

Institute for Global Environmental Strategies

Annual Report FY2006



Cover Photographs:
Yoshiko Yamanishi

Foreword



Hironori Hamanaka
Chair, IGES Board of Directors

The Institute for Global Environmental Strategies (IGES) is conducting practical strategic research on global environmental issues for realising sustainable development in the Asia-Pacific region. Established in 1998 under the initiative of the Government of Japan, IGES has its headquarters in Hayama, hosted by the Kanagawa Prefectural Government. Since its establishment, IGES has been developing its networks in Japan and abroad, setting up offices in Kitakyushu (Fukuoka Pref., Japan), Kobe (Hyogo Pref., Japan), Bangkok (Thailand) and most recently in Beijing (China) in July 2006, to further expand its research activities.

In FY2006, the final year of the Third Phase Strategic Research Programme (FY2004 - 2006), the six research projects - Climate Policy, Forest Conservation, Urban Environmental Management, Freshwater Resources Management, Business for Sustainable Society and Long-term Perspective and Policy Integration - worked to sum up Third Phase research and bring about steady, expected results. We also made full use of accumulated networks of international institutes and national governments to further disseminate research results and put them to practical use.

As the culmination of our research over the past eight years, IGES published the Japanese-language version of IGES White paper "Sustainable Asia 2005 and Beyond - In the pursuit of innovative policies" in

July 2006, which compiles data on environmental issues in Asia and proposes measures for improvement. In addition, on the occasion of the side event at the Twelfth Session of the Conference of the Parties (COP12) to the UNFCCC and the Second Session of the Conference of the Parties serving as the Meeting of the Parties to the Kyoto Protocol (COP/MOP2) held in Nairobi (Kenya) in November, we extensively reported the research results based on a series of policy dialogues on climate change related issues in Asia. Moreover, by holding side events at various important international conferences and serving as Secretariat for various entities such as the Asia-Pacific Forum for Environment and Development (APFED), the 3R Initiative and the Kitakyushu Initiative, we were able to disseminate research results and outreach to various kinds of stakeholders, such as policy-makers of national governments, NGOs/NPOs, businesses and researchers. We also actively provided opportunities to examine environmental policies to facilitate policies contributing to sustainable development.

With rapid population growth and economic development in the Asia-Pacific region, threats to the environment have been increasing, and this may mean that global sustainable development will be quite difficult to achieve. I am keenly aware of the urgency of environmental problems in Asia and believe that IGES, with its region-based strategic research, has an

increasingly important responsibility to shoulder in the future. April 2007 saw the start of the Fourth Phase Integrated Strategic Research Programme, and based on outcomes accumulated through research activities carried out thus far and strengthened cooperation among international organisations, government and research institutions, we hope to promote higher standards of strategic research and increase our efforts

to further disseminate the research outcomes and enrich information outreach.

In closing, I would like to ask for your continued understanding and support for IGES research activities.

Nironou Namanaka

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I

Outline of IGES



Mission and Goals

Global Environmental Strategies from the Asia-Pacific Region

The Institute for Global Environmental Strategies (IGES), established under the initiative of the Japanese Government in 1998, is an international research institute that conducts pragmatic and innovative strategic policy research aiming to support sustainable development in the Asia-Pacific region.

The mission of IGES is to conduct policy research on various kinds of environmental problems including global warming - the most urgent issue facing the world today-, forest degradation, air and water pollution and an increase in waste generation, and then to propose practical policies and construct strategies towards sus-

tainable development in the region.

Strategic policy research for the realisation of sustainable development is a formidable task with difficulties in the Asia-Pacific region, which occupies large areas on earth and has diversity in natural environment, cultures, social forms and the stage of economic development at national and local levels. IGES expands networks and strengthens collaborations with a broad range of stakeholders, such as national governments, non-governmental organisations, businesses and citizens groups, to carry out this challenging research.

Our Approach

Strategic Policy Research on Global Environmental Issues

IGES is an international strategic policy research institute that deals with global environmental issues*. From a global perspective that transcends national boundaries, IGES proposes policies and institutional frameworks that aim to create a new type of environmentally sound and equitable society.

* In April 2003, IGES was granted Special Consultative Status under the United Nations Economic and Social Council (UN/ECOSOC).

Focus on Sustainable Development in the Asia-Pacific Region

IGES research focuses on sustainable development in the Asia-Pacific, a region experiencing rapid growth in industrial activity and population, with serious implications for the future global environment.

Outreach for Policy-Making

IGES is a policy-oriented institute that reaches beyond pure academic research. It aims to produce out-

puts that can be reflected in the policy-making processes of international organisations as well as national and local governments, and in the activities of businesses, NGOs and local citizens. To this end, IGES reaches out actively to various stakeholders.



Major Research and Project Activities for FY 2006

Research Projects

IGES formulates three year research projects to conduct strategic policy-oriented research. In FY 2006, the final year of the Third Phase (FY 2004 - FY 2006), research results of the three years were compiled under 6 main projects: Climate Policy; Forest Conservation; Urban Environmental Management; Freshwater Resources Management; Business for Sustainable Society, and Long-term Perspective and Policy Integration.

Outreach Activities

Under the framework of the Asia-Pacific Forum for Environment and Development (APFED), a forum of experts concerning environmental issues in the region, for which IGES serves as secretariat, IGES conducted a series of activities with the aim of reflecting the institute's research results in the policy-making of national and local governments and activities of businesses, NGOs and local citizens. In addition, IGES presented the results of its strategic research on the occasion of the side events at the UNFCCC 12th Session of the Conference of Parties (COP12) and the second session of the Conference of Parties serving as the Meeting of the Parties to the Kyoto Protocol (COP/MOP2) and promoted the dissemination and realisation of those results.

Moreover, aiming to introduce its research results to a wider audience in an easy-to-understand way, IGES organised such events as a symposium to mark the Japanese-language publication of the IGES White Paper "Sustainable Asia 2005 and Beyond - In the pursuit of innovative policies". IGES also actively carried out information outreach, with such important contributions as the launch of "Enviro-Library", a database of IGES research results, and the regular publication of the e-mail newsletter "E-alert".

Inter-Governmental Programmes and Networks

IPCC National Greenhouse Gas Inventories Programme (NGGIP) Technical Support Unit (TSU)

TSU for NGGIP of the Inter-Governmental Panel on Climate Change (IPCC) was set up at IGES in 1999 in

order to function as the secretariat for the NGGIP activities. In April 2006, IPCC adopted and accepted the *2006 IPCC Guidelines for National Greenhouse Gas Inventories*, the final result of the project that the TSU had been working on under NGGIP since 2004. In line with this, TSU has been updating the IPCC Emission Factor Database (EFDB) launched in 2002, trying to increase the data stored in the database, and exploring other data sources.

Asia-Pacific Network for Global Change Research (APN)

APN was set up to promote global change research in the Asia-Pacific region, to increase participation by developing countries and to strengthen links between researchers and policy decision-makers. It currently has 21 member countries. In April 2004, the APN Secretariat was moved to IGES. In fiscal year 2006, Annual Regional Call for Proposals (ARCP) selected 15 projects which were allocated with funding of approximately US\$ 629,000.

Other Activities

The Programme Management Office (PMO), established in April 2006, plans and coordinates thematic research projects to cope flexibly with the issues and needs of the Asia-Pacific regions in an integrative manner for the effective implementation of strategic research. The PMO played a central role in developing the Fourth Phase Integrative Strategic Research Programme started from April 2007.

In July 2006, IGES established the Beijing Office (the Sino-Japan Cooperation Project Office) so as to strengthen environmental research and surveys in China. In this regard, a cooperative agreement was signed between IGES and the Sino-Japan Friendship Center for Environmental Protection affiliated to the State Environmental Protection Administration of China.

II

Research Projects



Climate Policy (CP) Project

1. Outline of Third Phase Strategic Research

The mission of the Climate Policy Project is to evaluate and recommend climate policies for sustainable development in Asia and the Pacific in an era of evolving global climate regime.

The research in the Third Phase was geared towards policy research both for strengthening the effectiveness of the market mechanisms of the Kyoto Protocol, and for designing more effective post-2012 climate regime. In order to accomplish the above effectively and comprehensively, we set out four sub-themes as follows:

- a. To assess climate policies in selected developed countries and their implications for Asia
- b. To propose measures for effective implementation of the Kyoto mechanisms
- c. To identify ways to strengthen the future climate regime beyond 2012 from an Asian perspective
- d. To recommend policies for enhancing adaptive capacity in Asia

2. Activities in FY 2006

2-1. Domestic Climate Policy

In the research in the Third Phase, the project examined the policies in Germany and the US as part of the assessment of the domestic climate policies in developed countries. They are expected to provide a sound base for effective domestic policy design in Japan and other Asian countries,

As part of the work on the assessment of the options in mechanism for Japan to acquire carbon emission reduction credits from abroad, the desired options regarding the emissions trading system (ETS) in Japan was examined, including prospects for linkages to the ETS of other countries. Analysis of Japan's Voluntary Emissions Trading Scheme (JVETS) showed that the lack of proactive participation by the Japanese private sector was a major barrier for its effective implementation. CP suggested that provision of incentives for active participation of the private sector and development of a solid system for reporting and verification of emission

reductions were critical to ensure its success. By applying game theory concepts, the project showed that JVETS, in its current design, had low potential for trading of emissions among participating companies, especially because companies set voluntary emission reduction targets solely based on their capacity to reduce emissions. The project made presentations on the design elements of JVETS and prospects for its improvement at various international conferences such as the conference on linking emissions trading schemes held in Brussels in May 2006. Furthermore, the project examined Japan's ODA policy in relation to climate change and noted that Japan's ODA administrators should focus on sensitising the developing country partners regarding the importance of energy conservation through fuel switch and about the mitigation potential of different renewable energy options. The project also suggested that Japanese ODA should focus further on promoting adaptation measures, especially in urban and coastal areas of the most vulnerable countries of the Asia-Pacific region. These suggestions were made to the Ministry of Foreign Affairs of Japan.

For implications to Asia, the project made an overview presentation on climate change actions in different Asian countries in a workshop entitled "Mainstreaming Policies and Investments in Low Carbon" which was co-organised by the United Nations Economic and Social Commission for Asia and the Pacific (ESCAP), the UK Department for International Development (DFID) and the UK Department for Environment, Food and Rural Affairs (DEFRA). It was held in Bangkok in August 2006. In this presentation, the limited potential of Clean Development Mechanism (CDM) in attracting investment to the region and the need for reducing geographic inequity in CDM within the region were discussed. CP also co-organised an international workshop on "Development and Climate" in Paris in September 2006. The Asian perspectives on formulation of climate policies with developmental benefits, especially with regard to promotion of renewable energy sources and energy efficiency measures, were presented.

2-2. Kyoto Mechanisms

Based on past research, such as the potential impacts of the European Union Greenhouse Gas Emission Trading Scheme (EU-ETS) on Japan's ability to acquire emission reduction credits (ERCs) from the central and eastern European countries, the project issued a Policy Brief entitled "Foreign Carbon Credit Purchasing Options Open to Japan to Achieve the Kyoto Target" in November 2006. CP suggested that Japan needs to establish a mechanism to secure credits from abroad corresponding to at least 1.6% based on the Kyoto Target Achievement Plan (KTAP). For creation of the new credit flows and promotion of acquirement of the credit by Japanese government and companies, the project also proposed two parallel but interlinked stages: 1) effective implementations of a national purchasing scheme and, 2) the establishment of a domestic cap and trading scheme linked to other domestic emissions trading schemes.

As a work commissioned from Ministry of the Environment of Japan (MOEJ) for capacity building of CDM in developing countries, CP implemented the programme of Integrated Capacity Strengthening for CDM (ICS-CDM) with the objectives of raising awareness of CDM among stakeholders, assisting institutions in formulating appropriate project approval process, and supporting the formulation, development and implementation of CDM projects. The project organised workshops and tutorials in local, national and regional level which oriented towards meeting diverse capacity building needs of various countries in Asia (nearly 100 workshops or seminars in the Third Phase). While focusing



CDM capacity building workshop (Thailand)

primarily on sectors such as renewable energy sources including biomass, the waste for energy generation and small scale projects with large developmental benefits, CP supported all types of projects based on stakeholder needs in different countries. In September 2006, a CDM investor forum was held in Japan to introduce four Chinese projects (three in biomass and one in the iron and steel sector) to Japanese investors. In August 2006, CP updated and published "CDM and JI in Charts Version 6.0" which is a document aiming to give a comprehensive and easy-to-understand description of the CDM and other Kyoto Mechanisms. In addition, the project organised a side event at the twelfth session of the Conference of the Parties to the United Nations Climate Change Convention (UNFCCC) and the second Meeting of the Parties to the Kyoto Protocol (COP 12 and COP/MOP 2) in Nairobi, reporting the CDM-related activities as well as explaining the current problems and the issues to be dealt with in the future.

2-3. Post-2012 Climate Framework

In the Third Phase, as an approach towards more effective participation of Asian countries in formulating the future climate regime, the project conducted a series of multi-stakeholder consultations in national and regional level. A side event was held at the 14th session of the Commission on Sustainable Development (CSD-14) in May 2006 and the summary of the findings from consultations held in 2005 were reported. In FY 2006, the project organised consultations on a sub-regional basis in East Asia (Beijing, July 2006), Southeast Asia (Bangkok, July 2006) and South Asia (Delhi, August 2006) to discuss specific themes of high priority such as energy security and development needs, CDM, technology development and transfer, and adaptation to climate change. Specific recommendations were made to move forward in discussions on each theme. With regard to technology development and transfer, for example, we identified three priorities - building synergies between UNFCCC and non-UNFCCC initiatives, enhancing flexibility of intellectual property rights for low carbon technologies, and improving financial mechanisms to accelerate technology deployment. Based on these consultations, CP published a report entitled "Asian Aspirations for the Climate Regime Beyond 2012" and distributed it



Consultation on climate regime beyond 2012 (China)



Consultation on climate regime beyond 2012 (India)

at the side event held at the COP12 and COP/MOP2 in Nairobi in November 2006.

In a collaborative project with Waseda University and National Institute for Environmental Studies (NIES) and as part of the commissioned work by MOEJ, the definitions and implementation in major countries of legal principles stipulated in Article 3 of the UNFCCC were examined. In FY 2006, information on the EU regulations to control air pollutants at national and regional level is compiled and the relationships between compliance and demonstrable progress in the climate regime were analysed. It was suggested that while compliance and demonstrable progress were closely linked conceptually, the current climate regime did not have a legally-binding framework to analyse such relationships.

Serving as a Secretariat for the MOEJ Working Group on future climate regime, the project, in collaboration with NIES and Tohoku University, developed a menu-based approach with multi-stage sector-based targets as a possible architecture for the second commitment period of the Kyoto Protocol. This approach

was presented at the World Congress of Environmental and Resource Economists and the annual meeting of Society for Environmental Economics and Policy Studies held in Kyoto in July 2006.

2-4. Adaptation

The research and outreach activities on adaptation were targeted at local, national and international levels. At the local level, the project conducted field surveys in Bangladesh and at the international level, analysed the merits and demerits of formulating a separate protocol on adaptation, prospects for mainstreaming adaptation in development planning. The results of the research were presented at various opportunities such as COP.

At the national level, CP participated as a member of the research consortium on adaptation in Japan. We contributed to the discussions of the consortium meetings held in July 2006 and made presentations at an international symposium entitled “Future of the Earth’s Environment - Prediction and Countermeasures of Global Warming” held at Mito in November 2006. In addition, the project analysed options for enhancing the effectiveness of Japanese ODA in the area of adaptation by critically looking at JICA’s experiences in disaster management, rural development and agricultural sectors. The report identified several examples of current and past ODA projects that indirectly facilitated adaptation to climate change, even though the projects were not designed with the intention of facilitating adaptation. The research outcomes were submitted to the Ministry of Foreign Affairs (MOFA) of Japan. It led MOFA to formulate a study group of “ODA and adapta-



Scoping consultation on adaptation

tion” in its preparation toward the 2008 G8 summit.

CP continued to examine the national policies for facilitating dynamic adaptation in agriculture and water resources sectors in Bangladesh, India and Viet Nam. The analysis showed that national and local governments have to be proactive in convincing farming communities and water resource managers of the potential impacts of climate change and provide necessary incentives to adjust cropping systems and water use methods, especially in the arid and semi arid tropics. In February 2007, CP organised an expert consultation on mainstreaming adaptation concerns in agriculture and water sectors, and suggested a few options for mainstreaming at both policy and operational levels in both sectors.

Selected Symposiums and Workshops

Side-event at COP12 and COP/MOP 2

CDM for Sustainable Development: Dream or Reality?

Date: 8 November 2006

Place: Nairobi, Kenya

Organiser: IGES

Outline:

Reflecting the interest in CDM, nearly 240 people, including climate negotiators and experts, attended the event. CP introduced IGES research on CDM and the capacity strengthening programme. We explained the progress and prospects for CDM implementation in Asia and noted that many CDM projects do not necessarily contribute to sustainable development in the developing countries and that institutional reforms would be crucial to promote CDM projects that yield low CERs (Certified Emission Reductions) and contribute to sustainable development. Mr. Richard Muyungi, Vice-President’s Office of Tanzania, pointed out that there are very few CDM projects in Africa and that a shortage of institutional and technical capacity and a lack of awareness are the key barriers. However, he noted that CDM has high potential especially in sectors such as waste management and transport. A panel discussion with representatives from Cambodia, China, India, Indonesia, the Philippines, Tanzania and Austria followed these presentations. Panel members discussed the national efforts on CDM and the best way to utilise CDM as a tool to achieve sustainable development.



COP12 side event “CDM for Sustainable Development”

Side-event at COP12 and COP/MOP 2

Asian Aspirations for Climate Regime Beyond 2012

Date: 10 November 2006

Place: Nairobi, Kenya

Organiser: IGES

Outline:

Since 2005, IGES has conducted multi-stakeholder consultations on climate regime beyond 2012. In 2006, consultations took place in the northeast, southeast and south Asia focusing on the themes of 1) energy security and development needs; 2) CDM; 3) technology development and transfer, and 4) adaptation to climate change.

In the side event, the findings of those meetings were presented and a report entitled “Asian Aspirations for Climate Regime Beyond 2012” was released. The presentations were followed by a panel discussion with representatives from China, India, Indonesia, Maldives, Republic of Korea and the Philippines. The panel urged for integration of climate policy and development policy at the national level as well as the sustainable development of energy. The importance of improving access to energy-saving technologies was noted. The panel also pointed out that adaptation to climate change should be placed on an equal footing with mitigation in international efforts against climate change.



COP12 side event “Asian Aspirations for Climate Regime Beyond 2012”

Forest Conservation (FC) Project

1. Outline of Third Phase Strategic Research

The Forest Conservation Project recognises that deforestation and forest degradation are the greatest challenges to forestry in Asia, and aims to propose pragmatic policy options for sustainable forest management in the Asia Pacific region. To do this, we conducted research under the theme “From Destructive Forestry Practices to Sustainable Forest Management” and focused on the following four areas:

- a. Forest Certification
- b. Plantation Forestry
- c. Scoping Study of Illegal Timber Imports into Japan
- d. Forest Governance

2. Activities in FY 2006

2-1. Forest Certification

Forest Certification is acknowledged as an important instrument for encouraging and rewarding good forest stewardship, but its application has progressed slowly in Asian tropical countries. Research in FY2006 focused on evaluating three innovative certification models in Papua New Guinea, Indonesia and Lao PDR, with the objective of identifying strategies for overcoming some of the constraints facing forest certification for small forest enterprises in the region (Figure 1).

2-2. Plantation Forestry

Our research continued to focus on the centrally-planned economies of China, Viet Nam and Lao PDR, where some of the world’s largest tree-planting programmes are located. We complemented these studies

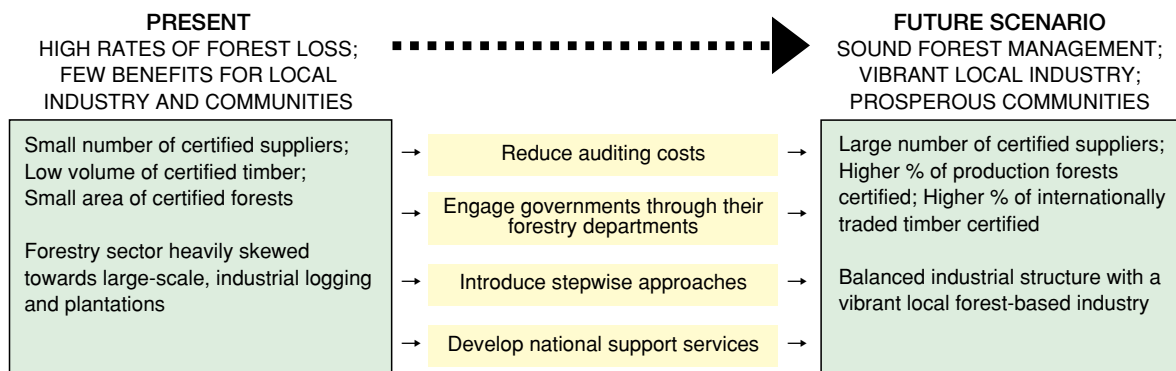


Secondary forest cleared by plantation companies (Lao PDR)

with a broader survey of trends and issues in plantation forestry in other Asian countries.

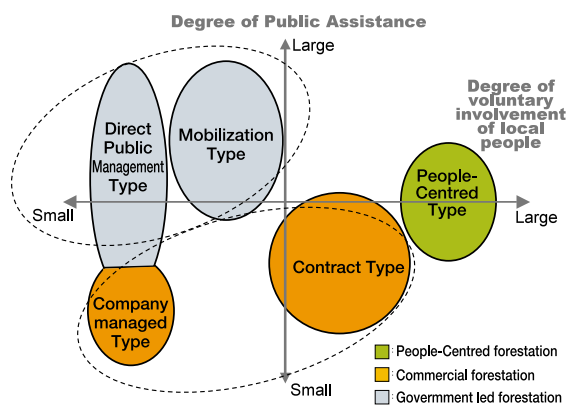
The approaches to planted forest establishment in Asia can be classified according to five types: direct public management; mobilisation; company managed; contract, and local people-centred (Figure 2). Each of these five forestation types have succeeded; however, the experience in Asia has been that under the direct public management type the traditional land-use rights of local people may not be respected, and the mobilisation type approach dampens enthusiasm for forestation amongst participating households if the government overly restricts land use by local people. The company managed plantation type has incited many examples of localised conflict. Creating space for local people to contribute to plantation design and management is vital to reduce land conflicts, achieve greater equity and secure the sustainability of the planted forests. For commercial plantations this can be achieved by moving to contract type models, which recognise local people’s land-use

(Figure 1) Measures to make forest certification more accessible to small forest enterprises



rights, while companies are still able to meet their lumber requirements. For government-led plantation models, the government should reflect the needs of local people in plantation design while continuing to provide technical and financial assistance, and it also may promote a shift to local people-centred types.

(Figure 2) Forestation Types in Asia



2-3. Scoping Study of Illegal Timber Imports into Japan

Our research in FY2006 focused on the reform of Japan's timber procurement policy, which we compared with public procurement policies in selected EU countries and which we assessed against forest realities in one "high risk" country, i.e. Papua New Guinea. Based on the research results, the project presented recommendations for improving Japan's procurement policy, including:

- i) develop and publicise national definitions of legality with supplier countries,
- ii) assess existing documentation systems in supplier countries, according to a publicly available list of criteria, with respect to whether they provide assurance of legality and sustainability,
- iii) when these systems are inadequate, work with governments to develop credible verification systems,
- iv) assess forest certification schemes to determine their credibility, using a standard set of criteria, and publish the results,
- v) develop criteria for legality and sustainability that would enable procurement agencies to conduct their own assessments of the timber/timber products to be procured, and
- vi) establish a service to provide guidance on how to certify the legality and sustainability of the timber/timber products to procurement agencies and their suppliers.

FC was also contracted by the Japan Federation of Wood Industry Associations to undertake 12 country studies of forest regulatory frameworks and illegal log-

ging by the end of FY2006 as part of the Ministry of Agriculture, Forestry and Fisheries project titled "Project to Promote a Comprehensive Response to Illegal Logging".

2-4. Forest Governance

FC conducted research on transitions in forest governance, specifically state support for community forestry and decentralisation of forest management. Focusing on seven Asian countries (India, Nepal, Cambodia, the Philippines, Thailand, Viet Nam and China), the studies assessed the institutional and policy changes at the national and provincial levels and developed country reports. Furthermore FC tried to analyse those changes through case studies and published the final report based on the shared observations and lessons acquired from those country studies.

Selected Symposiums and Workshops

The First Meeting of the Asia Forest Partnership (AFP) Evaluation Working Group

Date: 12-13 November 2006

Venue: IGES Headquarters

Organisers: IGES

Support: Government of Japan

Outline:

The Asia Forest Partnership (AFP) is a regional multi-stakeholder partnership that serves as an information-sharing platform and supports collaborative activities for the sustainable management of forests. Its three thematic areas are illegal logging, forest fires and land rehabilitation. The AFP Steering Committee established its Evaluation Working Group to assess the AFP's first five-year phase, which will come to an end in FY2007. In FY2006, IGES and the Government of Japan organised and chaired the first meeting of the Evaluation Working Group, which decided the outline and compiled the essential points to be covered in each section of the report.



AFP working group

Urban Environmental Management (UE) Project

1. Outline of Third Phase Strategic Research

The central theme of the UE project is how to integrate global scale environmental issues into local level management and planning with the promotion of greenhouse gas emission reduction as an ultimate goal. This is based on the common understanding that “human activity in cities can impose a serious environmental burden far away from the city boundaries”.

In the Third Phase we furthered our research focusing on the transportation and waste management areas which are the most striking environmental issues in Asian cities. For the transportation sector we took up the two areas of traffic reduction and modal share (share of public transport), whereas for waste management we investigated policies toward a recycle-oriented economic system, changes in treatment technologies and separation at source.

2. Activities in FY 2006

2-1. Transportation

a. Research into Reducing Travel Activities

Up until now in Asia, policies addressing each vehicle such as emissions regulations and fuel conversion have been regarded as important. Nowadays, however, growing attention is paid to the impacts of urban planning on transport related emissions in developed worlds. From the perspective of air pollution control and greenhouse gas emission reduction, we dealt with the issue of reducing travel activities through urban planning. Case studies were conducted in three cities (Yokohama, Shanghai and Bangkok) for this research.

In Yokohama, alongside studies into the state of traffic and the environment, we examined the urban planning framework of Japan in order to see how urban planning policies can be adopted and analysed urban design policies conducive to high density, mixed use of lands, and considering pedestrian and non-motorised transport (NMT). The Shanghai study examined the transport data in relation to the urban planning framework and pedestrian-friendly urban planning in designated zones. The study found that introduction of high den-

sity and mixed use land in the city was facilitated as the developers, the government and citizens developed a greater interest in facilities for pedestrians in the course of economic development. Researching in Bangkok, which has a high proportion of people who rely on automobiles, we found that even though mixed use land and the promotion of pedestrian-friendly environments, which have the potential to reduce transport demand, have been slightly addressed in current Bangkok Comprehensive Plan, these policies have few immediate effects on the current state.

b. Research on Modal Share

Cities in Asia are currently faced with rapid motorisation, and in order to limit the tremendous increase in atmospheric pollutants and greenhouse gases caused by this increase in vehicle numbers, it is urgent that the share of public transport systems be increased through political intervention.

In this research we conducted following case studies as policy measures for modal share: 1) introduction of public transport systems; 2) regulations on vehicle use, and 3) promotion of NMT use. For 1) we took up the case of Jakarta which was the first city in Asia to introduce a Bus Rapid Transport (BRT) system and where improvements in modal share can be seen. We analysed the factors that facilitated the introduction of BRT in Jakarta and identified such factors as the urgent need for reform in public transport that the city was facing, the Governor's leadership and the strong financial capacity of Provincial Government. Considering 2), we focused on Beijing, which is facing a rapid growth of vehicles and where car dependency is higher than other Chinese cities, and analysed the possibility of imposing restrictions on car use. For 3) we carried out work in Mumbai with its high potential for introduction of NMT, and came up with both short-term and long-term strategies. Regarding 1), we conducted comparative research on the policy processes in the three pioneering cities of BRT in Asia (Jakarta, Seoul and Beijing).

2-2. Waste Management

As part of our research we conducted local surveys and questionnaires as well as interviews of stakeholders concerned in Beijing, Manila and Bangkok. In Beijing we identified that in order to achieve long-term success in circular economy, it is essential to integrate the initiatives put forth by the central government and regional administrations into market mechanisms. In addition, we identified waste management as still being a major environmental management issue for Beijing. In Manila we examined changes in the treatment system and identified that Manila's political and cultural background played an important role in the drafting of waste sector policy. From 3R research in Bangkok we discovered that it is actually possible to expand the systemisation of best practices and that the effectiveness of bottom-up approaches may also work but only when it is done through bringing together the community, the local government and private sector external assistance.

2-3. Publication of a Special Edition of the Journal of Industrial Ecology

As a follow-up publication to a session at the International Human Dimensions Programme on Global Environmental Change (IHDP) held in October 2005, a special edition on the global impact of cities was published in March 2007. The UE project was involved in its planning, preparation and peer review process as well as choosing papers to feature in it.

2-4. Organising international workshops

At the Third World Urban Forum, held in June 2006, the UE project ran a side-event called "Integrating Global Concerns into Urban Management in Asia: Chal-

lenges and Experiences". In addition, at Better Air Quality Asia 2006, held in December 2006, the project organised two side-events based on the results of our case study research.

Selected Symposiums and Workshops

Better Air Quality Asia 2006 Sub-workshop

Date: 13-14 December 2006

Place: Yogyakarta, Indonesia

Organiser: IGES

Outline:

Better Air Quality Asia 2006 (BAQ 2006) is the largest conference on air quality in Asia. The 2006 conference had the theme "A Celebration of Efforts" with over 900 participants from more than 40 countries.

IGES UE project held two sub-workshops. At the "Travel Demand Reduction as a Co-benefits Policy Tool" workshop we presented case studies of reducing transport demand through urban planning (Yokohama, Bangkok, Shanghai) and facilitated discussions on a framework that links land use policy and measures to reduce greenhouse gases and air pollutants produced through transport more effectively.

At the "Modal Shifts towards Public Transport" workshop we gave the results of our research on traffic measures in Beijing, Jakarta, and Seoul and, using the example of the introduction of BRT, presented the results of our comparative analysis of the urban transport policy decision making process.

At the "Best Practice Exhibit" which gathered successful cases of air quality management and was held during the course of the conference, we set up a booth and used it to present the findings of our research.



Side event at WUF



Sub-workshop at BAQ 2006

Freshwater Resources Management (FW) Project

1. Outline of Third Phase Strategic Research

The FW project with its theme of “strategies for sustainable freshwater resources management” promoted two programmes, namely, “Research on Sustainable Water Management Policy” (SWMP) which aims to come up with integrated policy designs and “Water Environment Partnership in Asia” (WEPA) which is developing not only network among relevant stakeholders working for the water environment conservation in the region but also a database of the information such on policies and technology for water environment conservation.

2. Activities in FY 2006

2-1. Research on Sustainable Water Management Policy (SWMP)

Based on the case studies on groundwater management of Bangkok (Thailand), Bandung (Indonesia), Ho Chi Minh City (Viet Nam), Tianjin (China) and Kandy and Colombo (Sri Lanka) carried out in FY2004-2005, we conducted case studies on alternative water resources to groundwater, such as reclaimed water use in Tianjin; industrial use of public water supply which comes from surface water in Bangkok; potency of surface water use and reclaimed water use in industrial sector in Bandung, and surface water use in Ho Chi Minh City. In addition to the case studies, comparative studies of water management in these cities were also carried out. In order to ensure that our research and recommendations emerging from respective case studies were relevant to local situation, stakeholder meetings were held in respective cities. In March 2007, the final research meeting of SWMP was held in Bangkok. Local governmental officers and experts from respective case study cities were invited to the meeting and we discussed the recommendations which the SWMP research came up with as the result of the comparative study. In the Final Report of SWMP, we proposed that water management policies in Asian countries should focus on promotion of water efficiency. We also recommended that groundwater pollution controls should be



Research meeting at Ho Chi Minh City



Research meeting at Bangkok

strengthened by integration of quantity and quality management.

As part of our outreach activities, in September 2006 we presented our research findings at international meetings including “International Conference on Management of Water, Wastewater and Environment: Challenges for the Developing Countries” (organised by the Nepalese Environment Ministry) as well as “the First Policy Consultation Forum of the Seoul Initiative on Green Growth” (organised by United Nations Economic and Social Commission for Asia and the Pacific (UNESCAP) and the Ministry of the Environment, Korea) and received feedback from various stakeholders.

2-2. Water Environment Partnership in Asia (WEPA)

WEPA is an initiative proposed by the Ministry of the Environment, Japan at the Third World Water Forum in March 2003 with the aim of improving the water environmental governance in the region and enhancement



WEPA Database

of capacity for relevant stakeholders. As the information platform for those purposes, “WEPA Database” has been developed under the WEPA utilising the close link among the 11 partner countries, including Japan. In FY 2006, aiming to collect more information as well as to enhance the network with relevant stakeholders working for water environmental conservation, two meetings were held in Bangkok (Thailand), namely “International Symposium” and “WEPA International Forum.” In both meetings, we called for papers on good practices from the public and shared selected practices among meeting participants. These good practices presented at both meetings were uploaded onto the WEPA database.

Selected Symposiums and Workshops

Water Environment Partnership in Asia (WEPA) International Forum “Water Environmental Governance in Asia”

Date: 14-15 March 2007

Place: Bangkok, Thailand

Organisers: Ministry of the Environment, Japan

Co-organisers: IGES, Asian Institute of Technology (AIT)

Outline:

This forum aims to promote water environment governance by facilitating dialogue among various stakeholders in Asian monsoon regions as well as by networking with people working for the water environmental conservation in the region. In the meeting, good practices selected from open proposals were presented and shared among participants.

As the secretariat of WEPA, IGES provided not only logistic support but also substantial support such as selection of papers and preparation of meeting records.



WEPA International Forum “Water Environmental Governance in Asia”

Business for Sustainable Society (BSS) Project

1. Outline of Third Phase Strategic Research

The Business for Sustainable Society (BSS) Project was conducted at the Kansai Research Centre (KRC), aiming (1) to identify promising business models for realising a sustainable society and develop relevant methods to quantify their potential while proposing measures to promote such businesses, and (2) to clarify the conditions of business/industry activities and the direction of local development that are suitable for sustainable local society.

In FY 2006, “Research on Environmentally-Sound Business Models (BM Research)” with Product Service System (PSS) and Community Business (CB) and “Research on Environmentally-Sound Local Industrial System (LIS Research)” through examining the image of a global-warming-free local society and eco-industrial cluster[★] were conducted and their research results were produced.

2. Activities in FY 2006

2-1. Research on Environmentally-Sound Business Models (BM Research)

In the BM Research, (1) 25 cases/models selected as promising Product Service Systems (PSS) were analysed and evaluated, seven high potential business models were extracted and policy recommendations were made to promote and disseminate them. A research report was published as the results of a series

of the researches. In addition to the above approach with the analysis of the PSS cases/models, (2) a review of the policy trends of the PSS in Japan, Europe and the US, and (3) a research on the policy measures to promote community business for the environment which is another promising business model besides the PSS, were conducted and produced a discussion paper as the review/research result, respectively.

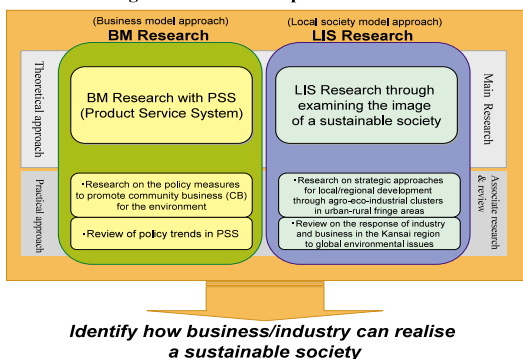
2-2. Research on Environmentally-Sound Local Industrial Systems (LIS Research)

In the LIS Research, (1) based on the image of a global-warming-free local society derived through a simplified simulation as the optimal combination of environmentally-sound technological and social systems, four promising global-warming-free solution businesses for realising such a local society were proposed and examined. A research report was prepared as the result of a series of research. In addition to the approach of examining the image of a global-warming-free local society, (2) research on strategic application of eco-industrial clusters in local/regional developments specific to Asian countries, and (3) a review on the locally-specific response of industry to global environmental issues were conducted and produced a source book or a research paper as the research/review result, respectively.

2-3. Other Activities

A series of stakeholder meetings under “Research on Strategic Approaches for Local/Regional Development through Eco-Industrial Clusters in Urban-Rural Fringe Areas” was held in Thailand (5 July 2006, Asian Institute of Technology), Viet Nam (28 July 2006, Ho Chi Minh City University of Technology) and India (4 August 2006, Anna University), respectively. Based on the outcomes of these meetings, an international workshop entitled “Eco-Industrial Clusters Leading to Sustainable Local Development of Asia” was organised in Kobe (26

BSS research goal and relationships between research themes



[★] Eco-industrial cluster: An area where resources such as energy, materials, water, information, etc. are efficiently shared through the gathering together of related businesses with cooperative relationships ensuring that positive effects are generated both environmentally and economically.

October 2006). Furthermore, an international symposium “Towards Sustainable Lifestyle and Business Model - Policy Trends of Sustainable Consumption and Production” was held in Kobe (17 January 2007) and various issues were examined there from a global perspective as to how consumers and producers can create a socio-economic system where the environmental burden can be reduced furthermore through cooperation, and the future measures were also discussed.

Selected Symposiums and Workshops

Business and the Environment International Workshop 2006

“Eco-Industrial Clusters Leading to Sustainable Local Development of Asia”

Date: 26 October 2006

Venue: Kobe, Hyogo Prefecture

Organiser: IGES

Outline:

Based on the negotiation results of the stakeholder conference, “Research concerning the Strategic Approaches for Local Development over/through Eco-Industrial Clusters in Urban and Rural Boundary Zones” was carried out in July and August. Along with debating the positive and negative points of various environmental management strategies concerning industrial clusters, based on case reports from Japan, Viet Nam, India and Thailand, it deepened understanding about the necessity and role of eco-industrial clusters for sustainable local development in Asia. Moreover, the panel discussion debated multiple investment strategies for consolidating the capacity of eco-industrial clusters and the necessity of integrative policy formations on a national level for the promotion of the eco-industrial clusters.



Business and the Environment International Workshop

Business and the Environment International Symposium 2006

“Towards Sustainable Lifestyle and Business Model - Policy Trends of Sustainable Con- sumption and Production”

Date: 17 January 2007

Venue: Kobe, Hyogo Prefecture

Organiser: IGES

Outline:

In the keynote speech, Michael Kuhndt, Head of the UNEP/Wuppertal Institute Collaborating Centre on Sustainable Consumption and Production (CSCP), used the concept of the Value Chain and positioned the poorest sectors of the population as customers and business partnerships in raw material collection, production/industry, distribution, waste, on every level. He reported on business models that ensure the poorest sectors profit, development of products that answer to needs, implementation of fair deals, and the creation of employment opportunities etc. He also proposed the “Human Development through the Market” approach which can successfully realise both poverty reduction and creation of business opportunity.

IGES BSS project has conducted reports on post global warming solution business models and product service systems (PSS) as past research outcomes. In the ongoing panel discussion there were debates and presentations from various angles on business support from the government, activities on the side of the producer, lifestyle changes, the application of new technology and so on.



Business and the Environment International Symposium

Long-term Perspective and Policy Integration (LTP) Project

1. Outline of Third Phase Strategic Research

The Long-term Perspective and Policy Integration Project examines how the fundamental principles of sustainable development apply to the Asia-Pacific region from a long-term and cross-sectoral viewpoint and tries to disseminate effective and consistent policy recommendations. LTP cooperates with other IGES projects, conducting cross-sectoral research for the implementation of sustainable development in the Asia-Pacific region.

The research programmes in FY2006 were conducted based on three features: 1) targeted policy research; 2) strategisation of research outcomes, and 3) mobilisation of research outcomes. LTP also continued with the new “Environmental Education for Sustainable Development” sub-project, which was started in April 2004.

2. Activities in FY 2006

2-1. Research on Innovative and Strategic Policy Options: Second Phase (RISPO II)

RISPO II is one of the sub-projects of APEIS*, and is also a partnership project under the United Nations Environment Programme/Network of Institutions for Sustainable Development (UNEP/NISD). This partnership project focuses on the rapidly developing economic integration of East Asia. The overall objective of the project is to provide policy-makers with strategic environmental policy options for promoting sustainable development and identifying the environmental and socio-economic effects of regional economic integration at national and regional levels.

IGES organised three Working Group Meetings corresponding to each of the three sectors/issues (wastes, renewable energy, and agriculture) specified for policy analysis research to facilitate collaborative research



RISPO II Regional Workshop

* It is a project that was registered as a type II partnership/initiative of the World Summit on Sustainable Development (WSSD) which took place in South Africa in August/September 2002, in the 10th Environment Congress for Asia and the Pacific (Eco-Asia 2001).

activities with the partner institutes in FY2006, and presented the research design and plans. IGES also organised the Regional Workshop in Bangkok on 21-23 March 2007 and reported on the preliminary findings from their research for both modelling and policy analysis studies.

2-2. Asia-Pacific Forum for Environment and Development: Second Phase (APFED II)

The Asia-Pacific Forum for Environment and Development: Second Phase (APFED II) was launched in FY2005. Its main objective is to facilitate the implementation of the 117 policies and measures recommended in the APFED Final Report which was adopted in December 2004. IGES was appointed as the Secretariat for APFED and the LTP project continues to give its support so that discussions go smoothly and results are formulated.

APFED II activities consist of three components: (i) policy dialogue; (ii) knowledge initiatives, and (iii) showcase programmes. At the Second Plenary Meeting of APFED II in Adelaide, Australia from 31 July to 1 August 2006, participants reviewed each proposal and the

implementation procedure for APFED II activities. They also established the Asia-Pacific regional network of policy research institutes (NetRes) consisting of five member institutes from the region. In addition, the winners of the Ryutaro Hashimoto APFED Awards were decided and honoured at an Awards ceremony. The Awards recognise governments, local authorities, NGOs and businesses that implement policies or practices that make outstanding contributions to the promotion of an



Signing ceremony of NetRes



APFED II Plenary Meeting

equitable and sustainable society in Asia and the Pacific. The award winners and other applicants who meet the required standard are included in the Best Practices Database so that knowledge and experience gained from work towards sustainable development can be shared and disseminated.

2-3. 3R Initiative for Sustainable Development

The 3R Initiative aims to construct a sustainable society by promoting activities on “reduce, reuse and recycle (of waste)” across different sectors. The 3R Initiative was endorsed at the G8 Summit held in 2004 at Sea Island, USA and was officially launched at the Ministerial Conference on the 3R initiative held in Tokyo in April 2005.

The LTP project, as the secretariat for the 3R Ministerial Conferences and Senior Officials Meetings (SOM), contributed to the process of this initiative and supported its promotion by conducting policy research on the 3Rs, examining regional strategies and promoting networking.

The South Asia 3R Expert Workshop was co-organised with the Asian Development Bank (ADB), and United Nations Environment Programme (UNEP) in Nepal Kathmandu from 30 August to 1 September 2006, where discussions took place on the current state of solid waste management in South Asian countries and 3R promotion. The outcome of the workshop was presented at the Asia 3R Conference in Tokyo from 30 October to 1 November 2006.

As a follow-up to these meetings, an “East



Workshop on EPR and International Material Flow

Asia/South East Asia 3R Experts Meeting” was held in Manila, Philippines on 15-16 February 2007, in cooperation with the ADB, UNEP Regional Office for Asia and the Pacific (UNEP/ROAP) and the UN Centre for Regional Development (UNCRD). Various stakeholders made presentations on a wide range of issues. An additional workshop entitled “Workshop on Extended Producer Responsibility (EPR) and International Material Flow” was co-organised with UNESCAP.

2-4. Toyota Stakeholder Dialogues

The Toyota Stakeholder Dialogue is a multi-stakeholder dialogue with a method of promoting participatory consensus building and partnership development. The 6th Dialogue was held in January 2007 on the topic of Toyota and Corporate Social Responsibility (CSR)/Environment. IGES has had a supporting role since the 1st Dialogue, and the LTP project has participated more actively since FY 2005. At the 6th Dialogue, IGES gave presentations on CSR and supported dialogue deliberations.

2-5. Environmental Education Sub-Project

As a contribution to the UN Decade of Education for Sustainable Development (DESD), the environmental education sub-project conducted research with the following three objectives:

- Establishing the policy concept “environmental education as a strategic tool for achieving sustainable development”
- Supporting implementation of the UN Decade of Education for Sustainable Development in the Asia-Pacific region
- Preparing a national strategy model for “education for sustainable development”

2-6. Kitakyushu Initiative for a Clean Environment

The Kitakyushu Initiative for a Clean Environment (Kitakyushu Initiative) was adopted at the 4th Ministerial Conference on Environment and Development in Asia and the Pacific (MCED) held in Kitakyushu in September 2000. The programme aims to realise tangible progress in the environmental quality of cities in the Asia-Pacific region. To achieve this aim, various activities have been conducted from 2000 to 2005, promoting

local initiatives on air and water pollution control and minimisation of waste. The Kitakyushu Initiative Network is comprised of participants from 62 cities in 18 countries in the Asia-Pacific region, whose activities include collecting and analysing successful practices and indicators, holding thematic seminars to build local authority capacity for urban environmental management, organising pilot studies aimed at improving urban environments, cooperation among cities and public relations activities through various mediums. The results of the Kitakyushu Initiative were highly evaluated at MCED2005 and an action plan for the Second Phase of the Kitakyushu Initiative (2005-2010) was adopted.

IGES Kitakyushu office serves as the Secretariat for the Kitakyushu Initiative and in FY 2006 carried out the following activities: 1) Pre-event at Eco Asia 2006 “International Workshop on Local Initiatives Addressing the Transformation of Lifestyles”, 2) Study Tour (Surabaya, Indonesia) to provide Network cities with a successful example of a pilot project, 3) Public Relations activities including publication of pamphlets and newsletters and 4) serving as the Information centre for successful practices.

Selected Symposiums and Workshops

The 14th Environment Congress for Asia and the Pacific (ECO ASIA 2006)

Date: 24-25 June 2006

Venue: Saitama City, Saitama Prefecture

Organiser: Ministry of the Environment of Japan

Co-organiser: Saitama City

Sponsor: Ministry of Foreign Affairs of Japan

Summary:

ECO ASIA 2006 was attended by representatives from 22 countries including the environment ministers from seven countries in the Asia Pacific region, as well as representatives from 11 international organisations. The main theme was “Towards Sustainable Societies” and discussions took place on how citizens, communities and the Asia-Pacific region should promote their activities at their own levels.

From IGES, the Long-term Perspective and Policy Integration Project contributed by developing a discussion paper on the above-mentioned theme as well as preparing the chair’s summary. At Session 2 “For Invigorating Actions by Communities” there were presentations on the Kitakyushu Initiative in which IGES Kitakyushu office serves as a secretariat, as well as the results of the “International Workshop on Local Initiatives Addressing Transformation of Lifestyles toward Achieving Sustainable Development in Asia and the Pacific” held the day before ECO ASIA by IGES Kitakyushu office, the Ministry of the Environment of Japan and the UN Economic and Social Commission for Asia and the Pacific (UNESCAP).



ECO ASIA 2006

Asia-Pacific Forum for Environment and Development in the Second Phase (APFEDII) Second Plenary Meeting

Date: 31 July - 1 August 2006

Venue: Adelaide, Australia

Summary:

This plenary meeting was attended by 53 representatives including participants from government bodies and NGOs, who examined how to best implement the three activities proposed in the APFED Final Report (Policy Dialogue, Showcase Programmes, Knowledge Initiatives).

“Policy dialogue” emphasises the necessity for follow-up activities in information disclosure and the area of the 3Rs. Discussions also approved the continuation of dialogue on Corporate Social Responsibility (CSR) and chemicals management. Five selection criteria for the “Showcase Programme” were approved namely, “innovation”, “possible application in other regions”, “effectiveness”, “feasibility” and “sustainability”. There were a total of 106 project proposals submitted and 13 were chosen as Showcase Projects for FY2006. For the “knowledge initiative”, the Ryutaro Hashimoto APFED Awards were implemented in the Asia-Pacific region and five best practices were honoured for contributions to promoting an equitable and

sustainable society. It was made clear these and other best practices should be disseminated widely.

South Asia 3R Expert Workshop

Date: 30 August - 1 September 2006

Venue: Kathmandu, Nepal

Organisers: IGES, Asian Development Bank (ADB), UN Environmental Programme (UNEP)

Summary:

Approximately forty experts on the 3Rs (Reduce, Reuse, Recycle) from research organisations, international organisations, governments and NGOs gathered to discuss solid waste management issues and comprehensively review 3R promotion. At the workshop, participants discussed the current situation and challenges in South Asia for the 3Rs in four sessions, which covered domestic solid waste management, industrial waste management, medical hazardous waste and E-waste. Three working groups focusing on social, financial/economical and technological contexts reviewed and examined priority actions for the 3Rs in South Asia.

IGES was the main organiser of this workshop and through working closely with the ADB and UNEP, decided the session coordinators and planned the proceedings and output image.



South Asia 3R Expert Workshop

III

Information Dissemination & Outreach



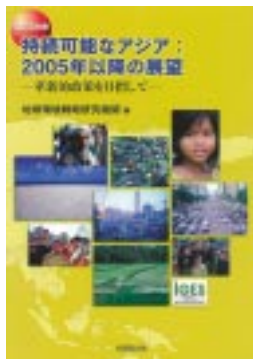
Information Dissemination & Outreach

To reflect its research outcomes in the environmental policies and activities in the Asia-Pacific region, IGES uses various media to present research outputs in an easy-to-understand format, and also collects and disseminates the latest information on policies and research trends relating to global environmental issues.

Commercial Publication

IGES White Paper “Sustainable Asia 2005 and Beyond - In the pursuit of innovative policies” (Japanese version, Publisher: Gihodo Shuppan)

In July 2006, IGES published its White Paper in Japanese which presented an analysis on the current state of environmental issues in Asia-Pacific and related proposals. This was a compilation of research implemented by IGES on environmental strategies in the region and based on the English edition released in January 2006 with some updated additions.



Policy Brief

In December 2006, IGES issued a Policy Brief entitled “Foreign Carbon Credit Purchasing Options Open to Japan to Achieve the Kyoto Target”. The first Policy Brief was launched in 2005, aiming to disseminate the research outcomes of the researchers and the projects as policy recommendations in a timely manner.



Periodicals

1) International Review for Environmental Strategies (IRES)

IRES was launched in August 2000 as an English language peer-reviewed academic journal. A special edition entitled “Best Practice on Environmental Policy in Asia and the Pacific” was published in March 2007.



2) Top News on the Environment in Asia 2006

IGES has been compiling important news on the environmental issues in the Asia-Pacific region each year. A provisional version of the 2006 edition was published in December 2006, and the final version came out in March 2007 with contributions from 23 countries and three organisations.



3) Newsletter

IGES published its newsletter *What's New from IGES* in June, August (Special Issue) and November 2006 and in February 2007. The newsletter included information on IGES' research projects, seminars and workshops, as well as researchers' introductions and their written analysis of research.

Information Dissemination over the Internet

1) E-alert

E-alert, an e-mail newsletter sent free-of-charge to subscribers, presents information on IGES research activities, events and global environmental issues. In 2006, IGES issued E-alert twice a month on average.

2) IGES EnviroScope

The IGES EnviroScope is a website designed to provide the latest information on ongoing environmental and sustainability issues around the world. In FY2006, it added a new function called “Library” - a database of IGES research outcomes which enables those interested to search for and view all the IGES research results online. In addition, its existing function called “Headlines” was further strengthened to collect the news headlines from related websites in real-time.

Information Dissemination through the Media

In FY 2006, IGES enhanced its information dissemination activities through domestic and foreign media using press releases and press briefings as effective tools of disseminating IGES’ activities and research outcomes to a variety of stakeholders. A total of 14 press releases in Japanese and English were issued and widely taken up in newspapers, magazines and news websites worldwide.

Global Environment Seminars

Through building cooperative relations and links with national government, local government, private enterprise, NGOs, etc., IGES reflects a wide variety of opinions in its research, which it strives to enrich and actually put into practice. As part of this, affiliate membership has been established and many businesses, NGOs and individuals take part in supporting our activities.

Targeting the general public including these affiliate members, IGES organises Global Environment Seminars (formerly Affiliate Member Seminars) to inform a wider audience about IGES activities and research results, hoping eventually to increase the number of the affiliate members that support our activities.

In FY2006, we took up the most up-to-date topics on the common themes of global environmental issues,

co-organising a total of 5 seminars with K-FACE, the Kanagawa Foundation for Academic and Cultural Exchange. Many people participated in each of the seminars and there was an active discussion on various issues.



	Date	Theme
1st seminar	29 August	Eco Action 21 and Environmental Management
2nd seminar	16 October	Sustainable Forest Management in Asia: Illegal Logging and Communities
3rd seminar	30 November	Business for Sustainable Regional Society: From the Perspective of Eco Industrial Clusters
4th seminar	31 January	Promotion of the 3R Initiative in the Economic Globalisation
5th seminar	27 March	Efforts to Prevent Global Warming: Current Issues and Challenges

IGES White Paper Launching Symposium

International Symposium “Towards a Sustainable Asia: Today’s Decisions for Tomorrow’s Generations”

Date: 1 July 2006

Place: Yokohama, Kanagawa Prefecture

Organiser: IGES

Outline:

IGES held a symposium to mark the publication of the IGES White Paper “Sustainable Asia 2005 and Beyond - In the pursuit of innovative policies” (Japanese edition) which analyses current environmental issues in Asia and presents IGES’ policy proposals to deal with them. Reflecting people’s great interest in Asian environmental issues, there was a large turnout of approximately 200 people at the symposium.

Following the opening address by Prof. Akio Morishima, Chair of the Board of Directors, Ms. Yoriko Kawaguchi, Member of the House of Councillors, gave a keynote speech entitled “Towards an Environmentally Co-existent Society: the Future of Asia and the Role of Japan”. Mr. Hideyuki Mori, Vice President of IGES, then, outlined the IGES White Paper, followed by a

guest speech by Mr. Shigefumi Matsuzawa, the Governor of Kanagawa Prefecture.

In the panel discussion entitled “Towards a Sustainable Asia”, experts from the Philippines, China and Japan reported on the state of the environment in Asia and high priority issues. The panel discussed how best we could work together in the region in order to take measures against the pressing environmental concerns, providing concrete examples of current collaborative initiatives by national governments and businesses. There was a shared understanding at the end of the discussion that building up partnerships among local government, business, civic society and NGOs were vital and urgent in Asia.



IV

The Fourth Phase Integrated Strategic Research Programme



Design of Integrative Strategic Research Programme of IGES for the Fourth Phase

Based on the Basic Framework of the Future Research Strategy at IGES beyond FY2006 which was approved at the IGES Board of Directors Meeting in February 2006, the Integrative Strategic Research Programme of IGES for the Fourth Phase was developed aiming to perform the three missions set out in the IGES Charter (See Figure "Our Approach" on page 6). The IGES Board Members Meeting in February 2007 approved the programme to be implemented from April 2007.

The Integrative Strategic Research Programme was formulated taking into account IGES strengths and limitations, the changes in outside conditions, as well as the continuity of research conducted in the Third Phase.

Research Projects

The actual selection of projects was based on four main criteria (i) policy relevance, (ii) added value, (iii) regional/international context, and (iv) external funds, resulting in the following seven projects.

- (i) Climate Change Policies in Asia in the context of International Climate Regime (Climate Policy Project)
- (ii) Sustainable Use of Biofuels in Transport in Asia: Policy Implications and Options (Biofuels Project)
- (iii) Forest Conservation, Livelihoods and Rights (Forest Conservation Project)
- (iv) Enhancing Access to Safe Water through Innovative Water Quality Management (Freshwater Project)
- (v) Integrated Waste Management and Resource Efficiency (Waste and Resources Project)
- (vi) Pro-active Policies and Business Strategies for Strengthening Corporate Environmental Manage-

ment in Developing Asia (Business and the Environment Project)

- (vii) Capacity Development and Education for Sustainable Development (Capacity Development and Education Project)

In addition, the following four studies of cross-cutting themes were considered necessary to promote interaction with the seven projects above.

- Promotion of Urban/Local Initiatives for Sustainable Society
- Economic Integration, Trade and Strategies for Sustainable Development
- Sub-regional Environmental Management and Development of Indicators
- Environmental management in Northeast Asia

Further to research projects and studies, the Integrative Strategic Research Programme includes activities involving important policy processes and close association with a number of important international/regional organisations that IGES has established so far. Besides issue-specific international processes such as the United Nations Framework Convention on Climate Change (UNFCCC), the World Water Forum (WWF) and the 3R Initiative, IGES will contribute to various activities related to the United Nations Environment Programme (UNEP), the United Nations Economic and Social Commission for Asia and the Pacific (UNESCAP), the Asian Development Bank (ADB) and the Tripartite Environment Ministers' Meeting for the People's Republic of China, the Republic of Korea and Japan (TEMM).

IGES will continue to serve as the secretariat of APFED and ECO ASIA.

V

Overseas Offices



Bangkok Office

1. Role of Bangkok Office

As a hub for further research activities in the Asia-Pacific region, IGES established the IGES Project Office in Bangkok in 2003 in cooperation with the Regional Resources Centre for Asia and the Pacific (RRC.AP) of the United Nations Environment Programme (UNEP). The notable role of the Bangkok Office is to engage in RRC.AP related projects as well as liaising with the Governments of Thailand and neighbouring countries, research institutes and international organisations in the region.

2. Activities in FY2006

2-1. Core Environment Program (CEP)

The primary project undertaken by the Bangkok Office is the Asian Development Bank (ADB) controlled Core Environment Program (CEP) aiming to facilitate the sustainable economic growth in the Greater Mekong Subregion (GMS)*. FY 2006 is transitional period of the last stage of the National Environmental Performance Assessment (EPA) and Strategic Environmental Framework (SEF II) and the initial stage of the CEP. In April 2006, the Final Workshop for the SEF II was held in Bangkok aiming to finalise the project and present the final EPA reports both at national and subregional levels. For the CEP, the Bangkok Office was involved in



The SEF II Final Workshop (24 April 2006, Bangkok)

designing the programme's five components and attending several workshops and meetings to reach consensus on the design. In particular, the Bangkok Office and UNEP are joint partners in implementing the Component 3: EPA and Sustainable Development Planning (SDP), the next phase of SEF, for which the Bangkok Office takes the leading role in SDP aspects of the project. IGES and ADB signed a Letter of Intent in December 2006 to continue the research collaboration in this area in FY 2007.

2-2. UNEP's Global Environmental Outlook (GEO)

The Bangkok Office, represented IGES as a collaborating centre for the production of UNEP's Global Environmental Outlook (GEO) series of reports, had been involved in reviewing the Asia and Pacific regional chapter, contributing draft material and attending discussions on the chapter of the reports. The IGES Bangkok representative was one of three contributing lead authors for the policy chapter of GEO-4.

2-3. Research on Innovative and Strategic Policy Option (RISPO)

Supporting and coordinating IGES Headquarter's activities particularly under the Long-term Perspective and Policy Integration Project were also the main tasks



Excursion to the Wat Suan Kaew, Nonthaburi, Thailand to see community waste management (the RISPO II Regional Workshop in March 2007)

* The Greater Mekong Subregion consists of six countries including Cambodia, Lao People's Democratic Republic, Myanmar and Thailand.

of the Bangkok Office. The Bangkok Office was involved in Research on Innovative and Strategic Policy Option (RISPO) for both the first and second phases. For RISPO I, the Bangkok Office contributed to all of the research papers, edited the papers and helped to prepare them for submission to peer reviewed journals and a special issue of International Review for Environmental Strategies (IRES) compiling all of the results of RISPO I. The Bangkok Office then contributed to the

Research Design Document for RISPO II, particularly focusing on advice regarding methodologies and scenarios. Following on from FY 2005 activities, IGES Bangkok staff assisted with two important events in FY 2006 for RISPO II including the Familiarisation Working Group Meeting and Regional Workshop which were held in Bangkok in November 2006 and March 2007 respectively.

Beijing Office

1. Background of Establishment

In view of the increasing strategic importance of China in environmental policy in Asia, including measures against global warming in the Asia-Pacific region, IGES had investigated establishing an office in Beijing as its second overseas office after the Bangkok office, so as to have a base to strengthen research activities with China.

On 1 April 2006, a Beijing office preparation room was set up at IGES headquarters and work started on a feasibility study for establishing an office. The Sino-Japan Friendship Center for Environmental Protection of the State Environmental Protection Administration of China (SEPA) (Chaoyang-qu, Beijing), which has close links with Japan as well as IGES, was investigated as a candidate location to establish the office.

Receiving advice from SEPA and through close consultation with the Center, the "Agreement between IGES and the Sino-Japan Friendship Center for Environ-

mental Protection of SEPA on Cooperation in the Area of Environmental Protection" was concluded on 2 July. On the same day, under the framework of the agreement, the Beijing office (Sino-Japan Cooperation Project Office) was established within the Center. The Beijing office aims to be a base to expand various surveys and research work in cooperation both bilaterally with China and multilaterally through close cooperation with the Center.

2. Activities in FY2006

In close cooperation with IGES Headquarters, the following survey and research work was carried out in FY2006 with the Beijing office playing a central role.

2-1. World Bank Training Project for Urban Air Quality Management Capacity Building in China

In a project commissioned by the World Bank, working with the Sino-Japan Friendship Center for Envi-



Signing ceremony for conclusion of an agreement for cooperation between IGES and the Sino-Japan Friendship Center for Environmental Protection (Great Hall of the People, Beijing)



Beijing Office name plate

ronmental Protection on capacity building for Chinese urban air quality management, the Beijing office provided training on urban air quality management methods making use of China's latest policy developments and simple models developed by the World Bank. There were three courses with as many as 106 participants from local governments, research institutes and companies from 41 cities in attendance.

2-2. Implementing the Clean Development Mechanism (CDM) Programme

IGES/CDM programme identifies and develops CDM projects in seven target countries, including China, and carries out purchasing support for the New Energy and Industrial Technology Development Organisation (NEDO) affiliated with the Japanese government. Of the seven countries, the project in China is the largest in scale. Working under the guidance of the Ministry of the Environment and the National Development and Reform Commission of China (NDRC), in FY2006 the Beijing office implemented four capacity building projects together with Tsinghua University, specifically assisting in drafting Project Design Documents (PDDs). The first that was implemented out of these projects (power generation using leftover gas from blast furnace/rotary kiln at iron works) became the first one to be directly purchased by the Japanese government.

2-3. Sino-Japan Joint Research to Strengthen Water Environmental Management in China

In China, ensuring the safety of drinking water has become the most important environmental issue. At the Sino-Japanese Environment Ministers' Conference held in Beijing on 2 December 2006, both sides agreed



Sino-Japan CDM cooperation project steering committee (Beijing)

to conduct "Sino-Japanese joint research to strengthen water environmental management in China" and it was decided that IGES and the Sino-Japan Friendship Center for Environmental Protection would be the organisations carrying out this joint research. Over the course of three such research projects up until the end of March 2007, field surveys were conducted on three drainage basins and the results compiled in a report.

2-4. Promoting 3Rs and Eco-town Initiatives in Tsingdao, China

The Beijing office organised the Sino-Japan ecological industrial park (Eco-town) workshop in Tsingdao, the area where China's first Eco-town is being constructed. The workshop aimed to promote Eco-town initiatives in China by introducing Japan's experience and exchanging information among stakeholders of the two countries. It also aimed to investigate common issues in developing Eco-towns in respective countries. The workshop contributed to identifying issues to be solved in building a recycling-based society in East Asia.

2-5. Planning and Coordinating the China, Korea and Japan Tripartite Roundtable Meeting on Environmental Industry

The Beijing office planned and coordinated the China, Korea and Japan Tripartite Roundtable Meeting on Environmental Industry held in Yantai, China, in September 2006.

In addition, the office contributed to the implementation of APFED II in China, coordinating between IGES and Chinese organisations concerned.



Sino-Japan joint research to strengthen water environmental management in China Field survey meeting (Tianjin)

VI

IPCC-NGGIP Technical Support Unit (TSU)



IPCC-NGGIP Technical Support Unit (TSU)

1. About the IPCC-NGGIP

Recognising the problem of potential global climate change, the World Meteorological Organization (WMO) and the United Nations Environment Programme (UNEP) established the Intergovernmental Panel on Climate Change (IPCC) in 1988. It is open to all members of UNEP and WMO.

The role of IPCC is to assess the scientific, technical and socio-economic information relevant to understanding the scientific basis of risk of human-induced climate change, its potential impacts and options for adaptation and mitigation on a comprehensive, objective, open and transparent basis.

The National Greenhouse Gas Inventories Programme (NGGIP) is one of the four pillars of the IPCC. Its objectives are, firstly, to develop and refine internationally-agreed methodology and software including good practice guidance for the calculation and reporting of national greenhouse gas emissions and removals and secondly, to encourage the widespread use of this methodology and guidance by countries participating in

the IPCC and by the Parties to the United Nations Framework Convention on Climate Change (UNFCCC). The NGGIP is managed by the Inventories Task Force Bureau (TFB).

The Technical Support Unit (TSU) for NGGIP was established at the Institute for Global Environmental Strategies (IGES) in September 1999 with substantial co-operation from the IPCC, Organisation for Economic Co-operation and Development (OECD), International Energy Agency (IEA) and related organisations. It is funded by the Government of Japan. It assists the Co-chairs of the TFB, serves the needs of the NGGIP and provides all the administrative and technical support needed by the programme.

Since 1999, the TSU has completed two major IPCC reports on inventory methodologies for all economic sectors, firstly the *Good Practice Guidance and Uncertainties Management in National Greenhouse Gas Inventories*, on the Energy, Industrial Processes, Agriculture and Waste sectors (the "GPG2000"), and secondly the *Good Practice Guidance on Land Use, Land-*



IPCC the 25th Plenary Session (Mauritius)

Use Change and Forestry for the Land Use, Land-Use Change and Forestry sectors (the “GPG-LULUCF”). Both reports were formally accepted by the IPCC and welcomed by the Subsidiary Body for Scientific and Technological Advice (SBSTA) of the UNFCCC, and have been heavily used by Parties to the UNFCCC in developing their national inventories.

2. Activities in FY2006

In April 2006, in Mauritius, the IPCC adopted and accepted the *2006 IPCC Guidelines for National Greenhouse Gas Inventories*. Since 2004, in response to an invitation from the UNFCCC, the NGGIP and TSU have been working on a project for the revision of the IPCC Guidelines based on the Revised 1996 IPCC Guidelines and the above-mentioned GPG reports. The 2006 Guidelines provide up-dated scientific and technical basis for future national inventory compilation, and are one of the significant achievements of the IPCC-NGGIP and of the TSU in IGES.

The IPCC Emission Factor Database (EFDB), a dynamically evolving software tool vetted by its Editorial Board together with the TSU, was launched in 2002. This database contains emission factors and other data

needed by experts to estimate national greenhouse gas emissions and is accessible through the website and CD-ROMs. The database has been made available to assist national experts by sharing knowledge and experience in estimating emissions. The EFDB does not guarantee that each factor is suitable for a particular use but it does provide the background data needed by experts to judge the applicability of the information for themselves. Along with the revision of the IPCC Guidelines, the growing importance of the EFDB has become widely recognised, especially for developing countries, as well as countries included in Annex I of the UNFCCC, in developing their inventories. The TSU and the Editorial Board of the EFDB are working to increase the data stored in the database. The default data from the *2006 IPCC Guidelines for National Greenhouse Gas Inventories* are being included in the database and other data sources are being explored.

The TSU also contributed to IPCC’s activities carried out by other Working Groups from the GHG inventory perspective. In addition, TSU staff members have represented the IPCC on inventory matters at a number of meetings such as UNFCCC workshops/meetings, Inventory Training and non-Annex I national communi-



IIIPCC Expert Meeting: Software for the 2006 IPCC National GHG Inventories Guidelines (Qatar)

cations, the meeting of United Nations Economic Commission for Europe (UNECE) Task Force on Emission Inventories and Projections, JICA training course for developing country government officials, the workshop on GHG Inventories in Asia Region organised by the Greenhouse Gas Inventories Office of Japan.

The TSU Inventory Internship programme was

launched in 2003 to provide an opportunity for young researchers/scientists to familiarise themselves with the IPCC methodologies for national GHG inventories through applied studies on the science relevant to specific sector(s). In 2006, one intern from Malaysia completed his research by applying the GPG-LULUCF to the forest inventory of Malaysia.

VII

Asia-Pacific Network for Global Change Research (APN)



Asia-Pacific Network for Global Change Research (APN)

1. About the APN

Changes in the Earth system are affecting the societies and economies of countries within the Asia-Pacific region, which supports more than half of the world's population. Recognising this, and following the White House Conference on Science and Economics Research (1990), the Asia-Pacific Network for Global Change Research (APN) was established in 1996 as a network of governments in the Asia-Pacific to foster global change research in the region, increase developing country involvement in that research, and strengthen interactions between the science community and policy-makers.

The APN defines global change research as "research regarding global change (the set of natural and human-induced changes in the Earth's physical and biological systems that, when aggregated, are significant at a global scale) and its implications for sustainable development in the Asia-Pacific region." Recent research and supporting observations have provided new insights into some of these changes and their impacts, but have at the same time opened a number of new and challenging scientific issues. The APN seeks to identify such emerging issues and to promote and encourage regional cooperative research to address them. In doing so, the APN assures that the results of this research contribute to development of a sound scientific basis for policy- and decision-making related to

issues for which global change is an important factor.

The APN covers a broad range of research topics with focus on climate; ecosystems, biodiversity, and land use; changes in the atmospheric, terrestrial and marine domains, and use of resources (food/water/energy/materials) and pathways for sustainable development.

The APN works hard to enable developing countries of the region to participate in, and to benefit fully from, cooperative research in the region. Recognising the interactive role of regional processes in the overall Earth system, the APN also tries to link the research it sponsors with research conducted in other regions and under the support of global-scale programmes.

To achieve its goals, APN believes that working in partnership with other organisations involved in global change research and policy development is essential to maximise available resources and to deliver the best possible results. Key partners include the global change programmes of International Geosphere-Biosphere Programme (IGBP), International Programme of biodiversity science (DIVERSITAS), International Human Dimensions Programme on Global Environmental Change (IHDP) and World Meteorological Organization (WCRP) as well as the Earth System Science Partnership (ESSP), Global Change System for Analysis, Research and Training (START) and APN's sister network, the Inter American Institute for Global Change Research



UNFCCC SB24 side event in Bonn

(IAI). Such collaboration with the global change community includes joint research projects, scientific capacity building activities, science-policy interfacing, enabling Asia-Pacific participation at international conferences, scoping workshops and developing and strengthening networks of scientists and policy-makers.

Currently, the APN's membership includes 21 countries (Australia, Bangladesh, Cambodia, China, Fiji, India, Indonesia, Japan, Lao PDR, Malaysia, Mongolia, Nepal, New Zealand, Pakistan, Philippines, Republic of Korea, the Russian Federation, Sri Lanka, Thailand, the USA and Viet Nam). The APN receives monetary contributions from Japan, USA, Australia, Republic of Korea and New Zealand. Equally important, the APN also receives in-kind support (human resources, equipment, venues for meetings, etc.) from many other member countries.

While the APN Secretariat has been under the administrative umbrella of IGES since April 2004, the APN's Inter-Governmental Meeting (IGM) continues to be its decision-making body. An independent account within the IGES financial system has been established so that the APN is able to administer its funds autonomously.

2. APN Funded Projects

2-1. ARCP

APN funding is mainly used to support regional global change research and capacity-building activities, which are selected through a competitive Annual Regional Call for Proposals (ARCP). In 2006/2007, 15 projects were selected to receive funding. Approximately US\$ 629,000 was allocated to the projects.

2-2. CAPaBLE

The APN launched a five-year Programme on "Scientific Capacity Building/Enhancement for Sustainable Development in Developing Countries" (CAPaBLE) in 2003, as a Type II Initiative Project of World Summit on Sustainable Development (WSSD). In 2006/2007, 3 Comprehensive Research Projects (CRP) with US\$180,000 which will lead to the capacity enhancement of leading researchers in developing countries, and 15 Capacity Building projects with US\$410,000 were funded.



Workshop on Integrated Model Development

3. Hyogo Activities

The office of the APN Secretariat office has been located in Kobe since 1999 with the financial support of Hyogo Prefectural Government. Several APN workshops, public symposia and conferences, therefore, convene in Hyogo every year. In 2006/2007, APN events in Hyogo included:

- i) Asia-Pacific Coasts Session at 7th International Conference on the Environmental Management of Enclosed Coastal Seas (EMECS 7), May 2006, Caen, France
- ii) International Seminar on the "Pathways toward a Sustainable Society with Biodiversity Conservation", February 2007, Kobe, Japan



International Workshop on Agrometeorological Risk Management

4. Participation in International Meetings, Workshops etc.

The APN Secretariat staff and APN members have participated in the following meetings and other relevant international meetings:

- Monsoon Asia Integrated Regional Study(MAIRS) Workshop on Science Framework, April 2006, Kun-

ming

- United Nations Commission on Sustainable Development(UNCSD), May 2006, New York
- Side Events at Subsidiary Body for Scientific and Technological Advise (UNFCCC) (SBSTA), 24, May 2006, Bonn
- 1st International Symposium for Climate Change Adaptation, June 2006, Seoul
- 14th ECO Asia, June 2006, Saitama
- 3rd Coastal Zone Asia-Pacific, Aug 2006, Batam
- 15th North Pacific Marine Science Organization Annual Meeting, October 2006, Yokohama
- IHDP/APN International Human Dimensions Workshop on: Institutional Dimension of Global Environmental Change: Water, Trade and Environment, October 2006, Chiang Mai
- 2nd International Young Scientists Conference, November 2006, Beijing

- Group of Earth Observations III, November 2006, Bonn
- International Group of Funding Agencies Annual Meeting, November 2006, Montreal
- GEOSS Symposium on Integrated Observations for Sustainable Development in the Asia Pacific Region, January 2007, Tokyo

5. Publicity and Communications

Publication of the APN in 2006/2007 includes:

- 11th Inter-Government Meeting (IGM)/ Scientific Planning Group (SPG) Proceedings
- 2005/2006 Annual Report
- Project Bulletin, Vol. 2
- Posters for international meeting and workshops
- APN Website(<http://www.apn-gcr.org>)
- Quarterly newsletters issued (E-publication only)



Young scientists being trained in methods of flux observation and analysis

VIII

Centre for Sustainability (CfS)



Centre for Sustainability (CfS)

1. About Eco Action 21

The Rio Declaration of the 1992 Earth Summit stated that “developed countries must promote the realisation of sustainable industry and consumption patterns” and so from the 1990s, global companies started to make autonomous efforts towards “environmental efficiency” in such areas as energy and resources. With concepts such as “Factor 10”, “Zero Emission” and “Factor 4”, the integration of environment and economy was pursued. Furthermore, from the mid 1990s, progress was made in efforts towards sustainable consumption by such methods as “environmental labels” and “green procurement” for goods. Recently, in light of the quantitative expansion of developing economies, “the realisation of sustainable production and consumption patterns” has become a topic equally applicable to developing nations.

As an international standard for autonomous efforts by industry, the ISO14001 was issued in the mid 1990s and has spread world-wide as a kind of “green passport” for international commerce. There are over 20,000 companies certified with ISO in Japan (as of March 2007), the largest number in the world. However, the ISO standard is requested only for building and maintaining in-house systems regarding the environment, such as structure within the company, report preparation, internal environment education, and carrying out internal company inspections of these aspects. There are no demands made regarding “performance” in reducing environmental burdens, nor are any requests made to publish environmental reports on the details of these activities. Consequently, some people ironically say that ISO certification means “we use so much paper compiling such a large number of reports, it is surely environmentally unfriendly”. In addition, it can cost millions of yen to carry out external inspections to make sure the company complies with the standard, and then be certified and registered. Companies carrying out inspections and issuing certification are also part of the “environmental business” but if the environment is not actually improved, then such work is meaningless. In particular, Europe and other regions are exploring ways to support

the environmental efforts of small and medium-sized enterprises (SMEs) with few finances and small workforces. On the other hand, there have been no new developments to realise sustainable consumption and there has been a sense of stagnation in the international community.

At IGES, we carry out research and development into innovative policy methods for sustainable development aiming to turn various key policy decisions into tangible forms, and in October 2004, we set up the “Centre for Sustainability” (CfS) to work towards “sustainable production and consumption”.

The first job for the Centre for Sustainability was to establish the “Eco Action 21 - Certification Registration System” from October 2004. This system supports even small and medium-sized enterprises (SMEs) in their efforts to deal more easily with environmental issues such as reducing amounts of carbon dioxide and waste, and cutting back on water use. The results are examined by inspectors, who are environmental specialists, and IGES registers the certification. Recently, large corporations and governmental organisations have begun to demand proof of environmentally-friendly management from companies that deliver their goods and services (the so-called “greening” of the supply chain). The Eco Action 21 certification registration system can meet that need. Eco Action 21 is not an in-house company system that carries with it heavy responsibilities like ISO. It simply requests a reduction of the environmental burden, and because an environmental activity report is made and published, it encourages environmental communication with the company. In particular, Eco Action 21 aims directly for a reduction in energy and water consumption as well as in waste production emissions. Therefore, if such reductions are carried out, there will be definite reductions in fuel, light and water charges, reduced costs for waste disposal and for the costs of raw materials. In this way, progress is made in both the environment and the economy. Since April 2005, IGES has given authorisation to 676 inspectors and approved 38 regional offices nationwide (with 100 inspectors and 5 offices authorised in FY 2007). By the



Eco Action 21 Annual National Meeting 2006

end of 2007, we hope to increase these numbers even further. This means that there is a framework in place to support, inspect and approve efforts on a local level.

2. Activities in FY2006

As of the end of March 2007, 1,445 companies were registered with certification. The number of companies registered with certification has been rapidly rising and will reach 2,000 by the end of FY 2007. The fee for registering certification (for a 2 year period) is between 50,000 yen and 200,000 yen depending on the type and size of the company. In FY 2006, 70 million yen in fee revenues were collected. Outgoings include fees for the Eco Action 21 governing board, the cost of hiring an examination hall for the inspectors' exam, staff costs and dissemination activities. The balance will be carried over to the next term and used for development of the activities outlines below.

Based on experience of Eco Profit, which has been implemented since the late 1990s in cities in such countries as Austria and Germany, it has been found that

rather than individual SMEs implementing environmental and cost-cutting measures, it is more effective for a large number of businesses to implement such measures simultaneously. Up to now, Eco Action 21 has distributed "pinpoint" advice to individual company managers, and opened "lines" between companies through the greening of the supply chain. Now, it hopes to develop "multi-faceted" local authority initiatives through the Eco Action 21 Local Initiative Programme.

In FY 2006, 34 local authorities nationwide participated in the programme, with the total number of participating companies reaching about 560. There has been a large increase in the number of inquiries from local authorities, including consideration in gaining certification for the local authority itself. From FY 2006, we have been developing the "Affiliated Business Greening Programme" to issue certification simultaneously to companies, their affiliates and customers. In FY 2006, 3 major companies took part nationwide, raising the awareness of Eco Action 21 even among major companies.

At the request of the Ministry of the Environment, IGES is making progress with preparations for Japan, China and the Republic of Korea to work with a joint system for the Eco Action 21 certification as one of the major projects by the Tripartite Environment Ministers

Meeting. If this is achieved, we shall see the greening of companies, especially SMEs, in three countries linked by some of the world's most important supply chains. We also hope to widen the scheme to other countries in Asia.