

Combating Global Warming: A Common Task for Mankind

By Hiroshi Ohki

THE EMERGENCE OF GLOBAL ENVIRONMENTAL PROBLEMS

The history of mankind's dealings with the global environment in the twentieth century has been characterized by both cooperation and confrontation, at different times and in different contexts, between scientific findings and political and/or economic interests.

In the 1950s, a number of American scientists began research in the Mauna Loa Mountains of Hawaii on the density of CO₂ in the air. After 30 years of observations, they confirmed that the density of CO₂ in the earth's atmosphere had increased quite regularly and continuously throughout the period under study. At the Vostok Base in the Antarctic, Soviet researchers spent years collecting ice core samples stretching back to ancient times. In 1987, they published impressive findings that the density of CO₂ in the atmosphere and the temperature of the earth have maintained a very close cause-and-effect relationship over tens of thousands of years.

As the above cases demonstrate, most global environmental issues are noticed by scientists first, but remain obscure until they become the subject of journalistic attention.

As early as 1972, a report entitled "The Limits to Growth" was published by the Rome Club, a non-governmental research group formed by a number of world-renowned scientists and economists, including Dr. Saburo Ohkita of Japan. The report provided a comprehensive analysis of future conditions on the planet based upon a scientific study of population growth, scarcity of food, energy and other natural resources, and many other factors that would hamper the sustainable development of human activities. It concluded that the current pattern of mankind's lifestyles and activities was dependent upon a huge consumption of natural resources and must be altered in order to avoid the destruction of our precious planet.

The Rome Club report's candid warning to the earth's inhabitants came at a time when most countries of the world were still busy trying to achieve economic growth. Prepared by using computers and the most recent data available, the report also succeeded in making both experts and laymen alike aware of the gravity of the issues it presented.

In the wake of notable activities by private institutions, a number of political and governmental leaders in North America and Europe also began to take initiative in discussing the importance of the global environment. The international community and various specialized organizations of the United Nations also grew concerned with the issue of the global environment.

The United Nations Conference on the Human Environment, held in Stockholm in 1972, was the first full-scale UN conference covering the topic of the global environment. The conference selected three words—"only our earth"—as a catch phrase to emphasize the precious value of the natural environment that Mother Earth kindly provides for mankind.

The World Climate Conference, sponsored by the WMO (World Meteorological Organization) in 1979, took up the question from a somewhat different angle and issued a statement in the same year that vividly pointed out the possible dangers posed to the welfare of mankind by global warming.

What was Japan's position on the global environment at the time? Since Japan depends heavily on imported oil to maintain its industrial activities and sustain the livelihood of its 120 million inhabitants, securing a stable supply of oil has always been an important national policy objective.

The Japanese people experienced serious energy crises in 1973 and 1979 when the world economy suffered because of OPEC's decision to drastically decrease oil production. This experience taught the Japanese the lessons of moderating energy consumption, an objective that Japan's government and

industries have met through the implementation of various measures in the years that followed. These energy conservation measures have enabled Japan, in a very short time, to become a world leader in the development of energy-saving technology. This in turn has contributed to making Japanese industries more competitive in the era of internationalization.

INTERNATIONAL COOPERATION IN COMBATING GLOBAL WARMING

As scientific data on global warming have gradually accumulated, research institutions and political leaders around the world have recognized that effective measures to prevent such warming must be developed through international cooperation. A 1988 meeting in Toronto, hosted by the Canadian government, was one major gathering for this purpose and cleared the way in the same year for the creation of the IPCC (Intergovernmental Panel on Climate Change). The IPCC was the first intergovernmental scientific research institution to focus its energies primarily on the question of global warming. Since its inception, the IPCC has played a leading role in the world in the compilation and analysis of scientific data to support the control of global warming.

The year 1988 was also a turning point in world politics. Reflecting the progress of détente between the United States and the Soviet Union, Soviet leaders became more active in UN-related organizations and showed more interest in environmental issues. Both General Secretary Gorbachev and Foreign Minister Shevardnadze impressed diplomatic circles by delivering speeches at the UN General Assembly in 1988 in which they stressed the importance of the global environment coupled with substantial arms reductions. Western countries viewed these speeches as reflective of a basic change in the position of the Soviet government, which up until that point had been indifferent to international cooperation on the global environment.

In 1990, a working group was established in the UN to prepare a framework agreement on climate change. After a series of strenuous negotiations, an agreement was drafted in 1992. At the UN Conference on the Environment (also known as the "Earth Summit") held in Rio de Janeiro in the same year, as many as 155 nations signed this international agreement in the form

of the UN Framework Convention on Climate Change (UNFCCC).

The Convention's objective was to stabilize the density of human-generated greenhouse gases in the atmosphere so as to prevent their deleterious effects on the global climate. The Convention also set a target that developed countries' total emission of greenhouse gases should be reduced to 1990 levels by the end of 2000.

Intergovernmental consultations continued within the UNFCCC's framework, and at its first full-scale member party conference (COP1) held in Berlin in 1995, the Berlin Mandate was adopted as a basic guideline document for the drafting of an international agreement aimed specifically at the prevention of global warming.

At the COP2 meeting held the following year in Geneva, it was further agreed that the member countries should prepare, in time for the COP3 meeting in 1997, an agreement stipulating legally binding target figures for the reduction of greenhouse gas emissions by developed countries after the year 2000. The reduction of gas emissions was thereby declared a legal obligation of the international community.

THE KYOTO CONFERENCE AND THEREAFTER

Because the process of negotiations at the Kyoto Conference (COP3) has been widely reported on by the media, I will not repeat its details here. It should be emphasized, however, that the COP3 was the product of long and serious discussions and the drafting of voluminous documents in which thousands of experts, government officials and cabinet ministers had participated for several years. The Conference itself was also attended by nearly 10,000 men and women, including the official representatives of no fewer than 150 countries and approximately 4,000 journalists who had gathered from all over the world. It is therefore not an exaggeration to say that the recent pronouncement by the Bush administration to discard the Kyoto Protocol constitutes a serious repudiation of cooperative efforts made by the world community over the course of many years to create an effective system for combating global warming.

At the Kyoto Conference, two different issues were at the center of discussions. The first was the treatment of developing countries in the context of common efforts made by member nations to curb greenhouse

emissions. Although it had already been decided at the COP1 meeting that developing countries should be exempt from legal obligations to regulate the emission of greenhouse gases, a number of developed countries, including the United States, argued at the COP3 meeting that many large developing countries are already major emitters of greenhouse gases and should be asked to begin to take action at least voluntarily to regulate these emissions. This argument reopened the same verbal battles that had hampered the progress of negotiations at many previous meetings and, as had been the case then, delayed the COP3 meeting's schedule. The question remained unresolved throughout the Conference and near its end was finally omitted from the agenda altogether.

The second question was the treatment of so-called "flexible measures" to be included as part of the obligations of developing countries to reduce emissions of greenhouse gases. In addition to the genuine reduction of greenhouse gas emissions, the Kyoto Protocol also enumerates a number of auxiliary measures that directly or indirectly contribute to such reductions. Emission trading, absorption of gases by forests (the so-called "sink"), economic and technical assistance provided by developed countries to reduce emissions of gases in less developed countries, were recognized as parts of substantial contributions made by COP members to combat global warming.

Nevertheless, it was not possible for the COP3 during its ten-day session to finalize precise rules and regulations concerning the scope of such flexible measures to be counted as a part of the contribution of developed countries. During meetings of the COP4, COP5 and finally the COP6, this question of flexible measures was thoroughly discussed and the Chairman's final proposal was also prepared. Unfortunately, the COP6 meeting failed to adopt this proposal.

The main reason for the failure was the confrontation between the United States and the European Union. The Europeans wanted flexible measures to account for only a small part of any country's emission cuts. In contrast, the Americans were opposed to any ceiling and argued that for the world as a whole, a maximum use of flexible measures would result in the realization of minimum costs in emission cuts. Finally, the Chairman of the COP6 had to declare the suspension of the Conference at the end of its ten-day session.

PROGRESS OF SCIENTIFIC RESEARCH

While politicians and bureaucrats have been busy discussing the wording of documents and searching for a compromise to keep the Kyoto Protocol alive, scientists have made their contribution by preparing new, precise reports on the progress of global warming. In the early months of 2001, the IPCC published its third report based on the most recent data available on global warming. The report summarized the panel's findings by stating that new and more precise evidence has been obtained that clearly indicates that a large component of global warming recorded over the past 50 years has been caused by human activities. The report presented various figures to demonstrate that global warming is progressing more rapidly than the estimate provided in the second report. It was reported, for instance, that

(a) The average surface temperature of the earth since 1861 has risen by $0.6 \pm 0.2^\circ \text{C}$. The rise in average surface temperature between 1990 and 2100 is estimated to be $1.4\sim 5.8^\circ \text{C}$ (as compared with $1.0\sim 3.5^\circ \text{C}$ in the second report).

(b) The density of CO_2 in the air is estimated to rise to $540\sim 970$ ppm by the end of the twenty-first century. (As compared with 280 ppm in 1990.) The report also estimated that at its current rate of change, global warming is likely to widen the gap between the world's demand for and its supply of food. In addition, the number of people throughout the world who suffer from a shortage of usable water will likely increase from the present 1.7 billion to upwards of 5 billion in 2025.

The report further discussed the effectiveness of various measures to combat climate change. Domestic measures such as carbon and energy taxes and active government investment and official aid to research and development projects were mentioned. As for international measures, emissions trading, joint implementation, clean development mechanisms and some other flexibility measures stipulated in the Kyoto Protocol were mentioned and the effective policy mix of these measures was recommended.

U.S. RETREAT FROM THE KYOTO PROTOCOL

In March of this year, the newly elected U.S. President, George W. Bush, abruptly announced that the United States had found the Kyoto Protocol flawed and decided not to ratify it. This news drew strong

criticism from countries around the world, with Japan and the European Union sending delegations to Washington to protest the U.S. decision to discard the agreement.

The U.S. administration insists that President Bush was critical of the contents of the Kyoto Protocol even before the presidential election and has provided two main reasons for its opposition. The first is that the Protocol seriously impairs U.S. economic interests. The second is that the exemption of developing countries from the obligation to control emissions will virtually cancel out progress made in the struggle against global warming.

As I mentioned previously in this article, the exemption of developing countries from the emission control obligation was decided at the COP1 because the per capita level of greenhouse gas emissions in developing countries, including such large emitters as China and India, is much lower than that of developed countries. The renewal of arguments on this question is likely to hamper the prompt implementation of our common task to combat global warming.

As for the alleged negative effects of the Kyoto Protocol on the U.S. economy, it must be emphasized that while the United States has the world's strongest economy, it is also the world's largest emitter of greenhouse gases. In the COP framework, every developed country is expected to bear its fair share of the burden (the COP1 used the phrase "common, but differentiated responsibilities") of combating global warming. By any standard, the United States should be among the first to demonstrate leadership in this common task of mankind.

[As I write this article in June 2001] it has been announced that a resumption of the COP6 will be held in Bonn this coming July. The U.S. administration has indicated that it will send a delegation to this meeting with a counter proposal to the Kyoto Protocol. Although the details of the proposal are not yet known, judging from available information it remains uncertain whether or not the United States will work immediately within the framework of the COP organization to finalize the Kyoto Protocol. Under the circumstances, other developed countries will have to work on their own, without being able to depend upon the return of the United States to the Kyoto Protocol.

For its part, Japan will continue to implement various measures enumerated in the Basic Law to Deal with

Global Warming, which was enacted shortly after the Kyoto Conference. The law's measures cover various fields of civilian activities, including industry, traffic and transportation, and the households of individual citizens. Political parties and NGOs are also discussing the introduction by the government of effective fiscal and taxation systems that will encourage activities to combat global warming.

Before I finished writing this article, I received news from the United States that confirms the reality of global climate change. A group of experts, which was recently assigned by President Bush to review scientific data on global warming, submitted a report in June and endorsed the view presented in the IPCC's third report that global warming is definitely progressing and human activities are substantially responsible for this. I sincerely hope that the President will pay serious attention to this report and reexamine his stance vis à vis the Kyoto Protocol. ☞

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