Climate Change: Japan's Post-Kyoto Initiatives

Climate change caused by human activity is an issue that will be with us for generations, affecting ecosystems, human health and economies. This issue of JEQ covers some of the main initiatives after the Kyoto Conference of the Japanese government, in particular the Environment Agency (EA), to arrest global warming.

The Kyoto Conference (the Third Session of Conference of Parties (COP3) to the United Nations Framework Convention on Climate Change — UNFCCC) hosted by Japan, from the 1st to 11th of December 1997 was a landmark event. Thousands of politicians, government officials, and industry, media, and citizens' group representatives gathered for the biggest meeting in history to discuss climate change. It resulted in the Kyoto Protocol which includes legally binding commitments for developed countries to reduce their greenhouse gas emissions an average of about 5% by the target years of 2008 to 2012. As host country of the Conference, and one of the world's largest economies, Japan has begun taking steps to follow up its commitment for a 6% reduction.

New Task Force To Arrest Global Warming

Recognizing global warming as one of the most pressing issues humanity is facing today, the Government of Japan took swift action by deciding to set up the Task Force to Arrest Global Warming on 19 December. The Task Force, headed by Prime Minister Hashimoto, is comprised of ministers and state agency heads. With special assistance provided by the Environment Agency, the Ministry of Foreign Affairs and the Ministry of International Trade and Industry, it works for smooth coordination and implementation by government agencies and ministries of the Kyoto Protocol which was agreed to by over 160 countries at the Kyoto Conference.

In his address at the first meeting of the Task Force held on 9 January, Prime Minister Hashimoto said, “Cabinet has to give wholesale effort to achieve the commitments agreed to in Kyoto last December. Japan’s energy efficiency level has reached the highest in the world and its not easy to go beyond that. However, we must do whatever we can in order to guarantee the benefits of today’s global environment for coming generations.”

(cont’d pg.2, Climate)
POLICY AREAS OF THE TASK FORCE TO ARREST GLOBAL WARMING

1. Carbon dioxide emissions reduction: (1) Effective implementation of energy efficiency measures:
   (a) Comprehensive revision of the Law Concerning the Rational Use of Energy, (b) Strengthening energy efficiency standards; (2) Incentives on development and promotion of energy efficient technology, facility and equipment: energy efficiency technology development, fuel switching, fuel efficient cars, promotion of use of pollution free vehicles, and low pollution cars; (3) Enhanced voluntary initiatives: (a) Follow-up on industry’s voluntary action plans, (b) Initiatives by the government and local authorities; (4) Indirect carbon dioxide emissions reduction and energy efficiency measures such as infrastructure projects, promotion of public transport use, efficient transport and distribution, traffic improvement measures, road network development to reduce traffic congestion; (5) Supply-side carbon dioxide emissions reduction measures, nuclear energy development coupled with rigid safety measures and new energy introduction; (6) Carbon dioxide emission limitation measures on industrial processes
2. Methane and nitrous oxide emissions reduction measures
3. Emissions limitation of hydrofluorocarbons (HFC), perfluorocarbons (PFC) and SF6: (a) Collection, recycling and destruction of these gases in accordance with current status of industry; (b) Research and development of substitute substances
4. Afforestation and reforestation as carbon sink enhancement: Carbon sink enhancement measures through afforestation and reforestation in accordance with current forestry status
5. Research and development of innovative technologies: Identifying research and development areas for and promotion of innovative environmentally-sound and energy technologies
6. International Cooperation: (a) Through joint implementation (among developed nations), emissions trading (among developed nations) and clean development mechanism (with developing nations); (b) Kyoto Initiative (assistance for developing nations) implementation; (c) Promotion and implementation of Climate Change Technology Initiatives (CTI), among developed nations
7. Promotion and support to voluntary public initiatives for life-style change: (a) Public relations; (b) Information dissemination; (c) Support initiatives by non-governmental organizations; (d) Education

Global Warming Abatement Policy

The legally-binding Protocol agreed to at the Kyoto Conference set out numerical targets and timetables for reduction in greenhouse gas emissions. At a meeting of the Central Environment Council (CEC), the highest advisory body to the government on environmental matters, on 16 December 1997, Environment Minister Ohki formally submitted a request for CEC to recommend a national long-term greenhouse gas emissions reduction strategy, including exploring national legislation necessary for implementing the Protocol.

Environment Agency Post-kyoto Initiatives

In order to fulfill national targets in the Kyoto Protocol, the EA is conducting an agency-wide effort and working for efficient coordination within the rest of the government. A Project Team to Arrest Global Warming was set up within the EA. Further measures to be taken by the EA announced on 12 January include national, international, and scientific initiatives, as described below.

I. NATIONAL ABATEMENT POLICY

Now that the Kyoto Protocol has been adopted by the government is preparing domestic legislation to implement the international accord. With its environmental expertise EA supports the Ministry of Foreign Affairs in preparing for Protocol ratification by the national Diet. In order to achieve the legally binding targets through limitation and reduction of six GHG emissions, carbon sink enhancement and reduction credit purchases, EA will prepare a comprehensive legal package that is aimed at stimulating voluntary initiatives by all sectors, a balanced and effective implementation of official instruments such as regulatory measures, economic instruments and public works. Equally important are reviewing and updating the previous Action Program to Arrest Global Warming (announced in 1990), examining technological and factual aspects to secure the reduction of GHG emissions by 6% from 1990 levels between 2008 and 2012. Plans on the table to deepen public awareness of global warming and expand citizen efforts include information dissemination in cooperation with local governments, continuation of the Eco-life Pledge aiming for 1 million pledges, organizing conferences, and giving strong support to various voluntary activities, which aim for a shift of objectives from "awareness raising" to "citizens’ participation and action".

II. INTERNATIONAL MECHANISMS

The Kyoto Protocol incorporates a ‘net approach’ which allows for ‘carbon sinks’ such as afforestation in the calculations of net greenhouse gas emissions. However, advances in scientific understanding about carbon sinks and other issues are needed urgently to guide negotiations. Part of the EA research budget will be used for this purpose. Active contributions to the Intergovernmental Panel on Climate Change (IPCC) are expected through Japan’s research on IPCC criteria and guidelines to calculate sinks not only in forests but also in agricultural land. Other topics that will be examined include emissions trading, the Clean Development Mechanism (CDM), Joint Implementation (JI) and Activities...
 Implemented Jointly (AIJ), for input into future negotiations. One of the most important issues left in the post-Kyoto process relates to developing countries’ efforts to tackle global warming. Japan’s answer to the need for technical transfers to developing countries was reflected in the Green Initiative announced by Prime Minister Hashimoto at the UN Special Session for Environment and Development last June. In order to materialize the Green Initiative, the existing support measures will be strengthened with emphasis on capacity building. In addition, the EA plans to set up a Global Warming Information Center (provisional name), and to create a new international committee to start building the infrastructure for a healthy global environment in the future, entitled Committee for Future Image of Earth Environment (provisional name). The Kyoto Initiative announced by Japan at the Kyoto Conference consists of human resources development (plans to train 3000 persons in areas related to combatting global warming in five years from 1998), provision of Official Development Assistance (ODA) loans with the most concessional conditions (0.75% annual interest rate and a 40 year repayment period), and transfer of Japan’s technology and expertise to developing countries. Japan also plans to play a leadership role in international negotiations, with plans to host an ECO ASIA Congress, a ministerial meeting including developing countries, to discuss agenda items towards the fourth conference of the parties to the UNFCCC (COP4). Minister Ohki, who chaired the COP3, will serve as the COP Chair until the COP4 in November 1998.

III. STRENGTHENING SCIENTIFIC INFRASTRUCTURE
Japan’s EA will strengthen its contribution to science relating to global warming through projects at the new Institute for Global Environmental Strategies (IGES) to study long-term policies for sustainable development particularly in Asia and the Pacific; through use of the Global Environment Research Fund to explain global warming mechanisms and improve the accuracy of forecasts; and through work to predict and assess the impacts of global warming on ecosystems, water resources, industry and human health under different scenarios, and consideration of early warning systems.

The work of addressing the threat of climate change will involve all sectors of society. In its capacity, the Environment Agency of Japan is involved in many of the initiatives above to make its contribution to finding solutions.

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**Data Book Of CO₂ Emissions From Cars, Electrical Products (ChoCO₂)**

The Global Environment Information Center (GEIC), a joint project of Japan’s Environment Agency and the United Nations University, recently launched the second edition of the study ‘ChoCO₂’ that ranks carbon dioxide emissions from various products. (ChoCO₂ means ‘Choice by CO₂’.) One volume of this edition includes updated information of the first edition which ranks electrical equipment such as refrigerators, air conditioners, TV sets, video players, CD players, audio amplifiers, word-processors, facsimile machines, notebook PCs and color printers. It provides an estimated amount of carbon dioxide emissions from each product per year. The second volume ranks 1,642 commercial and passenger cars produced and sold in Japan by Japanese automobile manufacturers. Japan’s carbon dioxide emissions from homes, the commercial sector and the transport sector grew rapidly — by 16% each — from 1990 to 1995. Emissions from homes account for 53% of commercial and home sector emissions, and commercial and home-use car emissions account for 44% transport sector emissions. Together they make up one third of Japan’s total emissions. In order to suppress such rapid emissions growth from those sectors, it is necessary not only to promote efficient use of energy, but to also to use products associated with lower carbon dioxide emissions.

To order in Japan send stamps worth 270 yen for one volume (specify ‘cars’ or ‘electrical equipment’), or 390 yen for both to the address below (hard copies in Japanese only). Information is available in English and Japanese through GEIC Web-pages. The web page also includes a ‘CO₂ calculator’ which calculates your daily or yearly CO₂ emissions depending on your lifestyle.

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Green Purchasing Network

The Green Purchasing Network (GPN) is a loose network in Japan of companies, government administration and consumers established in February 1996 to promote initiatives for green purchasing — buying environmentally friendly goods and services. The steadily growing GPN membership stood at over 1205 members (832 companies, 213 local authorities and 160 civic organizations) as of 2 March last year.

GPN activities include establishing purchasing guidelines in various product categories, publishing annual data books concerning the environmental impact of products, and ongoing surveys of actual conditions affecting green purchasing among GPN members. Other activities are newsletter publication, study meetings, study tours, exhibitions and annual forums and establishing local networks to involve consumers and small and medium size enterprises. The Environment Agency of Japan is providing active support for promotion and expansion of the Network as a GPN member.

New Guidelines Established

On 27 November the GPN Steering Committee adopted purchasing guidelines in three new categories: toilet paper, tissue paper and personal computers. Purchasing guidelines are established according to Principles of Green Purchasing and consist of points that should be considered when a particular good or service is purchased. The new guidelines are in addition to two previous categories of ‘office and printing paper’ and ‘copiers, laser printers and laser facsimiles. The Environment Data Book for Product Choice concerning these three areas will be published in June this year. Upcoming guidelines are for refrigerators, stationery, washing machines, lighting appliances and also for vehicles, air conditioners and office furniture.

Survey

GPN surveyed members between July and September in 1997 to assess the status of members’ green purchase initiatives and national trends of green consumerism. The result revealed that organized initiatives have made considerable progress, that of paper and stationery are subject of much attention, and that the GPN Purchasing Guidelines and Data Book for Product Choice are used along with environmental labelling such as the ‘Eco Mark’ as vital information sources.

1613 survey sheets were distributed among members and non-members of GPN, of which 477 were answered. Of the surveyed 40% answered they are conducting green purchasing, and another 46% plan to do so. Only 14% said they have no plans for green purchasing. Most popular areas the respondents conduct green purchasing are paper, followed by stationery, office equipment and packaging materials. Most favored information sources include product catalogs and environmental labelling, immediately followed by the GPN Purchasing Guideline and Data Book.

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SUMMARY OF THE GPN SURVEY:
- 90% of GPN members plan to introduce or are already conducting systematic green purchasing
- 44% of members increased their product categories for green purchasing
- Paper (80%) and stationery (44%) have high levels of green purchasing
- The rate of recycled fiber in papers used by members increased by 11.5% in one year coupled with a decline of bleaching whiteness by 2.6%
- Four most popular green purchasing information sources: GPN Guidelines, GPN Data Book, product catalogs and environmental labelling
- People expect more: improving the GPN Data Book, introducing best practices, local seminars and exhibitions
On the 17th and 18th of January, 39 children and government officials from 9 countries besides Japan gathered at the foot of Mount Fuji in Shizuoka Prefecture for the 2nd Junior Eco-Club Asia Conference. Countries represented were China, Japan, Korea, Malaysia, Nepal, Pakistan, Philippines, Singapore, Sri Lanka, and Thailand.

The conference was held to exchange information on children’s environmental activities and to discuss issues and areas of future cooperation for the promotion of children’s environmental activities. Participants reported on environmental education and children’s environmental conservation activities in their countries, including the Junior Eco-Club program in Japan; a GLOBE program in China where twenty schools monitor the environmental quality; environmental reporting at Korea Youth Journalism School; an audio-visual environmental travelling show in Malaysia; tree preservation activities by children in Nepal; environmental camps in Pakistan; a kindergarten-to-high school Environmental Education Curriculum Framework in the Philippines; environmental clubs in schools in Singapore; the Environmental Pioneer Brigade in Sri Lanka; and environmental clubs in Thailand. The children participating in the get-together session adopted a resolution of specific activities that individuals can do to live in harmony with nature and the Earth.

The 6th Northeast Asian Environment Meet

The 6th Northeast Asian Conference on Environmental Cooperation (NEAC) was held on 14-16 October 1997 in Niigata, Japan, with the participation of China, the Republic of Korea, Mongolia, and Japan, and representatives from the UNDP, UNEP, and ESCAP. The NEAC acts as a forum for the exchange of information and views on environmental issues of northeast Asia, and seeks to strengthen environmental cooperation. The main topics of discussion included acid deposition, wide-range water pollution control, biodiversity conservation, and cleaner production.

Regarding acid deposition, the Acid Deposition Monitoring Network in East Asia advocated by Japan and the Expert Meeting for Long-range Transboundary Air Pollutants in Northeast Asia were recognized as beneficial. The session included presentations on the status of water pollution, oil contamination in coastal areas, and recognized the importance of harmonizing water management policy among countries. On biodiversity protection and cleaner production, the importance of information exchange was stressed.

This Conference was organized by the Environment Agency of Japan, Niigata Prefectural Government, and the City of Niigata. The next NEAC will be held in 1998 in Korea.
The Asia-Pacific Network for Global Change Research (APN) made another step forward with its 3rd Inter-Governmental Meeting, held in Beijing from the 11th to 13th of March. With 16 countries represented, delegates decided on funding of about US$500,000 to support global change research in the region, on a number of improved organizational arrangements, and on priority in 1998/99 for climate change related work and ‘human dimensions of global environmental change’.

What Is The APN?

An understanding of the complex mechanisms and impacts of global environmental change on human health, welfare and ecosystems is becoming increasingly important for humanity. In particular, national, regional, and international policies need to reflect the best scientific knowledge available. This fact is notable in the area of responses to climate change.

The APN exists to contribute to that understanding. It is an inter-governmental network whose primary purposes are to foster research about global environmental change in the Asia-Pacific region, to increase developing country participation in that research, and to strengthen links between the scientific community and policy makers. It promotes, encourages and supports research activities on long-term global changes in climate, ocean and terrestrial systems, and on related physical, chemical, biological and socio-economic processes.

APN PRIORITY AREAS

(a) Climate system change and variability
   • Asian monsoon
   • ocean processes
   • ENSO (El Niño Southern Oscillation)
   • greenhouse gases and atmospheric composition change
   • impact on terrestrial ecosystems
(b) Coastal processes and impacts, including sea level change
(c) Terrestrial ecosystem change and impacts, involving
   • forests, grasslands, agricultural land
   • biodiversity
   • land use/land cover change
   • land degradation
(d) Other important topics
   • Acid deposition, impact of agriculture on environment, and policy support research

In all cases, the APN is giving increasing emphasis to the human dimensions of global change.

PROJECTS TO BE SUPPORTED BY APN IN 1998/99

• Continuation of Regional Climate Modeling (RCM) Development and Application for Asia (research, database, training course)
• Vulnerability Assessment of Major Wetlands in the Asia-Pacific Region
• Indicators for Detecting Variation of Climate Extremes
• ECO-ASIA Asia-Pacific Eco-Consciousness Project, Phase II (1998–99) (Workshop)
• Workshop — Toward an Integrated Regional Model of River Basin — Inputs to the Coastal Zones of Southeast Asia
• International Workshops for Integrated Assessment Model (IAM) in Asia
• Research Activities on Land Use in Temperate East Asia (LUTEA)
• Support for Organizing Committee Meeting for the 1999 Human Dimensions Open Meeing in Japan
• Workshop on Water and Human Security for Asia
• Workshops on Industrial Transformation in South Asia and East Asia
• Planning Workshop — Marine and Coastal Zone Studies in the Asia-Pacific Region
• Asia-Wide Workshop — Aerosol Studies of Asia-Pacific Region

Evolution

Matching initiatives in other parts of the world, the first workshop to consider the creation of a network in the Asia-Pacific region was held in Tokyo in December 1992. During the next four years a number of workshops identified scientific areas needing attention in the Asia-Pacific region which the APN is to address (see table) and suggested a structure. These meetings led to the official birth of the APN at the first Inter-Governmental Meeting in March of 1996 in Chiangmai, Thailand. The network has been steadily developing, and in September 1997 had its first open call for research proposals. The 3rd Inter-Governmental Meeting in Beijing agreed on which projects to fund in the next year, and among other conclusions agreed to start a formal strategic planning process to guide the future development of the network in the rapidly evolving field of global change research. The Secretariat of the APN is based in Tokyo, sponsored by the Environment Agency of Japan.

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ECO ASIA NET Workshop

The Second International Workshop on Environmental Information Network for Asia and the Pacific (ECO ASIA NET) was held on the 3rd and 4th of February in Tokyo. Participants discussed the further development of a network for information exchange on the Internet. The goals of the network are to support sustainable development in the Asia-Pacific region by information sharing and dissemination, and to support realization of the four concepts (see Long-term Project article) proposed at ECO ASIA Congresses (annual environment ministerial meetings organized by Japan).

The ECO ASIA NET homepage features a 'what's new' section, event calendar, links to environment agencies of other countries in the region, and reports on ECO ASIA. The February workshop agreed on standardized formats that countries are invited to consider when constructing their Homepages, in order to promote consistency in the presentation of information. Main sections suggested include (a) government organizations responsible for the environment, (b) policies and regulations concerning sustainable development, (c) state of the environment in each country, (d) information about 'Eco-consciousness', environment-friendly attitudes and customs, (e) implementation of Agenda 21 in the country, (f) calendar of events, (g) opportunities for building capacity (environmental education and training), (h) information about major groups in society related to sustainable development, and (i) special topics (e.g. eco-tourism, ISO 14000, etc.)

Homepage: http://www.ecoasia.org

ECO ASIA Long-term Project

The Fifth International Workshop on the ECO ASIA Long-term Project was held in Tokyo on the 3rd and 4th of March, attended by participants from 14 countries in the Asia-Pacific region and 5 organizations. The main purpose of the meeting was to plan an action-oriented Phase II of the Project. The Long-term Project was first proposed at the ECO ASIA ’93 Congress (ministerial meeting on environment) to provide decision-makers in the Asia-Pacific region with a scientific basis for policy formulation to achieve sustainable development, for the period leading up to the year 2025. The results of forecasts of socio-economic and environmental conditions were published and reported at panels at the United Nations Environment Program in April (UNCSD) and June (UNGASS) last year. Participants agreed that the objectives of Phase II of the Project are (a) to identify options for the environmental policies that can promote the long-term sustainable development of the Asia-Pacific region in the context of its socio-economic situation and also indicate environmental issues that may emerge from different development scenarios in the region; (b) to provide input to the ECO ASIA Congress for consideration as a possible contribution to the 'Rio+10' conference in the year 2002; and (c) to enhance human resources and institutional capacities of the participating countries to realize sustainable development through implementation of this Project. These objectives will be attained through application of the four concepts, namely: Eco-Consciousness, Eco-Partnership, Eco-Technology and Eco-Linkage, which were developed in Phase I. The participants discussed the Work Plan of Phase II of the Project. The Work Plan will be finalized based on further review and submitted to the ECO ASIA Congress to be held in Sendai, Japan in September 1998.

Four main concepts of the ECO ASIA Long-term Project:
- Eco-Consciousness: Common environmentally sound values such as practices, traditions, modes of social conduct, decision-making and bodies of indigenous knowledge
- Eco-Partnership: Activity which reinforces cooperation and exchange of experience within and between countries, companies, NGOs, local governments, joint activities, etc.
- Eco-Technology & Eco-Investment: Environmentally sound technology and investment that reconciles economic growth and environmental protection
- Eco-Policy Linkages: Strategy that links domestic/national environmental policies with regional or global environmental policies

Acid Deposition Monitoring Network in East Asia

The First Inter-Governmental Meeting on the Acid Deposition Monitoring Network in East Asia was held in Yokohama on the 19th and 20th of March, sponsored by the Environment Agency and Ministry of Foreign Affairs. The inter-governmental meeting agreed on the implementation of the preparatory-phase activities of the network starting in April 1998, as well as the major activities and tentative schedule during the preparatory phase. Acid deposition can cause environmental and other damage thousands of kilometers from the sources of emissions, requiring international cooperation to address the problem. Europe showed leadership in 1979 with the signing of the Convention on Long-Range Transboundary Air Pollution which set the stage for regional cooperation to combat acid deposition. The objectives of the Acid Deposition Monitoring Network in East Asia are to create a common understanding of the state of acid deposition in East Asia, and to provide useful inputs for decision-making at local, national and regional levels aimed at preventing or reducing adverse impacts of acid deposition on human health and the environment due to acid deposition. The Environment Agency of Japan sponsored a series of four expert meetings, held in 1993, 1995 (twice) and 1997 which resulted in adoption of "Guidelines for Monitoring Acid Deposition in the East Asian Region" as well as technical manuals for monitoring of wet deposition, soil and vegetation, and inland aquatic environments. Countries involved in discussions about the network include China, Indonesia, Japan, Korea, Malaysia, Mongolia, Philippines, Russia, Singapore, Thailand and Vietnam.
### Adoption of Charter for Establishment of IGES

On December 7th, 1997, during the height of negotiations at the Kyoto climate conference last year, a new organization made one step further in its evolution. A ceremony was held to adopt the Charter for the establishment of the Institute for Global Environmental Strategies (IGES) with signatures of national administrative organizations, research and academic institutions, and international organizations. This new institute will provide a forum for cooperation of related people and organizations worldwide. It is expected to develop strategies and policies to address global environmental issues. Key research themes of IGES for the next three years are (1) climate change, (2) urbanization and the environment, (3) forest conservation, (4) international cooperation on environmental education, and (5) environmental governance. A number of workshops are planned for the near future to further develop research activities. As of March 31st, IGES will be established and move to new quarters (see below).

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### New Environmental Training Facilities

At a ceremony on 16 October 1997, the Environment Agency announced completion of additional training and accommodation facilities at the National Environmental Training Institute in Tokorozawa, Saitama Prefecture. At the new facilities training courses will be held for personnel to be engaged in international environmental cooperation. As a model project, the facilities incorporate environmentally friendly design and features such as solar power generation, passive solar architecture, wall insulation, rainwater use and solar thermal panels. These innovative features are also used in training courses of the Center. The new International Training Facility is a three-story building which has a large conference room (80 person capacity with equipment for international conferencing), medium and small size seminar rooms, a library, etc. The new accommodation facility is a five story building with 44 rooms to accommodate guests including two for persons with special needs, as well as a sports room and relaxation lounges.

For more information about events and articles in JEQ please contact the Global Environment Department.