

# Foreword



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The Institute for Global Environmental Strategies (IGES) was established in April 1998 with the support of the Japanese Government and Kanagawa Prefecture and in the 5 years since then, it has been conducting research activities. It set up a research plan in 3 yearly stages, furthering policy research on the environment in the form of projects and so FY 2002 was the second year of the second Phase Plan, which places it right in the middle of the second Phase.

As is commonly known, IGES is a practical and strategic policy research institute having as its goal the planning and implementing of general policies for the realisation of sustainable development in the Asia-Pacific region. When IGES was established, a survey was conducted among government bodies and research organisations in the Asia-Pacific region. As a result, such topics as global warming, urban environmental management, forest conservation, environmental education, environmental governance (the role and responsibility that should be taken for sustainable development by all organisations such as central and local government, businesses, and NGOs) and water management have been taken up as problems facing the region that need solving. Out of these, it was decided that, because of the diverse nature of the problem depending on the country or region, water management would be taken up from the Second Phase after narrowing down the issues and would not be dealt with in the First Phase. Therefore, the First Phase plan would concentrate on research involving the above 5 issues, excluding water management. Furthermore, about 6 months later, a new

development pattern team was launched, as a project to lead cross-cutting research of each of the projects at IGES.

Whether a three-year time period for research was suitable for each of the projects is debatable, but for practical strategic policy research, it is necessary to implement policy recommendations in response to the changing outside situation. It is vital to conduct research with a long-term view, but as far as research results are concerned, it is necessary to summarise results into a fixed time frame, for example, 3 years, which is why one phase of research is 3 years. When IGES has amassed more experience, a review of the 3-year time period can probably take place. The reason for using projects as a method of research is to establish a policy aimed at solving a particular problem, envisage several scenarios to achieve the aim and after conducting comparative analysis of various concrete policies to put the scenarios into practice, one scenario will be chosen. To do this, all project members must work as one of a team and have the same perception on reality and an awareness of the problem, and by taking on a share of the roles according to his or her speciality, joint research can be carried out. This is the most effective and efficient way.

The first phase research, as mentioned above, was launched based on methods and basic ways of thinking that had almost never been used in Japan before. To recruit Japanese and foreign staff members, with a range of experience from various areas, including traditional specialist fields, and for a 3 year period of employment, was in itself not only quite a challenge, but when

we had just started out, there was not even a common understanding within IGES itself about the project research, so it was no easy task for the projects to narrow down their respective concrete research content, decide on a plan of research, and then pursue joint research with the cooperation of all project members. However, despite this situation of trial-and-error, research progressed through the intense efforts of all researchers and office staff. Each project conducted local surveys, participated in major international conferences, actively organised workshops abroad, as well as announcing research results. Through these activities, IGES gradually gained acknowledgement both at home and abroad as an international research organisation. Meanwhile, in 1999, the Technical Support Unit (TSU) of the Intergovernmental Panel on Climate Change (IPCC) was set up at IGES and began operating. In 2000, the IGES Kita-Kyushu office was established with the full support of Kita-Kyushu City.

In the Second Phase of research which began in 2001, 6 projects (Climate Policy, Urban Environmental Management, Forest Conservation, Environmental Education, Business and the Environment, and the Long-Term Perspective and Policy Integration) and 1 programme (Capacity Building) were implemented based on the results of the first stage research. The Second Phase of research saw the establishment of the new Kansai Research Centre fully supported by Hyogo Prefecture. This is where the Business and the Environment Project is conducting its research. Furthermore, in June, 2002, and with the full support of Kanagawa Prefecture, a new research building was completed across from the old research block in Shonan Village and IGES' headquarters moved into this new 7100m<sup>2</sup> building with

2 floors above ground and a basement floor. The new building is based on an original design with cutting-edge resource- and energy-saving facilities making it a suitably environment-conscious structure for IGES, an organisation pushing for sustainable development.

In the Second Phase of research, it has been disputed whether IGES, as a research institute, can produce international-level research results based on the foundation of the first phase. Even though FY 2002 was the half-way mark for the Second Phase research, it was decided that each research project and programme conduct a self-evaluation of the research results up to that point. This annual report plans to announce the results of that self-evaluation. In FY 2003, each project will draw up a project research plan for the Third Phase which will begin in 2004, based on the results of the project evaluation. It is hoped that this annual report will serve as basic material for the plans. In addition, at the conclusion of the Second Phase (the end of FY 2003), it is planned that all projects, together with cooperation from all of IGES, will participate in compiling what could be called a general overview of the First and Second Strategic Research Phases: the "IGES White Paper for Sustainable Development in the Asia-Pacific Region" (tentative title). I believe that, by working together in this way, all the researchers and staff members at IGES come to have a common awareness of the issues concerning global environmental trends, and will promote higher level strategic research in the future.



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# 1 Outline of IGES



# 1 Outline of IGES

## Goal

Established in 1998, the Institute for Global Environmental Strategies (IGES) is an independent, not for profit think tank, based in Japan, that goes beyond research to provide practical ways to protect the earth's environment and to realize greater sustainability and equity in the global community. While the outlook of IGES is global, the principal geographical scope of its activities is Asia and the Pacific region, an area which is experiencing rapid economic development and which will affect the global environment through its population growth, urban environmental problems and other environmental

issues.

The IGES mission is to move human society to become more environmentally and socio-economically sustainable.

In order to realize sustainable development, our current socio-economic activities themselves should be reviewed and redirected. Thus, the ultimate goal of IGES is to create a new paradigm for the global community so that the unsustainable production and consumption patterns currently observed can be changed into sustainable ones.

## Four Functions

IGES activities comprise four components:

Strategic Research

Application of Research Results to Policy Decisions and Actions

Information Outreach

Capacity Building

### Strategic Research

IGES works to carry out policy oriented research and provide innovative and practical proposals for policy and institutional changes that will foster an environmentally sound and socially equitable society. IGES seeks greater participation by major groups from civil society in conducting its research activities.



### Application of Research Results to Policy Decisions and Actions

IGES is a think tank that goes beyond research. In order to realise a sustainable and equitable society, IGES aims to reflect its research achievements in policy-making processes of national and local governments and actions of private companies, NGOs and the public. IGES actively participates in international conferences such as the Conference of the Parties to the United Nations Framework Convention on Climate Change (COP) to present its view. IGES also provides opportunities like public forums and workshops so as to facilitate multistakeholders dialogue on various issues that constitute major threats to global society.

Utilising its features as a non-governmental organisation with the Economic and Social Council of the United Nations (UN/ECOSOC), a status which was granted in April 2003, IGES conducts strategic research following global trends and takes a share in international environmental negotiations.

### Information Outreach

Objective information moves people to change their behavior. Therefore, IGES disseminates its scientific achievements and trends on international and regional debate regarding sustainable development-related issues through various media including the IGES web-

site, and e-mailed E-alerts. IGES has been actively working to introduce major policy trends in the region, particularly in non-English speaking countries .

### Capacity-building

Because people are empowered by skills and knowledge, IGES develops and offers an eLearning system,

an on-line training course, for training environmental specialists who wish to apply strategic research and skills. IGES also holds training workshops and supports training programmes by other organisations such as LEAD (the Leadership for Environment and Development).

## Milestones

### January 1995

Establishment of IGES recommended by the Japanese Prime Minister's Ad Hoc Commission on Global Environment in the twenty-first Century

### April 1996

Final report on functions, organisational structure and other aspects of IGES issued by the Discussion Group on Comprehensive Environmental Studies and Education (Environment Agency of Japan)

### January 1997

Decision for IGES to be located in Shonan Village Center, Kanagawa Prefecture

### April 1997

Establishment of a Preparatory Organization to establish IGES

### December 1997

Ceremony for Adoption of the Charter for the Establishment of IGES

### March 1998

Establishment of IGES as a non-profit organisation

### April 1998

Start of the First Phase Strategic Research

### July 1999

Establishment of the Technical Support Unit (TSU) of the IPCC National Greenhouse Gas Inventories Programme at IGES\*

### October 1999

Establishment of IGES Kitakyushu Office

### February 2001

Establishment of a special account for the Internet Global Environmental Fund\*\*

### April 2001

Start of the Second Phase Strategic Research

### June 2001

Establishment of Kansai Research Center

### June 2002

Completion of New IGES Research Building

### May 2003

Establishment of Project Office in Bangkok

\* TSU holds expert meetings and compiles reports and guidelines to technically support the activities of the Task Force Bureau (TFB) on National Greenhouse Gas Inventories, which was set up by the Intergovernmental Panel on Climate Change (IPCC).

\* \* Internet Global Environmental Fund conducts research for building systems using the Internet for the purpose of supporting global environmental conservation activities performed by NGOs around the world.



## **2 IGES Activities in Fiscal Year 2002**





## 2 IGES Activities in Fiscal Year 2002

### I. Summary

IGES has been pursuing more practical strategic research in the Second Phase. The three-year plan from Fiscal Year 2001 follows on developmentally from strategic research accumulated in the First Phase, with mutual collaboration among the various projects. In Fiscal Year 2002, the second year of the Second Phase, each project has continued to pursue its research, and the "Environmental Industry Project" began as a sub-project of the Long-Term Perspective and Policy Integration Project and preparations were made for the launch of the "Freshwater Resources Management Project".

In addition, IGES participated in the World Summit on Sustainable Development (WSSD) held in Johannesburg in August and September 2002, and organised side events. Presentations on the results of research projects contributed to improved recognition for IGES, and further positive international contributions were made through the continued contribution of data to the Environment Congress for Asia and the Pacific (ECO Asia) and Asia Pacific Forum for Environment and Development (APFED).

Furthermore, the content of the data collection/dissemination and human resource development programmes, which started from the Second Phase, are being enhancing by jointly developing eLearning system courses with United Nations Environment Programme / International Environmental Technology Centre (UNEP/IETC).

Out of the 2 projects which have been designated special account status, the Technical Support Unit of the National Greenhouse Gas Inventories Programme of the Intergovernmental Panel on Climate Change (IPCC/TSU) moved ahead in preparing a report on land-use, land-use change and forestry (LULUCF) as well as creating a greenhouse gas emission factor database (EFDB). Regarding the "Internet Global Environment Development Fund Project", the basic creation of the website has been completed and has started on a trial operations.

In addition, IGES moved into the exclusive research

facility which was completed in June 2002, using various technologies to reduce the impact on the environment. To mark the opening of the new facility, there was an opening ceremony with about 200 invited guests.

As far as activities towards the internationalisation of IGES, efforts have been made to create cooperative relationships with national governments and internationally evaluated research organisations, and to this end, there were three new signatories to the Charter of the Establishment of IGES, including the Malaysian Government.

#### 1. Activities of Strategic Research Projects

In Fiscal Year 2002, in addition to the 6 projects implemented in Fiscal Year 2001, the "Environmental Industry Project" was started as a sub-project of the "Long Term Perspective and Policy Integration Project". There was also preparations made to launch the "Freshwater Resources Management Project" in Fiscal Year 2003.

For the research projects, Fiscal Year 2002 was the second year of the Second Phase and each project compiled a Mid Term Report outlining the research situation at the end of Fiscal Year 2002. Furthermore, in order to propose integrated environmental policies, the research results of each project took a cross-cutting approach, and preparations were carried out mainly by the LTP project to complete the "Environmental White Paper for Sustainable Development in the Asia-Pacific" (tentative title).

#### 1) Climate Policy Project

In Fiscal Year 2002, despite major changes in the research staff, the CP project achieved results in many fields such as domestic systems, international cooperation, and adaptation issues. Proposals were made for a comprehensive domestic system which integrates various economic tools and independent activities. This proposal analysed in detail the domestic emissions trade system and then analysed and compared climate policies in Europe and Japan. It

was then presented as a necessary package of measures to achieve the aim of reduced emissions according to the Kyoto Protocol.

With regards to international cooperation, through continuing to organise bilateral dialogue between countries such as Thailand, Vietnam, Cambodia, there have been exchanges of opinion on climate change policies among policy makers, researchers and stakeholders in the Asia-Pacific Region and analysis on the future of local cooperation and the possibility of policy coordination. Such research results were presented at side events of the WSSD and the 8th Conference of Parties to the UN Framework Convention on Climate Change and detailed discussions took place based on these presentations. Several researchers were also invited from China and conducted analysis and evaluation on the barrier that exists between Japan and China on using the Clean Development Mechanisms (CDM) and proposing policies to apply them more effectively.

As for adjustment issues regarding climate change, research has been done on measures to strengthen the powers of opposition by integrating the traditional knowledge relevant to local areas.

In tandem with research activities, positive contributions have been made to activities providing information about climate change and to capacity building, through participation in international conferences, broadening of research networks, education workshops and the hosting of visiting researchers and student interns.

## **2) Urban Environmental Management Project**

Fiscal Year 2002 saw the continuation of research activities on the three themes of the Second Phase: 1) study on the process dynamics of urban environmental evolution; 2) research on urban policy integration of energy related environmental issues in selected Asian mega-cities, and 3) support for the implementation of the Kitakyushu Initiative Network for a clean environment, and provided results of the research to policy makers.

Specifically, in theme 1, a workshop was conducted with the Korean Environment Institute entitled "The Role of Planning Practices toward Sustainable Urban

Environment in Asia: Environmental Consequences of Metropolitan Expansion in Asia" and discussions took place on the recent relationship between the environment and development in mega-cities in Asia. There were also studies on the role of planning practices to deal with urban environmental problems. For theme 2, various joint research projects on energy-related policies were implemented including international workshops in Beijing, Hayama and Hawaii. Theme 3 implemented separate seminars on the three themes of waste disposal, public/private participation in wastewater treatment in cities and air pollution management. There was also support for the implementation of a pilot project in 5 cities, as well as collection and analysis of successful examples of urban environmental management (best practices).

## **3) Forest Conservation Project**

This project aims to develop strategies for desirable forest conservation and sustainable forest management with Indonesia, Lao P.D.R. and the Russian Far East as target countries for research. Having implemented a draft report of usable recommendations and guidelines for stakeholders at the local level, the final outcome of the project for Fiscal Year 2002 will be as follows:

- 1 ) Village Action Guidelines (VAG): Guidelines for stakeholders on the village level, beginning with the villagers
- 2 ) Local Policy Guidelines (LPG): Guidelines for stakeholders at the local level, beginning with local areas (targeting state government, or even smaller local authorities)
- 3 ) National Policy Recommendations (NPR): Recommendations to ensure the effective application of international treaties on local participation on forest management at the national level

Furthermore, based on research results so far, the "Policy Trend Report 2001/2002" (IGES) and "The Deforestation and Conservation of Forests in Asia" (Chuo Hoki Publishers) were published.

## **4) Environmental Education Project**

This project has been focusing on three main areas of research: 1) development of environmental educa-

tion materials; 2) human resource development, and 3) eco-tourism.

Regarding the development of environmental education materials, a provisional issue of a package of educational materials for wetland conservation was prepared, and the content evaluated and discussed at a workshop. This package of educational materials was presented at the 8th Conference of the Parties to the Ramsar Convention on Wetlands. For human resource development, the project once again organised the Environmental Education Training for NGO Staff in Indonesia, implemented up to now on commission from the Japan International Cooperation Agency (JICA). Research on Eco-tourism followed on from the first year and in particular focusing on Cambodia, it carried out a social survey in cooperation with the Cambodian Environmental Ministry of a floating community on Tonle Sap Lake, and there was a trial eco-tour with concerned parties.

Furthermore, aside from these important areas, basic research was continued to support the activities of the Tripartite (Japan, China, Korea) Environmental Education Network (TEEN), and a conference was organised to disseminate the results so far and discuss ways to translate them into practical policies.

#### **5) Business and the Environment Project**

This project is implemented based at the Kansai Research Centre and aims to propose a socio-economic system for concrete measures to promote best corporate voluntary environmental conservation practices (best practices). The project analyses and evaluates best practices to integrate environmental management methods and corporate management systems towards the construction of a sustainable socioeconomic system. Corporate environmental conservation activities include environmental management systems and environmental information disclosure such as environmental accounting and environmental reporting.

During Fiscal Year 2002 analyses of the current state of Japanese corporate environmental management as seen in the information disclosure of environmental accounting and environmental reports continued as in Fiscal Year 2001. Research was also con-

ducted into the environmental management situation in the Asia Pacific region and into relevant laws and regulations and efforts were made to grasp global trends and the needs of users. On the basis, best practices and issues were selected and experiments were carried out in cooperation with corporations to develop and study practical approaches such as material flow cost accounting. Research was also carried out to investigate the potential of environmental reports as a tool for the evaluation of corporations.

#### **6) Long-Term Perspective and Policy Integration Project**

This project continues to link the various fields of research at IGES and implements research activities focusing on the following main points: 1) cross-cutting policy analysis from a long-term view; 2) policy analysis to contribute to international discussions on the sustainable development of the Asia-Pacific region; and 3) policy analysis on urgent issues that are common in this region. In particular, activities were conducted keeping in mind contributions to the World Summit on Sustainable Development (WSSD) that was held in August and September 2002, at which research results were presented.

##### **■Research on Innovative and Strategic Policy Options (RISPO)**

RISPO is a sub-project of the Asia-Pacific Environmental Innovation Strategy project (APEIS) and as well as establishing a system of cooperation, proposing joint research plans and determining concrete research themes with other IGES projects and research institutes in the Asia-Pacific region, the project also collected best practices in the fields concerned with each research theme together with other research institutes, analysed them and created a prototype of a best practices inventory.

##### **■Asia-Pacific Forum for Environment and Development (APFED)**

With IGES as its secretariat, APFED presented research results and gave support to conferences to discuss the formulation of the APFED message to the WSSD and the implementation the commitments contained therein, as well as the preparation of a final report.

### **Environmental White Paper for Sustainable Development in the Asia-Pacific (tentative title)**

As well as making preparations for this White Paper which is due to be completed during Fiscal Year 2003 based on the results of all projects at IGES, a special issue of the White Paper entitled "Closing the Knowledge-Action Gap: Strategic Research for Sustainability in Asia and the Pacific" was presented at the WSSD and introduced IGES strategic research situation and the future formulation of the White Paper.

#### **■ Research on the environmental impact of the IT (Information Technology) Revolution**

By organising workshops, summarising the results and making preparations to publish them commercially, this project participated in local initiatives for IT and the environment in the Asia-Pacific through the UNEP.

#### **■ Preparations for the launch of the Freshwater Resource Management Project**

By carrying out a basic survey on the international trends regarding freshwater management, the "Study Group on Freshwater Resource Management in Asia" was established made up of experts from Japan, and discussions were carried out towards the consolidation of issues on freshwater resource management in Asia and refining research themes. Furthermore, the project organised a session at the Third World Water Forum (WWF3) held in Kyoto in March 2003.

#### **■ Environmental Industry Project**

This project, which began in Fiscal Year 2002, examines 4 countries in the Asia-Pacific (China, India, Indonesia and Korea) and conducts analysis focusing on the current situation of environmental industry from the point of view of environmental conservation technology, environmental management know-how and environmental hardware, as well as policies to promote industrial development both inside Japan and abroad. The sub-project also offers recommendations for the future development of environmental industry.

Six workshops were organised between May and October and there were discussions by members and advice groups in Japan on the current situation

and issues of environmental industry in the target countries. There was also the First International Workshop on Environmental Industry held at IGES headquarters on 14 and 15 December. There were discussions on the content of the First Draft submitted regarding environmental industry in the target countries, international environmental cooperation from Kita-Kyushu city, environmental concerns of small and medium sized businesses and Japan's environmental ODA. In addition, there was confirmation of the Fiscal Year 2003 research schedule aimed at producing a Second Draft, which include revisions based on the discussions, as well as putting focus on the future development of environmental industry.

## **2. IPCC/TSU Activities**

The Technical Support Unit of the National Greenhouse Gas Inventories Programme of the Intergovernmental Panel on Climate Change worked on two projects: (1) the creation of a Good Practice Guide (GPG) in Land Use, Land Use Change and Forestry sector (LULUCF); and (2) build a GHG emission factors database.

As for (1), the GPG reports provide guidance and methodology for countries when they calculate the amount of GHG emissions and removals from LULUCF fields. The report will be put together after two reviews by both the authors/experts meeting and governments / experts. The First Order Draft, drawn up after the third authors/experts meeting, was reviewed between December 2002 and January 2003.

For (2), the Emission Factors Database (EFDB) was established on the World Wide Web, and provides emission factors and other variables necessary to calculate GHG emissions and removals. In Fiscal Year 2002, after a pilot-test was carried out using a prototype database, the database was formally made public at COP8 in India. The EFDB currently operates on the Internet (<http://www.ipcc-nggip.iges.or.jp/EFDB/main.php>). Furthermore, in January 2003, an editorial committee was set up to promote the expansion of data.

### **3. Situation of Activities aimed at the realisation of research results**

As ways for decision-makers, businesses, NGOs and citizens' movements of national governments and local authorities, to reflect on its research results, in Fiscal Year 2002 IGES participated in the main international conferences and was active in organising symposiums and workshops. In particular, at the World Summit on Sustainable Development (WSSD) held in Johannesburg in August and September 2002, IGES organised 4 parallel events in the Japan Pavillion on APEIS, APFED, Climate Change and Biodiversity Conservation. They introduced the views and activities of the projects and held exchanges of opinions with participants. There was also an IGES booth set up during the summit introducing IGES research activities.

In addition, IGES set up booth exhibits and conducted seminars to present research results at the Third World Water Forum (WWF3), the 11th Eco Asia meeting, COP8, and the 12th Asia-Pacific Seminar on Climate Change. Moreover, in November 2002, it organised an international seminar in Beijing on financing mechanisms for environmental policies with the Global Environmental Facility (GEF). In March 2003, a local workshop was held jointly with the United Nations University on integrated human resource development regarding multilateral environmental treaties in the ASEAN region. In order to provide forums for various concerned parties to conduct free discussions in Japan too in FISCAL YEAR 2002, IGES held the Open Symposium on Climate Change in July 2002 in Tokyo, commissioned by the Japanese Ministry of Foreign Affairs. There was also a Multi-stakeholder dialogue commissioned by Toyota Motor Corporation to discuss the possibility of a green marketplace, held at IGES headquarters. There were several other seminars etc. organised based on IGES research results.

#### **2) Provision of forums to discuss policies in Japan**

Using its characteristics as an NGO, IGES offers a forum to discuss environmental issues where anyone can participate, from governments, businesses, NGOs and NPOs to researchers, local citizens and students. One very important function central to IGES is that it promotes policymaking on global environ-

mental issues.

### **4. Capacity Building Programme**

Focusing on Capacity Building as a way to deal with global environmental problems, IGES has developed the e-Learning system, an on-line education system, and conducts work centered on the Internship Programme in cooperation with other institutes.

Regarding e-Learning, Fiscal Year 2002 aimed at fully-fledged operation of the system with improvements to the system and course contents based on the results of a trial-run in Fiscal Year 2001. Several IGES research results were developed as e-Courses and e-Courses were also developed jointly with LEAD (Leadership for Environment and Development), the UNEP International Environmental Technology Centre (UNEP/IETC) and the Acid Deposition and Oxidant Research Centre (ADORC). Furthermore, using the large-scale e-Learning Project undertaken with Kanagawa Prefectural Government, IGES implemented impact evaluation research of the e-Course on ISO14001, the environmental management system.

In July 2002, in cooperation with LEAD-Japan, UNU, and UNEP-IETC, a workshop was organised on environmental management systems targeting the research students of LEAD-Japan and in addition, a training workshop for NGO staff in Indonesia was implemented as the final year of a 3-year programme.

Based on an agreement between LEAD and IGES, the Capacity Building Programme welcomed 2 interns from Russia and China, as well as placing 3 university students as short-term interns in the secretariat and research projects. Furthermore, as a part of personnel exchanges, a researcher from the Energy Research Institute (ERI) in China joined the Climate Policy Project in Fiscal Year 2002, and one IGES researcher was dispatched to the Wuppertal Institute for Climate, Environment and Energy and one to the World Conservation Union (IUCN).

### **5. Information Collection and Dissemination**

Apart from IGES research results and current activities, analysis is conducted on the newest information regarding policy and research trends on global environmental issues and then it is processed so it is easy to

understand. Appropriately combining various information media at IGES, the information is then disseminated throughout the world based on publicity strategies decided by the Public Relations Committee.

As for information dissemination through publications etc., preparations are being made to publish "Forest Loss and Conservation in Asia" in May 2003 and at the same time, "Environmental Accounting in the Process of Updating - towards practical tools for business and society" was published commercially in March 2003. Furthermore, the "International Review for Environmental Strategies (IRES)" which was launched in August 2000 with the aim of providing information and strategic research results for solutions to global environmental problems, published a special summer edition on "Globalisation and Sustainable Development" and a special winter edition on "Sustainable Freshwater Resource Management". Published every year since 1998, "Top News on Environment in Asia" compiled a booklet in Fiscal Year 2002 bringing together the main news on the environment in the region, with the cooperation of researchers from 15 countries and 3 institutes in the Asia-Pacific Region. "What's New from IGES" is issued 3 times a year as a newsletter, and provides information about IGES to research institutes, researchers, companies and NGOs etc. throughout the world.

As for information dissemination through the Internet, IGES made drastic modifications to its home page in order to post the very newest information and make it easier to read. It became fully operational in July 2002. The information dissemination system via e-mail, "e-alerts" sent out information on global environmental topics and IGES activities to about 3000 addresses, three times a year.

## **6. Upgrading to the new research building**

With the full support of Kanagawa Prefecture, the new IGES research facility was built in Shonan Village, Hayama in Kanagawa. It began operations in June 2002. For the opening, there was an Opening Ceremony on June 22, to which about 200 guests were invited. As a suitable facility for a research institute working on global environmental issues, the greatest consideration has been taken to the environment, and for maintenance in the future, a management system will be built

to reduce the impact on the environment.

## **7. Establishment of a Medium and Long-term plan including Internationalisation**

In order for IGES to steadily implement internationalisation, effective research and operations as an efficient institute, it has formulated a research plan aimed at achievements in the medium and long-term. Discussion began at Board of Directors meeting etc. In the future, IGES will investigate a strategic framework and formulate a medium and long-term plan looking ahead 6 to 10 years, by the end of Fiscal Year 2003.

Furthermore it is increasing the participation of signatories to the Charter for the Establishment of IGES, in order to pursue links with national governments and research institutes towards further internationalisation. In Fiscal Year 2002, the Malaysian government, World Watch Institute (USA) and the VTT Technical Research Centre of Finland all signed the Charter.

## **8. Other Activities**

### **1) Improvement of the Affiliate Members System**

For the opinions of governments, businesses, NPOs and citizens to be reflected in IGES research activities, and for research content to be more practical, various stakeholder networks centering on IGES should be created. From these and from IGES fiscal policy, it is important to increase the number of Affiliate Members. To this end, IGES is increasing member services to include priority invitation for affiliate members to various symposiums and seminars as well as distribution of publications. There have been 6 affiliate members' workshops where it is possible to interact with IGES researchers. Furthermore, to increase membership, a discount system has been set up for students and long-distance members who find it difficult to attend the seminars. As of 31 March 2003, there were 21 organisations, 2 NGOs and 88 private members.

### **2) Links with the local community**

Through links with local public organisations in the areas where IGES headquarters and offices are located, seminars are held for local citizens and businesses, which contribute to the local community. In partic-

ular, IGES has held joint seminars at its headquarters with the Kanagawa Foundation for Academic and Cultural Exchange (K-FACE) targeting local citizens and at the Kita-Kyushu Office, support is being given for the Kita-Kyushu Initiative.

### **3) Environmental Management System**

Up to now at IGES, environmental management has been implemented which sets a target value for actual reduction in the amount of electricity consumed per person. However, with the move to the new IGES building, there have been changes in the basic figures and it has become necessary to create a new environmental management system. In the new IGES building, the amount of electricity, gas and water used can be understood in detail depending on the location and application so there is a plan to construct a suitable environmental management system after looking at the record of usage for one year, including the amount of waste etc.

### **4) Internet Global Environmental Fund Development Project**

Fiscal Year 2002 was actually the second year of this project, and by providing a forum to disseminate NGO information dealing with environmental conservation activities to the world, support is increased to make use of an effective NGO network. In Fiscal Year 2002, work on the website (Virtual Globe) continued to be pursued and from January 2003, it began trial operations. Furthermore, as well as the construction of a website, advances were made in the selection of NGOs to be included and the creation of the contents. In addition, as far as the main developing countries in Asia are concerned, improvements were made regarding networking with the main local NGOs, making effective decisions and creating a system of communication. Furthermore, at the WSSD, IGES raised its profile by publicising Japan's contributions to global environmental conservation and achieved success in gaining higher recognition, as well as expanding and strengthening international networks.

## II. Outcomes of Research Projects

# CP

### A. Climate Policy Project (CP)

Climate change remains the biggest challenge to sustainable development as confirmed by discussions held during this year at the World Summit on Sustainable Development (WSSD) in Johannesburg. The mission of the Climate Policy (CP) project in Phase 2 (2001-2003) is to assess, identify and/or design innovative and pragmatic climate policies and measures for sustainable development, especially in the Asia-Pacific region. Despite a high staff turnover in FY 2002, the CP Project greatly contributed to this mission and gained a wider exposure and influence in both Japan and other Asian countries through accomplishing several targets set in themes including domestic policies, international cooperation, and adaptation issues.

Our project continued to maintain a strong profile in policy circles of Japan during this year by proposing a comprehensive package that considers policy objectives besides climate and integrates various economic, command and control, and voluntary measures as part of a new institutional framework. While further discussion is necessary in terms of the feasibility of new institutional framework and its consistency with the existing framework, it must be noted that the formulation of such draft by a non-governmental organisation was a breath of fresh air into the system design, and formed a solid basis for further discussion in Japan. The proposal placed emphasis on industrial theory aspects of climate mitigation and involved a large resource shift from the building and transportation sectors to the industrial sector to facilitate further emission reductions in the latter. The proposal was timely and appropriate especially because Japan ratified the Kyoto Protocol in June 2002, committing itself to an emissions target 6% below 1990 levels over the 2008 to 2012 commitment period. Several stakeholders widely appreciated the proposal as it offered policy makers a platform to design new systems that would help Japanese companies to comply with the Kyoto targets in a cost effective manner, while effectively making use of the emerging international emissions

trading market. For instance, the proposal argued that domestic emission trading and voluntary action plans must be linked with the international market to enable acquisition of overseas tradable permits and credits to be used for compliance with domestic regulations (Fig. 1).

In addition, Shuzo Nishioka, the Project Leader, participated actively in a wide range of domestic policy discussions, and was invited regularly by the national and local governments in Japan to recommend policies and measures to prevent global warming. We also reviewed relevant policies in transportation sector of Korea, and compared climate policies in Japan with those of Germany and other countries in Europe.

As part of our efforts to enhance international cooperation in climate policy in Asia, we continued to analyse current status of efforts to address climate change in various countries through organising dialogues with diverse stakeholders including government officials, industry, NGOs and academia. During this year, such dialogues were held in Thailand, Vietnam and Cambodia. At each dialogue, a comprehensive analysis of climate change issues in each country was made along with discussions on each country's specific needs to mitigate global warming and the common challenges facing policy makers across the Asia-Pacific region. The results from these and previous dialogues were published as a report entitled "Climate Policy Dialogues in Asia" and widely distributed at international events such as WSSD and the 8th Conference of Parties (COP8) of the United Nations Framework Convention on Climate Change. Further details are given under "Contributions to International Conferences" section (page 43).

The Clean Development Mechanism (CDM) is another effective tool to promote international cooperation and achieve sustainable development in developing countries while simultaneously addressing the issue of climate change through promoting a shift toward cleaner technologies. Moreover, given the high marginal abate-

ment costs within Japan's domestic economy, the Kyoto mechanisms such as CDM will be indispensable in meeting Japan's Kyoto target. However, several barriers prevail in understanding and implementation of CDM in both Japan and host countries. As a first attempt to analyse various obstacles and opportunities for effective CDM cooperation between Japan and China, a visiting researcher from the Energy Research Institute of China conducted a series of interviews in China with representatives of local and state governments, industry, and academia during this year. Various countermeasures to overcome such barriers have been proposed as part of this study.

Another aspect of increasing relevance and importance to developing countries of Asia is the assessment of policies relevant to adaptation to climate change. As most of our previous work emphasized mitigation policies, a beginning was made this year to examine relevance of bottom-up approaches in designing adaptation policies. Based on an assessment of successful local practices to enhance adaptation to climate change in different sectors, the importance of integrating such knowledge in adaptation plans was highlighted, and a spatial framework to achieve such integration was pro-

posed at the 12th Asia-Pacific Seminar on Climate Change (additional details on page 48). As part of our cooperation with the Long-Term Perspective and Policy Integration Project, we have begun a new study in Bangladesh to collect data on how local knowledge is being applied in adaptation to climate change (especially with respect to climate extremes such as droughts, floods, and sea-level rise) and on how such local knowledge may be integrated in local and national adaptation policy frameworks for enhancing adaptive capacity of communities. In addition, the project leader chaired adaptation policy studies at the Scientific and Technical Advisory Panel (STAP) of the Global Environment Facility, and submitted a comprehensive report on this topic.

Besides conducting research, the CP project was active in information outreach and capacity building through contributing to many domestic and international conferences and research networks, holding training workshops, and hosting visiting researchers and interns. Details of some conferences and workshops held this year are given separately. Throughout this work, the CP project maintained excellent partnerships with projects in IGES and various organisations actively involved in the policy making and assessment of climate change.

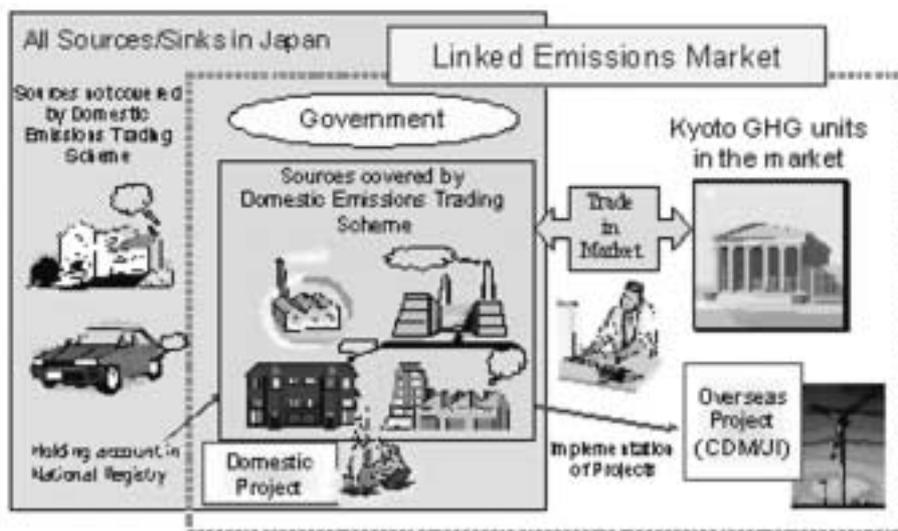


Figure 1: A conceptual proposal for linking domestic emissions trading and voluntary action plans with international markets

### 1. Outline of the Second Phase Research Plan

The goal of the Urban Environmental Management Project (UE) is to propose innovative ideas and models, which serve as guidelines for urban environmental management policies under the mega-trend of economic development in Asia in the 21st century. Based on comparative analysis and evaluation of the present condition and past experience of urbanisation as well as environmental problems in Asian cities, research in the second phase aims to provide examples for policy options, institutional systems, technical options, urban planning, infrastructure development, and financial mechanisms for better urban environmental management. In order to support related research projects and to propose more effective and efficient policies, the UE project promotes analysis and dissemination of information through an action-based intercity network. Research is conducted under the following themes:

#### 1) Study on the Process Dynamics of Urban Environmental Evolution

This study aims to develop a theoretical framework to analyse the process dynamics of urban environmental transformation by examining Asian cities in terms of economic, social, and other aspects.

#### 2) Study on the control of energy demand and greenhouse gas emissions in mega-cities

This study aims to develop a simulation model to quantify the impact of policies for macro-economic, transportation, residential and commercial waste management, and urban planning, in order to explore possible policy integration to maximize the positive effect of each sectoral policy. The scope of this study will be expanded to medium-sized cities in the future.

#### 3) Support for the implementation of the Kitakyushu Initiative for a Clean Environment

The Kitakyushu Initiative for a Clean Environ-

ment, a programme of the United Nations Economic and Social Commission for Asia and the Pacific (UN/ESCAP), is a mechanism to assist in the priority implementation of the Regional Action Programme (2001-2005), with specific focus on environmental quality and human health. The UE project acts as secretariat for the implementation of the Kitakyushu Initiative, under the guidance of UN/ESCAP and the Ministry of the Environment, Government of Japan. Activities include the collection and analysis of successful practices in urban environmental management, support for the implementation of pilot activities, and development of the Kitakyushu Initiative Network through regional, national, and local meetings.

### 2. Research Results of FY2002

The UE project continued to conduct research on the above themes, focusing on the examination of the relationship between the trend of industrial location patterns and urban environmental problems in Asia, capacity development of local governments, and quantitative analysis and simulation of policy impacts. Research results included comparative analyses of Tokyo, Seoul, Beijing, and Shanghai, as well as future forecasting models of energy consumption from sectors such as macro-economics, transportation, residential and commercial, municipal solid waste management, and material flow; analyses on the global environmental implication of metropolitan expansion in Asia and the role of planning practices; studies on capacity development of local governments in air quality management, water supply and wastewater treatment, and solid waste management; and development and application of financial mechanisms for urban environmental improvement.

Outcomes from research activities were disseminated to urban policy makers, international agencies, and academic researchers in international workshops and seminars, including the "International Workshop on Policy Integration towards Sustainable Urban Energy Use for Cities in Asia" (February 2003), the "IGES/KEI Interna-

tional Workshop on "The Role of Planning Practices towards Sustainable Urban Environment in Asia: Environmental Consequences in Asia" (March 2003), and thematic seminars on solid waste management, public-private partnerships in urban water supply and wastewater treatment, and air quality management under the Kitakyushu Initiative in September 2002, November 2002, and February 2003, respectively.

### **3. Future Tasks for the Second Phase**

#### **1) Study on the Process Dynamics of Urban Environmental Evolution**

Future tasks for this theme include drawing policy implications on how to effectively integrate national spatial policy, regional industrial policy and urban policy to minimise the negative impact on the environment. Case studies will be synthesised into a framework for capacity development of local governments in urban environmental management, and a simplified system of indicators developed.

#### **2) Study on the control of energy demand and greenhouse gas emissions in mega-cities**

This theme seeks the development of scenario

analyses and links those with the locally viable options using earlier models. Policy surveys and dialogues with selected cities would be carried out for developing those scenarios, and outcomes would be disseminated to promote countermeasures and improve energy efficiency in Asian cities, especially in rapidly industrialising East Asian cities.

#### **3) Support for the implementation of the Kitakyushu Initiative for a Clean Environment**

Thematic seminars on industrial relocation and public participation are planned for the next fiscal year, as well as the continuation of pilot activities and analyses of successful practices in solid waste, water supply/wastewater treatment, and air quality management. A review of activities (November 2001 to October 2003) will be conducted at the Second Meeting of the Kitakyushu Initiative Network in October 2003 and a roadmap for future activities developed. This will include expansion of network activities and creation of a support system of intercity cooperation with the participation of national governments, donor organizations, and businesses.

# FC

## C. Forest Conservation Project (FC)

In FY 2002, FC project conducted research to draft Village Action Guidelines (VAG) and National Policy Recommendations (NPR). The result is summarised as follows.

### 1. Result of Local Approach in Indonesian studies

VAG for Indonesia comprises 1) introduction, 2) situation and problems, 3) specific goals and direction of forest management, and 4) immediate action to be taken. Introduction includes purpose of the guidelines, definition of forest management, indicators of participation in forest management, instruction for using the guidelines, and definition of abbreviation/terms used.

Situation and problems cover the general situation and specific problems pertaining to forest and land condition, forest-based village economy, and government policy. Most of the problems are shared among villages as in other tropical regions. There is rapid destruction of forest and expansion of critical land, threat of recurrent forest fires, weakness of customary law to protect forest, weak concern and commitment from village leaders, low participation of women, and less democratic community decision-making process. Economic problems include low income of the people, dependence on shifting cultivation, and dependence on external funds when the people are involved in intensive forestry activities. Policy issues covers restriction of people's access to forestland, and unclear regulation on reforestation fund.

Specific goals are facilitation of reforestation / afforestation, prevention of forest fires, and declaration of protection forest, sustainable use of forest and natural resources, and improvement of village economies.

Actions to be taken include preparing for the protection of forests, making village regulations, improving the role of village institutions, and enhancing the role of women and young people. It is also necessary to make land use plans, and coordinate with neighbouring villages. To improve the economy, it is important to integrate forestry activities into income generating activities, create and expand the market for agricultural produce, and extend the people's access to forestland. From the

government side, it is necessary to make clear the procedures and regulations on reforestation fund, and government's support on people's right to land and forest.

### 2. Result of Local Approach in Laotian studies

The structure of Laotian VAG comprises of a background of villages, problems / good examples, internal / external factors, principles, and expected action to be taken. As a result of the PAR at a protected area in Savannakhet province, problems and good examples were clarified. As for internal problems, we found out an information gap between the rich and poor in the village. For instance, it is easy for the rich to get information from external sources, compared with the poor. Then the rich benefit in advance even before the poor get the information. As for external problems, we found out a lack of mutual understanding between local government and local people, caused by the lack of administrative services for the people. As for good examples, most of the local people still practice traditional land and forest use systems. For instance, when they collect one Yam potato for emergency food, they usually keep some of the rhizomes for next year's harvest.

### 3. Result of Local Approach in Russian studies

Russian studies were, in close contact with Lazo raion administration, focused on analyses on small-scale forest business and a community survey of Sita and Sukpai settlements.

Concerning small-scale business, the following could be pointed out based on case studies: 1) small businesses are private businesses that belong usually to a single person, single family or small close group; 2) by the same reasons, managers of small business are good organisers, flexible, communicative, have proficient knowledge of markets, etc. Good management is the main reason for small business success. As in the case of Canadian Model Forest Project, an education / capacity building programme is quite important for the development of small business. Obstacles to the development of small scale businesses were: imperfection of

the Russian bank/credit system, especially its high crediting rates; a complicated, instable, and opaque tax system, and arbitrariness and corruption of officials.

Concerning community research, the following could be pointed out: 1) for many reasons, there is a great deal of difference amongst the population regarding "real" public life. People don't want to participate in public events and they have lost confidence in the authorities. It is very difficult to motivate them to participate even in one-off events such as elections, villagers' meetings, etc. 2) Judging from the behaviour of local people, their interests in participating in forest management are very low. The issues they are most concerned with are jobs, income, survival, increasing their standards of living, etc. 3) There is a mixture of reasons why people may be eager to participate in forest management. Some wish to preserve forests, establish non-exhaustive means and even protected order. Others want to receive access to forest resources for their own gain. 4) Office workers, managers of local business, and the administrative staff are positive and have some skills for participatory approach.

#### **4. Result of International Approach**

The National Policy Recommendation (NPR) has been developed in consideration of the actual situation in each country and with reference to analyses of each country's unique situation from the viewpoint of implementing international treaties related to forest conservation. It has been revised from time to time in order to reflect discussions in the international workshops organ-

ised by IGES-FC Project in the three countries in 2002, as well as other comments and opinions sent to the FC from the workshop participants and from the project collaborators. It aims to encourage all stakeholders including national government, local government and NGO to promote the participation of local people in forest management, by setting out measures and actions to be taken in order to ensure domestic implementation of relevant provisions on participation in multilateral environmental agreements. To that end, it identifies necessary measures and actions, especially those on legal and administrative systems, for respective countries.

Since the key elements required for the participation of local people in forest management have been set out in various existing international instruments, both binding and non-binding, the NPR first analyses major international instruments related to forest management. Such legal elements are updated with analysis of resolutions adopted in recent COP Meetings of MEAs and the WSSD Johannesburg Meeting. It then examines domestic laws and administrative systems on forest management in the three countries, paying special attention to illegal logging and necessary control measures to prevent such logging.

In the concluding part, the National Policy Recommendation examines measures for ensuring effective participation of local people and identifies necessary measures and supportive measures for further improvements. Finally it identifies strategic elements for effective implementation of such measures to be taken by respective country.



## D. Environmental Education Project (EE)

### 1. Outline of the Second Phase Programme

Efforts made by and at country level alone are not sufficient to raise awareness about environmental issues at the global level. The efforts need to be made simultaneously at the global level as well. It is necessary, therefore, to develop an international system of cooperation that promotes environmental education across the region.

Currently, various problems such as inappropriate development, poverty, population growth, food production, natural resources and energy consumption issues, human rights, and gender issues and so forth, have been recognised as the most intricate issues that are linked directly to environmental issues. After the Rio Summit in 1992, international communities reoriented their concept of environmental education towards 'education for sustainability'. This new concept demands the simultaneous treatment of all relevant fields (sectors) for the establishment of a 'sustainable society'. Addressing this concern is the prime target of environmental education. Environmental education is necessary, not only for the purpose of tackling these urgent environmental issues, but also taking a broad and wide view on a sustainable society.

The Environmental Education Project during the first phase reviewed the latest status of environmental education in the Asia-Pacific region. The Project formulated a regional strategy on environmental education in the region. It was concluded that these studies are required to further improve environmental education in the region and their importance continues to grow. These studies demand practical actions, to which the Project is giving top priority in the current phase.

Under this background, the Project places emphasis on undertaking simultaneously 'study' as well as putting its findings into 'application'. Accordingly, in the second phase the Project aims at designing policy proposals (based on the assessment of environmental education in the region), and building up a framework of IGES as a hub of environmental education activities, through strategy proposed in the First Phase. The plan proposed for

the Second Phase consists of the following activities:

- Develop environmental education materials
- Implement human resource development
- Develop innovative eco-tourism education models

### 2. Research results of FY 2002 in second phase strategic research

In fiscal year 2002, the main activities of the Project are summarised as follows. The Project prepared educational materials on the conservation and wise use of wetlands. In addition, the Project collected and published information on pioneering examples on environmental education. The Project conducted a training course in collaboration with JICA for Indonesian NGO staff. Under the eco-tourism education activity, the Project conducted case studies in sites of eco-tourism and practiced a trial eco-tour in Cambodia. In addition, the Project conducted a study on environmental education in Northeast Asian countries, and organised some workshops in the region.

#### (1) Collection of the pioneering examples on environmental education

The Project collected information on pioneering examples on environmental education from 15 countries worldwide. Its objectives were to document cases of environmental education that are considered exemplary, to investigate how these cases successfully work, and to make these cases easily available and accessible to the practitioners. These examples were published in FY 2002 as a book entitled "The Path to Success".

#### (2) Wetland education material

Making educational material easily available to raise awareness on the wise use and conservation of wetlands began with preliminary consultation and dialogue with stakeholders and trial of the draft modules. In order to discuss the appropriateness of the material, the Project organised a workshop called "Workshop on the Evaluation of Educational Materials" from Jan 7 to 9, 2003 in Bangkok, Thailand. The material that the Project prepared con-

sists of four modules: (1) Let us keep our wetlands healthy; (2) What is happening to our freshwater resources? (3) Developing an objective-oriented Programme, and (4) Participatory Rural Appraisal. These modules will be published in FY 2003.

### **(3) Training course for NGO staff in Indonesia**

The Project organised an "Environmental Education Training for NGO Staff in Indonesia" from June 25 to July 27, 2002 in collaboration with Japan International Cooperation Agency (JICA). IGES has been organising the training programme since 1999 and the fourth one was organised in 2002. Trainees from different NGOs in Indonesia participated in the programme and obtained information, knowledge and know-how about practical activities on environmental education through field visit, observation, and direct interaction.

### **(4) Activities on eco-tourism education**

With a view towards the sustainable use of natural and social resources in developing countries, the Project conducted fieldworks in several sites of eco-tourism in FY 2002. Cambodia and Mongolia were selected as case study countries and preliminary fieldwork and book reviews were conducted. In Mongolia, a country report summarising the status of eco-tourism was prepared. In Cambodia, the Project organised an experimental practical eco-tour in Tonle Sap Lake and its surroundings from March 6 to 12, 2003 in collaboration with concerned national and local stakeholders. Based on results of the trial the Project will produce some proposals for eco-tourism education.

### **(5) Tripartite Environmental Education Network**

The Project conducted a study in Northeast Asian countries in order to assist the activities of the Tripartite Environmental Education Network (TEEN).

The third workshop and symposium of the China-Japan-Korea TEEN was held in Seoul, Korea from September 25 to 27, 2002 and the Project participated in this meeting.

**(6)** The Project held a seminar entitled "Considering Strategies for Environmental Education in the Asia-Pacific Region: Findings of IGES research on environmental education," as part of the 13th convention of the Japanese Society of Environmental Education held from 24 to 26 May, 2002, at the Miyagi University of Education.

## **3. Future tasks for the second phase**

In FY 2003, the Project will focus on completing research activities of the second phase. Regarding the development of environmental education materials, the Project will pilot test the package of educational materials, discuss these materials in the workshops and publish them for a wider dissemination in the Asia-Pacific region. Some of the materials will also be translated into local languages. In human resource development activity, the Project will organise workshop in Indonesia to evaluate training activities undertaken annually since 1999. In order to assist implementing environmental education in Nepal, the Project will organise a workshop for stakeholders. A comprehensive report on eco-tourism education will be compiled summarising the findings of action research, case studies and practical eco-tourism activities in Tonle Sap Lake, Cambodia conducted in FY 2002, action research findings, and case studies that were organised. In parallel to these activities, special activities such as promoting the "U.N. decade on education for sustainable development" and/or strengthening the "Japan-Korea-China Environmental Education Network" will also be carried out in the second half of FY 2003.

### 1. Business Report of Fiscal Year 2002

Responding to the World Summit on Sustainable Development (WSSD) held in August-September 2002, the Long-Term Perspective and Policy Integration Project (LTP) has focused its activities on the implementation of two major projects: i. e. "Asia Pacific Environmental Innovation Project/ Research on Innovative and Strategic Policy Options (APEIS/RISPO)", and "Asia-Pacific Forum for Environment and Development (APFED)". It has also played the leading role in drafting on IGES-wide paper "IGES Environmental White Paper for Sustainable Development in Asia-Pacific Region (IGES White Paper)".

Furthermore, LTP has finalised a sub-project entitled "IT Revolution and the Environment", prepared for the launching of the Fresh Water Resources Project, and contributed to the Third World Water Forum held in Kyoto in 2003 March. Research on the development of environmental industry in developing countries has also been implemented as a sub-project.

#### 1) Asia-Pacific Environmental Innovation Project/ Research on Innovative and Strategic Policy Options (APEIS/RISPO)

Asia-Pacific Environmental Innovation Project (APEIS), proposed and endorsed at ECO ASIA 2001, is an international collaborative research project participated by research institutes, international organisations, and policy makers in the field of environment and development in the region. Primary objectives of the project are to develop knowledge-based tools to support policy making and to propose innovative and strategic policy options to promote environmental innovation in the region. It consists of three sub-projects namely Integrated Environmental Monitoring (IEM), Integrated Environmental Assessment (IEA) and Research on Innovative and Strategic Policy Options (RISPO).

IGES is responsible for implementing RISPO, which includes about 20 research institutes and international organisations in the region. The first

ECO ASIA Panel, held in Hayama, Japan, endorsed the RISPO research direction focusing on four research themes during its first research phase (FY2002-FY2004): a) promoting eco-market and eco-industry, b) developing innovative urban systems, c) appropriately using community resources, and d) networking stakeholders for action. Following the endorsement of these four research themes, LTP in collaboration with other IGES research projects, organised international research teams on eight sub-themes including innovative financing for renewable energy development and development of environmentally sustainable transport systems in urban areas.

RISPO aims to propose "Strategic Policy Options (SPOs)" to promote environmental innovation in the region by March 2005. It also aims to prepare "Good Practices Inventory (GPI)" that provides a variety of information on practices toward sustainable development and serves as the basis for the policy options to be proposed. The first RISPO Plenary Workshop was held in Bangkok, March 2003, to exchange interim outcomes of the project and ideas on SPOs among participating researchers and policy makers in the region.

#### 2) Asia-Pacific Forum for Environment and Development (APFED)

Asia-Pacific Forum for Environment and Development (APFED) is a forum of eminent persons from the region and IGES serves as the secretariat of the forum. The aim of the forum is to present a new model of equitable and sustainable development for the region. In FY2002, through two substantive meetings and their associated meetings shown below, APFED discussed and adopted its Message to the WSSD and also started discussion on its Final Report to be prepared by the end of 2004.

- Second Substantive Meeting (APFED2): 4-5 May 2002, Jakarta, Indonesia)

- Expert Meetings for APFED2)
  - Expert Meeting on trade and environment: 1 April 2002, Tokyo, Japan
  - Expert Meeting on Renewable Energy: 2 April 2002, New Delhi, India
- Multi-stakeholder Meeting for APFED2: 3 May 2002, Jakarta, Indonesia
- Third Substantive Meeting (APFED3): 24-25 January 2003, Guilin, China
- Expert Meeting on an Integrated Approach to Managing Urbanisation with Particular Emphasis on Sustainable Land Use: 23 January 2003, Guilin, China

LTP contributed to the drafting process of the APFED Message to the WSSD; the implementation of the APFED Commitments included in the Message such as collection of best policy practices; and preparation of the Zero Draft discussed at APFED4.

### 3) IGES White Paper Project

The Asia-Pacific region is considered to have a great impact on the global environment in the 21st century due to its expected economic development and population growth. To provide and disseminate innovative policy recommendations to cope with the situation, the Board of Directors Meeting in February 2001 decided to launch a new IGES-wide initiative by publishing 'IGES Environmental White Paper for Sustainable Development in Asia-Pacific Region' (IGES White Paper). The White Paper is intended to bring forward innovative policy options and strategies for further actions towards sustainable development in the region by cross-cutting and integrating research activities at IGES.

The work plan and the structure of the book were designed by the task team after discussions at various occasions such as a series of the white paper study sessions, which most of IGES in-house researchers attended. Based on the overarching theme to be sketched out by the white paper task team, each project will start drafting its own part. These drafts will be reviewed, revised, and edited for the publication of its first edition towards the end of FY 2003.

As an interim output of this project, a report titled "Closing the Knowledge - Action Gap: Strategic Research for Sustainability in Asia and the Pacific" was distributed at the Johannesburg Summit in August / September 2002. This report introduced research activities at IGES and announced the future publication of the IGES White Paper.

### 4) ICT and Environment

In FY2002 LTP organised the 12th and 13th Study Group Meetings on IT Revolution and the Environment, which had been held monthly since December 2000 with Nikkei Business Publications, Inc. The Study Group Meetings had active discussions on how IT revolution changes economic activities, individual lifestyles, and social structure, and how IT can be used for saving energy and resources consumption. LTP has compiled the record of these discussions as well as of the lectures given at the Study Group Meetings into a report ("Report of the Study Group Meetings on IT Revolution and the Environment", March 2004). A book titled "Environmental Resuscitation and Information Technology" (Kankyo-Saisei to Jyoho-Gijutsu) will be published in September 2003.

LTP participated in an international workshop (New Delhi, India, May 2002) for the initiative known as the Information and Communications Technology and the Environment in Asia and the Pacific (ICTEAP), led by the United Nations Environment Programme/Regional Office for Asia and the Pacific (UNEP/ROAP). At this workshop LTP researchers made presentations on success stories of ICT applications for the environment in the region and on researches on ICT application for reducing GHG emissions and ICT application for exchange systems of recyclable materials, all of which LTP has built and conducted under the framework of ICTEAP Initiative.

### 5) Preparation for the Freshwater Resources Management Project

LTP was assigned to prepare for the research plan of Freshwater Resources Management Pro-

ject due to be launched in the second research phase (FY2001-2003). In FY2002, a small group of experts named "Study Group on Freshwater Resources Management in Asia (chaired by Dr. Shinichiro Ohgaki, Dean of Faculty of Engineering, University of Tokyo)" was established to identify possible challenges and to discuss future prospects of freshwater resources management issues in the Asia-Pacific and possible research topic of the new project. An interim report of the Study Group was compiled based on the discussion on FY2002 and distributed to the Third World Water Forum (WWF3) held on 16-23 March 2003 in Kyoto, Osaka and Shiga of Japan.

As contributions to WWF3, LTP played a key role to organise and draft the session report of "Water Quality Monitoring and Modeling -The Present Situation and Partnership for the Future-" which IGES co-organised on 21 March 2003 with Ministry of the Environment, Japan Society on Water Environment, and the United Nations University. LTP also contributed to the Pre-session, a pre-meeting of the session held on 16 and 17 October 2002. Further, LTP contributed to the Sub-group Meeting of Ministerial Conference of WWF3 "Water Pollution Prevention and Ecosystem Conservation" through support of drafting the chair's summary. The summary was an input to the International Ministerial Conference of WWF3.

#### **6) Environmental Industry Sub-project**

The environmental industry project (EI project) started in FY2002. The project intends to make an overview of environmental industry (environmental technology, management know-how/services and hardware) in selected developing countries of the Asia-Pacific region (China, India, Indonesia and the Republic of Korea) and to make some recommendations for the industry's accelerated development. EI project held the 1st International Workshop with the participation of researchers in charge of the target countries and Japanese researchers in December 2002. The discussion at the workshop was quite useful to improve research members' understanding of the

current state and major issues of promoting environmental industry. The 2nd Workshop held in June 2003 extended the discussion, including a researcher from the United States, to the contributions of international organisations, foreign multinational corporations and intercity cooperation on the development of environmental industry in the target countries. The results of these workshops will be published as a report on environmental industry in Asian countries. EI project regularly holds study group meetings at IGES Tokyo office to exchange views on environmental industry.

#### **7) Contribution to WSSD and its preparatory process**

LTP contributed to the international dialogues on sustainable development through disseminating the interim outcomes of its three activities, namely IGES white paper, APEIS/RISPO, and APFED, at the World Summit on Sustainable Development (WSSD) and its preparatory process. At the 4th Preparatory Committee (PrepCom IV) for WSSD, May/June 2002 in Bali, LTP introduced two regional initiatives from Asia and the Pacific - APFED and APEIS - at a side event entitled "New Partnership Initiatives toward Johannesburg and beyond: Creating a New Regional Network for Sustainable Development," which was then followed by active discussion among stakeholders from all over the world. At the WSSD, August/September in Johannesburg, LTP disseminated a report named "Closing the Knowledge - Action Gap: Strategic Research for Sustainability in Asia and the Pacific" and held two parallel events, "Innovation from the Asia-Pacific toward Sustainable Development - Initiatives on Science & Technology for Improved Environmental Policy -" and "APFED Recommendations and Commitments: New Partnership Initiatives for Knowledge Network and Capacity Building" relating to APEIS/RISPO and APFED respectively.

#### **2. Future Tasks for the Second Phase**

As it is the last year of the second phase of the IGES

research activity, LTP, in fiscal year 2003, will strengthen the Good Practice Inventory (GPI) and come up with the Strategic Policy Options (SPOs) with RISPO. It will also support, preparation of the APFED Final Report and implementation of the APFED commitments. Furthermore, the IGES White Paper (tentative title) will be completed, and the Fresh Water Resources Project will be launched.

# BE

## F . Business and the Environment Project

### 1. Summary of Second Stage Project Plan

The "Business and the Environment Project", here after BE project, was implemented at the Kansai Research Centre established in June, 2001, with the theme "Research on Environmental Conservation Activities in the Private Sector". Voluntary activity by corporations regarding the environment is one policy technique after regulatory measures and economic measures and it is gaining greater importance worldwide. We can expect rapid economic growth in the Asia-Pacific region in the future, so managing both the economy and the environment has become an urgent issue and the integration of the economy and the environment is called for on an individual business level.

As a way of promoting independent policies, progress has been made in the ISO14001 environmental management system, environmental accounting, environmental information disclosure, etc. but the integration of these methods of environmental management with the business management systems leave problems in the future.

The BE project aims to widely analyse and evaluate the situation regarding voluntary corporate environmental conservation activities such as environmental accounting, environmental information disclosure, and environmental management evaluation, which should strive for integration between environmental management techniques and business management systems. The project also aims to propose practical measures for businesses to facilitate these activities and introduces socio-economic systems to implement them.

### 2. Placement and activity report for the Second Phase in FY 2002

In FY 2001, the first year of the project, efforts were made to build a network of research institutes, businesses, universities, and public organisations linking the Asia-Pacific region, Japan and the Kansai area. In addition, research was conducted centered on deciding sub-themes such as environmental accounting and environmental information disclosure and analysing the current

situation. In FY 2002, as well as continuing current status analysis and maintaining networks, we carried out policy research from a global point of view with the voluntary activities of Japanese companies as the main target.

#### 1) Environmental accounting

##### a) Analysis of the current situation

As well as carrying out analysis on what kind of cost classification and effective disclosure was conducted by companies, targeting environmental accounting recorded in environmental reports, we also conducted a survey on the practice of environmental accounting of 200 companies. It was clear that there was much room for improvement on points of comparability and too few companies used environmental accounting in internal management.



Environmental Reports

b) Study Group of Environmental Accounting for Corporate Management

We recruited business people and set up and organised the Study Group of Environmental Accounting for Corporate Management. Based on the success of the First Seminar (September 2001 to July 2002, 14 companies participating), we are developing the Second Seminar (September 2002 to July 2003, 17 companies participating). The results of the First Seminar were published in March 2003, as "Environmental Accounting in the process of updating".

c) Empirical Research on Material Flow Cost Accounting

Material flow cost accounting, developed in Germany, is gaining worldwide attention as a form of environmental accounting useful for internal management (Chart X). Looking at material loss and system loss etc. in each process of manufacturing, and by analysing which part could become more cost-effective, empirical research was carried out with the cooperation of businesses, regarding the issues which can be applied to Japanese companies and we announced the results at the Interna-

tional Symposium on Environmental Accounting 2003 (organised by IGES in January, 2003).

2) Environmental Information Disclosure

a) Analysis of the current situation

In order to analyse the situation regarding environmental reports published by Japanese companies, we conducted a survey of businesses, following on from the previous year, targeting 2000 companies listed on the stock exchange. We also made a comprehensive collection of environmental reports of listed companies and conducted analysis of the content recorded in almost all the environmental reports for FY 2000 and 2001 (FY 2000: 236 companies, FY 2001: 297 companies). The results showed that those companies with the highest level of contact with the final consumer had the most satisfactory content and that there was a quite a difference in content among the various types of company.

b) Research regarding comparability and credibility

Out of the problems of lack of comparability and credibility, which are the main issues regarding environmental disclosure, we conducted detailed

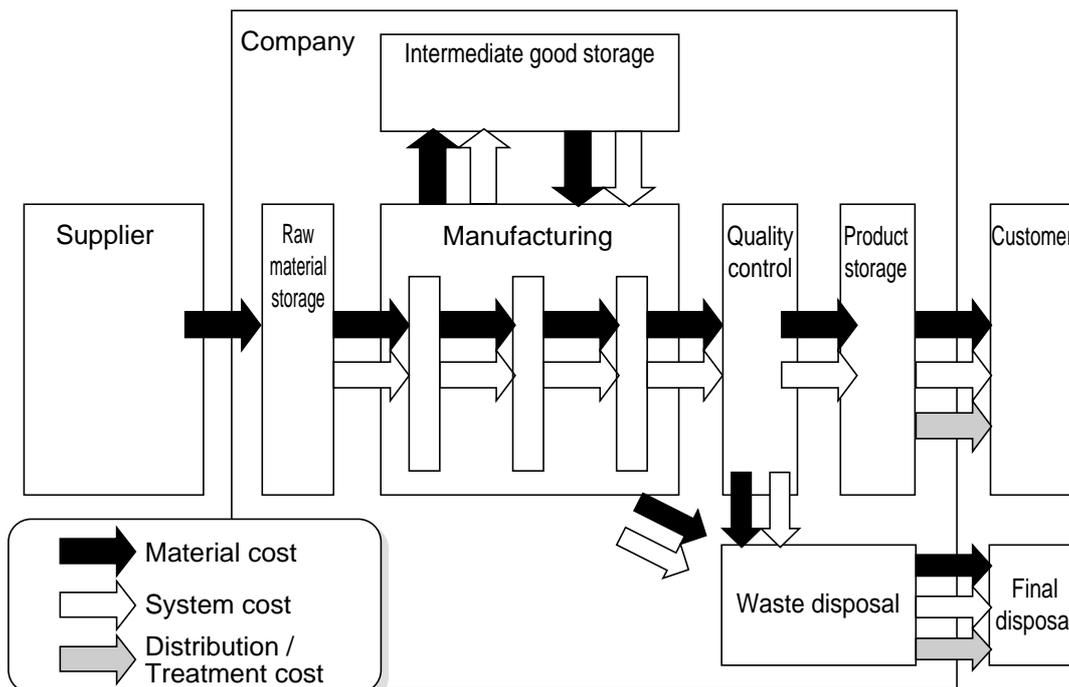


Chart X : concept image of material flow cost accounting

comparative research on the environmental reports of manufacturers of automobiles, beer and the chemical industry. We also carried out interviews with the people in charge of the company's environmental report and collected opinions about the position of environmental information disclosure of corporate management and compared the needs of the readers and the contents among the companies. Further, the third party opinion reports are a way of improving credibility, but we indicated the importance of distinguishing between verification and opinion. The results of this research were announced at the IGES Affiliate Members Seminar held in March, 2003.

### 3) Others

- a) Research on measures for the application of environmental evaluation

We looked into creating a database to document environmental evaluation in order to support the cost-effectiveness of environmental conservation. However, it became clear that there was not much data valid for environmental accounting and we conducted a survey on the actual situation of financial evaluation of the effects of environmental conservation.

- b) Research on the Asia Pacific

The results of investigations of environmental information disclosure in 9 Asian countries show that in Korea environmental report guidelines have already been drawn up and environmental accounting guidelines are being worked out, and it was discovered that environmental reports have been published in China and India etc. Furthermore, we conducted a survey about the environmental management of companies listed on the stock exchange in Korea, the Philippines and Indonesia. It became clear that each country is making progress with environmental management.

- c) Creating networks

As well as supporting the "Tripartite Roundtable on Environmental Industries (Japan, China and Korea)" which was held based on the meeting of the Environment Ministers of Japan, China and Korea, the "IGES International Symposium on Busi-

ness and the Environment" was held carrying on from last year, deepening the exchanges among government staff, researchers and business parties, mainly from those three countries. We also held the International Symposium on Environmental Accounting 2003 where researchers and others from Europe and America could further their information exchange. In addition, a research worker from this project spent a short time at the Wuppertal Institute for Climate, Environment and Energy in Germany and we examined the possibility of joint cooperation between that institute and IGES.

### 3. Future Issues in the Second Phase

Up to now, we have dealt mainly with analysis of the current situation. From now on, based on the results of this research, we hope to clarify the prospects for environmental accounting and environmental information disclosure. That is, for environmental accounting, we will conduct research on measures to spread material flow cost accounting and research on the connection between environmental accounting and financial accounting. For environmental information disclosure, we will conduct a survey on the needs of stakeholders in environmental reports, and clarify topics and measures to promote the diffusion of environmental reports. Furthermore, we will also conduct research on business ratings with regards to environmental management and sustainable management and will clarify the issues that will be an incentive for business ratings to promote environmental management.

Moreover, by holding the international symposiums, networks with overseas research institutes were enriched further. This also being the final year of the Second Phase, the research results up until the present time were also gathered and we made efforts to dispatch information.

### Publication of "Environmental Accounting in the Process of Updating"

From September 2001, the Business and the Environment Project has established and administered the "Study Group of Environmental Accounting for Corporate Management", to research environmental accounting with private sector participation. The aim of this

study group is to conduct research on environmental accounting useful to corporate management particularly environmental management accounting used in internal business decision-making. At the same time, it will highlight problems arising from the actual use of environmental accounting in the business place as well as pick out research topics to solve them.

In practice, we hold workshops and have discussion on new themes once every two months. The workshop could be said to be an important forum for an exchange of opinions to take place between the researchers and those engaged in business. Six sessions of the first phase of this business workshop were completed on schedule in July 2002. The six regular workshops and the extra workshop were evaluated extremely highly, with many discussions on environmental accounting taking place, from new themes reflecting the sometimes sensitive state of the world to practical debates which have immediate use in business.

Based on the contents of discussions, BE project compiled a book bringing together other research results to disseminate and educate about environmental accounting. The title is "Environmental Accounting in the Process of Updating - Developing Practical Tools for Corporate Management and Society". The book was published by the Energy Conservation Center in March 2003.

A simple summary of the book is as follows. The theme of the book is "Probing for ways to aim for environmental accounting" and the motif running through the whole book is "Environmental Accounting for business

and society". This is made clear in the introductory chapter. Environmental accounting is becoming well-known as a vital technique to link environmental conservation activities and economic activities in business. At present there are over 300 companies releasing information about environmental accounting in environmental reports, indicating that we are emerging from the first introductory stage of environmental accounting and are about to enter the second developmental stage. Now we need to go back to the basics once more and decide how best to proceed. The role of environmental accounting is of course useful for internal decision-making and could also be useful for external decision-making (i.e. in society). The first part of this publication, "Environmental Accounting for Corporate Management" takes the main techniques of environmental management accounting and using example companies as case-studies, it sets out a detailed explanation by the main person involved in each technique. In the second part, "Environmental Accounting for Society", the theme is external environmental accounting disclosure. Based on a wealth of data on surveys by IGES and actual analysis regarding the rapidly developing external disclosure of environmental accounting in Japan, we are highlighting the problems involved with this and seeking solutions. In the second part, we introduce examples of external disclosure as case studies.

Environmental accounting for business and society shows two functions of environmental accounting and at the same time shows the direction that environmental accounting should be heading.

## **Environmental Accounting in the Process of Updating - Developing Practical Tools for Corporate Management and Society**

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## III . IGES Capacity Building Programme

### 1. Outline of CB programme

IGES Capacity Building Programme connects policy-research and policy-making by providing innovative training for decision makers to formulate research-based policies.

Based on Agenda 21 principles and IGES mission, the Capacity Building Programme's mission is to support learning for sustainable development through the following objectives:

1. To encourage innovative policy development by making IGES research results easily accessible to policy makers and policy implementers
2. To provide large number of key decision makers with quality learning through:
  - (a) adopting an integrated capacity development approach
  - (b) promoting the wise use of eLearning (for narrowing the digital divide)
  - (c) offering needs-based combination of eLearning with face-to-face methodologies.

IGES carries out its mission through four key activities:

- \* strategic research
- \* multi-stakeholder dialogue
- \* information outreach
- \* capacity building



Figure 1.: IGES four key activities. Capacity building is highlighted.

The beneficiaries of the Capacity Building Programme's activities are the same as IGES' research projects: policy makers, decision makers, leaders and managers who have high impact, broad outreach, who

are stakeholders of sustainable development, as well as governments, business, schools and universities, non-governmental organisations, and those whose activities have special focus on Asia-Pacific countries.

The Capacity Building Programme focuses on eLearning (internet-based learning) as the primary tool of implementation, and combining eLearning with face-to-face training workshops with a commitment to narrow the digital divide. The content of training materials is built on IGES strategic research results, as well as the intellectual capital of the Capacity Building Programme's large international network of organisations involved in policy change for sustainable development.

### 2. eLearning System

The Capacity Building Programme provided a reliable web-based learning environment and eLearning tools to enhance self-paced, asynchronous capacity development activities. Activities include:

**Software:** Ensured the reliability and user-friendliness of IGES' software (Course Maker, Course Manager Pro) with regular upgrade by incorporating requests from users to improve the system. Considered using commercial eLearning software as well.

**Learner support:** Provided learners with technical, content, and training design support, with >3,500 registered users from IGES target group (policy makers, decision makers).

**Websites:** Updated and harmonised the Programme's Japanese and English websites, with a target of >1,000/month website visits.

**Strategic alliance of providers:** Developed strategic alliances with like-minded eLearning for sustainable development initiatives (e.g. UNU, UNEP-IETC, UNEP-GRID, LearnSD) to leverage resources and enhance the quality of on-line capacity development.

### 3. eCourses

The Capacity Building Programme offered eCourses to meet the capacity development needs of a well identified and motivated audience of IGES and its partners. Activities included:

### 3.1 New eCourses

Started and/or completed authoring, testing, peer- and expert-reviewing three new eCourses in IGES strategic research areas (Climate Change, Urban Environmental Management, Forest Conservation, Freshwater Resources, Business and Industry, Trade and Environment, Information and Communication Technologies and Environment, Environmental Education). Making sure that each IGES research area is represented by one eCourse.

The new eCourses started to employ a scenario-based learning approach (instead of the former page-turner approach) to provide learners with ample opportunity to apply their newly gained knowledge in various situations shaped by diverse values and quickly shifting contexts.

The Capacity Building Programme started to develop its interested partner organisations' capacities to make full use of IGES eLearning system at various levels (taking eCourses, linking IGES eCourses to partner organisations' website, customising IGES eCourses, setting up the partners' own eLearning system). IGES current and future partners will be included in the development of the above mentioned eCourses by:

- Strengthening the collaboration with IGES research projects.
- Continuing working with Kanagawa Prefecture by developing their capacities to train other government agencies on how to use IGES eLearning system to provide on-line and blended staff training on environmental and sustainable development issues.
- Continuing working with UNEP-IETC, LEAD-Japan, LEAD-Pakistan, LEAD-India, GEC, ADORC, UNEP-DTIE, UNEP-ROAP, UNESCO, UNDP, UNITAR, APFED
- Forge new, long-term partnerships, e.g. UNFCCC, IUCN

### 3.2. Existing eCourses

Maintained and updated the current 39 eCourses

by regular (twice a year) expert review and on-going improvement based on learners' (end-users) feedback. The updates include adding interactivity, real-life images and case studies.

### 4. Face-to-Face Training

There were two main areas of the face-to-face training activities:

Training material development: Developed training and learning resource materials for both on-line and off-line use, and their combination.

Training workshop implementation: Designed and implemented 6 face-to-face training workshops in Japan (11 training days, 75 participants from 15 countries).

### 5. Internship

The Programme offered two six-month long research internships for two LEAD<sup>1</sup> Fellows (from Russia and China) to strengthen their leadership abilities and provide them with opportunities to exchange ideas with IGES researchers. The two interns started developing their eCourses during their internship.

### 6. Research

Conducted research on the impact of eLearning. The research involved 1,600 staff members of Kanagawa Prefectural Government, Japan who took a self-study, asynchronous eCourse on ISO14001. Based on 281 valid respondents, the research confirmed the following:

The eCourse significantly increased the learners' knowledge of ISO 14001.

Learners' perception of ISO14001 became more comprehensive by taking the eCourse, from a simplistic view of general environmental issues to a multifaceted view of environmental management, including both process and content issues.

Taking an eCourse increases the willingness to act but does not necessarily close the knowledge-action gap.

### 7. Communication

Network development: Strengthened the networks of

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<sup>1</sup> LEAD: Leadership for Environment and Development (<http://www.lead.org/>)

capacity development providers committed to sustainable development.

Activities and results can be seen at the following websites:

| <b>Website:</b>                        | <b>URL:</b>   |
|--|---|
| eLearning (English)                    | <a href="http://iges.net/">http://iges.net/</a>   |
| eLearning (Japanese)                   | <a href="http://iges-japan.net/">http://iges-japan.net/</a>                                 |
| Capacity Building Programme (English)  | <a href="http://www.iges.or.jp/en/cb/index.html">http://www.iges.or.jp/en/cb/index.html</a> |
| Capacity Building Programme (Japanese) | <a href="http://www.iges.or.jp/jp/cb/index.html">http://www.iges.or.jp/jp/cb/index.html</a> |

## IV. Activities of IPCC/TSU

The Technical Support Unit (TSU) of the National Greenhouse Gas Inventories Programme (NGGIP) for the Intergovernmental Panel on Climate Change (IPCC), hosted by IGES, has been coordinating two main projects under the guidance of the IPCC Inventory Task Force Bureau (TFB). These projects are: Land Use, Land-Use Change and Forestry (LULUCF) and the Emission Factor Database (EFDB) development.

In response to the invitation by the UNFCCC (COP decision 11/CP.7), the TSU, guided by the TFB, dealt with three tasks on LULUCF: Task 1 - Good Practice Guidance Report for the sector; Task 2 - Definitions for degradation of forests and devegetation of other vegetation types and methodologies to inventory emissions and removals from these activities, and Task 3 - Issues on factoring out direct human-induced changes in carbon stocks and anthropogenic greenhouse gas emissions and removals from indirect human-induced and natural changes, as well as those caused by past practices.

In FY2002, for Tasks 1 and 2, the TSU organised three authors/experts meetings in Tampere (Finland), Rio de Janeiro in (Brazil) and Kuala Lumpur (Malaysia), preceded by the first meeting in late FY2001. Task 1 is relatively large with about 100 authors contributing to the report, whilst Task 2 is smaller with fewer than 20 authors. Each meeting was preceded by a Steering Group Meeting and a one-day Co-ordinating Lead Authors Meeting (the Kuala Lumpur Meeting took place in the FY2003, but the organisational work was conducted in FY2002). As for Task 3, the TSU organised an Expert Meeting on 16-18 September 2002 in Geneva, Switzerland, to scope the task. The Expert Meeting assessed the availability of science for the task, and developed draft Terms of Reference, a draft Table of Contents and a draft work plan for the task. It also recommended that the IPCC prepares a Special Report on the framework for "factoring out" methodologies. After further discussions at subsequent meetings, the IPCC Panel decided to hold an Expert Meeting on Terrestrial Carbon Stocks under the auspices of the IPCC WGI. The outcome of this meeting will be relayed to IPCC XXI for their consideration with respect to the way forward.

After the Tampere and Rio de Janeiro meetings, first-order draft reports of the Tasks 1 and 2 were subjected to the review process. The first Government/Expert review took place from 2 December 2002 to 27 January 2003. Prior to the review, the TSU undertook the final editing of the draft reports in consultation with the Steering Group and the Co-ordinating Lead Authors (CLAs) with emphasis on ensuring consistent use of terminologies, correct cross-referencing between the chapters and tasks, and other editorial tasks. This included checking all figures, tables, boxes and equation numberings, as well as formats and references.

The first Government/Expert review resulted in more than 6,000 comments. TSU consolidated the lists of comments which would be used to prepare the second-order draft. The TSU and the Steering Group also prepared the list of highlighted issues and proposals for the consideration of CLAs to initiate discussions on those issues at the meeting in Malaysia (31 March -3 April in Malaysia).

The IPCC Emission Factor Database (EFDB) prototype was constructed in January 2002 and the TSU organised a pilot test of the prototype database. The Second Expert Meeting on the Project, organised by the TSU, in Bratislava, Slovakia, on 23-24 April 2002, discussed all issues and suggestions that arose from the pilot testing and provided input for further development and improvement of the database. The first version of EFDB (web application) was opened to the public at COP8 in New Delhi, India on 26 October 2003. (<http://www.ipcc-nggip.iges.or.jp/EFDB/main.php>)

During FY2002, the TSU facilitated the establishment of an editorial board for the EFDB (EFDB Editorial Board). The EFDB Editorial Board assesses any new proposals of emission factors and other parameters before they are incorporated in the database. The TSU and IGES Secretariat organised the first meeting of the EFDB Editorial Board 28 - 30 January 2003 at IGES Headquarters, in Hayama, Japan

The TSU published the Background Paper: IPCC Expert Meetings on the Good Practice Guidance and Uncertainty Management in National Greenhouse Gas Inventories in December 2002. This is a collection of

background papers prepared for the discussion on Good Practice Guidance report in 2000. The Background Paper publication is available on the website at <http://www.ipcc-nggip.iges.or.jp/public/gp/gpg-bgp.htm> for free downloading.

In support of the TFB, the TSU organised the TFB9 meeting on 25- 27 November 2002, in Hayama, Japan. The meeting was hosted by IGES. This meeting considered the report on conclusions from meetings of the IPCC and the United Nations Framework Convention on Climate Change (UNFCCC), the progress on the LULUCF Tasks 1, 2 and 3, the EFDB project as well as some initial discussions on the Revision of the 1996 IPCC Guidelines.

The TSU, in support of the TFB Co-chairs, prepared progress reports of NGGIP Projects and proposals for new activities at several IPCC meetings.

The TFB Co-Chairs reported on progress of the IPCC-NGGIP activities to meetings of the Subsidiary Body for Scientific and Technological Advice (SBSTA) for the UNFCCC. In support of the TFB Co-Chairs, the TSU prepared reports and participated in the different meetings of the Convention.

The next major project of the NGGIP will be the revision of the Revised 1996 IPCC Guidelines for National Greenhouse Gas Inventories. UNFCCC SBSTA17 in New Delhi in October 2002 formally invited IPCC to revise the Revised 1996 IPCC Guidelines by early 2006. The planning of the work began during the 9th Session of the TFB. The meeting developed a 4-step programme

which was approved by the IPCC Bureau XXIX and Panel XX meetings in February 2003. The next step in the work is to convene a scoping meeting for the project which is planned to start in 2004.

The TSU prepared reports and participated in the regular monthly meetings of IGES where information exchange was done. In particular, the TSU worked closely with IGES in organising the TFB9 meeting and the Editorial Board meeting of the EFDB Project at IGES, and in recruiting new personnel for the TSU.

The TSU, as a group working on development, refinement, and dissemination of methodologies for GHG inventories, participated in several international/regional/local meetings. This included the TSU serving as resource persons in the JICA Seminar on Strategies for Climate Change and Development of National Inventories, 12-13 February 2003, Tsukuba, Japan.

In consultation with the TFB Co-Chairs, the TSU will continue to support the activities of the IPCC National Greenhouse Gas Inventories Programme to organise, coordinate and participate in meetings of the TFB and IPCC as well as providing support to the TFB with the aim of completing the LULUCF work on schedule by November 2003. It will also continue to develop and improve the database and will host the web-based database in its initial stage. Similarly, the TSU will continue to support the activities of the IPCC NGGIP and IGES in its research and development activities, as well as participating in local and international meetings and workshops that are relevant to GHG inventories.

## V. Contributions to International Conferences

### A. The World Summit on Sustainable Development (WSSD; Johannesburg Summit)

At the World Summit on Sustainable Development (Johannesburg Summit) held in Johannesburg, South Africa, between 26 August and 4 September 2002, as well as discussions between governments, there were many side events and parallel events for the benefit of various stakeholders. IGES used the Johannesburg Summit to introduce pamphlets and panels of the research results of each project, as well as holding 4 parallel events in conjunction with the Japanese Government about local initiatives for sustainable development within the Asia Pacific region, as well as important topics like climate change.

"Japan's Challenge for Kyoto Protocol Implementation", the parallel event on global warming held jointly with the Ministry of the Environment of Japan, had 3 main themes: (1) to emphasise the importance of the Kyoto Protocol as a first step towards international efforts as well as to call international attention to Japan's stance of putting global interests first and ratifying the Kyoto Protocol under difficult circumstances such as severe economic downturn and the announcement of non-participation by the USA; (2) to seek ways for developed and developing countries to cooperate constructively to build a regime for future efforts on a global

scale with the participation of all countries; (3) to gain the participation of the USA on think tanks etc. which give positive recommendations regarding global warming and to discuss future collaboration. The speakers at the side event remarked on the following 4 points: (1) international cooperation on putting the Kyoto Protocol into force as early as possible and the necessity for all countries to further reduce emissions; (2) an international framework for emission-reduction by those developed countries taking part and the importance of the promotion and development of environmental technology in both developed and developing countries; (3) the necessity of promoting coordination among developed countries regarding emissions-reduction as well as the importance of cooperating with vulnerable island nations directly influenced by climate change, and (4) the necessity to find a positive policy to lower the impact on the environment of the current consumption and manufacturing patterns.

Furthermore, a parallel event entitled "Biodiversity Conservation in the Asia-Pacific Region - towards New Partnerships after the Johannesburg Summit" was held commissioned by the Ministry of the Environment and focused on 2 points namely: (1) what kind of future



1. At the Johannesburg Summit and during the preparatory process, IGES announced its research results at such forums as the Asia Pacific Forum for Environment and Development (APFED), the Asia Pacific Environmental Innovation Strategy Project / Research on Innovative and Strategic Policy Options (APEIS/RISPO) and the "Environmental White Paper for Sustainable Development in Asia" (tentative title) thus making a contribution to the international dialogue on sustainable development. Please refer to the relevant parts of the Long-Term Perspective and Policy Integration Project (LTP) and other research projects, for details.



cooperation can be expected in the field of biodiversity conservation in the Asia-Pacific region, and (2) whether it is at all possible at present, to build partnerships linking activities carried out under various frameworks. There were lively discussions on these issues.

At the parallel event, "APFED Recommendations and Commitments: New Partnership Initiative for Knowledge Network and Capacity Building" held jointly by the Ministry of the Environment of Japan, the United Nations Environment Programme (UNEP) and the UN Economic and Social Commission for Asia and the Pacific (UN/ESCAP), APFED's activities for local initiatives for sustainable development in the Asia Pacific region were introduced, and there was an exchange of opinions regarding APFED's recommendations and commitments to the WSSD. The speakers stated the importance of the Asia Pacific region in attaining sustainable development and the necessity for concrete action. Furthermore, in view of the importance of capacity-building and creating networks for sustainable development, APFED announced its hope to contribute to solving problems presently facing the world by cooperating with various other organizations, through the realisation of the commitments contained in the APFED Message.

At the side event, "Innovation from the Asia-Pacific towards Sustainable Development - Initiatives on Science and Technology for Improved Environmental Policy" held by the Ministry of the Environment of Japan, the launch of the Asia-Pacific Environmental Innovation Strategy Project (APEIS) was formally announced and recorded as a Type 2 document at WSSD. APEIS will develop alternative policies and new strategies for further sustainable development and make forecasts on the environment and the economy through computer

models and integrated environmental monitoring via satellite. As one part of APEIS, IGES introduced the Research on Innovative and Strategic Policy Options (RISPO) implemented jointly with other research institutes and international organisations in the Asia Pacific region. The participants had great expectations regarding attempts to support decision-making for sustainable development based on scientific information.

At these side events, the audience displayed a high degree of interest in the themes, sometimes with standing room only at the venue. In addition the exchanges of opinion came not only from the speakers but also from the floor, making the events a great success.

As well as conducting follow-up activities after the WSSD, on the "Plan of Implementation of the Johannesburg Summit" and the "Government Declaration" (both Type 1 documents), IGES is conducting the steady implementation of activities set out in the APEIS "Message of Commitments". Furthermore, during the summit, the Malaysian Ministry for Science, Technology and the Environment, and the Center for International Environmental Law (USA) signed the IGES Charter, bringing the number of signatories to 43.

#### Summary of Side Events

**"Innovation from the Asia-Pacific toward Sustainable Development - Initiatives on Science and Technology for Improved Environmental Policy"**

**Date:** 27 August, 2002 (Tuesday) 12:45 ~ 14:45

**Venue:** Japan Pavilion, Ubuntu Village, Johannesburg

**Speakers (in order of presentations):** Dr. Tsuneyuki Morita (Director, Socio-Environmental Systems Division, National Institute for Environmental Studies (NIES)), Dr. Masataka Watanabe (Director, Water and Soil Environment Division, NIES), Dr. P. R. Shukla (Professor, Indian Institute of Management), Mr. Yoshihiro Natori (Project Leader, IGES), Dr. Walter Reid (Director, MA), Mr. Warren Evans (Director, Environment and Social Safeguard Division, ADB), and Mr. Martin Rice (Secretariat, APN).

**"Biodiversity Conservation in the Asia-Pacific Region - towards New Partnerships after the Johannesburg Summit"**

**Date:** 27 August 2002 (Tuesday) 15:00 ~ 17:00

**Venue:** Japan Pavilion, Ubutu Village, Johannesburg

**Speakers (in order of presentation):** Mr. Eiichi Yamashita (Senior Vice-Minister, Ministry of the Environment of Japan), Mr. Naohisa Okuda (Deputy Director, Policy Division, Nature Conservation Bureau, Ministry of the Environment of Japan), Dr. Mike Rands (Director and Chief Executive, BirdLife International), Mr. Jorgen Thomsen (Executive Director, Critical Ecosystem Partnership Fund), Mr. Effendy A. Sumardja (Ministry of the Environment, Republic of Indonesia), Philip Burgess (Director, Marine and International Section, Environment Australia, Department of the Environment and Heritage)

**Coordinator:** Prof. Osamu Abe (Professor, Graduate School of International Communication, Rikkyo University)

**Audience:** 100

**"APFED Recommendations and Commitments: New Partnership Initiatives for Knowledge Network and Capacity Building"**

**Date:** 28 August 2002 (Wednesday) 16:00 ~ 18:00

**Venue:** Japan Pavilion, Ubutu Village, Johannesburg

**Speakers (in order of presentation):** Mr. Hiroshi Ohki (Minister of the Environment, Japan), Mr. Ryutaro Hashimoto (APFED Chair and former Prime Minister of Japan), Dr. Klaus Töpfer (Executive Director, UNEP), Dr. Kim Hak-Su (Executive Secretary, UN/ESCAP), Prof. Akio Morishima (Chair of the Board of Directors, IGES), Dr. Parvez Hassan (APFED member), Mr. Warren Evans (Director, Environment and Social Safeguard Division, ADB), Dr. Reza Macnoon (APFED member)

**Audience:** 120

**"Japan's Challenge for Kyoto Protocol Implementation"**

**Date:** 28 August 2002 (Wednesday) 13:45 ~ 15:30

**Venue:** Japan Pavilion, Ubutu Village, Johannesburg

**Speakers (in order of presentation):** Mr. Hiroshi Ohki (Minister of the Environment of Japan), Ms. Kayoko Shimizu (member of the House of Councilors), Mr. James Cecil Cocker (Deputy Prime Minister, Kingdom of Tonga), Dr. Tsuneyuki Morita (Director of Socio Environmental Systems Division, NIES), Mr. Christopher Flavin (President of Worldwatch Institute), Mr. Masayuki Sasanouchi (Toyota Motor Corporation), Mr. Priyadarshi Shukla (Professor, Indian Institute of Management), Prof. Kazuo Matsushita (Professor of Kyoto University)

**Chair:** Ms. Charmine Koda (Journalist)

**Audience:** 150

## B . The Eighth Conference of the Parties to the United Nations Framework Convention on Climate Change (UNFCCC)

The Climate Policy project organised a special event entitled "Climate Policy Dialogues in Asia" on 29 October, 2002 at the 8th Conference of the Parties to the United Nations Framework Convention on Climate Change (COP8) held in New Delhi, India. Several people from a range of sectors appreciated the event, where distinguished panelists including Dr. Rajendra Pachauri (Chairman of the Intergovernmental Panel on Climate Change and the IGES Board Member), Dr. Huaqing Xu (Energy Research Institute of China), Dr. Wha-jin Han (Korea Economics and Environment Institute), Prof. John Byrne (Centre for Energy and Environment Policy, USA) and Dr. Erik Haites (Margaree Consultants, Canada) participated besides Prof. Akio Morishima and Prof. Shuzo Nishioka (Fig. 1).

Prof. Morishima, in his opening remarks, underscored the importance of engaging diverse stakeholders in addressing climate change issues. Dr. John Christensen of the UNEP Collaborating Centre for Energy and Environment (UCCEE) emphasized that collaboration between IGES and UCCEE in the area of climate policy in Asia was by and large successful in motivating policy makers in the region to consider various options to address climate change. Dr. Tae Yong Jung of IGES summarised the previous dialogues held in 6 Asian countries and noted that both political will and raising public awareness are critical in implementing climate policies in the region.

In the Panel Discussion, Dr. Hu stressed the need for choosing development paths that result in low emissions of greenhouse gases (GHG). He also underlined the need for enhancing sinks in China. Dr. Nishioka highlighted that both adaptation and clean development mechanism (CDM) could be viewed as win-win opportu-

nities for developing countries and stressed that adequate consultations among all stakeholders is urgent before discussions begin on moving beyond the Kyoto Protocol. Dr. Han addressed the relationship between climate change and sustainable development, and ways to facilitate participation of developing countries in future climate regime. She called for creation of additional flexibility, incentives and commitments that do not hamper economic development. Dr. Byrne highlighted the need to consider equity principles in devising future commitments, and the importance of harmonising climate policies with energy policies within the framework of sustainable development. Dr. Haites underscored the importance of Asia in the context of climate change because of its significant size, population, diversity, economic growth, etc. and mentioned that China's efforts in reducing GHG emissions despite its rapid economic growth could serve as a model for other countries in the region. Dr. Pachauri stressed that CDM projects should contribute to sustainable development and that local stakeholders must be mobilised to define sustainability from various perspectives. He called for technology transfer accompanied by institutional changes that are demand driven and are relevant to the developing countries. After responding to the various queries from participants, the panel discussion was concluded. Prof. Morishima thanked the participants and solicited cooperation in future IGES events. The project maintained an exhibit throughout the conference to publicise IGES activities in general and distributed information on CP activities in particular.

### Side Event

**Climate** : Policy Dialogue in Asia

**Date** : 29 October 2002 (Tuesday) 18:00 ~ 20:00

**Venue** : Vigyan Bhawan, New Delhi

**Coodinator** : Prof. Akio Morishima

**Audience** : 120



## C. The Asia-Pacific Forum for Environment and Development (APFED)

The Asia-Pacific Forum for Environment and Development (APFED) is an independent body of eminent persons mainly from Asia and the Pacific region, which was officially established with the approval of the Tenth Environmental Congress for Asia and the Pacific (ECO ASIA 2001) in 2001. The aim of the forum is to deliberate on and present a new development model for the 21st century by the end of 2004. Under the Chair of the Forum, Mr. Ryutaro Hashimoto, former Prime Minister of Japan, APFED began its deliberation process in FY 2001. In May 2002, APFED adopted the APFED Message to the World Summit on Sustainable Development (WSSD) held in August-September 2002 in Johannesburg, South Africa. The Message was handed to Mr. Koizumi, the Prime Minister of Japan from Mr. Hashimoto and also distributed to the heads of other countries, and also presented at the WSSD. After the WSSD, the Forum started its work to draft the APFED Final Report to be completed by the end of 2004.

As the Secretariat of the Asia-Pacific Forum for Environment and Development (APFED), IGES provided support to two meetings of the APFED and their associated meetings; drafted and disseminated the APFED Message; and supported development of framework of the Final Report. Details of the meetings and events that took place are described below.

### 1. Expert Meeting for the Second Substantive Meeting

Prior to the Second Substantive Meeting of APFED (APFED 2), two Expert Meetings attended by approximately forty experts were organised in March and April 2002 in order to provide APFED deliberations with experts' views on the first draft of the APFED Message to the WSSD. The joint one-day meeting on trade and finance was held on 1 April at the UNU, which was chaired by Dr. Ryokichi Hirono, Professor Emeritus, Seikei University (session on financing for sustainable development) and Mr. Nirmal Andrews, Regional Director and Representative, UNEP/ROAP (session on trade and sustainable development). The meeting on renewable energy

was held on 2 April at India Habitat Centre, New Delhi, India in cooperation with Tata Energy Research Institute (TERI: now the Energy and Resource Institute), chaired by Dr. R. K. Pachauri, Director-General, TERI.

### 2. Second Substantive Meeting and its associated meetings

The Second Substantive Meeting of APFED (APFED 2) was held at the Mandarin Oriental Hotel in Jakarta, Indonesia on 4-5 May 2002, jointly organised by the UN ESCAP, UNEP, the State Ministry of the Environment of Indonesia, and the Ministry of the Environment of Japan. The APFED2 was associated with the multi-stakeholder meeting that was held at the same venue of APFED 2 in Jakarta on 3 May. The multi-stakeholder meeting was attended by 30 representatives of non-governmental organisations, as well as five APFED members. Professor Akio Morishima chaired the meeting and compiled the comments and insights on the draft APFED Message to the WSSD of the participants.

In APFED2, ten members participated and Professor Morishima chaired the meeting on behalf of Mr. Hashimoto. Taking into consideration the comments received from the public and points raised at the expert and the multi-stakeholder meetings, APFED members further discussed the APFED Message and adopted it at APFED2. APFED Message consisted of the recommendations on five sectoral issues (freshwater resources, renewable energy, trade, finance and urbanisation) and two overarching issues (good governance and capacity building). Three commitments were included in the APFED Message, considering the importance of actions by APFED itself. The commitments are "collection and dissemination of best policy practices (BPP)," "establishment of a network of research institutes and researchers (NetRes)," and "development of an inventory of capacity building programme."

The commitments were registered as a Type II document at WSSD.

### 3. Dissemination of APFED Message to WSSD - Side-Event at PrepCom IV and Parallel-Event at the WSSD

The APFED Message was dispatched to the heads of the nations of the world by Mr. Hashimoto, APFED Chair, and presented at the Side Event at PrepCom IV and Parallel Event at the WSSD. The Side Event of PrepComIV "New partnership initiatives toward Johannesburg and beyond: Creating a new regional network for sustainable development" was held on 3 June 2002, at the Conference Room 2, Bali International Conference Centre (BICC), in Bali, Indonesia, organised by the Ministry of the Environment of Japan, UN ESCAP, UNEP and UNU/IAS and IGES. Over 150 participants including ministers and government officials from around the world and representatives from international organisations and NGOs was attended the event including our APFED members, namely Dr. Cielito F. Habito, Dr. Parvez Hassan, and Dr. Kim Hak-Su, and Prof. Akio Morishima, were panelists at the meeting.

The Parallel Event at the WSSD, "APFED Recommendations and Commitments: New Partnership Initiatives for Knowledge Network and Capacity Building" was organised by the Ministry of the Environment of Japan, UNEP, UN ESCAP and IGES. The event was held at the Japan Pavilion in Ubuntu Village, Johannesburg, South Africa, on 28 August 2002. Approximately 120 people were present and opinions were exchanged on APFED's recommendations and commitments made to the WSSD. The parallel event began with opening remarks by the then Minister of the Environment of Japan, Mr. Hiroshi Ohki. APFED members Mr. Ryutaro Hashimoto, Dr. Klaus Topfer, Dr. Kim Hak-Su, Dr. Parvez Hassan, and Professor Akio Morishima were panelists.

### 4. The Third Substantive Meeting of APFED and its associate meeting

The Third Substantive Meeting of the APFED (APFED 3) was organised jointly by the Ministry of the Environment of Japan, UNEP, UN ESCAP, and State Environmental Protection Administration of the People's Republic of China in Guilin, China, on 25-26 January 2003. Twenty-two APFED members participated in the meeting and discussed the outline of the Final Report of the APFED and implementation plan of the commitments made in the APFED Message to the WSSD. The members agreed the proposal of the zero-draft of the Final Report and methods to collect the best policy practices (BPP) presented by Mr. Hashimoto, the Chair of APFED.

Expert Meeting on an Integrated Approach to Managing Urbanisation with Particular Emphasis on Sustainable Land Use was held in association with APFED3 in the same venue of APFED3 on 23 January, which was chaired by Dr. Qu Geping, APFED Member of China. Dr. Zhang Kun, Director, Sino-Japan Friendship Center for Environmental Protection. Professor Akio Morishima, Chair of the Board of Directors, IGES served as Vice-Chair of the meeting. The meeting submitted its summary to the APFED3 for consideration.



## D. The Third World Water Forum (WWF3)

The Third World Water Forum\* (WWF3) was held in Kyoto, Shiga and Osaka, Japan from 16 to 23 March 2003 with the participation of approximately 25,000 people from various region and field. The main element of the Forum was 351 sessions looking at the whole range of water issues from diverse viewpoints. The Forum Statement was drafted based on session reports submitted from each session as well as thematic/regional statements as an output of the forum. Exhibitions and events also took place to facilitate information exchange and gain mutual understanding among participants. The Ministerial Conference was held on the occasion of WWF3 on 22 and 23 March and it adopted the "Ministerial Declaration -Message from Lake Biwa and Yodo River Basin." In addition to the Declaration, there was a presentation entitled the Portfolio for Water Actions, a compilation of specific actions contributed from countries and international organisations. IGES contributed to the WWF3 through: 1) dissemination of IGES research outputs related to water issues to the forum participants; 2) organising a session "Water Quality Monitoring and Modelling - The Present Situation and Partnership for the Future"; and 3) support of the Ministerial Conference.

### 1. Dissemination of IGES research outputs

IGES exhibited and distributed its research outputs at the Stakeholder Center, Kyoto International Conference Hall, the main venue of WWF3. Posters, water-related publications including IRES Journal focusing on water management issues were displayed and distributed to the forum participants.

Capacity Building Programme demonstrated IGES new on-line training package on Freshwater (<http://www.iges.net/waterdemo/index.htm>) featuring IGES water related research outputs and a highly interactive, simulation-based eCourse on water issues (<http://www.iges.net/waterdemo/anim/water2.htm>).

The eCourse was also presented at the two-day event on Capacity Building organised by UNESCO-IHE, Cap-

Net UNDP, WaterAid, The World Bank Institute, UNU / INWEH, UNESCO. The presentation was so successful that Cap-Net UNDP incorporated IGES eCourse on water issues in their training of trainers on IWRM in June, 2003 Neuchatel, Switzerland. This training of trainers was co-organised by Cap-Net with collaboration from the Nechatel University, World Bank Institute and UNESCO-IHE.

### 2. Organising the Session "Water Quality Monitoring and Modelling -The Present Situation and Partnership for the Future-"

IGES organised a session "Water Quality Monitoring and Modelling -The Present Situation and Partnership for the Future-" on 21 March 2003 at "Suehiro", Takaragaike Prince Hotel. The session was co-organised with the Ministry of the Environment, Japan, the Society on Water Environment, and the United Nations University. The session aimed to share information on water quality monitoring and identify challenges and opportunity in Asia and had approximately 110 participants. The session consisted of two keynote speeches from Indonesia and Japan, presentations on monitoring activities by governments and citizens from China, Malaysia, Thailand, Vietnam and Japan, followed by a roundtable discussion on the challenges and opportunities of water quality monitoring in the region and partnership for the future. The session concluded with six recommendations including formulation of an Asian platform for better water environment management. In the session, a new initiative "Water Environment Partnership in Asia" was presented by the Ministry of the Environment of Japan which includes a database of information and experience in water environmental protection. It was welcomed by the session participants.

Before the session, a pre-session was held on 16 -17 October 2002 at United Nations University in Tokyo, Japan to deepen understanding and narrow the focus on the topic of the session. Eighty people participated in the pre-session including guest speakers from Indone-

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\* World Water Forum is the international conference created by the World Water Council and held every three year since 1997. The forum has significant impact on the future direction of international dialogue on water issues.

sia, Malaysia, Thailand and Vietnam.

### **3. Contribution to the Ministerial Conference**

IGES provided substantial support to the Ministry of the Environment of Japan regarding the Senior Officials Meeting (19-20 March, in Kyoto) and the Ministerial

Conference (22-23 March in Kyoto), including drafting of the Chairperson's summary of the Sub-group Meeting of Ministerial Conference of WWF3 "Water Pollution Prevention and Ecosystem Conservation" that was held in the afternoon of 22 March as a part of the Ministerial Conference.

## **E. The Twelfth Asia-Pacific Seminar on Climate Change, Bangkok, Thailand**

The Twelfth Asia-Pacific Seminar on Climate Change, which was attended by experts from 26 countries and representatives from 13 United Nations and other international organisations, was held in Bangkok, Thailand from 30 July to 2 August 2002. Along with the Ministry of the Environment of Japan, and the United Nations Economic and Social Commission for Asia and the Pacific (ESCAP), IGES organised this seminar. The major objectives of the Seminar were to exchange information, experience and views on climate change among countries in Asia and the Pacific and to facilitate further activities to address climate change in the region. The specific focus of the Seminar was on the steps after Bonn and Marrakech conferences, as well as issues related to the clean development mechanism (CDM), adaptation strategies, information dissemination through networking and multi-stakeholder approach to climate change.

In his welcoming address, Dr. Sawhney outlined possible actions of ESCAP to address vulnerability and adaptation to climate change, that could be developed on the basis of its institutional strength in four areas, i.e. policy development, capacity building, advisory services and regional coordination. Mr. Yamada of the Ministry of the Environment informed the Seminar of Japan's ratification of the Kyoto Protocol and called for concerted support of the Asia Pacific countries towards the early entry into force of the Protocol. Mr. Chvajarernpun of Thailand's Office of Environmental Policy and Planning underscored the important potentials of the CDM that would provide opportunities for both developing and

developed countries to share benefits from greenhouse gas (GHG) emission reduction.

Several representatives from international organisations including United Nations Framework Convention on Climate Change, ESCAP, United Nations Development Programme, United Nations Environment Programme, United Nations Industrial Development Organisation, Asian Development Bank presented the activities of respective organisations in addressing climate change. In this connection, the participants reaffirmed the importance of inter-agency coordination and effective implementation by maximising synergy among existing initiatives and programmes on the related subjects of climate change. Representatives from selected countries including Vietnam, Sri Lanka, and Iran outlined the status of climate change activities in their countries. The latest progress on scientific assessment of climate change was discussed by representatives from Japan, Tonga, China, New Zealand and Pakistan. Issues and experiences related to national and regional adaptation strategies and the role of multi-stakeholder approaches and networking in addressing climate change issues were thoroughly discussed at the Seminar.

IGES staff made two presentations at the Seminar entitled "Integrating indigenous knowledge in climate change adaptation strategies in Asia and the Pacific: Some Issues and Options" and "IGES' e-learning system on climate change". The next seminar in this series will be held in Miyazaki, Japan in September, 2003.

## VI. Workshops and Symposiums

### A. International Training Workshop on Climate Change Issues, Phnom Penh, Cambodia

At the request of the Ministry of Environment of the Kingdom of Cambodia, IGES and the United Nations Environment Programme Collaborating Centre on Energy and Environment (UCCEE) jointly held an international training workshop on climate change issues on 5 and 6 December 2002 in Phnom Penh, Cambodia. Forty participants from Cambodia, Vietnam and Lao PDR representing the national and local governments, non-governmental organisations, the private sector, and academia attended the workshop. The aim of the workshop was to raise awareness among participants on key issues and challenges involved in tackling climate change and to gather views of various stakeholders, as the lack of public awareness of climate change was identified as the main constraint in all countries.

After reviewing climate change issues and policies in all 3 countries, topics such as greenhouse gas (GHG) mitigation efforts, international finance mechanisms, relevance of Kyoto mechanisms such as Clean Development Mechanism (CDM), capacity building and technology transfer were discussed. Five presentations were made by IGES staff on topics including CDM, assessment of climate policies in Asia, policy options for inte-

grating traditional knowledge in climate change mitigation and adaptation plans, challenges in environmental education, and IGES capacity building programme and its e-Learning courses on climate change. Staff from UCCEE, United Nations Environment Programme and Asian Development Bank made five presentations on topics such as case studies of GHG mitigation efforts in developing countries, international finance mechanisms for mitigation efforts, renewable energy and energy efficiency project financing, opportunities for small scale CDM projects, and capacity development for CDM.

In the final session, representatives from all countries conveyed their appreciation to IGES and UCCEE for conducting the Workshop and requested for continuation of such efforts in the future. They also sought help from IGES and UCCEE in sponsoring a joint research project. Mr. Prach Sun of the Cambodian Ministry of Environment concluded the workshop by noting that it contributed greatly to strengthening technical and institutional capacity to address various issues of climate change, and in promoting regional cooperation and networking among participants.



## B. Expert Meeting on Climate Change and Sustainable Development in Seoul, Korea

The Korea Energy Economics Institute (KEEI, Korea) and the Institute for Global Environmental Strategies (IGES, Japan) jointly hosted the Expert Meeting on Climate Change and Sustainable Development on 19 -and 20 November 2002, in Seoul, Korea. The Expert Meeting was supported by the Korean Ministry of Foreign Affairs and Trade. The aim of the Expert Meeting was to provide an opportunity for experts to assess the current state of climate science and international efforts to mitigate climate change, and to explore the prospects for possible global participation and its implications for sustainable development. The Expert Meeting was opened by Prof. Sang-Gon Lee (President of KEEI). Dr. Shuzo Nishioka made welcoming remarks on behalf of Prof. Akio Morishima (President of IGES). A welcoming speech was given by Hon. Mr. Bu-Young Lee, who is the chairman of the special committee for the UNFCCC of the National Assembly of Korea.

In session I (Climate Change: Scientific Assessment and Future Prospect), Dr. N. Nakicenovic presented energy scenarios and their implications on sustainability providing a framework for exploring future perspectives. Dr. S. Nishioka discussed the importance of adaptation to climate change in relation to sustainability, and Dr. J. Edmonds presented the role of technologies to mitigate climate change and recent development of the

advanced technology.

In session II (Climate Change and Equity: Country Mitigation Measures and Equity Perspectives), Dr. E. Haites analysed options for negotiating further reductions of greenhouse gas emissions, followed by Prof. J. Byrne's presentation arguing that climate change policy has largely focused on the problem of designing market-based tools to encourage efficient adjustments in the carbon intensity of the global economy. Dr. N. Matsuo outlined the Japan's view on the equity in relation to the 2nd commitment period.

Session III (Global Participation and Sustainable Development) began with Mr. C. Philibert's presentation that discussed several options for future commitments including price-capping, non-binding targets and dynamic targets. Dr. O. Blanchard presented various approaches that can promote North-South cooperation of climate change for the future commitment periods. Prof. P. R. Shukla showed the views from an Indian perspective regarding the policies and issues on climate change and sustainable development.

In the final session, all participants joined active discussions at a roundtable. The discussion topics included equity issues, the role of technology, adaptations issues, risk management, and the role of dynamic target.



## C. Climate Policy Dialogue in Thailand, Vietnam/Cambodia

The Institute for Global Environmental Strategies (IGES) in collaboration with the UNEP Collaborating Centre on Energy & Environment (UCCEE) and the Thailand Environment Institute (TEI) organised an international workshop on climate policy dialogue with Thailand on 27 and 28 May 2002, in Bangkok, Thailand. Various experts from government, private and non-governmental organisations in Thailand along with experts from IGES, UCCEE and TEI contributed their valuable experience on climate policy in this workshop. The experts expressed their hope that the Kyoto Protocol will come into force by next year irrespective of the US ratification. It was acknowledged that the role of Asian developing countries for the mitigation of climate change is equally important as industrialised countries, such as EU, US, Japan. The workshop was divided into three components: Session I: Issues after COP7-focusing on the Kyoto mechanisms and global participation; Session II: Policies and measures related to climate change issues, and a panel discussion. In these sessions, the outlook of Clean Development Mechanism (CDM) in developing nations and the operating rules for the Kyoto mechanism were presented by experts from IGES and UCCEE.

"Climate Policy Dialogue in Vietnam/Cambodia: Fur-

ther International Cooperation for Promoting Policies and Measures for Climate Change" was held in Ho Chi Minh City, Vietnam on 30th and 31st May 2002, organised by the National Environmental Agency (NEA, Vietnam), the Institute for Global Environmental Strategies (IGES, Japan) and the UNEP Collaborating Centre on Energy & Environment (UCCEE, Denmark). The workshop was also supported by the Ministry of Environment (MOE, Cambodia) and the National Institute for Environmental Studies (NIES, Japan). Session I examined the issues after COP7 focusing on capacity building and the Kyoto Mechanism, in particular Clean Development Mechanism (CDM). The issues of policy and measures related to climate change were extensively discussed in Session II, based on the modelling analysis presented by the speakers. In the panel discussion, it was emphasised by a number of the participants that further collaboration on capacity building is vital to tackle climate change in developing countries with specific considerations on cultural differences of each country. In his concluding remarks, Prof. Morishima (President of IGES) stressed the importance of raising and enhancing the awareness of policy makers and establishing the partnership between developing and developed countries.

#### **D. Informal Meeting and Open Symposium on Further Actions against Climate Change, Tokyo, Japan**

In cooperation with the Ministry of Foreign Affairs of Japan, the IGES Climate Policy Project organised an informal meeting and open symposium of climate change specialists and negotiators from 17 to 19 July 2002. The aim of this meeting was to exchange views on further actions against climate change and establish a common understanding among Parties. The symposium (co-supported by the Ministry of Economy, Trade and Industry of Japan, the Ministry of Environment of Japan, and the Yomiuri Newspaper ) was recognised for its contribution to the promotion of Japanese diplomacy and its leadership in the field of international climate policy.

When the Kyoto Protocol was adopted at the Third Conference of the Parties of the United Nations Framework Convention on Climate Change (COP3), the world

as a whole took a major step towards combating global warming. At the end of last year, concrete rules for the implementation of the protocol were compiled in the "Marrakech Accord" at COP7. 75 countries, including Japan, have already concluded the Kyoto Protocol. At the symposium, experts who have been involved in front-line activities in countries and international organisations discussed the future perspective of international negotiations beyond the first commitment period of the Kyoto Protocol and climate change actions by each country. The purpose of the symposium was to provide an opportunity through these discussions for all participants to consider how to approach global warming issues. The symposium ended successfully with 340 participants representing governments, embassies, private companies, research institutes, and the press.

## E. The Second Toyota Stakeholder Dialogue

Recently, an endeavour called "Stakeholder Dialogue" is receiving much attention. This gathering of interested parties and sectors with diversified opinions and values holds discussions on specific themes, confirms and absorbs common ground and differences, as well as their background, and wherever possible, finds shared solutions.

The "Second Toyota Stakeholder Dialogue" was held at IGES on Oct. 18-19, 2002. This event was set up by Toyota Motor Corporation to hear opinions from various sectors for use in working out its own business strategy. The dialogue meeting was conducted following methods adopted by the World Business Council for Sustainable Development (WBCSD). General planning and operation of the event was entrusted to IGES.

The theme of the discussions was "Is a green market possible?" with a total of 30 people participating (9 from businesses, 8 from NPOs and other organisations, 7 mainly from research institutions, 3 from government, and 3 from Toyota). The first day was devoted to gener-



al sessions, including keynote presentations. On the second day, participants split into three groups for thematic discussions in the morning before returning to a general session in the afternoon. The two days of debate were heated, free and vigorous.

Discussions focused on three issues: 1) meaning of a green market; 2) roles of businesses, consumers, government and NGO/NPOs in seeking market greening (structural transformation); and 3) what is the driving force behind realising a green market? To sum up, participants gained a common awareness of the importance of businesses, consumers and government entering into equal partnerships to build a green market. In this regard, they shared the following views: it is important that NPOs provide fair evaluation of environmental conservation-oriented products and transmit relevant information and that businesses, consumers and government play intermediary roles and perform policy recommendation functions; the presence of influential NPOs that can perform such functions is necessary in Japan; and it is extremely important to have a mature civil society supporting those NPOs. For its part, IGES was asked to become more aggressively involved with policy recommendation.

There appeared to be much to gain from the Toyota Stakeholder Dialogues held in 2001 and 2002. Many participants expressed hope for this dialogue to continue. We hope we can accumulate experiences from these dialogues and develop more effective and meaningful discussion methods. We also hope this network for dialogue will be expanded further to embrace participants from a wider spectrum of sectors.

## F. International Workshop on Policy Integration Towards Sustainable Urban Energy Use for Cities in Asia

This workshop was organised by IGES with financial support from the Asian Pacific Network for Global Change Research (APN), AEON Foundation and Asahi Glass Foundation, and in cooperation with the East West Center, Hawaii. The workshop was organised to present and discuss the methodologies and results of the project obtained to date. It also focused on the exchange of information from the other similar ongoing research initiatives with the participation of key leading personalities and institutions from around the world. The workshop gathered academic as well as practitioners from institutions such as the Imperial College London, East West Center, World Bank, ICLEI, United Nations

University, Business Council for Sustainable Development-Mexico, and U.S. Environmental Protection Agency, among others. Throughout the workshop, the focus of discussions was on a few key questions, namely (1) How to integrate energy dimension in urban environmental policy and planning? (2) How to promote capacity building of energy-related studies for cities in developing countries? (3) What kind of methodologies are being used in such analyses? (4) What kind of data and information barriers exist? (5) How to interpret the research results and translate such results into actual policies? A panel discussion was held at the end of the workshop highlighting these issues.

### **Outline of the Workshop**

**Date:** 4-5 February 2003

**Venue:** East-West Center, Hawaii, U.S.A.

**Organisers:** IGES, APN

**Supporters:** APN, AEON Foundation, Asahi Glass Foundation

### **Programme**

#### **\*4 February 2003**

- Session on the present and future of economy, energy and environment in mega-cities
- Session on energy and urban sustainability
- Session on urban transportation and energy

#### **\*5 February 2003**

- Session on modelling and data
- Session on integration of urban and global policies
- Panel discussions

## G. IGES-KEI Workshop on Urban Environment in Asia: "The Role of Planning Practices towards Sustainable Urban Environment in Asia"

Regardless of the nature of driving forces underlying such spatial expansions of Asian megacities, the peripheries of the metropolitan areas in Asian cities are being rapidly filled with newly-built residential towns, industrial estates and other facilities. Although the reckless expansion of these cities has been considered unavoidable under strong developmental pressure such as the lack of housing and other urban facilities, but it induced unintended spill-over of environmental degradation across metropolitan areas of these Asian megacities.

As a consequence, these "Asian extended metropolises" impose greater environmental stresses on the periphery as well as core city by exposing the traffic congestion with extended commuting distances, uncon-

trolled expansion of urban fringes, and great loss of greenery and natural habitats. In addition, the relocated polluting industries from the inner core are widely blamed for the stationary source of air and water pollution. Furthermore, uncontrolled land development and intense pressure from square settlements on open spaces in the periphery are becoming increasingly apparent.

Given the background of the workshop in search for sustainable urban environment in Asia, the international workshop was co-hosted by IGES and the Korea Environment Institute (KEI) on 11 March, 2003.

IGES and KEI invited an array of leading researchers and practitioners for this workshop, to come together to consider the lessons of research about environmental consequence of metropolitan expansion in Asian cities and to take up the challenges of sustainable urban environment in the future. The majority of the IGES-KEI workshop participants, mainly from Japan, Korea, China, and Thailand, presented detailed analysis on the changing nature of urban environmental problems along with exploring possible solutions from planning practices guiding sustainable urban development in Asia.



## H. Kitakyushu Initiative Thematic Seminars

The Urban Environmental Management Project, in collaboration with the United Nations Economic and Social Commission for Asia and the Pacific (UN/ESCAP), organised three thematic seminars as part of a series under the Kitakyushu Initiative. The aim of these seminars was to increase the capacity of local governments in urban environmental management, with a focus on critical issues for local governments, including solid waste management, urban water supply and wastewater treatment, and air quality management. The seminars included the participation of representatives from local governments in the Asia-Pacific region, as well as international organisations, experts, and academia.



### **Outline of the Seminars**

#### **1st Thematic Seminar: Solid Waste Management**

**Date:** 19-20 September 2002

**Venue:** Kitakyushu International Conference Centre, Kitakyushu (Japan)

**Organisers:** UN/ESCAP, IGES

#### **Programme:**

**\*19 September 2002:** Field visit to Kitakyushu City's comprehensive solid waste management system (recycling centre, incineration plant, landfill site)

**\*20 September 2002:** Seminar (Presentations and discussions on existing capacities of local governments to address priority issues; activities currently being carried out by local governments to reduce household waste, touching upon priority issues in legislation, financing, technology, enforcement, and public participation; the concrete actions that can be taken to address particular issues; and policies and measures that may be most appropriate for future actions.)

#### **2nd Thematic Seminar: Public Private Partnerships for Urban Water Supply and Wastewater Treatment**

**Date:** 4 November 2003

**Venue:** China-Japan Friendship Centre for Environmental Protection, Beijing (China)

**Organisers:** UN/ESCAP, IGES

#### **Programme:**

Discussions were carried out on the experiences, challenges and future plans of local governments on the theme of public-private partnerships, with specific focus on water supply and wastewater treatment, in order to develop strategies necessary to encourage public initiatives and promote private sector participation in financing urban environmental infrastructure.

#### **3rd Thematic Seminar: Urban Air Quality Management**

**Date:** 20-21 February 2003

**Venue:** United Nations Conference Centre, Bangkok (Thailand)

**Organisers:** UN/ESCAP, IGES

#### **Programme:**

**\*20 February 2003:** Discussions focused on monitoring, and mobile and stationary sources of air pollution including policymaking and implementation.

**\*21 February 2003:** Seminar and field visit (monitoring station, emission checkpoint)

## 1. International Seminar on Financial Mechanisms for Environmental Protection / First Task Force Meeting for "Financial Mechanisms for Environmental Protec-

To commemorate the 30th anniversary of the normalization of national relations between China and Japan, as well as the launch of the CCICED Task Force for Financial Mechanisms for Environmental Protection, the "International Seminar on Financial Mechanisms for Environmental Protection" was organised by IGES, the Japan Bank for International Cooperation (JBIC) and China Council for International Cooperation on Environ-



ment and Development (CCICED) Secretariat, and co-organised by the Ministry of the Environment of Japan and the State Environmental Protection Administration of China. This Seminar had taken up the topic of the development of financial mechanisms for environmental protection, an important and central policy issue in China. Discussion was held on the methods to procure funding for environmental measures, as well as whether investments can be made for important policies. The experiences of developed countries were a major reference in the development of environmental financial mechanisms for China. Therefore, together with the identification of the experiences of developed countries, exchange of ideas on the potential application to China was carried out with relevant representatives of the Chinese National and Local Governments. The results from this seminar were used as input for "The Task Force Meeting for Financial Mechanisms for Environmental Protection" held on 6 November.

### **Outline of the Seminar and Meeting**

**Date:** 5-6 November 2002

**Venue:** Beijing, People's Republic of China

**Organisers:** IGES, JBIC, CCICED

**Supporters:** MoEJ, SEPA

### **Programme**

**\*5 November 2002:** International Seminar on Financial Mechanisms for Environmental Protection

**\*6 November 2002:** The Task Force Meeting for Financial Mechanisms for Environmental Protection

## **J. Seminar on Considering Strategies for Environmental Education in the Asia-Pacific Region**

The IGES Environmental Education(EE) Project held a seminar entitled "Considering Strategies for Environmental Education in the Asia-Pacific Region: Findings of IGES research on environmental education," as part of the 13th Convention of the Japanese Society of Environmental Education held from 24 to 26 May, 2002, at the Miyagi University of Education.

About 15 people consisting of administrators, staff of NGOs, teachers and students participated in the seminar. At the seminar, EE project reported the results of the First Phase research project (1998 to 2001), as well as the plans for Phase Two. Some typical problems and future prospects in promoting environmental education in the Asia-Pacific region were also discussed.

During the Second Phase, EE project is placing emphasis on practical approaches and mainly working on the following three programmes: (1) the development of environmental education materials; (2) the implementation of human resource development; and (3) the

development of an innovative ecotourism education model. After the report of EE project activities, trends in capacity building, the effective promotion of environmental education, and the problems of environmental education in Japan were discussed, based on questions from the participants.

As a result of the seminar, it was confirmed that current leader-oriented training activities should be reconsidered, that it is important to implement capacity building programmes directly for the general public and local people to improve the ripple effect on the capacity building programmes, that it will be important to prepare and implement a concrete action plan for effectively promoting environmental education in each country in the region, that it will also be necessary to develop mechanisms for supporting the preparation and implementation of the action plan, and that it is necessary for each country to consider linking its domestic framework of environmental education to the international framework.

## K. The First RISPO Plenary Workshop

The Long-Term Perspective and Policy Integration Project, in collaboration with the Thailand Environmental Institute, organised the first Research on Innovative and Strategic Policy Options (RISPO) Plenary Workshop on 27-28 March 2003 in Bangkok. RISPO is one of the three sub-projects under Asia Pacific Environmental Innovation Strategy Project (APEIS) and aims to develop Strategic Policy Options and Good Practices Inventory as common regional assets, to be used as knowledge-based tools for informed decision-making for sustainable development. IGES has been conducting research for RISPO in collaboration with various research institutes working in the field of environment and development and with key international organisations in the region. The workshop was held in order to share the progress in its first year and discuss issues related to the development of final outcomes among the participating researchers, receiving inputs from international organisations and government officers in the Asia-Pacific region. The workshop was attended by 43 participants from collaborating research organisations, international organisations and the government of Thailand.

Preceded by welcoming remarks from Mr. Chartree Chueyprasit, Deputy Permanent Secretary, Ministry of Natural Resources and Environment, Government of Thailand, the presentation and discussion sessions were held in order to: (1) share the progress of research activities in the first year of RISPO; (2) discuss linkages among research topics; (3) discuss the expected outcomes and related activities of RISPO, namely Strategic Policy Options, Good Practices Inventories, and capacity building; and (4) discuss and agree on plans for the second year of RISPO. Many constructive suggestions were obtained from very active discussions by the participants and the future course of research was agreed.

Back to back with the RISPO plenary workshop, the Second Meeting of Research Coordination Committee of APEIS (APEIS/RCC), an annual meeting to coordinate research activities among the sub-projects of APEIS, was held on 30-31 March at the same venue. About 30 participants from research institutes, international organisations, and governments in Asia-Pacific region convened.

### **Outline of the Workshop**

**Date:** March 27-28, 2003-06-25

**Venue:** Grand Tower Inn Hotel, Bangkok

**Organiser:** IGES

**Co-organiser:** Thailand Environment Institute (TEI)

### **Programme**

#### **DAY 1: 27 March 2003 (Thu)**

#### **Opening remark**

Mr. Chartree Chueyprasit, Deputy Permanent Secretary, Ministry of Natural Resources and Environment, Government of Thailand

Review and Prospect of APEIS/RISPO

Presentation: Mr. Yoshihiro Natori, IGES

Progress of Each Research Team

Overall Discussion on the Presented Progress

Linkages among Research Teams

#### **DAY 2: 28 March 2003 (Fri)**

Good Practices Inventory

Strategic Policy Options

Capacity Building

Presentation: Ms. Andrea Deri, IGES

Activities in the Second year of RISPO

## L. International Symposium 2002 "Business and the Environment"

The Business and the Environment project organises an International Symposium "Business and the Environment" every year to strengthen networks among researchers etc. at home and abroad as well as disseminate information to the general public. In 2002, it was held as part of the Hyogo Environmental Business Week (July 22-26 2002), following on from the Tripartite (Japan, China and Korea) Roundtable Conference.

In FY2002, the International Symposium "Business and the Environment" was held just before the Johannesburg Summit and was based on the theme "Quest for the Market supporting Sustainable Development - Partnership and Transformation of Socio-Economy". We



Keynote Speech

invited Dr. William Glanville from Canada and organised a keynote speech and panel discussions.

In the 10 years since the Rio de Janeiro Earth Summit, world industrial sectors have made changes in environmental management through promotion of ISO 14000 series, introducing environmental accounting, issuing environmental reports and developing methods to measure greenhouse gas emissions. However, efforts are needed not just from the industrial sector, but also from all sectors of society including governments, local authorities, NGOs and NPOs, to coordinate and strengthen independent activities. This is the important issue for the future.

With this in mind, the keynote speech noted the need to rethink issues, looking at them from a long-term view of 100 years of global environmental damage, and mentioned the framework for analysis of the collaboration of governments, business and civil society in creating partnerships. There were also presentations on the current situation of environmental industry in Asian countries, examples of environmental business activities in Japanese companies, trends in China regarding environmental industry and NGOs, and advanced environmental activities of the citizens of the Brazilian city of Curitiba. Audience participation also contributed to the deepening of the discussion.

**Summary of the symposium**

**Date and Time:** July 25, 2002 13:00 ~ 17:00

**International Conference Center Kobe, Hyogo**

**Organised by IGES**

**Participants:** 200

**Programme**

## Opening Remarks

Akio Morishima (Chair, Board of Directors, Institute for Global Environmental Strategies (IGES), President, Central Environmental Council, Japan)

Toshizo Ido (Governor of Hyogo Prefecture, Japan)

Nobutoshi Miyoshi (Director of Environment and Economy Division, Environmental Policy Bureau, Ministry of the Environment, Government of Japan)

## Special Speech "Transition of Environmental Problems and Responses of Japanese Society"

Akio Morishima

## Keynote Speech "Partnering for Sustainability: The Collaboration Imperative" - Utilizing Business-NGO Relationship to Achieve Sustainable Development-

William Glanville (Vice-President and Chief Operating Officer, IISD (International Institute for Sustainable Development), Canada)

## Panel Discussion "Quest for the Market Supporting Sustainable Development" - Partnership and Transformation of Socio-economy

Coordinator: Akihiro Amano (Director, Kansai Research Center, IGES/ Director, IGES, Japan)

Panelists: William Glanville

Ryokichi Hirono (Professor Emeritus, Seikei University / Director, IGES, Japan)

Yutaka Miyakawa (Manager, Environmental Control & Energy Division, Kobe Steel, Ltd.)

Han Wei (Secretary General, China Association of Environmental Protection Industry, China)

Hitoshi Nakamura (Director of Special Project, Open University for the Environment (Curitiba, Brazil), Former Secretary of State for the Environment and Water Resources, State of Parana, Brazil)

## M. International Symposium on Environmental Accounting 2003

The "International Symposium on Environmental Accounting 2003" was organised by IGES Business and the Environment Project and took place on January 31 at the Osaka International Convention Center (Grand Cube Osaka). Under the sub-heading "Cutting Edge of Environmental Accounting for Corporate Management and Environmental Conservation - Environmental Accounting in Japanese Corporate Management and Potentialities of Material Flow Cost Accounting (MFCA)", this symposium presented research on tools useful for decision-making in corporate management to achieve a reduced environmental burden and greater profits.

Focusing on production losses that, up to now have tended to be buried by management accounting in the normal costs, MFCA is a technique that aims to pin down physically and financially the material cost, system cost (labour and energy costs), transportation and disposal costs of losses at each point of origin and implement a reduction on environmental impact, and improvements in co-efficiency. It could be said to be a useful tool in corporate management aiming for an increase in profits with a reduced impact on the environment.

In the keynote speech, Katsuhiko Kokubu, the Project Leader and Professor at Kobe University, stated that it is vital for environmental accounting to have the two aims of external information disclosure and internal management, and for both sides to carry out environmental management. The future issues of the refine-

ment of external environmental information disclosure and incorporating internal environmental management into business practices were also raised. Following this, the first session comprised reports from the Ministry of the Environment and the Japanese Institute of Certified Public Accountants outlining studies on the current situation and spread of environmental information disclosure in Japanese companies and how to maintain reliability. In the second session, environmental accounting in the comparatively under-developed internal management in Japan was looked at, and there was a discussion on MFCA as one tool. Michiyasu Nakajima (Assistant Professor, Kansai University) brought up the issue, and then B. Wagner (Professor at Augsburg University), one of the founders of MFCA, and R. Pojasek, the founder of environmental management accounting in the USA made a presentation on the system in their respective countries. Finally the companies that conducted the experimental research for IGES project, Nippon Paint Company Ltd. and Shionogi & Co. Ltd., gave a research report and there was a lively discussion among the researchers based on the results of the two companies.

Thanks to the many companies and researchers who took part in this symposium, and from the many questions that were taken at the meetings, we can only hope for broad developments to be made in environmental accounting.

### **Outline**

**Date:** January 31, 2003 (Fri.)

**Venue:** Osaka International Convention Center (Grand Cube Osaka) 10th Floor Nakanoshima Kita-ku Osaka, JAPAN

**Organiser:** Institute for Global Environmental Strategies (IGES)

**Participants:** 203

### **Programme**

#### **Opening Remarks**

Akio Morishima, Chair, Board of Directors, Institute for Global Environmental Strategies (IGES)/ President, Central Environmental Council, Japan

Akihiro Amano, Director, IGES Kansai Research Center/ Director, IGES

Nobutoshi Miyoshi, Director of Environment and Economy Division, Environment Policy Bureau, Ministry of the Environment

#### **Keynote Speech "Environmental Accounting for Business Management and Environmental Conservation"**

Katsuhiko Kokubu, Project Leader, IGES Kansai Research Center/ Professor, Graduate School of Business Administration, Kobe University

### **1st Session: Environmental Accounting for Environmental Disclosure**

#### Presentations

1. "Efforts of Japanese Government - Focus on the Role of Ministry of the Environment -"  
Kenji Sawami , Assistant Director, Environment and Economy Division, Environmental Policy Bureau, Ministry of the Environment
2. "Efforts of the Japanese Institute of Certified Public Accountants (JICPA)" (11:40 ~ 12:00)  
Eriko Nashioka, Research Fellow, IGES Kansai Research Center/ Certified Public Accountant/ Member of the Environmental Accounting Expert Committee in the Management Research Study Group of the Japanese Institute of Certified Public Accountants

12:00 - 13:30 (90 mins.) Lunch & Poster Session by co-sponsors

### **2nd Session: Environmental Management Accounting for Better Eco-Efficiency - Close Look at Material Flow Cost Accounting**

#### Introduction

"Introducing Material Flow Cost Accounting for Better Utilising Internal Environmental Management Information"

Michiyasu Nakajima, Associate Professor, Faculty of Commerce, Kansai University/Research Fellow, IGES  
Presentations by Invited Speakers

1. "Development of Material Flow Cost Accounting in Germany"  
Bernd Wagner , Professor, University of Augsburg, Germany
2. " Using Process Maps and Other Tools to Improve the Use of Cost Flow Accounting The North American Experience"  
Robert B.Pojasek , Adjunct Professor, Harvard University/ President, Pojasek & Associates, U.S.A

15:00 - 15:30 Coffee Break & Poster Session

#### Panel Discussions

"How will Material Flow Cost Accounting Contribute to Better Eco-Efficiency?"

#### Part 1: Case Studies

1. Nippon Paint  
Jun Okajima , Manager, Finance & Accounting Department, Nippon Paint Co., Ltd.
2. Shionogi  
Yoshitsugu Kokuryo , General Manager, Environmental Management Unit, Shionogi & Co., Ltd.

#### Part 2: Panel Discussion

Coordinator: Prof. Katsuhiko Kokubu

Panelists: Prof. Dr. Bernd Wagner, Dr. Robert B. Pojasek , Prof. Michiyasu Nakajima , Jun Okajima , Yoshitsugu Kokuryo



**participants of the symposium**

## N. The Second Tripartite Roundtable on Environmental Industries (China, Korea, and Japan)

The Second Tripartite Roundtable on Environmental Industry took place at the Awaji Yumebutai International Conference Center in Hyogo Prefecture, western Japan. The first roundtable was held in Seoul, Korea in June 2001, following an agreement reached by the environment ministers of the three countries in 1999. Ministry of the Environment of Japan and Hyogo prefectural government hosted the second meeting and the Institute for Global Environmental Strategies (IGES) served as secretariat. A total of 125 people participated, including 55 delegates and 70 observers from the governments, research bodies, local authorities, businesses and NGOs of the three countries.

In a keynote speech, Mr. Ryokichi Hirono, Project leader of IGES Environmental Industries in Developing Countries Project, described environmental industry in Asia as being oriented around a "growth first, environment next" approach. To improve the situation, he said, firm political determination and a new approach integrating regulatory measures with citizen participation and economic instruments were essential.

Three sessions followed: "*Environmental Industry, Now and the Future; the Way Forward*" (Chairpersons: Mr. Xu Songling, China and Mr. Shuzo Nishioka, Japan); "*Greening of Business Activities*" (Chairpersons: Mr. Byung-Wook Lee, Korea and Mr. Kazuo Matsushita, Japan); and "*Role of Green Investment and Technology*

for Sustainable Development" (Chairpersons: Mr. Sang-Eun Lee, Korea and Mr. Tsuneyuki Morita, Japan).

At the closing session, Chairperson Akihiro Amano, Director of the IGES Kansai Research Center, summed up the discussions, saying that various good practices were collected, the discussion on greening of business activities was initiated and environmental industry and technology were recognized as strong driving forces for realizing sustainable development in each country. He also noted that: 1) the relationship between government regulations and environmental industry development is moving from a command and control approach towards that of information sharing and taking precautionary measures 2) participants supported closer partnerships between the community, civil society, markets and regulators; and 3) financial institutions play an important role in developing environmental industry.

It was also pointed out that positive action should be taken through increased information exchange and cooperation, especially regarding sharing experience and knowledge about the good practices in the three countries. The roundtable closed after participants welcomed China's offer to host the next meeting.

(This meeting was organised by the Business and the Environment Project (Kansai Research Centre) in collaboration with the Long Term Perspective and Policy Project)



## **O. Inter-Linkages - Regional Workshop on Integrated Capacity Development in ASEAN on Multilateral Environmental Agreements**

A regional workshop on Integrated Capacity Development in ASEAN was held on March 24, 25 and 26, 2003 in Kuala Lumpur, Malaysia to explore opportunities for, and identify constraints in strengthening cooperation and mutual supportiveness of multilateral environmental agreements (MEAs) both in scale (national/regional/global) and across issues (biodiversity, climate change, chemicals, etc.) in the ASEAN region. The workshop was hosted by the Ministry of Science, Technology and the Environment, Malaysia (MOSTE) and co-organised by the Institute for Global Environmental Strategies (IGES), the United Nations University (UNU), ASEAN Secretariat, Institute for International and Strategic Studies (ISIS) Malaysia, and the Ministry of the Environment (MOE), Japan. The participants were senior and middle level managers who have prime responsibility for implementing and coordinating MEAs in their countries.

The workshop built upon the experiences of the UNU's Inter-linkages Initiative, recommendations of its case study in the ASEAN member states and the preceding workshop and public forum held at UNU in Tokyo in January 2003 in collaboration with IGES. The Kuala Lumpur workshop benefited both governmental and non-governmental stakeholders at the national level. UNU's Inter-linkages Initiative focuses on human-environment interaction through the governance of multilateral environmental agreements (MEAs).

The Regional Workshop on Integrated Capacity Development was organised under three headings: climate change, biodiversity and chemicals. Plenary sessions were devoted to presentations from various stakeholders, including IGES, followed by intensive working groups meetings.

Andrea Deri, Programme Manager, IGES Capacity Building Programme presented IGES innovative approach of using eLearning to add value to traditional, face-to-face capacity building approaches. Following up on the keen interest from several participating countries and co-organisers in using eLearning in integrated capacity enhancement, IGES, UNU and UNITAR started a discussion on developing an eCourse to strengthen negotiation skills in developing countries.

The regional workshop in Kuala Lumpur emphasised the power of networking, information sharing by regular contacts of key national, regional and international stakeholders. Following up on this recommendation, eight organisations joined a telephone conferencing event on June 5, 2003 including ASEAN, SPREP, IGES, UNDP-Cap. 2015, UNDP-GEF, UNEP-ROAP, UNITAR and UNU to further discuss needs and identify opportunities for integrated capacity development.



## VII. Opening of the new IGES Research Facility

With the full support of Kanagawa Prefecture, the new IGES Research Facility was completed in June 2002 and the official opening ceremony was held on June 22. There were about 200 participants at the opening ceremony including the Chairman of the Board of Directors and the trustees. First Mr. Morishima, the Chairman of the Board of Directors, gave some opening remarks. He mentioned that IGES started its activities in 1998 in the Research Wing of the Shonan Village Centre. The First Phase Strategic Research Programme was successfully completed and the Second Phase Strategic Research Programme began immediately. Strategic research was carried out for the advancement of sustainable development in the 21st century. In the new facility, we have decided to build up research which should provide new policies with a high level of practical efficiency and carry out analysis of environmental issues from a wide viewpoint. After that, the Minister for the Environment, Hiroshi Oki and the Governor of Kanagawa Prefecture, Hiroshi Okazaki gave a congratulatory speech to IGES on the occasion of the transfer to new facilities. In the message from former Japanese Prime Minister, Ryutaro Hashimoto, he recounted how at the United Nations General Assembly Special Session (UNGASS) in 1997, as Prime Minister, he announced his support for the establishment of IGES and international research cooperation, and how IGES was established the following year. He expressed his hope that research activities would be more vigorously pursued in the new facility, using world wide research networks for strategic analysis and research of global environmental issues and that practical and innovative policies would be offered to ensure sustainable development.

Next there was a keynote address from IGES Honorable Advisor, Jiro Kondo, on the theme "Past, Present and Future: *In 1993 under the Hosokawa government, the "21st century global environmental discussion group" was set up to create long-range view on how to deal with global environmental issues (the speaker, Jiro Kondo, was the President of the Central Environment Council, Japan, at the time) and in January 1995 a final report entitled "Towards the creation of a new civilisation" was submitted to the then Prime Minister, Mr.*

*Murayama. In the meeting, the idea was brought up of creating and re-editing a new global environmental science and technology by bringing together the conservation of biodiversity, the idea of recirculation of mass production/mass disposal, and arts and social science and natural science. Furthermore, there was a proposal to set up a practical strategic research institute and IGES was born in 1998. However, if one looks at the global environmental situation after that, the Kyoto protocol proved very difficult to bring together as was clearly shown in the countermeasures for global warming. In the 21st century, the so-called environment century, it is necessary that IGES plan strategies and propose concrete environmental policies. However, as Sun Tzu says, you must know your enemy as well as yourself. Therefore, in this case, it is necessary to be mindful of the US, and continue to build strategies keeping an eye on the world situation.*

After the keynote speech, there was an introductory video of IGES, the presentation of a letter of thanks to those at the construction company etc. and a guided tour of the facility. At the reception, several people expressed their expectations for IGES, including the Mayor of Hayama, the Mayor of Yokosuka, Dr. Peter de Janosi (Director), Dr. Keith Bezanson (Director), and Councillor Ishizaka.

The new research facility is suitable for IGES' use, and the design was decided from the results of a construction contest, as a building kind to the environment and kind to those who use it. The site area of the new facility is around 20,000 m<sup>2</sup>, the building area is about 7500 m<sup>2</sup>, with 2 floors above ground and one basement floor. The facility comprises research project rooms, a secretariat, library, board of directors' room, meeting rooms with simultaneous interpretation facilities, as well as a dining room, accommodation for researchers etc., and an atrium with a high ceiling space. The designer was Nikken Sekkei Ltd., the contractor was Kajima Mitsui Kobai Consortium, the owner is the Housing Supply Corporation of Kanagawa Prefecture and IGES uses the new facility as tenants.

The new facility tries to use natural energy and resources as much as possible. It has a system to use

natural light via the top light, and a system to shield direct sunlight by using large window roofs and solar louvers. There is a ventilation system which uses roof greening and a cool/heat trench, the toilets and on-site water uses rain water, there are solar panels for light and heat, and the wind is used to generate power. Furthermore, there is an ice-heat-storage system, an NAS battery installed with the cooperation of Tokyo Electric Power Company, a micro gas turbine installed with the cooperation of Tokyo Gas which reduces the peak daytime usage of electricity and aims to use energy at a high rate of efficiency by co-generation. The building materials use recycled materials as much as possible like wood reproduced from rubber waste, and floor tiles made from regenerated glass. For the area around the building, the natural locality was used and a biotope was set up using rainwater, where many living things can breathe naturally. In addition, a system has been installed to show and analyse how such energy is used. Through using these techniques, it is thought that the new facility can be a model for environmentally considerate construction for architecture in the future. Current-

ly the data for energy consumption in FY 2002 is under analysis. There is an investigation underway to check the actual possibility of cutting energy consumption by 50% compared to the old building and a 50% peak cut. Based on this data it has been decided to build and implement a new environmental management system.

From July 2002, there were many employees who showed signs of sick-house syndrome and chemical sensitivity and so various measures were taken to improve the ventilation etc. Because of this, the system was not always operated with a view to how best conserve energy, but it was more important to first work on measures to ensure the health and safety of all staff members.

We hold guided tours of the facility every Tuesday for the general public. Last year, 892 people participated in the tours. Those interested in taking part in a tour should contact us on the number below.

IGES Secretariat, General Affairs Division:

tel. 046-855-3700

## VIII. Other Activities

### A. Information dissemination

IGES disseminates information about its strategic research, targeting various bodies such as other international organisations and research institutes, researchers, decision makers, the media, NGOs, and the general public. Further, towards the realisation of a sustainable and equitable society, it collects information about discussion and policy trends on international and regional debate regarding global environmental issues. It then analyses this information in an easy-to-understand way, and disseminates it to the rest of the world.

#### Commercial Publications

##### 1 ) Deforestation and Conservation of Forests in Asia

This explained the structure of the issue of declining forest areas in Asia based on discussions trends about policies for international forest conservation and surveys of the area. It also provided basic information to find countermeasures based on the actual situation on the ground. It introduced the voices of the local people in Asia living within the forests through hearings and information gained from detailed surveys on-site. It was published in May 2003, by Chuo Hoki Publishers.

##### 2 ) "Environmental Accounting in the Process of Updating - Developing Practical Tools for Corporate Management and Society"

Since the establishment of the Kansai Research Centre in September 2001, it has held "Study Group Environmental Accounting for Corporate Management" as a forum for cutting edge accounting research and exchanges of practical opinion. We published a summary of the results for the 6 sessions in Phase 1 of this business workshop. This publication provided new information and discussions about environmental accounting by introducing actual examples of environmental accounting used by real businesses, and asking how environmental accounting is useful for decision-making within companies. It

was published by the Energy Conservation Centre in March 2003. (00 pages)

#### Periodicals

##### 1 ) "International Review for Environmental Strategies (IRES)"

The English Language journal "International Review for Environmental Strategies (IRES)" was published with the aim of providing information about the newest trends in global environmental issues and introducing actual strategic papers for solving global environmental problems. In FY 2002, there were 2 issues published - "Globalisation and Sustainable Development" (Summer Issue) and "Sustainable Freshwater Resource Management". (Winter Issue) (3000 issues of each)

##### 2 ) "Top News on Environment" in Asia

This has been published every year since the establishment of IGES, using a network of researchers who deal with environmental issues in the Asia-Pacific region. In 2002, this was compiled into a book, with the help of researchers from 18 countries and 3 organisations in the Asia-Pacific region. Beginning with environmental issues from various Asian countries, it introduced important news relating to environmental issues which have global repercussions reaching further than the Asia-Pacific region. (2000 issues)

##### 3 ) Newsletter

The newsletter "What's New from IGES?" is published 3 times a year. It introduces IGES' activities to a wide audience from various international and research organisations, researchers, NGOs, the media and the general public. English edition - 2000 copies, Japanese edition - 1500 copies.

#### Dissemination of information over the Internet

##### 1 ) Renewal of Homepage

From July 2002, we began a newly designed homepage. Beginning with the activities of each

project, it is updated regularly to transmit information according to topics that users are interested in, by analysing international trends regarding environmental issues.

**2 ) "E-alert"**

The e-mail newsletter "E-alert" is published 3 times a year. It not only provides the newest information about IGES' activities, but also transmits contents that has been analysed by the

researchers so that trends on environmental issues can be quickly and easily understood. It is sent to about 3000 registered readers.

**3 ) Database**

We have started investigations to create a database that will contain IGES' own network and information as well as environmental information from the Asia-Pacific region regarding sustainable development.

## B. Affiliate Membership - Seminars for Affiliate Members

IGES' ultimate goal is the "realisation of research results". To this end, we have been building collaborative and cooperative relations over the years with governments, local authorities, the private sector, as well as NGOs etc. The "affiliate member" system is one part of this.

Affiliate members have benefits such as invitations to IGES-sponsored symposiums etc. and free publications and the like, and in addition are also able to participate in the "Seminars for Affiliate members".

The aims of this seminar are to widely publicise the contents of IGES' activities and encourage registration of affiliate members. There was also the "IGES Affiliate Members Study Meeting/Public Seminar" which was fully open to the public.

In FY 2002, from among common themes on global environmental issues, the most current issue was taken up and participants considered how to best deal with it in from the standpoint of governments, businesses and local citizens. The First to the Fourth Seminar were held

jointly with the Kanagawa Foundation for Academic and Cultural Exchange (K-FACE) and the Fifth and Sixth Seminars were held independently by IGES, making a total of 6 seminars. There were a large number of participants and satisfactory discussions were developed.

As of March 31, 2003, the number of affiliate members is as follows: 19 corporate members, 1 NGO, and 78 individual members (of which 2 are associate members), and 1 student member, with the individual membership falling slightly.

From FY 2002, the new system for "associate members" and "student members" was renewed and set up. The benefits for "associate members" are limited but the membership fees are half that of regular members, and we are aiming to widen the areas for members. "Student membership" is separate from regular membership and associate membership and we hope to widen the registration of student members by setting a lower membership fee.

### Seminars for IGES Affiliate Members in FY2002

| Date             | Programme Theme  | Speakers and Presenters  |  | Venue   |
|------------------|--|--|--|---|
| 23 Oct.<br>(Wed) | "Looking at future global environmental problems, considering the Global Environmental Summit - from the viewpoint of local society" |  |  | IGES Hayama<br>Conference Room 1                                  |
|                  | Keynote Report "Johannesburg Summit - Results and Reflection"  | Takashi Otsuka   | LTP Project, IGES  |   |
|                  | Report "WSSD as seen from NGOs"  | Katsuko Sato   | Soft Energy Project (NPO)  |   |
|                  | Panel Discussion "Significance of WSSD and what local society can do"  | Masako Ashidate  | Liaison Committee "Milk-Pack Recycling Promotion in Kanagawa"  |   |
|                  |  | Moderator : Shinichi Arai (Secretary General, IGES)  |  |   |
| 12 Nov.<br>(Tue) | "Thoughts on Global Warming -the new COP8 report and future trends of domestic policies"   |  |  | Landmark tower<br>13th Fl.<br>Forum Yokohama<br>Seminar Room 1    |
|                  | Keynote Report "New COP8 Report - the Kyoto Protocol and future trends"  | Yasushi Ninomiya   | CP Project, IGES   |   |
|                  | Case Report I "CCP(Cities for Climate Protection) Campaign Profile and Development"  | Michie Kishigami   | Managing Director, ICLEI (The International Council for Local Environmental Initiatives) Japanese Office |   |
|                  | Case Report II "Actions to Prevent Global Warming - Case of Hayama Town"   | Tetsuo Shinoda   | Deputy Manager, Environmental Section, Hayama Town   |   |
|                  |  | Moderator : Shinichi Arai (Secretary General, IGES)  |  |   |
| 24 Dec.<br>(Tue) | "Possibility of Eco-tourism for building local community"  |  |  | IGES Hayama<br>Training Room                                      |
|                  | Keynote Report "Eco-tourism to promote local nature and culture"   | Yurie Kaizu  | Japan Ecotourism Society   |   |
|                  | Case Report I "Eco-tourism in South East Asia - example of eco-tourism development in Cambodia"                                      | Akihiro Nakahata   | Green-Consumer Association   |   |
|                  | Case Report II "Trends in Eco-tourism"   | Kouichi Mori   | Urban Communications Co.,Ltd.  |   |
|                  |  | Moderator : Norihito Shimizu (K-FACE)  |  |   |
| 22 Jan.<br>(Wed) | "Towards the improvement of environmental management system" - based on examples introducing ISO14001                                |  |  | IGES Hayama<br>Training Room                                      |
|                  | Case Report I "Fujitsu Co. "   | Syoji Kunugi   | Fujitsu Limited  |   |
|                  | Case Report II "Kanagawa Prefectural Government"   | Katsuhiro Hozumi   | Environmental Planning Section, Kanagawa Prefecture  |   |
|                  | Group Discussion 海 "Current Problems solved from the view of system management"  | Resource Person : Syoji Kunugi, Katsuhiro Hozumi, Norihito Shimizu   |  |   |
|                  |  | Facilitator : Masahisa Sato ( CB Program, IGES ), Reiko Koyama ( CB Program, IGES )  |  |   |
| 13 Mar.<br>(Thu) | "Environmental Reporting - Present and Future"   |  |  | Landmark tower<br>13th Fl.<br>Forum Yokohama<br>Conference Room 1 |
|                  | Issues Raised  | Katsuhiko Kokubu   | Leader, BE Project, IGES   |   |
|                  | Case Report I "Analysis of recorded contents and publication status of environmental reports"  | Kenjiro Hirayama   | BE Project, IGES   |   |
|                  | Case Report II "Comparability Analysis of recorded contents of environmental reports"  | Masaji Kitamura  | BE Project, IGES   |   |
|                  | Case Report III "Research on the reliability of environmental reports"   | Eriko Nashioka   | BE Project, IGES   |   |
|                  | Panel Discussion "Possibilities and issues of environmental reports"   | Moderator : Katsuhiko Kokubu<br>Panelists : Takashi Seo (Sompo Japan Insurance Inc.) / Nobuhiro Kanno (Matsushita Electric Industrial Co., Ltd.) |  |   |
| 26 Mar.<br>(Wed) | Perspectives on Environmental Education in schools   |  |  | Yokohama Gino<br>Bunka Kaikan<br>large conference<br>room         |
|                  | Report 1 a decade of education for sustainable development   | Osamu Abe  | Leader, EE Project, IGES/Professor, Sociology Department, Rikkyo University                              |   |
|                  | Report 2 Points for nature based environmental study during comprehensive learning time  | Mitsuhsisa Hioki   | National Institute for Educational Policy Research   |   |
|                  | Questions and Answers/ Exchange of opinion   |  |  |   |

## **C. Promotion of Further Internationalisation of IGES - the formulation and internationalisation of the Third Phase Programme and the IGES Medium and Long-term Plan**

IGES was established in 1998 and since then, because it departs from having a specific national position and interest, and conducts effective international activities from a neutral standpoint with the cooperation of a broad spectrum of interested parties, it has come to be known as an independent "international organisation" carrying out comprehensive strategic research in a new way. Because of this, it is important to conduct research from a long-term perspective and at the same time, work to become a truly international organisation.

Therefore, it is necessary to look ahead 6 to 10 years and consider a medium and long-term plan that also includes internationalisation. Discussions started in FY2002 on the Third Phase Strategic Research Programme (SRP3) which is due to begin in FY2004, as well as a Medium and Long-term Plan.

To wit, at the 10th Informal Meeting of Directors and Trustees of IGES in June, 2002, there was discussion on the medium and long-term plan based on the schedule of SRP3 and the results of an internal study. As a result, it was decided to create small groups made up of the directors and experts and carry out preparatory discussions on SRP3.

Having gone through the internal investigations and the preparatory discussions by the above-mentioned small groups on the SRP3 and the medium and long-term plan including internationalisation, there was a debate mainly focusing on SRP3 at the 11th Informal Meeting of Directors and Trustees.

Out of this, indication was made of the necessity of investigating strategic ways to find and develop basic ideas and aims for IGES in the future, particularly regarding formulation of SRP3. There was discussion on this and other matters at the 12th Informal Meeting and the plan is to decide on SRP3 at the Fifteenth Meeting of the Board of Directors in February 2004.

The situation regarding discussions on SRP3 and the medium and long-term plan including internationalisation is introduced below.

### **1. Formulation of SRP3**

We began basic discussions from the summer of

2002 on the Third Phase plan, due to be implemented from March 2004 for 3 years. For each on-going project, we investigated the effective use of limited resources such as capital and personnel, the continued effective use of the results of the First and Second Phase, and the aim of appropriately following up the results of the WSSD. Following discussions at the IGES research department meeting in January 2003, project proposals were sent to each small group member and preparatory discussions took place in time for the 11th Informal meeting of Directors and Trustees. Based on the results of this, discussions took place at the informal meeting and various suggestions were made including integrating the Environmental Education Project with the Capacity Building Programme. After that, there was an appropriate review of each project proposal based on comments from the Research Advisory Committee, it was proposed as a draft revision to the 12th Informal Meeting and was discussed by the Directors and trustees. Furthermore, at the Board of Directors Meeting in June, it is decided that the president shall prepare the Third Phase Plan by September, based on discussion at the informal meetings.

### **Chart - List of Small Group Members**

Dr. Keith Bezanson

Dr. Peter de Janosi

Dr. Ryokichi Hirono

Dr. Hoesung Lee

Dr. Tongroj Onchan

Dr. Jill Jeager

### **2. Formulation of the Medium and Long-term plan**

Regarding the medium and long-term plan, as mentioned above, it was pointed out at the 10th Informal Meeting of Directors and Trustees that there should be an aim particularly to diversify future finances, internationalise personnel as well as conduct strategic investigations including measures to scale down the number of projects. There was also a request to the director at the 13th Board of Directors Meeting, to present a basic report of the investigation at the 14th Board of Directors

Meeting. On the basis of this, the promotion of internationalisation, the improvement and diversification of financial resources, the scale of project research, the management of the research framework, and the implementation of external evaluation of research results were mentioned and discussed as aims and topics for the Third Phase Strategic Research Programme. The formulation of the medium and long-term plan based on these discussions is scheduled for the 15th board of directors meeting in February 2004.

### 3. Internationalisation

Since IGES was established, internationalisation has been an important topic from a medium and long-term view. Up to now, a phased approach has been taken, and in the Second Phase Strategic Research Plan the links with international bodies and research organisations in other countries has deepened through the implementation of joint projects. Further, in the Third Phase, efforts are being made to carry out internationalisation based on an establishment treaty.

In FY2002, the following responses were taken:

- 1 ) Increase in the number of Signatory Organisations to the Charter of the Establishment of IGES Malaysia Ministry of Science, Technology and the Environment (MOSTE), World Watch Institute, VTT Technical Research Centre of Finland signed the Charter.

In addition, there was an exchange of a Memorandum of Understanding for practical cooperation with the National Institute of Environmental Research (NIER), Korea as well as negotiations with the Government of Indonesia on a frame-

work for cooperation.

- 2 ) Designation as a UN NGO by the United Nations Economic and Social Council (ECOSOC)  
Applications for UN NGO status have been made to ECOSOC in the past, but it was in January that the application was finally approved by the NGO Committee of ECOSOC. (Following that, it was officially endorsed by ECOSOC in May, 2003)
- 3 ) Consolidating efforts to realise the research results achieved at the WSSD etc. and strengthening networks with various national governments that make use of the Asia Pacific Forum for Environment and Development (APFED) etc.
- 4 ) Making efforts to implement joint projects and diversify financial resources, through cooperation with UNEP, ESCAP and others.
- 5 ) Participation in the National Environmental Performance Assessment in the Greater Mekong Sub-region and the first term strategic project conducted by GEF, ADB and UNEP. In addition, the decision to open the IGES Project Office in Bangkok to implement this project and the Asia-Pacific Environmental Innovation Strategy Project (APEIS) with the cooperation of UNEP. (The office began operations in May 2003).

From now on, making steady progress to place these activities within the medium and long-term plan, the aim is to be recognised as a real international organisation, as seen from the example of IUCN. This will be very difficult but, as far as entering into establishment treaties with other national governments, we are examining the possibility of bilateral agreements.

# APPENDIX



## List of Achievements (April 1, 2002 — March 31, 2003)

### 1. Commercial Publications

#### Forest Conservation Project

Makoto Inoue (ed.), 2003, Deforestation and Forest Conservation in Asia, Tokyo, Chuohoki Publisher, 324pp., (in Japanese)

#### Business and the Environmental Project

Katsuhiko Kokubu, Eriko Nashioka (eds.), 2003, Environmental Accounting in the process of updating, Kansai, The Energy Conservation Center, Japan, 307pp., (in Japanese)

### 2. Reports published by IGES

#### IGES Secretariat

*International Review for Environmental Strategies*, Volume 3 Number 1, Summer 2002 (2002), 211pp.

*International Review for Environmental Strategies*, Volume 3 Number 2, Winter 2002 (2002), 359pp.

*2002 Top News on Environment in Asia* (2002), 127pp.

*IGES Annual Report FY2001* (2002), 97pp.

#### Climate Policy Project

2002, Climate Policy Project Activities, CD-ROM

2002, "A Proposal on Domestic Climate Policies and Measures in Japan : Strategic Design for Japanese Companies to be a Winner in the Climate Businesses", 171pp.

2002, Implications of Baltic Environmental Policies for East Asia , 260pp., Report for commissioned work for Ministry of Environment

2002, Policy Design of Climate Change Collaboration in Northern Asia : Possible Options and Constraints for Cooperative Effort between Russia, Japan, China and Korea, 315pp.

2002, Proceedings of IGES Workshop on Climate Policy in Asia, Dec. 17-18, Shinagawa Prince Hotel, Tokyo, Japan, 404pp.

2002, Workshop Proceedings Policy Design of Climate Change Collaboration in Northern Asia : Possible Options and Constraints for Cooperative Effort between Russia, Japan, China and Korea, 218pp.

2002, Climate Policy Dialogue in Asia August 2002, 30pp.

2002, Post-COP8 Seminar, 194pp.

2002, Clean Development Mechanism, 29pp., Japanese translation of Clean Development Mechanism published by UNEP RISO

2002, PROCEEDINGS OF THE TRAINING WORKSHOP ON CLIMATE CHANGE ISSUES 5-6 December 2002 Phnom Penh, Cambodia, 183pp.

#### Urban Environmental Management Project

2003, Report on International Seminar on Financial Mechanisms for Environmental Protection / China Council for International Cooperation on Environment and Development : The First Task Force Meeting for Financial Mechanisms for Environmental Protection, 686pp., (in English/Chinese)

2003, Meeting Proceedings : International Seminar on Financial Mechanisms for Environmental Protection, 140pp., (in Japanese)

2003, Policy Integration towards Sustainable Urban Energy Use for Cities in Asia: Proceedings of IGES/APN International Workshop, 290pp., (Sponsored by APN, AEON)

2003, The Budget of GHGs, Urban Air Pollutants and their Future Emissions Scenarios in Selected Mega-cities in Asia: Final report of IGES/APN Project, Submitted to Asia Pacific Network for Global Change Research (APN), 118pp.

2003, 1st Thematic Seminar : Kitakyushu Initiative Seminar on Solid Waste Management, 228pp.

2003, 2nd Thematic Seminar : Kitakyushu Initiative Seminar on Public-Private Partnerships for Urban Water Supply and Wastewater Treatment, 148pp.

2003, 3rd Thematic Seminar : Kitakyushu Initiative Seminar on Urban Air Quality Management, 317pp.

#### Forest Conservation Project

2003, Laos Country Report 2002 : Towards the participatory forest management in Laos

2003, Policy Trend Report 2001/2002, 149pp.

2003, Russia Country Report 2002

### Environmental Education Project

- 2002, Making Sense of Climate Change, 78pp., consultancy
- 2002, The Path to Success : Some Pioneering Examples of Environmental Education, 312pp.
- 2002, Interim Report FY2001, 82pp.
- 2002, What is Happening to our Freshwater Resources : Module 2 Draft for Discussion, 32pp.

### Long-Term Prerspective and Policy Integration Project

- 2002, Report on Asia-Pacific Region Research on Innovative Strategy Option, 300pp., (in Japanese) commissioned report for MOEJ
- 2002, Study Report on Issues on Freshwater Resources and International Response, 120pp., (in Japanese) commissioned report for MOEJ
- 2002, APFED Commissioned Report on Eminent Persons' Forum, 80pp., commissioned report for MOEJ

### Business and the Environmental Project

- 2002, COP7 and the Future of Business Activities , Seminar on Countermeasures against Global Warming, 123pp., (in Japanese)
- 2002, Possible Influence of GRI Guidelines that is in the revision process, Environmental Reporting Seminar, (in Japanese)
- 2002, Proceedings of The 2nd Tripartite Roundtable on Environmental Industries (China, Korea, and Japan), 266pp., (in Japanese)
- 2002, International Symposium 2002 "Business and the Environment", (in Japanese)
- 2003, International Symposium of Environmental Accounting 2003 : Cutting Edge of Environmental Accounting for Corporate Management and Environmental Conservation ~ Environmental Accounting in Japanese Corporate Management and Potentialities of Material Flow Cost Accounting ~ , International Symposium 2003 on "Environmental Accounting", 117pp.

## 3. e Courses published by the Capacity Building Program

### Environment

| eCourse title   | English | Japanese |
|---|---------|----------|
| ISO14001 for Local Governments                                |         |          |
| ISO14001 Implementation for Companies                         |         |          |
| ISO14001 Staff Training                                       |         |          |
| EMS Auditing  |         |          |
| Environmental Leadership                                      |         |          |
| Implementing Sustainable Development                          |         |          |
| Introduction to Climate Change                                |         |          |
| Analytical Tools for Climate Change Strategy                  |         |          |
| Climate Change Mitigation                                     |         |          |
| Mitigation Options in Forestry                                |         |          |
| Participatory Forest Management in South-East Asian Countries |         |          |
| ICT and Environment   |         |          |
| Urban Environmental Management System (EMS)                   |         |          |

### Strategic Skills

| eCourse title                                     | English | Japanese |
|---|---------|----------|
| Management  |         |          |
| Strategic Planning for Environmental Organization |         |          |
| How to Write a Dissemination Plan                 |         |          |
| How to Write a Marketing Plan                     |         |          |
| Project Evaluation                                |         |          |
| Risk Management                                   |         |          |
| Effective Meetings                                |         |          |
| How to Negotiate                                  |         |          |
| How to Sell                                       |         |          |
| Implementing eLearning Projects                   |         |          |
| How to structure Online Course and Lessons        |         |          |
| How to Use Course Maker                           |         |          |
| Nine Steps from Authoring to Uploading on eCourse |         |          |

## 4. Research Achievement

### 1) Academic Papers

#### Climate Policy Project

- Hidefumi Imura, Rie Watanabe, 2002, *Voluntary Approaches -Two Japanese cases : Pollution Control Agreements in Yokohama city and Kitakyushu city*, Env/EPOC/WPNEP(2002)12, Paris, OECD
- Tae Yong Jung, Dong Kun Lee and Sung Woo Jeon , 2002, *Application of AIM/endues Model to Korea*, (chapter), M. Kainuma, Y. Matsuoka and T. Morita, Climate Policy Assessment (Asia-Pacific Integrated Modeling), Tokyo, Springer
- So Won Yoon, 2002, *A Study on the Environmental and Economic Value of Green Spaces : the Case of Seoul Metropolitan City*, *Journal of the Korean Society for Environmental Restoration and Revegetation Technology*, The Korea society for Environmental and Revegetation Technology
- So Won Yoon and Tae Yong Jung, 2002, *Energy Demand Project and its Environmental Implication on the Transport Sector in Korea : An Application of LEAP Model*, Climate Policy, Elsevier
- So Won Yoon and Dong Kun Lee, 2002, *A study on the Construction of the Assessment Model and it's Application for Sustainable Development in East Asia Cities*, Korean Planning Association, 37, Korea Planners Association, pp.7-25
- So Won Yoon and Dong Kun Lee, 2002, *The Development of the Evaluation Model of Climate Changes and Air Pollution for Sustainability of Cities in Korea*, Landscape and Urban Planning, Elsevier
- Ancha Srinivasan, 2002, *Integrating Indigenous Knowledge in Climate Change Adaptation Strategies in Asia and the Pacific: Issues and Options*, Proceedings of the 12th Asia-Pacific Seminar on Climate Change, Bangkok, ESCAP
- Ancha Srinivasan, 2002, *Precision Agriculture, Modelling and Land Use Planning*, Keynote Speech, Andreas Deininger, Deutscher Tropen-tag 2002: International Research on Food Security, Natural Resource Management and Rural Development, Wizenhausen, Germany, University of Kassel, pp.111-112.
- Yasushi Ninomiya, 2002, *An analysis of energy demand in Japan and the UK using the structural time series model*, Proceedings of the 2002 Conference of the Society for Environmental Economic and Policy Studies, Sapporo, Japan., The Society for Environmental Economics and Policy Studies, pp.190-191.
- Yasushi Ninomiya, 2002, *The Underlying Energy Demand Trend and Seasonality: An application of the structural time series model to Energy Demand in the UK and Japan*, Ph.D. Thesis, A Thesis Submitted to the University of Surrey (UK) for the Degree of Doctor of Philosophy in Economics
- Norichika Kanie, 2002, *Johannesburg Summit and Governance for Sustainable Development*, Environmental Research, Hitachi Environment Foundation

#### Urban Environmental Management Project

- K. M. Zhang, Miao Chang and B. Du, 2002, *Environmental Protection Policies and Environmental Governance in Chinese Cities*, Yoshioka Kanji, Kojima Tomoyuki (eds.), Economic Development and Environmental Conservation in Asia, Volume 4, Tokyo, Institute for Economic and Industry Studies (Keio Economic Observatory), pp.71-95
- Miao Chang and Hidefumi Imura, 2002, *Developing Private Finance Initiatives (PFI)/Public-Private Partnerships (PPP) for Urban Environmental Infrastructure in Asia*, JSCE (ed), Environmental System Research, Vol.30, Yamanashi, Committee on Environmental Systems, Japan Society of Civil Engineers, pp.143-151
- Miao Chang and Hidefumi Imura, 2002, *Financing Urban Environmental Infrastructure in China : Current Situation and Challenges*, Hiroshi Osada (ed.), Journal of International Development Studies, Vol. 11, No. 1, Nagoya, JASID, pp.1-20
- Miao Chang and Hidefumi Imura, 2002, *A Study on Foreign Direct Investment for Urban Environmental Infrastructure of Asia*, Society for Environmental Economics and Policy Studies, Society for Environmental Economics and Policy Studies 2002 Year Meeting, Hokkaido, SEEPS, pp.180-181
- Miao Chang, 2003, *Kitakyushu Initiative for a Clean Environment : Successful and Transferable Practices (Chongqing, China) : SO<sub>2</sub> Pollution Control*, IGES, Collection of successful practices
- Miao Chang, 2003, *Kitakyushu Initiative for a Clean Environment : Successful and Transferable Practices (Weihai, China) : Water Pollution Control*, IGES, Collection of successful practices
- Miao Chang, 2003, *Kitakyushu Initiative for a Clean Environment : Successful and Transferable Practices (Dalian, China) : Removal and modification of polluting enterprises*, IGES, Collection of successful practices
- Miao Chang, 2003, *Kitakyushu Initiative for a Clean Environment : Successful and Transferable Practices (Ningbo, China) : Efficient application of integrated policies for the urban environment*, IGES, Collection of successful practices
- Miao Chang and Hidefumi Imura, 2003, *Developing Private Finance Initiatives (PFI)/Public-Private Partnerships (PPP) for Urban Environmental Infrastructure in Asia*, China Council for International Cooperation on Environment and Development (CCICED), Proceedings from the First Task Force Meeting on Financial Mechanisms for Environmental Protection, Beijing, CCICED, pp.318-340, 5-6 November 2002
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- ume 31, Number 14, Elsevier Sciences, pp.1493-1507
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- Shobhakar Dhakal, Shinji Kaneko and Hidefumi Imura, 2003, *CO<sub>2</sub> emissions from energy use in East Asian mega-cities : Driving factors, challenges and strategies*, Proceedings of IGES/APN International Workshop on Policy Integration towards Sustainable Energy Use for Cities in Asia, Hawaii
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- Mushtaq Ahmed Memon, 2003, *Successful Practices Analysis : Integrated Urban Air Quality Management in Bangkok, Thailand*
- Mushtaq Ahmed Memon, 2003, *Successful Practice Analysis : Coexistence of Industry and Community : Air Pollution Management in Kitakyushu*

- Mushtaq Ahmed Memon, 2003, *Successful Practices Analysis : Public-Private Partnerships (PPP) in Water and Sanitation in Cartagena (Colombia)*
- Mushtaq Ahmed Memon, 2003, *Successful Practices Analysis : PPP in Urban Water (Concession Contracts) in Cordoba (Argentina)*
- Mushtaq Ahmed Memon, 2003, *Successful Practices Analysis : Public-Private Partnerships in Bulk Water Supply in Johor Bahru (Malaysia)*
- Mushtaq Ahmed Memon, 2003, *Successful Practices Analysis : PPP in Water Supply and Wastewater Treatment in Manila (Philippines)*
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- Takashi Masuno, Kimihiko Hyakumura and Kenichi Abe, 2003, *Forestry Research in Laos : The result of literature review and further issue*, The 114th Japan Forestry Society Committee, The proceedings of the 114th Japan Forestry Society Committee, Tokyo, Japan Forestry Society, p.40
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- Makoto Inoue and Martinus Nanang, 2002, *Indonesia*, Japan Environmental Council (ed.), The State of the Environment in Asia 2002/2003, Tokyo, Springer-Verlag, pp.194-197
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- Yatsuka Kataoka, 2002, *Overview Paper on Water for Sustainable Development in Asia and the Pacific*, Discussion paper at the APFED first substantial meeting
- Maki Sato, 2002, *Overview Paper on Renewable Energy for Sustainable Development in Asia and the Pacific*, Discussion paper at the APFED first substantial meeting

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- Yasushi Ninomiya, 2002, *Energy demand analysis using the Structural Time Series Model*, Proceedings of the International Workshop on Climate Change Energy Modelling, Kanagawa
- Yasushi Ninomiya, 2002, *Energy Demand in Japan: An Analysis of the Past Trend*, Proceedings of the Climate Policy Dialogue in Thailand, Bangkok, Thailand
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- Ancha Srinivasan, 2002, *Integrating Traditional Knowledge in Climate Change Mitigation and Adaptation Plans: Policy Options and Priorities*, Proceedings of the Training Workshop on Climate Change Issues, Phnon Penh
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- Naoko Matsumoto, 2002, *Book Review for "New Structures for Global Environmental Policy"*, IGES(ed.), International Review for Environmental Strategies (IRES), Vol3. No.2, Hayama, IGES

### **Business and the Environmental Project**

- Eriko Nashioka, 2002, *Environmental Accounting*, Aozora, 19, Kobe, Hyogo Prefecture (in Japanese)

## 5. Workshops and Seminars organized by IGES

### Climate Policy Project

| Date             | Title  | Co-organizers  | Place                                 |
|------------------|--|--|---------------------------------------|
| May 27-28, 2002  | Climate Policy Dialogue in Thailand  | UNEP Collaborating Centre on Energy & Environment, Denmark, Thailand Environment Institute, Thailand | Bangkok, Thailand                     |
| May 30-31, 2002  | Climate Policy Dialogue in Vietnam/Cambodia: Further International Cooperation for Promoting P & Ms for Climate Change | UNEP Collaborating Centre on Energy & Environment, Denmark, National Environment Agency, Vietnam     | Ho Chi Minh City, Vietnam             |
| July 15-16, 2002 | Informal Meeting on Actions against Global Warming: The Kyoto Protocol and Beyond                                      |  |                                       |
| July 19, 2002    | Symposium on Further Actions against Climate Change  | Ministry of Foreign Affairs  | Mita Conference Center, Tokyo         |
| Aug. 22, 2002    | Open Forum on a Proposal on Domestic Climate Policies and Measures in Japan  |  | Fukoku Seimei Building, Tokyo         |
| Nov. 19-20, 2002 | The International Expert Meeting on Climate Change and Sustainable Development   | Korea Energy Economics Institute   | Seoul, Korea                          |
| Nov. 28, 2002    | Post-COP8 Seminar  | Global Industrial and Social Progress Research Institute   | Tokai Daigaku Koyu Kaikan, Tokyo      |
| Dec. 5-6, 2002   | Training Workshop on Climate Change Issues   | UNEP Collaborating Centre on Energy & Environment, Denmark   | Phnom Penh, Cambodia                  |
| Dec. 9-10, 2002  | International Workshop on Climate Change Energy Modeling   |  | Yokohama Bay Sheraton Hotel, Yokohama |

### Urban Environmental Management Project

| Date             | Title   | Co-organizers  | Place   |
|------------------|---|--|---|
| July 4-7, 2002   | APN Working Group Meeting   |  | Beijing, China  |
| Jul. 9-10, 2002  | The International Seminar of Global 500 China Forum   | Weihai Municipal Government  | Weihai, China   |
| Aug. 20-23, 2002 | APN Project Database construction   |  | Seoul, Korea  |
| Sep. 19-20, 2002 | 1st Thematic Seminar : Kitakyushu Initiative Seminar on Solid Waste Management  | UN/ESCAP, MoEJ   | Kitakyushu International Conference Center (KICC), Kitakyushu |
| Nov. 4, 2002     | 2nd Thematic Seminar : Kitakyushu Initiative Seminar on Public-Private Partnerships for Urban Water Supply and Wastewater Treatment | UN/ESCAP, MoEJ   | Beijing, China  |
| Nov. 5, 2002     | International Seminar on Financial Mechanisms for Environmental Protection  | Japan Bank for International Cooperation (JBIC), China Council for International Cooperation on Environment and Development (CCICED) Secretariat | Beijing, China  |

| Date             | Title  | Co-organizers          | Place                                |
|------------------|--|------------------------|--------------------------------------|
| Nov. 6, 2002     | First Task Force Meeting for "Financial Mechanisms for Environmental Protection"   | Co-chair of Task Force | Beijing, China                       |
| Nov. 7, 2002     | Core Research Team Meeting for Financial Mechanisms for Environmental Protection   | CCICED                 | Beijing, China                       |
| Dec. 2-3, 2002   | Workshop of IGES/APN Mega-City in Hayama   |                        | IGES, Hayama                         |
| Feb. 4-5, 2003   | International Workshop on Policy Integration Towards Sustainable Urban Energy Use for Cities in Asia   | APN                    | East West Center, Hawaii, USA        |
| Feb. 20-21, 2003 | 3rd Thematic Seminar : Kitakyushu Initiative Seminar on Urban Air Quality Management   | UN/ESCAP               | Bangkok, Thailand                    |
| Mar. 11, 2003    | The IGES-KEI International Workshop on "The Role of Planning Practices toward Sustainable Urban Environment in Asia": Environmental Consequences of Metropolitan Expansion in Asia | KEI                    | Conference Hall at KEI, Seoul, Korea |
| Mar. 18-19, 2003 | 2nd Core Research Team Meeting for Financial Mechanisms for Environmental Protection   | CCICED                 | Beijing, China                       |

### Forest Conservation Project

| Date                 | Title  | Co-organizers  | Place  |
|----------------------|--|--|--|
| May 22, 2002         | Workshop on FoF-IGES Forest Conservation Project FY 2001   | Faculty of Forestry, National University of Laos   | Vientiane Laos   |
| May 25, 2002         | 2nd Internal Workshop on Forest Conservation Project   |  | Faculty of Agriculture, The University of Tokyo, Tokyo |
| July 14 and 27, 2002 | Working Group Meeting on Village Action Guidelines   | Center for Social Forestry, Mulawarman University  | Samarinda, Indonesia                                   |
| July 30, 2002        | Steering Committee Meeting of Indonesian Studies   | Indonesian Institute of Sciences   | Jakarta, Indonesia                                     |
| Aug. 15, 2002        | Steering Committee Meeting in Russian Studies  | Economic Research Institute of the Far Eastern Branch of the Russian Academy of Sciences | Khabarovsk, Russia                                     |
| Nov. 27, 2002        | Village Meeting in Khabarovsk  | Cita village   | Khabarovsk, Russia                                     |
| Dec. 10, 2002        | Coordination Committee Meeting in Laotian Studies  | Faculty of Forestry, National University of Laos   | Vientiane, Laos  |
| Dec. 10, 2002        | Working Group Meeting on Village Action Guideline (VAG) and National Policy Recommendation (NPR) | Faculty of Forestry, National University of Laos   | Vientiane, Laos  |

### Environmental Education Project

| Date            | Title  | Co-organizers                               | Place   |
|-----------------|--|---|---|
| May 26 2002     | Considering Strategies for Environmental Education in the Asia-Pacific Region : Findings of IGES research on environmental education | Japanese Society of Environmental Education | Miyagi University of Education, Sendai                |
| July 1-26, 2002 | Environmental Education Training for NGO Staff in Indonesia  | JICA  | IGES, Hayama / JICA Tokyo International Centre, Tokyo |

| Date          | Title   | Co-organizers  | Place                                   |
|---------------|---|--|---|
| Jan. 7-9 2003 | Workshop on the Evaluation of Educational Materials | Rumsar Center Japan and Mahidol University, Thailand | Kasetsart University, Bangkok, Thailand |

### Long-Term Prerspective and Policy Integration Project

| Date             | Title   | Co-organizers   | Place  |
|------------------|---|---|--|
| Apr. 1. 2002     | APFED Expert Meeting ( Trade and Finance )  |   | United Nations University, Tokyo   |
| Apr. 2.2002      | APFED Expert Meeting (Renewable Energy)   |   | India Habitat Centre, New Delhi, India                                     |
| May. 3. 2002     | The Multistakeholder Meeting for the Second Substantive Meeting of Asia Pacific Forum for Environment and Development   | Ministry of Environment of Japan, Economic and Social Commission for Asia and the Pacific (UN ESCAP), United Nations Environment Programme (UNEP) | Jakarta, Indonesia   |
| May. 4-5, 2002   | The Second Substantive Meeting of APFED (APFED 2)   | UN ESCAP, UNEP, the State Ministry of the Environment of Indonesia, and the Ministry of the Environment of Japan                                  | Mandarin Oriental Hotel, Jakarta, Indonesia                                |
| Jun. 3. 2002     | Side-Event of PrepComIV for WSSD " New partnership initiatives toward Johannesburg and beyond: Creating a new regional network for sustainable development, " | Ministry of the Environment of Japan, UN ESCAP, UNEP, and UNU/IAS   | Bali International Conference Centre, Bali, Indonesia                      |
| Aug. 27. 2002    | WSSD Parallel Event "Innovations from the Asia-Pacific toward Sustainable Development: Initiatives on Science & Technology for Improved Environmental Policy" | Ministry of the Environment of Japan  | Japan Pavilion in Ubuntu Village, Johannesburg, South Africa               |
| Aug. 28. 2002    | WSSD Parallel Event "APFED Recommendations and Commitments: New Partnership Initiatives for Knowledge Network and Capacity Building"                          | the Ministry of the Environment of Japan, UNEP, UN ESCAP  | Japan Pavilion in Ubuntu Village, Johannesburg, South Africa               |
| Oct. 16-17, 2002 | The Pre-session for the Third World Water Forum on: "Water Quality Monitoring and Modelling -The Present Situation and Partnership for the Future-"           | Ministry of the Environment of Japan, Japan Society on Water Environment, United Nations University   | United Nations University, Tokyo   |
| Nov. 4, 2002     | The 1st Research Team Meeting on RISPO-NGO (Promoting environmental education by NGOs)  |   | University of Indonesia, Jakarta Indonesia                                 |
| Nov. 12-13, 2002 | The 1st Research Team Meeting on RISPO-CBT (Facilitating community-based tourism in protected areas)  |   | IGES Tokyo office, Tokyo   |
| Dec. 7-8, 2002   | The 1st Research Team Meeting on RISPO-SME (Improving environmental performance of small and medium-sized enterprises)  |   | IGES Tokyo office, Tokyo   |
| Dec. 9-10, 2002  | The 1st Research Team Meeting on RISPO-LINK (Local/Indigenous knowledge_based sustainable resource management)  | Mahidol University  | Salaya Pavilion, Mahidol University, Bangkok, Thailand<br><br>IGES, Hayama |

| Date             | Title  | Co-organizers   | Place   |
|------------------|--|---|---|
| Dec. 15, 2002    | The 1st Research Team Meeting on RISPO-Recycle (Creation of inter-boundary market for recyclable materials)              |   |   |
| Jan. 23, 2003    | The Expert Meeting for the Third Substantive Meeting of APFED  | Ministry of the Environment of Japan, State Environment Protection Agency of PRC (tbc)              | tbc, Guilin, China                              |
| Jan. 24, 2003    | The Multistakeholder Meeting for the Third Substantive Meeting of APFED  | Ministry of the Environment of Japan, State Environment Protection Agency of PRC (tbc)              | tbc, Guilin, China                              |
| Jan. 25-26, 2003 | The Third Substantive Meeting of APFED (APFED3)  | Ministry of the Environment of Japan, State Environment Protection Agency of PRC, UN ESCAP, UNEP    | tbc, Guilin, China                              |
| Jan. 28-29, 2003 | The 1st Research Team Meeting on RISPO-Finance (Innovative financing for renewable energy development)                   | Energy Research Institute (ERI)   | Energy Research Institute (ERI), Beijing, China |
| Jan. 28-29, 2003 | The 1st Research Team Meeting on RISPO-EST (Development of environmentally sustainable transport systems in urban areas) | Energy Research Institute (ERI)   | Energy Research Institute (ERI), Beijing, China |
| Jan. 30-31, 2003 | The 1st Research Team Meeting on RISPO-Biomass (Promotion of biomass energy)   |   | IGES Tokyo office, Tokyo                        |
| Mar. 21, 2003    | Session at the Third World Water Forum (tbd)   | Ministry of the Environment of Japan, Japan Society on Water Environment, United Nations University | Kyoto Takaragaike Prince Hotel, Kyoto           |
| Mar. 27-28, 2003 | The 1st Plenary Workshop for RISPO   |   | Grand Tower Inn Hotel, Bangkok, Thailand        |
| Mar. 30-31, 2003 | The 2nd Meeting of Research Coordination Committee of APEIS  | Ministry of the Environment of Japan  | Grand Tower Inn Hotel Bangkok Thailand          |

### Environmental Industry Sub-Project

| Date         | Title   | Co-organizers | Place                    |
|--------------|---|---------------|--------------------------|
| May 27, 2002 | The 1st Study Group Meeting on Environmental Industry Project : Selection of lecture themes and scheduling of lecturers                             |               | IGES Tokyo Office, Tokyo |
| Jun 25, 2002 | The 2nd Study Group Meeting on Environmental Industry Project : Industries for environmental monitoring in China                                    |               | IGES Tokyo Office, Tokyo |
| Jul 16, 2002 | The 3rd Study Group Meeting on Environmental Industry Project : Environmental industries in China   |               | IGES Tokyo Office, Tokyo |
| Aug 22, 2002 | The 4th Study Group Meeting on Environmental Industry Project : Contribution and challenges of the private sector toward the environmental industry |               | IGES Tokyo Office, Tokyo |
| Sep 18, 2002 | The 5th Study Group Meeting on Environmental Industry Project : Measures undertaken by Matsushita Electric Industrial Co. Ltd. in its overseas      |               | IGES Tokyo Office, Tokyo |

| Date             | Title   | Co-organizers | Place                    |
|------------------|---|---------------|--------------------------|
| Oct 31, 2002     | The 6th Study Group Meeting on Environmental Industry Project : Eco-Financing |               | IGES Tokyo Office, Tokyo |
| Dec. 14-15, 2002 | 1st Internal Workshop on Environmental Industry                               |               | IGES Headquarter, Hayama |

### Business and the Environmental Project

| Date               | Title   | Co-organizers                                 | Place   |
|--------------------|---|---|---|
| July.23-24, 2002   | The 2nd Tripartite Roundtable on Environmental Industries (China, Korea, and Japan)   | Ministry of the Environment, Hyogo Prefecture | Awaji Yumebutai International Conference Center, Kobe |
| July.25, 2002      | International Symposium 2002 "Business and the Environment"   |   | PortPia Hotel Kobe, Kobe                              |
| Sep.20, 2002       | The 1st study group meeting of environmental accounting for corporate management  |   | Osaka City University Hall, Osaka                     |
| Nov.2002-July 2003 | The Study Meeting of Environmental Accounting for Corporate Management  |   | IHD Building, Kobe                                    |
| Jan.31, 2003       | International Symposium on Environmental Accounting 2003 : Cutting Edge of Environmental Accounting for Corporate Management and Environmental Conservation -Environmental Accounting in Japanese Corporate Management and Potentialities of Material Flow Cost Accounting- |   | Osaka International Convention Center, Osaka          |

### Capacity Building Program

| Date            | Title  | Co-organizers                              | Place   |
|-----------------|--|--|---|
| Apr.11, 2002    | Training on eLearning and eAuthoring   |  | IGES, Hayama  |
| Apr.26, 2002    | Environmental Seminar for enterprises  | K-FACE                                     | Kanagawa Small and Medium sized Enterprise Center, Yokohama |
| Jul.3-4, 2002   | JICA Indonesia Training Course   | IGES Environmental Education Project, JICA | IGES, Hayama  |
| Jul.8-12, 2002  | LEAD 5th National Training Session for Cohort 9  | LEAD Japan                                 | IGES, Hayama  |
| Oct.9, 2002     | Environmental Education Course Focused on Aquatic Environment JFY2002                    | UNU/IAS                                    | UNU/IAS, Tokyo  |
| Oct.11, 2002    | Instructional Design for eCourse   | LEARNWAYS                                  | IGES, Hayama  |
| Nov.07, 2002    | Community Learning Program:Ogusu Junior High School student experiencing working at IGES |  | IGES, Hayama  |
| Nov.14-15, 2002 | LEAD National Director Planning Meeting for Long Term                                    | LEAD Japan                                 | IGES, Hayama  |
| Jan.23, 2003    | Environmental Management Systems: In case of ISO14001 Implementation                     | K-FACE                                     | IGES, Hayama  |

## 6. Field Studies

### Urban Environmental Management Project

| Date                 | Purpose  | Place   | Name   |
|----------------------|--|---|--|
| May. 1-4, 2002       | Implementation of pilot activities for the Kitakyushu Initiative in Thailand   | Nakhon Ratchasima/Korat, Nonthaburi, Thailand   | Shobhakar Dhakal, Mushtaq Ahmed Memon, Keiko Sasaki, 3 outside experts |
| May. 8-26, 2002      | PFI/PPP for Urban Environmental Infrastructure in Chinese Cities   | Beijing, Shanghai, Zhejiang, Wenzhou, Leqing, Pinghu, Shaoxing, Hanzhou, Jiangsu, Nanjing, Guangzhou, Nanhai, China | Miao Chang   |
| May. 25-30, 2002     | Feasibility of implementation of pilot activities for the Kitakyushu Initiative in China / On-site field survey  | Ningbo, China   | Keiko Sasaki, Miao Chang, Osamu Norimatsu                              |
| Jun. 12-15, 2002     | Field Survey on transportation policy in Shanghai/discussion with Chinese experts at Shanghai Academy of Environmental Science, and Shanghai Urban Transport Bureau. | Shanghai, China   | Hidefumi Imura, Tae Yong Jung, Shinji Kaneko, Kosuke Araki             |
| Jun. 16-20, 2002     | Field Survey for settling research contents with Chinese researchers   | Xi'an, China  | Shinji Kaneko  |
| Jun. 7-9, 2002       | Collection of successful practices in urban environmental management   | Surabaya, Indonesia   | Shobhakar Dhakal   |
| Jul. 29-31, 2002     | Implementation of pilot activities for the Kitakyushu Initiative in Bangladesh   | Dhaka, Bangladesh   | Mushtaq Ahmed Memon, Christine Pearson                                 |
| Aug. 1-3, 2002       | Implementation of pilot activities for the Kitakyushu Initiative in Vietnam  | Ho Chi Minh, Vietnam  | Mushtaq Ahmed Memon, Christine Pearson                                 |
| Aug. 25-Sep. 6, 2002 | World Summit on Sustainable Development : Promotion of the Kitakyushu Initiative   | Johannesburg, South Africa  | Mushtaq Ahmed Memon (as part of IGES delegation)                       |
| Nov. 6-13, 2002      | Collection of successful practices in urban environmental management   | Kathmandu, Nepal  | Shobhakar Dhakal   |
| Nov. 14-20, 2002     | Collection of successful practices in urban environmental management   | Singapore   | Shobhakar Dhakal   |
| Dec. 3-7, 2002       | Collection of successful practices : Metropolitan Waterworks and Sewerage System   | Manila, Philippines   | Miao Chang, Mushtaq Ahmed Memon  |
| Dec. 11-18, 2002     | Collection of successful practices in urban environmental management   | Macao, Hong Kong, China   | Miao Chang, Mushtaq Ahmed Memon  |
| Dec. 8-15, 2002      | Preparation for the Workshop and Information Collection  | Beijing, Seoul, China, Korea  | Kwon Changki   |
| Feb. 3-7, 2003       | Collection of international experiences of urban environmental infrastructure for financial mechanisms   | Paris, France   | Miao Chang, Mushtaq Ahmed Memon  |
| Mar. 17-22, 2003     | Interview for urban environmental management capacity indicators   | Jakarta, Surabaya, Indonesia  | Kenichi Sato, Noriko Kono  |

## Forest Conservation Project

| Date                  | Purpose  | Place  | Name                                   |
|-----------------------|--|--|--|
| May. 12-24, 2002      | Hearing the land and forest allocation program at central and local level. The discussion the this fiscal year's research collaboration with NUOL The presentation on the result of FY2001 on FOF-NUOL Forest Conservation Project | Savannakhet, Vientiane, Laos   | HYAKUMURA Kimihiko                     |
| Jun. 24-Jul. 1, 2002  | Negotiation and Discussion on research collaboration with Economic Research Institute, Field research at Lazo Raion  | Khabarovsk Lazo Raion, Russia  | Hiroaki Kakizawa                       |
| Jul. 7-Aug. 1, 2002   | Participatory Action Research (Trip IV)  | West Kutai District and East Kutai District, East Kalimantan Province, Indonesia | Martinus Nanang                        |
| Jul. 21-Aug. 1, 2002  | Participation in Steering Committee Meeting at Indonesian Institute of Sciences and field survey of forest certification and timber distribution in Jakarta, Bogor and Surabaya  | Jakarta, Bogor and Surabaya, Indonesia   | Satoshi Tachibana                      |
| Jul. 29-Aug. 12, 2002 | Participation in Steering Committee Meeting at Indonesian Institute of Sciences and fieldwork in East Kalimantan   | Jakarta and East Kalimantan Indonesia  | Makoto Inoue                           |
| Aug. 12-25, 2002      | Participation in Steering Committee Meeting at Economic Research Institute and field research at Lazo Raion  | Khabarovsk Lazo Raion Russia   | Hiroaki Kakizawa and Satoshi Tachibana |
| Sep. 1-30, 2002       | Negotiation and Discussion on research collaboration with Faculty of Forestry, National University of Laos and Provincial Agriculture and Forestry Office of Savannakhet, Research on forest policy by local Government            | Vientiane and Savannakhet, Laos  | Kimihiko Hyakumura                     |
| Nov.3-Dec. 25, 2002   | The collection the information on Village action guideline The research collaboration with local government ( Savannakhet PAFO) The management of Coordination Committee Meeting   | Savannakhet, Vientiane, Laos   | HYAKUMURA Kimihiko                     |
| Nov.10-Dec.16, 2002   | Participatory Action Research (Trip V) and research on Political ecology of Forest management  | West Kutai District and East Kutai District, East Kalimantan Province, Indonesia | Martinus Nanang                        |
| Nov. 25-29, 2002      | Participation in Village Meeting at Cita Village, Discussion with Economic Research Institute on Village Action Guideline (VAG)  | Khabarovsk Lazo Raion, Russia  | Hiroaki Kakizawa                       |
| Dec. 2-12, 2002       | Participation in Coordination Committee Meeting at National University of Laos and fieldwork in Savannakhet  | Savannakhet and Vientiane Laos   | Makoto Inoue                           |
| Mar. 6-27, 2003       | Fieldwork and community meetings   | Engkuni-Pasek, Muara Jawa, Tanjung Jaan, East Kalimantan, Indonesia              | Martinus Nanang                        |

## Environmental Education Project

| Date                 | Purpose  | Place                 | Name                                 |
|----------------------|--|-----------------------|--------------------------------------|
| May 26-Jun. 3, 2002  | Preliminary Field Research on Ecotourism in Cambodia | Siem Reap, Cambodia   | Akihiro Nakahata                     |
| Aug. 12-Sep. 8, 2002 | Field Research on Ecotourism in Cambodia             | Siem Reap, Cambodia   | Akihiro Nakahata, Masahiro Takahashi |
| Sep. 4-9, 2002       | Field Research on Ecotourism in Mongolia             | Ulanbardtol, Mongolia | Osamu Abe, Masahiro Takahashi        |

| Date            | Purpose   | Place              | Name  |
|-----------------|---|--------------------|---|
| Mar. 6-12, 2003 | Field Research and Practice an Ecotourism in Cambodia | Siem Reap,Cambodia | Osamu Abe, Akihiro Nakahata, Masahiro Takahashi |

### Long-Term Prerspective and Policy Integration Project

| Date                 | Purpose  | Place  | Name            |
|----------------------|--|--|-----------------|
| Oct. 15-Nov. 7, 2002 | Research and Research Coordination with Local Counterparts as a part of APEIS/RISPO                | Jakarta, Bogor, Surabaya, Yogyakarta, Medan, Indonesia | Ko Nomura       |
| Dec. 2-8, 2002       | Field Research conducted under the framework of APEIS/RISPO for collecting good practices in Japan | Yakushima, Japan                                       | Lisa Hiwasaki   |
| Feb. 16 -19, 2003    | Assessment of case studies for the collaborative work in APEIS/RISPO                               | Agra, India  | Taeko Takahashi |
| Feb. 20-23, 2003     | Assessment of case studies for the collaborative work in APEIS/RISPO                               | Bangkok, Thailand                                      | Taeko Takahashi |

### Environmental Industry Sub-Project

| Date             | Purpose  | Place  | Name            |
|------------------|--|--|-----------------|
| Sep. 11-14, 2002 | Meeting on Environmental Industry with Chinese and Korea's collaborators | Beijing, Seoul, P.R. China Republic of Korea | Ryokichi Hirono |
| Jan. 26-28, 2003 | Meeting on Environmental Industry with Chinese officials                 | Shanghai P.R. China                          | Ryokichi Hirono |

### Business and the Environmental Project

| Date            | Purpose  | Place              | Name           |
|-----------------|--|--------------------|----------------|
| 2002/10-2002/12 | Possible collaborative research plans between the Wuppertal Institute and IGES | Wuppertal, Germany | Yasuhiro Kanda |



# Financial Statement

## 貸借対照表

2001年度及び2002年度

## Balance Sheet

Fiscal 2001 (Year ended March 31, 2002) and  
Fiscal 2002 (Year ended March 31, 2003)

|  |   |
|--|---|
| <p>I 資産の部</p> <p>1 流動資産</p> <p>現金・預金</p> <p>未収金</p> <p>未収会費</p> <p>前払費用</p> <p>立替金</p> <p>仮払金</p> <p>会計間貸借</p> <p>流動資産合計</p> <p>2 固定資産</p> <p>基本財産</p> <p>投資有価証券(基本金)</p> <p>投資有価証券(戦略研究基金)</p> <p>その他の固定資産</p> <p>建物付属設備</p> <p>情報通信設備</p> <p>車両運搬具</p> <p>什器備品</p> <p>ソフトウェア</p> <p>計</p> <p>投資有価証券</p> <p>電話加入権</p> <p>敷金</p> <p>退職給与引当預金</p> <p>減価償却引当預金</p> <p>固定資産合計</p> <p>資産合計</p> | <p>Assets</p> <p>Current assets</p> <p>Cash on hand and in banks</p> <p>Accounts receivable</p> <p>Membership fee receivable</p> <p>Prepaid expenses</p> <p>Advance disbursement</p> <p>Advance payments</p> <p>Inter-account receivables (payables)</p> <p>Total current assets</p> <p>Non-current assets</p> <p>Assets for basic funds</p> <p>Investment securities (Basic Fund)</p> <p>Investment securities (Strategic Research Fund)</p> <p>Other non-current assets</p> <p>Building equipment</p> <p>IT equipment</p> <p>Vehicles</p> <p>Office equipment</p> <p>Software</p> <p>Investment securities</p> <p>Telephone rights</p> <p>Lease deposits</p> <p>Deposits for severance indemnities funds</p> <p>Deposits for depreciation funds</p> <p>Total non-current assets</p> <p>Total assets</p> |
| <p>II 負債の部</p> <p>1 流動負債</p> <p>未払金</p> <p>短期借入金</p> <p>前受金</p> <p>預り金</p> <p>流動負債合計</p> <p>2 固定負債</p> <p>退職給与引当金</p> <p>固定負債合計</p> <p>負債合計</p>  | <p>Liabilities</p> <p>Current liabilities</p> <p>Accounts payable</p> <p>Short term loans</p> <p>Advance receipt</p> <p>Deposits received</p> <p>Total current liabilities</p> <p>Non-current liabilities</p> <p>Accrued severance indemnities</p> <p>Total non-current liabilities</p> <p>Total liabilities</p>  |
| <p>III 正味財産の部</p> <p>1 永久的に使途を制限された正味財産</p> <p>基本金</p> <p>戦略研究基金</p> <p>2 一時的に使途を制限された正味財産</p> <p>IPCC/TSU特別会計活動資金</p> <p>インターネット特別会計活動資金</p> <p>3 使途を制限されない正味財産</p> <p>正味財産合計</p> <p>負債及び正味財産合計</p>   | <p>Net Assets</p> <p>Permanently restricted</p> <p>Basic Fund</p> <p>Strategic Research Fund</p> <p>Temporarily restricted</p> <p>Net assets for IPCC/TSU Fund</p> <p>Net assets for the Internet Global Environmental Fund</p> <p>Unrestricted</p> <p>Total net assets</p> <p>Total liabilities and net assets</p>   |

(単位：千円, Unit : Thousands of Yen)

3月31日 March 31

| 2001年           |          |  |           | 2002年           |          |  |           |
|-----------------|----------|--|-----------|-----------------|----------|--|-----------|
| 一般会計            | 特別会計     | Special Account  | 計         | 一般会計            | 特別会計     | Special Account  | 計         |
| General Account | IPCC/TSU | インターネット<br>環境基金<br>Internet Global<br>Environmental Fund | Total     | General Account | IPCC/TSU | インターネット<br>環境基金<br>Internet Global<br>Environmental Fund | Total     |
| 3,502           | 50,573   | 1,621,752  | 1,675,827 | 70,331          | 122,473  | 1,171,131  | 1,363,935 |
| 293,666         | 8        | -  | 293,674   | 372,716         | -        | -  | 372,716   |
| 70              | -        | -  | 70        | -               | -        | -  | -         |
| 7,415           | -        | -  | 7,415     | 8,299           | -        | 2,017  | 10,316    |
| 392             | -        | -  | 392       | 3,894           | -        | -  | 3,894     |
| 736             | -        | -  | 736       | 1,674           | -        | -  | 1,674     |
| (50,000)        | 50,000   | -  | -         | -               | -        | -  | -         |
| 255,781         | 100,581  | 1,621,752  | 1,978,114 | 456,914         | 122,473  | 1,173,148  | 1,752,535 |
| 50,000          | -        | -  | 50,000    | 50,000          | -        | -  | 50,000    |
| 200,000         | -        | -  | 200,000   | 200,000         | -        | -  | 200,000   |
| 250,000         | -        | -  | 250,000   | 250,000         | -        | -  | 250,000   |
| 13,457          | 2,576    | -  | 16,033    | 2,574           | -        | -  | 2,574     |
| 16,106          | 16,925   | -  | 33,031    | 46,796          | 11,598   | -  | 58,394    |
| 1,391           | -        | -  | 1,391     | 1,028           | -        | -  | 1,028     |
| 3,982           | 1,706    | -  | 5,688     | 4,786           | 13,328   | -  | 18,114    |
| 7,321           | 338      | -  | 7,659     | 4,972           | 202      | -  | 5,174     |
| 42,257          | 21,545   | -  | 63,802    | 60,156          | 25,128   | -  | 85,284    |
| -               | -        | -  | -         | -               | -        | -  | -         |
| 1,788           | 305      | -  | 2,093     | 2,517           | 306      | -  | 2,823     |
| 3,862           | 840      | -  | 4,702     | 4,332           | 840      | -  | 5,172     |
| 12,441          | 1,428    | 854  | 14,723    | 21,340          | 3,042    | 589  | 24,971    |
| 35,619          | 13,939   | -  | 49,558    | 20,820          | 2,774    | -  | 23,594    |
| 95,967          | 38,057   | 854  | 134,878   | 109,165         | 32,090   | 589  | 141,844   |
| 345,967         | 38,057   | 854  | 384,878   | 359,165         | 32,090   | 589  | 391,844   |
| 601,748         | 138,638  | 1,622,606  | 2,362,992 | 816,079         | 154,563  | 1,173,737  | 2,144,379 |
| 145,187         | 6,260    | 59,366   | 210,813   | 189,252         | 23,674   | 19,055   | 231,981   |
| -               | -        | -  | -         | 220,000         | -        | -  | 220,000   |
| -               | -        | -  | -         | 1,000           | -        | -  | 1,000     |
| 7,700           | 820      | 579  | 9,099     | 3,185           | 607      | 440  | 4,232     |
| 152,887         | 7,080    | 59,945   | 219,912   | 413,437         | 24,281   | 19,495   | 457,213   |
| 12,441          | 1,428    | 854  | 14,723    | 20,917          | 3,042    | 589  | 24,548    |
| 12,441          | 1,428    | 854  | 14,723    | 20,917          | 3,042    | 589  | 24,548    |
| 165,328         | 8,508    | 60,799   | 234,635   | 434,354         | 27,323   | 20,084   | 481,761   |
| 50,000          | -        | -  | 50,000    | 50,000          | -        | -  | 50,000    |
| 200,000         | -        | -  | 200,000   | 200,000         | -        | -  | 200,000   |
| 250,000         | -        | -  | 250,000   | 250,000         | -        | -  | 250,000   |
| -               | 130,130  | -  | 130,130   | -               | 127,240  | -  | 127,240   |
| -               | -        | 1,561,807  | 1,561,807 | -               | -        | 1,153,653  | 1,153,653 |
| -               | 130,130  | 1,561,807  | 1,691,937 | -               | 127,240  | 1,153,653  | 1,280,893 |
| 186,420         | -        | -  | 186,420   | 131,725         | -        | -  | 131,725   |
| 436,420         | 130,130  | 1,561,807  | 2,128,357 | 381,725         | 127,240  | 1,153,653  | 1,662,618 |
| 601,748         | 138,638  | 1,622,606  | 2,362,992 | 816,079         | 154,563  | 1,173,737  | 2,144,379 |

正味財産増減計算書  
2001年度及び2002年度

Statement of Activities  
Fiscal 2001 (Year ended March 31, 2002) and  
Fiscal 2002 (Year ended March 31, 2003)

|                            |   | 2001年度 Fiscal 2001 |                      |  |            |
|----------------------------|---|--------------------|----------------------|--|------------|
|                            |   | 一般会計               | 特別会計 Special Account | 計 Total  |            |
|                            |   | General Account    | IPCC/TSU             | インターネット地球環境基金 Internet Global Environmental Fund |            |
|                            |   | 決算額 Actual         | 決算額 Actual           | 決算額 Actual                                       | 決算額 Actual |
| I 収入（収益）の部                 | Revenues and gains:   |                    |                      |  |            |
| 1 基本財産運用収入                 | Income from basic fund  |                    |                      |  |            |
| 基本財産利息収入                   | Interest income   | 1,959              | -                    | -  | 1,959      |
| 2 戦略研究基金運用収入               | Income from strategic research fund                                 |                    |                      |  |            |
| 戦略基金運用利息                   | Interest income   | 7,026              | -                    | -  | 7,026      |
| 3 会費収入                     | Membership fees   | 4,545              | -                    | -  | 4,545      |
| 4 事業収入                     | Contract revenues   |                    |                      |  |            |
| 受託事業収入                     | Contract revenues   | 377,999            | -                    | -  | 377,999    |
| その他の事業収入                   | Others  | 4,749              | -                    | -  | 4,749      |
|                            |   | 382,748            | -                    | -  | 382,748    |
| 5 拠出金収入(環境省)               | Contribution of Ministry of the Environment                         |                    |                      |  |            |
|                            | For Strategic Research  | 550,000            | -                    | -  | 550,000    |
|                            | For Internet Global Environmental Fund                              | -                  | -                    | -  | -          |
|                            |   | 550,000            | -                    | -  | 550,000    |
| 6 補助金収入                    | Grants  |                    |                      |  |            |
| 神奈川県                       | from Kanagawa Prefecture  |                    |                      |  |            |
| 運営費・事業費                    | For office management and promotion                                 | 97,900             | -                    | -  | 97,900     |
| 家賃                         | For office rent   | 133,368            | -                    | -  | 133,368    |
| 北九州市                       | from Kitakyushu City  | 45,069             | -                    | -  | 45,069     |
| 兵庫県                        | from Hyogo Prefecture   | 58,617             | -                    | -  | -          |
|                            |   | 334,954            | -                    | -  | 334,954    |
| 7 研究助成金収入                  | Research grant  | 16,743             | -                    | -  | 16,743     |
| 8 負担金収入                    | Revenue for shared services   |                    |                      |  |            |
| 家賃負担金収入                    | Revenue for rental of new office                                    | -                  | -                    | -  | -          |
| 負担金収入                      | Revenue for shared services   | 500                | -                    | -  | 500        |
|                            |   | 500                | -                    | -  | 500        |
| 9 雑収入                      | Miscellaneous income  | 9,563              | -                    | 488  | 10,051     |
| 10 日本特別基金収入                | Subsidies for IPCC Japanese special fund                            | -                  | 175,488              | -  | 175,488    |
| 収入（収益）計                    | Total revenues and gains:   | 1,308,038          | 175,488              | 488  | 1,484,014  |
| II 支出（費用）の部                | Expenses and losses:  |                    |                      |  |            |
| 1 事業費                      | Expenses for promotion of projects                                  | 875,818            | 120,239              | 320,862  | 1,316,919  |
| 2 管理費                      | General and administrative expenses                                 | 303,678            | -                    | -  | 303,678    |
| 3 減価償却費                    | Depreciation and amortization                                       | 10,045             | 5,221                | -  | 15,266     |
| 4 退職給与引当金繰入<br>（支払額控除後）/戻入 | Provision (reversal) for severance indemnities<br>(net of payments) | 10,753             | 1,204                | 853  | 12,810     |
| 5 固定資産除却額                  | Loss on disposal of property and plant                              | -                  | -                    | -  | -          |
| 6 予備費                      | Budgeted reservation  | -                  | -                    | -  | -          |
| 支出（費用）計                    | Total expenses and losses:  | 1,200,294          | 126,664              | 321,715  | 1,648,673  |
| 当期正味財産増加（減少）額              | Increase (decrease) in net assets:                                  | 107,744            | 48,824               | (321,227)  | (164,659)  |
| 前期繰越正味財産                   | Net assets at beginning of year                                     | 328,676            | 81,306               | 1,883,034  | 2,293,016  |
| 次期繰越正味財産                   | Net assets at end of year   | 436,420            | 130,130              | 1,561,807  | 2,128,357  |

\* 特別会計の正味財産は、特定の目的のために一時的に用途を制限された基金である。  
\* Net assets for Special Accounts mean temporarily restricted fund for specific purposes.

(単位：千円, Unit: Thousands of Yen)

2002年度 Fiscal 2002

| 特別会計 Special Account |               |                  |               |               |                  |  |               |                  |               |               |                  |               |               |                  |
|----------------------|---------------|------------------|---------------|---------------|------------------|--|---------------|------------------|---------------|---------------|------------------|---------------|---------------|------------------|
| 一般会計 General Account |               |                  | IPCC/TSU      |               |                  | インターネット地球環境基金<br>Global Environmental Fund |               |                  | Internet      |               |                  | 計 Total       |               |                  |
| 予算額<br>Budget        | 決算額<br>Actual | 差異<br>Difference | 予算額<br>Budget | 決算額<br>Actual | 差異<br>Difference | 予算額<br>Budget                              | 決算額<br>Actual | 差異<br>Difference | 予算額<br>Budget | 決算額<br>Actual | 差異<br>Difference | 予算額<br>Budget | 決算額<br>Actual | 差異<br>Difference |
| 2,819                | 2,912         | (93)             | -             | -             | -                | -  | -             | -                | 2,819         | 2,912         | (93)             | -             | -             | -                |
| 6,861                | 9,719         | (2,858)          | -             | -             | -                | -  | -             | -                | 6,861         | 9,719         | (2,858)          | -             | -             | -                |
| 4,500                | 3,403         | 1,097            | -             | -             | -                | -  | -             | -                | 4,500         | 3,403         | 1,097            | -             | -             | -                |
| 450,643              | 454,138       | (3,495)          | -             | -             | -                | -  | -             | -                | 450,643       | 454,138       | (3,495)          | -             | -             | -                |
| 4,000                | 5,062         | (1,062)          | -             | -             | -                | -  | -             | -                | 4,000         | 5,062         | (1,062)          | -             | -             | -                |
| 454,643              | 459,200       | (4,557)          | -             | -             | -                | -  | -             | -                | 454,643       | 459,200       | (4,557)          | -             | -             | -                |
| 550,000              | 550,000       | -                | -             | -             | -                | -  | -             | -                | 550,000       | 550,000       | -                | -             | -             | -                |
| 550,000              | 550,000       | -                | -             | -             | -                | -  | -             | -                | 550,000       | 550,000       | -                | -             | -             | -                |
| 187,547              | 187,547       | -                | -             | -             | -                | -  | -             | -                | 187,547       | 187,547       | -                | -             | -             | -                |
| 33,342               | 33,342        | -                | -             | -             | -                | -  | -             | -                | 33,342        | 33,342        | -                | -             | -             | -                |
| 44,560               | 44,560        | -                | -             | -             | -                | -  | -             | -                | 44,560        | 44,560        | -                | -             | -             | -                |
| 58,846               | 58,462        | 384              | -             | -             | -                | -  | -             | -                | 58,846        | 58,462        | 384              | -             | -             | -                |
| 324,295              | 323,911       | 384              | -             | -             | -                | -  | -             | -                | 324,295       | 323,911       | 384              | -             | -             | -                |
| 13,337               | 13,382        | (45)             | -             | -             | -                | -  | -             | -                | 13,337        | 13,382        | (45)             | -             | -             | -                |
| 122,665              | 122,665       | 122,665          | -             | -             | -                | -  | -             | -                | 122,665       | -             | 122,665          | -             | -             | -                |
| 8,000                | 9,176         | (114,665)        | -             | -             | -                | -  | -             | -                | 8,000         | 122,665       | (114,665)        | -             | -             | -                |
| 130,665              | 131,841       | 8,000            | -             | -             | -                | -  | -             | -                | 130,665       | 9,176         | 121,489          | -             | -             | -                |
| 11,950               | 12,683        | (733)            | -             | -             | -                | 3,000                                      | 159           | 2,841            | 138,665       | 131,841       | 6,824            | -             | -             | -                |
| -                    | -             | -                | 180,081       | 180,081       | -                | -  | -             | -                | 14,950        | 12,842        | 2,108            | -             | -             | -                |
| -                    | -             | -                | -             | -             | -                | -  | -             | -                | 180,081       | 180,081       | -                | -             | -             | -                |
| 1,499,070            | 1,507,051     | 1,195            | 180,081       | 180,081       | -                | 3,000                                      | 159           | 2,841            | 1,690,151     | 1,687,291     | 2,478            | -             | -             | -                |
| 1,167,059            | 1,122,498     | 44,561           | 164,618       | 159,816       | 4,802            | 386,045                                    | 408,577       | (22,532)         | 1,717,722     | 1,690,891     | 26,831           | -             | -             | -                |
| 388,728              | 390,653       | (1,925)          | -             | -             | -                | -  | -             | -                | 388,728       | 390,653       | (1,925)          | -             | -             | -                |
| 10,541               | 10,557        | (16)             | 1,978         | 1,978         | -                | -  | -             | -                | 12,519        | 12,535        | (16)             | -             | -             | -                |
| 11,005               | 8,476         | 2,529            | 1,700         | 1,614         | 86               | 853  | (264)         | 1,117            | 13,558        | 9,826         | 3,732            | -             | -             | -                |
| 29,562               | 29,562        | -                | 19,562        | 19,563        | -                | -  | -             | -                | 49,124        | 49,125        | (1)              | -             | -             | -                |
| 4,857                | -             | 4,857            | 2,000         | -             | 2,000            | 2,000                                      | -             | 2,000            | 8,857         | -             | 8,857            | -             | -             | -                |
| 1,611,752            | 1,561,746     | 50,006           | 189,858       | 182,971       | 6,888            | 388,898                                    | 408,313       | (19,415)         | 2,190,508     | 2,153,030     | 37,478           | -             | -             | -                |
| (112,682)            | (54,695)      | (48,811)         | (9,777)       | (2,890)       | (6,888)          | (385,898)                                  | (408,154)     | 22,256           | (508,357)     | (465,739)     | (33,443)         | -             | -             | -                |
| 301,034              | 436,420       | (135,386)        | 77,281        | 130,130       | (52,849)         | 1,252,545                                  | 1,561,807     | (309,262)        | 1,830,860     | 2,128,357     | (497,497)        | -             | -             | -                |
| 188,352              | 381,725       | (193,373)        | 67,504        | 127,240       | (59,736)         | 866,647                                    | 1,153,653     | (287,006)        | 1,122,503     | 1,662,618     | (540,115)        | -             | -             | -                |

収支計算書  
2001年度及び2002年度

Statement of Cash flows  
Fiscal 2001 (Year ended March 31, 2002) and  
Fiscal 2002 (Year ended March 31, 2003)

|                  |  | 2001年度 Fiscal 2001 |                      |  |
|------------------|--|--------------------|----------------------|--|
|                  |  | 一般会計               | 特別会計 Special Account | 計 Total  |
|                  |  | General Account    | IPCC/TSU             | インターネット地球環境基金<br>Internet Global Environmental<br>Fund |
|                  |  | 決算額                | 決算額                  | 決算額  |
|                  |  | Actual             | Actual               | Actual   |
| I 経常収支           | Cash flows from operating activities   |                    |                      |  |
| 1 当期正味財産増加額      | Changes in net assets  | 107,744            | 48,824               | (321,227)  |
| 2 経常収支への調整       | Adjustments to reconcile change in net assets to net cash used by operating activities |                    |                      |  |
| 減価償却費            | Depreciation and amortization  | 10,045             | 5,221                | -  |
| 退職給付引当金繰入(戻入)額   | Provision (reversal) for severance indemnities   | 10,753             | 1,204                | 853  |
| 戦略基金運用利息等        | Interest income  | 1,167              | -                    | -  |
| 未収金(増加)減少        | Increase (decrease) in accounts receivable   | (229,631)          | (8)                  | -  |
| その他流動資産(増加)減少    | Increase (decrease) in other current assets  | (5,203)            | -                    | -  |
| 未払金増加(減少)        | Increase (decrease) in accounts payable  | 27,398             | (982)                | 58,230   |
| 固定資産除却額          | Loss on disposal of property and plant   | -                  | -                    | -  |
| その他流動負債増加        | Increase in other current liabilities  | 1,949              | 91                   | 525  |
| 経常収支             | Net cash provided by (used in) operating activities                                    | (75,778)           | 54,350               | (261,619)  |
| II 投資活動          | Cash flows from investing activities   |                    |                      |  |
| 1 固定資産取得支出       | Purchase of property and equipment   |                    |                      |  |
| 建物付属設備           | Purchase of building equipment   | -                  | -                    | -  |
| 情報通信設備           | Purchase of I T equipment  | -                  | -                    | -  |
| 什器備品             | Purchase of office equipment   | (3,354)            | (1,080)              | -  |
| ソフトウェア           | Purchase of software   | (893)              | -                    | -  |
| 電話加入権            | Purchase of telephone rights   | -                  | -                    | -  |
|                  |  | (4,247)            | (1,080)              | -  |
| 2 特定預金及び有価証券の設定  | Increase in deposits and securities for specific funds                                 |                    |                      |  |
| 基本財産特定投資有価証券     | Investment securities for Basic Fund   | (50,000)           | -                    | -  |
| 戦略研究基金特定投資有価証券   | Investment securities for Strategic Research Fund                                      | (200,000)          | -                    | -  |
| 余裕資金特定投資有価証券     | Investment securities for reserved fund  | (100,777)          | -                    | -  |
| 退職給付引当金特定預金      | Deposits for severance indemnities funds   | (12,441)           | (1,347)              | (853)  |
| 減価償却引当金特定預金      | Deposits for depreciation funds  | (10,045)           | (5,221)              | -  |
| 固定資産購入特定預金       | Deposits for purchase of property and equipment  | -                  | -                    | -  |
|                  |  | (373,263)          | (6,568)              | (853)  |
| 3 特定預金取崩         | Decrease in deposits for specific funds  |                    |                      |  |
| 基本財産特定投資有価証券     | Investment securities for Basic Fund   | 50,000             | -                    | -  |
| 戦略研究基金特定預金       | Deposits for Strategic Research Fund   | -                  | -                    | -  |
| 戦略研究基金特定投資有価証券   | Investment securities for Strategic Research Fund                                      | 200,000            | -                    | -  |
| 余裕資金特定投資有価証券     | Investment securities for reserved fund  | 100,000            | -                    | -  |
| 減価償却引当金特定預金      | Deposits for depreciation funds  | -                  | -                    | -  |
| 退職給付引当金特定預金      | Deposits for severance indemnities funds   | 598                | -                    | -  |
| 固定資産購入特定預金       | Deposits for purchase of property and equipment  | -                  | -                    | -  |
|                  |  | 350,598            | -                    | -  |
| 4 その他            | Other  |                    |                      |  |
| 敷金支出             | Payment of guaranty deposits   | (58)               | -                    | -  |
| 合計               | Net cash used in investing activities  | (26,970)           | (7,648)              | (853)  |
| III 財務活動         | Cash flows from financing activities   |                    |                      |  |
| 1 短期借入金収入        | Borrowing of short term loans  | 50,000             | -                    | -  |
| 2 短期借入金返済支出      | Repayments of short term loans   | (50,000)           | -                    | -  |
| 3 会計間貸借          | Inter-account receivables (payables)   | 50,000             | (50,000)             | -  |
| 合計               | Net cash provided by (used in) financing activities                                    | 50,000             | (50,000)             | -  |
| 現金及び現金同等物増加(減少)額 | Net increase (decrease) in cash and cash equivalents                                   | (52,748)           | (3,298)              | (262,472)  |
| 現金及び現金同等物期首残高    | Cash and cash equivalents at beginning of year   | 56,250             | 53,871               | 1,884,224  |
| 現金及び現金同等物期末残高    | Cash and cash equivalents at end of year   | 3,502              | 50,573               | 1,621,752  |
| IV 収支差額との調整      | Reconciliation to Surplus from revenues over expenditures                              |                    |                      |  |
| 現金及び現金同等物増加(減少)額 | Net increase (decrease) in cash and cash equivalents                                   | (52,748)           | (3,298)              | (262,472)  |
| 未収金(増加)減少        | Increase (decrease) in accounts receivable   | 229,631            | 8                    | -  |
| その他流動資産(増加)減少    | Increase (decrease) in other current assets  | 5,203              | -                    | -  |
| 未払金増加(減少)        | Increase (decrease) in accounts payable  | (27,398)           | 982                  | (58,230)   |
| その他流動負債増加(増減)    | Increase (decrease) in other current liabilities                                       | (1,949)            | (91)                 | (525)  |
|                  | Surplus from revenues over expenditures  |                    |                      |  |
| 当期収支差額           | For the year   | 152,739            | (2,399)              | (321,227)  |
| 前期繰越収支差額         | Beginning of year  | 155                | 45,900               | 1,883,034  |
| 次期繰越収支差額         | End of year  | 152,894            | 43,501               | 1,561,807  |

(単位：千円, Unit : Thousands of Yen)

2002年度 Fiscal 2002

特別会計 Special Account

| 一般会計 General Account |               |                  | IPCC/TSU      |               |                  | 在外特別地球環境基金<br>Internet GobaI Environmental Fund |               |                  | 計 Total       |               |                  |
|----------------------|---------------|------------------|---------------|---------------|------------------|---|---------------|------------------|---------------|---------------|------------------|
| 予算額<br>Budget        | 決算額<br>Actual | 差異<br>Difference | 予算額<br>Budget | 決算額<br>Actual | 差異<br>Difference | 予算額<br>Budget                                   | 決算額<br>Actual | 差異<br>Difference | 予算額<br>Budget | 決算額<br>Actual | 差異<br>Difference |
| (112,682)            | (54,695)      | (48,811)         | (9,777)       | (2,890)       | (6,888)          | (385,898)                                       | (408,154)     | 22,256           | (508,357)     | (465,739)     | (33,443)         |
| 10,541               | 10,557        | (16)             | 1,978         | 1,978         | -                | -   | -             | -                | 12,519        | 12,535        | (16)             |
| 11,005               | 8,476         | 2,529            | 1,700         | 1,614         | 86               | 853   | (264)         | 1,117            | 13,558        | 9,826         | 3,732            |
| -                    | -             | -                | -             | -             | -                | -   | -             | -                | -             | -             | -                |
| -                    | (79,050)      | 79,050           | -             | 8             | (8)              | -   | -             | -                | -             | (79,042)      | 79,042           |
| 328                  | (5,254)       | 5,582            | 38            | -             | 38               | 30  | 2,017         | (1,987)          | 396           | (3,237)       | 3,633            |
| 142,046              | 44,065        | 97,981           | 48,912        | 17,414        | 31,498           | 5,714   | (40,311)      | 46,025           | 196,672       | 21,168        | 175,504          |
| 29,562               | 29,562        | -                | 19,562        | 19,563        | (1)              | -   | -             | -                | 49,124        | 49,125        | (1)              |
| -                    | (3,515)       | 3,515            | -             | (213)         | 213              | -   | (139)         | 139              | -             | (3,867)       | 3,867            |
| 80,800               | (49,854)      | 139,830          | 62,413        | 37,474        | 24,938           | (379,301)                                       | (446,851)     | 67,550           | (236,088)     | (459,231)     | 232,318          |
| -                    | -             | -                | -             | -             | -                | -   | -             | -                | -             | -             | -                |
| (4,230)              | (2,730)       | (1,500)          | -             | -             | -                | -   | -             | -                | (4,230)       | (2,730)       | (1,500)          |
| (51,500)             | (52,742)      | 1,242            | (40,912)      | (13,080)      | (27,832)         | -   | -             | -                | (92,412)      | (65,822)      | (26,590)         |
| (1,520)              | (1,738)       | 218              | (310)         | (12,043)      | 11,733           | -   | -             | -                | (1,830)       | (13,781)      | 11,951           |
| (200)                | (808)         | 608              | -             | -             | -                | -   | -             | -                | (200)         | (808)         | 608              |
| (800)                | (729)         | (71)             | -             | -             | -                | -   | -             | -                | (800)         | (729)         | (71)             |
| (58,250)             | (58,747)      | 497              | (41,222)      | (25,123)      | (16,099)         | -   | -             | -                | (99,472)      | (83,870)      | (15,602)         |
| -                    | (50,000)      | 50,000           | -             | -             | -                | -   | -             | -                | -             | (50,000)      | 50,000           |
| -                    | (50,000)      | 50,000           | -             | -             | -                | -   | -             | -                | -             | (50,000)      | 50,000           |
| -                    | -             | -                | -             | -             | -                | -   | -             | -                | -             | -             | -                |
| (11,005)             | (10,522)      | (483)            | (1,700)       | (1,661)       | (39)             | (853)   | (589)         | (264)            | (13,558)      | (12,772)      | (786)            |
| (10,541)             | (10,557)      | 16               | (1,978)       | (1,978)       | -                | -   | -             | -                | (12,519)      | (12,535)      | 16               |
| -                    | (71,000)      | 71,000           | -             | (8,750)       | 8,750            | -   | -             | -                | -             | (79,750)      | 79,750           |
| (21,546)             | (192,079)     | 170,533          | (3,678)       | (12,389)      | 8,711            | (853)   | (589)         | (264)            | (26,077)      | (205,057)     | 178,980          |
| -                    | 50,000        | (50,000)         | -             | -             | -                | -   | -             | -                | -             | 50,000        | (50,000)         |
| -                    | 50,000        | (50,000)         | -             | -             | -                | -   | -             | -                | -             | 50,000        | (50,000)         |
| -                    | -             | -                | -             | -             | -                | -   | -             | -                | -             | -             | -                |
| 58,476               | 25,355        | 13,121           | 15,021        | 13,143        | 1,878            | -   | -             | -                | 53,497        | 38,498        | 13,121           |
| -                    | 1,623         | (1,623)          | -             | 47            | -                | -   | 854           | -                | -             | 2,524         | (1,623)          |
| 71,000               | 71,000        | -                | 8,750         | 8,750         | -                | -   | -             | -                | 79,750        | 79,750        | -                |
| 109,476              | 197,978       | (88,502)         | 23,771        | 21,940        | 1,831            | -   | 854           | -                | 133,247       | 220,772       | (88,502)         |
| -                    | (471)         | 471              | -             | -             | -                | -   | -             | -                | -             | (471)         | 471              |
| 29,680               | (53,319)      | 82,999           | (21,129)      | (15,572)      | (7,388)          | (853)   | 265           | (264)            | 7,698         | (68,626)      | 75,347           |
| -                    | -             | -                | -             | -             | -                | -   | -             | -                | -             | -             | -                |
| (110,000)            | 330,000       | (440,000)        | -             | -             | -                | -   | -             | -                | (110,000)     | 330,000       | (440,000)        |
| 110,000              | (110,000)     | 220,000          | -             | -             | -                | -   | -             | -                | 110,000       | (110,000)     | 220,000          |
| -                    | (50,000)      | 50,000           | -             | 50,000        | (50,000)         | -   | -             | -                | -             | -             | -                |
| -                    | 170,000       | (170,000)        | -             | 50,000        | (50,000)         | -   | -             | -                | -             | 220,000       | (220,000)        |
| 110,480              | 66,827        | 43,653           | 41,284        | 71,902        | (30,618)         | (380,154)                                       | (446,586)     | 66,432           | (228,390)     | (307,857)     | 79,467           |
| 391,207              | 51,978        | 339,229          | 184,487       | 50,572        | 133,915          | 97,833  | 1,621,752     | (1,523,919)      | 673,527       | 1,724,302     | (1,050,775)      |
| 501,687              | 118,805       | 382,882          | 225,771       | 122,474       | 103,297          | (282,321)                                       | 1,175,166     | (1,457,487)      | 445,137       | 1,416,445     | (971,308)        |
| -                    | -             | -                | -             | -             | -                | -   | -             | -                | -             | -             | -                |
| 110,480              | 66,827        | 43,653           | 41,284        | 71,902        | (30,618)         | (380,154)                                       | (446,586)     | 66,432           | (228,390)     | (307,857)     | 79,467           |
| -                    | 79,050        | (79,050)         | -             | (8)           | 8                | -   | -             | -                | -             | 79,042        | (79,042)         |
| (328)                | 5,254         | (5,582)          | (38)          | -             | (38)             | (30)  | (2,017)       | 1,987            | (396)         | 3,237         | (3,633)          |
| (142,046)            | (44,065)      | (97,981)         | (48,912)      | (17,414)      | (31,498)         | (5,714)   | 40,311        | (46,025)         | (196,672)     | (21,168)      | (175,504)        |
| -                    | 3,515         | (3,515)          | -             | 213           | (213)            | -   | 139           | (139)            | -             | 3,867         | (3,867)          |
| (31,894)             | 110,581       | (142,475)        | (7,666)       | 54,693        | (62,359)         | (385,898)                                       | (408,153)     | 22,255           | (425,458)     | (242,879)     | (182,579)        |
| 31,894               | 152,894       | (121,000)        | 93,501        | 43,500        | 50,001           | 1,561,807                                       | 1,561,807     | -                | 1,687,202     | 1,758,201     | (70,999)         |
| -                    | 263,475       | (263,475)        | 85,835        | 98,193        | (12,358)         | 1,175,909                                       | 1,153,654     | 22,255           | 1,261,744     | 1,515,322     | (253,578)        |

# Organization

## Outline

### The Institute for Global Environmental Strategies (IGES)

#### Establishment

March 31, 1998

#### Location

Headquarter

2108-11 kamiyamaguchi, Hayama, Kanagawa 240-0115

Tokyo Office

Nippon Press Center Bldg.8F,2-2-1 Uchisaiwai-cho, Chiyoda-ku, Tokyo 100-0001

Kitakyusyu Office

Kitakyusyu International Conference Center 6F,3-9-30 Asano, Kokurakita-ku, Kitakyushu-city, Fukuoka 802-0001

Kansai Research Center

International Health Development Center (IHD) Bldg. 5F,1-5-1 Wakinohama Kaigan Dori Chuo-ku, Kobe, Hyogo 651-0073

Project Office in Bangkok

c/o UNEP RRC AP, Outreach Building Asian Institute of Technology

P.O. Box 4, Klongluang, Pathumthani 12120, Thailand

**Chair of the Board of Directors** Prof. Akio Morishima (President of the Central Environment Council)

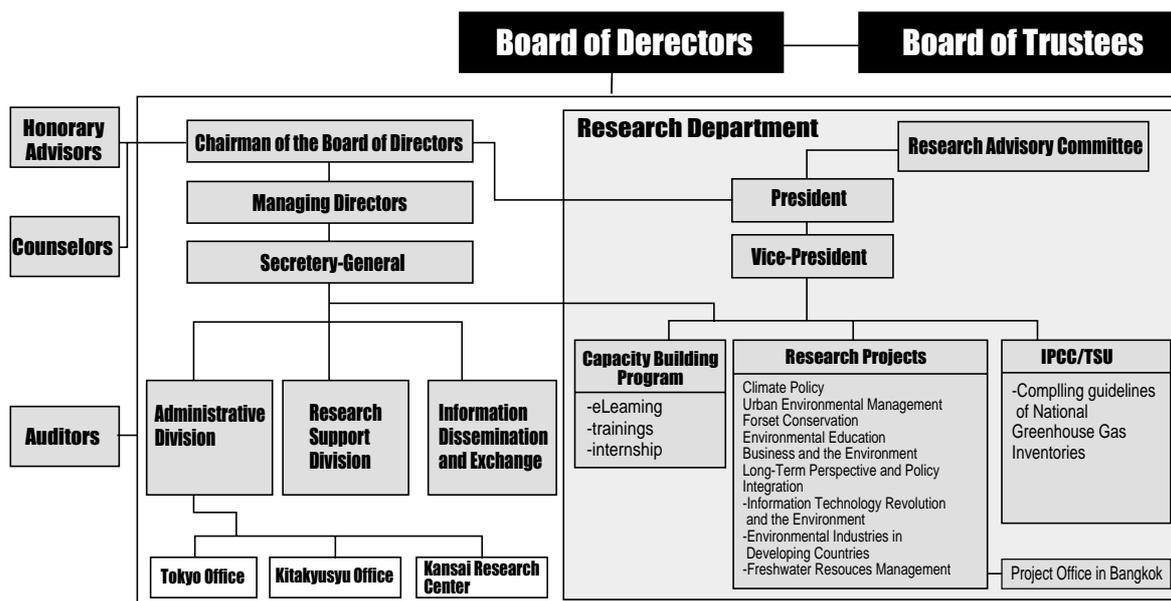
#### Number of Employees (as of 31 March, 2003)

Research staff : 39 full-time staff (18 are non-Japanese), 30 part-time staff Total : 69

Secretariat staff : 39 full-time (2 are non-Japanese), 8 part-time staff Total : 47

**Working Languages** Japanese and English

## Organization Chart



## i List of Members of the Boards of FY2002

### ■ Directors

|                                  |  |
|----------------------------------|--|
| Prof. Akio Morishima (Chair)     | President, Central Environment Council   |
| Mr. Nobuo Mizuguchi (Vice Chair) | Vice Governor, Kanagawa Prefectural Government   |
| Dr. Akihiro Amano                | Professor of Economics, School of Policy Studies, Kwansai Gakuin University  |
| Dr. Keith Bezanson               | Director, Institute of Development Studies, University of Sussex   |
| Dr. Edith Brown Weiss            | Francis Cabell Brown Professor of International Law , Georgetown University Law Center   |
| Dr. Peter de Janosi              | Senior Advisor, LEAD International   |
| Mr. Takahiko Hiraishi            | Co-Chair, Intergovernmental Panel on Climate Change(IPCC) Inventories Task Force Bureau;<br>Special Advisor to the Environment Minister of Japan |
| Dr. Ryokichi Hirono              | Professor Emeritus , Seikei University   |
| Dr. Hidefumi Imura               | Professor, Graduate School of Environmental Studies, Nagoya University   |
| Dr. Yoichi Kaya                  | Professor , Keio University  |
| Ms. Charmine Koda                | Journalist   |
| Dr. Hoesung Lee                  | President, Council on Energy and Environment Korea   |
| Mr. Tadahiro Mitsuhashi          | Professor, Faculty of Policy Informatics, Chiba University of Commerce   |
| Dr. Tongroj Onchan               | President, Mekong Environment and Resource Institute   |
| Dr. Yasuyuki Oshima              | Director, Research Division, Japan Wildlife Research Center  |
| Dr. Rajendra K. Pachauri         | Director, The Energy and Resources Institute   |
| Dr. Kirit S. Parikh              | Emeritus Professor, Indira Gandhi Institute of Development Research  |
| Mr. James Gustave Speth          | Dean, Yale University School of Forestry and Environmental Studies   |
| Dr. Manfred Stock                | Deputy Director, Potsdam Institute for Climate Impact Research   |
| Dr. Yutaka Suzuki                | President, Himeji Institute of Technology  |
| Amb. Frans B.A.M. van Haren      | President & CEO of the Earth Council Institute   |
| Mr. Keizo Yamaji                 | Chairman, Nihon Tetra Pak K.K.   |
| Prof. Kun Zhang                  | Director General, The Sino-Japan Friendship Center for Environmental Protection  |

### ■ Auditors

|                       |  |
|-----------------------|--|
| Mr. Yasunaka Fujikawa | Director & COO, The Bank of Yokohama, Ltd.                   |
| Mr. Teruaki Masumoto  | Executive Vice President, Tokyo Electric Power Company, Inc. |

### ■ Trustees

|                              |   |
|------------------------------|---|
| Dr. Borjigid Ts. Adyasuren   | Advisor to the Minister of Environment , Ministry of Nature and Environment, Mongolia             |
| Dr. Marcel A. Boisard        | Executive Director, United Nations Institute for Training and Research                            |
| Dr. Ralph Chapman            | Manager, Strategic Policy Group, Ministry for the Environment, New Zealand                        |
| Hon. Mr. Kamal P. Chaulagain | Former Minister, Ministry of Population and Environment, Nepal                                    |
| Dr. Nigel Cross              | Executive Director, International Institute for Environment and Development                       |
| Mr. Gerard Early             | Head, Approvals and legislation Division, Environment Australia                                   |
| Mr. Christopher Flavin       | President, The Worldwatch Institute   |
| Dr. Nobuyoshi Fugono         | President, Advanced Telecommunications Research Institute International (ATR)                     |
| Mr. Shinji Fukukawa          | Advisor, Dentsu Inc.  |
| Dr. William Glanville        | Vice-President & Chief Operating Officer, The International Institute for Sustainable Development |
| Dr. Yohishi Gohshi           | President, National Institute for Environmental Studies   |
| Hon. Ms. Elisea G. Gozun     | Secretary, Department of Environment and Natural Resources, The Government of the Philippines     |

|                         |  |
|-------------------------|--|
| Mr. Takeshi Hara        | Professor, Waseda University, Graduate School of Asia-Pacific Studies  |
| Mr. Yoshio Hatano       | President, Foreign Press Center Japan  |
| Dr. Peter Hennicke      | Acting President, Wuppertal Institute for Climate, Environment and Energy  |
| Mr. Takuya Hirano       | President, Japan Marine Science & Technology Center  |
| Mr. Masami Ishizaka     | Executive Vice President, Japan National Oil Corporation   |
| Dr. Keumhee Jung        | Director, Global Environment Office, Ministry of Environment, Korea  |
| Dr. Roger E. Kasperson  | Executive Director, Stockholm Environment Institute  |
| Mr. Kazunobu Onogawa    | Director, United Nations Centre for Regional Development   |
| Mr. Shigeo Masui        | Editorial Writer, The Yomiuri Shimbun  |
| H. E. Mr. Khieu Muth    | Director General, Ministry of Environment, Kingdom of Cambodia   |
| Mr. Tomomitsu Oba       | Chairman, Japan Center for International Finance   |
| Mr. Masamine Sasaki     | Director General, National Science Museum  |
| Mr. Surendra Shrestha   | Regional Director and Representative for Asia and the Pacific,<br>United Nations Environment Programme(UNEP/ROAP)        |
| Dr. R.T.M. Sutamihardja | Senior Advisor, the Minister of Environment, Republic of Indonesia   |
| Dr. Monthip Tabucanon   | Deputy Director-General, Department of Environmental Quality Promotion,<br>Ministry of Natural Resources and Environment |
| Mr. Takahisa Tsukamoto  | Chairman of the Board of Directors, Japan International Forestry Promotion & Cooperation Center                          |
| Dr. Ruqiu Ye            | Senior Advisor to the Minister, China State Environmental Protection Administration                                      |
| Mr. A. H. Zakri         | Director, The United Nations University  |

#### ■ Honorary Advisors

|                         |   |
|-------------------------|---|
| Mr. Gaishi Hiraiwa      | Honorary Chairman; Chairman, Keidanren; Global Environmental Action                           |
| Mr. Toshiaki Kaifu      | Advisor, Global Environmental Action; Former Prime Minister                                   |
| Dr. Ichiro Kato         | Honorary Chancellor, the Seijo Gakuen; Former President, The University of Tokyo              |
| Dr. Jiro Kondo          | Chairman, The Science and Technology Foundation of Japan                                      |
| Mr. Tomiichi Murayama   | President, Asian Women's Fund; Former Prime Minister  |
| Dr. Jun-ichi Nishizawa  | President, Iwate Prefectural University; Former President, Tohoku University                  |
| Mr. Geping Qu           | Chairman of the Council of Environmental and Resources Protection, National People's Congress |
| Dr. Emil Salim          | Former State Minister for Population and Environment  |
| Dr. Stephan Schmidheiny | Vice-Chairman, Executive Committee, World Business Council for Sustainable Development        |
| Mr. Maurice Strong      | Chairman, The Earth Council   |
| Dr. M. S. Swaminathan   | Chairman, M. S. Swaminathan Research Foundation   |
| Dr. Klaus Töpfer        | Executive Director, United Nations Environment Programme                                      |
| Dr. Takeshi Umehara     | Honorary Advisor, International Research Center for Japanese Studies                          |

#### ■ Counselors

|                      |  |
|----------------------|--|
| Dr. Nobuyoshi Fugono | President, Advanced Telecommunications Research Institute International(ATR) |
| Mr. Shinji Fukukawa  | Advisor, Dentsu Inc.   |
| Mr. Takeshi Hara     | Professor, Waseda University, Graduate School of Asia-Pacific Studies        |
| Mr. Yoshio Hatano    | President, Foreign Press Center Japan  |
| Mr. Takuya Hirano    | President, Japan Marine Science & Technology Center                          |
| Mr. Masami Ishizaka  | Executive Vice President, Japan National Oil Corporation                     |
| Mr. Yukiyasu Kojima  | Speaker, Kanagawa Prefectural Assembly, Japan                                |
| Mr. Tomomitsu Oba    | Chairman, Japan Center for International Finance                             |

|                        |   |
|------------------------|---|
| Dr. Gen Ohi            | Advisor, National Institute for Environmental Studies   |
| Mr. Shigeyuki Okajima  | Executive Director, Japan Environmental Education Forum   |
| Mr. Yoshitake Ota      | Advisor, Mizuho Corporate Bank, Ltd.  |
| Mr. Masamine Sasaki    | Director General, The Independent Administrative Institution National Science Museum            |
| Mr. Takahisa Tsukamoto | Chairman of the Board of Directors, Japan International Forestry Promotion & Cooperation Center |

#### ■ Research Advisory Committee Members

|                            |   |
|----------------------------|---|
| Dr. Kheng-Lian Koh         | Director, Institute of Development Studies (IDS), University of Sussex  |
| Dr. Gerardo Budowski       | Vice Rector, United Nations University for Peace  |
| Prof. Lin Sien Chia        | Associate Senior Research Fellow, Institute of Southeast Asian Studies (ISEAS)  |
| Prof. Martin Claussen      | Head of Climate System Department, Potsdam Institute for Climate Impact Research (PIK)  |
| Dr. Nigel Cross            | Executive Director, International Institute for Environment and Development   |
| Dr. William Glanville      | Vice President & Chief Operating Officer, The International Institute for Sustainable (IISD)                                  |
| Dr. Wha-Jin Han            | Director, Global Environmental Research Center, Korea Environment Institute   |
| Prof. John Hay             | Director, the IGCI Professional Training Programme,<br>International Global Change Institute, Waikato University              |
| Dr. Tony Janetos           | Former Senior Vice President and Chief of Program, World Resources Institute  |
| Mr. Kotaro Kimura          | Executive Director, Global Industrial and Social Progress Research Institute (GISPRI)   |
| Dr. Kheng-Lian Koh         | Director, Asia-Pacific Centre for Environmental Law (APCEL)   |
| Mr. Philip Mathews         | Assistant Director General, Institute of Strategic and International Studies (ISIS)   |
| Dr. Tsuneyuki Morita       | Director, Social Environmental System Division, National Institute for Environmental Studies                                  |
| Dr. Edda Muller            | Executive Director, Federation of German Consumer Organizations   |
| Dr. Nebjosa Nakicenovic    | Leader, Environmentally Compatible Energy Strategies Project,<br>International Institute for Applied Systems Analysis (IIASA) |
| Dr. Jin-Gyu Oh             | Director, Center for Climate Change Studies, Korea Energy Economics Institute (KEEI)  |
| Dr. Tongroj Onchan         | President, Mekong Environment and Resource Institute  |
| Dr. Jyoti K. Parikh        | Senior Professor, Indira Gandhi Institute of Development Research (IGIDR)   |
| Dr. Rudolf Petersen        | Director, Transport Division, Wuppertal Institute for Climate, Environment and Energy   |
| Mr. Yong Ren               | The Sino-Japan Friendship Center for Environmental Protection   |
| Prof. Ilkka Savolainen     | Research Professor, VTT Technical Research Centre of Finland  |
| Dr. Leena Srivastava       | Director, Regulatory Studies and Governance Division, Tata Energy Research Institute  |
| Dr. Chalongsob Sussangkarn | President, Thailand Development Research Institute Foundation (TDRI)  |
| Dr. Francisco Szekely      | Deputy Minister, Ministry of Environment, Mexico  |

## ii List of Employees of FY2002

| ■ Research Department                                       |                     |  |                          |
|---|---------------------|--|--------------------------|
| <b>Climate Policy Project</b>                               |                     |  |                          |
| Project Leader  | Shuzo Nishioka      | Research Associate   | Ko Nomura                |
| Senior Research Fellow                                      | Naoki Matsuo        | Research Associate   | Shuzo Katsumoto          |
| Senior Research Fellow                                      | Tae Yong Jung       | Research Associate   | Yatsuka Kataoka          |
| Senior Research Fellow                                      | Ancha Srinivasan    | Research Associate   | Moustapha Kamal Gueye    |
| Research Associate  | So Won Yoon         | Research Associate   | Lisa Hiwasaki            |
| Research Associate  | Yasushi Ninomiya    | Research Associate   | Maki Sato                |
| Research Associate  | Rie Watanabe        | Visiting Researcher  | Jan-Dirk Seiler Hausmann |
| Research Associate  | Wakana Takahashi    | Intern   | Katsuhiko Hari           |
| Research Associate  | Yosuke Fukushima    | Project Secretary  | Naoko Miyazaki           |
| Visiting Researcher   | Norichika Kanie     | Project Secretary  | Ayumi Goto               |
| Visiting Researcher   | Vladimir Kotov      | <b>Environment Industry Project</b>                                  |                          |
| Visiting Researcher   | Elena Nikitina      | Project Leader   | Ryokichi Hirono          |
| Visiting Researcher   | Zheng Shuang        | Visiting Researcher  | Yoshiaki Nakaune         |
| Intern  | Masamitsu Umezawa   | Project Secretary  | Tomoe Karasawa           |
| Project Secretary   | Tomoko Miyazaki     | Project Secretary  | Tomoko Miyazaki          |
| <b>Urban Environmental Management Project</b>               |                     |  |                          |
| Project Leader  | Hidehumi Imura      | <b>Business and the Environment Project (Kansai Research Center)</b> |                          |
| Research Fellow   | Bai Xuemei          | Project Leader   | Katsuhiko Kokubu         |
| Research Fellow   | Kwon Changki        | Research Fellow  | Eriko Nashioka           |
| Research Associate  | Kosuke Araki        | Research Fellow  | Yasuhiro Kannda          |
| Research Associate  | Noriko Kono         | Research Fellow  | Kenjiro Hirayama         |
| Research Associate (Kitakyushu)                             | Mushtaq Ahmed Memon | Senior Visiting Researcher   | Masaji Kitamura          |
| Research Associate (Kitakyushu)                             | Shobhakar Dhakal    | Senior Visiting Researcher   | Shinji Kaneko            |
| Research Associate (Kitakyushu)                             | Chang Miao          | Visiting Researcher  | Yasuhisa Nakaso          |
| Visiting Researcher   | Shinji Kaneko       | Visiting Researcher  | Yasuhide Nakagami        |
| Project Secretary   | Kyoko Takada        | Visiting Researcher  | Koichiro Saio            |
| <b>Forest Conservation Project</b>                          |                     |  |                          |
| Project Leader  | Makoto Inoue        | Visiting Researcher  | Emiko Murei              |
| Research Fellow   | Martinus Nanang     | Visiting Researcher  | Humiaki Goto             |
| Research Fellow   | Satoshi Tachibana   | Visiting Researcher  | Tomomi Shinabe           |
| Research Associate  | Kimihiro Hyakumura  | Project Secretary  | Mami Tachibana           |
| Research Associate  | Kiyoshi Komatsu     | Research Assistant   | Mariko Shoji             |
| Research Associate  | Kazuhiro Harada     | <b>Capacity Building Programme</b>                                   |                          |
| Visiting Researcher   | Hiroji Isozaki      | Programme Manager  | Andrea Deri              |
| Visiting Researcher   | Hiroaki Kakizawa    | Research Associate   | Masahisa Sato            |
| Visiting Researcher   | Shin Nagata         | e-Learning Project Coordinator                                       | Reiko Koyama             |
| Visiting Researcher   | Satoru Matsumoto    | Intern   | Eldar Kurbanov           |
| Visiting Researcher   | Sachie Okamoto      | Intern   | Jia Li                   |
| Project Secretary   | Saho Moriguchi      | Project Secretary  | Soon-deok Park           |
| Project Secretary   | Soko Fujimori       | Project Secretary  | Mami Takanarita          |
| <b>Environmental Education Project</b>                      |                     |  |                          |
| Project Leader  | Osamu Abe           | <b>IPCC/TSU</b>  |                          |
| Senior Research Fellow                                      | Bishnu Bhandari     | Head   | Riitta K. Pipatti        |
| Research Associate  | Masahiro Takahashi  | Programme Officer  | Leandro Buendia          |
| Research Associate  | Akihiro Nakahata    | Programme Officer  | Todd Ngara               |
| Project Secretary   | Tomoe Karasawa      | Administrative Officer   | Kyoko Miwa               |
| Project Secretary   | Chikako Sugawara    | Project Secretary  | Akiko Kawase             |
| <b>Long-Term Perspective and Policy Integration Project</b> |                     |  |                          |
| Project Leader  | Yoshihiro Natori    | <b>Consultant</b>  |                          |
| Project Leader  | Kazuo Matsushita    | Senior Consultant  | Takahiko Hiraishi        |
| Sub Project Leader  | Takashi Matsumura   | Consultant   | Kazuo Watanabe           |
| Research Fellow   | Kenichi Imai        | Consultant   | Hisakazu Kato            |
| Research Associate  | Taeko Takahashi     | Consultant   | Yohei Harashima          |
| Research Associate  | Takashi Otsuka      | Consultant   | Kazuo Matsushita         |
|   |                     | Consultant   | Kiyoto Tanabe            |
|   |                     | Consultant   | Naoya Sawazu             |
|   |                     | Consultant   | Shinji Kaneko            |

## ■ Secretariat

|  |                  |
|--|------------------|
| <b>Chair of the Board of Directors</b> | Akio Morishima   |
| <b>Secretary General</b>               | Shinichi Arai    |
| <b>Deputy Secretary General</b>        | Makoto Tsuruta   |
| <b>Administrative Section</b>          |                  |
| Head of Administrative Section         | Hiroyuki Shimura |
| Head of Welfare Section                | Isao Sato        |
| Secretary to Administrative Section    | Aoi Oride        |
| Head                                   | Hideki Oda       |
| Head                                   | Akie Narita      |
|  | Yuji Shimizu     |
|  | Akio Nishiyama   |
|  | Mamoru Suzuki    |
|  | Miyuki Kawai     |
|  | Takashi Sodemoto |
|  | Rie Murakoshi    |
|  | Tomoko Yamamoto  |
|  | Makino Yuko      |
|  | Aya Saito        |
| <b>Research Support Section</b>        |                  |
| Head of Research Support Section       | Masami Yamamori  |
| Head                                   | Yuko Tanno       |
| Head                                   | Rika Oshima      |
|  | Tomoko Ishikawa  |
|  | Yoshie Ito       |
|  | Emika Yoshitaki  |
|  | Megumi Yajima    |
|  | Maki Fujiwara    |
|  | Junko Hara       |
|  | Masae Sato       |
| Intern                                 | David Crosbie    |

|  |   |
|--|---|
| <b>Kansai Research Center</b>                              |   |
| Director   | Akihiro Amano                                     |
| Advisor  | Ryutaro Yatsu                                     |
| Advisor  | Sombo Yamamura                                    |
| Head of Research Planning and<br>Administrative Department | Akira Yoshida<br>Miho Kawamura                    |
| <b>Tokyo Office</b>  |   |
|  | Sumiyo Morita<br>Tatsuko Kumamoto<br>Chieko Mori  |
| <b>Tokyo Office Annex</b>                                  |   |
|  | Kimio Hayasaka<br>Takako Sato<br>Yuko Nagasawa    |
| <b>Kitakyushu Office</b>                                   |   |
| Director   | Hidefumi Imura                                    |
| Division Head  | Keiko Sasaki                                      |
| Division Chief   | Osamu Norimatsu                                   |
| Division Chief   | Hidekazu Kakizoe                                  |
| Division Chief   | Christine Pearson<br>Kimiyo Wikusu<br>Satomi Kido |

### **iii Signatory organizations and institutions of the Charter for the Establishment of IGES (In alphabetical order, as of March 2002)**

#### **[National Administrative Organizations] 14 Organizations**

- 1 Ministry of the Environment , Japan
- 2 Department of the Environment, Australia
- 3 Ministry of Environment, Cambodia
- 4 Ministry of Environment, Canada
- 5 State Environmental Protection Administration, China
- 6 Ministry of Environment and Forests, India
- 7 State Ministry of Environment, Indonesia
- 8 Ministry of Environment, Korea
- 9 Ministry of Science,Technology and the Environment, Malaysia
- 10 Ministry of Nature and the Environment, Mongolia
- 11 Ministry of Population and Environment, Nepal
- 12 Ministry for the Environment, New Zealand
- 13 Department of Environment and Natural Resources, the Philippines
- 14 Ministry of Science, Technology and the Environment, Thailand

#### **[International Organizations] 4 Organizations**

- 1 United Nations Centre for Regional Development
- 2 United Nations Environment Programme
- 3 United Nations Institute for Training and Research
- 4 Institute of Advanced Studies, The United Nations University

#### **[Research and Academic Institutions] 25 Organizations**

- 1 Asia-Pacific Centre for Environmental Law, Singapore
- 2 Center for International Environmental Law, United States of America
- 3 The Earth Council, Costa Rica
- 4 Global Industrial and Social Progress Research Institute, Japan
- 5 Indira Gandhi Institute of Development Research, India
- 6 Institute of Development Studies, University of Sussex, United Kingdom
- 7 Institute of Southeast Asian Studies, Singapore
- 8 Institute of Strategic and International Studies (ISIS) Malaysia, Malaysia
- 9 International Academy of the Environment, Switzerland
- 10 The International Global Change Institute, the University of Waikato, New Zealand
- 11 International Institute for Environment and Development, United Kingdom
- 12 The International Institute for Sustainable Development, Canada
- 13 International Institute of Applied Systems Analysis, Austria
- 14 Korea Energy Economics Institute, Republic of Korea
- 15 Korea Environment Institute, Republic of Korea
- 16 National Institute for Environmental Studies, Japan
- 17 Potsdam Institute for Climate Impact Research, Germany
- 18 The Sino-Japan Friendship Center for Environmental Protection, China
- 19 Stockholm Environment Institute, Sweden
- 20 The Energy and Resources Institute, India
- 21 Thailand Development Research Institute Foundation, Thailand
- 22 Thailand Environment Institute, Thailand
- 23 The World Resources Institute, United States of America
- 24 VTT Technical Research Center of Finland, Finland
- 25 Wuppertal Institute for Climate, Environment and Energy, Germany

# Articles of Association for the Institute for Global Environmental Strategies

Authorized by the Governor of Kanagawa Prefecture on April 21,1997  
Amendments Approved by the Prime Minister of Japan on March 31,1998  
Amended on February 23,2001  
Amended on August 20,2002

## Chapter 1 General Provisions

(Name)

### Article 1

This institute shall be called the Institute for Global Environmental Strategies (hereinafter "the Institute").

(Office)

### Article 2

1. The headquarters of the Institute shall be situated at 2108-11, Kami Yamaguchi, Hayama-machi, Miura-gun, Kanagawa Prefecture.
2. The Institute may establish other offices where needed upon resolution of the Board of Directors.

(Objectives)

### Article 3

The Institute, based on the Charter for the Establishment of the Institute for Global Environmental Strategies (hereinafter "the Charter"), shall strive to carry out policy oriented research and related activities to develop and formulate innovative policy instruments and environmental strategies for sustainable development ("Strategic Research"), aiming at creating a new paradigm for global civilization; and to make the results of the Strategic Research applicable for the policy making and decision making of a broad range of entities so that sustainable development can be achieved globally, inter alia in the Asia-Pacific Region.

(Activities)

### Article 4

In order to achieve the objectives outlined in the preceding article, the Institute shall undertake the following business activities:

- 1) conduct Strategic Research, including joint research with international organizations, national and local governments, research and academic institutions, corporations, and NGOs (hereinafter "other organizations");
- 2) conduct Strategic Research in response to requests from other organizations; and provide information and recommendations on the formulation of strategies for sustainable development to those bodies as required;
- 3) convene international conferences and seminars and conduct other capacity building activities (this includes co-sponsorship with other organizations);
- 4) participate in conferences where various policies and decisions are determined and offer proposals based on the results of its Strategic Research;

- 5) invite researchers from other research and academic institutions others to participate in research, and provide training courses in areas related to the creation of strategies;
- 6) collect, arrange, and provide information related to sustainable development; and
- 7) carry out any further necessary activities to achieve the objectives of the Institute.

(Working languages)

### Article 5

Working languages of the Institute shall be English and Japanese.

## Chapter 2 Assets and Accounting

(Composition of assets)

### Article 6

1. The assets of the Institute shall be comprised of the following:
  - 1) assets recorded in the List of Property as of the establishment of the Institute;
  - 2) assets received as donations from corporations or individuals after establishment;
  - 3) voluntary contributions from governmental agencies, local governments of Japan and other interested countries;
  - 4) grants from private foundations and others;
  - 5) income generated from existing assets;
  - 6) income from fees paid by affiliates;
  - 7) income from regular activities; and
  - 8) any other income.

(Classification of assets)

### Article 7

1. The assets of the Institute shall consist of the Principal Fund and the Operating Resources.
2. The Institute's Principal Fund shall be composed of the following:
  - 1) assets listed in the Principal Fund category in the List of Property as of establishment;
  - 2) assets donated specifically to the Principal Fund; and
  - 3) assets that are transferred to the Principal Fund by resolution of the Board of Directors.
3. The Operating Resources shall be those other than the Principal Fund.

(Administration of the assets)

**Article 8**

1. The assets of the Institute shall be administered by the Chair of the Board of Directors using methods decided by the Chair upon resolution of the Board of Directors.
2. Cash contained in the Principal Fund and the Strategic Research Fund must be preserved using safe and reliable methods that include establishing postal time-deposit accounts or bank time-deposit accounts; entrusting the funds with a trust bank; or purchasing government or corporate bonds.

(Restrictions on the disposal of the Principal Fund)

**Article 9**

The Principal Fund may not be disposed of or used as collateral. However, in the case where there are unavoidable circumstances when carrying out the activities of the Institute, a portion of the Principal Fund may be disposed of, or all or a portion of the Principal Fund may be used as collateral upon resolution of two-thirds or more of the current number of members of the Board of Directors, with the approval of the Board of Trustees and the approval of the Minister of the Environment

(Strategic Research Fund)

**Article 10**

1. The Strategic Research Fund shall be set up to ensure that operations are carried out smoothly.  
The Strategic Research Fund shall be composed of the following categories of assets:
  - 1) donated assets designated as assets for the Strategic Research Fund; and
  - 2) assets that are transferred to the Strategic Research Fund by resolution of the Board of Directors.
2. The Strategic Research Fund may not be disposed of or used as collateral. However, in the case where there are unavoidable circumstances when carrying out the activities of the Institute, upon resolution of two-thirds or more of the current number of members of the Board of Directors and with the approval of the Board of Trustees a portion of the Strategic Research Fund may be disposed of or, all or a portion of the Strategic Research Fund may be used as collateral

(Payment of expenses)

**Article 11**

The expenses of the Institute shall be paid from the Operating Resources.

(Business plans and budget)

**Article 12**

The documents for the Institute's annual business plans and the annual budget necessary for such business plans shall be prepared by the Chair of the Board of Directors. Prior to the start of each fiscal year, these documents must be sub-

mitted to the Minister of the Environment upon resolution of more than one-half of the current number of the members of the Board of Directors after receiving the comments by the Board of Trustees. Any revisions to these documents must also follow the same process.

(Provisional budget)

**Article 13**

1. Notwithstanding the provisions of the preceding article, when the budget for income and expenditures is not formulated due to compelling reasons, the Chair of the Board of Directors may, upon resolution of the Board of Directors, exercise control over revenue and expenses in accordance with the budget of the previous fiscal year until a new budget is formulated.
2. The budget for revenue and expenses referred to in the preceding clause shall become the revenue and expenditures for the newly formulated budget.

(Business reports and settlement of revenue and expenses)

**Article 14**

1. The Institute's business reports and settlement statements shall be prepared by the Chair of the Board of Directors at the end of each fiscal year and shall include the Business Report, Statements of Revenue and Expenses, Report on Changes in Net Assets, Balance Sheets, and the List of Property. After receiving the auditor's inspection and upon resolution of more than one-half of the current number of the members of the Board of Directors, these documents must be reported to the Board of Trustees and they, within three months after the close of the fiscal year, must be submitted to the Minister of the Environment. In this case, if any revisions were made to the amount of the total of assets, it should be registered within two weeks, and a certified copy of the registration should be attached to these documents.
2. When there are surplus funds in the Institute's revenue and expenses settlement, upon resolution of the Board of Directors all or a portion of this surplus shall be transferred into the Principal Fund or appropriated forward to the next fiscal year.

(Long-term borrowings)

**Article 15**

When the Institute seeks to borrow funds, upon resolution of two-thirds or more of the current number of members of the Board of Directors and with the approval of the Board of Trustees, authorization must be obtained from the Minister of the Environment, except for the payment of short-term borrowings with income from that fiscal year.

(Assumption of responsibilities and waiver of rights)

**Article 16**

In cases corresponding to the provision of Article 9 or provisions in previous articles and with the exception of those

matters determined by the budget for revenue and expenses, notice must be served to the Minister of the Environment upon resolution of more than one-half of the current number of the members of the Board of Directors and with the approval of the Board of Trustees, when Institute seeks to assume additional responsibilities or waive rights.

(Fiscal year)

#### **Article 17**

The Institute's fiscal year shall begin on April 1 of each year and end on March 31 of the following year.

### **Chapter 3 Officer**

(Types and number of officers)

#### **Article 18**

1. The Institute shall have the following officers:

1) Directors

The Institute shall have at least 15 and no more than 25 Directors.

2) Auditors

There shall be two Auditors.

2. Among the Directors, one-half of the current number of Directors plus one shall be persons of Japanese nationality. In the case the current number is odd, the terms "the current number of Directors" shall signify "the current number minus one".

3. Among the Directors, there shall be one Chair of the Board of Directors.

4. Among the Directors, there shall be one or two Vice-Chair(s).

5. Among the Directors, there shall be one President.

6. Among the Directors, there may be one Vice-President..

7. Among the Directors, there shall be one Managing Director.

(Election and other matters)

#### **Article 19**

1. The Directors and Auditors shall be elected by the Board of Trustees.

2. The Directors shall mutually elect the Chair of the Board of Directors, one or two Vice-Chair(s), the President, the Vice-President and the Managing Director.

3. The Directors, Auditors, and Trustees cannot simultaneously serve in another position.

4. The number of Directors that are relatives or have special mutual relations shall not exceed one-third of the total number of Directors.

5. The Auditors shall not be relatives or have special mutual relationships.

6. Any changes among the Directors shall be registered within two weeks and reported without delay to the Minister of the Environment together with a certified copy of the register.

7. Any changes among Auditors shall be reported without delay to the Minister of the Environment.

(Duties)

#### **Article 20**

1. The Chair of the Board of Directors shall represent the Institute and exercise general control over the business thereof.

2. The Vice-chair(s) shall assist the Chair of the Board of Directors and in the event that the Chair becomes incapacitated or is absent, a designated Vice-Chair shall execute the duties of the office of the Chair in accordance with the previously determined intentions of the Chair in an order determined by resolution of the Board of Directors.

3. The President shall direct the operation of Strategic Research, its related training and other matters of the Institute as stipulated in Article 42.

4. The Vice-President shall assist the President and execute the duties of the office of the President in the event that the President becomes incapacitated or is absent.

5. The Managing Director shall assist the Chair of the Board of Directors and the Vice-Chair(s) and shall, under the guidance of the Chair and the Vice-Chair(s), exercise control over and dispose of the ordinary business of the Institute which is not within the duties of the office of the President.

6. The Directors shall comprise the Board of Directors, and they must resolve matters related to the business of the Institute in accordance with the provisions under these Articles of Association.

(Duties of the Auditors)

#### **Article 21**

The Auditors shall:

1) audit assets and accounting;

2) audit the execution of business activities by the Directors;

3) report irregularities found through the auditing of assets, accounting, and the execution of business activities to the Board of Directors and the Board of Trustees, or Minister of the Environment; and

4) when it is necessary to report on matters in the preceding item, request a convening of or convene the meetings of the Board of Directors and the Board of Trustees.

(Terms of office)

#### **Article 22**

1. The terms of office for the Officers shall be three years. However, officers shall not be prevented from being reelected to a second term.

2. The terms of office for Officers who are elected as replacements or elected as additional Officers shall be the time remaining in the term of any predecessor or the same

as the terms of the present Officers.

3. Even after resigning or following the expiration of a term of office, Officers must carry out the duties of their position until a successor takes office.

(Dismissal)

#### **Article 23**

When one of the following matters applies to an Officer, the Officer may be dismissed by resolutions of at least two-thirds majorities of both the Board of Directors or the Board of Trustees, based on the current number of Directors or Trustees. In the case of such dismissal, an opportunity must be given to the officer for exculpation prior to a vote on a resolution of the Board of Directors and the Board of Trustees.

- 1) When it is recognized that the Officer is unable to execute the duties of the position because of psychological or physical problems
- 2) When it is recognized that the officer has violated an obligation of the duties of the position or if the Officer carries out any activity that is inappropriate for an Officer

(Remuneration and others)

#### **Article 24**

1. Officers shall not be remunerated. However, full-time officers may be remunerated.
2. Officers may be reimbursed for expenses.
3. The Chair may decide on reimbursement for necessary matters related to the preceding two clauses upon resolution of the Board of Directors.

## **Chapter 4 The Board of Directors**

(Composition)

#### **Article 25**

The Board of Directors shall consist of Directors.

(Authority)

#### **Article 26**

In addition to matters separately determined by the provisions under these Articles of Association, the Board of Directors shall decide on and execute all matters of importance related to the business activities of the Institute.

(Types and convening of the meetings of the Board of Directors)

#### **Article 27**

1. There shall be two types of meetings of the Board of Directors: the ordinary meeting of the Board of Directors and the extraordinary meeting of the Board of Directors.
2. The ordinary meeting of the Board of Directors shall convene twice each year.
3. The extraordinary meeting of the Board of Directors shall convene in any of the following cases:
  - 1) when the Chair of the Board of Directors recognizes

that such a convening is necessary;

- 2) when there is a request to convene by one-third or more of the current number of members, with a request stating in writing the purpose of the convening of the Board of Directors; and
- 3) when there is a request to convene by an Auditor, as stipulated in item 4 of Article 21.

(Calling of Meetings)

#### **Article 28**

1. The Chair of the Board of Directors shall call meetings of the Board of Directors.
2. The Chair of the Board of Directors must call the extraordinary meetings of the Board of Directors within 20 days in the case of items 2 and 3 of clause 3 in the preceding Article.
3. When calling of the ordinary meeting of the Board of Directors, notification in writing that states the time and date, place, purpose, and articles for deliberation must be made at least 30 days prior to the convening of the meeting. However, this shall not apply when all Directors agree to convene the meeting.

(Chair of meeting)

#### **Article 29**

The Chair of the Board of Directors shall also serve as meeting chair.

(Quorum)

#### **Article 30**

Meetings of the Board of Directors may not be convened unless more than a half of the current number of Directors are in attendance.

(Resolutions)

#### **Article 31**

Except as otherwise provided for by the provisions in these Articles of Association, the resolutions of the meeting of the Board of Directors shall be decided upon by a majority vote of the Directors. In the case of an equal number votes for approval and disapproval, the matter shall be decided by the Chair of the meeting.

(Voting in writing and others)

#### **Article 32**

1. Any Director unable to attend the meeting due to unavoidable circumstances may vote in writing on the matters on which notification has been made beforehand, or another Director may be commissioned to vote as a proxy for the absent Director.
2. With regard to the application of provisions in the preceding two articles in the case where a Director is unable to attend as stipulated in the preceding clause, the Director shall nevertheless be regarded as having attended the meeting.

(Minutes)

**Article 33**

1. The minutes of the meetings of the Board of Directors shall be prepared and must contain the following matters:
  - 1) The date, time, and place of meeting
  - 2) The current number of Directors, the names and number of Directors in attendance. (Persons voting in writing and commissioned to vote by proxy shall be noted in the minutes.)
  - 3) Matters deliberated and matters voted on
  - 4) A summary and the results of the proceedings
  - 5) Matters relating to the election of signatories to the minutes
2. The Chair of the meeting and two or more persons elected to sign the minutes of the meeting must sign and affix their seals to the minutes.

## Chapter 5 Trustees and the Board of Trustees

(Trustees)

**Article 34**

1. The Institute shall have at least 25 and no more than 35 Trustees.
2. Trustees shall be elected by the Board of Directors, and shall be commissioned by the Chair of the Board of Directors.
3. The Trustees shall be the persons commissioned by national administrative organization and international organizations that have signed the Charter or persons of knowledge and experience.
4. The provisions in Articles 22,23, and 24 shall be applied mutatis mutandis to the Trustees. In this case, the term "officer" used in these articles shall read as "Trustee."

(Board of Trustees)

**Article 35**

The Board of Trustees shall be composed of Trustees.

(Authority of the Board of Trustees)

**Article 36**

The Board of Trustees shall carry out the duties stipulated in these Articles of Association, deliberate and provide advice to the Chair of the Board of Directors on matters related to the business of the Institute, in response to requests from the Chair of the Board of Directors or when the Board of Trustees recognizes that such deliberation and advice are needed .

(Calling of Meeting)

**Article 37**

1. Meeting of the Board of Trustees shall be called by the Chair of the Board of Directors.
2. The Chair of the Board of Directors must convene the

Board of Trustees within 20 days, when there is a written request stating the purpose to convene by one-third or more of the current number of Trustee members.

(Election of the Chair)

**Article 38**

The Chair of the meeting of the Board of Trustees shall be mutually elected by the Trustees.

(Quorum, resolutions and voting in writing and others)

**Article 39**

The provisions in Articles 30 to 33 shall be applicable mutatis mutandis to the Trustees. In this case, the terms "Board of Directors" and "Directors" used in the mentioned articles shall read as "Board of Trustees" and "Trustees".

(Other)

**Article 40**

In addition to the provisions in this article, the Board of Directors shall determine necessary matters related to the operation of the Board of Trustees.

## Chapter 6 Honorary Advisors and Counselors

(Honorary Advisors and Counselors)

**Article 41**

1. The Institute may have Honorary Advisors and Counselors.
2. Honorary Advisors and Counselors shall be appointed by the Chair of the Board of Directors upon the recommendation of the Board of Directors.
3. The Honorary Advisors shall respond to inquiries from the Chair of the Board of Directors regarding basic matters and may provide advice to the President.
4. The Counselors shall respond to inquiries from the Chair of the Board of Directors regarding important business matters and may provide advice to the President.
5. The terms of office for both the Honorary Advisors and the Counselors shall be three years. However, the Honorary Advisors and the Counselors are not prevented from being reappointed.

## Chapter 7 Research Structure

(Duties of the President)

**Article 42**

The president shall execute the following duties based on resolutions made by the Board of Directors:

- 1) decide on Strategic Research plans and manage their implementation;
- 2) prepare annual reports on Strategic Research and its related training and report to the members of both the

- Board of Directors and the Board of Trustees;
- 3) appoint and dismiss research fellows and other related staff;
  - 4) decide on necessary matters related to Strategic Research and its related training;
  - 5) direct the operation of Strategic Research and its related training.

(Research Advisory Committee)

**Article 43**

1. The Institute shall have a Research Advisory Committee which is an advisory body for promotion of Strategic Research.
2. The Research Advisory Committee provides the President with advice on matters related to promotion of Strategic Research, such as decisions on Strategic Research plans and management of their implementation.
3. The Members of the Research Advisory Committee shall be appointed by the Chair of the Board of Directors in consultation with the President.
4. The Members of the Research Advisory Committee shall be the persons commissioned by research and academic institutions that have signed the Charter or persons of knowledge and experience.
5. The terms of office for the Members of the Research Advisory Committee shall be three years. However, the Members are not prevented from being reappointed.
6. The terms of office for the Members of the Research Advisory Committee who are elected as replacements or elected as additional Members shall be the time remaining in the term of any predecessor or the same as the terms of the present Members.
7. In addition to matters stipulated in the preceding clauses, necessary matters related to the Research Advisory Committee shall be decided by the Chair of the Board of Directors subject to resolution of the Board of Directors.

(Research fellows and other related staff)

**Article 44**

1. The Institute shall have senior research fellows, research fellows, research associates and visiting research fellows.
2. Visiting research fellows shall belong to other organizations and engage in the Strategic Research.
3. The senior research fellows, research fellows, research associates and visiting research fellows shall be appointed and dismissed by the President.
4. Necessary matters related to senior research fellows and others shall be decided by the President subject to resolution of the Board of Directors.

(Trainees)

**Article 45**

1. In addition to those persons belonging to the Institute, the Institute may have other persons participate in the Strategic Research as trainees.

2. Necessary decisions regarding trainees shall be made by the President subject to resolution of the Board of Directors.

## Chapter 8 Secretariat

(Establishment)

**Article 46**

1. A Secretariat shall be installed to carry out the business of the Institute.
2. The Secretariat shall have a Secretary-General and necessary staff.
3. The Secretary-General and staff shall be appointed and dismissed by the Chair of the Board of Directors. Upon appointment or dismissal of staff involved in research activities, however, the Secretary General shall consult the President.
4. The Chair of the Board of Directors shall decide on matters necessary for the Institute and operation of the Secretariat subject to resolution of the Board of Directors.

(Books and documents to be furnished)

**Article 47**

The office of the Secretariat must always keep the following records and documents:

- 1) the Articles of Association for the Institute;
- 2) a list and the resumes of Directors, Auditors, Trustees, Members of Research Advisory Committee, Research Fellows, Research Associates and other staff;
- 3) documents on permission, authorization, and registration;
- 4) documents on the proceedings of the Institute set forth in the Articles of Association;
- 5) records and documentary evidence for revenue and expenses;
- 6) documents indicating the status of the assets and liabilities and the situation regarding net assets; and
- 7) other necessary documents and records.

## Chapter 9 Affiliates

(Affiliates)

**Article 48**

1. Individual persons and corporations who endorse the objectives and activities of the Institute may become affiliates of the Institute according to the rules determined by the Chair of the Board of Directors upon resolution by the Board of Directors.
2. The affiliates can participate in the business activities of the Institute and obtain information on results of Strategic Research and related matters.
3. The affiliates shall pay the prescribed fees according to the rules stipulated in clause 1 of this Article.

## Chapter 10 Amendments to the Articles of Association and Dissolution of the Institute

(Amendments to the Articles of Association)

### Article 49

These Articles of Association may be amended only with the approval of the Minister of the Environment after approval by three-fourths or more of the current number of members of the Board of Directors and three-fourths or more of the current number of members of the Board of Trustees.

(Dissolution)

### Article 50

The Institute may be dissolved only in accordance with the provisions set forth in items 2 through 4 of clause 1 under Article 68 of the Japanese Civil Law and with the approval of the Minister of the Environment after resolution of three-fourths or more of the current number of members of the Board of Directors and three-fourths or more of the current number of members of the Board of Trustees.

(Disposition of residual assets)

### Article 51

The residual assets at the time of the dissolution of the Institute shall be donated to institutions that operate with similar objectives or returned to the party which donated the concerned assets to the Institute, subject to the approval of the Minister of the Environment after the resolution of three-fourths or more of the current number of members of the Board of Directors and three-fourths or more of the current number of members of the Board of Trustees.

## Chapter 11 Supplementary Provisions

(Commission)

### Article 52

In addition to matters stipulated in these Articles of Association, necessary matters relating to the operations of the Institute shall be decided separately by the Chair subject to resolution of the Board of Directors.

### Additional provisions

1. These Articles of Association become effective on March 31, 1998
2. Clause 2 of Article 18 shall become effective on and after March 31, 1999.
3. The President of the Institute shall serve as the Chair of the Board of Directors, until the first meeting of the Board of Directors of the Institution, which is to be held after

March 31, 1998.

4. Notwithstanding the provisions set forth in clause 7 of Article 18, the position of Managing Director may be vacant until an appropriate date.
5. Regardless of the provisions set forth in clause 5 of Article 43, terms of the Research Advisors selected by the Chair of the Board of Directors shall end on March 31, 1999. This is also in accordance with clause 3 of the same Article.