SCIENCE *for the* EARTH

Can Science Make the World a Better Place?

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Foreword by Stephen Hawking

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Chapter 8

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'Green' Economics: Still a Dismal Science?

ECONOMICS has been disparagingly labeled the 'dismal science' ever since the phrase was first coined by the 19th century Scottish writer Thomas Carlyle, who attacked an economic and political climate where 'Cash payment' had, he suggested, become 'the sole nexus between man and man'. A century and a half since Carlyle's writing heralded a new generation of novels with a social conscience, the ability to produce 'cash payment' is too often the only means by which a human life is valued, even by many 'green' economists. Universal human rights appear not to fit into their computer models, which carry the implicit assumption that such rights are subsidiary to monetary values. As Hazel Henderson put it

> *Economics has enthroned some of our most unattractive predispositions: material acquisitiveness, competition, gluttony, pride, selfishness, short-sightedness and just plain greed.*

In this chapter, however, we see South Africa as a microcosm of the world's economic and political dilemmas, and view events there during the past few years as a cause for hope. Its rich ruling minority ceded political power to a new democratic government because it was ultimately in its own self-interest to do so. We see the same process as able to bring long-term solutions to many of humanity's current environmental dilemmas.

We argue in this chapter that the prevention of catastrophic changes to the human life support system, the biosphere, is also in everyone's interest—even billionaires, economists and politicians. Focusing on the negotiations surrounding global climate change, we suggest that proposed solutions which are not based on equity have little chance of long-term success. We see signs that an increasing number of individuals who shape world economic policy believe that the current environmental crisis can only be overcome if the solutions proposed are based on the equal worth of every human life on Earth.

Economics seeks the honorific status of being a science, yet its divorce from ecological processes, upon which every economic process ultimately depends, is among the factors which limit its utility in the real world. As Lynn Margulis has suggested in Chapter 2, the only truly productive beings on Earth are those which carry out the remarkable biological process of photosynthesis by which CO_2 and water are transformed into oxygen and carbohydrates. Such organisms include plants and many bacteria, whereas humans just convert such productivity, consume, excrete and (hopefully) recycle. A nation's gross national product can ultimately only be a biological and, to a lesser extent, a geological one, not the meaningless economic statistic that is currently calculated. To be sustainable such a total cannot increase indefinitely, but will eventually stabilize. Any society that does not undertake to democratically agree

where such an increase in human throughput should stop will either end up in internal conflict, or in conflict with its neighbors.

Most economists have been unable to take on this broader perspective because they straddle the worlds of both academic ideas and political power, as described by Harmke Kamminga in Chapter 15, and because both politicians and economists are oblivious to, maybe even wilfully ignorant of, fundamental ecological truths such as the finite nature of many of the Earth's resources. Their solutions are often an uncomfortable mix of 'objective' mathematical models with political pragmatism. Although microeconomics, occurring within specific small-scale political frameworks where, for example, individuals share a common interest in survival and are constrained within clear ecological limits, has seen some success, the intellectual basis of macroeconomics is fatally undermined by being forced to factor out such uncomfortable truths because of the subject's intimate relationship with political pragmatism and compromise. Economists who share in power often share in its arrogance and its ignorance of the unutterably awful living conditions they impose on millions of people, even if such people exist on their own doorstep.

The biggest obstacle for economists in modifying their models to fit reality was the notion, prophesized by Carlyle, that everything—pure air, football matches, even people—has a monetary value. Once money became more than a convenient local substitute for swapping resources such as food, livestock and building materials, then the lunacy of people-less money in the stock market controlling money-less people became inevitable. The rules by which most economists operate only allow for the creation of more money, without any reference to the people or resources required, apart from the assumption of their inexhaustible

ability to allow increased production of colored pieces of paper. When built upon these foundations, 'green economics' is an oxymoron.

The Intergovernmental Panel on Climate Change (IPCC) was set up by the United Nations (UN) Environment Programme and the World Meteorological Organization to find out whether human activities might be disturbing the world's climate and, if so, what can be done. Over the past 130 years the global mean temperature has risen by at least 0.6 °C. Sea levels have risen. Weather-induced insurance claims are, in real terms, an order of magnitude higher than 20 years ago. Beyond this, a rapid and irreversible rise in temperature could develop within 50 years.

In 1990, the IPCC confirmed that there was a risk of catastrophic climate change unless greenhouse gas levels were stabilized. This, they said, would require humans to reduce their greenhouse emissions by 60–80%. Greenpeace conducted a survey of all international climate scientists involved in the IPCC study, and others who have published on issues relevant to climate change in the journals *Science* or *Nature* during 1991. Of 113 responses, 13% agreed that if greenhouse gas emissions continue at their present rate, a runaway greenhouse effect would be 'probable'; 32% said a runaway greenhouse effect was 'possible'; while 47% said it would 'probably not' happen. The OECD (Organization for Economic Co-operation and Development) suggest that there is going to be a rate of death in hundreds of thousands due to global climate changes.

As a result, many environmentalists hoped that economics might be forced to reacquaint itself with some ecological realities. In 1992, certain economists were invited to join the climate change negotiation process and have subsequently explicitly or implicitly attempted to capture that process for their profession. They applied a standard

procedure, cost–benefit analysis or CBA, which balances one person's costs against another's benefits. As we will show, when applied to environmental problems, CBA has serious drawbacks in addition to the fundamental questions, 'whose costs?' and 'who benefits?' These difficulties are addressed by the United Kingdom's Centre for the Social and Economic Research of the Global Environment (CSERGE), who developed a concept called global cost–benefit analysis. Global warming and the costs and benefits of climate change are now assessed by them in these monetary terms. This assessment is being aggressively pushed by the economists in the UN's IPCC. Part of this exercise, they assert, entails giving cash values to human lives. They accept that there are going to be hundreds of thousands of deaths worldwide as a result of global climate changes.

The logical conclusion of global-CBA is reached in a recent CSERGE publication. In the document, an impeccable chain of reasoning, albeit from a questionable set of premises, leads to a conclusion that in global climate negotiations countries with different gross national products have different values attached to their citizens. Therefore the 'statistical life' of a citizen of the European Union (EU) or the USA is worth $1.5 million, whereas in China it is only $150 000. Thus these influential economists believe that one real Chinese life is 10 times more easily discarded than a real life in the EU and the USA. Ironically, these lives are now at risk as a result of damage to the global environment for which citizens in the EU and the USA have been and are at least 10 times more responsible per head than citizens in China. An average citizen in the EU or the USA uses between 10 and 100 times the resources of an average citizen in the less developed world.

There may be some potential local professional benefit to economists in industrialized nations by their domination

of the sustainable development agenda, but it is outweighed by the obvious global political cost. People in the EU and the USA are outnumbered by everyone else by ten to one. Thus the need to value human rights as equal would seem extremely prudent.

In fact, global-CBA is a misnomer in that it is trying to compare subglobal costs with global benefits. Clearly everyone on the planet stands to benefit from avoiding the damages resulting from emissions-driven global climate changes, and this benefit is therefore global. But the 'costs' of cutting back these emissions pertain only to that minority of industrial countries who are disproportionately responsible for creating them, and are therefore subglobal by definition.

Despite this anomaly, World Bank economists suggest that the right to emit CO_2 should be proportional to the size of a country's gross domestic product (GDP). In other words, rights should be vested in those countries which already have substantial GDPs, virtually all generated by fossil fuels. They suggest that, because of the 'costs' of reducing emissions, stabilization should be achieved by a combination of small fossil-GDP states (developing countries) not using fossil fuels, and major users not expanding their use (rather than cutting back). Although this proposal could lead to an eventual stabilization of *emissions*, it provides no basis for the universally accepted goal of the stabilization of atmospheric CO_2 *levels*, which would require a long-term reduction in total emissions.

Furthermore, whilst these arguments are being made, 'policy instruments' are being designed by the economists and prepared for promotion through the IPCC. Prominent amongst these is the instrument called, 'tradable CO_2 emissions quotas'. It is intended that these quotas will be introduced into international trading arrangements and that the basic allocation of quotas (or the right to pollute) will

not only be matched to the maldistribution of global economic development of a particular country, but also that the maldistribution will be structurally consolidated through trading operations in the existing exchange rate regime. Because currencies are traded, exchange rates bear little relation to purchasing power. An allocation by GDP, apart from its fundamental immorality, has the effect of systematically under-allocating to less developed countries by a factor of two to four.

The International Monetary Fund (IMF) intends that global macroeconomic policy development will sustain the purchasing power advantage of the G7 countries at the expense of currencies elsewhere. The 'tradable CO_2 emissions quotas' represent a thrust to set up a market in the international trade of what are, in reality, global common property resources. In effect, the quotas represent bits of the global ecological services provided by the global climate system. We believe that the allocation of quotas per capita rather than by GDP is the only fair and sustainable method, and the only one with any chance of obtaining widespread international recognition.

Overall, global-CBA designed mechanisms for the management of global climate change are the rearticulation of a two-tier global economy. They are the culmination of centuries of colonialist and current neocolonialist distortions of the economies and ecologies of less developed countries to suit the needs of the industrialized world. In contrast with this analysis, Figure 8.1 summarizes the actual divide: 'debitors' can achieve high incomes by ecologically inefficient overconsumption with a high environmental impact, but are ultimately unsustainable. 'Creditors' have long lived sustainably by underconsuming their resources with low environmental impact, but are threatened—first by colonialism and more recently by the neocolonialist implications of global-CBA. The ability of

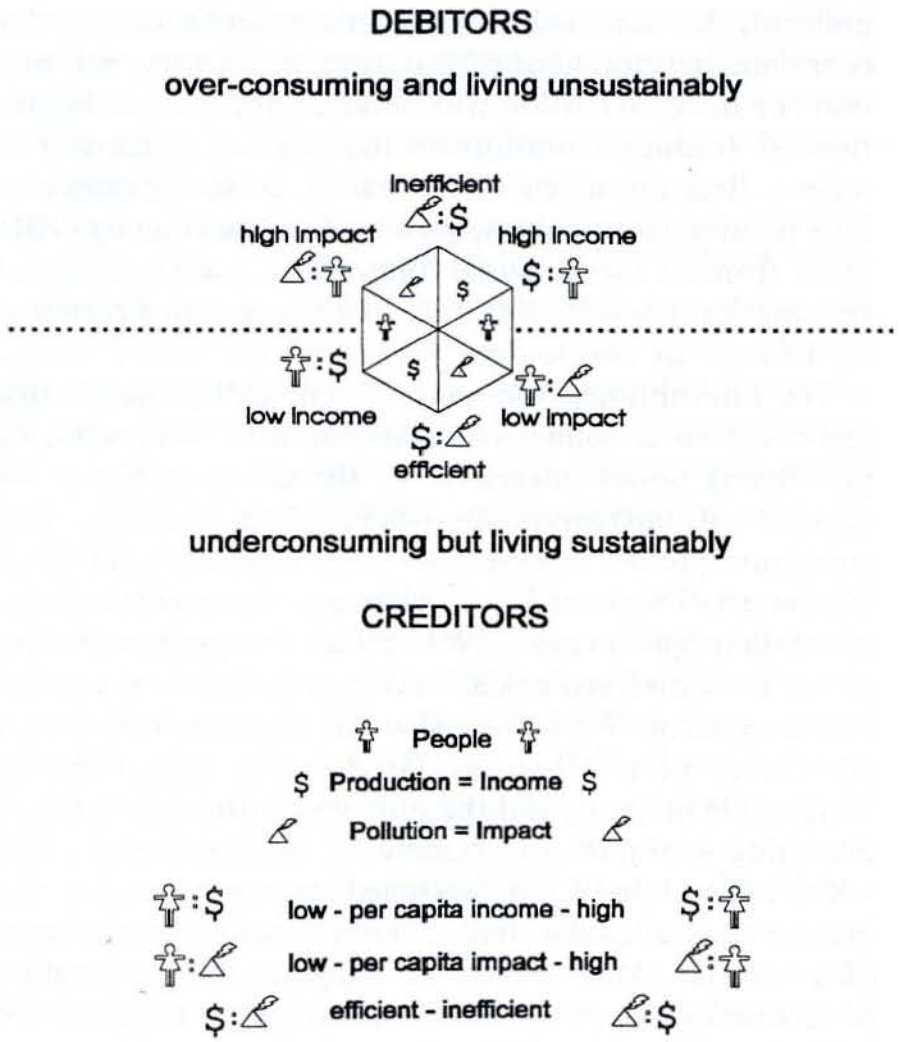

Figure 8.1. Who are the real creditors and debitors of the global commons?

economists to make their work appear 'objective', when in fact their modeling ignores the basic right of every human to be judged of equal worth whatever their nationality, creed or color, is described in Figure 8.2.

To progress we need far-reaching reforms of international institutions. The UN must be democratized. More radical and much harder to achieve would be the

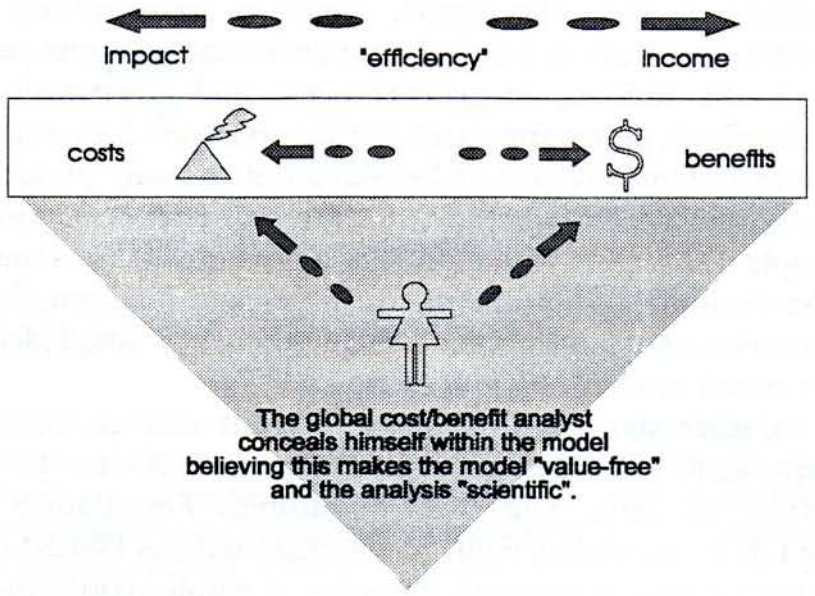

Figure 8.2. A global commons critique of cost-benefit analysis

establishment of Structural Adjustment Programmes (SAPs) for the industrialized countries. Current SAPs are imposed on less developed countries to drive them towards export-led growth in accordance with conventional 'wisdom'. The SAPs lead to the replacing of subsistence crops by cash crops, encouraging deforestation, reducing welfare spending, lowering standards of living and forcing dependence on a market where the terms of trade remorselessly deteriorate as the countries concerned are forced to compete with each other on rich men's terms. Such SAPs are a result of the power of people-less money. So we suggest an OECD that is 'structurally adjusted' to include money-less people. This would guide the OECD countries towards the greening of their economies and exact very modest reparations from them for past damage to the biosphere.

Outbreaks of common sense and sanity keep occurring all over the world. If you need cheering up, read Guy

Dauncey's *After the Crash*, a superb compendium of mostly small-scale ecological–economic success stories such as credit unions, local currencies and cooperatives. Democracy, most spectacularly demonstrated by recent events in South Africa, is breaking out in many places in the world. Full democracy, the siting of real power with people rather than with money, is a prerequisite for sanity. The fissioning, if peaceful, of large- and medium-sized countries into smaller units is encouraging too: small places are much easier to democratize.

Another sign of hope is the vibrant new economics movement, which is much too large and diverse to do justice to here. The New Economics Foundation in the UK is one leading light. So internationally is TOES (The Other Economic Summit), the series of parallel conferences to the annual jamborees of the G7 heads of state. There is increasing interest in these organizations from the media and from sections of political and economic orthodoxy.

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. The *global commons* is a term which has entered the sustainable development debate, particularly in the context of global climate change. It signifies that there are, by definition, subglobal limits to the creation of private property arrangements. We also take the term to signify that a free market in these subglobal private property arrangements cannot sustainably exceed subglobal limits. The phrase *global commons* also acknowledges the basic collateral, or equity, of human existence in the totality of the biosphere's life supporting systems and recognizes the interdependence of all the stake-holders in this global equity and addresses their fundamental rights of existence. It recognizes therefore that the stake-holders'

global rights precede subglobal rights derived from private property arrangements.

Economics need not be dismal, it merely needs to be conducted on a more democratic, human scale, together with a recognition that humanity together constitutes a global common.

Annotated List of Further Reading

The Growth Illusion, Richard Douthwaite, London: Green Books, 1992.
Subtitled 'How Economic Growth Has Enriched the Few, Impoverished the Many and Endangered the Planet.' A passionate presentation of the case against economic growth, with in-depth case studies of Holland, India and Ireland.

Global Warming Damage Costs: Some Monetary Estimates, Samuel Frankhauser, CSERGE Working Paper GEC 92-29, 1994.
An attempt to calculate money values for all aspects of the damage expected to be caused by a doubling of atmospheric CO_2. Destined for notoriety due to its valuing an OECD life at $1.5 million and a Chinese life at $150 000.

The New Protectionism, Tim Lang and Colin Hines, London: Earthscan, 1993.
Details the case against so-called 'free' trade. Argues for a new progressive variant on protectionism which favors local production, local and minimal consumption of resources and high quality of life.

A Green History of the World, Clive Ponting, London: Penguin, 1993.
Presents an ecological perspective on world history, starting with the development of agriculture. A telling vignette portrays the history of Easter Island as a stark role model for today's anti-ecological world society.

Alternative Economic Indicators, Victor Anderson, London: Routledge, 1991.
Describes national accounting, summarizes the case against economic growth, and presents a strong case for the replacement of GDP by

a basket of 16 social, demographic, financial and environmental factors.

After the Crash, Guy Dauncey, London: Green Print, 1988.
A vision of pieces of a different future that are starting to happen; with many examples of inspiring practice from all over the world.

New Economics, quarterly magazine published by New Economics Foundation, 88/94 Wentworth St, London E1 7SA, UK.
Lively articles on subjects including fair trade, green taxes and local initiatives.

Benefits and Taxes: A Radical Strategy, James Robertson, London: New Economics Foundation, 1994.
Proposes a comprehensive reform of UK institutions to reconcile economic efficiency with social justice and ecological sustainability.

Small is Beautiful, E. F. Schumacher, London: Blond & Briggs, 1973.
The subtitle, 'A Study of Economics as if People Mattered'. A classic.