A Proposed Structure for an International Convention on Climate Change

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Formal negotiations toward an international convention on climate change will begin shortly after completion of the interim report of the Intergovernmental Panel on Climate Change (IPCC); presentation of the report to the Second World Climate Conference will be this fall. The United Nations (UN) and its member governments will be under pressure to have a final text ready for signature at the 1992 UN Conference on Environment and Development, if not before. In a 25 May speech responding to greenhouse warming predictions made by the IPCC science working group, Margaret Thatcher said that Britain would reduce the proposed growth of its CO_2 emissions enough to stabilize them at 1990 levels by 2005 if other countries did their part.

Yet the United States, Japan, and other countries that emit substantial quantities of greenhouse gases continue to resist potentially expensive emission-reduction targets or control measures, citing continuing uncertainties about the extent, timing, and distribution of future climate change and its economic consequences. Similarly, developing countries are unlikely to agree to emissions targets or control measures that they perceive as impeding their economic development and will almost certainly condition their participation on a commitment by the Organization for Economic Cooperation and Development (OECD) countries to provide additional development assistance.

When confronted with these political realities, must we settle for a "bare-bones" framework convention similar to the Vienna Convention on Protection of the Ozone Layer, or can we devise a more substantive convention that would stimulate policy changes by the parties without requiring costly emission reductions in the short-term? I believe we should take the latter course and pursue a more substantive convention along the lines described below.

A central task for a climate convention will be to provide the international community with a permanent mechanism for coordinating its efforts to deal with climate change. At present, the IPCC is serving this function reasonably well, but it remains an ad hoc working group with no permanent status. The "conference of the parties" to the convention would replace the IPCC and would establish subsidiary bodies similar to those established by the IPCC. Those bodies would include the following.

1) *A bureau.* The bureau, or group of officers in charge of managing meetings of the parties, would consist of a chair, one or more vice-chairs, and one or more rapporteurs elected for fixed terms of several years

2) *An executive council.* The executive council would consist of representatives of the parties, including the bureau, which would meet more frequently than the conference of the parties and would oversee implementation of whatever program was approved by the conference.

3) *Permanent committees.* The convention should establish permanent committees on science, environment, and socioeconomic impact, and policy responses similar to IPCC Working Groups I, II, and III.

4) *A strong secretariat.* The breadth and complexity of the climate change issue make it essential that the work carried out under the convention be supported by a strong secretariat of at least 20 professionals, including experts on atmospheric science, economic analysis, financial mechanisms, international law, and public education.

The convention should go beyond organizational structure to establish a process for updating the parties' understanding of the science and potential impacts of climate change and for building consensus on policy responses. It is crucial that the science and impacts committees produce peer-reviewed annual updates of their respective assessments to provide a basis for evolving policy responses.

To support this ongoing assessment process, the convention should explicitly provide for (i) building up the international network of climate monitoring stations as part of the World Climate Program coordinated by the World Meteorological Organization; (ii) international collaboration in developing and funding a space-based monitoring system along the lines of Mission to Planet Earth; (iii) international cooperation in developing and funding the hardware and software for the next several generations of general circulation climate models; and (iv) maximum participation of developing country scientists and technicians in all these activities.

Whereas an international convention is in many respects a top-down undertaking, a more bottom-up process is preferable for developing policy responses. Only policies formulated at the national level will overcome widespread concern about economic costs and reflect the different circumstances of different countries. The convention should drive this process by requiring each party to prepare and distribute its own national plan for reducing greenhouse gas emissions and for adapting to future change while achieving its development objectives. The convention would contain general guidelines for preparing national plans, including the sectors and general issues to be covered. Each party would be free, however, to determine its own emissions reduction strategy consistent with any

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overall targets and timetables established by the convention.

The point is to require each party to make an initial determination of the national measures it is prepared to commit to and then to share that determination with other parties for analysis and discussion. From such analysis and discussion should emerge (i) an initial baseline emissions scenario based on implementation of the national plans, (ii) a more complete inventory of possible policy responses, and (iii) an initial indication of the additional financial and technical resources that might be required to implement the plans, particularly in developing countries.

As national plans are revised and updated, one would hope that various parties could be induced to make their plans more ambitious and effective in response to the information and feedback they receive from other parties and outside sources. Potential opportunities for asymmetrical reductions or emissions trades should become more apparent. The convention should require each party to prepare an initial plan within 1 year of its becoming subject to the convention and to update that plan every 2 years thereafter.

To obtain the participation of key developing countries such as China, India, and Brazil, the convention will have to contain strong provisions with respect to technology transfer and financial assistance. Despite the popularity of the sustainable development concept, developing country governments still perceive a direct conflict between their goals for economic development and measures to reduce greenhouse gas emissions in their countries. This perception is exaggerated. Developing countries collectively will be investing hundreds of billions of dollars for economic development over the next few decades. If this money is invested in systems that are energy and materials efficient, the environmental impact of a given level of economic development can be substantially reduced. For example, China's ratio of CO_2 emissions to gross national product (GNP) is roughly five times that of Japan (*1*). If China were to achieve even 60% of Japanese efficiency and carbon intensity levels in its new energy-producing and energy-consuming infrastructure, it could improve this ratio substantially in a relatively short time. The one major hurdle is obtaining the technical information, management assistance, and capital required to promote more efficient and less polluting supply and use of energy and other natural resources.

A climate convention could make an important contribution to overcoming this hurdle. First, the convention could establish a fund to meet all or part of the hard currency costs of preparing and updating the developing countries' national plans referred to above. The fund would cover the costs of sending public and private sector experts from OECD countries and multilateral institutions to work with counterparts in developing countries in preparing the national plans and more detailed studies of energy, transport, agriculture, and other key sectors. The money required for such a fund might be in the order of a hundred million dollars per year, which could be contributed by the OECD countries proportionate to greenhouse gas emissions. Only developing countries that were parties to the convention could have access to the fund, which should provide a major incentive for developing countries to become parties.

The national plans and sectoral studies would have to identify capital requirements sector-by-sector and possible sources of capital, domestic and foreign. To help meet those requirements, the convention should contain provisions that encourage the private sector to furnish the capital required. The OECD countries would be obligated to arrange for soft loans from multilateral development banks, provide expanded political risk insurance, and even offer credit guarantees for projects meeting certain criteria. The developing countries would be obligated to provide a favorable investment climate for foreign investors making climate-related investments, including effective protection of intellectual property rights and patents, no prohibition on operating control, taxation of profits at a national rate or better, and foreign exchange priority for dividend and capital remittances within certain limits.

Finally, we come to the issue of targets and timetables for greenhouse gas emission reduction and their appropriate role. The purpose of short-term targets and timetables is not to set final goals. There is simply too much uncertainty about the science, regional impacts, and socioeconomic consequences of climate change for the United States and other key countries to commit to ambitious short-term emissions reduction goals within the next few years. Rather, the purpose of short-term targets and timetables is to catalyze a process—to induce governments and the private sector to take certain initial steps needed to set the stage for more far-reaching changes later on. Once this process has begun we will be able to achieve much greater emissions reductions than we can imagine today, irrespective of what is written into international agreements.

The following is a set of targets and timetables for greenhouse gas emissions reductions that might be politically acceptable and yet sufficiently ambitious to begin to bring about results.

1) A short-term stabilization target placing an overall ceiling on the parties' emissions of all greenhouse gases (expressed in equivalent units) at their levels for the year the convention entered into force effective 10 years thereafter.

2) An OECD CO_2 stabilization subtarget that would require each OECD country to hold its emissions at their average level for the year the convention enters into effect and the previous 4 years effective 10 years after the convention enters into effect. The combination of a chlorofluorocarbon phase-out and stabilization of CO_2 emissions from industrialized countries would provide leeway for short-term emissions increases from developing countries.

3) An energy efficiency subtarget, whereby all parties would be obligated to improve the ratio of their carbon emissions to GNP by 2% per year over the same 10-year period. This rate of improvement, which was achieved by Japan and the United States during the 1973 to 1986 period (*2*), would allow individual parties to seek the combination of energy efficiency improvements and reductions in the carbon intensity of their overall fuel mix that best suits their particular circumstances. It would also allow parties with high GNP growth rates correspondingly high emissions.

4) A deforestation subtarget, whereby all parties agree to eliminate net loss of forests by the end of the 10-year period in question. Achieving this goal would help preserve biodiversity and promote other environmental goals as well as reduce net carbon emissions.

To supplement and reinforce the targets and timetables proposed above, the convention should impose a general obligation on the parties to use the best available technology that is economically achievable to reduce emissions of greenhouse gases. This general obligation is particularly important for greenhouse gases such as methane and nitrous oxide, for which it is difficult to set targets because their sources and sinks are not yet well understood. An annex to the convention could describe specific technologies currently available for reducing emissions and their respective unit costs.

The international community has an unprecedented opportunity to pursue a "no regrets" strategy that will put us on a development path that simultaneously achieves an acceptable degree of economic development and minimizes the possibility of environmental disruption. A properly structured climate convention could be an important step toward grasping this opportunity.

REFERENCES

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