

FAILURE AT THE HAGUE: CLIMATE PROTECTION IS PUT OFF ONCE MORE

The fact that human activity is contributing to global warming seems increasingly probable. The principle of precaution was adopted as of Rio, 1992. In Kyoto 1997, the industrialised countries committed themselves to objective targets for reducing gas emissions, the precise implementation of which were discussed at the Hague, in November 2000. The gap between the positions of the European Union and the United States closed considerably during these negotiations. But their ultimate failure may be explained by government reticence to promote significant changes in the modes of production and consumption which current economic conditions do not impose.

There is now hardly any doubt concerning the reality of global warming nor about the role played by the rise in emissions of greenhouse gases (GHGs). To a large extent, this rise is linked to modes of production and consumption in temperate climate regions and to the fall in GHG removals by “sinks” due to deforestation in tropical regions.¹ But, while scientific discussion increasingly stresses the urgency of adopting preventative measures to meet the long term threat to the world's climate, few economic and political actors have an immediate interest in protecting this public good.

■ PROTECTING THE “CLIMATE” AS A PUBLIC GOOD

With the Rio Convention², countries recognised that greenhouse gas emissions generated by human activity are probably contributing to the warming of the planet. They therefore deduced, on the basis of the precautionary principle, that it was necessary to stabilise GHG concentrations at a level which would prevent any “dangerous anthropogenic interference in the climate system”. This approach avoided making a direct comparison of the costs of possible damages and how to avoid them, for which it would be difficult to

obtain agreement³. Alternatively, given the scientific results set out by the IPCC (Intergovernmental Panel on Climate Change), imposing a reasonable ceiling on gas concentrations implies that emissions would stabilise before 2050 and then fall substantially in the second half of the 21st century. The annual cost of such a growth path in emissions has been estimated to represent several tenths of one percent of global GDP⁴.

It was agreed that this burden would be shared between groups of countries, given their historical responsibilities, their exposure to climate change and their living standards. In a first phase, only the rich countries will have to make commitments to reduce emissions. The industrialised countries which signed the Convention have declared themselves ready to ensure that the volume of emissions in the year 2000 does not exceed the 1990 level.

■ ***The Strengthening of Commitment at Kyoto***

Later negotiations concerned increasingly restrictive quantitative commitments and how these objectives can be met at a better cost. With the Kyoto Protocol in 1997, the industrialised countries which had ratified the Convention (the “Annex B Parties”, which include members of the OECD in 1992, apart from Turkey, plus eleven countries from Central

1. The Third Assessment Report on Climate Change by the IPCC (Intergovernmental Panel on Climate Change) is to be published in 2001. It is more certain and more pessimistic than the last report, published in 1995. If no additional measures are taken, the concentration of GHGs will rise from less than 300 parts per million (ppm) in 1900, and about 350 ppm at present, to between 540 and 970 ppm by 2100. The rise in concentration could lead to an increase in the global mean temperature of between 1.5 to 6° C over the same period. This would raise the sea-level by between 14 and 80 cm, and would probably increase extreme weather conditions.

2. The United Nations Framework Convention on Climate Change, based on the 1990 IPCC Report, adopted at the Earth Summit of the United Nations in Rio, in 1992, and ratified in 1994.

3. See the Second Evaluation of the IPCC, “Climate Change, 1995”.

4. O. Blanchard, P. Criqui, M. Trommetter, L. Viguière, “Au-delà de Kyoto: enjeux d'équité et d'efficacité dans la négociation sur le changement climatique”, *Economie et Prévision* April-June 2000.

and Eastern Europe, Russia and the Ukraine) committed themselves to objective targets, which will become legal once the Protocol has been ratified. As a whole, these countries must reduce their emission of six principal greenhouse gases⁵ over the period 2008-2012, by at least 5% with respect to their emission levels in 1990. As at Rio, no commitment was imposed on the developing countries. However, specific aid should help them reduce emissions over the long term.

The cuts required by the Kyoto Protocol are limited, given the long term objectives, but are very strong compared to present trends (see Graph 1). Emissions by transition countries have indeed fallen substantially since 1990, due to their economic crisis, and should remain well below their levels in 1990, through to 2010. But emissions continue to rise in the OECD countries: by 2010 at current rates of increase, they could exceed levels prevalent in 1990 by 15% in Europe, by 25% in the Asia-Pacific region, and by 30% in North America. For the world as a whole, emission trends point to a 40% increase between 1990 and 2010.

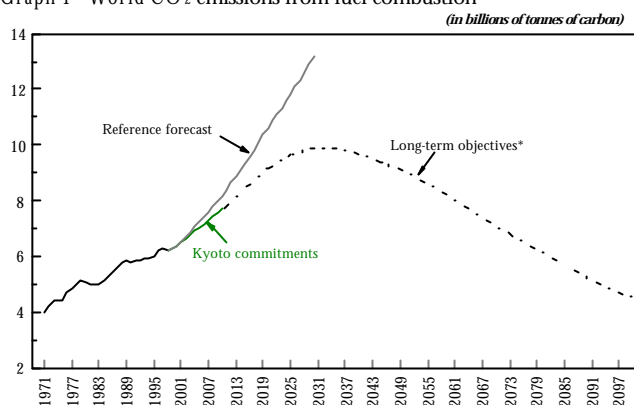
Meeting the Kyoto target commitments will be all the harder for most of the OECD countries given the significant improvements which have already occurred over the last twenty years in terms of the efficiency of energy applications. Further savings will thus require more radical measures. Since 1990, the trend to reducing energy intensity⁶ has slowed in the OECD countries, and growth in energy consumption per capita has continued. Road and air transport generate more than a quarter of total carbon dioxide emissions in the OECD. These emissions have been growing very rapidly since the 1970s, and the trend is likely to continue over the next ten years. The improved efficiency of engines has been largely offset by the use of large model vehicles and greater traffic, following on from higher incomes, low fuel prices, the evolution of urban settlement, and just-in-time stock management in companies.

■ Flexibility Mechanisms

The scale of the targets to be met under the Kyoto accord led to the inclusion of “flexibility mechanisms” in the Protocol, in order to achieve the reduction objectives at a lower cost: countries may agree among each other to share out the reduction effort so as to reduce overall costs.

The principal flexibility mechanism authorised by the Protocol is the possibility of trading emission rights among Annex B countries. Furthermore, within the framework of “joint application”, an Annex B country may count as a reduction in its own emissions any reductions carried out in another Annex B country, stemming from a project it has financed. Lastly, a particular form of imports of emission permits from abroad is also authorised via “Clean Development Mechanisms”: an Annex B country may “fulfil part of its obligations” by financing projects to reduce emissions in developing countries.

Graph 1 - World CO₂ emissions from fuel combustion



Sources : IEA, *CO₂ Emissions from Fuel Combustion 2000*; O. Blanchard *et al. op. cit.* ; Second Assessment by the IPCC, *op. cit.*

*2010-2030: a 5% cut in the Annex B countries and progressive stabilisation in the developing countries; 2030-2100: path assuring the stabilisation of the concentration of GHGs at 550 ppm, through to 2150.

The flexibility mechanisms put forward by the Protocol guarantee a fall, probably significant, in the total cost of respecting commitments. The cut in emissions proscribed by the Protocol is estimated to lead to a cumulated reduction of US GDP of 1.3 percent by 2010, 1 percent for the European Union, and 0.8 percent for Japan⁷: the costs could be halved if a system of tradable permits is set up within the Annex B countries, and could be divided in three were markets for permits to be extended to the whole world.

However, trade in permits would not necessarily generate a virtuous mechanism for reducing emissions in the industrialised countries, due to the fact that it could lead to weak or unstable permit prices in the long term. Thus, the market within the Annex B countries would be significantly distorted by the large number of so-called “hot air” permits allocated to Russia and the Ukraine on the basis of their emission levels in 1990, but which they have not used because of economic recession. The extension of the market to developing countries would lead to a lasting fall in the cost of permits, as these countries have great potential for reducing emissions at a low or moderate marginal cost.

BOX - THE EMISSION REDUCTION COMMITMENTS OF THE KYOTO PROTOCOL

The reduction of emissions by “sources” (the combustion of fossil fuels, cement production etc.) and the variations in the removal of carbon by natural, vegetation “sinks” in the wake of forestation or agricultural measures are both accounted for. Yet quantifying such net removal by “sinks” is technically delicate. In the carbon cycle, carbon dioxide is mainly taken up, definitively, by maritime micro-organisms (plankton), over 4 to 7 years. A small share may be temporarily stocked by land vegetation. The quantity stocked per unit of surface area depends on numerous vegetative and meteorological factors: it may thus vary significantly from one year to another.

5. Carbon dioxide, methane, nitrous oxide and three halocarbon gases.

6. The ratio of primary energy consumption to GDP.

7. The averages of results provided by twelve computable general equilibrium models. See J.-C. Hourcade and E. Fortin, “Impact économique des politiques climatiques : des controverses aux enjeux de coordination”, *Economie internationale*, n°82, 2nd quarter 2000.

Such a context would be unfavourable to the sustained effort of the industrialised countries, whether it is in terms of research and development or the reorganisation of urban infrastructure and transport. Still, such an effort is indispensable for emissions by industrialised countries to be reduced as of now and for this to serve as a model for the transition and developing countries. For this reason, the Kyoto Protocol includes a “supplementarity” principle: reductions in emissions should be obtained “principally” through domestic “policies and measures” within the industrialised countries, with the flexibility mechanisms only providing a partial substitute.

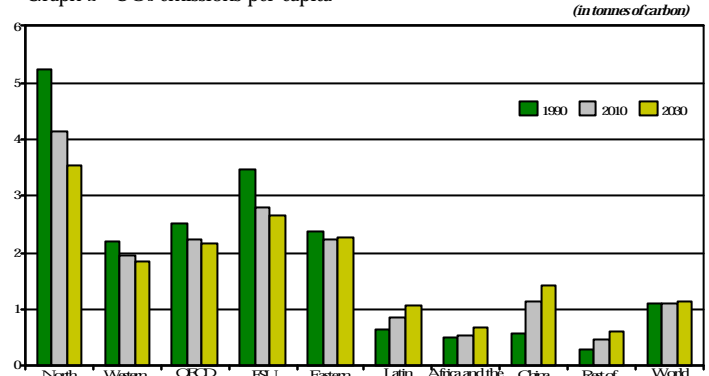
THE POSITIONS

At least 55 countries which signed the Rio Convention have to ratify the Kyoto Protocol for it to come into force, and these countries must be responsible for at least 55% of total GHG emissions by the industrialised countries in 1990. It thus becomes vital for the major industrialised and transition countries to reach an agreement, but also that developing countries support it too, as they will be the main emitters in the future, even if their per capita emission levels remain relatively low (see Graph 2). On the eve of the Hague negotiations, 180 countries grouped themselves into three large blocs.

The position of the **developing countries** varied according to their own interests. Extreme positions were held by small, island states in the Pacific which are highly vulnerable to global warming and by countries dependent on exports of hydrocarbons. Intermediate positions were held by very poor countries seeking aid, major producers and consumers of coal like India and China, as well as emerging countries whose manufactured exports require the use of much carbon. Nevertheless, all these countries managed to adopt a relatively common stance within the “Group of 77 + China”⁸. They continue to refuse being committed to any quantitative restrictions on emissions, while demanding stronger commitments on behalf of the industrialised countries. They demand that the principle of supplementarity be respected. They have only accepted the flexibility mechanisms and especially the “Clean Development Mechanism” (CDM) on the condition that it leads to technology transfers which correspond to national development objectives. They have also asked for enhanced finances for other forms of cooperation. Many developing countries are wary about the creation of international emission permit markets, and some are opposed to them on principle.

The **European Union** has committed itself to a collective reduction of emissions, and therefore negotiated **en bloc**, even though real differences exist across countries. The EU has also demanded the application of the supplementarity principle, and has put forward a quantitative definition for it. For the EU, emission reduction policies should be brought into force early in the industrialised countries, thus avoiding delaying

Graph 2 - CO₂ emissions per capita



Source: O. Blanchard *et al.*, *op. cit.*

2010: Kyoto; 2010-2030: a 5% cut in the Annex B countries and progressive stabilisation in the developing countries.

efforts by transferring them to countries with low marginal reduction costs. Thus, the EU accepts trade in permits within the Annex B countries, but had originally requested that their application be limited to “concrete ceilings”. For the same reasons the Union favours a restrictive definition of the Clean Development Mechanism. Lastly, the Union has requested that there be stricter control systems and financial penalties to guarantee that commitments are respected.

In contrast to the EU's position, most of the other Annex B countries (the United States, Canada, Australia, New Zealand and the transition countries) have formed an informal “**Umbrella**” group, favouring flexibility mechanisms and the other possibilities offered by the Protocol, in order to reach their objectives at a lesser cost. They have asked that an important share of the reduction commitments may be carried out by taking into account removals of carbon dioxide by so-called “sinks”. They also propose a global market for permits without restrictions, in which Russia and the Ukraine may trade “hot air”, in particular. Some American experts have suggested imposing a price ceiling on such permits, in order to limit the corresponding financial transfers. They have put forward a broader definition of the “Clean Development Mechanism”. Furthermore, the United States has asked for a “significant participation” in the reduction commitments of some of the larger, industrialising countries which are not in Annex B.

WHY DID THE HAGUE CONFERENCE FAIL?

There was some drawing together of these various positions at the Hague Conference. The United States accepted that developing countries should continue to be exempt from quantitative commitments. The latter have obtained proposals for financial transfers which are more satisfactory⁹. The quarrel over lightening national commitments has been blunted: the United States has accepted a considerable limitation of the scope of the “Clean Development Mechanism”, and has not officially requested that a ceiling be

8. See D. Cavard, “Les pays en développement dans la négociation sur le changement climatique”, *Revue de l'Energie* January 1998. The “Group of 77” was created in 1964 to promote the collective interests of the developing countries within UN bodies. It has more than 130 members at present.

9. It should be noted that these have reduced developing countries support for the EU positions of principle.

Table - The positions held by country groups during the negotiations of the Kyoto Protocol

| Undecided issues | Developing Countries (Group of 77 and China) | European Union | "Umbrella" (other countries in Annex B) |
|--|---|---|--|
| Limiting emissions - in the industrialised countries - in developing countries | - for strengthening limits - against any commitment | - for early application | - for meeting objectives at lowest cost - significant commitment by several large countries |
| Compliance | | strict controls financial penalties | flexibility |
| Taking vegetation "sinks" into account | | restrictive | extensive/very extensive |
| Primacy of "policies and measures" ("supplementarity") | for | for at least 50% of the reduction | against |
| Flexibility mechanisms - markets for permits - clean development mechanism | - distrust --> opposition - with conditions --> opposition | - between countries in Annex B with specified ceilings - restrictive definition | favoured approach - Annex B and world with price ceilings - broad definition |

Note: the positions on which concessions were made at the Hague are indicated in green.

The failure of the Hague negotiations, which may undermine the ratification of the Kyoto Protocol, can also be interpreted as an alibi all the industrialised nations, have used to put off national policies aimed at restricting emissions. Such policies, however, have the sure advantage of reducing local and regional pollution. But they also call into question consumption practices which are defended by

pressure groups that have no interest in changing behaviour, and which are accepted by individuals who are little aware of costs that they have to bear, as these are spread widely. It is therefore difficult for governments to impose such policies before damage to the environment becomes flagrant. The first world conference on climate change took place in 1979, at a time when rising energy prices favoured the search of savings. It may be necessary to wait for another price hike for fossil fuels or a significant rise in the cost of environmental damage linked to global warming before countries feel sufficient pressure to change policy.

fixed for the price of carbon in the trade of permits. The US also accepted that the share of GHGs sequestered by carbon sinks that counts towards the overall reduction commitment be scaled back strongly and that the ways such sequestration is calculated are also revised downwards substantially. The EU, for its part, has accepted that the principle of "supplementarity" be interpreted in a qualitative and not a quantitative manner, and that the use of permit markets within the Annex B countries should thus not be limited. They have also accepted that if commitments are not respected, then compensation should come in the form of penalty rates and not financial sanctions.

However, the Hague negotiations were suspended with the parties not reaching agreement. The final disagreement apparently related to some 15 to 20 million tonnes of carbon, which the European Union wanted to take out of the calculation of total carbon removed by "sinks" in the United States¹⁰. But, this matter of detail was more a pretext the Union seized to break off the negotiations: some of the EU Member States already felt the concessions they had made during negotiations to be excessive.

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10. Participating countries are to formulate new proposals and the conference is scheduled to restart in 2001.

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