

What happens after Kyoto?

More of the same –or ‘contraction & convergence’

Barrister James Cameron and colleagues from the Foundation for International Environmental Law and Development (FIELD) helped negotiate the UN Framework Convention on Climate Change and the Kyoto Protocol on behalf of the Alliance of Small Island States (AOSIS). In this correspondence debate (2003), IPPR Energy Research Fellow Alex Evans, debates with him the thorny question of whether to try to continue with the ‘Kyoto approach’ for new commitments in international climate policy, or whether by contrast to use a radically different framework in future.

Kyoto can’t solve the problem

Dear James

Global climate policy ultimately consists of two deceptively simple questions. First, what is a safe level of greenhouse gas concentrations in the atmosphere, and the emissions path to get there? And second, who gets to emit what?

If they sound simple, I think we both know better – at least as far as experience to date suggests. Kyoto is no more than a very small first step. It will reduce industrialised countries’ emissions to no more than one or two per cent below 1990 levels and developing country emissions are not limited at all. As a result, according to the International Energy Agency, global emissions will rise by some 70 per cent during Kyoto’s lifespan. We have not even begun to address the objective of the 1992 UN Climate Convention: ‘stabilisation of green-house gas concentrations in the atmosphere at a level that would prevent dangerous anthropogenic interference with the climate system’.

Of course, the reason why Kyoto’s reductions are so modest is the second, vexed question of who gets to emit what. As a result of acute concerns about national competitiveness, negotiations over emissions allocations at Kyoto were a grand game of ‘beggar my neighbour’. The commitments agreed were, as a result, tiny. The EU would reduce their emissions by eight per cent below 1990 levels, the US by seven per cent and so on; Australia somehow managed to negotiate an allowed increase. particular rhyme or reason to the

commitments agreed, and certainly no clear correlation to the science or to the objective of stabilising concentrations.

This is even before we consider the question of developing country participation in quantified targets. Developing countries have consistently pointed to their far lower per capita emissions, their lower historical responsibility for climate change, and their greater exposure to the damages caused by global warming. Above all, they have been acutely sensitive to any perceived attempt to limit their room to grow their economies so that industrialised countries would 'pull the ladder up after them'. It's hard to disagree with this claim. As a result, Kyoto was built on the premise that developed countries should 'take a lead', with developing countries taking on targets of their own only once this had been demonstrated.

Politically, then, Kyoto makes some kind of sense. You would probably argue that it was the best that could be hoped for in the circumstances. You might be right. But it doesn't change the fact that concentrations continue to rise inexorably. We remain firmly on course for a climate disaster, Kyoto or no Kyoto. And there are no strong grounds for supposing that persisting with the Kyoto approach for future rounds of commitments will be any more productive. I want to argue that there's a better approach: the framework called 'Contraction and Convergence' (C&C) designed by the Global Commons Institute.

If we go back to first principles – those two questions I mentioned at the start of my letter – we can start to see where Kyoto went wrong. Fatally, negotiations on Kyoto began by asking, 'what does everyone think they can manage?' As a result, negotiations veered immediately into 'beggar my neighbour', and the cuts were inevitably haggled downwards. Only as an afterthought could the countries round the table work out what overall effect these commitments would have on global concentrations. In short, Kyoto put the cart before the horse. It started with 'who gets to emit what?' rather than 'what's the size of the emissions budget that we have to distribute?'

C&C, by contrast, would work the other way round. It begins not with what countries 'think they can manage', but with the more urgent need to sort out climate change. Consequently, the first step under C&C is for countries to agree a ceiling on atmospheric concentrations of greenhouse gases, such as 400 parts per million (ppm) of CO₂. It's a straightforward second step to work out a global 'emissions budget' that contracts over time in order to stay below

this ceiling. The concentration ceiling would be reviewable so that new scientific findings could be taken into account as they emerge.

Environmentally, this first step is indispensable: stabilisation will not happen by accident. It's also urgent. From a standing pre-industrial start of 280ppm, concentrations are today at 370ppm, and rising at more than a point a year. We are starting to see the obvious damages: droughts, floods, hurricanes and sea level rise and they are getting worse. The low-lying small island state of Tuvalu is already having to evacuate. But there are also the 'positive feedbacks' to worry about: the possibility of chain reactions that would put the problem beyond human control. The Met Office has already warned that tropical rainforests could die as a result of changed climatic conditions, hence releasing CO₂ as they decay rather than soaking it up as they do now.

We are creating this problem faster than we are solving it. By extension, we are still losing the battle. We have to get our act together now and agree globally what level of concentrations (and hence damages) we are prepared to tolerate.

This still leaves us with who gets to emit what. In particular, since a safe global emissions budget by definition entails quantified targets for developing countries, it means we have to devise a way of addressing developing countries' equity requirements. We must find, in other words, a way of effecting the global 'climate covenant' that the Prime Minister called for in his speech on the environment in February this year.

As I mentioned earlier, developing countries are acutely sensitive to retaining adequate room for their economies to grow. They also have much lower per capita emissions. These two facts are related. National emission levels are directly proportionate to countries' GDP, not their populations. The US, for instance, has about a quarter of the world's emissions with only four per cent of the population. Developing countries, in other words, emit less precisely because they are poor.

Developing countries will clearly not accept any 'grandfathered' distribution of tradable emission entitlements that allocates emission rights in proportion to current levels, and thus locks existing global inequalities into the creation of a new tradable asset worth trillions of dollars. Instead, developing countries have consistently called for emission rights to be distributed on a per capita

basis – most recently in the speech by Indian Prime Minister Atal Behari Vajpayee to the 2002 UN climate summit in Delhi.

Of course, an immediate per capita distribution at the outset would be just as impractical as the ‘grandfathered’ approach. There is no way that the US or other industrialised countries could adjust fast enough. So a compromise is needed. Under C&C, that compromise is gradual convergence. National emission entitlements would converge from their current GDP-proportionate levels to equal per capita levels by a date that would be agreed by all countries, such as 2040. In this way, developing countries have from the outset a constitutional guarantee of equitable allocations, and assurance as to when this would happen. More fundamentally, they also have room to grow their economies, but within a managed and environmentally sound framework.

Emissions trading would be encouraged as a clear win-win. Industrialised countries would have flexibility as to how they met their commitments, so reducing the costs of compliance by allowing emissions cuts to be made wherever cheapest. For their part, developing countries would be able to profit from their lower per capita emissions by selling surplus emissions permits. They would have a carrot as well as a stick, as well as a clear incentive to invest the proceeds of emissions sales in renewables and other clean technologies, since this would keep their emissions down and hence maximise their ability to sell emissions permits.

In short, C&C has all that Kyoto lacks. It meets the US requirement of developing country participation – without which there is no real possibility of US re-engagement, as both President Bush and the Senate have made abundantly clear – but in a way that meets developing countries’ equity concerns. More fundamentally, it has the environmental integrity so absent from Kyoto, in that it is specifically designed to stay below a safe concentration level for green-house gases in the atmosphere. Most importantly, it offers a framework that reduces rather than increases complexity, and so offers a negotiators a chance of actually reaching agreement on how to share out emissions entitlements.

It’s sometimes argued that C&C is a nice idea, but politically unrealistic. In fact, the problem we have is that Kyoto is environmentally unrealistic. Politics is infinitely malleable. The same is not true of the atmosphere. Either we forge a global deal predicated explicitly on staying within natural limits, or by default we exceed them – at our peril. Once we take the indispensable step of defining

a finite, contracting global emissions budget, convergence becomes the inevitable political corollary. How else are we going to obtain global agreement on how to distribute the entitlements?

Alex

Dear Alex

Despite agreeing with much of your analysis and the sentiment which lies behind your prescription, I take a different view on how the Kyoto protocol regime should develop beyond the first commitment period. Before I set out that view, let me do two things: declare interests and display how much I agree with you.

We helped to build up the Alliance of Small Island States (AOSIS), which at one stage comprised 43 governments. It was an alliance of developing country governments most vulnerable to the physical consequences of climate change and least able to respond with economic or political power. Their best hope was to contribute skilfully to designing a multi-lateral legal system where they could use law to protect their interests. An effective international treaty on climate change provided the best protection to these states but at the same time, the successful representation of their interests would ensure an effective treaty regime. It was AOSIS who pushed for the inclusion of the precautionary principle, who argued for the toughest reduction targets, who supported the strongest form of policies and measures, who raised questions of insurance and liability, argued for tough compliance regimes and a more powerful dispute settlement mechanism. It was also AOSIS who tabled a fully worked out international agreement on climate change on day one of the negotiations at Chantilly in Virginia in 1990. They were the conscience of the negotiating community and they did very well to make the regime as good as it is.

Throughout those many years of negotiating and indeed attending as an observer delegate, I have been lobbied with the contraction and convergence framework. I admire the motivation and tremendous analytical effort of the Global Commons Institute but I found it impossible to incorporate the contraction and convergence framework in these negotiations. There was no place to start. I could not begin a negotiating argument because I knew that it would take too long to agree the ground rules before we began.

I say this as an unabashed idealist. I want no part of a realist argument that says that states only act in their discreet self-interest and therefore could not contemplate the equity element of contraction and convergence but, as I will explain, I do not want to spend energy negotiating the contraction and convergence model for the second commitment period.

Negotiators can be too precious about the texts that they feel a part of. We do not own the words or their interpretation and we should not cling too much to a structure that may be unstable and deserving of replacement by something more robust. We know it's not perfect, but it's the best we could do. Kyoto is itself inadequate to deal with the severity of the climate change problem and is only a gesture in the right direction of the objectives set out in Article 2 of the original convention. We know that the targets are the result of brute, table thumping politics –hence John Prescott's success in that regard– and not some sophisticated allocation of property rights based on principle and scientific data. It was simply the best that could be done at the time. The deliberate ambiguities make it frustrating to apply but it set a direction, maintained policy momentum and for the first time, got into the heart of every economy through the relationship between climate change and energy policy. It is already a success even before it is ratified because it has inspired significant domestic action and has led directly to the suite of policies adopted by the European Union, most notably the EU Emissions Allowance Trading Scheme.

So I agree that the negotiations at Kyoto revolved too much around the question 'what does everyone think they can manage?' I also agree that there is or ought to be a sense of urgency and that any allocation of artificial scarcity which is the creation of a legal regime of constraint should be done rationally. I simply cannot see that we would respond to the urgency with a greater speed and effectiveness if we attempted to negotiate on the basis of the contraction and convergence model. In fact, I think it would take us longer. It would provide more scope for impossible to resolve conflicts over fairness and distributive justice. It would ensure that the United States of America would continue to stay outside the negotiations even with a change of government. It would weaken the resolve of many of the northern European governments and therefore throw the others into a state of anxiety which would make them less prepared to set about constraining the emissions of their most significant industrial sectors now.

Let me take you back to the introductory paragraph of your letter. I contest your choice of 'deceptively simple questions'. I think the key question is connected to the objective (Article 2) of the UN Framework Convention on Climate Change. The entire regime is designed to meet that objective –the stabilisation of greenhouse gas concentrations in the atmosphere at levels which are safe. This regime, as opposed to others more directly attuned to equity, social justice and access to resources, is dedicated to resolving the question 'how do we get there?' This is more important than who gets us there. Fairness is a strategy, a working ethic, not an objective.

Put another way, a manifestly unfair regime is more likely to fail. It is less likely to attract the huge range of interests that are required to deal with a global problem of such complexity and scale that ultimately, every human is implicated in the problem and can contribute to a solution. 'Ultimately' is obviously a key word there given that for large swathes of the planet, there is no capacity to make the slightest difference to the resolution of the problem. I might go further and say that even in the developed world, individual action is so peripheral to the resolution of the climate change problem that all one really should be concerned with is how governments can construct the best regulatory frameworks to increase the chances producing solutions together as fast as we created the problem when we launched the fossil fuel economy.

So the first motivation is not to worry about who gets what to emit but how do we encourage, incentivise, coerce, and compel the principal economic actors of international society to supply our basic needs for energy, power and materials in a way which addresses the risk of unsafe climatic change. Emissions trading based on allocations of scarcity is one method and must begin with the negotiation of assigned amounts before trading is possible. We have done that. It is crude, simplistic and inadequate but it is easier and therefore quicker to improve that system than to replace it with a different one before the second commitment period. We do not need new principles. We need tougher targets on the Annex I (developed) countries and a process for gradually extending obligations to reduce to the industrialised developing world.

The Kyoto protocol also created other flexible mechanisms including the Clean Development Mechanism which I spent a good deal of time working on, on behalf of AOSIS and in furtherance of their interests, and despite much tinkering and undermining of the basic principles of Article 12, it remains

available as a device to encourage investment in the south from the north in ways that increase solidarity between north and south, provide new technology and deliver sustainable development on an equitable basis. It is a manifestly fair bargain.

I suggest that we take the Article 12 model and develop it to enable countries to make the transition from no obligations outside Annex I to phased-in obligations. We seem to agree on the value of emissions trading. Base line and credit devices for incentivising the more industrialised developing countries to join the Annex I countries in accepting targets for reductions over the second commitment period is a sensible complimentary policy if the reduction targets get much tougher in the second commitment period. The CDM will only deliver on its bargain if there is volume. Volume will only occur if there is real constraint on the major emitters and in due course, these will include countries within the G77 (developing country) block.

In my experience, nothing ever happens of any merit in these negotiations until such time as established negotiating blocks fracture. The G77 is capable of gross hypocrisy, irrelevant rhetoric and the most obscene demonstrations of big country versus small country bullying. The developing countries have many and diverse interests and they act with one voice occasionally in order to block progress in negotiations and occasionally to register important points of principle but on balance, they are no more pure than any other inter-governmental coalition of convenience. The hard facts of climate change, the inevitable economic consequences of transitioning from various types of energy and power development and the unequal distribution of capital ensure that there will be winners and losers within every political block.

The contraction and convergence idea is a useful intellectual challenge to the complacency that arises when governments attempt to deal with issues of complexity with familiar methods or perhaps by borrowing too easily from realist notions of calibrating self-interest. We are better off making the existing system better with all its flaws than by attempting to run the contraction and convergence debate to a logical conclusion and thereafter designing a system around it. If we can design policy driven markets for the technological solutions to climate change and if we can realign incentives for investment from both public and private sectors so that they are consistent with the objective of the framework convention, it does not matter where the emission reductions come from, and we will have succeeded. James “[Kyoto] is crude, simplistic and

inadequate but it is easier...to improve that system than to replace it with a different one before the second commitment period”

James

The stakes are too high to wait for political palliatives

Dear James

Let's assume for the moment that we do play it your way on the question of future climate commitments – ‘tougher targets on Annex I and a process for gradually extending obligations to reduce to the industrialised developing world’. If I may, I'd like to press you a little on what the prospects would be for following this approach. Specifically, I want to ask you four questions, which I believe show that Kyoto cannot work (either environmentally or politically) whilst Contraction & Convergence can. First of all, what are the prospects for American re-engagement under a continuation of the Kyoto approach? President Bush has made it abundantly clear that the US won't take on a quantified target unless developing countries do too. So has the Senate, which in 1997 passed just such a resolution by 97 votes to zero. (As a result, we would gain no solace from a Democrat Administration: the treaty would still not be ratified.) Contraction & Convergence (C&C) has full developing country participation from the outset and can hence give the US what it says it wants. Kyoto does not. Secondly, why would ‘tougher targets’ suddenly be any more palatable to the other industrialised countries than they were at Kyoto in 1997? It would still be a game of beggar my neighbour in which every country had a clear incentive to dilute the targets as a result of concerns about competitive-ness. The prospects for success would be very much higher if negotiators were instead starting out by determining a safe global emissions budget – something that all countries have an equal stake in, irrespective of competitiveness – and only then turning to the question of how to share it out. And third, how would you propose to get the ‘industrialised developing world’ onboard with this approach? In his speech to the last UN climate summit, Indian Prime Minister Atal Behari Vajpayee was clear that ‘climate change mitigation will bring additional strain to the already fragile economies of the developing countries and will affect our efforts to achieve higher growth rates to eradicate poverty speedily’. He was, however, open to one particular

approach to setting targets: 'we do not believe that the ethos of democracy can support any norm other than equal per capita rights to global resources'. I've already said that Kyoto is environmentally unrealistic. For the reasons set out above, I believe it to be politically unrealistic too. It's clear that the US are not about to undergo some sort of Damascene conversion on Kyoto and take on targets with-out developing countries doing the same. And it's also clear that developing countries won't participate in targets unless there's a guarantee of equal per capita entitlements by a future date. So if not Contraction & Convergence, then what? In your letter, you observed that 'we do not need new principles'. I agree. I want us to start applying the existing ones – pre-caution and equity. Above all, I want us to apply the 1992 Climate Convention's principle that the whole point of global climate policy is to stabilise concentrations of green-house gases in the atmosphere. This leads me to my last question. In your letter, you argue that Kyoto is consistent with stabilising concentrations, in that (more than other approaches) it is dedicated to resolving the question, 'how do we get here?'. Fair enough. So in that case, what is the level at which concentrations will stabilise under a continuation of the Kyoto system? We both know that you have no way of answering that question. Under Kyoto, more than half the world is left out of any sort of targets for their emissions. As a result, there is absolutely no way of knowing where total global emissions will end up; consequently, neither is there any way what so ever of forecasting whether concentrations will stabilise at all, much less what the level would be if (by some sort of lucky accident) they did stabilise. With Contraction & Convergence, on the other hand, the answer to this final question is straightforward. The stabilisation level is, very simply, whatever the world decides that it will be. This is because under C&C, choosing that level is the very first step that negotiators are asked to take. Goethe once said: 'Until one is committed, there is hesitancy, the chance to drawback, always ineffectiveness. Concerning all acts of initiative (and creation) there is one elementary truth the ignorance of which kills countless ideas and splendid plans: that the moment one definitely commits oneself, then providence moves too. All sorts of things occur to help one that would never otherwise have occurred. A whole stream of events issues from the decision, raising in one's favour all manner of unforeseen incidents and meetings and material assistance, which no man could have dreamed would have come his way. What-ever you can do or dream you can, begin it. Boldness has genius, power

and magic in it. Begin it now.' To be sure, defining a global ceiling for greenhouse gas concentrations would be a big step to take. It would imply setting up a policy framework to deliver it that would need to last for decades – far longer than most of the current, incremental, and too often ineffective multilateral environmental agreements. And it would entail admitting for the first time that hitting limits to consumption means that we must find a way of sharing out limited resources fairly. But in the light of the stakes that we face and the manifest failure of Kyoto to make progress towards stabilising concentrations, what is the realistic alternative?

Alex

Maintaining momentum is the key

Dear Alex

Firstly, great Goethe quote. So good I think I will use it. We have actually begun: with the FCCC. That was the best argument for adopting it - a bold beginning.

But let's pause to reconsider the nature of the problem and the response we have already made. We have a threat of catastrophe which is not immediate and whose causes are diffuse. Because of the carbon content of our energy economy and its contribution to climate change we are attempting to negotiate and thereafter to co-ordinate the energy policy of some 200 nations. The climate regime is an epic enterprise and is without question the most complex and demanding piece of international negotiation ever under-taken. There simply is no equivalent and because the nature of the climate change problem excludes accurate calibrating of national self-interest, we are attempting to form a global public interest.

If, after decades of continuous negotiation, with new information fuelling a consensus that more effort must be expended in order to reduce emissions by increasing amounts, we have switched the bulk of the world economy away from fossil fuels; if we can say we have managed the climate change problem we will (to quote my friend Tom Burke) 'have contracted and converged'. Contraction and convergence is where we may well end up but it's not a good way to start. And it's certainly not a good way to re-start when you've already started.

Just take the Kyoto Protocol, which maybe one of several Protocols. Good politics allied to good policy says, 'get it ratified and then move on'. It could be redundant with-in a very short period of time, in which case, we will make another Protocol that is more effective, hopefully with US participation. To not ratify because it is flawed or to suggest there's some alternative system readily available to supplant it, would simply stop political momentum in its tracks. It will provide all those who either will not act or feel as if they cannot act with ready excuses to delay and delay and delay.

Your observations about American reengagement need correcting. A Democrat President together with a majority in Congress would very likely ratify Kyoto today. Thinking has changed on the Hill, with Republicans too, and in key states and cities – New York, California, Connecticut, Oregon, Illinois, Chicago, Seattle and New York again. The Kyoto Protocol is being implemented beyond and despite the White House. The only constituency I can see favouring C&C will be those who are determined to slow up the climate change regime indefinitely – a weird conspiracy theory but entirely within the compass of the super confident 'neo-cons' around the White House and consistent with the practice of the anti-Kyoto business lobby over many years. I do not believe any US administration would agree to begin negotiations again on the basis of C&C and I think it's disingenuous to say that this would constitute 'the developing country participation' mandate given to negotiators by the 1997 Senate Resolution.

The need for greater reductions than provided by the Kyoto Protocol is so widely understood by the negotiating community in and around the Conference of the Parties that I don't see the point of your question on why tougher targets would be any more palatable. Of course there will be tougher targets when they're finally agreed. Whether targets or timetables remain the preferred method for achieving reductions there will be further constraints on greenhouse gas emissions. There will not be a single method of constraint chosen. There couldn't be. And in the end it will not be made on the basis of a rational allocation of a global atmospheric budget – it will be another rough deal. The very best we can hope for is that the negotiating process sets in motion a range of strategies that will deal with little bits of the problem effectively and that over time we will accumulate sufficient successes to have made progress.

I regard Prime Minister Vajpayee's statement as good rhetoric supporting a negotiating position that has been in place for the best part of ten years. It doesn't tell you very much about what ultimately India as an industrialising developing nation will be doing in co-operation with other countries to reduce their emissions in the second commitment period.

You are right we do not know with any precision what Kyoto will deliver in terms of concentrations of greenhouse gases in the atmosphere. But we don't have to. As long as Kyoto is ratified, there will be enough momentum in favour of new negotiations for a new Protocol, which would effectively carry the obligations of what would have been its second commitment period. If this huge multi-layered policy-making enterprise has in the meantime begun to change the consciousness of business and political leaders, thereby re-directing regulatory and investment effort towards the objective of the Convention, then we will have moved forward a trend towards lower global emissions. We will have some clear scientific reference points from the IPCC and the UNFCCC subsidiary bodies to check the progress against. All this infrastructure for decision-making exists to apply principles like precaution and equity.

Finally, we are pretty good at deploying fiscal and indeed regulatory measures at consumption in the developed world when we want to. We can make fossil fuels a target for consumption taxes. Indeed the very countries where you are more likely to find political consensus around such a policy response are, literally, those who can afford it. The burden need not fall on the developing world. I don't pretend it's easy but the continued development of the regime created by the Framework Convention in 1992 is sufficient to assist those who are able to put in place such measures without ever having to mandate them to do so. The global process works if it can inspire action even where it doesn't require it. I'm not at all sure what you are proposing for an international institution capable of rationally allocating atmospheric resources on a global basis but it looks to me that it might involve another half century of world government creating that I'd rather not embark on.

James

How will developing countries get on board?

Dear James

I'm not saying that the world shouldn't ratify Kyoto. What I am saying is that in future, we should focus our efforts on a more effective treaty architecture – one based on actually solving the problem.

I was surprised to read your assertion that 'we don't have to' know the level of concentrations we'll end up with under a continuation of the Kyoto approach. A lot of scientists would disagree with that, among them Sir John Houghton, the IPCC science working group chair for the Third Assessment Report, and Sir Tom Blundell, the Chair of the Royal Commission on Environmental Pollution. Both, incidentally, are also firm supporters of Contraction and Convergence, and would no doubt express some surprise at your perhaps slightly bizarre claim that 'the only constituency I can see favouring C&C will be those who are determined to slow up the climate change regime indefinitely'.

I also suspect that scientists (not to mention the small island states that you advise) might question your assertion that the 'threat of catastrophe is not immediate'. Recent evidence shows that atmospheric 'buffers' such as the ability of the oceans to absorb carbon dioxide, or the effect of sulphate aerosols, are likely to decline sharply in effectiveness from now on. We just don't know the level of concentrations that would trigger catastrophic 'positive feed-backs' such as extensive die-back of rain-forest carbon sinks. Whatever the basis of your assertion may be, it doesn't sound like the precautionary principle.

But let me focus in particular on your closing shot that C&C 'might involve another half century of world government "stabilising concentrations needs developing countries to accept limits; and to do that, they need an incentive" creating that I'd rather not embark on'. Let us leave aside the fact that C&C is, like Kyoto, a global governance mechanism, which is nothing to do with a 'world government'. The real issue here is that regardless of whether we have five, ten or fifty years to play (and delay) with – and I think fifty is on the optimistic side – we would be far better off spending whatever time we have on building a system that can actually stabilise concentrations.

You have conceded that further rounds of Kyoto can't do this. Your letter admits that 'the very best we can hope for is that the negotiating process sets in motion a range of strategies that will deal with little bits of the problem

effectively and that over time we will accumulate sufficient successes to have made progress’.

By ducking the challenge of a concentration target in favour of vaguer goals such as ‘moving forward a trend towards lower global emissions’, you have illustrated precisely the point of the Goethe quotation. After all, you allow that ‘if we can say we have managed the climate change problem, we will have contracted and converged’.

So if we can both agree that Contraction and Convergence is the inevitable endpoint of any successful process, then why not follow Goethe’s advice and take the decision to commit now to the system that actually ensures that this takes place?

To repeat, stabilising concentrations needs developing countries to accept limits; and to do that, they need an incentive. One doesn’t have to be Goethe to see that Kyoto’s system – whereby the UK can meet its target comfortably and sell its surplus for a healthy profit, whilst India (with per capita emissions ten times lower) has no permit in the first place – may be missing a trick.

Alternatively, we can continue to leave developing countries out of entitlements until the damages really start to accelerate – at which point we’ll have to explain to them that the gravity of the situation means that there’s no incentive of surplus permits to trade, because their friends in the North have (regrettably) used them all up. I wonder what the prospects would then be for a global deal?

Alex

Another round of Kyoto – without C&C

Dear Alex

So we agree that the Kyoto Protocol should be ratified as is and we agree that in future we need a more effective treaty system that actually solves the problem of climate change. We appear not to agree on tactics and we may have more of a disagreement on principle than we are admitting.

There is not a part per million between us when you say that stabilising concentrations requires developing countries to be properly incentivised. This

will be a central feature of the second commitment period negotiations whether C&C is adopted in any form at all.

We know also that those incentives will be differentiated. The developing country block will inevitably be broken up into parts. The break-up will in part reflect differences in wealth, which in part will pick up per capita emissions but not explicitly. Equity will be in play.

Developing countries need to take advantage of the service they can provide to a properly constrained Annex I world. The carbon market ought to be truly global with Another round of Kyoto – without C&C developing countries being centres of trading expertise as well as host countries for investment purposes. We need CDM exchanges in Johannesburg, Sao Paulo, Mexico City, Hanoi and Cairo in order that more of the value of this market is retained there and is not simply another exported commodity.

Quickly, my taunt about those interested in slowing the process down by promoting C&C was aimed at US opinion formers around the White House and not at your esteemed list of scientific supporters; and I'm confident about the precautionary principle argument – catastrophe is not imminent, harm is – the point is we have begun on the basis of precaution but not done enough to reduce the risk of catastrophe.

It seems to me Alex, you are trapped by your concession that you would wish to see Kyoto ratified; if the Protocol is ratified it will galvanize efforts to push on with negotiations for the second commitment period with negotiators conscious of the need to do better. This effort will carry many of the ideas of C&C without having to fundamentally alter the negotiation model. Ratification of the Kyoto Protocol will encourage the US to come back and negotiate in good faith an instrument that they could ratify – it may be the Washington Protocol or some such. The pressure for the US to join the international system would increase significantly, US businesses will be affected by Kyoto implementation worldwide, the States will continue to implement in their own way, a Federal emissions trading scheme will arrive more quickly and the issue will be how do we get the developing countries to join in with us?

Brazil, Argentina, Chile, Turkey, Kazakhstan, Mexico, Korea, Singapore might all accept quantified obligations when they see deeper cuts being offered in Annex I and when a price for carbon is established under Kyoto and schemes like the EU ETS. It's possible that we might experiment with intensity targets

for developing countries even though we disapprove of them in our own economies. It would then entail a complicated conversion factor if one wanted to trade emission reductions between a country with an intensity target rather than an absolute target but we have experience of how that might be done.

Governments could create an investment fund to purchase emission reductions (much like the World Bank's Prototype Carbon Fund or the Dutch funds but on a greater scale) which would offer a premium price for project-based reductions in developing countries according to a scale that referenced per capita emissions. There is opportunity in the parallel policy processes relating to renewables including the idea of creating a global market in Renewable Energy Certificates. In sum, I believe declaring an intention to negotiate on the basis of the C&C model will not accelerate the level of commitment to reduce greenhouse gas emissions and will make it less likely that the society of negotiators will achieve the objective or the fairness you desire. We need fairness in allocation, real constraint in Annex I first, bankable incentives to switch to a lower carbon developing economy and a progressive extension of obligations. We don't need C&C to get any of it.

James