letters and articles
1989 - 2002
relating to the provenance and presentation of

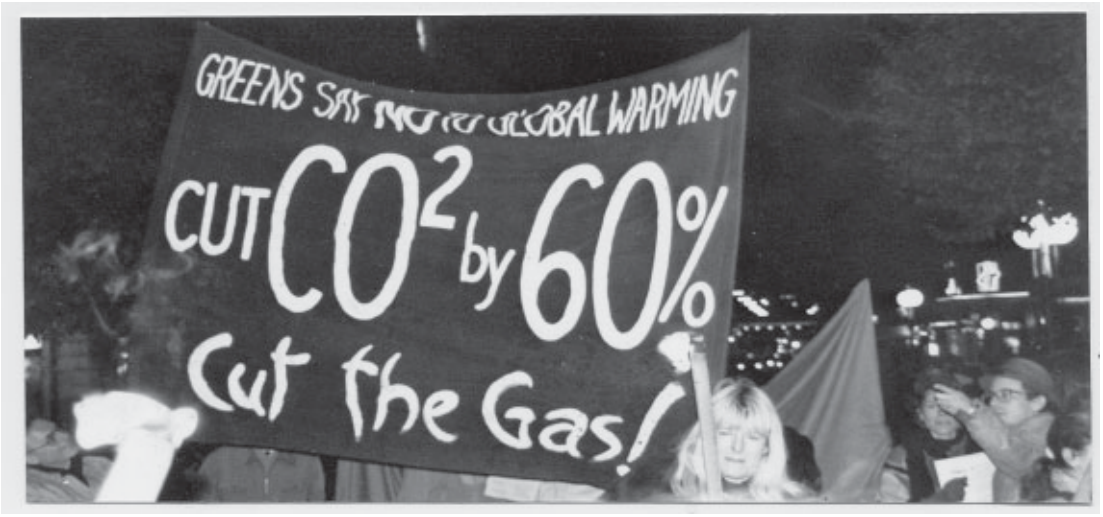
"Contraction & Convergence"

GCI's contribution to realising the objective of

the United NationsFramework Convention on Climate Change

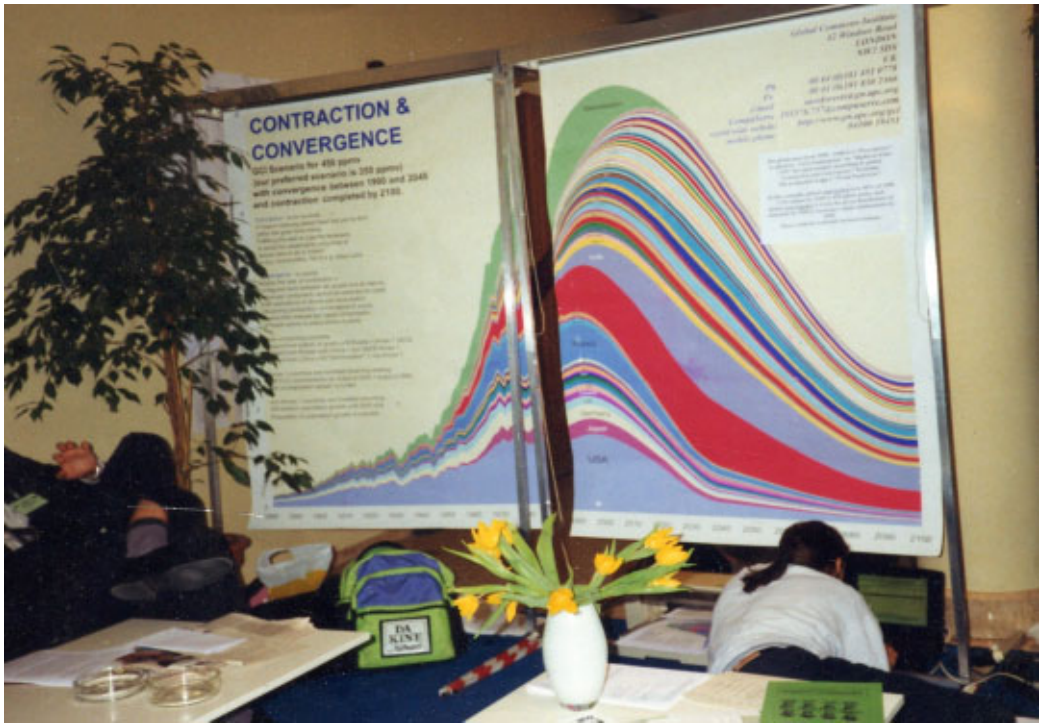
"It's not a question of whether, but how much, how soon"

John Knaess.



Second World Climate Conference Geneva November 1990

GCI at the UN in 1996, COP-2 Geneva



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1989

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.

> *"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. "*

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 dieback 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 Nat-ional 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. (USA), Probe International (Canada), Project for Ecological Recovery (Thailand), Rainforest Action Network (USA), Rainforest Information Centre (Australia), Reforest the Earth (UK), Research Foundation for Science and Ecology (India), Sahabat Alam (Malaysia), Survival International (UK), Third World (Uruguay), Uniao das Nacoes Indigenas (Brazil).

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 he 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 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), Ralph Burk (West German Green Party).

November 09 - Kilburn Times

Green Campaigners deliver letter to P M

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."*

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 By 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-PAPs 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 inti-

mately 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.

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 Ian 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 signal 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.

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

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 sup-ported 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 eco-systems 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 lan 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 grass-roots 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 rain-forests, 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 leagues 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.

GROSS GHGS			PER CAPITA ghgS & $S		
COUNTRY	Tonnes Carbon	%s	COUNTRY	Tonnes Carbon	INCOME
USA	1,000,000,000	17.6	Canada	4.52	$15,160
USSR	890,000,000	12	Ivory Coast	5.52	$740
Brazil	610,000,000	10.5	Brazil	6.52	$2,020
China	1,000,000,000	6.6	USA	7.52	$18,530
India	1,000,000,000	3.9	Australia	8.52	$11,100
Japan	1,000,000,000	3.9	East Germany	9.52	
West Germany	150,000,000	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	Colombia	2.21	$1,240
Mexico	78,000,000	1.4	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	1.79	$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	0.48	$370
Netherlands	42,000,000	0.7	China	0.34	$290
Saudi Arabia	42,000,000	0.7	India	0.28	$300

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, right). 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 is to 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.

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."

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 unsus-

tainable, 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 Save the Planet,
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 Elkins; DrGUI 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)

Drafted by Jim Berreen and Aubrey Meyer, this was 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, it became the basis for GCI to: -

- quantify the Ecological Debt (1991/93)

- rebut the Climate Cost/Benefit Analysts * (1993/95)

- establish "Contraction & Convergence" (1995/2002)

Simon Hughes, Lib. Dem. Environment spokesman; Margaret Ewing, (SNP); Ian 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). GUI 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); Ian 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).

1991

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.

Freeloading on Global Warming Benefits

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

UK Gov. White Paper on the Environment 1990.

The SWCC 'Joint Ministerial Statement' November 1990.

Statement from the SAP PAULO workshop during 1PCC Working Group 3 (Response Strategies) deliberations - January 1990

(1) - Climate-destabilizing, anthropogenically aggravated global warming due to enhanced CO' 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).

(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 region-al/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 contro-

> *"The part that forestry can play in keeping levels of CO2in 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 al-ready 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. White Paper on the Environment 1990.

versy 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 CO' 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 repeated! 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 co-coordinated international co-operation including strengthening the T-FAP and the ITTO."*
>
> The SWCC 'Joint Ministerial Statement' November 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 consider-able degree of (unacknowledged) self-interest. (Loosely speaking it seems to qualify as an example of 'tied-aid', tied that is, to the glob 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 audit ing. In the absence of being ascribe 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 'multilateral 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 1PCC 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 SAP PAULO workshop during 1PCC Working Group 3 (Response Strategies) deliberations - January 1990

April - GCI

Carbon Fixing First World CO_2 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 annual.

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 grass- roots.

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".

June 9th - Guardian

Cold War of Global Warming

Your front page story (Guardian June 2nd) "UN presses of 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.

I am surprised that Paul Brown did not include in his piece the IPCC observation that those greenhouse gas emissions scenarios to the year 2100 were modelled in the context of "*an assumed decrease in economic growth for all countries beyond the year 2000*" and also in the context of *"population figures assumed to approach 10.5 billion by the second half of next century."*

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 wich 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."*

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 sense 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

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 indebted-ness 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 to 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 C02 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
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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 C02 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 C02 emissions over the next 15 years. It promulgates the "comprehensive approach". This relies on tree planting to fix atmospheric C02, rather than restraint at source.

Considering the US, with 4 per cent of the world's population, provides 25 per cent of global C02 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 002 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 C02 restraint is 'score-card-sharping'.

Worse the Government's response to the whole reason for C02 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 non-compliance 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 fund raising 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, 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 C02 and other industrial greenhouse gas emissions.

The starkest assessment yet has come from the California based research group IPSEP (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."

(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 C02 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 coun-*

tries 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 by2005."

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.

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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 life-styles do not inflict destabilising impacts on the general health and common wealth of the planetary eco-system 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.

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 C02 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 MacNiece wrote years ago, "I am not yet born — oh hear me."

Aubrey Meyer.
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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.
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March 20 - The 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 C02 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 our-selves") 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 C02 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 and Aubrey Meyer
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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 PUBLICATION

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

An Early Compilation of Materials Relating to Contraction and Convergence

Available at: www.gci.org.uk/articles

GLOBAL COMMONS INSTITUTE
42 Windsor Road London NW2 5DS

"Pay now - Live later."

June - The Centre For Our Common Future and the IFC

A Package Marked, 'Return to Sender'.

Some Problems with the Climate Convention

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 and 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 immedi-

ate 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.

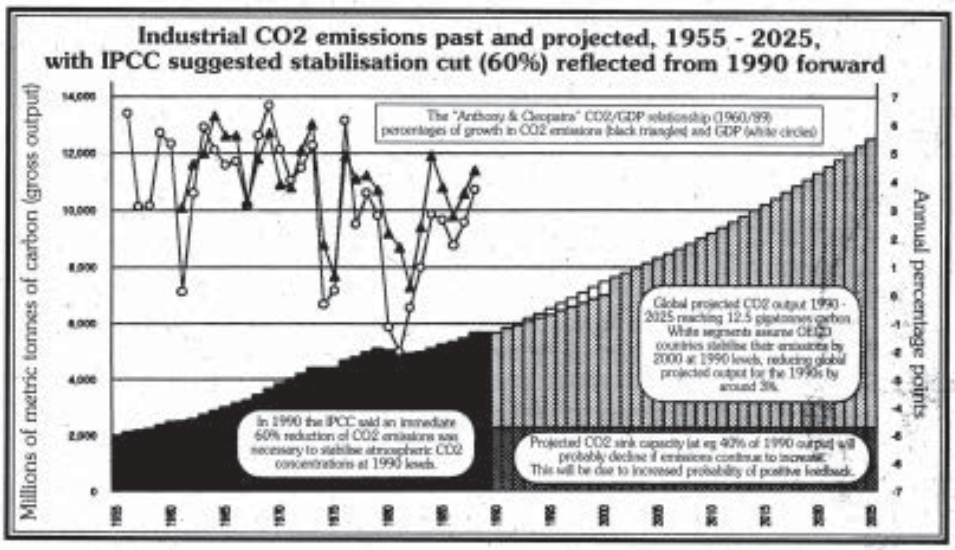
The relationship between CO2 and GDP for the past thirty years and the C02 emissions trend which unfettered economic growth will provoke). The convention also insists that no measures for climate protection should be allowed to impinge "unjustifiably" on free and open international trade —hardly a word 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. 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

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



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 C02 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
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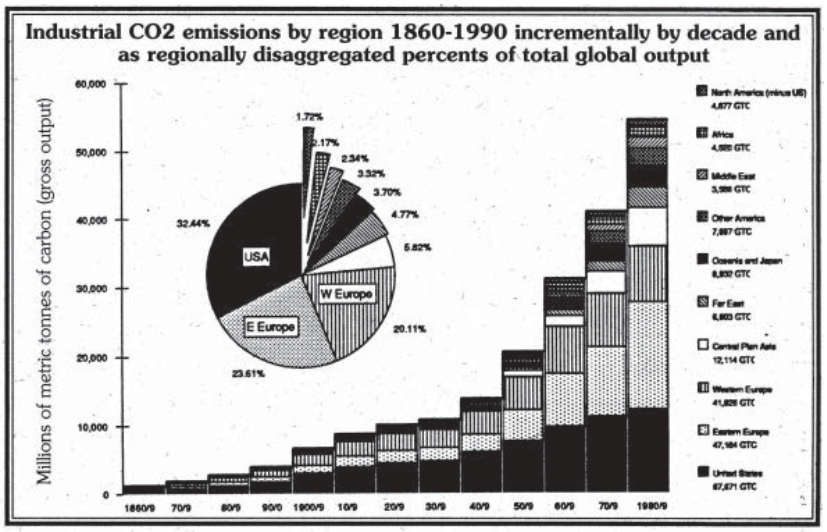

GCI is an independent think-tank that researches the causes of global ecological problems and assesses their political implications. It campaigns for rational change accepting the link between equity and survival.

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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 which 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, Assoc Dir TNI: Jason Wilson, University College London: 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

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

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 biodiversity, 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 multina-

tionals 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.

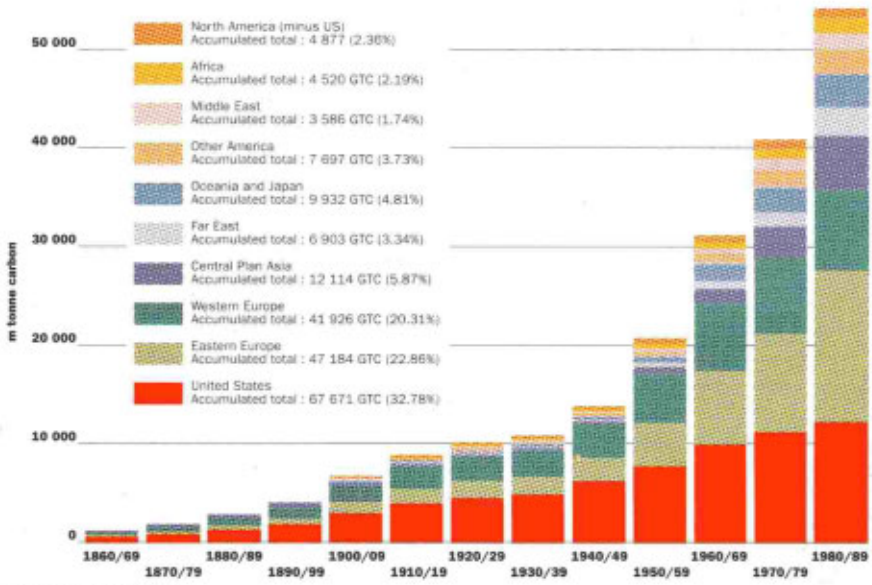
UK Prime Minister John Major's rather languid judgement that past 'damage was inflicted not out of greed or malice, but out of ignorance' is only partly true and underestimates the immense practical need for redress. Moreover, his Darwin Initiative 'for the survival of the species', whilst responsibly 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 redistribution 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

Accumulated industrial CO_2 output by region 1860 – 1989



GTC :Giga tonne carbon

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.

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.

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

"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 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 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."

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

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*

circulated in the UNCED preparations.

This Global Commons Institute statement 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 pre-vention 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."*

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.

August 14 - The 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

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

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).

December 16 - The Guardian

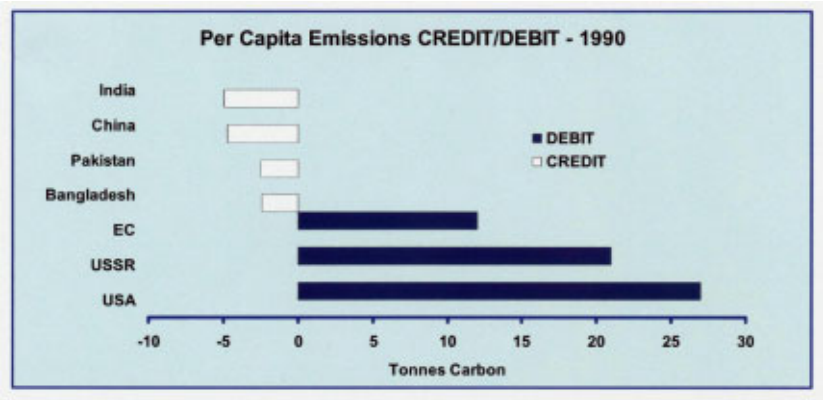
Fighting for the air we breathe

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 C02, 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, CGI 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.

October 1992 - GCI PUBLICATION

"Climate Change, Population and the Paradox of Growth" -

Aubrey Meyer and Anandi Sharan

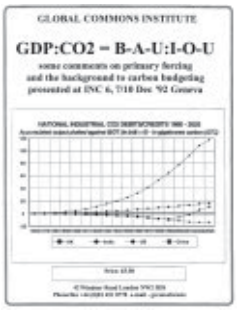
Available at: www.gci.org.uk/articles

December 1992 – GCI PUBLICATION

"GDP:CO2 = B-A-U:I-O-U" –

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

Available at: www.gci.org.uk/articles



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 millenium" 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 millenium, 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

1993

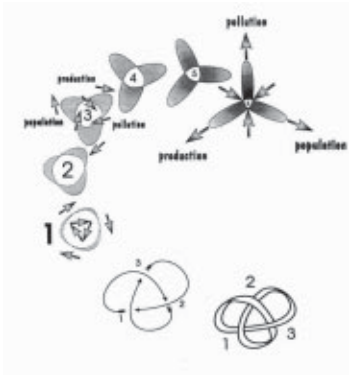
1993 - GCI PUBLICATION

"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

Available at: www.gci.org.uk/articles



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.

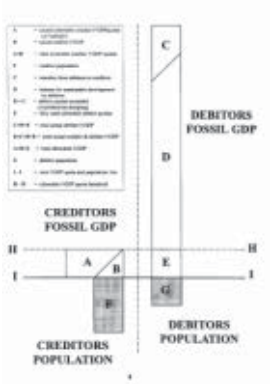
Aubrey Meyer
Anandi Sharan
The Global Commons Institute
at the UN

March 1993 - GCI PUBLICATION

"Climate Change and the Precautionary Principle"-

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

Available at: www.gci.org.uk/articles



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 IPCC the assumption of a 60% cut in green-

house 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 Green-peace 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.

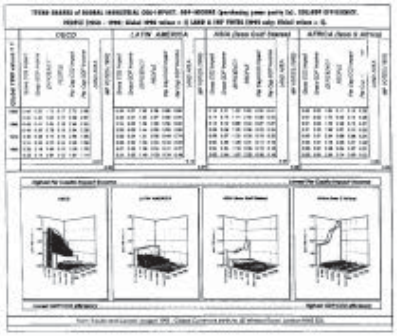
by Jaya Dayal
New York, Mar 22 (IPS)

May 1993 - GCI PUBLICATION

"Who Provides Global Benefit; who causes Global Disbenefit" –

A Policy Briefing to the IPCC 2nd Assessment

Available at: www.gci.org.uk/articles

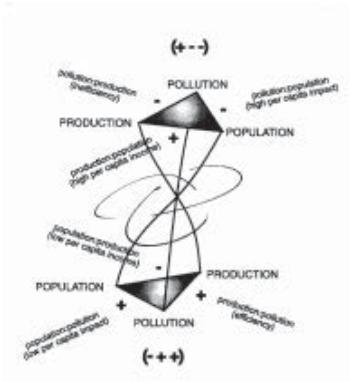


June 1993 - GCI PUBLICATION

"Making Way for Decision-Taking Under Uncertainty"-

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

Available at: www.gci.org.uk/articles

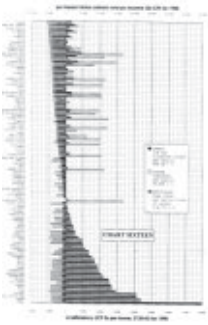


August 1993 - GCI PUBLICATION

"Joint Implementation – in a Globally Sustainable System Equity and Efficiency Converge" –

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

Available at: www.gci.org.uk/articles



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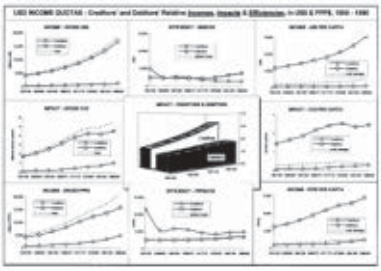
June 1994 - GCI PUBLICATION

"The Unequal Use of the Global Commons" –

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

Available at: www.gci.org.uk/articles



July - Guardian

Commons and goings

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 outnumbered 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

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.

July 20 - The Standard

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 inter-national 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 ndustrialised 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.

Juy 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

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 subgroup 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 eleventh 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 remark-able 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 - Tom Wakeford and Martin Walters ISBN 0-471-95283-4

"Science for the Earth"

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

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

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 (IPPC), 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 IPPC 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 inacation. 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 an North America.

Lives in the former Soviet Union are valued at £180,00 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 1989s.

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

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 Insti-

tute, 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. "T*he 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."*

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," 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.

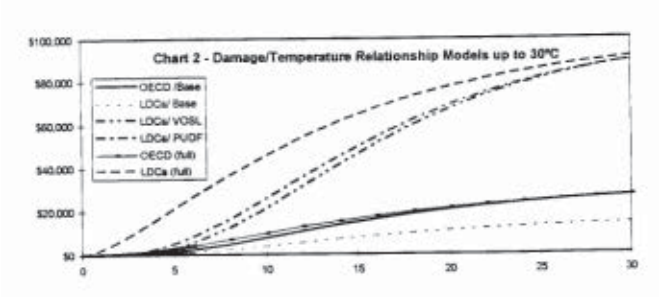
But other IPCC work—on trends in emissions of greenhouse gases, for instance—assumes poor nations will grow richer. *"If they get richer, they will be willing to pay more to save lives. The economists' valuation of future lives should reflect that,"* he says.

October 1995 - GCI PUBLICATION

"A Recalculation of the Social Costs of Climate Change" –

Aubrey Meyer and Tony Cooper

Available at: www.gci.org.uk/articles



Is one American worth fifteen 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, Professor 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 that 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."

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 the Global Commons Institute (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 Intergovernmental 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
London

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 re-open 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 govern-

ment 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?

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 three.

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 policymakers 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.*"

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

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.*"

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 valua-

tion 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.

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Tom Wakeford (Biology, York); Nigei 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. Amster-dam); 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. Shukia, 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 Shukia, 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.

Contact: Global Commons Institute, 42 Windsor Road, London NV/2 SOS, UK. E-mail: saveforests@gn.apc.org. The 20-page GCI paper is available at £5 (NGOs), £15 (institutions), plus postage.

1996

May - Climax

Tough... but true

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 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 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 is 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 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 C02 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.

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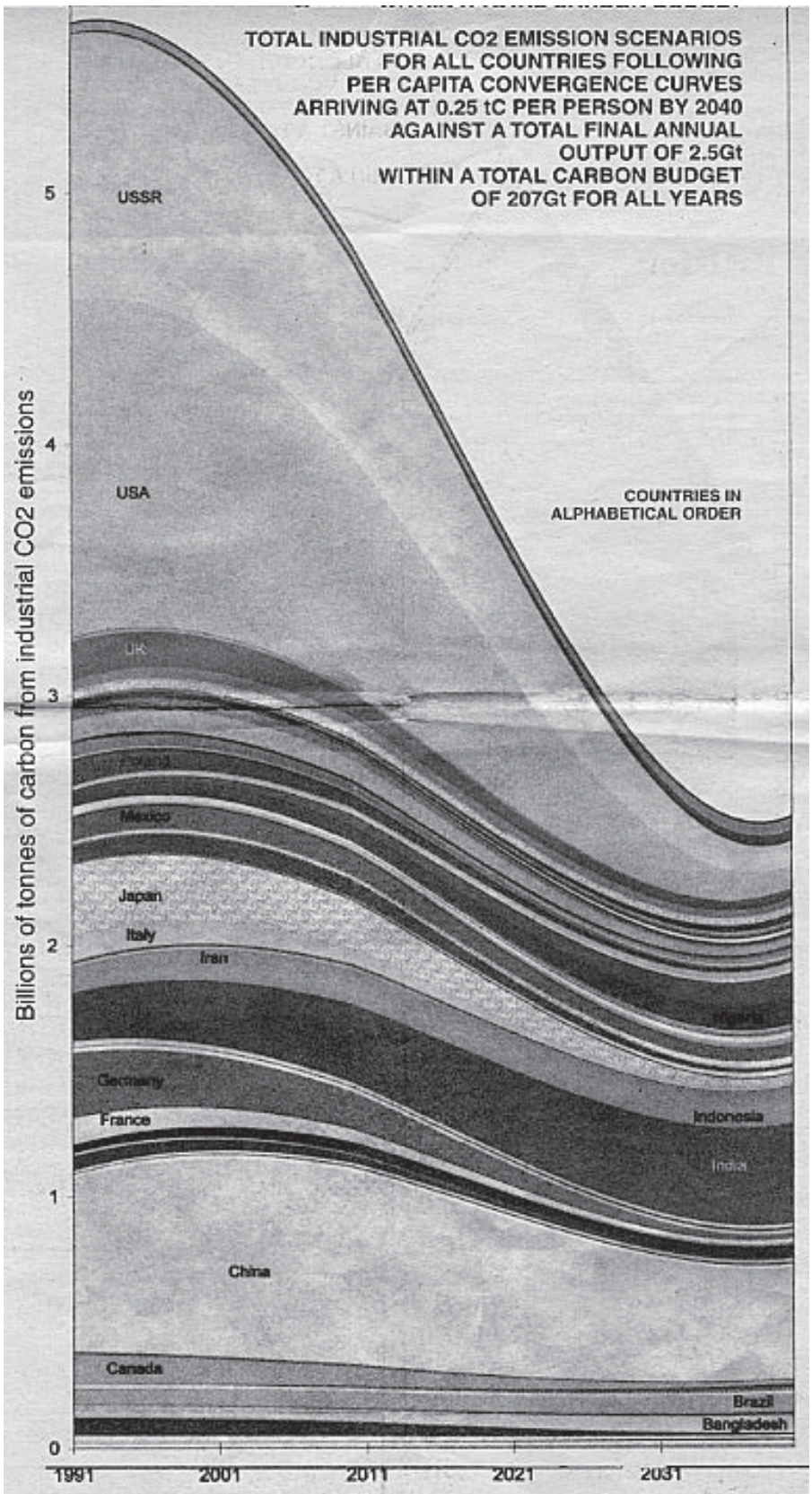
The graph means?

GCI believes that countries should aim to reduce their carbon dioxide emissions to 0.25 tonnes per person per year by 2040. At the moment, emissions are roughly distributed according to a country's GNP - the richer you are the more you emit. In the chart the existing 1990 distribution of C02 production is shown - showing the large shares for countries such as Germany and Japan. In the chart we estimate the effects of overall emissions contracting on a feasible curve to the year 2040. By this time a 60% cut in emissions from around 5.5 gigatonnes of carbon dioxide to just over 2.5 gigatonnes will have been achieved. However in 2040 the distribution of emissions will be according to population - so shares for countries such as India and China will be a much larger proportion of total emissions. The table at the bottom shows what these curves would mean for various countries. It is vital that the current income-based distribution of resource use is replaced by equality between all humans in the global community. In the graph annual per capita value for fossil fuel consumption has been reduced by 2040 to 0.25 tonnes of carbon. While this is a move in the right direction, this alone will not solve the problem of the historical responsibility of the industrialised countries who caused the problem in the first place. However it is a plan within which everyone can agree to worn towards reducing emissions. Activities to reduce emissions which may be jointly implemented between countries with high emissions and low emissions could easily be financed in a way which would lead away from dependence on fossil fuels, towards renewable sources.

Some now say we need a new global ethic. As Buddhists recognise, no one is saved until everyone is saved. GCI says that we will only be saved from global climate change if a new ethic of equity and survival takes root.



Total carbon dioxide emissions for selected countries in Gt
(proportion of 1990 emissions in brackets)

	1990	2015	2040
USA	1.34	0.93 (70%)	0.09 (6%)
Germany	0.26	0.13 (50%)	0.02 (7%)
India	0.18	0.35 (194%)	0.39 (214%)
China	0.67	0.71 (105%)	0.4 (59%)
Poland	0.1	0.06 (60%)	0.01 (10%)
Brazil	0.06	0.07 (116%)	0.06 (100%)

July 29 - The 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.

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

"Basically, they're saying that your right to be on this planet is proportional to your income"

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 iincreasingly 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 (CO_2) 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 CO_2 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 $C0_2$ 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 drumbeat 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 estab-

lished 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 de-position of frozen C02), 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 (GCI), will deliver a lecture on global warming on Tuesday at 6pm in the Quaker Meeting House, Victoria Terrace, Edinburgh

1997

February - Countryside Magazine

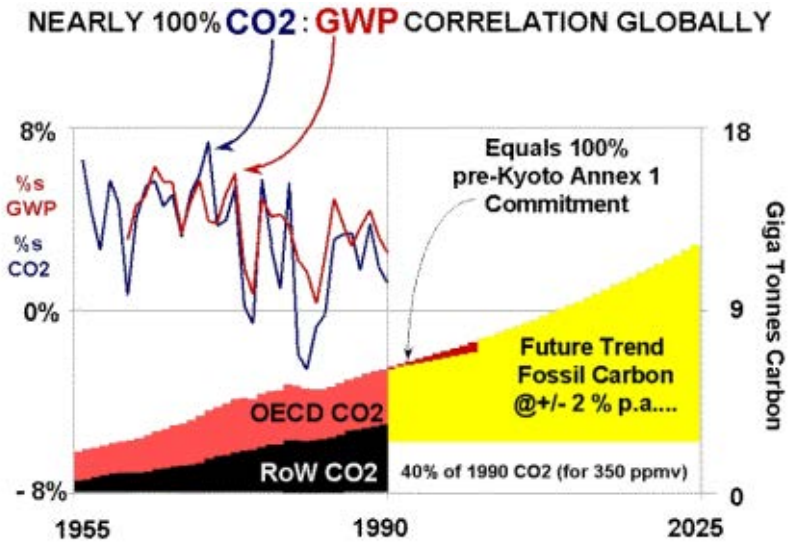
Now the big one

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.

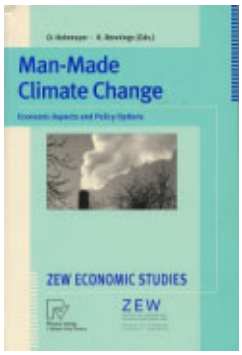
March 1997 - ZEW Centre for European Economic Research

"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

Available at: www.gci.org.uk/articles



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 environ-mental 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 C02 emissions levels by 2100 as compared to 1990. However, atmospheric concentrations of C02 continue to rise to 450 ppmv over the next century (to over 70% above pre-industrial levels) in spite of this contraction of human C02 emissions. It is this persistent atmospheric retention of C02 emissions which is at the heart of the emerging crisis of human-induced climate change.

Damages from raised atmospheric C02 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 C02 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 C02 emissions retained in the atmosphere since that year.

The international political quarrel over the annual C02 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 C02 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 C02 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 C02 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."

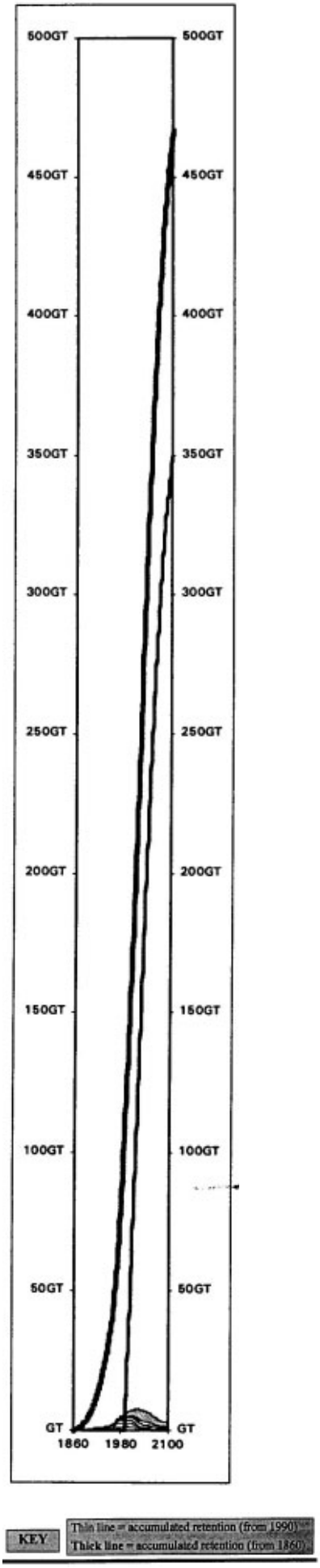
The "convergence" dynamic

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 C02 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 C02 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 C02 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

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 Changewhich 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 C02 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

November 20 - Nature

Equity is the key criterion for developing nations

If the Kyoto meeting fails to reach a satisfac-tory outcome many leaders of developing countries are aware that they may be asked to share re-sponsibility for the failure. The question occupying the minds of top civil ser-vants from Brasilia to Beijing, al-ready under pressure to reduce their greenhouse gas emissions sooner than they want, is simple: how should they respond?

So far, the Group of 77 devel-oping countries, which in-cludes India, African states, the Middle East, Southeast Asia and the whole of Latin America apart from Argenti-na, has been united in its opposition to the US propos-als (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 prob-lems. Until this happens, the G77 countries say they will also refuse on principle to discuss the issue of emissions trading or joint implementa-tion.

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 environ-mental catastrophe. In the middle lie India, China and the other large industrial-izing 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 emis-sions 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 develop-ing 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 speci-fied date. In return, the United States is likely to be asked not to block agreement on targets that would enable developing coun-tries 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 dis-tributing emissions reduc-tions.

A per capita-based solution would set an emissions limit, or 'cap', to a specified num-ber of tonnes of carbon per person a year. Countries emitting more than this would agree to reduce their emis-sions 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 pro-moting the idea that the world's emissions could converge on a single, per-capita figure include the Lon-don-based environmentalist lobby group, Global Commons Institute. Aubrey Meyer, GCI's director, says that, if a per capita strategy were to be followed, global concentra-tions 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 Meyers 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

Per capita solution?

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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 clear-est 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 administra-tion 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

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 and 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,18 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".19 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 China20 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."21

This page is: http://www.thecornerhouse.org.uk/briefing/03climate.html

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 base-line. 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.

> 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.

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.

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

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.

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 widowbox 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."

But 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 - 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.

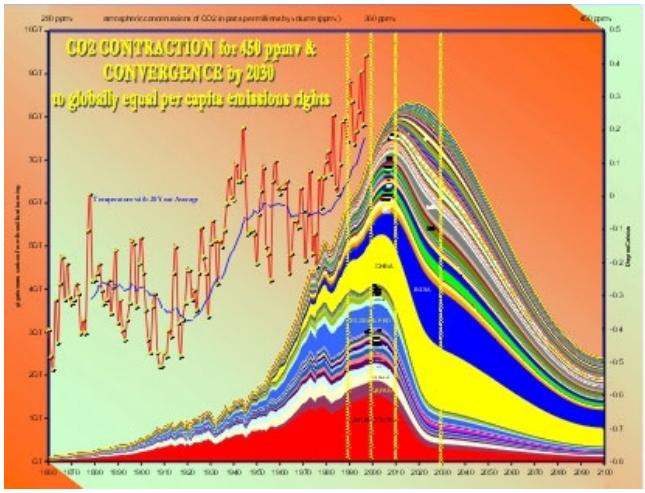
For China and other Southern

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 C02 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 C02 concentrations within the agreed ceiling. The ceiling and budget are held under review;
- Third, countries would agree to allocate the C02 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.

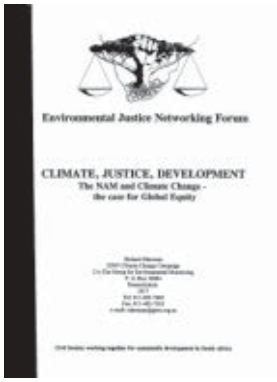
It means agreeing internationally how rapidly greenhouse gas emissions should contract each year and then allocating permits to emit them to all countries on the basis of their populations. The permits would be tradeable, so that those countries which could not manage within their allocations could buy 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...."

Full article at:
www.guardianunlimited.co.uk/globalwarming/story/0,7369,509220,00.html

August 1998 - GCI PUBLICATION

"Climate, Justice, Development – A Policy Briefing to the Non Aligned Movement on Climate Change; the case for Global Equity" –

Available at: www.gci.org.uk/articles


Environmental Justice Networking Forum

CLIMATE, JUSTICE, DEVELOPMENT
The NAM and Climate Change -
the case for Global Equity

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, favor 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 interac-

tion 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.

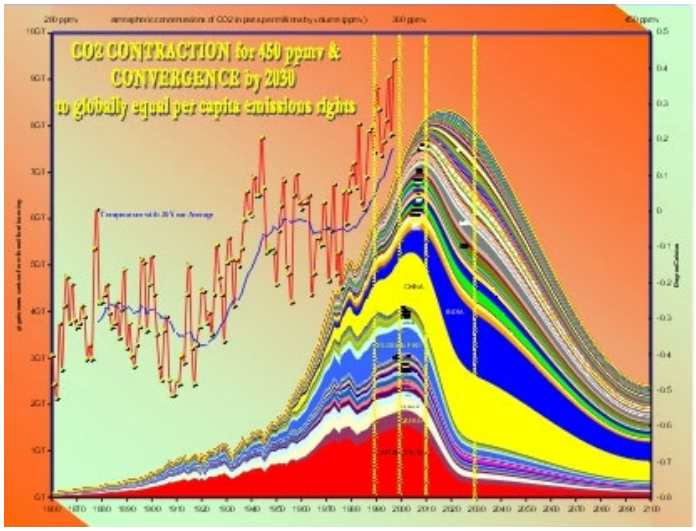
As the technical battles rage over sinks and senates, clean development mechanisms and dirty politics, we all must struggle to keep our heads above the wealth of demands. Our constant concern must be to keep our bearings and ask ourselves whether any particular decision takes us closer to the rendezvous 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 'gigatons' (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 gigatons 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.

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 there-

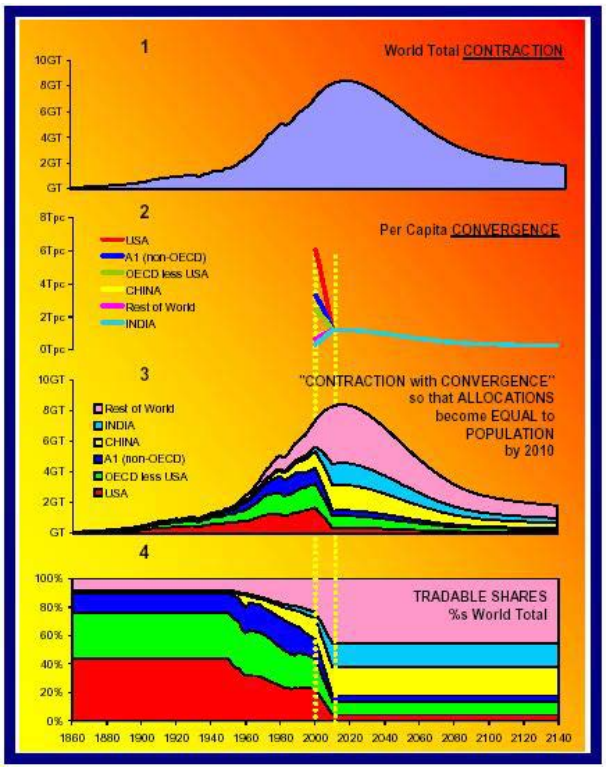
after. Again revision over time may be required. The combination of these operations result in an internationally complete and equitable set of ghg allocations that are legally binding limitations of reductions and also fully internationally tradable shares. The international distribution of shares is 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.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"CONTRACTION with CONVERGENCE"
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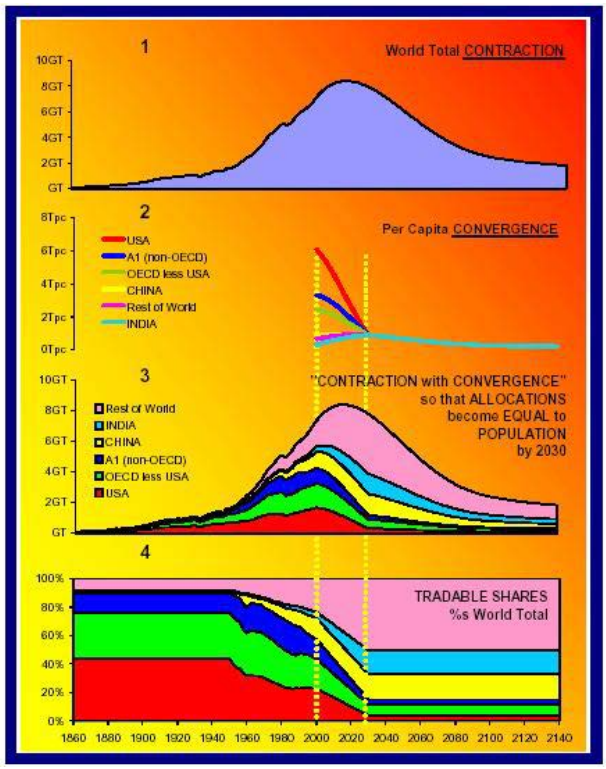
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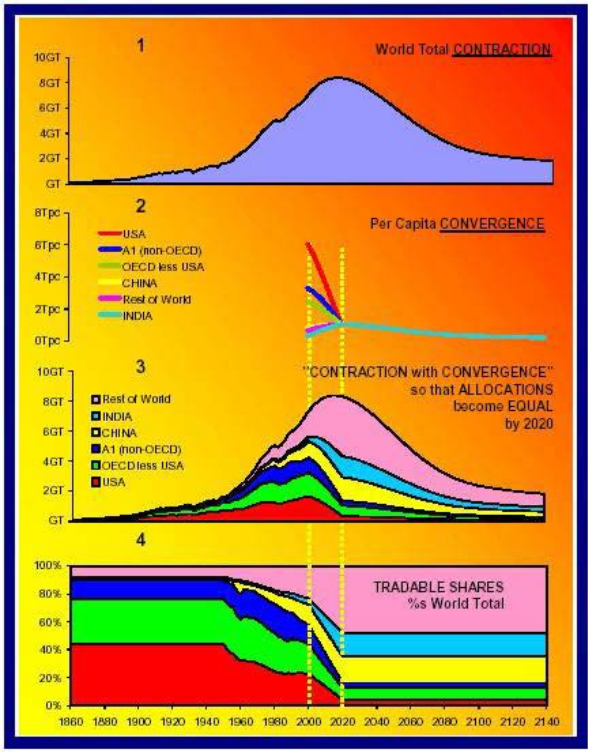
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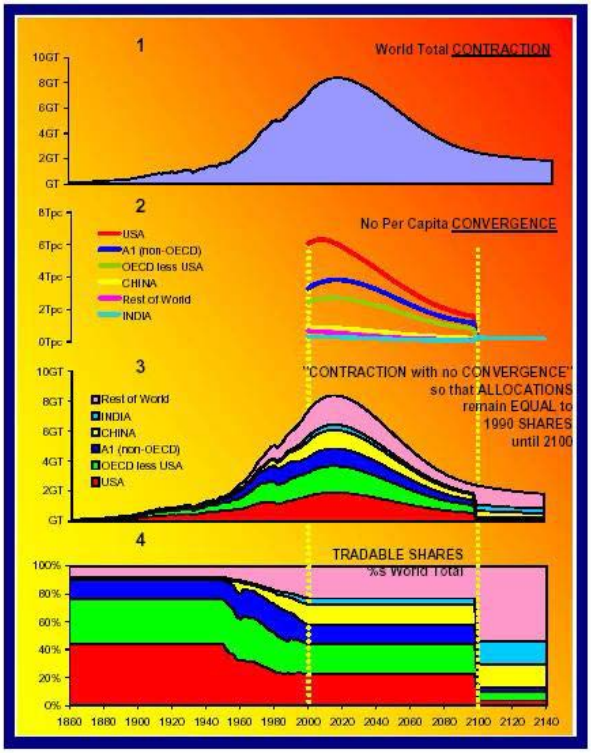
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November 12 - Buenos Aires Herald

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.

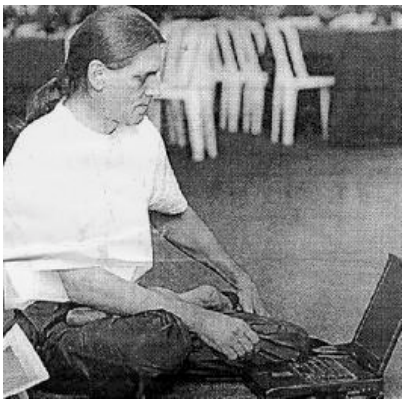
A passionate and intense advocate of a unique idea to head off an environmental disaster and create global equity, Meyer has attracted more attention than ministers and environmentalists. The conference's official newsletter described him serenading cleaning staff and security guards with the violin 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 C02 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.

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 afar 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.

> 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.

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 establish-

ing 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 lime 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.

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

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 Slates' 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, hut 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 off CO_2 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 he 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.

Fig. 1. Stabilisation scenario of CO_2 at 450 ppmv under "Contraction and Convergence" including the Kyoto commitments. Convergence is completed by 2030 with a 70% reduction in CO_2 over 1990 levels. (AOSIS = Association of Small Island States; JUSCANZ - Japan. USA. Canada. Australia. New Zealand.)

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

September 8 - The 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.

Sustainable Development Agenda 1999

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 (GHC) 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 CHG 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 there-after.

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 Porum. 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.

2000

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 imbedded 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.

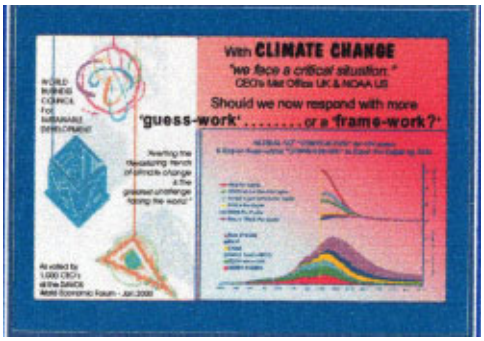
However, a proposal of the Global Commons Institute that is being widely discussed applies the second and third principles by allowing eventually for the allocation of carbon emissions to nations on an equal per capita basis while also allowing for emissions trading.

January 2000 - GCI PUBLICATION

"Guesswork Framework" –

GCI's submission to the IPCC Third Assessment of Climate Change, Working Group Three

Available at: www.gci.org.uk/articles



May 19 - Church Times

Preparing to fund the world

THE CAUSES of global warming are still uncertain. It is likely, though, that both camps in the debate are right: we are currently near the peak of one of the earth's natural cycles in temperature; and human activity is contributing to climate change. Governments in the West have used the uncertainty to justify inactivity, but, as Christian Aid points out, too many people are at risk. Whether the causes of disasters are natural or unnatural, their effects are observable and, in some measure, preventable.

It is possible to be optimistic. Seen over the past few decades, the public in the developed countries has taken steps towards a position of global responsibility. Post-imperialist attitudes towards the Third World nations have improved markedly.

The international media broadcast news of disasters wherever in the world they occur, and the public response is compassionate and generous. The failure of UN peacekeepers in places like Sierra Leone suggests a reappraisal is needed of their mandate, but the commitment behind their deployment remains.

These responses are pitifully small when measured against the scale of the disasters that threaten large numbers of the world's population. 100 million currently at risk from drought in northern India: a further 16 million in the horn of Africa. One projection suggests that three billion people will be at risk if changes to the climate cannot be halted. Nevertheless, it could be argued that the West has laid down the roots of a global ethic, of the kind advocated by Professor Hans Kung. Let us hope that the roots are deep enough, for the task ahead is nothing less than a dismantling of the materialist vision that the West has held so long and still wishes to export to the developing world.

For we are at a halfway house. The Western public is not heedless of the suffering in the most vulnerable parts of the world; but it has yet to stand the test of sacrifice; to see its standard of living dropping in order to release the sums needed to sustain distant sections of the world's population. For the immediate future, this is the only way to fund feeding and resettlement programmes for the large numbers hit by drought or flooding. Restrictions on energy use by the West are only one part of the answer. The Western public must be prepared to be taxed heavily in order to fund resettlement programmes, as parts of the world become uninhabitable. Satisfying Western consumer desire must give way to meeting Third World want.

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.

Sinxe 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.

CO_2 emissions from fossil fuel burning represent the principal contribution to human enhanced global-warming. Half of these emissions have remained in the atmosphere, raising CO_2 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.

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 predefined, 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 place 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

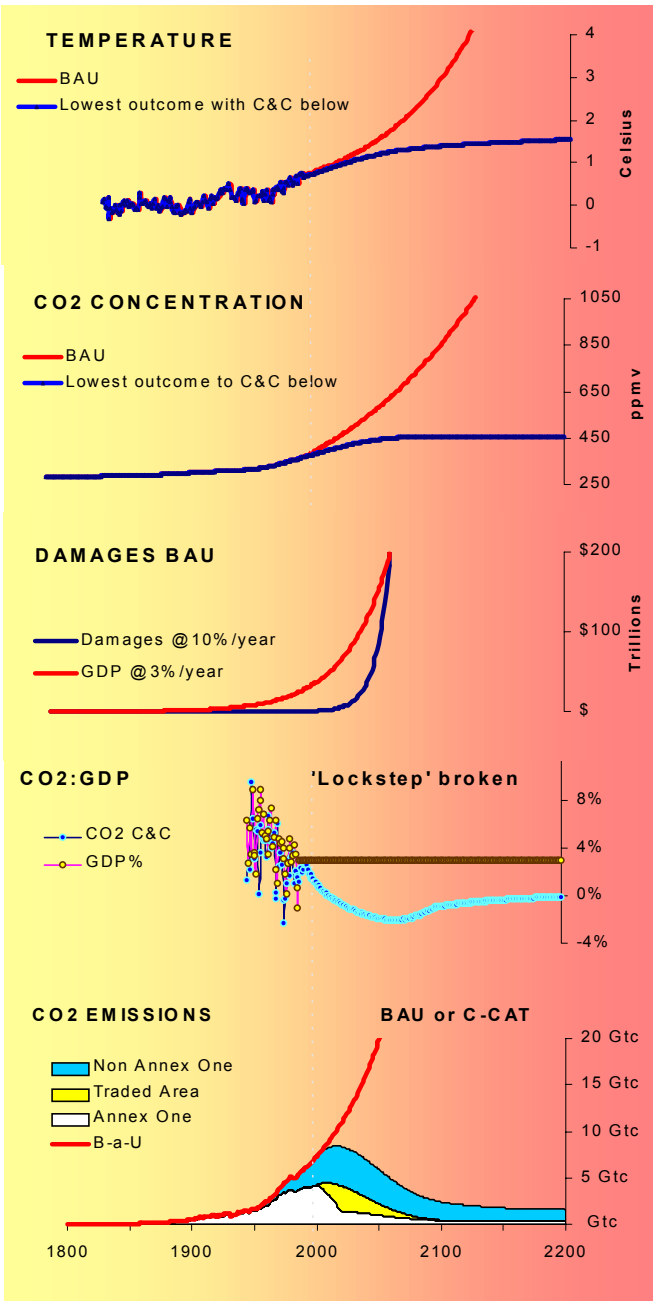
(4) European Parliament in '99

(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 to100 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



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 tota1rise 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.

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 28 - BBC online

The human price of Mozambique's

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

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."

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.

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 offset?"* 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.

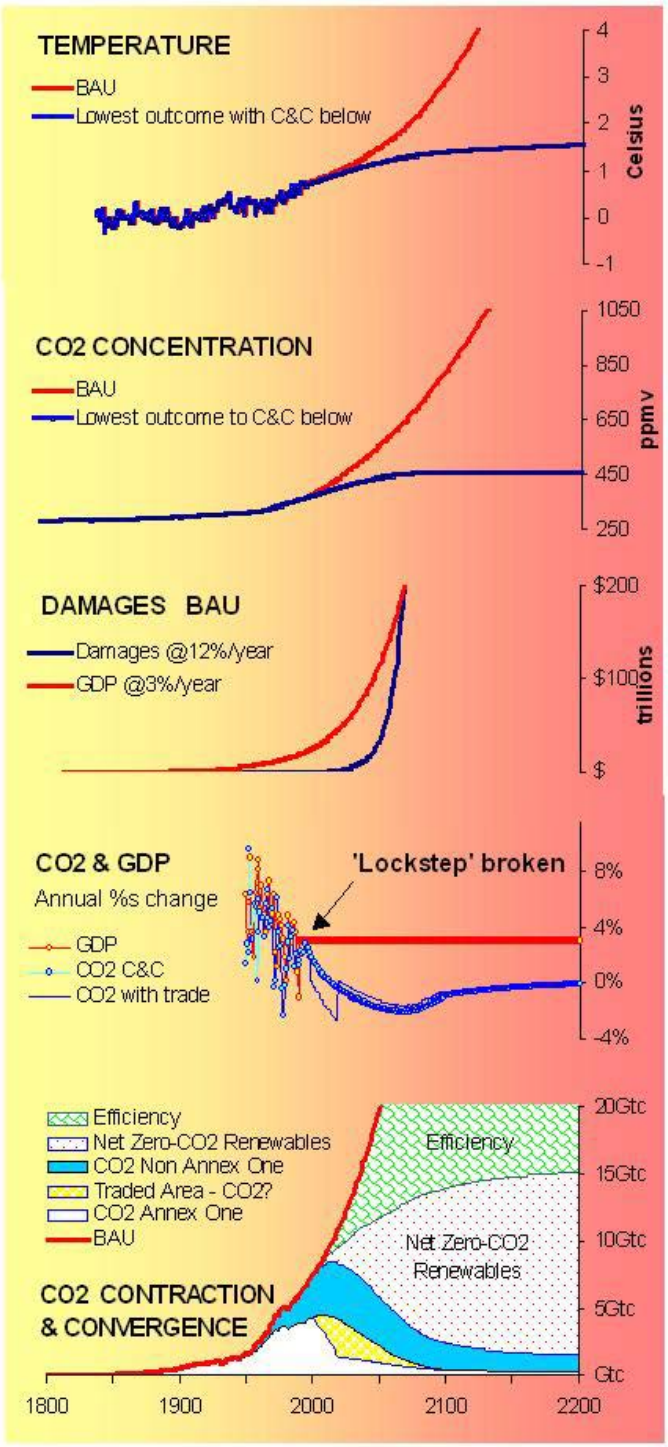
Recorded surface temperature has risen by 0.9°C between 1860 and 2000. Future projections follow CO_2 emissions and atmospheric ghg concentrations (in ppmv - parts per million by volume). The red line shows how temperature will rise with a Business-as-Usual (BAU) 2% annual growth in emissions. The blue line shows the lowest possible climate sensitivity - a tota1rise 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.



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 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 CO2 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 con-sequences 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.

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 the Global Commons Institute - www.gci.org.uk

[Contraction and convergence] 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'

C02 concentrations Recorded rise in atmospheric C02 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 (BAD).The best case sees this rise stabilised at twice today's level due to a 60 global contraction in the underlying emissions by 2100.

C02 emissions The upper line shows Business-As-Usual C02 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.

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

"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."

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

Climate change and insurance

Read full chapter at: - http://www.gci.org.uk/Insurers/Chap10_CII_(C&C).pdf

winds, surrounded by the sea and has considerable biomass capacity in Scotland. Attempts to speed up the transition to renewables should be accelerated to match progress in Europe, especially Denmark and Germany However, under normal commercial circumstances, the transition to renewable energy will not be quick enough or wide enough to deliver the required emission cuts.

Contraction & convergence

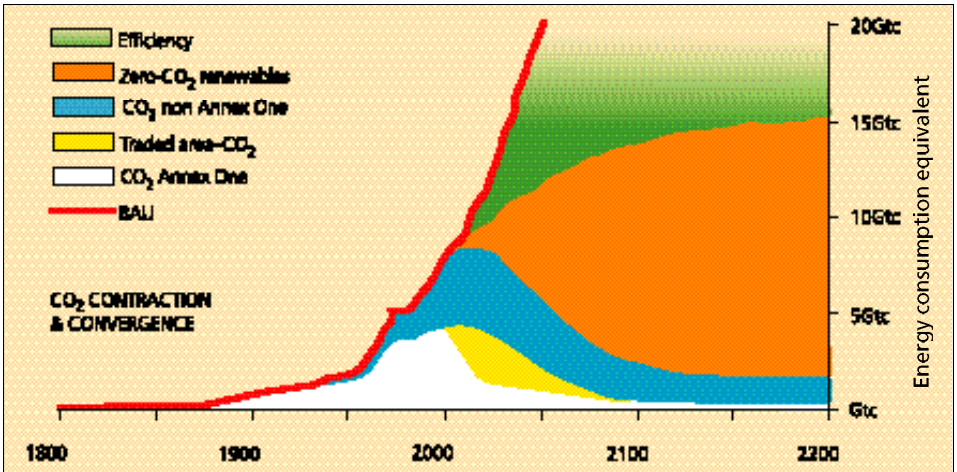
The most realistic way to bring about the required reduction in ghg emissions (which will have the combined effect of reducing the damage imposed on the insurance industry and encouraging the transition to renewable energy) is that proposed in the concept of Contraction and Convergence (C&C). This concept 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 CO_2) 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



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.

Figure 10.9. Contraction and convergence

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 fom 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.

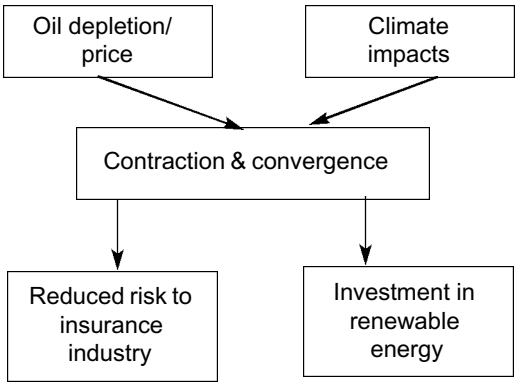


Figure 10.10. Contraction and convergence and risk

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.

- Assist research on weather patterns
- Identify key hazards
- Educate property stakeholders
- Co-operate with government/professionals etc. to
  1. improve physical risks
  2. provide 'essential' cover/recovery
  3. build up reserves
  4. control exposure
- Develop new products
- Back renewables against carbon
- Lobby on emission controls

Figure 10.11. A proactive response to climate change

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 claims-handling.
- 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 societys' 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 societys' 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

2001

2001 – A BRE / LPC Publication

The Implication of Climate Change for the Insurance Industry – an update and outlook to 2020

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).

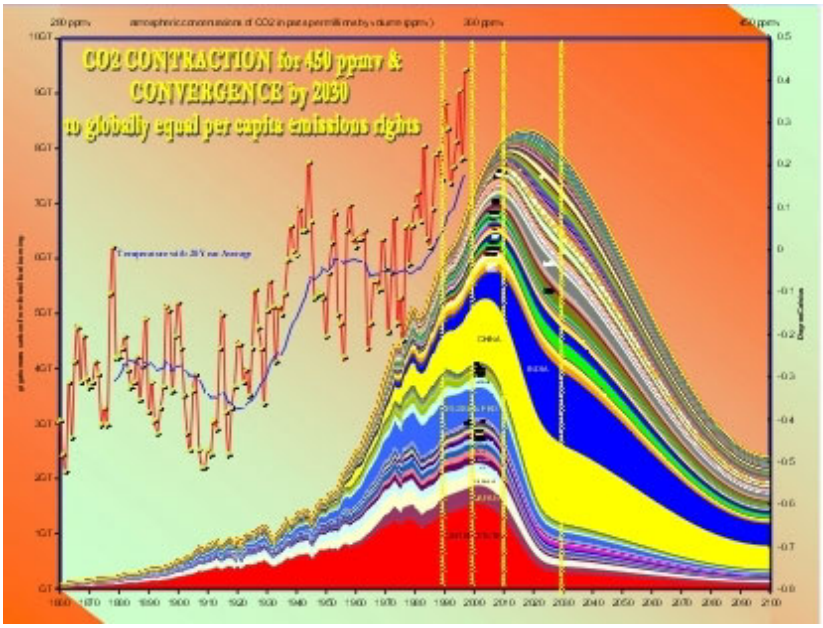
The concept has won support from other influential experts around the world, and has been praised by Michael Meacher, the UK Minister of Environment (see: - www.gci.org.uk).

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 would 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.

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

March - 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 gree

nhouse 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.

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.

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 championedby 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 1 997 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 the 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 he 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 Martyn Turner and Brian 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 CO_2, 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 genera-

tion 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 CO_2, 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 - 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 de-

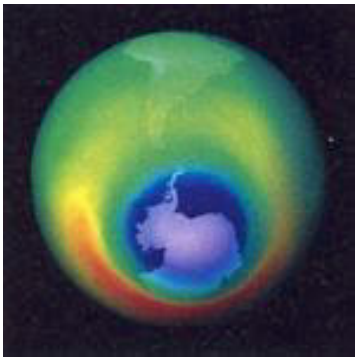
mands for developing country participation, developing world equity concerns, private sector needs for flexibility and efficiency, and (most importantly) EU and NGO calls for a framework with environmental integrity.

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 C02 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 C02 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 sup-port 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

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 focussing 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 interna-

tional 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.

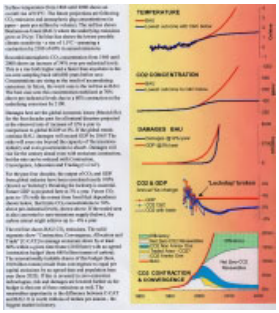
Alex Evans works with the Global Commons Institute.

June 2001 - GCI PUBLICATION

"Contraction and Convergence" –

A Policy Briefing on Climate Change to the UNEP Financial Institutions.

Available at: www.gci.org.uk/articles



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) (see review in this issue).

June - The 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 resolveable.

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 de veloping 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 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 hideyholes.

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.

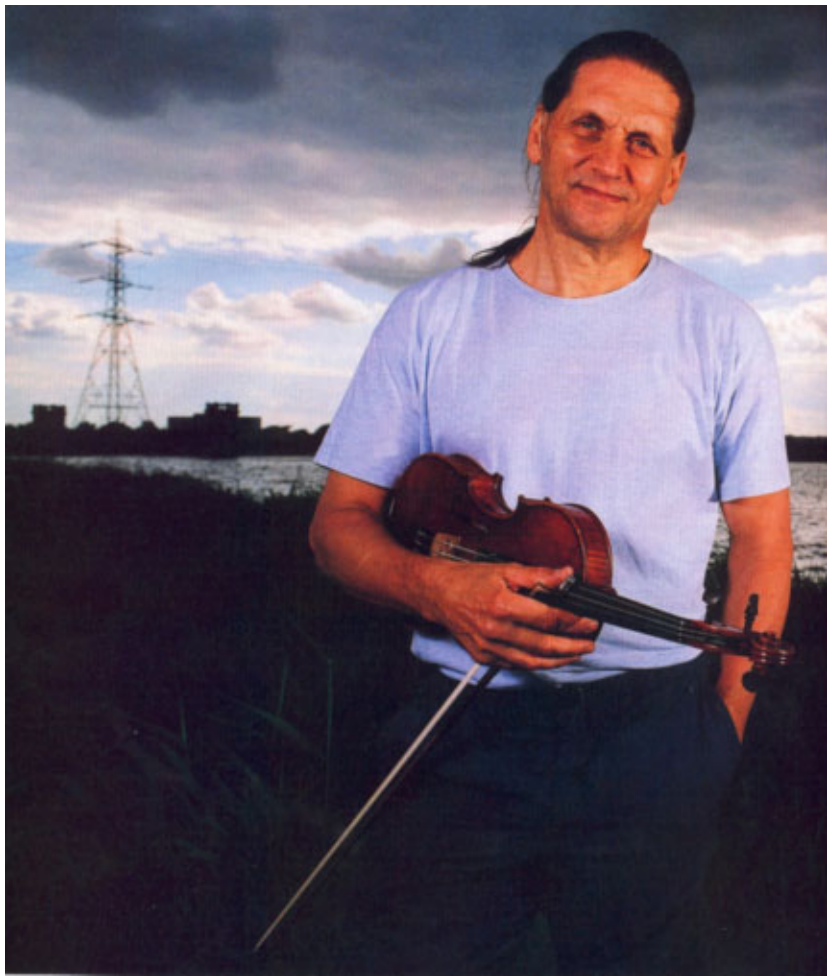
They annoyed me. The analysis produced by the mainstream economists suggested that this problem was insoluble; that it was too expensive to save the planet. This is because their work conceals daft and immoral assumptions not only about the expendability of natural resources but also of human beings. 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 ather than a race to get into it.

Fred Pearce

July - The 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.

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 three, looks likely to dwell instead on the remaining uncertainties surrounding 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.

> **"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

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.

"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.

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.

"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 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.

comment@guardian.co.uk

July 23 - E-Finacne 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."

This article in eFinanceNews at: - http://www.efinancialnews.com/story.cfm?passedref=17000000000016517&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,

mj.q-@virgin.net

http://www.guardian.co.uk/letters/story/0,3604,527366,00.html

August 2 - Commonwealth Human Ecology Council Journal

Why Contraction & Convergence is The Framework to Solve Global Climate Change

Alex Evans and Aubrey Meyer

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?

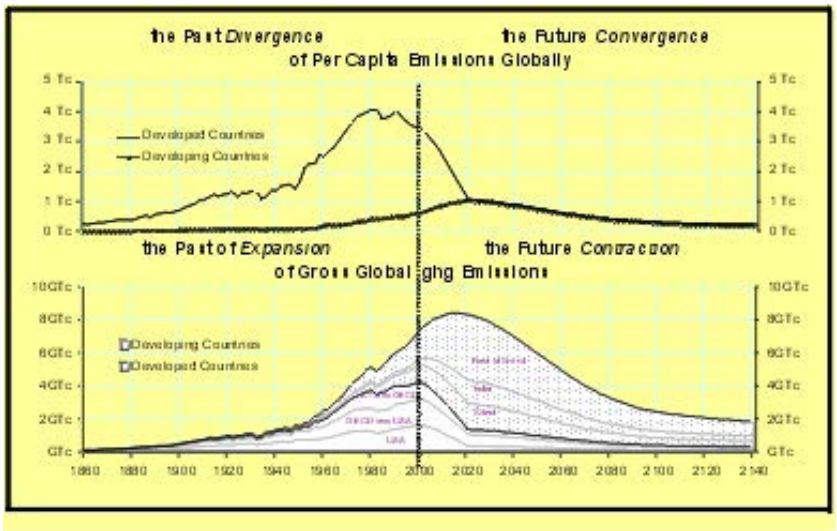
Developing countries argue that they have minimal historical emissions compared to the North, still have much lower per capita emissions, stand to lose out most from climate change, and above all that developed countries should "take a lead" in tackling the problem.

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

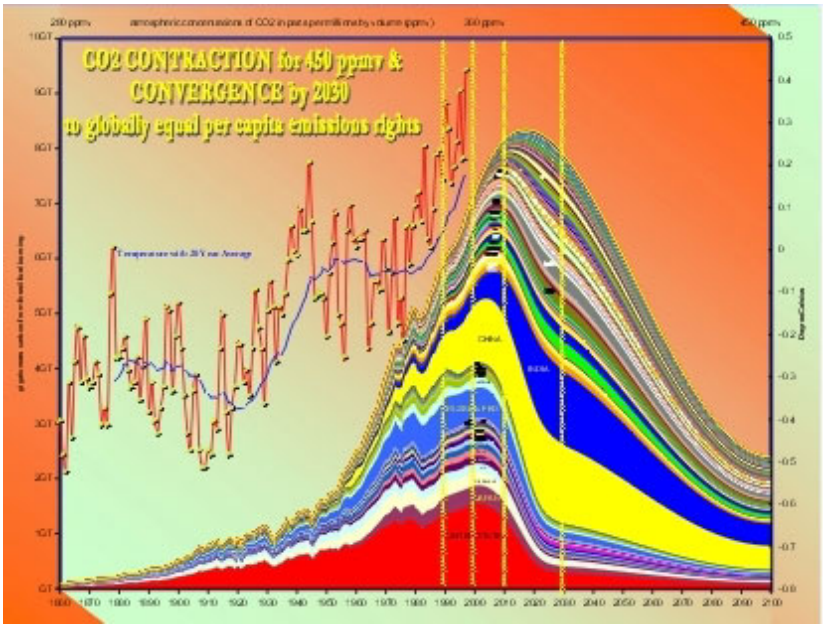
Under C&C, all countries would collectively agree an annually reviewable target for a stable atmospheric concentration of carbon dioxide in the atmosphere, and then work out the rate at which emissions must contract in order to reach it. The need for a specific concentration target to be set is absolutely 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 CO_2 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 fulfill 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 CO_2, 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

The 'UN Observer & International Review' called it the seminal book on climate policy.

Jonathon Loh from Conservation Policy WWF International says it is, *"brilliant and reads like a novel. The policy analysis is of course as sharp as ever (and) the analysis of how the climate negotiations leading up to and beyond Kyoto went off track is spot on."*

It is available from Green Books price £5: - http://www.greenbooks.co.uk/cac/cacorder.htm

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.

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Aubrey Meyer is the Director of the GCI. His email address is aubrey@gci.org.uk He is the author of "Contraction and Convergence – the Global Solution to Climate Change".

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 emmitted 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.

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 indi-

cate 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

"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 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 ammassed 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.

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 0.3iC and 0.6iC. This roughly concurs with UN Inter-governmental Panel on Climate Change (IPCC) estimates, which suggest a 0.6iC increase, plus or minus 0.2iC. 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

"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."

disasters due to climate change, S 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 thermo- dynamics 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."

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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."

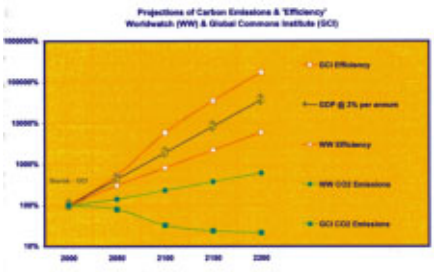
Julian E Salt - of the LPC Centre for Risk Sciences, BRE -

September 2001 - GCI PUBLICATION

"Contraction and Convergence" –

A Policy Briefing on Climate Change to the Performance and Innovation Unit of the UK Government Cabinet Office.

Available at: www.gci.org.uk/articles



November 30 - Finacial 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."

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

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

Full article can be found at www.newint.org

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

Full article can be found at: 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 maneuver 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 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 carbonabsorbing 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 inter-

national 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

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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. "

pollutants, to shift to nonpolluting renewables.

An even bolder approach, the World Energy Modernization Plan—drafted by a group of energy-company presidents, economists, energy-policy specialists, and others (including this writer)—proposes a combination of three policies that would reduce carbon emissions by 70 percent. The plan calls for the redirection of energy subsidies away from fossil fuels to renewable sources in industrial nations; the creation of a fund on the order of $300 billion a year to transfer clean energy to developing countries (financed either through a .025 percent "Tobin tax" on international currency transactions or through carbon taxes in industrial countries); and the replacement of the Kyoto framework of international carbon trading with a progressively more stringent fossil-fuel efficiency standard.

Under the stricter standard, every nation would increase its fossil-fuel efficiency by 5 percent a year until the global 70 percent reduction is achieved. Since few economies can maintain a 5 percent annual growth rate, emissions reductions would outpace economic growth. This would be much easier to monitor than measuring emissions; it would simply entail comparing the ratio of carbon-fuel consumption with gross domestic product. Countries would initially realize their goals by implementing inexpensive energy efficiencies, such as better conservation and more-fuel-efficient cars. As those efficiencies became more expensive to capture, countries would meet gradually tougher standards by drawing more energy from renewable sources. That shift, in turn, would create the mass markets and economies of scale for renewables that would make them as cheap as or cheaper than coal and oil.

This subsidy switch would convert oil companies into energy companies. The progressive fossil-fuel efficiency standard would also jump-start renewable energy, propelling it into a global industry. Worldwide competition for the new market in clean energy would power the whole process.

By refusing even to consider a plan of this scope and scale, Bush is not only risking the U.S. leadership role; he is also ceding the leadership of the next energy economy as European-produced solar, wind, and hydrogen technologies gradually come to dominate world energy markets.

In Marrakech, November is normally the height of the rainy season. As the delegates convened, however, Moroccans were struggling through the fourth year of a severe drought that is destroying forests, depleting water tables, and promoting the spread of deserts into villages. In nearby Algeria, the worst flooding in memory killed more than 1,000 people, collapsed buildings, and turned streets into rivers—another indicator of the violent and unseasonal weather that marks early-stage global warming.

Climate change is unmistakably accelerating. The deep oceans are warming. The tundra is thawing. The glaciers are melting. Infectious diseases are migrating. Violent weather events are occurring more often. The very timing of the seasons has changed. And all this is the result of just one degree of warming. According to the IPCC, the earth will warm from 4 degrees to 11 degrees later in this century.

In November the highly respected British medical journal *The Lancet* estimated that millions of people, mostly in developing countries, will die over the next 20 years from warming-driven outbreaks of dengue fever, malaria, cholera, encephalitis, and pulmonary diseases. If the world does not soon address the climate crisis in its true dimensions, it will not much matter where global political leadership lies. Our fossil-fuel dependency will propel us all into an indeterminate season of disintegration.

Ross Gelbspan

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, 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 dete-

riorating 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.

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.

Caspar Henderson is senior correspondent for GREEN FUTURES

May 23 - Presented at the International Workshop on Oil Depletion

Building Limited Fossil Energy Supplies into the World Monetary System

Richard Douthwaite

"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."

full paper at: - http://www.gci.org.uk/papers/EBCUS.pdf

June 6 - Climate Change Knowledge Network

Business Perspectives - 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."

http://www.cckn.net/compendium/business_background.asp

The CCKN is made possible by the generous support of:
Canadian International Development Agency (CIDA)
Department of Foreign

Affairs and International Trade (DFAIT), Canada
Royal Ministry of Foreign Affairs, Norway
International Development Research Centre (IDRC), Canada

June 13 - Le Monde Diplomtique

"Contraction & Convergence" The Global Framework for Solutions to Climate Change

" . . . . 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 long-term 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?"

Full article at: - http://www.amisuk.f9.co.uk/ourarticles/Apr02art4.html

July 19 - World Review of Books

"Contraction & Convergence – the Global Solution to Climate Change"

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 CO_2 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/CO_2 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."

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)

[1] See: -

http://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 glob-al 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.

2002 - GCI PUBLICATION

"Wilton Park Slide Show" –

With Notes

Available at: www.gci.org.uk/articles

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

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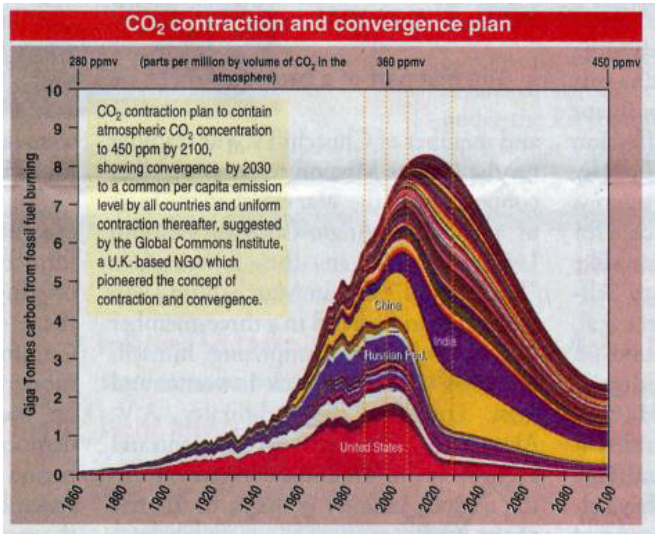
bargaining positions.

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 focussed 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 intergenerational 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 23 - Church Times

Anglicans urge greater concern for the earrth

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."

Full articles at: -

http://www.opendemocracy.net/forum/document_details.asp?CatID=99&DocID=1638&DebateID=177

and

http://www.opendemocracy.net/forum/Message_Details.asp?StrandID=83&DebateID=177&CatID=99&M=1308&T=1308&F=177

September 3 - The Times

Capitalism is 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 overweaning arrogance.

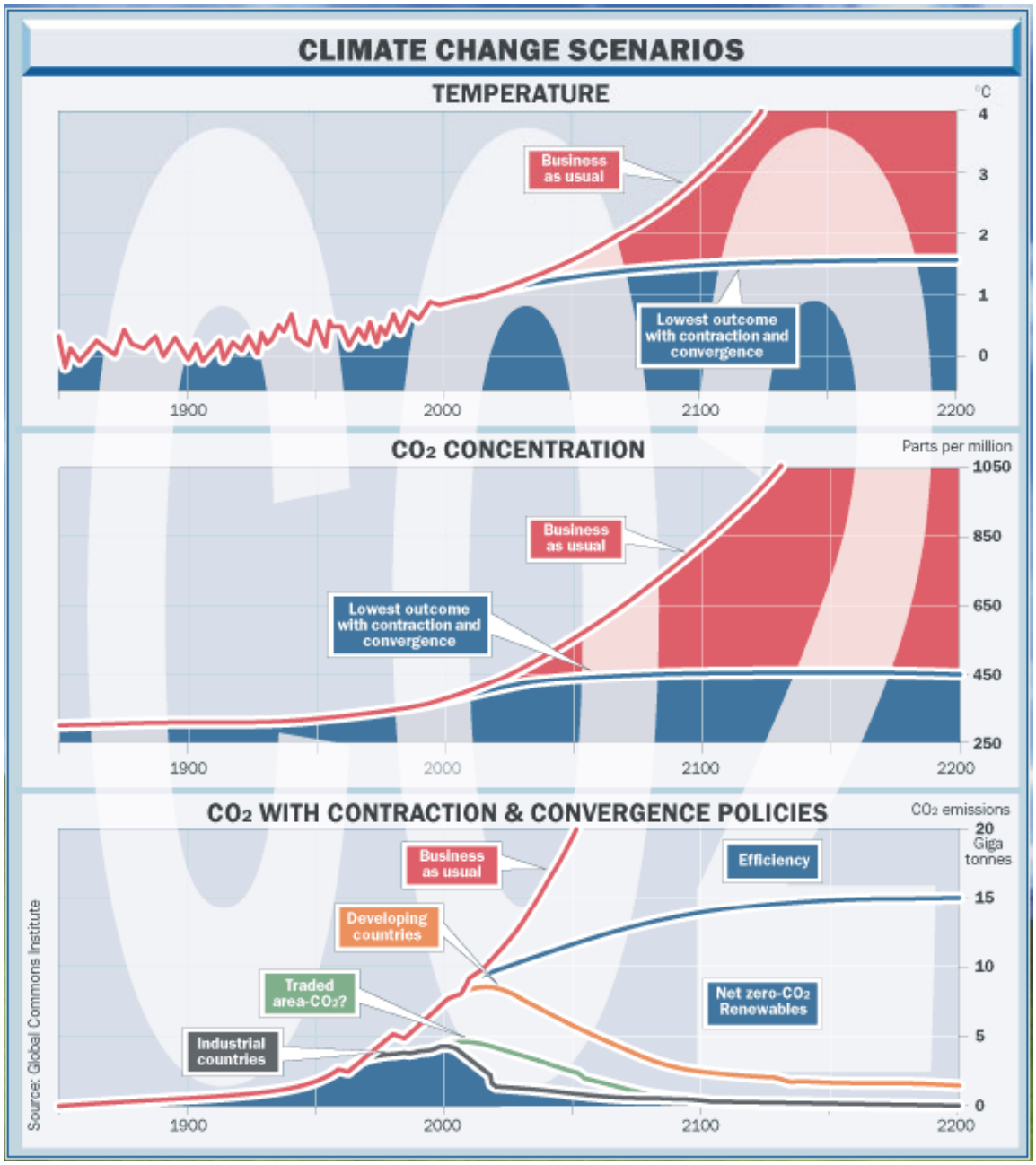
Moreover, the experience of the past two centuries suggests that the generations of the future will be infinitely cleverer than we are. They will devise solutions to their problems with an ingenuity that we cannot begin to imagine today. It is not just lazy and selfish to leave the solution of many long-term 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 emmissions 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 disupting 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 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

To see why this might be so, consider the ambitious target for reducing carbon emmissions 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.

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.