

# **The Business Report for FY 2012**

## **Institute for Global Environmental Strategies**

To implement strategic research and to be flexible enough to cover a broad range of issues for integration of environment protection and sustainable development in the Asia-Pacific region, the Integrative Strategic Research Programme of IGES for the Fifth Phase (ISRP5) starting from April 2010 introduces four criteria (“relevance”, “value added”, “influence generation” and “appropriate resource allocation”) and proposes research projects based on these criteria. In FY2012, the final year of the Fifth Phase, IGES implemented 35 research projects under five research groups and the Programme Management Office (PMO), as well as at each of the four satellite offices of IGES, aiming to bring qualified results and to generate effective impacts based on ISRP5.

The Fourth IGES White Paper was launched in July 2012, under a working title of “Greening Governance in Asia-Pacific”, which is linked with the dual themes of the UN Conference on Sustainable Development 2012 (Rio+20). In addition, the Fourth International Forum for Sustainable Asia and the Pacific (ISAP) was organised in July as a platform to disseminate the research results of IGES as a whole and to encourage discussion among experts from diverse countries. ISAP2012, under the main theme of “Beyond Rio+20”, discussed on the important agenda in the region including climate change, green economy, resilience, sustainable development goals (SDGs), and bio-diversities.

To secure stable funds for the final stage of the Fifth Phase research, efforts to raise funds continued in parallel with research activities.

### **A. Strategic Research**

ISRP5 categorises IGES strategic research as 1) Issue Cluster, 2) Discipline Cluster, and 3) Stakeholder Cluster, within which five research groups, namely, Climate Change, Natural Resources Management, Sustainable Consumption and Production, Economy and Environment, Governance and Capacity, as well as the PMO and four satellite offices, will conduct research on their own initiative.

#### **1. Issue Cluster**

##### **1-1 Climate Change Group (CC)**

The goal of the Climate Change Group was to strengthen the knowledge base for climate change-related governance in Asia. In FY2012, the group aimed to conduct action-oriented research on the six components listed below. The results and proposals were outreached actively through various channels including IGES Policy Brief, IGES Policy Report and Climate Edge, CC group’s newsletter.

## **Component 1: Low-Carbon Sustainable Development in Asia (This component was linked to Component 5)**

This component conducted the following activities, aiming to analyse practical institutional design related to the international position and domestic policies on such as issues as numerical GHG emission reduction commitment in Asian countries, especially China, India, and Indonesia.

### **<Major research activities in FY2012>**

- Analysis of domestic systems in Asian countries (China, India, Indonesia)
- Detailed analysis of allocation method of the national targets in China
- Policy Research Dialogues on low-carbon development (Oct.2012 in Beijing, Feb.2013 in Delhi) to discuss future international climate regime, development process for the Asian-wide carbon market under various types of crediting systems, possible collaboration between Governments and research institutes

### **<Major outputs/outcome and impacts in FY2012>**

- One peer review journal article
- FY2012 Report on Commissioned Work of the Environment Research and Technology Development Fund
- Discussion paper and fact-sheets to analyse latest trend of climate change actions in China, India, Indonesia and Korea

## **Component 2: Post-2012 Climate Regime**

Aiming to make proposal for the new protocol or UNFCCC COP decision for a future regime based on the Durban agreement, IGES conducted the following activities in FY2012 with a view to making timely and pragmatic policy recommendations with regards to the post-2012 regime discussion.

### **<Major research activities in FY2012>**

- Clarification on the process formation and differences in negotiating positions of various countries on building blocks of a future climate regime (e.g. legal form, measurement, reporting and verification (MRV) system, technology mechanism and a financial mechanism, equity, leveling-up of the ambition, review, sectoral approach)
- Examination of how agreements at Durban can be effectively implemented
- In particular, qualitative and quantitative analysis of the state of financial support in relation to the vital issue of climate finance in negotiations
- Publication of these results and recommendation through newsletters, commentaries, fact-sheets, handbooks, etc.

### **<Major outputs/outcome and impacts in FY2012>**

- WRI Working Paper “The Japanese Fast-Start Finance Contribution” (November 2012)
- “Handbook for Climate Change Negotiators Ver. 4 & 4.5” (November 2012)
- Database on climate change policies in 16 major emission counties (EU, Germany, UK, Italy, France, Australia, New Zealand, Russia, Canada, China, India, USA, Brazil, Mexico, Korea, Qatar) in relation to their GHG reduction targets
- The Climate Edge – SB36 Report on Bonn Meeting
- Discussion paper to analyse latest trend of climate change actions in China, India and Korea

- Participation in the negotiation team of the Government of Japan
- Organisation of expert consultations on a future climate regime in China (Oct.2012 in Beijing) and India (Feb.2013 in Dehli)

### **Component 3: Institutional Design of an MRV (M Measurement, Reporting and Verification) System<sup>1</sup>**

This component aimed to understand the negotiating positions of different countries on a MRV system; and identify how a MRV system could be operationalized in Asian developing countries (including possible synergies with GHG inventories).

#### **<Major research activities in FY2012>**

- Analysis and Evaluation of NAMAs (National Mitigation Actions) in various countries
- Comparative studies on MRV systems in the major economies (China India, Indonesia) and examination of institution building for MRV systems beyond 2012.

#### **<Major outputs/outcome and impacts in FY2012>**

- Commissioned work supporting MRV system construction in Asia aimed at construction of new mechanisms (India, Indonesia, Cambodia, Thailand, China, the Philippines, Viet Nam, Laos)
- Policy Brief, “From NAMAs to Low Carbon Development in Southeast Asia: Technical, Mainstreaming, and Institutional Dimensions” (October, 2012)
- Policy Report “Measurement, Reporting, and Verification (MRV) for low carbon development: Learning from Experience in Asia” (March 2013)

This research was partly conducted in collaboration with Economy and Environment Group (EE).

### **Component 4: Co-benefit Approach in Asia** (The Kansai Research Centre was responsible for technical aspects of the co-benefit approach)

This component aimed to identify policies and measures that can maximise the developmental co-benefits from GHG mitigation in key sectors. In FY2012, IGES conducted following activities.

#### **<Major research activities in FY2012>**

- Contribution to the policy discussion on SLCP (Short-lived Climate Pollutants) and active involvement in formulation of practical international framework on SLCP
- Analysis of barriers to realising co-benefits in the key GHG mitigation sectors, including transport and buildings and studies on an MRV system for the evaluation of the co-benefits
- Introduction of new elements, such as gender, into the cobenefit discussion
- Development of an integrated model of air pollution and climate change (MERGE model) in cooperation with Tohoku University and support for Asian Co-benefits Partnership<sup>2</sup> as the secretariat

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<sup>1</sup> This component is a part of the integrative research component on MRV-related capacity development conducted by Programme Management Office (PMO).

<sup>2</sup> Established in November 2010 to improve coordination between organisations promoting co-benefits in Asia

- Invitation to IGES to the Climate and Clean Air Coalition (CCAC) as a non-state member

**<Major outputs/outcome and impacts in FY2012>**

- Commissioned work supporting MRV system construction in Asia aimed at construction of new mechanisms (India, Indonesia, Cambodia, Thailand, China, the Philippines, Vietnam, Laos, Mongolia, Myanmar, Ukraine and other East European countries)
- ADB Inception Report “Harnessing Climate Change Mitigation Initiatives to Benefit Women” (March 2013)
- UNEP 5<sup>th</sup> Global Environment Outlook (GEO5) – Atmosphere
- One peer reviewed article

**Component 5: International Research Network for Low Carbon Societies (LCS-RNet)**

This component aimed to support the International Research Network for Low Carbon Societies (LCS-RNet) as a platform to promote scientific information exchange and research cooperation on LCS policies.

**<Major research activities in FY2012>**

- As the secretariat of LCS-RNet, promotion of collaboration of member research institutions through annual meetings etc.
- Analysis of shared challenges for research on creating LCS
- Aiming to improve LCS research capacity in Asia, establishment of “Low Carbon Asia Research Network” (LoCARNet) in 2012 to serve as a forum for information exchange among researchers in the region

**<Major outputs/outcome and impacts in FY2012>**

- Newsletters and annual meeting synthesis report of both LCS-Rnet and LoCARNet
- Presentation at COP18 and on-site reports in the form of commentary
- FY2012 commissioned work report on the Commissioned Operation of the International Research Network for Low Carbon Societies (March 2013)

**Component 6: Development of Renewable energy model for Japan** (conducted in collaboration with Economy and Environment (EE) Group)

After the Eastern Japan disaster on 11 March 2011, a revision of the energy system and energy mix is of great importance. By using a model such as the TIMES model which is an end-use model, this research examined the best (optimal) mix of energy and propose the sustainable and safe energy system.

**<Major research activities in FY2012>**

- Analysis of optimal-mix of electricity generation with enhanced use of renewable energy resources in Japan as a whole
- Examination of best-mix of electricity generation and the optimal power-supply system at the national level
- Review of the energy and climate policy by the Government (“New innovative policy on Energy and Environment” by the Democratic party)

#### <Major outputs/outcome and impacts in FY2012>

- Policy Report, “Balancing Japan’s Energy and Climate Goals: Exploring Post-Fukushima Energy Supply Options, July 2012, in Lessons Learnt from the Triple Disaster in East Japan” (June 2012)
- Working paper, “Reviewing the innovative strategy of the Energy and Climate policy in Japan” (Nov. 2012)

### **1-1-1 Market Mechanism Sub-Group**

#### **Component 1: Effective Market Mechanisms to reduce GHG emissions for Developing Countries in Asia**

This component aimed to implement new market-based mechanisms under the post-2012 climate regime and further improve the existing market mechanisms such as clean development mechanism (CDM) as a possible foundation for the establishment of new market-based mechanisms. With these ultimate aims, the main activities in FY2012 focused on the followings.

#### <Major research activities in FY2012>

- Design of new market-based mechanisms under the post-2012 climate regime and making proposals (Policy paper).
- Capacity building for implementation of new market-based mechanisms in Asian developing countries, particularly to assist developing systems to measure, report and verify (MRV) greenhouse gas (GHG) emissions reduction.
- Proposals for improvement of existing market mechanisms such as CDM .
- Research on the evaluation of CDM performance on the methodology, governance system, and contribution to the sustainable development based on the database and capacity building.
- Research on the option of new market-based mechanisms and analysis of future carbon market in the Asian countries.

In addition, this component also provided those countries who intend to establish their own domestic carbon market with a range of support for their "market readiness" such as:

- Design and proposal for domestic emission trading and/or VER (verified emission reduction) schemes.
- Capacity building for implementation of domestic emission trading and/or VER schemes
- Examination on the possible design of the institutional and methodological aspects of the MRV system

#### <Major outputs/outcome and impacts in FY2012>

- New MOU agreement with UNFCCC secretariat on a framework for cooperation (Oct. 2012)
- Policy Brief “Impact of COP18 Decisions on Use of Kyoto Mechanisms by Japan” (March 2013)
- Policy Report, “Towards the CDM 2.0:Lessons from the capacity building in Asia” (March 2013)
- Development of proposal on the standardized baseline for the CDM with the Ministry of Environment Cambodia (Sep. 2012)

- Establishment of collaboration with external organisations on CDM capacity building under Nairobi Framework Partnership coordinated by the UNFCCC secretariat (Feb. 2013)
- Co-organisation of workshop with ADB and UNFCCC Secretariat on improvement of geographical imbalance on CDM in Asia Pacific region and development of report (July 2012)
- Publication and update on “New Market Mechanisms in CHARTS”, and “Illustration of New Market Mechanism”
- Publication and update on existing market mechanism “CDM in CHARTS” and “Illustration of Kyoto Mechanism”
- Newly developed GHG calculation sheet and project document preparation tool, “PoA templates” (July 2012)
- Publication and update on country handbooks on market mechanism in Aisa

### **Component 2: Support for Institutional Design of an MRV (Measurement, Reporting and Verification) System for GHG emission reduction/sink<sup>3</sup>**

This component aimed to assist developing systems to measure, report and verify (MRV) greenhouse gas (GHG) emissions reduction and/or sinks in developing countries, as a basis of new market mechanisms. The following activities were comprehensively implemented by utilising knowledge and networks of other research groups in IGES.

#### **<Major research activities in FY2012>**

- Examination of methodological issues of MRV for GHG emission reduction/sinks as a basis of new market mechanisms
- Capacity building for effective implementation of MRV system for GHG emission reduction/sinks

#### **<Major outputs/outcome and impacts in FY2012>**

- Policy Brief, “Classification of MRV of Greenhouse Gas (GHG) Emissions/Reductions: For the discussions on NAMAs and MRV” (December 2012)
- Policy Report, “Measurement, Reporting, and Verification (MRV) for low carbon development: Learning from Experience in Asia” Editing of report and contributing to the Chapters on MRV methodologies on waste and renewable energy (March 2013)
- International Symposium on “How to Make Asia into Low Carbon Society: the role of measurement, reporting and verification (MRV) and opportunity for partnership” (March 2013)

### **1-2 Natural Resources Management Group (NRM)**

The Natural Resources Management Group conducted comprehensive research aiming to develop policy proposals on the sustainable management and use of natural resources resources in the Asia-Pacific region. Its research components include forest conservation, freshwater management

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<sup>3</sup> This component is a part of the integrative research component on MRV-related capacity development conducted by Programme Management Office (PMO).

and climate change adaptation. It also covered biodiversity and ecosystem services as a common issue for the above three research areas.

### **Component 1: Biodiversity and Ecosystem Services**

Based on the international processes of 2012 relating to the conservation and sustainable use of biodiversity and ecosystem services at conferences such as Rio+20, the 5th World Conservation Congress and 11th meeting of the Conference of the Parties to the Convention on Biological Diversity (CBD)(COP11), IGES has continued to contribute to and liaise with the UNU, the Secretariat for the CBD, and other organisations working on biodiversity issues. In partnership with international initiatives such as the Satoyama Initiative, the group conducted a wide range of policy and investigative research on economic mechanisms, policy frameworks and private sector engagement for biodiversity conservation. This research was carried out by the Programme Management Office (PMO).

#### **(1) Policy research on the Satoyama Initiative and dissemination of results**

IGES is a member of the International Partnership for the Satoyama Initiative (IPSI) established at the CBD COP10 in 2010, which has its Secretariat at the United Nations University Institute of Advanced Studies (UNU-IAS). In collaboration with UNU-IAS, IGES carried out policy research to promote the conservation and sustainable use of biodiversity-rich, human-influenced ecosystems. The following projects were conducted in 2012:

##### **<Major research activities, outputs/outcome and impacts in FY2012>**

- Review of Satoyama case studies on the maintenance and restoration of socio-ecological production landscapes
- Provision of resources and information contributing to policy formulation at IPSI-related meetings and at COP11
- Workshop and parallel session, co-organised with UNU-IAS, at ISAP2012 to promote the Satoyama Initiative

#### **(2) Research on sustainability indicators and accounting frameworks**

Studies were conducted on sustainability indicators and accounting frameworks under the MOEJ programme for Policy Studies on Environmental Economics (PSEE), in particular through case studies on ecosystem/natural capital accounting initiatives being implemented in various countries. The implementation of these studies was carried out jointly with the Economy and Environment Group (EE) and the Sustainable Consumption and Production Group (SCP).

#### **(3) Studies on biodiversity offset methods and advanced policy frameworks**

Based on a study on the evaluation of biodiversity offset methods carried out by the group in FY2011, the following studies were undertaken to examine a suitable offset policy for Japan:

##### **<Major research activities in FY2012>**

- Biodiversity offset methodologies and country case studies
- Methodologies for the selection of appropriate offset sites

#### **(4) Studies on the mainstreaming of biodiversity and ecosystem services**

Based on studies related to business and biodiversity carried out in FY2011, investigations continued on private sector engagement in evaluating and managing the impacts of corporate activities on biodiversity and ecosystem services. This included following up on international initiatives for

business and biodiversity, such as The Economics of Ecosystems and Biodiversity (TEEB), as well as initiatives within Japan.

**<Major research activities in FY2012>**

- Survey on The Economics of Ecosystems and Biodiversity (TEEB)
- Survey on ecosystem services in business and possible impact on biodiversity (joint survey with International Standard Innovation Technology Research Association)

**(5) Mid-term Review of the Japan Biodiversity Fund (JBF)**

Through investigative research, the group contributed to the Mid-term Review of the JBF.

**<Major research activities, outputs/outcome and impacts in FY2012>**

- Desk review focusing on activities funded by the JBF over the past two years
- Interviews with the Secretariat of the Convention on Biological Diversity (SCBD), MOEJ and developing countries on the contribution of the JBF to capacity building in developing countries

**Component 2: Climate Change Adaptation**

The goal of this component was to strengthen knowledge for promoting science-based adaptation in the Asia-Pacific region. In FY2012, the Adaptation Team continued to conduct result-oriented research on the sub-components listed below.

**(1) Adaptation metrics (Global Environment Research Fund (MOEJ); in collaboration with BCAS, TERI and ICIMOD)**

This study aimed to measure the effectiveness of adaptation actions and measure progress in mainstreaming adaptation in sectoral and national policies in the Gangetic Basin .

**<Major research activities in FY2012>**

- Literature review on methods to measure the effectiveness of adaptation actions and to measure progress in mainstreaming adaptation
- To identify effective adaptation options for the Gangetic Basin, analysis of past and predictive rainfall and characterization of water shortage conditions
- Consultation meetings and surveys with partner institutions (May 2012 in Bangladesh and India; June 2012 in Nepal)

**<Major outputs/outcome and impacts in FY2012>**

- Published one IGES research report on adaptation effectiveness indicators
- Presented research papers at the 4<sup>th</sup> International Conference on Climate Change, Seattle, Washington (July 2012)
- Presented research paper at Adaptation Futures, Arizona (May 2012)

- Presented research paper on adaptation effectiveness indicators at the 11th International Conference on Dryland Development, Beijing (March 2013).

## **(2) Adaptive policies in Japan**

This APN-funded project on policy-making factors on mainstreaming adaptation was implemented in collaboration with UKM, Malaysia. This subcomponent conducted a case study on adaptation aspects of agricultural policies in Japan. The main activities in FY2012 were:

### **<Major research activities in FY2012>**

- A questionnaire survey of respondents of the first iteration survey conducted in FY2011 using the Delphi method
- Using the international NGO Tearfund framework, measurement of the progress in institutional mainstreaming of climate change adaptation by conducting a survey of important institutional stakeholders in Japan

### **<Major outputs/outcome and impacts in FY2012>**

- Presentation of peer reviewed paper at the Earth System Governance Conference, Tokyo (January 2013)
- Publication of a research paper on adaptive policies in a book published by Singapore University and MacMillan Publishers
- Submission of the final research report to APN (March 2013)

## **(3) Risk Insurance Systems for Promoting Climate Change Adaptation and Disaster Risk Reduction in Asia**

This APAN research fund study aimed to explore how risk insurance can contribute to adaptive capacity and measures needed to improve the existing risk insurance mechanisms.

### **<Major research activities in FY2012>**

- Establishment of communication method for research and understanding of detailed survey subjects
- Literature reviews and expert meetings for each region (Viet Nam in April, Malaysia in November, and Philippines in January 2013)
- Clarification of current risk insurance mechanisms and barriers to promoting effective risk insurance in the survey countries

### **<Major outputs/outcome and impacts in FY2012>**

- Preparation of report on survey results
  - ✧ Successful procurement of project funding from APN for research on risk insurance starting from FY2013
- Publication of a peer reviewed research paper on “Promoting Risk Insurance in Asia-Pacific Region: Lessons from the Ground for the Future Climate Regime under UNFCCC” in a book published by BaltCiCA and Blackwell and Wiley
- Publication of a peer reviewed research paper on financial innovations for risk reduction in the WANA region in a book published by WMO, FAO and Springer

#### **(4) Collaboration with other projects**

##### **<Major research activities in FY2012>**

- Contribution to capacity building of senior staff and management staff at the African Development Bank on Resilience and Green Growth
- Support for APAN activities
- Continued support and monitoring of the Asia Pacific Forum for Environment and Development (APFED) Showcase projects in the Philippines

##### **<Major outputs/outcome and impacts in FY2012>**

- Preparation of a guidance note on water sector for Africa
- Contribution to Chapter 24 of the 5th Assessment Report of IPCC (Asia) under livelihoods, food production systems and food security
- Chapter 4 of policy report “Lessons learned from the triple disaster in East Japan”
- Publication of peer reviewed research paper
- Research results from APAN funding:
  - Session on risk insurance at the 3<sup>rd</sup> Adaptation Forum, Incheon (March 2013)
  - Preparation of two research reports on piloting of training modules for district and sub-district agriculture officers in Bangladesh and Cambodia
  - Preparation of a research report for APAN on financing risk reduction in the agriculture sector based on the study carried out in the Philippines, Viet Nam and Malaysia.
- S6 and ICCPL<sup>4</sup> projects:
  - Publication of a peer reviewed research paper
  - Published a peer reviewed research paper on Indonesia climate change adaptation policies in a book published by BaltCiCA and Black and Wiley.

#### **Component 3: Forest Conservation through REDD+<sup>5</sup> and Forest Products Trade**

The objectives of the research on forest conservation were to:

- (i) Provide guidance on engaging local communities in carbon accounting and other aspects of REDD+;
- (ii) Provide critical analytical inputs for the REDD+ negotiations and the development of effective, efficient and equitable national REDD+ administration and strategies;
- (iii) Contribute to the development of MRV (Measurement, Reporting and Verification) systems for REDD+<sup>6</sup>;

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<sup>4</sup> Refer to 4-4

<sup>5</sup> REDD+: Reducing Emissions from Deforestation and Forest Degradation and conservation of forest carbon stocks, sustainable management of forest, enhancement of forest carbon stocks.

<sup>6</sup> This component is a part of the integrative research component on MRV-related capacity development conducted

- (iv) Deepen understanding of the strengths and weaknesses of regulatory initiatives in consumer countries to curb the import of illegal forest products.

In FY2012, this research aimed to provide analysis and guidance on REDD+ and assess consumer country responses to the trade in illegal timber. For that purpose, each sub-component implemented the following activities:

### **(1) Community Carbon Accounting**

This component consisted of action research and capacity building to develop and test the concept of community carbon accounting (CCA), which is an approach to engage communities in the measurement of forest carbon stock change. The following activities were carried out:

#### **<Major research activities in FY2012>**

- Action research on CCA in Lao PDR, Indonesia, PNG, Cambodia and Viet Nam
- Project partners meeting and 2-day CCA training manual design workshop in Japan

#### **<Major outputs/outcome and impacts in FY2012>**

- Policy brief “Community-based Forest Monitoring for REDD+: Lessons and reflections from the field”
- Book chapter “Forestry: Importance of local participation in REDD+”

### **(2) REDD+ Database**

This component includes managing, updating and expanding the IGES REDD+ Database and using the information compiled in the database for research. The following activities were conducted in this component:

#### **<Major research activities, outputs/outcome and impacts in FY2012>**

- Development of profiles of REDD+ demonstration activities
- Summary of the profiles using a matrix
- Reports on REDD+ readiness in three countries – Indonesia, PNG, Lao PDR
- IGES Policy report “REDD+ projects: A review of selected REDD+ project designs”

### **(3) International REDD+ negotiations**

The aim of this component is to provide inputs into the international REDD+ negotiations. The following activities were carried out:

#### **<Major research activities, outputs/outcome and impacts in FY2012>**

- Finalisation of the draft forest sector governance standard for Nepal through an online survey, interviews with stakeholders, a national workshop and field tests
- Presentation of the governance standard at several UNFCCC side events
- Preparation of reports on the UN Climate Change Conference, AWG-LCA15 and COP18

#### **(4) Analysis of voluntary REDD+ standards<sup>7</sup>**

This research aims to draw lessons from the Verified Carbon Standard (VCS) and other voluntary REDD+ standards for national REDD+ MRV and bilateral GHG offset mechanisms.

##### **<Major research activities in FY2012>**

- Review and analysis of VCS standards, methodologies and processes

##### **<Major outputs/outcome and impact in FY2012>**

- Report on emissions scenario modelling for the Seima Community-Based Production Forest in Cambodia.

#### **(5) Forest products trade**

This research aimed to evaluate measures taken by consumer countries to curb the import of illegal forest products and conducted the following activities:

##### **<Major research activities in FY2012>**

- Research on certification standards and drivers for certification in Papua New Guinea, under the Australian Government funded Responsible Asia Forestry and Trade partnership

##### **<Major outputs/outcome and impacts in FY2012>**

- Preparation of draft technical reports

### **1-2-1 Freshwater Sub-Group**

The goal of the Freshwater Sub-group is to enhance water governance for sustainable development. Our activities were composed of two components: research entitled “Groundwater Governance for Sustainable Development” and a network activity “Water Environment Partnership in Asia (WEPA)”. The Freshwater sub-group shared its findings with a wider audience and also strengthened the existing network.

#### **Component 1: Groundwater Governance for Sustainable Development**

This research was composed of a baseline study of groundwater and its governance in Asia, and an in-depth study on enabling environment for the introduction/effective implementation of economic instruments for sustainable development. This component was conducted as an integral part of the activities related to the Asia-Pacific Water Forum Water Knowledge Hub Network on Groundwater.

##### **(1) Baseline study of groundwater and its governance in Asia**

###### **<Major research activities in FY2012>**

- Literature review
- Local data collection

###### **<Major outputs/outcome and impacts in FY2012>**

- Compilation of basic information available on groundwater in Lao PDR (country or sub-region basis)

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<sup>7</sup> This component is a part of the integrative research component on MRV-related capacity development conducted by Programme Management Office (PMO).

## **(2) In-depth study on enabling environment for the introduction/effective implementation of economic instruments for sustainable development**

### **<Major research activities in FY2012>**

- Studies of groundwater management in Lao PDR, focusing on groundwater irrigation
- Study on groundwater management at selected coastal areas in Southeast Asia, conducted under ADB-UNESCO-IHE Knowledge Partnership Project “Comparative Research of Groundwater Management in the Coastal Areas in Southeast Asia”

### **<Major outputs/outcome and impacts in FY2012>**

- Summary of inception meeting and workshop organised under “Comparative research of groundwater management in the coastal areas in Southeast Asia”
- Inception meeting report of the project “Enhancing the resilience and productivity of rainfed dominated systems in Lao PDR through sustainable groundwater use”, which was shared with local policy makers

## **(3) APWF Groundwater Knowledge Hub related activities**

### **<Major research activities in FY2012>**

- Participation in the Asia-Pacific Knowledge Hub Network Meeting and other related meetings for information collection and networking
- Knowledge-hub website management

### **<Major outputs/outcome and impact in FY2012>**

- Contributed to the educational/capacity development programme conducted by University of Tokyo, through the international symposium “Towards Integrated Water Resource Management for Sustainable Development: Perspective from Four Countries”, which was also targeted at capacity development of local authorities of the host country (Zhangye, China)

## **Component 2: Water Environment Partnership in Asia (WEPA)**

The Freshwater Sub-group has been commissioned by the MOEJ to serve as the secretariat of the Water Environment Partnership in Asia (WEPA). The sub-group continued to provide the secretariat duties for the Partnership initiative, which covers 13 countries in Asia. A detailed plan of activities of WEPA was decided by MOEJ referring to the discussion of the WEPA Advisory Meeting.

### **<Major research activities in FY2012>**

- Domestic Advisor Meeting (held twice, Tokyo)
- WEPA International Workshop (February 2013, Siem Reap)
- Annual Meeting (February 2013, Siem Reap)
- Bilateral meeting (September 2012, Sri Lanka)
- Survey in several WEPA partner countries on priority topics (domestic and industrial wastewater treatment).

### **<Major outputs/outcome and impact in FY2012>**

- WEPA web-based database update
- Publication of WEPA Outlook in Japanese

### **Component 3: Development of NAMAs in wastewater sector<sup>8</sup>**

#### **<Major research activities in FY2012>**

A study for the development of NAMAs in the wastewater sector was conducted, which included investigation of possible MRV for NAMAs and GHG reduction potential in the wastewater sector. Field surveys were conducted in Cambodia, Indonesia and Thailand.

#### **<Major outputs/outcome and impact in FY2012>**

- Chapter 14 “Wastewater” in the IGES Policy Report “Measurement, Reporting and Verification (MRV) for low carbon development: Learning from experience in Asia”.

### **Component 4: Water-Energy-Climate Nexus (An assessment of water resource management and climate mitigation policies in Thailand using water-extended bottom up energy systems model)**

One of the main objectives of this study was to establish what relationship exists between water resources and energy production. This study also aimed to demonstrate the importance, and highlight the co-benefits, of integrated energy-water management policies.

#### **<Major research activities in FY2012>**

- Estimation of water availability for energy production under different policy scenarios
- Development of a water adjusted bottom-up energy systems model
- Estimation of water use coefficient for energy sectors
- Assessment of water constraints for energy sector

#### **<Major outputs/outcome and impact in FY2012>**

- Policy brief, peer reviewed case study article and non-peer reviewed article
- Contribution to World Water Development Report (WWDR) 5 to be published by UN-Water

## **1-3 Sustainable Consumption and Production Group (SCP)**

The goal of the Sustainable Consumption and Production (SCP) Group was to contribute to the development of sustainable patterns of consumption and production in the Asia-Pacific region. Special attention is given to the use of materials (physical and energy resources) and how the environmental impacts associated with those materials over their life-cycles can be reduced through policy interventions. In FY2012, the third and final year of the Fifth Phase, the group aimed to continue the work carried out earlier, whilst also trying to strengthen the new research focus on sustainable consumption in Asia. For that purpose, each component of the group implemented the following activities.

### **Component 1: Sustainable Consumption in Developing Asia**

This component aimed to explore the meaning of sustainable consumption in an Asian context, and to identify and advocate effective policy measures for addressing unsustainable patterns and trends.

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<sup>8</sup> This component is a part of the integrative research component on MRV-related capacity development conducted by Programme Management Office (PMO).

**<Major research activities in FY2012>**

- Analysis of challenges in transitioning to energy efficient housing in developing Asia (funded by ADB)
- SCP capacity assessment of 19 countries in Asia Pacific under the framework of EU's SWITCH Asia Programme, (together with CSIRO) preparation of handbook for policy makers and a series of training workshops (UNEP commissioned project)
- Contribution to IGES' involvement in Rio+20 and assistance to Japanese government in hosting the meeting of UNEP's International Resource Panel.
- Support for the launch of the Global Research Forum (GRF) on SCP.

**<Major outputs/outcome and impact in FY2012>**

- Report to UNEP and SWITCH Asia, "Capacity Building and Policy Needs Assessment on Sustainable Consumption and Production" (July 2012) and a handbook for senior policy makers in Asia countries (October 2012)
- Contribution to the ASEAN Leadership capacity building programme and to capacity building for the African Development Bank.
- Asia Pacific Chapter of UNEP's Global Outlook on SCP Policies
- Peer-reviewed article on the limitations of the Green Consumerism approach
- Contribution to a study on Happiness indicators and to a UNESCAP project on Green Growth indicators
- Establishment of a research consortium on approaches to materials reduction, and kick-off workshop in Wuppertal (Germany) March 2013

**Component 2: Chemicals Management for Sustainable Product and Material Life-Cycles**

This component carried out the following activities, aiming to contribute to improved management of chemicals, especially chemicals used in products, from a life-cycle perspective.

**<Major research activities in FY2012>**

- Research on applicability of Recycling Certification in the context of developing Asia (funding from Environment Research and Technology Development Fund).
- Expert workshop on E-waste management, proposing an idea of certification and quality control in the recycling industry for sound management of e-waste in Asian countries.
- Contribution to the discussion of the first meeting of the Technical Expert Group (TEG.1) to develop a framework for the ESM of hazardous and other wastes, as well as on the Japanese government's position on ESM framework on Basel process as a member of the committee of MOEJ/MOFA/METI .

**<Major outputs/outcome and impact in FY2012>**

- Research Report on "Research Project to Examine the Possibility to Introduce Recycling Certification in Asia (ReCA)"(May 2012)
- Expert Workshop on "Possible Introduction of Recycling Certification in Asia" back to back with the UNIDO/UNCRD e-waste training workshops for policy makers of GMS countries

(July 2012)

- Discussion Paper “ Possible Introduction of Recycling Certification in Asia” submitted as a background paper to UNIDO/UNCRD e-waste training workshops for policy makers of GMS countries (July 2012)
- Special session on “Applicability of Certification Schemes for Development of Recycling Industries in Asia” at Annual Conference of Society for Environmental Economics and Policy Studies(September 2012).
- Invitation to the 9th NIES E-waste Workshop in Bangkok to be a speaker and also chair of the one panel discussion on topic of recycling certification and international resource circulation(January 2013).

### **Component 3: Governance for Sustainable Resource Circulation in Asia**

This component aims to assess policies related to resource circulation, including trade in second-hand goods and recyclable materials, from a sustainability perspective. It was conducted in collaboration with the Economic and Environment Group.

#### **<Major research activities in FY2012>**

- Research on two international working groups (on 3R indicators, and international resource circulation), as the 2<sup>nd</sup> phase of the research network associated with the Regional 3R Forum
- . Submission of 9 types of factsheets as well as a background paper on 3R policy indicators to the 4<sup>th</sup> Regional 3R Forum in Asia (March 2013), based on the outcomes from the working groups on 3R indicators
- Support for food waste commissioned by Ministry of Housing and Local Government (MHLG) to develop the Food Waste Management Strategies in Malaysia, , and support for the Ministry of Natural Resources and Environment of Viet Nam to develop a 3R Program in Viet Nam (in collaboration with IGES Kitakyushu Urban Centre) , submission of reports to each government (March 2013).
- Research to develop a methodology for sustainability assessment of E-waste recycling in selected countries in Asia in collaboration with a visiting researcher from a Japanese private company
- Member of 3 of MOEJ’s advisory committees on “International resource circulation”, “International promotion of recycling industries”, “Kawasaki-Sheng Yang Collaboration for Establishing Environmentally-Friendly Cities”

#### **<Major outputs/outcome and impact in FY2012>**

- Adoption of a list of sample indicators on 3R progress attached to Hanoi 3R Declaration, as outcome document of the 4<sup>th</sup> Regional 3R Forum in Asia and formal request from 3R Regional forum to further examine the possibility to come up with a core set of policy indicators on the 3Rs for Asia and the Pacific.
- Methodology developed for sustainability assessment of WEEE recycling in selected countries in Asia and applied for evaluating life cycle GHG emission from home appliances recycling in Japan in collaboration between IGES researchers and a visiting researcher from a private company.
- Presentation on “International Collaboration Towards Sustainable Resource Circulation and

Management.” at Conference organized by Japanese-German Center in Berlin (December 2012).

#### **Component 4: Sustainable Waste Management with Multiple Benefits**

This component aims mainly to identify feasible options for local governments to maximise utilisation and minimise disposal of waste by introducing the 3Rs and to raise awareness on the associated benefits on climate change, food and energy security, and employment and poverty reduction. The following activities were carried out in FY2012.

##### **<Major research activities in FY2012>**

- Integrated assessment multiple benefits of integrated solid waste management in developing Asian countries
- Study on MRV methodologies for improved waste management and recycling
- Development of appropriate recycling business model for developing Asian countries (Funded by ADB)

##### **<Major outputs/outcome and impact in FY2012>**

- Contribution to IGES MRV research - Introduction of LCA approach for accounting GHG emission reduction from solid waste management and proposal to apply the 3Rs for NAMAs policy
- Development of an online tool (March 2013)
- Pilot project and capacity building for organic waste separation and composting in Cambodia and submission of a commissioned report.
- Finalisation of a project from ADB on recycling business
- Policy Brief, “Towards Climate-Friendly Waste Management: The Potential of Integrated Municipal Solid Waste Management” (October 2012)
- Policy Brief, “Sustainable Management of Organic Waste: The need for coordinated action at national and local levels” (September 2012)
- Policy Report, “A guide for sustainable urban organic waste management in Thailand: Combining food, energy, and climate co-benefits”, (June 2012) (with Thai language version)
- Policy Report, “Measurement, Reporting, and Verification (MRV) for low carbon development: Learning from Experience in Asia” (March 2013) (with Khmer language version)
- Two peer reviewed articles

## **2. Disciplines Cluster**

### **2-1 Economy and Environment Group (EE)**

The goal of the Economy and Environment Group is to develop innovative quantitative analysis tools for integrated policy assessment of sustainable development, and thereby to conduct research on policies and strategies tackling emerging issues such as trade and environment, and green economy. In FY2012, the group implemented the following activities, in many cases collaborating

with other groups including Climate Change Group (CC), Sustainable Consumption and Production Group (SCP), and Natural Resources Management Group (NRM).

### **Component 1: Integrated Policy Impact Assessment for Sustainable Development**

This component aims to develop a model for integrated policy impact assessment of sustainable development based on economic models which have been developed so far. In addition to top-down general equilibrium type models such as CGE and IO models, we developed capacity to use bottom-up energy models such as TIMES model or IIASA's MESSAGE model to address emerging policy questions.

#### **<Major research activities in FY2012>**

- Research project to develop policy impact assessment tool for resource recycling and sustainable resource use. Development of a method to estimate carbon footprint and life cycle resource use by linking computable general equilibrium (CGE) model and multi-region input-output (MRIO) model.
- Capacity building in bottom-up energy models, such as the TIMES model
- Research on a long-term energy and CO<sub>2</sub> emissions scenario for Japan using the TIMES model with an economic impact assessment on energy mix options.
- Joint research with the International Institute for Applied Systems Analysis (IIASA) in Austria, on long-term energy scenario assessments for water and energy in Asia.

#### **<Major outputs/outcome and impact in FY2012>**

- Policy Brief, "Long Term Electricity Scenario and Water Use—A case study on India" (July 2012)
- A peer reviewed article

### **Component 2: Trade and Environment with Special Focus on Embodied Emissions**

This component aims to reveal policy implications of burden-sharing relevant to embodied emissions, based on the estimated emissions embodied in trade. Policy analysis on border adjustment measures was one of the study topics addressed in FY2011.

#### **<Major research activities in FY2012>**

- Research on implications of economic development and carbon emission considering embodied emissions through a quantitative analysis using the multi-regional input-output (MRIO) model to account for greenhouse gas emissions embodied in trade

#### **<Major outputs/outcome and impact in FY2012>**

- Commissioned report to Wuppertal Institute, "Regional Trend in Electromobility in Japan" (March 2013)
- Book chapter entitled "Link of the Chinese Interregional Input-Output Model with the Asian International Input-Output Table: The case of China and Japan" (April 2012)
- Three peer reviewed articles

### **Component 3: Green Growth through Economic Instruments and Green Investment**

This component aimed at quantitative impact assessment of green development policies using the integrated policy impact assessment model. The component also aimed to contribute to international policy processes related to green economy. The group carried out economic analysis in cooperation

with universities and research institutes on the sustainable use of resources and ecosystem services, which are principle issues in green economy policies. The following activities were conducted in FY2012

**<Major research activities in FY2012>**

- Open session on green economies through the development of resilient energy systems at the International Forum for Sustainable Asia and the Pacific (ISAP2012) held in July 2012 - discussions on the research results obtained through the use of bottom-up energy models.
- Contribution to analysis of domestic renewable energy through through the use of bottom-up energy models.
- Follow-up research on EAS region energy markets as commissioned research for Economic Research Institute for ASEAN and Asia (ERIA)
- Presentation at meeting and seminar of International Resource Panel of the United Nations Environment Programme (UNEP) (November 2012, Tokyo).
- Contribution to training project for staff at the African Development Bank focusing on green growth.

**<Major outputs/outcome and impact in FY2012>**

- Two commissioned reports to MOEJ Research Fund
- Commissioned report to MOEJ: “Establishing and Operating National Preparatory Committee for Rio+20”
- Commissioned report to MOEJ
- One chapter of Policy Report, “Lessons Learnt from the Triple Disaster in East Japan” (June 2012)
- A chapter of Policy Report, “Measurement, Reporting, and Verification (MRV) for low-carbon development: Learning from Experience in Asia” (March 2013)
- Publication of book entitled “The Economics of Biodiversity and Ecosystem Services” (January 2013)

**2-2 Governance and Capacity Group (GC)**

The goal of the Governance and Capacity Group was to explore ways to improve governance and capacity for sustainable development in the Asia-Pacific region, and propose appropriate policies. In FY2012, this group conducted research under six main components. The following main activities were implemented in each of these components.

**Component 1: Regional Governance and Environmental Cooperation in Asia**

This component had two main objectives. First, it analysed international environmental cooperation mechanisms in North and Southeast Asia to develop recommendations for strengthening them. Second, it contributed to specific regional policy processes. Main activities in FY2012 were as follows:

**<Major research activities in FY2012 >**

**(1) Study on Environmental Governance in East Asia**

- Presentations at ISAP “Greening Governance in Asia-Pacific” and “Future Directions for IFSD: Post Rio+20.”

**(2) Study on Environmental Governance in Northeast Asia** (conducted under the framework of TEMM in cooperation with research institutes from China and Republic of Korea)

- Joint research on the current status and major challenges of environmental governance in Northeast Asia, in collaboration with Korea Environment Institute (KEI) and the Policy Research Center for Environment and Economy (PRCEE).

**(3) Contribution to specific regional policy processes** (in cooperation with the PMO)

- Research on environmental policy measures and challenges in the areas of air pollution, waste management and mercury pollution in India as part of IGES work on the Clean Asia Initiative (CAI).

<Major outputs/outcome and impact in FY2012>

- MoEJ commissioned report on Clean Air Initiative (CAI) (March 2013)
- Chapter in Fourth IGES White Paper summarizing the results of (1) above

## **Component 2: Multilevel Governance**

<Major research activities in FY2012>

**(1) Research on International Environmental Governance (IEG) and the Institutional Framework for Sustainable Development (IFSD)** (Conducted in cooperation with PMO, EE and SCP)

The main objective of this subcomponent was to analyse key issues from a global perspective and make policy recommendations regarding IEG and IFSD<sup>9</sup>, in connection with Rio+20. In FY2012, the following activity was carried out:

- Preparation of IGES Position Paper and policy recommendations to MOEJ based on analysis of key issues of IEG and IFSD, relating to Rio+20, including UNEP and UNCSD

**(2) Research on the potential to develop new Millennium Development Goals (MDGs) with strengthened environmental aspects (Sustainable Development Goals (SDGs))**

(conducted in cooperation with the Tokyo Institute of Technology, United Nations University Institute of Advanced Studies (UNU-IAS), and the PMO)

This subcomponent is part of a larger project to consider how to strengthen the environmental aspect of MDGs in the context of upcoming international discussions on post MDGs and the possibility of establishing SDGs.

<Major research activities in FY2012>

- Research on international trends in the discussion on MDGs/SDGs, possible effectiveness of potential goals and indicators, and implications of application of basic principles such as common but differentiated responsibility, universality, fairness and balance.

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<sup>9</sup> IEG: International environmental governance

IFSD: Institutional framework for sustainable development

#### <Major outputs/outcome and impacts in FY2012>

- Policy Report "Global Architectures for Sustainable Development Delivery" (June 2012), with ASEF
- Governance parts of Chapter 10 "Asia and the Pacific" of the 5<sup>th</sup> *Global Environment Outlook* (GEO5) of UNEP
- A section of Taking Action Together under UNEP's "Global Outlook on SCP Policies (Asia and the Pacific)"
- Policy Brief, "Post-2015: framing a new approach to sustainable development" (March 2013) co-authored with Independent Research Forum (IRF)
- Issue Brief, "The Role of Governance Post2015" (March 2013)
- Policy Report, "Current Outlook on the Sustainable Development Goals (SDGs): A Brief Analysis of Country Positions" (Jan. 2013), co-authored with Tokyo Institute of Technology

### **Component 3: Regional and National Governance: Trans-Boundary Air Pollution**

(Conducted in collaboration with Kanazawa University and other universities and research institutes)

The main goal of this component was to analyse the key trends of domestic atmospheric environment management policy in the case study countries in the North and South East Asian regions (China, Japan, Republic of Korea and Thailand) and the main factors determining them, in order to understand the possible domestic factors and barriers to the promotion of potential international coordination for comprehensive atmospheric management or potential international agreement in East Asia. FY2012 was the fourth year of the research project. IGES conducted research focusing on developing options to strengthen the international cooperation framework and the regional science-policy interface in North and Southeast Asia, through four case studies (China, Japan, Republic of Korea and Thailand), and organising an international expert workshop

#### <Major research activities in FY2012>

- Side event and presentation at Better Air Quality (BAQ) (Hong Kong, December 2012)
- International workshops on "Strengthening the international cooperation framework and science-policy interface to promote air pollution control in East Asia 2013" (Tokyo, February 2013), and "Regional air pollution frameworks in East Asia and potential for linkage with co-benefits" (Tokyo, February 2013) (joint event organised by IGES/ International Institute for Applied Systems Analysis (IIASA))
- Presentations and publications on research results presented at International Meetings (January ~ March 2013)

#### <Major outputs/outcome and impacts in FY2012>

- Conference paper on "Voluntary approaches in VOC emission reduction policy in Japan" presented at the Tokyo Earth System Governance Conference in Jan. 2013.
- Preparation of Report on Commissioned Work of the Environment Research and Technology FY2012 (March 2013)

### **Component 4: Education**

#### **(1) Capacity Development and Education for Sustainable Consumption in Asia\***

The main purpose of this component was to strengthen governments' efforts on Education for

Sustainable Consumption (ESC) to promote civil society's proactive participation in sustainable consumption and responsible lifestyles. This was accomplished through three objectives: i) capacity building for ESC leaders to strengthen policy-makers' understanding of ESC's importance and techniques for its promotion ii) providing strategic policy recommendations on ESC to policy-makers in East Asia, and iii) advancing policy dialogues on ESC in the A-P region to secure better regional cooperation. Major activities in FY2012 were as follows:

**<Major research activities in FY2012>**

**(a) Research on Planning for Low-Carbon Sustainable Cities and increasing Citizen Engagement in Low-Carbon Transitions**

Research was implemented to examine the planning processes of local governments to address transitions towards Low-Carbon Sustainable Cities, and specifically to identify the citizens' roles/responsibilities in this transition being considered by local governments. This research aimed to utilise a social learning perspective to strengthen practices of citizen engagement towards becoming powerful actors in the realization of Low Carbon Sustainable Cities.

This research was conducted as a part of Component 6.

**(b) Strengthening ESC Leadership and Network in East Asia:**

IGES coordinated regional ESC networking activities in East Asia, cooperating with the Division of Technology, Industry and Economics (UNEP-DTIE) project on Strengthening Institutional Frameworks for ESC to disseminate project guidelines. IGES also served as the regional coordinator for the "Partnership for Education and Research for Responsible Living"<sup>10</sup> through which Asian perspectives on ESC were brought to international attention,

**<Major outputs/outcome and impacts in FY2012>**

- Contributions to policy report as a consultant to UNEP's pilot project on Institutional Strengthening of ESC
- Provision of case studies for Chapter 5 of UNEP's Global Outlook on SCP Policies
- Provision of case studies on learning for sustainable lifestyles in Asia for UNEP and PERL (2012) Learning to Transform Oneself and Society: Education for Sustainable Living
- Peer-reviewed chapter in book by Springer on Enabling Responsible Living.
- Chapter in book by Chinese Environmental Publishing House on Research on Education for Sustainable Consumption

**(2) Monitoring and Evaluation of Education for Sustainable Development in Asia** (A collaborative research project with United Nations University Institute of Advanced Studies (UNU-IAS))

The purpose of this project was to conduct scoping research on the implementation and practice of ESD<sup>11</sup> in selected countries in the region. This research aimed to identify the important factors and leverage points for both ESD implementation and learning performance as a precursor to developing

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<sup>10</sup> A global network on ESC in collaboration with the Marrakech Task Force for ESC, UNEP, UNESCO, EU and the Consumer Citizenship Network

<sup>11</sup> ESD: (Education for sustainable development)

a set of Indicators for ESD that are relevant for use in monitoring and evaluation across the Asia-Pacific region. This research was established around the fact that “the UN Decade of ESD” will conclude in 2014, IGES conducted following activities in FY2012.

#### <Major research activities in FY2012>

##### **(a) Research on necessary capacities for ESD Implementation:**

To distinguish capacity-leverage points for strengthening ESD implementation, IGES conducted research at national level in seven selected countries from East and Southeast Asia to produce ESD country status reports and to investigate important factors in achieving effective ESD implementation.

##### **(b) Research on Assessment of Learning Performance in ESD:**

To identify the important characteristics of educational contents and learning processes that support good ESD learning achievements and outcomes, IGES conducted research based on good practice cases collected from 10 Regional Centres of Expertise (RCEs) on ESD from East and Southeast Asia.

##### **(c) Developing a Monitoring and Evaluation framework for elaborating pilot ESD Indicators**

IGES utilised the research work of the previous two sub-components to develop a monitoring and evaluation framework and to organise multiple events for collaborative inquiry and capacity building on actualising a process for monitoring and evaluation of ESD across the region through the elaboration of pilot ESD indicators.

#### <Major outputs/outcome and impacts in FY2012>

- Organised sub-regional ESD reporting and capacity building meeting for Southeast Asia (April 2012, Bangkok, Thailand)
- Expert Workshop on Monitoring and Evaluation of ESD at ISAP 2012 (July 2012)
- UNESCO Expert Consultation on Elaborating Indicators of ESD (December 2012, Bangkok, Thailand)
- Three Policy Reports: “ESD Country Status Reports”, “Assessment of Learning Performance in ESD”, “Monitoring and Evaluation of ESD”
- Three peer-reviewed journal articles

#### **Component 5: Local Governance**

The objective of this component was to analyse effective collaboration between local governments and local stakeholders towards sustainable regional development.

#### <Major research activities in FY2012>

##### **(1) Local level transition for sustainable society**

The study evaluated regional management and urban-rural relationship that can foster transitional energy concept in terms of electricity, heat and transportation fuel in Japan after 3.11, focusing on the role of local governments and networks of individuals and corporations. In FY2012, IGES conducted case studies of on-going initiatives to collate data needed for assessment as well as consultation with experts and stakeholders on options.

This study was conducted as a part of Component 6.

## **(2) Low carbon development and new market mechanisms at local level<sup>12</sup>**

The study evaluated the mechanisms to promote low-carbon development at local level in selected Asian developing countries using a new market mechanism proposed by Japanese government. Based on a case study of demonstration programmes in selected local governments, capacity development activities were implemented for the local and national institutions conducive to utilisation of new market mechanism

### **<Major outputs/outcome and impacts in FY2012>**

- Policy Report “Japanese individuals’ attitudes towards post-Fukushima energy policy reform and markets”
- Policy Brief, “Practical measures to promote Japanese local governments’ environmental collaboration with developing countries with citizens’ support”
- Two peer review journal articles
- Member of an MoEJ advisory panel on overseas legal system
- Expert workshop on urban development using smart grid
- One chapter of a Japan International Cooperation Agency (JICA) book

## **Component 6: Dynamics of the transition to low-carbon society – focus on lifestyle changes and energy consumption in cities<sup>13</sup>**

In light of the energy crisis, this research looked at the direction of new policies for system reform and technology innovation as the core for creating low-carbon cities. It also researched how local government, businesses and citizens dealt with this transition and how technology is transferred. At the same time, the Urban Knowledge Platform for Low-Carbon Cities was created to promote information exchange among those entities dealing with these issues such as local authorities, businesses, universities and research institutes, and studies were undertaken based on collaboration among these connected actors.

### **<Major research activities in FY2012>**

#### **(1) Research on Planning for Low-Carbon Sustainable Cities and increasing Citizen Engagement in Low-Carbon Transitions**

For details, see Component 4 (1) (a)

#### **(2) Research on local development measures for the formation of low-carbon districts**

This research conducted analysis of what systems could be effective and what are the challenges using examples of existing new energy businesses in Europe and the US, so as to understand the potential of new energy business in Japan. Studies were also carried out on the potential for companies making further progress in energy-saving, and what actual movements could be seen post

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<sup>12</sup> This component is a part of the integrative research component on new market mechanisms coordinated by Programme Management Office (PMO).

<sup>13</sup> As the main tasks and the corresponding staff were transferred to PMO in the middle of FY2011, and then to the GC group in FY2012, KUC undertook only a part of this research focusing on low-carbon city development plans in Kitakyushu City

3.11, focusing on businesses that are end-consumers of energy. Based on these studies and analysis results, input was made into observations on local development for low-carbon city formation

### **(3) Local level transition for sustainable society**

For details, see Component 5 (1)

#### **<Major outputs/outcome and impacts in FY2012>**

- Two peer reviews articles relating to the Triple Disaster in East Japan
- Two non-reviewed articles in collaboration with Yokohama City University etc.
- Academic presentation on Kitakyushu City
- Symposia and Seminars on Urbanisation Knowledge Platform for LC cities

## **3. Stakeholder Cluster**

### **3-1 Kansai Research Centre (Business and the Environment)**

The Kansai Research Centre conducted research focusing on actions taken by the private sector including business corporations promoting environmental and energy-saving measures. Corporate behaviours were analysed in collaboration with case study countries and local governments, while environmental and energy-saving technologies of firms were studied aiming to apply their low-carbon and co-benefit technologies to developing countries. By conducting these activities, the research aimed to identify possible barriers and promotional factors to promote sustainable business in Asia, and formulate specific strategies. The following activities were conducted in FY2012.

### **Component 1: Research for the Application of Low-Carbon Technology in India (ALCT)**

To promote the application of low carbon technology in India, the project has, together with The Energy and Resources Institute (TERI) and support from various leading private businesses, such as Mayekawa, Yanmar and Panasonic Group, conducted a wide range of activities with regards to technology transfer and application, including:

#### **<Major research activities in FY2012>**

- Selection and evaluation of appropriate low-carbon technologies: four technical investigations for a total of eight Indian units in four industrial clusters for various low-carbon technologies.
- Based on these missions, evaluation of potential in terms of carbon emissions reduction, to be up to about 50%, as well as preparation of detailed drawings etc. for the actual installation of the gas and electric heat pump systems.
- Evaluation on improving operational management methods for induction furnace and compressed air system,
- Pilot project: gained agreement from four Indian factory units for the purpose of conducting a pilot to supply equipment for selected low-carbon technologies
- Installation of gas heat pump (GHP) system in two foundry units by February 2013 and operations started as a remarkable development,

- Electric heat pump (EHP) system currently under manufacture in Japan and expected to be installed in two dairy units.
- Launch of baseline measurement by December 2012 to verify effectiveness of carbon emissions reduction
- Capacity building for local Indian engineers etc.: workshops/seminars both in Japan and India with an aim to build capacity for engineers as well as managers of the Indian industry
- Invitation to Indian delegates including engineers from TERI to Japan for on-site study tour in the actual Japanese industry.
- Dissemination of project activities and results: Participation in a number of domestic and international practical and academic discussions/conferences, to present results and to enhance the network of IGES among governments, private business and academia.

**<Major outputs/outcome and impacts in FY2012>**

- Policy brief “Technology as a measure to Tackle Global Warming” (May 2012)
- Commissioned reports “Detailed Study for Two Dairy Units in India” (May-June 2012)
- Presentation of results in India at National Summit on Energy Efficiency on MSMEs in India(July 2012), at workshop (December 2012) and at India-Japan policy dialogue (February 2013)
- Commissioned report “Improving Air Compressor System in Indian Small and Medium Enterprises (SMEs)” (March 2013)

**Component 2: Market-based Instruments for Improving Company Carbon Performance in Northeast Asia (MBIs)**

Focusing on climate change policies using economic instruments (subsidies, taxation, emissions trading, etc.), this component aimed to identify the existing gap between current policies and effective and feasible policies in Northeast Asia by analysing the influence of those policies on individual companies: (i) influence on energy efficiency and GHG emissions, and (ii) influence on corporate operations and overall responses of companies to economic climate tools. On that basis, policy recommendations were developed as a comprehensive policy framework as well as specific measures in cooperation with local researchers. The results from the above mentioned research were expected to be input to make or draft a plan at regional level. Major activities in FY2012 were:

**<Major research activities in FY2012>**

- Summary of the latest discussions and progress of industry-related energy saving and climate policies at national level in China and Korea, with an emphasis on economic tools.
- Questionnaire survey to 465 large energy-consuming companies in Hyogo prefecture of Japan. Using the dataset from 230 respondents, the company’s energy saving practices and determinants, their awareness of and acceptability to economic climate policies and their affordable carbon prices were measured and estimated.
- Field works in China and Korea. The policy choice experiment surveys successfully collected data from 150 companies in Korea and 201 companies in China. The modeling analyses clarified the policy attributes and levels significantly affecting the company’s choice preferences to the design alternatives of MBIs, including carbon tax policy and GHG ETS

**<Major outputs/outcome and impacts in FY2012>**

- Five peer-reviewed articles in world famous journals, such as ‘Applied Energy’ and ‘Energy Economics’.
- Presentation of two papers at meetings in Japan and Korea.
- Two research reports respectively summarising the policy choice surveys in China and Korea.
- Research outcomes disseminated by local networks
- Survey findings shared with research institutes under national ministries in China and Korea, and Hyogo prefecture government of Japan

**Component 3: Local Business Initiative (LBI)**

The follow-up activities of the “Eco-Home Diagnosis Project” were implemented in cooperation with Hyogo prefectural government and related private sectors. Major activities in FY 2012 were:

**<Major research activities in FY2012>**

- Analysis of diagnosis data obtained in Hyogo prefecture and verification of the structure of CO2 emissions and CO2 reduction effect.
- Support to establish the self-reliant operations in Hyogo of environmental concierge system, which Ministry of Environment is promoting.

**<Major outputs/outcome and impacts in FY2012>**

- Exchange analysis on survey at the Hyogo Uchi-eco committee meeting etc.

**Component 4: Co-benefit Technologies (CT)**

This component aimed to collect and organise technological information and data regarding co-benefits technologies balancing between environmental and energy-saving measures owned by Japanese businesses. Research was conducted on applicable technologies and their transfer to developing countries. Other research regarding environmental technologies closely linked with “co-benefit technologies” was also conducted in collaboration with related organisations.

**<Major research activities in FY2012>**

- Literature review
- Third meeting of the Asian Co-benefits Partnership (ACP) Advisory Group (24 July 2012 at ISAP2012).

**<Major outputs/outcome and impacts in FY2012>**

- Presentations at Hyogo Prefecture and Asian Development Bank (ADB).
- Peer reviewed article and working paper.

**Component 5: MRV Project**

This component aimed to develop MRV methodologies, conduct case studies and capacity building regarding two Japanese low-carbon technologies, namely Gas Heat Pump (GHP) and Electric Heat Pump (EHP). In FY2012, KRC implemented the following activities.

**<Major research activities in FY2012>**

- In collaboration with TERI, investigation of potential application of Japanese technologies

related to GHP and EHP in Indian small and medium enterprises (SME).

- Collaboration of technology experts, to develop MRV methodologies on GHP and EHP.
- MRV case studies on actual/potential CO<sub>2</sub> emission reduction, using the developed MRV methodologies.
- Capacity building on how to carry out MRV, through onsite training, workshops, etc.

#### <Major outputs/outcome and impacts in FY2012>

- Policy report, policy brief and research activity reports and presentations at domestic and international symposiums etc.
- Based on the presentation which KRC gave during MRV workshop in India, proposal by Shakti Sustainable Energy Foundation (SSEF) to conduct joint capacity buildings for about 300 certified energy auditors regarding GHP and EHP using the developed MRV methodologies.

#### **Component 6: Dissemination (DS)**

Kansai Research Centre disseminated the results of its research activities periodically to policy authorities and industrial sectors, and implemented the following activities to obtain feedback from them:

- International symposium “Low Carbon Society in Asia through Dissemination of Renewable Energy Technology” (February 2013, Kobe, Japan)
- Presentation at “IGES-TERI Joint Symposium India-Japan Technology Cooperation towards Sustainable Development” at ISAP2012 (July 2012, Yokohama, Japan)

#### **3-2 Kitakyushu Urban Centre**

The main objective of the Kitakyushu Urban Centre (KUC) was promotion of local initiatives toward development of liveable and sustainable cities through 1) promotion of networking opportunities among local governments, as well as with other stakeholders including national governments and agencies, international and regional organisations, donors, academia, research institutions and NGOs, 2) provision of useful knowledge and approaches by objective and cross-cutting analysis of successful case studies and policies, 3) provision of practical solutions and training opportunities to resolve local environmental problems, and 4) mobilising resources and support for that from partner organisations and funding agencies.

#### **Component 1: High Level Seminar on Environmentally Sustainable Cities**

##### **(1) Expansion of the Association of Southeast Asian Nations (ASEAN) ESC Model Cities Programme**

Outputs and achievements of the ASEAN ESC Model Cities Programme (jointly implemented by IGES and ASEAN Secretariat) in Year 1 were reported to the ASEAN Working Group on Environmentally Sustainable Cities (ESC), ASEAN Senior Officials on the Environment, ASEAN-Japan Dialogue on Environmental Cooperation and 3<sup>rd</sup> East Asia Summit Environment Ministers Meeting (EAS EMM). A proposal for funding extension was approved by ASEAN and submitted to Japan-ASEAN Integration Fund (JAIF), which is awaiting approval. KUC maintained the programme’s momentum with stakeholders and organised the 4<sup>th</sup> High Level Seminar on ESC, positioning it as a leading high-level platform for networking and building partnerships on ESC.

#### <Major research activities in FY2012>

- Published the Final Report of Year 1 ASEAN ESC Model Cities Programme, while the proposal for Year 2 extension was approved by ASEAN and submitted to JAIF

#### <Major outputs/outcome and impacts in FY2012>

- Some ASEAN member states, including the Philippines, Indonesia and Malaysia, formulated plans to link country-based ESC initiatives with the Model Cities Programme
- The CityLinks Pilot Partnership, a technical city exchange programme between ASEAN and the United States promoted by the United States Aid for International Development (USAID), was designed building on the recommendations of the HLS ESC and ASEAN ESC Model Cities Programme

## (2) Clean Asia Initiative

The Clean Asia Initiative under the Ministry of the Environment, Japan, has been implemented for the last three years and KUC has contributed in organising the past three High Level Seminars on Environmentally Sustainable Cities (HLS ESC) using the fund. KUC served as secretariat for the 4<sup>th</sup> HLS ESC in Viet Nam in March 2013 linking that to the ASEAN ESC Model Cities programme, which was initiated by the recommendation of the 1<sup>st</sup> seminar.

#### <Major research activities, outputs/outcome and impacts in FY2012>

- Secretariat for the 4<sup>th</sup> HLS ESC (March 2013 in Viet Nam) with 200 participants from governments from 15 countries, 21 local authorities and 29 international organisations, NGOs, research institutes, private companies and others and facilitated networking and knowledge sharing among them
- Compilation of Chair's Summary of the 4<sup>th</sup> HLS ESC

## **Component 2: Integrating development and climate mitigation policies<sup>14</sup>**

### (1) MRV capacity building for local governments

This was a continuation of the same project from FY2011. In response to the demands from local governments in Indonesia, Thailand, Viet Nam and others in developing MRV capacities to formulate local GHG emission reduction plan, which is expected by the national governments, KUC organised capacity building workshops in each city and invited them to a three-week training course in September 2012 at JICA Kyushu. Other groups in IGES also contributed in the training course by lecturing on international climate change negotiation process, carbon market development in each country, transportation and forest management.

#### <Major research activities, outputs/outcome and impacts in FY2012>

- Developed a set of training modules for building capacity on low-carbon city planning in an MRV manner for targeted local government officials with references to the experiences of Kitakyushu City Government as well as ongoing and planned activities in each targeted city.
- KUC also organised a session on smart and low-carbon cities at ISAP2012 by inviting

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<sup>14</sup> This component is a part of the integrative research component on MRV-related capacity development conducted by Programme Management Office (PMO).

representatives from target cities including Surabaya (Indonesia) (July, Yokohama).

- Supported Nonthaburi (Thailand), Surabaya (Indonesia) and Ho Chi Minh City (Viet Nam) to initiate development of low-carbon city plans using MRV

## **(2) Study on measures to promote low-carbon districts**

FY2012 was the second year of a three-year research project (Global Environment Research Fund (MOEJ) E-1105) headed by Nagoya University. As the main tasks and the corresponding staff were transferred to IGES headquarters in the middle of FY2011, KUC undertook only a part of it in studying low-carbon city development plans in Kitakyushu City.

### **<Major research activities, outputs/outcome and impacts in FY2012>**

- Joint research on low-carbon society and green growth with relevant institutions in China and Korea
- Presentation of the findings at Korea Environment Institute International Conference (November 2012)

## **Component 3: Promotion of organic waste management and local initiatives in Asian cities**

### **(1) Research on large-scale composting projects**

This ADB-funded study examined both successful and unsuccessful large-scale composting programmes in six Asian countries, including India, Sri Lanka, Bangladesh, Thailand, Indonesia and China, to identify recommendable policies for promoting composting as a green business. The output of the study was formulated in a guideline for national and local policy-makers to implement composting projects with technical and financial options in view of applying that for ADB-funded solid waste management projects.

### **<Major research activities, outputs/outcome and impacts in FY2012>**

- Commissioned report for ADB incorporating the findings in the six countries
- National workshops in Sri Lanka, Thailand, Bangladesh, India, China and Indonesia with participation of national government officers and other stakeholders to discuss and recommend favorable policies to support large-scale composting projects

### **(2) Promotion of decentralised composting**

Following the past achievements under the Kitakyushu Initiative for a Clean Environment (2000-2010), an intercity network to share good environmental practices among member cities, replication of a successful community-based composting model developed in Surabaya (Indonesia) was further disseminated in other Asian Cities in cooperation with Kitakyushu City Government, Kitakyushu International Techno-cooperative Association (KITA), Japan International Cooperation Agency (JICA), United Nations Economic and Social Commission for Asia and the Pacific (UNESCAP) and other organisations.

### **<Major research activities, outputs/outcome and impacts in FY2012>**

- Regional networking seminar on KitaQ Composting System in July 2012 in cooperation with JICA Kyushu with participation of 19 delegates from 13 cities in Asia and South America
- Policy report compiling the key findings in Surabaya (Indonesia) and Cebu (Philippines),

peer-reviewed article, conference paper and discussion paper

- Provision of technical assistance in designing a community-based solid waste management plan in Saankhu City (Nepal)
- Assistance to Cebu City in achieving a 30% waste reduction by implementing on-site waste separation and composting projects in line with the mandate of the Republic Act 9003
- Knowledge sharing with other surrounding cities in Metro Cebu

#### **Component 4: 3R strategy/policy development**

##### **(1) Development of 3R Strategies in Malaysia, Viet Nam and Nairobi, Kenya**

KUC implemented two bi-lateral cooperation projects funded by the Ministry of the Environment, Japan (MOEJ), namely development of a national organic waste management strategy in Malaysia and a national 3R action programme in Viet Nam. Recommendations for both strategies based on research findings in each country were compiled and submitted to both national governments for their consideration. In Nairobi (Kenya), KUC, together with Kitakyushu City and private consulting firms, supported the City Council in improving the solid waste collection and transportation system under a JICA Technical Assistance Project.

##### **<Major research activities, outputs/outcome and impacts in FY2012>**

- Support to Ministry of Housing and Local Government, Malaysia to develop a national strategy on food waste management which is in the hands of Malaysia Government to formulate a regulation
- Support to Vietnam Environment Administration (VEA), Ministry of Natural Resources and Environment, to develop a 3R Action Programme, which will be submitted to Prime Minister department for its approval within 2013
- Plenary session on country-country cooperation in the promotion of 3Rs in Asia organized together with United Nations Centre for Regional Development (UNCRD) and MOEJ at the 4<sup>th</sup> Regional 3R Forum in Asia in Hanoi, Viet Nam in March 2013 to disseminate the main outputs of the two projects in Malaysia and Viet Nam
- Submitted a Year 1 report to Nairobi City Council rated as rank 'A' by JICA, improving the solid waste collection and transportation system in Nairobi

#### **Component 5: Community development studies and training [New]**

In collaboration with the Graduate School for International Development and Cooperation (IDEC), Hiroshima University private research institutes, KUC designed a lecture course on community development at IDEC and served as a lecturer and course coordinator.

##### **<Major research activities, outputs/outcome and impacts in FY2012>**

- Organised a half semester course on community development at IDEC, Hiroshima University (90 minutes x 7 days, April – July 2013, about 30 students)
- The experience and knowledge accumulated through organising the course was shared with JICA Kyushu and JICA Chugoku for potentially adopting the contents for a new training course.

#### **Component 6: JICA-related projects**

Since 2011, JICA shifted its focus to collaborate more with local partners and JICA Kyushu started

strengthening partnerships with Kitakyushu City, KITA and IGES/KUC. In response, KUC contributed in providing some inputs in some training programmes as given below:

**<Major research activities, outputs/outcome and impacts in FY2012>**

- Lecture on local-level low-carbon policies at JICA training courses
- Lecture on practical low-cost wastewater treatment options in Asian cities at a JICA training course
- Lecture on community-based solid waste management and composting management systems at JICA training courses including the one for JICA volunteers
- Provided JICA with materials for exhibition at Rio + 20
- Follow-up with trainees having returned home and JICA volunteers by taking advantages of field visits of other KUC research projects

**Component 7: Other Kitakyushu Collaboration Projects**

In line with Kitakyushu City's international environmental cooperation strategy, KUC supported the following projects:

**<Major research activities in FY2012>**

- Overview of the Organisation for Economic Cooperation and Development (OECD) Green Cities Programme Report outputs and suggested policy recommendations to Kitakyushu city regarding collaboration with other selected green cities
- Baseline understanding of Myanmar's conditions and explored possibilities and formulated specific recommendations for establishing inter-city collaborative projects
- Design of several international cooperation project proposals with Kitakyushu City using environmental technologies of local private companies

**<Major outputs/outcome and impacts in FY2012>**

- Attendance at a series of international cooperation strategy development meetings of Fukuoka Prefecture and report on this strategy of Kitakyushu City
- Kitakyushu City-initiated cooperation activities with Mandalay City, Myanmar in FY2013
- Implementation of a solid waste minimizing project by at-source separation and recycling in Surabaya, Indonesia by Nishihara Co., a Kitakyushu-based company, under a JICA scheme which was officially commended by the mayor of Surabaya

**3-3 Regional Centre**

The goal of the Regional Centre in Bangkok as one of the overseas offices of IGES is to build and strengthen IGES's partnership with international organisations and development agencies, especially those having offices in Bangkok or in the region. It provided secretariat services for three regional networks specialised in climate change adaptation, environmental safeguards and sustainable development, and it also engaged in regional activities.

### **Component 1: Network for Integrated Planning and Sustainable Development Strategies in Asia-Pacific Region (SDplanNet-Asia&Pacific)<sup>15</sup>**

IGES has been coordinating SDplanNet-Asia&Pacific since 2008 with initial financial support from the International Institute for Sustainable Development (IISD), Canada, for the period 2008-2010. :

#### **<Major research activities, outputs/outcome and impact in FY2012>**

- Continued publication of bi-weekly newsletters that featured sustainable development tools, event calendar, call for proposal and other news and updates on its website to actively engage members and practitioners of sustainable development.
- Continued discussions on potential collaboration in the region with the United Nations Office of Sustainable Development (UNOSD) in following up with Rio+20 outcomes.

### **Component 2: Asian Environmental Compliance and Enforcement Network (AECEN)<sup>16</sup>**

IGES has been hosting the secretariat for AECEN since 2012. In FY2012, the Regional Centre implemented the following activities:

#### **<Major research activities, outputs/outcome and impact in FY2012>**

- Maintenance of the secretariat functions of the network.
- Development of an EIA Clearing House under the project funded by ADB, including compiling a compendium of good EIA practices.
- Case study on black carbon in Thailand in collaboration with CC Co-benefit team.

### **Component 3: Asia Pacific Adaptation Network (APAN)<sup>17</sup>**

Since 2010 IGES has been co-hosting the Regional Hub of the network under the guidance of the -UN Environmental Programme Regional Office for Asia and the Pacific (UNEP-ROAP) and implementing activities in collaboration with partner organisations including the Regional Resource Centre for Asia and the Pacific (RRC.AP), Stockholm Environment Institute (SEI), and APAN's sub-regional and thematic nodal organizations (Nodes). IGES also led the network's knowledge management activities. In FY2012, the Regional Centre implemented the following major activities:

#### **< Major research activities, outputs/outcome and impact in FY2012>**

- The 3rd Adaptation Forum (Asia-Pacific regional forum) in Korea in March 2013 with about 500 participants, (March 2013, Korea).
- Meetings respective for subregional and topics, as well as workshops and training to

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<sup>15</sup> SDplanNet-Asia&Pacific is a network of sustainable development practitioners that conducts outreach activities such as virtual on-line workshops and publication of a newsletter on trends and progress in sustainable development practice.

<sup>16</sup> AECEN is a network of environmental agencies from 16 countries in Asia dedicated to improving performance in relation to compliance and enforcement of national laws and multilateral environment agreements. AECEN operates primarily by twinning countries through South-South cooperation to share good practices and to assist each other in capacity building. AECEN is also strengthening the capacity of environmental courts and the judiciary responsible for environmental cases throughout Asia.

<sup>17</sup> APAN aims to help build climate resilience of vulnerable human systems, ecosystems and economies through the mobilisation of knowledge and technologies to support adaptation capacity building, policy-setting, planning and practices.

improve capacity

- Upgrade and re-launch of APAN's new web portal, merging and expanding links and functions such as an online community of practice (E-CoP) in collaboration with the ADAPT Asia-Pacific project.
- Knowledge products such as synthesis on technology gaps, adaptation needs in the region, risk insurance, and piloted training modules developed for agriculture/water sectors in collaboration with NRM Adaptation team.

#### **Component 4: Support for UNEP Fifth Global Environmental Outlook (GEO5)**

IGES is a longstanding collaborating centre for UNEP's Global Environment Outlook (GEO) series.

##### **<Major research activities, outputs/outcome and impact in FY2012>**

- Finalisation of GEO5 chapter on the Asia-Pacific region in time for Rio+20 and contributed to the policy makers summary, presented at multiple occasions including a session at ISAP.
- Preparation of the Environmental Outlook launched in Myanmar, Bhutan, and South Asia.

#### **Component 5: Support to Climate Change Adaptation Project Preparation Facility for Asia and the Pacific (ADAPT Asia-Pacific)**<sup>18</sup>

Since FY2011, IGES has been implementing this five-year project funded by the U.S. Agency for International Development (USAID) as project partner. In FY2012, the Regional Centre implemented the following:

##### **<Major research activities, outputs/outcome and impact in FY2012>**

- Upgrade and re-launch of APAN's new web portal merging and expanding links and functions such as an online community of practice (E-CoP). Visitors to the website increased and reached over 5,000 in two months (February-March 2013).
- Parallel session on Adaptation financing at the 3<sup>rd</sup> Adaptation Forum.

#### **Component 6: Coordination with Organisations Stationed in Bangkok and support for IGES-wide Activities**

The Regional Centre has maintained close collaboration and communication with multilateral and bilateral organisations such as UNEP-ROAP, UNESCAP, UNDP, ILO, World Bank, ADB, USAID, SIDA, and government offices and research institutes located in Bangkok and other cities in Southeast Asia to provide a wide range of support to IGES's research project activities projects. The Regional Centre also helped implement IGES-wide activities held in the region. In FY2012 BRC implemented the following:

##### **<Major research activities, outputs/outcome and impact in FY2012>**

- Finalisation of MoU with International Labour Organization (ILO) Regional Office for Asia and the Pacific (September 2012).

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<sup>18</sup> ADAPT Asia-Pacific aims to strengthen human and institutional capacity to prepare quality climate change adaptation investment proposals, accelerate and ensure sustained access to financial resources for climate change adaptation investment projects, and strengthen and sustain a regional knowledge platform to share and replicate best practices.

- Contribution to events such as side event IPCC WG (Bangkok, September 2012), Low Carbon Asia Research Network (LoCarNet) Regional meeting (Bangkok, October 2012), Green Economy and Green Growth (GEGG) meeting (Myanmar, November 2012), African Development Bank (AfDB) training (Tunisia, November 2012), United Nations Office for Sustainable Development (UNOSD) meeting (Korea, February 2013).
- Launch of “Evening Café” to help experts and practitioners from international agencies and partner organisations in Bangkok exchange information and discuss timely issues in an informal setting.

### **3-4 Beijing Office**

The purpose of the Beijing Office is to act as an important bridge and a reliable platform between China and Japan to further promote environmental bilateral cooperation between the two countries. For this purpose, the following activities were conducted in FY2012.

#### **Component 1: Sino-Japan Water Environment Partnership**

##### **<Major research activities, outputs/outcome and impacts in FY2012>**

This research has been implemented in China as part of the cooperation scheme of a project based on an agreement between the Japanese and Chinese governments. Beijing Office analysed the issues of the current policy framework on water pollutant reduction and water environment management, and prepared the policy recommendations for important water areas such as drinking water sources, where more strategic and comprehensive management is needed in light of their rapid development.

In FY2012, Beijing Office implemented a model project on the total pollution reduction of the rural area in Weihai city, Shangdong Province, China.

#### **Component 2: Climate Change Capacity Building Project in China**

This research was carried out in close coordination with the Climate Change Group (Market Mechanism Sub-group). In FY2012, Beijing Office implemented the following activities:

##### **<Major research activities, outputs/outcome and impacts in FY2012>**

- Sino-Japan joint training and capacity building for some model provinces and cities in China in order to increase their levels of capacity for climate change.(July~August 2012)
- Sino-Japan joint research on the carbon market for building up China’s market.

#### **Component 3: Participation in Sino-Japan Joint Survey Research in the Environmental Field**

IGES participated in joint survey research in the environmental field conducted by the Japanese government in order to establish a strategic reciprocity relationship between China and Japan.

##### **<Major research activities, outputs/outcome and impacts in FY2012>**

- Sino-Japan co-benefit model project
- Sino-Japan joint research on total emission reduction of nitrogen oxide in air
- Sino-Japan joint research on the pollution reduction of heavy metals in the environment, etc.

## **Component 4: Support for IGES' Activities to be carried out in China**

### **<Major research activities, outcomes and impacts in FY2012>**

Beijing Office supported each group or centre of IGES by providing important policy information etc. from China.

## **4. Programme Management Office (PMO) : Networking and Strategic Operation**

The PMO continued to work on the cross-cutting issues, being actively involved in a number of political initiatives in the Asia-Pacific region as well as worldwide. It also designed and coordinated IGES-wide strategic activities including the International Forum for Sustainable Asia and the Pacific (ISAP), White Papers, IGES Strategic Fund, external fundraising and promotion of internal quality management system to produce better quality research outputs.

### **4-1 IGES White Paper**

The Fourth IGES White Paper was launched in July 2012, under a working title of “Greening Governance in Asia-Pacific”, which is linked with the dual themes of the UN Conference on Sustainable Development 2012 (Rio+20).

#### **<Major research activities, outputs/outcome and impacts in FY2012>**

- Executive summary released at Rio+20.
- Publication and launch of complete document at ISAP2012 where it served as a major focal point for the discussions on the outcomes of Rio+20 and the future direction of sustainable development governance in Asia-Pacific.
- Distribution of executive summary as an official document at the Asia Pacific Subregional Environmental Policy Dialogue hosted by UNEP in Hyderabad, India (October)

### **4-2 International Forum for Sustainable Asia and the Pacific (ISAP)**

The 4<sup>th</sup> International Forum for Sustainable Asia and the Pacific (ISAP 2012) was held under the main theme of “Beyond Rio+20” on 24-25 July in Yokohama, Japan, at the Pacifico Yokohama in collaboration with United Nations University - Institute of Advanced Studies (UNU-IAS). A total number of about 1100 people participated in this two-day event.

#### **<Major research activities, outputs/outcome and impacts in FY2012>**

- Timely review of results of Rio+20 held in June 2012, discussions on important agendas in the region such as climate change, green economy, resilience, sustainable development goals and biodiversity.
- Platform for multiple stakeholders to interact while sharing unique perspectives on the important agenda topics in the region under the above themes of ISAP2012 (including international organisations; central and local governments; research institutes; business; students and local citizens) ;

### **4-3 Strategic Fund**

IGES Strategic Fund was introduced in April 2008 aiming to promote innovative policy ideas within IGES. In FY2012, a total of 10 project proposals were submitted for consideration and out of those, the following three were selected and implemented by the groups concerned:

- (i) Evaluation of water resource management and climate change mitigation in Thailand, using a bottom-up energy system model for water demand (joint research with the CC group, EE group)
- (ii) Dynamics of transition to low-carbon society
- (iii) Development of training module for LC city programme based on case study of Kitakyushu City (Kitakyushu Urban Centre)

#### **4-4 Promotion of Clean Asia Initiative (CAI)**

The overall goal of the operation is to contribute to the establishment and elaboration of effective international environmental cooperation mechanisms, in particular, in East Asia. Promotion of CAI is to support MOEJ activities of international environmental cooperation. IGES collected and analysed information and data related to environmental cooperation through networking and basic research from relevant governments, international organisations and the research community. Based on this knowledge, IGES contributed to the important inter-governmental policy process in the region. In FY2012, this operation implemented the following activities in two components for further promoting environmental cooperation in East Asia.

#### **Component 1: Networking and Basic Research with Relevant Governments, International Organisations and the Research Community**

This component aimed to promote environmental cooperation activities undertaken by MOEJ under the umbrella of CAI.

##### **<Major research activities, FY2012>**

- Provided liaison and coordination with the ASEAN Secretariat, relevant countries in the East Asia and international organisations and the research community in the region, as well as strengthening the network among them.
- Conducted studies on important and emerging environmental issues in the East Asia region to grasp understanding of the needs of the present as well as the future.
- Enhancement of information dissemination and raising awareness on CAI activities, both domestically and internationally.

##### **<Major outputs/outcome and impacts in FY2012>**

- Support to International environmental cooperation promotion in Myanmar and Indonesia

#### **Component 2: Provision of Substantive Inputs to the Priority Intergovernmental Policy Processes**

IGES made substantive inputs into key intergovernmental policy processes.

##### **<Major research activities, outputs/outcome and impacts in FY2012>**

- Japan ASEAN Environmental Policy Dialogue and its Preparatory Meeting. (August, Siem Reap, Cambodia).
- ASEAN+3 Environmental Ministers' Meeting (ASEAN+3 EMM) and its Preparatory Meeting. (August, Siem Reap, Cambodia).
- ASEAN+3 Environmental Ministers' Meeting (ASEAN+3 EMM) (September, Bangkok, Thailand)

- Senior Officials Meeting of The North-East Asia Subregional Programme for Environmental Cooperation(December, Chengdu, China ).

#### **4-5 Monitoring, Evaluation and Advisory Activities on Indonesia Climate Change Policies**

The overall objective of the activities was to monitor Climate Change Policies of the Government of Indonesia (hereinafter GOI) and conducted overall evaluation on series of Indonesia Climate Change Program Loans (ICCPL). These activities also aimed to contribute to further strengthening the climate policy of GOI, as well as to providing policy recommendations for the Government of Japan (hereinafter GOJ). The specific objectives of the activities were as shown below:

##### **<Major research activities, FY2012>**

- Monitoring and evaluation of GOI's Climate Change Policies (written in the "Policy Matrix" agreed by both governments) and overall evaluation of ICCPL phase II (2010-2012)
- Recommendations to GOI for further strengthening its capacity to respond to Climate Change issues (measures for further actions, improvement for the mid- and long-term effects of implemented actions, and important policies beyond Policy Matrix)

##### **<Major outputs/outcome and impacts in FY2012>**

- Recommendations to GOJ for effective support to developing countries' Climate Change policies. The recommendations include additional support option.
- Two reports: a Monitoring Report and a Programme Evaluation Report on ICCPL Phase II.

#### **4-6 IGES Contribution to United Nations Conference on Sustainable Development (Rio +20)**

In order to actively contribute to the preparatory and follow-up processes for and after the UN Conference on Sustainable Development (Rio+20), IGES has been mainly conducting three activities: (i) information collection and analysis on the preparatory and follow-up processes for and after Rio+20; (ii) deepening discussions on key discussion points such as Sustainable Development Goals (SDGs) and two themes of Rio+20, "green economy in the context of sustainable development and poverty eradication" and "institutional framework for sustainable development", and establishing effective outreach regarding these matters; and (iii) contribution to the intergovernmental preparatory and follow-up processes for and after Rio+20. To effectively address and make the utmost impacts through these cross-cutting processes, PMO was engaged in all-IGES coordination of the relevant activities as shown below:

##### **<Major research activities, FY2012>**

##### **(1) Information collection and analysis for the preparatory and follow-up processes for and after Rio+20**

- UN processes: Preparatory Committee Meetings/Informal Intersessional Meetings of Rio+20; Rio+20 and its Side Events, Regular sessions of UN Commission on Sustainable Development (CSD); UNEP Governing Council/Global Ministerial Environmental Forum; and UNEP Global Environmental Outlook 5 (GEO5) preparation process etc.
- Others: Japan National Preparatory Committee, and Major Groups related meetings etc.

##### **(2) Deepening discussions on key discussion points and two themes of Rio+20**

- Internal meetings for information sharing

- Dissemination of key messages through Rio+20 side events
- Deepening of discussions at ISAP2012

### **(3) Contributing to the intergovernmental preparatory and follow-up processes for and after Rio+20**

- Contribution to intergovernmental preparatory process for Rio+20 and follow-up processes, such as 27<sup>th</sup> session of the UNEP Governing Council, by conducting the MOEJ commissioned work entitled “Establishing and Operating National Preparatory Committee for Rio+20.”
- Contribution to Rio+20 follow-up processes through formulation of research system for Post 2015 development agenda and SDGs, as well as production of policy brief

#### **<Major outputs/outcome and impacts, FY2012>**

- Non-peer reviewed report as Rio+20 follow-up, Commentary series of viewpoints from researchers on IGES website
- Dissemination of IGES message through main IGES publications such as the Fourth White Paper
- Feasibility research on Post 2015 development agenda and SDGs, research project on post 2012 (MOEJ research development fund S11)
- Semi-plenary on Post 2015 development agenda at Earth System Governance Tokyo meeting 2013

### **4-7 Overall Coordination on Institutional Design of an MRV System in Asia**

Since FY2011, IGES has been implementing a cross-cutting operation entitled ‘Institutional Design of an MRV (Measurement, Reporting and Verification) System in Asia towards the creation of a new mechanism’ commissioned by the Ministry of the Environment of Japan. A number of IGES research groups, including CC, MM and NRM, are participating in the operation.

#### **<Major research activities in FY2012>**

Understanding the importance and necessity to best utilise IGES-wide expertise for effective implementation of this operation, PMO joined with the Market Mechanism group and enhanced its overall coordination function in FY2012. The coordination was made paying attention to inter-group knowledge and information sharing on such issues as the following

- Trends of various NAMA/MRV relevant actions at national, municipal and project levels (including institutional design and implementation barriers)
- Efforts within IGES to link with the energy and waste sectors

Furthermore, having identified issues on energy efficiency standards for Indonesian household electric appliances comparing them with Japanese standards, studies were conducted on methodologies to measure the difference between energy standards and energy consumption (actual use). In addition, studies also looked at the way forward for capacity building so that these methodologies can be put to use.

Moreover, through the experience of implementing CDM in Indonesia, particularly by studying barriers to implement CDM projects, lessons were learned that could be used towards putting new mechanisms into effect in the future.

#### **<Major outcomes and impacts in FY2012>**

- Chapter on situation in Indonesia in an Institute-wide policy report on NAMA and MRV

- Workshop in Jakarta

#### **4-8 Action Research on Effective Decontamination Operations with due regard to Local Conditions in Fukushima**

IGES has launched an ‘Action Research on Effective Decontamination Operations with due regard to Local Conditions in Fukushima’ from FY2012 to FY2014 receiving a competitive research grant from the Ministry of the Environment of Japan. In Fukushima prefecture and nearby regions, having a wide range of stakeholders namely the central government, prefectural governments, a number of local governments (city, town and villages) and local communities involved, decontamination/remediation operations are accelerating; while challenges remain, such as development of decontamination strategies/local plans, implementation, securing workers’ safety, public participation and information-sharing. Aiming at providing substantive inputs to the ongoing decontamination/remediation operations, reflecting the realities of local conditions for effective designing and implementation, IGES conducted action research consisting of three research components with the participation of experts from Fukushima University, other experts involved in the Fukushima’s recovery processes, and selected international experts familiar with decontamination/remediation operations in Europe with their previous experiences with Chernobyl.

##### **(1) Governance for Effective Remediation/Decontamination Operations**

- Provision of recommendations based on the analyses on gaps in information exchange, financial flow, roles and responsibilities, etc. among key stakeholders including the central government, prefectural governments, local governments (city, town and villages) and local communities
- Identification of capacity development needs for effective remediation/ decontamination governance

##### **(2) Development of remediation/decontamination strategies reflecting the local conditions**

- Development of a Japan optimal model (decision support system) based on the existing European model for developing and/or elaborating local remediation/decontamination strategies to attain the residents’ long-term additional radiation dose level lower than 1mSv/year.

##### **(3) Effective communications to promote collaboration with those affected in contaminated areas**

- Development of an appropriate risk-communication methodology to build and enhance mutual trust among stakeholders, in particular those of local residents and communities, to central and prefectural governments, through which mutual understanding and consensus should be achieved.

##### **<Major research activities, FY2012>**

- Fukushima Action Research on Effective Decontamination Operation: FAIRDO – site visits, workshops and symposia in Fukushima and Yokohama (July)
- NERIS Working Group2 Meeting: Emergency Preparedness and Stakeholder participation (November)
- Workshop to Report on Effective Decontamination (December)

- TEMM Seminar on the Environmental Impact Caused by Natural Disasters Lessons Learned from the Great East Japan Earthquake (January 2013)
- RODOS Users Meeting (February 2013)

#### <Major outputs/outcome and impacts FY2012>

- FAIRDO First Discussion Paper (October 2012)
- FAIRDO Website Launch (November 2012)
- FAIRDO activities and midterm results published in The Economist and local news media in Fukushima

## II External Fund-Raising

### 1. Overall

There are several unclear elements surrounding IGES, in both the domestic political and economic situation. While the basic funding from the Ministry of the Environment of Japan has remained stable at a certain level, the financial assistance that IGES receives from related local governments has been on a gradually decreasing trend. Under these circumstances, in order to maintain the necessary fund for its strategic research, the acquisition of external funds has become an even more important issue

On the other hand, there is continuing demand in Asia for strategic research on global environmental problems. Thus, the acquisition of external funds for conducting such strategic projects became more indispensable for IGES than ever before. IGES is exploring appropriate funding resources actively and selectively, for securing research funds, taking into account the research plan and researchers' capacity.

IGES, based on previous experience, aims to develop such activities in an active and strategic manner, keeping in mind the basic approach below.

#### Basic Approach

- (i) Ensuring funds for research activities, fully taking into account IGES's core competence, as well as research needs in Asia.
- (ii) Ensuring funds for active involvement in important policy processes and networking, relevant to the IGES mission.
- (iii) Applying for appropriate funding resources actively and selectively, to secure research funds, taking into account the research plan and researchers' capacity.
- (iv) Placing careful consideration on research which may have low cost-benefit or is a completely new area or an area with limited experience within IGES.
- (v) Exploring research funding sources, particularly outside of Japan, in close collaboration with IGES partner institutes which have had fruitful experiences.

### 2. Resources Obtained

The total fund obtained for FY2012 was approximately JPY 1.26 billion<sup>19</sup> which is 94.7% of the

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<sup>19</sup> This amount was obtained by deducting the contract revenues of the "project for public-interest purpose 4" (JISE)

funds obtained in FY2011 (JPY1.33 billion).

The following list shows the major research projects that obtained external funds in FY2012, according to the categories of external funds.

## **2-1 Commissioned work from Governmental Agencies**

**Total JPY 962.957 million**

Projects from governmental agencies are quite flexible, and many are suited to IGES's research activities. IGES emphasised its internationality and placed importance on obtaining projects from these governmental agencies through a proposal-based bidding process and others.

### **(a) Commissioned work from Ministry of the Environment**

**Sub-total JPY 914.750 million**

- New Market Mechanism Capacity Building Programme
- MRV Capacity Building in Asia for the Establishment of New Market Mechanisms
- Supporting hub-centre for Asia and Pacific Region
- Low Carbon Society International Research Network (LCS-RNet)
- Model Project on Total Pollutant Reduction of Nitrogen etc. in Small Town and Rural Area, China
- Promotion of Clean Asia Initiative
- Future Climate Regime: Prevention of Global Warming
- Water Environment Partnership in Asia (WEPA)
- Asia Resource Circulation Policy Research
- Policy Study of Environmental Economics (PSEE) (2 projects)

(12 other projects in addition to the above)

### **(b) JICA**

**Sub-total JPY 48.207 million**

- Monitoring and Support Activities on Indonesia Climate Change Program Loan ( III ) [continued]
- Support of Evaluation with French Agency of Development on Indonesia Climate Change Program Loan (1)-(3)
- Regional Training on NAMA/MRV Capacity Development
- KitaQ System Composting Network

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from the total amount of contract revenues on the "Statements of Activities Summary" of the FY2010 Financial Statement.

## 2-2 Research Grants from Governmental Institutes

**Total JPY 154.408 million**

IGES has submitted applications to the Global Environment Research Fund (MOEJ) and the Grants-in-Aid for Scientific Research (Ministry of Education, Culture, Sports, Science and Technology (MEXT)) and were successful in obtaining funds as shown below. These are proposal-based grant schemes which are suitable for IGES to obtain funds for its research activities. The following are lists of projects accepted under each grant scheme.

### **(a) Global Environment Research Fund (MOEJ)**

**Sub-total JPY 136.068 million**

- Action Research on Effective Decontamination Operations with due regard to Local Conditions in Fukushima
- Comprehensive research on the promotion of atmospheric environment management in East Asia based on clarification of the conditions of regional air pollution and consideration of co-benefits with climate change countermeasures (Theme 3)[continued]
- Research on Climate Change Framework Options based on International Negotiation Process [continued]
- Research on Adaptation Policies, Adaptation Metrics, and Identifying Win-Win Adaptation Options (S-8-3-4) [continued]
- Design and Implementation Process of Building Blocks for Realising Low Carbon Society[continued]
- Identification of possible goals and targets in environmental dimension of post-MDGs
- Research on Institutional Design and Roadmap Development for realizing a Low Carbon Society Scenario in China and India [continued]
- Research on Evaluation of Risk Management Options for Climate Change under Contingencies in terms of Technology, Society and Economy

### **(b) Global Environment Research Fund Grants (MOEJ)**

**Sub-total JPY 2.318 million**

- Research Project on Possible Introduction of Recycling Certification in Asia[continued]

### **(c) Japan Society for the Promotion of Science Grants-in-Aid for Scientific Research B (MEXT)**

**Sub-total JPY 0.422 million**

- Research on Sustainable Development and Economic Growth in East Asia[continued]
- Project on creating scenarios to improve water sanitation environment in developing countries in Asia

**(d) JST-JICA Science and Technology Research Partnership for Sustainable Development** Sub-total JPY 15.600 million

- Research on the Application of Low Carbon Technology for Sustainable Development in India[continued]

**2-3 Research Grants from Private Companies**

IGES applied to several Japanese funding schemes which target environmental issues. The following is a project to which IGES applied in FY2011 under a grant scheme. However, the application was not accepted.

**The Toyota Foundation Asian Neighbours Program**

- Regional Seminar on Community-Based Solid Waste Management in Asia

**2-4 External Fund-raising Outside of Japan**

**Total JPY 81.252 million**

Based upon collaboration with the following research institutes and international organisations in Asia, the external funds outside of Japan below were obtained.

- United Nations Environment Programme (UNEP)
- United Nations Educational, Scientific and Cultural Organization (UNESCO)
- United Nations University Institute of Advanced Studies (UNU-IAS)
- Asian Development Bank (ADB)
- African Development Bank (AfDB)
- AECOM Technology Cooperation (AECOM)
- British Embassy Tokyo
- Asia-Pacific Network for Global Change Research (APN)
- Universiti Kebangsaan Malaysia and others

**2-5 Others**

**Total JPY 57.009 million**

The following are research projects which were subcontracted from Local governments, Independent administrative institutions and private companies. [ ] shows the primary contractors.

**(a) Local governments, Institutions or Agencies**

Sub-total JPY 19.172 million

- Capacity Building on Solid Waste Management System in Nairobi, Kenya [Kitakyushu International Techno-cooperative Association (KAITA)]
- Policy Proposals for International Diffusion of Green Growth Policies [Kitakyushu-City]
- Research on Potential of Collaboration in Myanmar [Kitakyushu-City]

- TEMM(Tripartite Environment Ministers Meeting Among China, Japan and Korea) Joint Research on Environmental Governance in Northeast Asia[Japan Environmental Education Forum]
- Collaboration for International Exchange Programme [The Hitachi Environmental Foundation] (4 other projects in addition to the above)

**(b) Private Sector**

Sub-total JPY 37.837 million

- Basic survey on international trends on Rio+20 and managing National Preparatory Committee [Mitsubishi Research Institute]
- Support in the development of Asian Low-carbon Growth Strategy and Low Carbon Road Map for Capacity-Building of BOCM-MRV [Mizuho Information & Research Institute, Inc. ]
- Research on Biodiversity Offset Evaluation Measures, and others [Idea]

### III. Networking and Participation to a Policy Process

For global environmental conservation and natural environment protection or arrangement, IGES positively participated in the construction of international / local network for various stakeholders and was also involved in policy processes.

#### 1. Participation in important initiatives in Asia

While continuing to conduct various international/local networks, in FY2012, IGES began providing support to the secretariat functions of the Low Carbon Asia Research Network (LoCARNet), comprised of research communities in Asia. IGES also launched its support for the Global Research Forum on Sustainable Production and Consumption in which global research institutions, international organisations and NGOs from around the world participate. IGES also organised various meetings as a secretariat etc., by providing opportunities for discussion for governments, companies, NGO/NPO and researchers as well as contribution to policymaking.

|                               |  |
|-------------------------------|--|
| [Climate Change]              | Asian Co-benefits Partnership (ACP)<br>International Research Network for Low Carbon Societies (LCS-Rnet)<br>Low Carbon Asia Research Network (LoCARNet)<br>Asia Pacific Adaptation Network (APAN)<br>The Japan Climate Leaders' Partnership (J-CLP) |
| [Waste Management]            | Regional 3R Forum in Asia  |
| [Natural Resource Management] | Water Environment Partnership in Asia (WEPA)<br>Asia-Pacific Water Forum (Water Knowledge Hubs)  |
| [Sustainable Cities]          | Environmentally Sustainable Cities (ESC) High Level Seminar/ ASEAN ESC Model Cities Programme  |
| [SCP]                         | Global Research Forum on Sustainable Production and Consumption  |
| [Cross Cutting]               | Asian Environmental Compliance and Enforcement Network (AECEN)   |

Asia-Europe Environment Forum (ENVForum)  
Sustainable Development Planning Network for Asia-Pacific (SDplanNet-Asia&Pacific)  
Clean Asia Initiative (CAI)  
Asia-Pacific Forum for Environment and Development  
(APFED)  
Japan Committee for IIASA

## **2. Strategic Networking with Major Stakeholders**

IGES also concluded memorandums of understanding (MoUs) with the following organisations to strengthen research partnerships for sustainable development of the Asia-Pacific region.

- Institute of Microfinance (InM), Bangladesh Institute of International and Strategic Studies (BISS) (July 2012)  
—Poverty alleviation, resilience (adaptivity), research contribution for climate change adaptation
- Asian Institute of Technology (AIT), Keio University (July 2012)  
—Research contribution for sustainable development and climate change in Asia Pacific
- International Labour Organization (ILO) (September 2012)  
—Research for green employment, training, support and contribution to policy support
- Secretariat of the United Nations Framework Convention on Climate Change (UNFCCC) (October 2012)  
—Collaborative development for CDM database and joint implementation of consultation support for least developed countries (LDC)
- Institute of Strategy and Policy on Natural Resources and Environment (ISPONRE) (December 2012)  
—Research contribution of 3R and Waste management in Viet Nam

## **IV. Information Dissemination and Outreach**

IGES used various media to introduce its research outputs comprehensively to various stakeholders so that they can be applied to environmental policy-making and activities related to environmental issues in the Asia-Pacific region. IGES also extensively collected and disseminated information on the latest policy trends and research activities on global environmental issues.

### **1. Publication of IGES Policy Briefs**

Through publishing Policy Briefs, IGES aims to disseminate its research results as policy recommendations in a timely manner. In FY2012, the following Policy Briefs were published:

- Practical measures to promote Japanese local governments' environmental collaboration with developing countries with citizens' support (GC)
- Technology Transfer as a Measure to Tackle Global Warming in Asia (KRC)
- Long Term Electricity Scenario and Water Use: A Case Study on India (FW, EE)
- Sustainable Management of Organic Waste: The need for coordinated action at national and local levels (SCP)
- Community-based Forest Monitoring for REDD+: Lessons and reflections from the field (FC)

- From NAMAs to Low Carbon Development in Southeast Asia: Technical, Mainstreaming, and Institutional Dimensions(CC)
- Towards Climate-Friendly Waste Management: The Potential of Integrated Municipal Solid Waste Management (SCP)
- Classification of MRV of Greenhouse Gas (GHG) Emissions/Reduction: For the discussions on NAMAs and MRV (MM)
- Impact of COP18 Decisions on Use of Kyoto Mechanisms by Japan (MM)

## **2. Information Dissemination through Publications and Periodicals**

IGES continued to publish periodicals, such as “What’s New from IGES” ( 3 times a year, newsletter), and the “Annual Report” in order to put out information collected through its research activities or by using its research networks. At the same time, IGES put more efforts on effective information dissemination, aiming to further increase its visibility in and out of Japan.

## **3. Information Collection and Dissemination Using Information and Communication Technology (ICT)**

We aimed to enrich the role of the IGES website as a portal for collecting and providing information on events and environmental information in the dynamic Asia-Pacific region by providing timely access to information regarding research outputs (including strategic research and policy advice); by hosting the various databases managed by IGES; and by introducing the international and regional initiatives and activities in which IGES takes part. Effective tools to support this include:

- “IGES EnviroScope”, the environmental information site of IGES, which introduces IGES publications as its research output database
- The e-mail news “E-alert” to provide the latest trends and outputs of the research in a timely manner. In FY2012 there were 17 editions (nos. 212 ~ 228)
- “Monthly Asian Focus: Observations on Sustainability”, a series of interviews with the foremost experts in their fields and published on the IGES website.

## **4. Information Dissemination through the Media**

As one effective way to transmit IGES activities and research results to its stakeholders, IGES strengthened its information sharing through a wide range of international and domestic media sources. There were press releases, press conferences, and roundtable press conferences, and news reports on overseas and domestic TV, newspapers, magazines and internet news sites.

## **5. Contribution to Local Communities**

In order to disseminate research activities and results, IGES conducted outreach activities for local residents and businesses in cooperation with local governments and other concerned organisations.

- Holding a series of “Global Environment Seminars” aiming to present the results of IGES research activities
  - 1<sup>st</sup> Global Environmental Seminar “Prospects for environmental business in China”

(October, Yokohama)

- 2<sup>nd</sup> Global Environmental Seminar “Post COP18 Debriefing and Prospects” (December, Yokohama)
- 3<sup>rd</sup> Global Environmental Seminar “Beyond global warming: World trends and Japan's policies on low-carbon societies” (February, Yokohama)
- Co-organizing “Shonan Academia” with Kanagawa International Foundation
- Participating in the “Shonan Village Festival” hosted by Village Shonan, Inc.
- Exhibitions at “Exhibition for a Better Hayama” and the World Environment event “Agenda Day”, Kanagawa Prefecture
- Co-organising seminars and symposia on environmental issues with Kanagawa Prefecture and Hyogo Prefecture
- Cooperation with events held by Kanagawa Prefecture, Hyogo Prefecture and Kitakyushu City

## IV. Other Activities

### 1. Capability Building of Research Staff and Promotion of Researcher Exchange

In an effort to promote mutual exchanges among the research projects and enhance the capacity of research staff, “In-house Seminars” were held as needed. Furthermore, in order to build networks with major environmental research institutes and universities in various countries, IGES dispatched its researchers to those organisations and/or accept researchers from them.

### 2. Enhancing the IGES Affiliate Member System

IGES made continued efforts to promote the affiliate member system in order to reflect the various opinions of governments, private companies, NGOs/NPOs and citizens in IGES research activities as well as to establish a strong financial base for the institute. In order to increase membership, services for affiliate members were further improved by appropriate incentives such as preferentially inviting them to various symposia and seminars and providing them with various IGES publications. The number of affiliate members are set out in the following table:

|                              | Full membership | Associate membership | Total   |
|------------------------------|-----------------|----------------------|---------|
| Foundations/<br>Corporations | 14 (-1)         | 0 (0)                | 14 (-1) |
| NGOs                         | 1 (0)           | 0 (0)                | 1(0)    |
| Individual members           | 55 (+3)         | 2 (-2)               | 57 (+1) |
| Students                     | 6 (+2)          | 0 (-1)               | 6 (+1)  |
| 計                            | 76(+4)          | 2 (-3)               | 78 (+1) |

Note) figures in brackets ( ) shows difference compared to last year's figures

## **B. Business on Special Accounts**

### **I. Activities of the Technical Support Unit (TSU) for the IPCC-TFI**

TSU supports and manages the Intergovernmental Panel on Climate Change (IPCC) Task Force on National Greenhouse Gas Inventories (TFI) work programme which has the following aims:

- Developing and refining internationally-agreed methodologies and software for the estimation and reporting of national GHG emissions and removals;
- Encouraging the widespread use of these methodologies by countries participating in the IPCC and the Parties to the United Nations Framework Convention on Climate Change (UNFCCC).

The TSU implemented the following components as well as providing support to IGES and other organisations towards these goals.

#### **1-1 Additional Guidance on Wetlands to Supplement the 2006 IPCC Guidelines**

This component aimed to develop an IPCC Methodology Report titled: “2013 Supplement to the 2006 IPCC Guidelines for National Greenhouse Gas Inventories: Wetlands” in response to the invitation of the Subsidiary Body for Scientific and Technological Advice (SBSTA) of UNFCCC. The TSU started this work in 2011 and plans to finish in October 2013. In FY2012, the following activities were implemented:

- Lead Author meeting and four other meetings;
- Review of the First Order Draft (FOD) by experts;
- Review of the Second Order Draft (SOD) by experts and governments.

#### **1-2 Additional Guidance on Land Use, Land-Use Change and Forestry Activities under the Kyoto Protocol**

This component aimed to develop an IPCC Methodology Report titled: “2013 Revised Supplementary Methods and Good Practice Guidance Arising from the Kyoto Protocol” in response to the invitation of the Conference of the Parties serving as the Meeting of the Parties to the Kyoto Protocol. The TSU started this work in 2012 and plans to finish in October 2013. In FY2012, the following activities were implemented:

- Three Lead Author meetings and four other meetings;
- Review of the FOD by experts.

#### **1-3 IPCC Emission Factor Database (EFDB)**

This component aimed to maintain and improve a database of emission factors and other parameters for development of national GHG inventories which can be used by national inventory experts, among others, to search for nationally appropriate values of these suitable for their national circumstances. In FY2012, the following activities were implemented:

- Research and identification of potential data for approval by Editorial Board;
- Support of data management and data approval process;
- Data collection meetings on Waste Sector;
- Tenth meeting of the EFDB Editorial Board.

#### **1-4 IPCC Inventory Software**

This component aimed to develop and improve an easy-to-use software package to implement the

methods provided in the 2006 IPCC Guidelines. In FY2012, the following activities were implemented:

- Launch of the first-release version of the IPCC Inventory Software;
- Publicity about the software at UNFCCC and IPCC meetings;
- Expert meeting to promote use of the software.

#### **1-5 Meeting of the Bureau of TFI**

The Bureau of TFI (TFB) comprised of 14 members including its two Co-chairs overseas and provides guidance to the IPCC-TFI. In FY2012, the TSU held the 24<sup>th</sup> meeting of TFB.

#### **1-6 International Expert Meetings on Greenhouse Gas Inventories**

This component aimed to organise, host and publish the results of expert meetings on topics chosen to provide additional information and support to inventory compilers. In FY2012, the following activities were implemented:

- Open meeting to introduce the work of the IPCC TFI;
- Expert meeting on role of remote sensing in forest and national GHG inventories;
- Publication and dissemination of results of earlier expert meetings.

#### **1-7 Contribution to fostering GHG inventory expertise**

This component aimed to contribute to building capacity and fostering GHG inventory expertise especially in developing countries. In FY2012, the TSU cooperated on inventory-related capacity building programmes organized by other organisations such as JICA by providing technical expertise and inventory-related materials developed by TFI. Also, the TSU continued its Inventory Internship Programme in FY2012 and 4 interns worked under this programme.

## **II. Asia-Pacific Network for Global Change Research (APN)**

APN is an inter-governmental network whose mission is to foster global change research in the Asia-Pacific region, increase developing country participation in that research and to strengthen interactions between the science community and decision-makers. In order to support and build on the capacity of scientists in the fields of global change research, especially in developing countries, APN conducted the following activities:

### **2-1 Support of Research and Capacity Development, Related to Global Change through Competitive Calls for Proposals**

#### **(1) Support of research projects, selected through the Annual Regional Call for Proposals (ARCP)**

In FY2012 APN supported international research projects selected by the 17th Inter-Governmental Meeting (IGM).

## **(2) CAPaBLE Programme (Scientific Capacity Building and Enhancement for Sustainable Development in Developing Countries)**

With the aim of improving the scientific capabilities of developing countries, APN supported capacity building activities for young, aspiring scientists and joint research activities of leading scientists in developing countries.

## **(3) Global Change Research on topics of high priority in the environmental policy of the local government**

APN conducted Projects in cooperation with Hyogo Prefecture as follows:

- Scoping workshop to enhance the action of APN developing country members on adaptation in the Asia-Pacific region
- Satoyama Initiative “New Commons” Workshop
- International Symposium on Low carbon Society in Asia through Dissemination of Renewable Energy Technology

### **2-2 Inter-Governmental Meeting**

APN conducted the 18th Inter-Governmental Meeting (IGM) and the Scientific Planning Group (SPG) Meeting in Kobe, Japan.

## **III. Activities of the Japanese Center for International Studies in Ecology (JISE)**

Aiming to realise a sustainable society through ecological study, JISE conducts practical research toward restoring and creating the environment from regional to global level, offers environment-related training programmes, and collects and provides environmental information. JISE implemented the following activities in FY2012.

### **3-1 Research Projects**

JISE promoted practical research projects regarding environmental conservation and restoration based on ecological study, which include Restoring Tropical Forests (Malaysia, Kenya and Cambodia), Actual and Potential Natural Vegetation in Asia and the Pacific (Thailand and Kyushu), Vegetation Science Research Related to Conservation of Biodiversity (Tohoku region of Japan), and Structure and Dynamics of Regional Ecosystems including their Evaluation (Lao PDR). In particular, 2012 saw JISE pushing ahead with research and regeneration projects contributing to nature and forest restoration in the coastal regions of northern Kanto and Tohoku which were hit by the Great East Japan earthquake in March 2011.

Based on the above research, JISE made proactive social contributions in partnership with other institutes by promotion of replanting disaster-prevention and environmental-preservation forests, which contributed to global climate change policy, conservation and restoration of biodiversity, disaster prevention in mountainous and coastal regions, and restoration of forests for water source conservation; as well as supported to keep secured local livelihoods by prevention of earthquake, fire, and tsunami damage to urban and industrial regions.

### **3-2 Capacity building**

On commission from the Japan International Cooperation Agency (JICA), JISE carried out a research project Vegetation Restoration of Waste Grounds in Asia and Africa, aiming to build capacity overseas. In addition, JISE implemented capacity building projects aimed at the general public, such as forest creation, to contribute to the recovery and protection of the environment.

### **3-3 Interaction**

Based on partnership with institutions such as Yokohama National University, JISE promoted the launch of its database of information regarding phytosociological data (composition, structure and vegetation units). JISE also held outreach events, such as the JISE Environmental Forum, targeting the general public.

### **3-4 Dissemination and education**

JISE disseminates news of its activities through its public relations report (the “JISE Newsletter”) which introduces its own activities as well as the efforts of private companies in environmental conservation. JISE also publishes “Eco-Habitat: JISE research”, a bulletin containing its research results, which will be available online via CiNii. It also planned and implemented numerous tours to carry out forest restoration overseas, such as the Kenya Eco-tour (April)

## **C. Institutional Organisation**

### **1. Meetings of the Boards of Directors and Trustees**

In April 2012, IGES made the transition to a Public Incorporated Foundation and in accordance with the Articles of Incorporation, regular meetings of the Board of Directors and the Board of Trustees under the new system were held twice as follows.

- The 1st Meeting of the Board of Directors
  - Date: 26 June 2012 (Tues.)
  - Venue: Headquarters of IGES
  - Principal agenda items: Resolution on the Election of the Chair of the Board of Directors
  - Operating Director and appointment of Secretary General
  - Resolution advising approval of the draft FY2011 Business Report and the draft FY2011 Settlement Statement of IGES
  - Discussion of the Integrative Strategic Research Programme for the Sixth Phase of IGES
  - Recommendation of Honorary Advisor and Counsellors of IGES
  - Resolution advising approval of Asset Management of IGES
  
- The 2<sup>nd</sup> Meeting of the Board of Directors
  - Date: 29 January 2013 (Tues.)
  - Venue: Headquarters of IGES
  - Principal agenda items: Discussion of the Integrative Strategic Research Programme for the

### Sixth Phase of IGES

Resolution advising approval of the draft FY2013 Business Plan and the draft FY2013 Budget of IGES

Amendments of Regulations for Management of IGES

Matters for consultation at the Board of Trustees Meeting

- The 1<sup>st</sup> Meeting of the Board of Trustees
  - Date: 26 June 2012 (Tues.)
  - Venue: Headquarters of the Institute for Global Environmental Strategies
  - Principal agenda items: Approval of the draft FY2011 Business Report and the draft FY2011 Settlement Statement of IGES
  - Discussion of the Integrative Strategic Research Programme for the Sixth Phase of IGES
  - Election of a member of the Board of Directors of IGES
  - Resolution advising approval of the amount of remuneration and standards for Directors and Auditors
  - Discussion of In-house rules for use of visual and audio teleconferencing
  
- The 2<sup>nd</sup> Meeting of the Board of Trustees
  - Date: 12 February 2013 (Tues.)
  - Venue: Headquarters of IGES
  - Principal agenda items: Approval of the Integrative Strategic Research Programme for the Sixth Phase of IGES
  - Approval of the draft FY2013 Business plan and the draft FY2013 Budget of IGES
  - Discussion of performance evaluation of Directors of IGES
  - Discussion of appointment of Directors of IGES

## **2. Senior Staff Meetings (MSS)**

A total of eleven MSS Meetings were held to discuss issues in implementing strategic research as well as to exchange information on research activities of each of the groups.

### 3. Research and Secretariat staff

Personnel (as of 31 March 2012)

|                          |   |     | (Short term) | (Non-Japanese) |
|--------------------------|---|-----|--------------|----------------|
| Research Employees       | Strategic Research Project                | 90  | 40           | 29             |
|                          | Other projects (formerly Special Account) | 10  | 0            | 3              |
| Administrative Employees | General Administration                    | 22  | 9            | 0              |
|                          | Research Support                          | 39  | 26           | 8              |
|                          | Special Account                           | 14  | 8            | 3              |
| Total                    |   | 175 |              |                |

\*Subtotal in brackets for employees under short-term contract and non-Japanese employees.