, Hillman himself would have had few expectations that the world would have changed so much in the directions he had advocated for so long.

The most obvious change has been the worldwide response to the evidence of climate disruption caused by greenhouse gas emissions. Young readers, used to the system of carbon allowances and global emissions trading, find it hard to imagine

a world in which these did not exist and were the subject of furious debate. But of course it took an emergency to bring these systems into being, and to bring people such as Mayer Hillman and Aubrey Meyer, the founder of the Contraction and Convergence Plan now in use around the world, to the attention of policy makers.

The warning signs of climate change were apparent in the 1990s, but were largely ignored, especially in the USA. The great storms and floods of 2000-2001 in Britain played a significant role in raising public awareness of the risks of climate disruption, but even then Hillman and Meyer's pamphlet of 2003 on carbon allowances, emissions trading and airline taxes was disregarded by politicians fearful of the electoral consequences of radical policies to manage demand for fossil fuel use, especially in transport. Memories of the fuel crises of autumn 2000 and the 'motorists' revolt' in 2002 were too strong.

It was not until the Great Storm of 2005 in north-west Europe, and the near-simultaneous catastrophic floods along the eastern seaboard of the USA, that public opinion and political attitudes began to change rapidly. The Emergency Earth Summit of 2006 put in place the Contraction and Convergence Plan, which was ratified across the planet by 2010.

Of course, the action came too late to prevent major climate disruption, and we are living with the consequences now - the spread of tropical diseases in the North, the prospect of huge migrations from flooded coastal cities in the South, and the likelihood of extinction for so many species unable to adapt to warming and loss of habitats. But the signs are that we did act in time to avert truly calamitous climate change by mid-century.

30 OCTOBER 2021

Ahead of Time
From Aubrey Meyer

Dear Mayer,

We met all those years ago in the early 1990s. You were already a veteran of thinking and campaigning about what was then known as 'sustainable development'. I was just a middle-aged musician in the first throes of the deep anxiety that a new awareness of these issues had unleashed in me.

With three friends from the UK Green Party I had just formed the Global Commons Institute, or GCI. With a focus of human-induced global warming and climate change, our global mission was summed up simply as 'equity and survival'. International agreement to reduce the emissions of the greenhouse gases causing climate change was obviously needed. GCI took the simple position that the international sharing of this task would have to be based on recognising the principles of precaution and equity, or fair sharing under limits. This is

what we subsequently came to develop as a call to the UN for international emissions 'Contraction and Convergence', effectively a deliberate convergence on equality per head of the emissions shares of the rich and the poor.

Demonstrating your own effort to avoiding emissions from motorised transport, you had cycled across north London to my small flat so we could talk about these concerns. The journey from your home in Hampstead to Willesden was mostly downhill. You obviously knew this and therefore that the journey home was going to be uphill. You didn't appear to mind this in the least.

Perhaps it was allegorical. After a moment's downhill, it was refreshingly easy for us to find common cause in our concerns. And afterwards - in fact ever since - it has been difficult really for all of us to go home. This is because we knew that it would be an uphill struggle to persuade people that this sharing under limits, or global equity, had to be locally, but also widely, accepted as normal and necessary for global survival.

In those days 'efficiency' was the dominant culture at court. Mammon - in a large car - was effecting a hostile takeover in a universe of infinite economic expansion. The gods of Casino- Capitalism had become Cosmos, and Communism was disgraced in the ashes of 'evil empires' and other such dragons that had been slain at 'the end of history'. The beasts of growth and greed had slaughtered the God of fair play. Equity was dead and efficiency triumphant. Do you remember all that?

What was and has remained vivid for me all the years since then was that the ethic of equity and survival was obviously already quite 'normal' for you. And while I was only to discover later that you had been frequently punished for thinking this way and would be more, at that moment in my life it was comforting to me that someone had arrived from the blue yonder of Hampstead on a bicycle with a commitment to this simple, decent, yet logical attitude.

It is now 30 years since that link and our friendship through it was made. What was true then has remained true to this day. I suspect it has been true through the ages. The way to salvation is hard to find and like a razor's edge. It takes self-understanding to find it and persistent courage to focus this effort on a constructive gentleness with other beings, as distractions and provocations to do otherwise are frequent and pervasive.

However, you had spotted that global climate change was uniquely forcing a dilemma on humanity that made the thesis of 'equity and survival' the logical imperative within which context the purely moral impulse resides. Unabated, climate change says that any ideological resistance to the moral impulse is subsumed by the negative expression of the thesis, in other words 'no equity, no survival'. Opponents of the thesis face the problem of being not so much 'not good' as 'not smart', as not to survive is to lose.

Those who demurred were often nothing more than sceptics who had presumed that any power for change is in the institutions of realpolitik, and that they - indeed we all - are condemned to behave as just spectators or fatalists, sometimes acting as well-paid experts and as consultants, groomed in a none-too-subtle form of obedience.

You were never one of these. 'Equity and survival' says that now, if there is any power for change, it is first and foremost in the institution of the argument itself and its proper understanding and advocacy. I have felt for all the time that I have known you that this point was what we fundamentally shared and that with you it was more strongly shared than with any of my other nearest long-time campaigning colleagues. The power of this insight is fundamental yet also dangerous. Power is always awesome because of the challenge it issues and the responsibility that it invites.

The simple logic of equity and survival has remained at the heart of what I long ago came to see as a basis for realising a politics beyond ideology. And armed with this argument, and the confidence derived from this recognition of its power, I believe that you and I, and all of us who argued this way, helped to shape the struggle for the necessary institutional changes more decisively than those with purely moral and/or merely technological preoccupations. This insight has helped to keep the iteration and development of the argument persistent, effective and responsive.

It has been the new neutrality. And now, after these 30 years, we can all see that the argument has decisively taken root in institutions of governance and social policy, that back in the 1990s were still captive to the ideological obedience of 'efficiency' and the loaded neutrality of laissez-faire. Sustainable development is now pursued in a way that is quite uncontroversially guided by a constitutional foundation of equity for survival. About this we can feel some sense of achievement.

Yet what Tony Blair, then prime minister, said back in the year 2000, sadly remains true to this day. All these changes recognised, humanity continues to create its problems faster than it solves them. In real terms our progress remains too slow and it is difficult to escape from a persistent feeling of failure. Our future is now really being determined by the ever more emergent and frightening reality of global climate changes, and effectively a global security crisis now exists because of this. The rise in atmospheric greenhouse gas concentrations and global temperature is still out of control because of uncontrolled pollution.

It is true that we have also known from the outset that no matter how rapidly we all made progress in the effort to institute the culture of equity and survival, and then the consequences of implementing 'Contraction and Convergence', changes for the better would never outpace the rate at which climate change- related damages unfolded during the final

decades of our lives. What we didn't know then was just how badly the odds were stacked against us in the battle to make the rates of change for the better overtake the rates of change for the worse. This was the precautionary point we had been urging all along. In the face of uncertainties about how fast humanity is approaching the zone where sudden and traumatic outcomes become possible, prevalent and even completely unavoidable, playing safe and not unnecessarily running risks should always have been the priority. And equity and survival said this. It showed from the outset that structuring for change among ourselves in concert - in a constitutional and comprehensive way - had to be preferable to having it forced upon us by indecision, adversity and adversarial chaos.

As you know, formal 'Contraction and Convergence' procedures on global emissions were finally instituted by the UN eight years ago. Subsequently, a context has evolved that has protected and reinforced the value of the numerous local initiatives emerging around the world on transport and other planning issues (the sorts of things you have also so persistently articulated and championed all your life). In the light of this I know it is a source of great satisfaction to you that not only has the global effort for resource conservation and sharing matured so visibly, but it has done so in such a way that the economic value of this conservation and sharing is recognised and rewarded as much as over-consumption is now discouraged and indeed penalised. For example, the agreement across Europe at the beginning of the last parliament to replace the tax and benefit system with citizen's income is probably the most radical transformation of social policy in the history of the European adventure. This is all quite amazing. One only has to remember how much of a status symbol large cars still were only ten years ago and to see how much of a stigma they are now, to recognise this. It seems that the work ethic is being superseded by the walk ethic and that perhaps we have not completely grown old in vain.

Yet in the last 20 years, because of the only partially retarded pollution of the atmosphere, humanity as a whole has added another 0.5°C temperature rise to the global average, 'Contraction and Convergence' notwithstanding. This is as much as humanity triggered in the previous 100 years. Conservation, sharing, global institutions of governance, enlightened social policy, high technology and the growing emergence of renewable and non- polluting sources of energy - welcome as all of these are - have not been able to prevent this rise in temperature. Extreme weather events and the damage resulting from these are still increasingly frequent and traumatic around the world.

This is a terrible legacy to leave to the children and grandchildren of today. Climate change will continue to worsen throughout their lives unless they are consistently more successful than we have been at slowing the rates of destruction and entropy in favour of overall ecological recovery

and renewal. This dilemma remains at the heart of the human destiny. Our descendants will need the honesty to recognise this and persistent skill, courage and invention to deal with it effectively. But most of all they will need an understanding that without real and sustained compassion, all our efforts and theirs will be dissipated as they become locked into irreversible decline. I'm not sure at all that, if they find this too, they will be able to claim that they learned it from us or from history. But then perhaps that really is the power of equity and survival. It is quite new.

All these years I have loved and admired you for having had the skill, the courage and the compassion to speak and act in its name.

Aubrey

30 OCTOBER 2021

Ahead of Time
From John Pinder

The colder light, of day I woke from that dream this morning, on your 90th birthday, in a Britain that has indeed been much influenced by your virtue. But the world has not been sufficiently influenced by mine: not only, perhaps, owing to unfavourable fortuna, in other words a tougher nut to crack, but also to my less incandescent virtue.

You expressed warm sympathy for the idea when I first consulted you about it and you put me in touch with the remark- able Aubrey Meyer and his Global Commons Institute, who introduced me to the concept of Contraction and Convergence: the steady reduction of emissions, over a period of perhaps a third of a century, at the end of which a sustainable level of global emissions would be shared among the world's states on the basis of an equal quantity per head of population. When I showed you a draft of my paper on a global community for sustainable development before its publication in 1999, however, your reaction was that the tone was not urgent enough, the cuts not deep enough, the pace proposed not fast enough: fire against the drip of water on the rock. But there has been progress. The global community is a major achievement of the EU's common external policy. The partnership with India is beneficient and strong. The US, China and other sceptical nations seem to be coming round. And your ideas have become part of the global intellectual concerns. PSI, replete with brilliant young researchers, now dwarfs the Brookings Institution in size and has a powerful influence on policy throughout the European Union and around the world.

There is light at the end of the tunnel; and you may see the world emerge from it before you celebrate your 100th birthday.

Yours, it really does begin to feel like ever

John Pinder