what next for slowing climate change?

AUBREY MEYER

US opposition to meaningful steps to curtail greenhouse gas emissions is putting the whole world in jeopardy. Feasta is helping to develop an approach which might break the American veto

If humanity's reaction to the threat of global warming is not fast and effective, we might as well not bother to respond at all because the only thing slow and grudging actions would achieve would be to delay the onset of whatever is to happen by a few years. The choice we face is therefore between making determined, drastic changes now, or doing nothing. There is no middle road.

This is because, if we allow the warming to proceed too far - and we've no idea how much warming is safe - powerful feedback mechanisms will kick in and there will be no clawing back from where they take us. We don't even know whether these feedbacks will be positive or negative, whether they will lead to another ice age or to a runaway warming, as the panel explains. But they will happen. They've happened before and they work very quickly, as the ice-core and pollen records show.

It doesn't really matter whether a rapid warming or an ice age occurs - either would be equally catastrophic. So the message is clear: greenhouse gas concentrations in the atmosphere have to be stabilised within the next ten or twenty years if we are to have a decent chance of avoiding the one or the other. This in turn means that we don't have the luxury of waiting until the most economically powerful countries on the planet decide to attempt to solve the problem. That might be too late. A structure has to be found within which those countries that recognise the seriousness of the problem and are prepared to act can do so without waiting for the others, who can always join the effort later. After all, it would have been

impossible to establish the EU if it had been necessary to get all 15 countries to sign up at once. Why should action to halt climate change be any different?

One part of that structure is Contraction and Convergence, the method of controlling greenhouse gas emissions I've developed over the past ten years with colleagues at the Global Commons Institute in London and about which I spoke at a Feasta conference in March 2000. So what is C&C and how might it help slow, or even halt, the warming process that is making people so concerned? Essentially, it involves three steps:

1. An international agreement is reached on how much further the level of carbon dioxide (CO_2) in the atmosphere can be allowed to rise before the changes in climate it produces become totally unacceptable. Fixing this target level is very difficult as the concentrations are too high already.

2. Once the ultimate overall limit to CO_2 concentrations as been agreed, it is a simple matter to use an estimate of the proportion of the gas released which is retained in the atmosphere to work out how quickly we need to cut back on current global emissions in order to reach the target. This cutting back is the Contraction part of Contraction and Convergence.

3. Once we know by what percentage the world has to cut its CO_2 emissions each year to hit the concentration target, we have to decide how to allocate the fossil fuel consumption that those emissions represent. Should it be left to the market to do so? - If it did, we would effectively allow the industrialised nations, which have caused the warming problem and have become rich through their overuse of fossil fuel, to continue to use the lion's share. Or should we say, as the Americans once did, that all countries should cut back by the same percentage? This proposal would, of course, mean that those countries which use most fossil fuel now would continue to use most in the future. That would scarcely command worldwide support. Or should we say, as the C&C approach does, that the right to emit carbon dioxide is a human right which should be allocated on an equal basis to all of humankind? This might appeal to a majority of the countries of the world but the overconsuming countries would have to be allowed an adjustment period in which to bring their emissions down before the Convergence on the universal level. So C&C has a period for that built in.

After convergence, each country would receive the same allocation of CO_2 emissions permits per head of its population at some agreed base year. Those countries which were unable to live within their allocation would be able to buy

more permits from countries which ran their economies in a more energy-frugal way. This feature would lead to a steady flow of purchasing power from the countries which have used fossil energy to become rich to ones which are currently poor. It would thus not only shrink the gap between rich and poor but also encourage the South to develop along a low-fossil-energy path.

But what currency would the fossil-fuel-hungry countries use to buy their extra emissions permits? I put this question to Richard Douthwaite on the telephone about three years ago and he immediately said that, if reserve currencies like US dollars, Euros, Sterling and Yen were used, the countries which issued those currencies would get their extra permits at a discount. This was because a proportion of the money they paid over would not be returned to them in payment for their exports but would be used instead as if it was a world currency to finance international trade. Obviously, this would give these countries an unfair advantage over the rest of the world. Consequently, if C&C was to work fairly and well, it had to become even more radical. We had to extend it into the area of international monetary reform.

Richard put forward proposals for doing so in his Schumacher Briefing, *The Ecology of Money* which was published in October 1999. He suggested that an international agency be set up to handle two things. One was the allocation and issue of greenhouse gas emissions permits he called Special Emission Rights or SERs according to the C&C formula. The other was a new global currency which would be used for trading SERs internationally. This he called the ebcu, an acronym for emissions-backed currency unit.

Ebcus would get into circulation by being distributed, free, to the nations of the world on the basis of their populations, just as everyone gets the same allocation of cash when they start a game of Monopoly. Richard wants ebcus to be used for all international trade, not just the purchase of SERs, and thinks that a majority of countries might be prepared to insist on payment in ebcu to avoid giving the countries with reserve currencies a permanent trading advantage. If, after trading with ebcus began, the price of an SER in ebcu rose above a certain figure, the issuing agency (IA) would sell more SERs for ebcus, thus putting a ceiling on their price. The ebcus the IA received for the sale would be permanently removed from circulation. This would reduce the number in use, restricting the amount of international trade it was possible to carry on, and thus the world demand for fossil fuels. In other words, the system automatically restricts the level of economic activity to one which is compatible with bringing greenhouse gas emissions down along the internationally-agreed trajectory and hitting the atmospheric

concentration target. On the other hand, if humanity learns to manage with less fossil energy, there's no barrier to the amount of trade going up.

The next step came in October 2000 when I spent ten days in Westport with Richard working on my Schumacher Briefing on C&C. A lot of our time was spent discussing the apparent impossibility of getting the US actually to make even the totally-inadequate emissions reductions it had pledged under the Kyoto Protocol, let alone the savage cuts urgently required to reduce the risk of a catastrophic climate change. It was vitally important that the US should not be allowed to block action by other countries. However, the inclusion of the ebcu proposals in the C&C package would make it very attractive to most nations in the Majority World (MW) as it would give them emissions permits to sell each year and also an initial allocation of the new world currency which would go a long way to clearing their debts.

However, it would be very unpopular with the US, which would not only have to buy emissions permits every year but which would also lose the advantages given it by the power of the dollar. The main OPEC countries would oppose the system too, as making it necessary for oil companies to buy emissions permits before they could take delivery of oil or gas would mean that they could afford to pay less for the fuel. The cost of the emissions permits would come straight out of the fossil energy producers' pockets. Some fossil energy-producing countries might be in an intermediate position, though - they might lose oil revenue but gain from the sale of permits.

Our idea that a part-world, let's-ignore-the-US-and-go-ahead-anyway solution might be practical developed quickly. The Dutch alternative newsmagazine *Ode* had called a conference on international monetary reform in early December, billing it as an attempt to produce a Bretton Woods agreement (the agreement under which the World Bank and the IMF were set up) for the 21st century. It had even booked a five-star hotel at Noordwijk ann Zee with the same style and ambience as that on the other side of the Atlantic used in 1944 by the original Bretton Woods negotiators. Richard had been invited to speak, others in the Feasta network were going to be involved and he thought the organisers would invite me too. It seemed a great chance to give the C&C plus monetary reform package an airing.

As over two years' preparatory work preceded the original Bretton Woods agreement, Richard thought we'd better prepare a draft treaty to take with us. I was tied up in the climate negotiations at The Hague, so, with the help of other Feasta

members and particularly John Jopling and James Bruges, he drew up the following document which spells out in some detail how a more sustainable climate and monetary regime might be achieved. The explanatory comments are part of the original paper.

the treaty of Noordwijk

FEASTA'S DISCUSSION DRAFT

Preamble

The world economy is not working well. Its over-use of the Earth's resources threatens the stability of the climate and is causing the fastest rate of species extinction since the disappearance of the dinosaurs. Moreover, fisheries and forests are being destroyed by over-exploitation, aquifers pumped out and soils eroded with little thought for the consequences. The natural capital on which future generations will depend is being rapidly lost.

Yet despite the economy's profligate and increasing rate of resource use, the majority of humanity still lives in dire poverty and the gap between rich and poor is growing. In 1997, the richest fifth of the world's population enjoyed 74 times the income of the poorest fifth, up from 60 times in 1990 and 30 times in 1960.

The poverty has serious consequences. Dirty water and bad sanitation enable cholera and diarrhoea to kill three million of the poor a year. Indoor air pollution, mainly from cooking stoves, causes two million deaths. Vector-borne diseases such as malaria kill another 800,000.. And urban air pollution and agri-chemicals, the results of the way our economic system has developed, are also major killers. In all, roughly a fifth of all disease in poor countries is caused by factors which could be readily changed if a relatively small amount of resources were switched from other uses.

Even if we were to disregard its damaging effects on the environment and on the lives of millions of people, the world economy has to be considered dysfunctional in its own terms because of its fundamental instability. It is widely accepted that something as simple as a stock market crash could cause it to break down catastrophically and plunge the world into a depression comparable or worse than that in the 1930s. Moreover, a national economy can be ruined almost overnight by speculative money flows, as Mexico's was in 1994.

All these problems are due in large part to faults built into the present global economic system when it was set up at Bretton Woods in 1944. At that time, in response to

overwhelming pressure from the United States, mechanisms designed to redress the balance between countries with trade surpluses and those with trade deficits were left out. Consequently, the problems the system produces cannot be solved until it is replaced or radically changed.

Designed to allow the world economy to move towards the goals of sustainability, stability and equity, the Treaty of Noordwijk would, if ratified on behalf of a majority of the world's people, bring about most of the reforms required to alleviate the above problems. In particular it would:

- Put a genuine world currency into circulation for the first time.
- Limit the level of global economic activity to the maximum compatible with the Earth's environmental health.
- Bring about a fairer distribution of the Earth's resources.
- End most Third World debt.
- Provide annual funding for improved health, educational and social services.
- Give national governments more power over international investors and speculative currency movements.
- Remove the necessity for countries to achieve economic growth purely to avoid financial collapse in circumstances in which the growth is known to be environmentally and socially damaging.
- Make national economies much more stable.
- Allow countries to move towards sustainability as rapidly as they would wish rather than the pace of the slowest.
- Remove the unfair built-in advantages enjoyed by countries issuing 'hard' currencies in the present global financial system.

Clause 1: We, the parties hereinafter subscribed, resolve to set up a new international institution, the Issuing Authority, to issue and manage a global currency on behalf of us all.

Comment: A world currency is necessary in the interests of international equity. Because there is no global currency at present, the countries which issue 'hard' currencies such as the dollar, the pound sterling, the Euro, the yen and the Swiss franc all benefit very considerably from having their monies used as global money substitutes. Their benefits arise because the central banks in third countries keep their currencies in their foreign exchange reserves, effectively giving them an interest-free loan of the goods and services which were supplied to earn the money in the first place. The US is the major beneficiary - at the end of 1999, the dollar accounted for 66% of global foreign exchange reserves according to the IMF. In addition, billions of dollars are held offshore by non-US banks and lent as Eurodollars to non-US customers. In addition, many billions are used for international trade transactions not involving the US, for purchases in 'dollar shops' or are hoarded by their holders for fear their national currency will collapse or civil disturbances will break out. These vast holdings explain in part why the US has been able to run a balance of payments deficit on its current account for many

years. What this means is that the US has been able to purchase a much greater value of goods and services from the rest of the world than it has supplied.

Clause 2: The Issuing Authority will be controlled by a board of directors elected by a representative of each of the subscribing states. Each representative will be deemed to hold a proxy on behalf of each citizen of the country he or she represents.

Comment: This clause means that populous countries will have a greater say in choosing the members of the board of the IA than countries with small populations. Once elected, the directors will be able to act independently of the countries which voted for them - they will not represent any specific bloc or part of the world. This will be quite unlike the situation in the World Bank and the IMF in which almost half of all the votes are controlled by the seven leading Western industrial countries with the result that the institutions are run to further the industrialised countries' interests.

Clause 3: We further resolve that the Issuing Authority be responsible for issuing carbon dioxide emission rights to an Approved Organisation in each subscribing state in accordance with the broad principles of Contraction and Convergence.

Comment: If global warming is to be curtailed, the international community is going to have to agree a generally-acceptable framework for doing so. The only framework being widely discussed at present is Contraction and Convergence. This involves setting a target for the maximum level of greenhouse gases such as CO_2 in the atmosphere and then working out by how much the current level of emissions needs to be cut annually so that the target is kept. Then, having set each year's emissions quota in this way, the current year's allocation is shared out among the nations of the world according to the size of their population in a base year - say 1990. Those countries which don't receive enough emissions permits to be able to consume as much fossil energy as they would like can then purchase permits to emit more greenhouse gases from countries such as India which currently use very little fossil energy per inhabitant. Every year there would be a new issue of emissions permits in line with the pre-determined, declining quota for that year. This system would not only ensure that the target level of greenhouse gases in the atmosphere was not exceeded but would also shift purchasing power from countries which have become rich by their over-use of fossil energy to poorer parts of the world.

Clause 4: At the same time as the first year's issue of carbon dioxide emission permits is made, the Issuing Authority will distribute the new global currency to the central banks of the subscribing states on the same population-related basis as the permits. The subscribing states undertake to use the new money for trading in emissions permits and for all other international transactions.

Comment: For the reasons already explained, if those countries with widely-acceptable currencies were able to use them to buy extra emissions permits, they would effectively be getting a discount on their purchases because a large fraction of the money they

paid over would go into circulation as if it was world currency and not be presented back to the wealthy issuing country in payment for goods and services bought by the poorer country.

The new currency is intended to be used for all international transactions, not just those involving emissions permits. The IA will not be able to stop private traders using, say, dollars, for a transaction not involving the US, but all countries should be encouraged to feel that it is wrong to continue to use another country's currency for transactions not involving that country as it gives an unfair international advantage to the country whose currency is used..

The issue of the global currency will mean that countries which hold dollars and other convertible currencies will no longer need them in their foreign exchange reserves, for general international trading and for hoarding - the new money will be available for these jobs instead.. They will consequently be able to use their hard currency holdings to pay off their foreign debts. If they have too little hard currency to get out of debt entirely, they will be able to buy additional hard currency with part of their global currency allocation.. This is likely to release most poor countries from all their external debt problems. Any surplus global currency should be regarded as capital and used for development projects.

Clause 5. The Issuing Authority will undertake to sell more emissions permits whenever their price in terms of the world currency, which is to be called the ebcu (Emissions-Backed Currency Unit), rises above a specified level. Equally, if the price of permits falls below the specified level having once achieved it, the IA will either put more ebcus into circulation on the same per capita basis as they were originally issued or reduce the supply of emissions permits in the next annual allocation.

Comment: This mechanism fixes the value of the global currency in terms of emissions permits. It also controls the total amount of activity that it is possible to carry on within the world economy. The Quantity Theory of Money states that the amount of money available determines the number of transactions it is possible to carry out in an economic system at any given price level if the speed at which money passes from hand to hand stays constant. Thus, if the level of economic activity in the world economy is so high that additional fossil energy is required to fuel it and the demand for this extra fuel drives the price of emissions permits up above the specified level, the IA will sell additional permits and remove the ebcus it receives in payment for them from circulation. This reduction in the world's money supply would reduce the level of activity in the global economy and thus the demand for fossil energy, causing the price of permits to fall back. Similarly, if the price of permits fell, either the level of activity in the world economy would be too low (in which case mass unemployment would be evident) or humanity would have been so successful in developing non-fossil energy sources that the demand for fossil fuel had dropped. In the latter case, the IA should reduce the quota of permits it distributes the following year in order to accelerate the fall in greenhouse emissions and achieve a lower, safer maximum concentration of

greenhouse gases in the atmosphere. In the former case, just enough extra ebcus should be issued to alleviate extreme hardship.

Clause 6. The Approved Organisations to which the IA will issue emissions permits will be independent national trusts set up specifically to handle emissions permits on behalf of the individuals entitled to them. Each subscribing state undertakes to submit for the IA's approval proposals for the means by which the trustees of its trust will be chosen. We understand that no trust will become an Approved Organisation unless it is clear that its trustees are independent of government and can act independently of it. Subscribing states grant the IA the power to cease to issue permits to any AO which it believes has not handled previous issues of permits and/or the revenue from them in the best interests of the beneficiaries.

Comment: One of the problems with any system which involves the flow of a great deal of valuable property to any country is that the ruling elite may take most of it for itself, or use it to further its political or military ambitions. Consequently, just as the World Bank and the IMF have the power to refuse to lend to governments with policies they dislike, so the IA must have the power to see that each person in whose name an emissions allowance has been issued actually benefits from it. Generally, each trust will auction its allocation of permits and then decide how to spend the national currency it receives for them in the best interests of the people of the country concerned.

For example, as transport, water and sanitary services, health care and education are more effectively provided on a collective rather than an individual basis. a trust might choose to allocate part of its income to those directly, rather than giving all the money to the people in whose name they hold it so that they can buy these services independently. A trust might also favour operating old age pensions and children's allowances rather than giving a flat basic income to everyone, as everyone would be able to benefit from these at some time in their lives. Trusts might also make funds available for the rapid development of renewable energy sources, in order to prevent general hardship by keeping energy prices down. However, as cost structures will change considerably as the use of fossil fuel becomes much more expensive, the first duty of most trusts will be to ensure that the very poor do not suffer from the changes. They will consequently have to distribute a proportion of their income directly to those in whose name they hold it, possibly as a citizens' income.

While the trusts will sell their allocations of emissions permits for their national currency, they need not necessarily (and perhaps should not because of the risk of corruption) restrict the bidders to their own citizens. Foreigners whose bids are accepted will have to pay in ebcu, and these sales will fix the exchange rate between the ebcu and the national currency.

Clause 7. The subscribing states undertake to have two national currencies, one for trading and the other for savings, in operation within five years from the date

of ratification of this treaty. They agree to set each currency up so that it has its own external exchange rate which they will allow to move in such a way that inflows and outflows to and from the relevant account balance from month to month.

Comment: The reason that speculative and/or investment capital flows can be so damaging is that they alter the exchange rate which applies to imports and exports. This is because when investment funds, foreign loans or hot money flow into a country, their conversion out of foreign currency into the national one increases the demand for the national currency above what it would otherwise be and thus lifts its value in terms of the foreign currency. This, in turn, makes imports cheaper and means that exporters earn less. In other words, inward capital flows damage domestic producers and favour foreign ones. This means that if capital subsequently begins to flow in the other direction, the country is less able to manage on its home production and its export earnings than it would have been if the capital inflow had not taken place because its home producers and exporters have been undermined. Moreover, if interest rates are raised to try to stem the outflow - as happened in Mexico - every company with any debts at all will see its profits fall because of the additional interest it has to pay on its borrowings. Some companies may be driven out of business altogether.

The solution to this problem is to keep capital flows and import-and-export money flows completely apart. This was the usual practice in most countries until the Bretton Woods system was destroyed by President Nixon in 1971 when he removed its basis by unilaterally deciding that the US would no longer sell gold at $35 an ounce. In the aftermath, when countries abandoned the fixed exchange rates they had had with the dollar and allowed the value of their currencies to float, they mistakenly saw no need to keep current and capital flows separate.

The maintenance of separate exchange rates for the two types of money flow means that the value of a country's exports will always equal the value of its imports and also that there will be no net flow of capital into or out of the country. It will, of course, be possible for people to move their capital abroad, but only by exchanging it, through the market, with people wishing to move their capital the other way. This provision would completely halt short-term speculative flows and remove the need for a Tobin-type tax. It would also give governments much more power as, if the markets did not like their policies, the only effect would be to alter the exchange rate on the capital account. There would be no crisis. The system would be very stable.

Separating the two flows and having differing exchange rates for each essentially means that a country gets two types of money, each with a different function. One would be exchange money, used solely for buying and selling. This would be the money to be spent into circulation by the government as described in Clause 8. The other type would be the money in which one's savings were kept. This second currency would be expected to keep, or increase, its value relative to the exchange currency over the years. Its existence would mean that a government would not have to worry too much if the exchange currency lost a little of its value each year from inflation because it had

chosen to keep plenty of exchange money in circulation to ensure that there was plenty of work.

The two currencies would be linked as follows: Supposing you wanted to buy a capital asset, such as a block of shares or a house. You would take your exchange money, the sort in which you would get your pay, and buy savings money to use for the asset purchases. This savings money would come, via a broker, from someone who had sold some of their capital assets and was wanting to get hold of exchange money to pay for living expenses. The exchange rate between exchange money and savings money would be fixed by the market. If a lot of people wanted to save and fewer people wanted to cash in their savings, then more exchange money would have to be offered for the savings money.

If you wished to buy shares or a house overseas, you would buy savings money with your exchange money, and then use your savings money to buy savings money in the country in which you wanted to invest. If ever you wanted to sell up abroad, the steps would be reversed.

All this might sound very complex the first time it is encountered. In practice, however, it would be easy to carry out and, by ensuring stability and enabling national economies to run at their maximum capacity consistent with keeping greenhouse gas emissions below the global target, bring many benefits.

Clause 8. For reasons of national and international financial stability, the subscribing states undertake to issue their national trading currencies by spending them into circulation themselves rather than by allowing their commercial banks to create these currencies by lending them into use.

Comment: Of all the money we use, only the notes and coins are issued by the government though its central bank. The rest - the money we transfer when we write a cheque, authorise a direct debit or use a credit or debit card - is created by the commercial banking system and only exists because we, or someone else, has borrowed it and is paying interest on it. As notes and coins are now mostly used just for minor transactions, 97% of the money in use in a typical industrialised country has been created by someone going into debt. This makes the financial system very unstable because, if people begin to feel a little uncertain about their economic future, they will not be prepared to take out as many new loans as they did, in total, in the equivalent period the previous year. As the earlier loans are being repaid, the fact that the total value of new loans has fallen means that less money is being put into circulation than is being taken out by the repayment of loans and the payment of the interest due on them. In other words, the amount of money in circulation will contract and, as we have already seen, the Quantity Theory of Money suggests that, unless prices fall or the smaller amount of money is passed from hand to hand faster, the amount of trading carried out in the economy will contract.

The lower level of trading will cut business profits and these will be further reduced because the stock of money available to be divided up amongst firms at the end of a year is lower. The lower profits and tougher business conditions will make people even more reluctant to borrow, causing a further contraction in the money supply, which in turn will deter more borrowing. The economy will enter a downward spiral and end in a severe depression. This explains why governments are so keen to ensure that economic growth continues year after year, even though it might be damaging the environment and society. In the present system, growth is necessary to ensure that enough borrowing goes on to prevent the money supply contracting and causing a slump.

Allowing the commercial banks to create most of a country's money and charge interest on it gives a massive, distorting subsidy to this part of the financial system. The alternative is for the government to spend the required amount of money into circulation itself. In an expanding economy, this would allow taxes to be reduced or the level of government services increased. More importantly, by making the amount of money in circulation much more stable, it would make the level of economic activity much more stable too. If the government found that the economy was slowing down and unemployment was developing, it could issue more money to itself and spend it into use. This spending would not only create additional jobs directly but also because the additional money supply would enable an increased amount of trading to go on. On the other hand, if it put too much money into circulation so that a rapid inflation developed, it could easily correct the situation by putting up taxes and withdrawing the money from use. This would be a much more effective way of controlling the money supply than the present one which involves increasing the interest rate so that people are deterred from borrowing. The drawback with this as a control method is that raising the rate of interest raises the price of the money which businesses have already borrowed. This is itself inflationary as it adds to business costs and, naturally, firms try to recover their higher costs by charging higher prices. As a result, quite high, and therefore damaging, increases in interest rates are often required to keep prices steady under the present regime.

Clause 9. Subscribing states undertake not to trade with, lend to, or borrow from, non-subscriber states except on terms approved by the IA. They grant the IA the right to suspend the issue of emissions permits to Approved Organisations if the state which the AO serves allows trading with non-subscriber states without the consent of the IA or, if IA consent has been given, on terms not approved by the IA. In cases in which a subscribing state's actions are seriously undermining the interests of other subscribers, they grant the IA the right to delete the state's name from the list of subscribers.

Comment: This clause is to deter Free Riders. A few industrial countries are likely to consider staying outside the global currency/ghg emissions control system in order to subsidise their production of goods and service by using fossil fuel for which emissions permits have not been purchased. This would give their exports a cost advantage over countries inside the global system if they were allowed to trade freely with them.

Consequently, in order to prevent the global system from being undermined, countries within it have to be able to protect themselves against this type of unfair competition. If these powers enable the IA to stop subscribing states from trading with non-subscribers except on terms which it approves, the risks of the system failing are much reduced.

In practice, the IA is likely to require those importing goods from non-subscribing states to buy emissions permits to cover the emissions the production of the imports generated. The same system would work in reverse - exporters to non-subscribers would be given emissions permits to cover the fossil energy their products required to make. However, exports to non-subscribing states are likely to be small in the early years of the system as the importing countries will be required to pay in ebcus for them and they will be earning very few ebcus because the policy of the subscribing states will be to spend their stocks of now-redundant dollars and other convertible currencies for their imports and only use ebcus once these have gone.

Clause 10. Subscribing states undertake to allow their national trading currencies to be supplemented by regional and local trading currencies. They agree to encourage regional and local governments to accept the payment of regional and local taxes in supplementary currencies which meet specified standards.

Comment: Under the Noordwijk system, governments will cease to have their economies' rate of economic growth as their primary concern. Instead, they will give priority to ensuring that as much economic activity is carried on as is possible within the greenhouse gas emissions allocation. If they put a lot of exchange money into circulation in an attempt to reduce unemployment in peripheral or rural areas, they are likely to find that an excessive amount of money gets into circulation in the more prosperous areas and that this raises the demand for energy there, causing the exchange rate of their exchange currency to fall in relation to the ebcu. Consequently, a better way of ensuring that all areas of a country are as economically active as their inhabitants wish to be is to encourage the development of regional and local currencies in the poorer areas as these would allow local trading to be carried on even if the national currency was scarce. The local currencies would have their own variable exchange rates with the national currency. As a result, their issue and circulation would not affect the exchange rate of the national currency with the ebcu except to the extent that more fossil energy was used by the extra activity they generated..

It has frequently been pointed out that if the North of England had had its own currency in the 1980s rather than using sterling, its shipyards, factories and mines would not have been as badly affected as they were by the high value of the pound brought about by the flow of money from North Sea oil and the earnings of the City of London. Similarly, the former East Germany was badly affected by the one-for-one exchange rate chosen for the Ost mark against the Deutschmark. The introduction of regional currencies would prevent these problems and end the social hardship which results from the one-currency-suits-all approach to money matters.

Clause 11. This Treaty will come into force when it has been ratified by subscribing states whose total population comprises more than half the population of the world.

Summary

The Treaty of Noordwijk will bring an end to an extraordinary period in the history of humanity in which groups of people, their productivity enhanced by their excessive use of fossil fuel, used the wealth that their high productivity brought them to purchase whatever they wanted from the rest of the world without regard for the sustainability of what they were doing or for the effect they were having on those living in a more sustainable way.

In addition, the Treaty will end a period in which economic growth had to be generated without regard for whether or not it was proving beneficial purely to keep the economic system from immediate collapse. Such growth puts unnecessary pressure on the environment and denies resources to people whose need for them is acute.

The Treaty will bring about circumstances in which each nation, released from most international and internal debt, will have the freedom to work towards environmental and social sustainability as rapidly as it wishes without regard for international investors or its competitive situation and without having to limit itself either to the pace of the slowest country or the maximum made possible by international negotiations.

In short, the Treaty, if ratified, will bring about a more equitable, stable and sustainable future for all of humankind.

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The *Ode* conference itself was a wash-out although the company was enjoyable and the hotel was fine. The problem was that only six or seven people of the 150-plus present actually knew anything about money systems and the way they work, let alone the climate crisis. Consequently, the first draft of the 'official' statement of what had been agreed at the meeting had no mention of money at all. Richard and Bernard Lietaer, the former Belgian central banker and currency reformer protested about this (I'd gone up to my room to play my violin out of sheer frustration) but were fiercely opposed by Mickey Huibregsten of McKinsey Netherlands, the international consultants, who, for some reason we failed to discover, had been made responsible for assembling the statement. 'We have to leave specific techniques out of this', 'We can't sign something we don't understand' and 'There's uncertainty about climate change' are some of the phrases I'm told Huibregsten

used. The document he produced was so bland and toothless as to be a complete waste of time.

Nevertheless, the effort put into assembling the draft 'treaty' wasn't wasted. It has been widely circulated and discussed on the internet where it is called 'The Feasta Noordwijk Treaty' to distinguish it from Huibregsten's work. The challenge now is to assemble a group of nations which will put it, or something very similar, into effect. It matters very much which countries join the system and which don't. If only those countries which expect to have a surplus of permits to sell in the first few years join, the system won't work as there will be no 'over-consumers' in the market to buy permits although a small demand could be created by requiring firms importing from the over-consuming bloc to buy permits to cover the amount of fossil energy used to make whatever goods and services they are bringing in.

To make the market for permits work properly in the absence of an all-world membership, the number of permits issued by the IA would have to be reduced by the number the non-participants could have been expected to buy had they joined. Obviously, this cuts the benefits to those with permits to sell, so it is crucial to get some overconsumers - the Europeans, for example - to join the system too, perhaps on the understanding that a lot of the orders currently going to the US and other countries which stay out will be switched to them. The more overconsumers joining, the greater the financial flow to the Majority World (MW) and the bigger the market the MW will be able to provide for industrialised country exporters.

If the MW refused to sell raw materials and manufactures to overconsumers unless they joined the system, it would put irresistible pressure on many to do so. The MW states would have the freedom to take such a stance as most of their debts to the overconsuming bloc would have been cut sharply when ebcus began to be used for all inter-MW trade, freeing up the reserve currencies currently used for inter-MW trading for debt repayment. Moreover, the MW could make the threat without causing itself unemployment to the extent that demand in the MW rose because more money was in circulation and the MW countries needed more resources themselves.

If the MW were unhappy about a total refusal to sell to over-consuming non-members, they could merely say to the US and similar countries: 'We don't need your dollars any more. We'll only sell to you if you pay us in ebcu'. This would mean that the US had to earn ebcu before it could import. It could only do this by exporting to the MW and, before its exports could clear customs, the importers

would have to buy emissions permits to cover the energy taken to make them so that the US did not gain a competitive advantage from being outside the system.

So where do we go from here? As the last few paragraphs show, the feasibility of introducing the C&C plus monetary reform package on a piecemeal basis depends entirely on which countries sign up for it and the policies they adopt towards non-participants. It would be very nice to produce a model which predicted the outcomes for each country according to whatever countries are involved, and I'm currently looking for volunteers to undertake that work.

Their results will be essential for the other strand I'm following. This is to talk to various MW governments to try to interest them in the idea of not only attempting to avert a damaging change in the world's climate but also bringing about a more equitable distribution of the world's wealth. If some charismatic MW leader - perhaps Dr. Mahatir of Malaysia, who, during the Asian Crisis, saved his country from economic ruin by going against the West's advice and introducing currency controls - took up the idea and promoted it, the chances of building a more sustainable world would soar.

Biographical Sketch :

Aubrey Meyer is a violinist and composer who was once the principal violinist in the BBC Ulster Orchestra. He was born in Bradford, grew up in South Africa and studied music at the University of Cape Town. He was a founder of the Global Commons Institute and largely responsible for the development and promotion of the 'Contraction and Convergence' approach to halting global warming. In 1998 he won the Andrew Less Memorial Award with the following citation: 'Aubrey Meyer, almost singlehandedly and with minimal resources, has made an extraordinary impact on the negotiations for 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'. He works full-time on climate change issues and lives in North London.

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This article is from the first* Feasta Review*, a 204-page large format book. Copies of the book are available for £15 from Green Books.