

Global Environment Centre Foundation

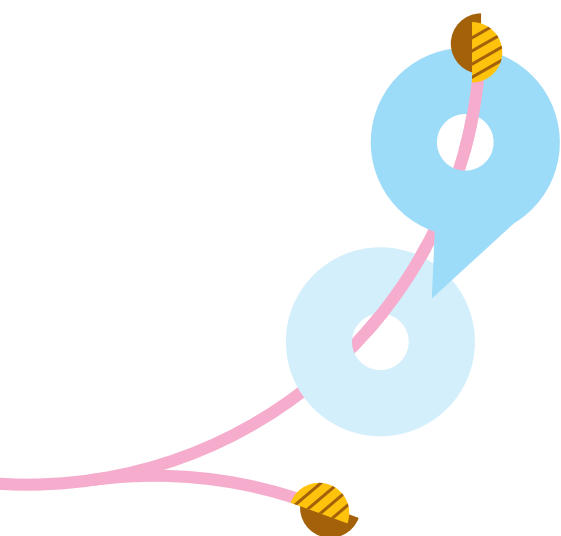
Annual Report 2009



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All years listed in this Annual Report are expressed according to the Japanese fiscal year from 1 April to 31 March.
Terms marked with an asterisk (*) are defined in the margin.



Foreword

Since its founding in 1992, the Global Environment Centre Foundation (GEC) has leveraged Osaka City's wealth of knowledge and experience on pollution prevention and environmental conservation to support the United Nations Environment Programme (UNEP) International Environmental Technology Centre (IETC)'s activities towards environmental conservation in developing nations, and to perform survey research, training, and awareness-raising activities for protection of the global environment.

In 2009, GEC continued this enthusiastic support for IETC's projects. We also made a positive contribution to the capacity building of waste management and 3R officers in developing nations by organizing three international workshops with IETC on the conversion of waste plastics into fuel, integrated solid waste management (ISWM), and waste agricultural biomass. In addition, we launched an eco-town technology database project, and conducted a joint basic study on water footprint with IETC's cooperation.

GEC has also been actively engaged in survey research and training programmes. We inaugurated the 'Project for Building a Recycling-Oriented System in Ha Long Bay, Viet Nam' with the collaboration of Osaka Prefecture University. We also conducted the highest number of JICA training courses to date, with 11 courses on topics such as climate change as well as GEC's forte—urban environmental management.

In December, GEC attended the 15th Conference of the Parties to the United Nations Framework Convention on Climate Change (COP15) and the 5th Conference of the Parties serving as the meeting of the Parties to the Kyoto Protocol (CMP5) held in Copenhagen, Denmark, where we co-hosted a side event introducing the outcomes of Clean Development Mechanism (CDM) feasibility studies and the quantitative assessment of co-benefits.

On 1 April 2010, GEC made a new start following a change of legal entity from an 'incorporated foundation' to a 'public interest incorporated foundation' in accordance with Japan's new public interest corporation system.

While the importance of GEC's mission has grown along with rising concerns about environmental issues, it is crucial that we gain the public's understanding and cooperation by clearly explaining the outcomes of our efforts towards conservation of the global environment. Furthermore, given the fiscal situation surrounding Japan's local governments, it is essential that we procure external funding to ensure the continued operation of our projects. In light of these circumstances, our entire board of directors and personnel are committed to working together to achieve GEC's further development.

I look forward to your ongoing support and understanding of GEC's activities in the years to come.



September 2010

A handwritten signature in black ink, reading 'H. Miyahara' in a cursive style.

MIYAHARA, Hideo

President

Global Environment Centre Foundation

Promoting UNEP/DTIE/IETC's Activities of Disseminating Information on Environmentally Sound Technologies (ESTs*) and Technology Transfer

ESTs

Environmentally Sound Technologies, as defined in Agenda 21, should protect the environment, are less contaminative, use various resources in a more sustainable manner, recycle more of their wastes and products and handle residual waste in a more acceptable manner than the technologies for which they were substitutes.

Eco-Town

Eco-towns developed in Japan utilize a framework whereby environmentally-sound enterprises are set up on accumulated land using local technologies and industries, thereby stimulating the local economy and ensuring employment, as well as simultaneously achieving waste management and conservation of water and air quality in accordance with the Zero Emissions concept.

Environmentally Sound Industrial Development and Eco-Town* Development Project in the Asia-Pacific Region

In Asia where economic development is happening at a rapid phase, there is a growing interest in the concept of eco-towns as a means of pursuing a sustainable society, while achieving a balance between the environment and the economy. Within this context, IETC started the Eco-town Project in 2004 to create eco-towns in the Asia-Pacific region based on the experiences and lessons of Japan's eco-town development, and GEC has provided its support for this project.

As part of this support, GEC launched the 'Eco-Town Environmental Technology Database Creation Project for Building Resource Recycling-based Societies in Developing Countries' with the assistance of the Mitsui & Co., Ltd. Environment Fund in 2009. Under this project, GEC is promoting eco-town development by conducting environmental technology needs assessments in developing nations; specifically Penang in Malaysia and Bandung in Indonesia which are planning to build eco-towns, and integrating the results into an online database on environmental technology systems essential to eco-town creation.

In 2009, GEC conducted needs assessments on the environmental technology required for eco-town formation in Penang and Bandung, and identified the environmental technology in Japanese eco-towns to meet their needs.

Based on cooperation with the Socio-Economic & Environmental Research Institute (SERI) in Penang and the Institute of Ecology (IOE) in Bandung, GEC conducted needs assessment questionnaires targeting Penang and Bandung's local companies, recyclers, and government.

From 23 to 30 August 2009, we visited local companies and recyclers in each city and conducted interviews on the technology and systems required for eco-town formation. We also participated in the Eco-Town Stakeholders Consultation and Training/Awareness Workshop jointly hosted with IETC on 24 August in Penang and 28 August in Bandung, where we introduced Japan's Eco-Town initiatives and outlined the 'Eco-town Environmental Technology Database Creation Project'.

In the future, we plan to conduct interviews and field surveys on the environmental technologies employed by Japanese eco-towns which are suited to the needs of developing nations, as well as collecting and organizing information for database creation.



Eco-Town Workshop (Penang)



Wastewater treatment facility at a textile factory (Bandung)

Eco-Town Project Activities

From 2 to 3 February 2010, IETC and Kawasaki City co-hosted the '6th Asia-Pacific Eco-Business Forum' as a joint event with the 'Kawasaki International Eco-Tech Fair 2010', and GEC participated in and collaborated on this event. The forum was attended by representatives from environmental administrative agencies in Penang, Malaysia; Bandung and Banda Aceh, Indonesia; Shenyang and Linyi, China; Cebu, Philippines; and Surat, India. Each session featured presentations on the eco-town initiatives and challenges of participating cities, as well as lively discussions.

At the UNEP Eco-town project session, GEC delivered a presentation outlining its support



6th Asia-Pacific Eco-Business Forum

for the project, explained the results of the environmental technology needs assessments conducted in Penang and Bandung under the Environmental Technology Database Creation Project, and described the future project schedule. We also collected information on the direction of future eco-town projects and the progress of eco-town development projects in Penang and Bandung.

Organizing of the 'International Expert Group Workshop on Compendium of ESTs for Converting Waste Plastics into a Resource'

As many developing nations attempt to address the surge in waste plastics, IETC is implementing the 'Project on Converting Waste Plastics into a Resource' based on the 3R* approach to mitigate the environmental dilemma posed by waste plastics by converting them into a valuable resource, and GEC is providing support for the project.

In 2009, GEC co-hosted the 'International Expert Group Workshop on Compendium of ESTs for Converting Waste Plastics into a Resource' with IETC from 15 to 16 June in Osaka, Japan. The workshop was attended by 42 experts representing the private and public sectors in Japan and overseas, and featured discussions on technologies for converting waste plastics into energy, business partnerships based on government support, and the data collection & analysis required when selecting suitable technologies.

The 'Compendium of Technology' and the 'Converting Waste Plastics into a Resource – Assessment Guide' were prepared based on the opinions and proposals of experts at the workshop and subsequently published on the IETC website with the aim of raising awareness and facilitating the implementation of pilot projects. IETC pilot projects are currently proceeding in Thailand and the Philippines based on the compendium and assessment guide.



Participants in the workshop

Organizing of the 'Training Workshop on Integrated Solid Waste Management (ISWM*)'

As part of its support for ISWM planning aimed at national and local governments, IETC co-hosted the 'Training Workshop on Integrated Solid Waste Management' (ISWM) with GEC, the UNEP Regional Office for Asia and the Pacific (UNEP/ROAP), and the United Nations Economic and Social Commission for Asia and the Pacific (UNESCAP) from 5 to 8 October 2009 to build the capacity of waste management officers in Asia-Pacific nations. The workshop provided training to 13 participants from 10 countries in the Asia Pacific region, as well as UNEP/ROAP and UNESCAP. On 7 October, the workshop participants observed the Tsurumi Recycling Centre and a recycling company located in an eco-town in Osaka Prefecture. On the following day, a total of 24 participants including Japanese academics shared information on waste management initiatives.



Field trip to the Tsurumi Recycling Centre

Organizing of the 'Regional Workshop on Waste Agricultural Biomass*'

UNEP/IETC is currently focusing on projects to promote waste biomass utilization towards the effective use of resources, and GEC is providing support for these projects. As one aspect of this work, GEC co-hosted the 'Regional Workshop on Waste Agricultural Biomass' with IETC from 2 to 5 March 2010. The workshop aimed to support regional partners in Asian nations by holding discussions to: share information with research organizations engaged in the

3R

Reduce, Reuse and Recycle. A basic concept espousing treatment of waste materials in that order to create a society which generates the minimum possible amount of waste. In other words, this concept describes the attempt to foster a 'recycling-oriented society' which minimizes the impact upon the environment by not generating waste, and reusing it or recycling its resources when you do to significantly decrease the consumption of resources and waste created and promote effective resource use. The 3R concept also forms the cornerstone for the promotion of Japan's recycling laws such as the Container and Packaging Recycling Law, the Home Appliance Recycling Law, the Construction Material Recycling Law, the Food Recycling Law and the End-of-Life Vehicle Recycling Law.

ISWM (Integrated Solid Waste Management)

A waste management technique based on the 3Rs concept and incorporating waste reduction, separation-at-source for reuse & recycling, collection & transportation systems, waste collection sites and their recovery of useful materials, proper treatment and resource recovery, and final disposal.

Waste agricultural biomass

Organic resources contained in agricultural waste such as rice straw and sugarcane bagasse.

Water footprint

The total volume of water consumed throughout the entire supply chain of a product. The water footprint is an empirical index expressing the amount and location of water consumption from raw material procurement to the production stage, transportation, use, and recycling (disposal). Expressing water volume as a multi-dimensional index, the water footprint concept is characterized by its ability to demonstrate the type of water (rainwater/surface water or groundwater), the time and place of water use, and the volume of evaporated water. ISO has commenced the process of standardization of water footprint accounting.

GESAP (GEC Sanitation Programme)

The website's content consists of five themes: 'Global Situation in Sanitation Sector', 'Water and Wastewater Reuse', 'Sewage Works in Osaka, Japan' (published by the Osaka Municipal Public Works Bureau), 'Resource and Energy Recovery in Sanitation' and 'Water Supply System in Osaka, Japan' (published by the Osaka Municipal Waterworks Bureau).



development of processes to produce energy from waste biomass as well as with policy makers promoting the concept of biomass towns; investigate the potential for collaboration; and identify technologies for use in these waste biomass utilization projects.

Around 20 participants including experts from Japan and overseas with a profound knowledge of waste agricultural biomass, government officials, and IETC experts attended the workshop, where they shared information on the latest research and policy trends, and held a meaningful discussion on future projects.



Expert research presentation

Survey on Application of Footprint for Water Environment Protection

UNEP/IETC has been implementing the 'Water Footprint* Neutrality & Efficiency Project' since June 2009. The project entails the refinement of water footprint and related concepts, as well as pilot applications of the associated methodologies and tools in selected geographical areas and industries.

Based on IETC's initiatives, GEC undertook the 'Survey on Application of Footprint for Water Environment Protection', and prepared basic documents for discussion of international standardization of water footprint as well as summarizing currently-proposed water footprint issues.

GEC will continue to support IETC's water footprint projects in the future through co-organizing of workshops and other activities.

Urban Water Issues (Website on Water and Sanitation 'GESAP*')

GEC launched the 'GESAP' website on water and sanitation in 2005 with the aim of providing information to assist in solving sanitary water supply and drainage problems in developing countries. The website contains data on themes such as 'Global Situation in the Sanitation Sector', 'Water and Wastewater Reuse', and 'Sewage Works in Osaka, Japan'. In 2009, we updated the information on 'Sewage Works in Osaka, Japan' and published it on the GESAP website in February 2010. In the future, we will examine ways to make the website more useful while determining user needs.

International Cooperation in Developing Countries**Support for Building a Community-Based Recycle-Oriented System in Vietnam's Ha Long Bay* Area**

The recent deterioration in the environment of Ha Long Bay in Quang Ninh Province, Vietnam has increased the likelihood that it will lose its World Heritage listing, and has made dealing with the problem all the more urgent. The 'Project on Support for Building a Community-Based Recycle-Oriented System in Vietnam's Ha Long Bay Area – a JICA Grass Roots Technical Cooperation Project' being conducted by GEC in collaboration with Osaka Prefecture University aims to improve the lives of local residents as well as the bay's environment by creating a resource recycling system based on the joint participation of residents, tourist boat operators, and the government. The project has now officially commenced after receiving approval from the Vietnamese Government in October 2009.

On 19 October 2009, we hosted the second Project Cycle Management (PCM) Workshop to discuss the future roles of stakeholders. The workshop provided a good opportunity for

all participants to gain a common awareness of project activities and aims, and to promote future project activities. Specific activities conducted in 2009 include a survey on refuse & wastewater and surveys on waste volume conducted in each of the four seasons (autumn and winter in 2009) with the consent of the survey population; namely the floating communities in the village of Vong Vieng and three tourist boat operators, to determine the state of refuse and wastewater in Ha Long Bay. We also conducted a class for students at a floating elementary school on how to monitor water quality including water depth, temperature, transparency and visibility.

On 11 March 2010, we hosted another local seminar for stakeholders to discuss in greater depth the specific details of activities and potential for a resource recycling system. Next fiscal year, we plan to collect more information and facilitate further discussions in order to investigate the possibility of partnerships and cooperation with external parties towards the creation of a local sustainable resource recycling system. We will also expand the project's activities throughout Ha Long Bay by communicating with other floating communities, promoting activities involving new tourist boat operators, and conducting various training to foster environmental activity leaders.



Demonstration of water quality monitoring



Second PCM workshop

Support for Community Efforts to Restore the Environment of Thailand's Tha Chin River* Basin

This project, which aimed to revitalize autonomous, ongoing conservation activities in the Tha Chin River and build partnerships between affiliates from government, industry and academia, was conducted between 2005 and 2007 with the support of the Environmental Restoration and Conservation Agency's Japan Fund for Global Environment. The project was concluded successfully following the creation of an environmental map and the Environmental Reading Material (ERM) led by local residents.



The Tha Chin River Learning Centre

GEC conducted a follow-up assessment of the project by visiting Nakhon Pathom Province from 5 to 9 October 2009 and holding meetings with leaders from the four provinces through which the river flows, as well as representatives from Mahidol University and the Regional Environment Office 5 (REO5) to exchange information on how the completed ERM was being used. The provincial leaders gave presentations on the environmental classes using ERM, which allowed us to see their pride in the ERM which they all worked hard to prepare, and their efforts to disseminate its contents. The meeting also drew attention to a number of challenges, such as the desire to publish an updated version of the ERM incorporating technical contents to encourage use by a broad range of age groups, the lack of available copies, and the need to improve teacher training. Overall, however, we confirmed that the ERM was being used proactively by the Tha Chin River Basin inhabitants and that water quality conservation initiatives were being conducted through partnerships between the sub-basins.

In the future, GEC will conduct talks on the implementation of a project to help improve the Tha Chin River's water quality based on proposals from REO5.

Ha Long Bay

Located northwest of the Gulf of Tonkin in the northern part of Viet Nam, Ha Long Bay is a place world-famous for its scenic beauty and was placed on the UNESCO World Natural Heritage List in 1994.



Ha Long Bay



A floating community in Ha Long Bay

Tha Chin River

Length: 320km
Watershed: 12,000km²
Inhabitants: 2.5 million



Contribution to Measures for the Mitigation of Climate Change

CDM (Clean Development Mechanism)

One of the flexible mechanisms (Kyoto Mechanisms) introduced to achieve the greenhouse gas reduction targets contained in the Kyoto Protocol. When a developed country (investor country) provides funds and technical assistance for the implementation of a project which leads to a reduction in greenhouse gas emissions in a developing country (host country), credits (CER*) are issued for the amount of reduced emissions. A developed country can then use these credits to achieve its own emission reduction target.

JI (Joint Implementation)

A Kyoto Mechanism like CDM, Joint Implementation is a system whereby developed nations cooperate to implement projects to reduce greenhouse gases, with one developed nation (the host nation) issuing credits called Emission Reduction Units (ERUs*) after converting a corresponding amount of Assigned Amount Units (AAUs), and the other developed nation (investor nation) able to use those ERUs to achieve their own emission reduction targets.

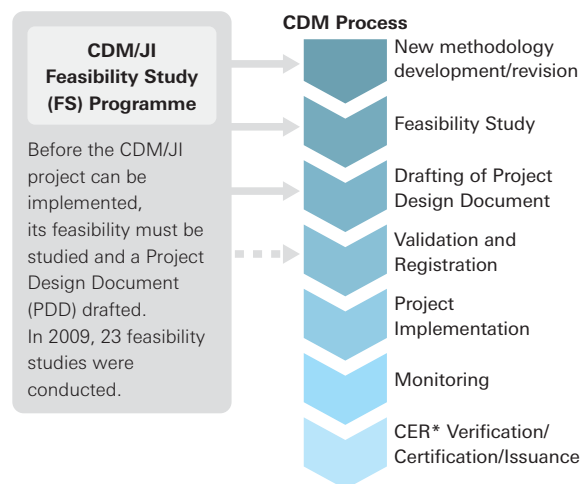
CDM/JI Feasibility Study Programme

Of the feasibility studies carried out to date, 10 projects have been registered by the CDM Executive Board (EB) and another 3 projects have obtained approval from the Japanese Government. The development and revision of 5 CDM methodologies have also been approved by the CDM EB.

CDM*/JI* Feasibility Study Programme*

Since its commission by the Ministry of the Environment in 1999 as secretariat of the CDM/JI Feasibility Study Programme, GEC has managed the progress of CDM/JI feasibility studies (FSs) performed by private companies, and has worked to unearth promising CDM/JI projects, accumulate knowledge, and disseminate information useful for project development & implementation.

In 2009, we invited applications with an emphasis on CDM/JI project FSs capable of realizing 'co-benefits' in terms of greenhouse gas mitigation and environmental pollution control in developing countries. As a result, 23 feasibility studies were adopted in fields such as waste management and renewable energy. GEC assisted in the preparation of the Project Design Documents (PDDs) which are subject to assessment (validation assessment) to determine the project's suitability for adoption as a CDM/JI project. GEC also established an expert committee to provide specific advice on study details and project realization, and are carefully managing the progress of FSs while maintaining close communication with the FS entities.

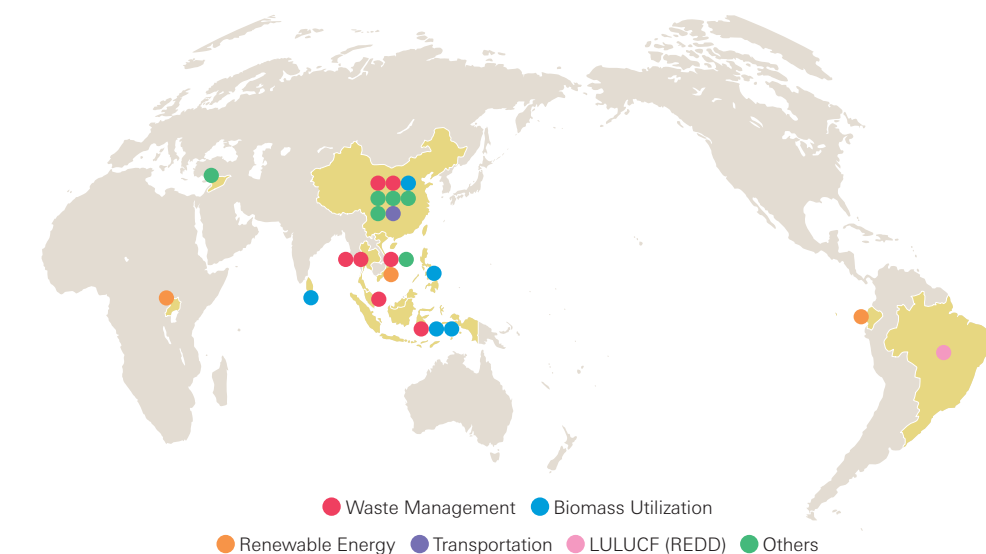
CDM Flow & GEC Programme**List of 2009 CDM/JI Feasibility Studies***

Category	Project	Country
Waste Management	Aerobic Digestion of Sewage Sludge in Pingdingshan Sewage Treatment Plants	China
	Eco-Farming Biogas Digester CDM Project under the PoA	China
	Methane Recovery from Palm Oil Mill Effluent	Indonesia
	Integrated MSW Treatment with Composting of Organic Waste and LFG Capture and Utilization	Malaysia
	Semi-Aerobic Disposal CDM Project in Laemchabang Landfill Site	Thailand
	Biogas Power Generation and Bio-Compost Production Project at Sugar Mill and Bio-Ethanol Factory	Thailand
	Aerobic Treatment of Household Waste	Viet Nam
Biomass Utilization	Biomass Cogeneration Using Pelletized Agricultural Residues	China
	Switching from Mixed Fuel to Biomass for Electricity Generation	Indonesia
	Environmentally Friendly Development by Multiple Use of Jatropha Curcas	Indonesia
	Power Generation Using Waste Banana	Philippines
	Programmatic CDM for Biomass (Gliricidia) Utilization for Thermal Energy to be Used at Industrial Facilities	Sri Lanka
Renewable Energy	Wind Power and Co-Generation CDM Projects Using Jatropha Oil	Ecuador
	Installation of PV LED Lanterns throughout the Republic of Uganda	Uganda
	Small-Scale Hydropower CDM Project	Viet Nam
Transportation	Energy Efficiency Activities Using Idling Stop Equipments for Buses	China
LULUCF (REDD)	'Halitina' REDD Project	Brazil
Others	Programmatic CDM for Electrical Power Saving at Locomotive Factories	China
	Waste Heat Recovery and Utilization Programme in Cement Industry	China
	Waste Heat Recovery and Utilization for Power Generation Plant	China
	Programmatic CDM for Energy Efficiency Programme through Introducing 3WCF Technique	China
	Energy Utilization of Ammonia Plant Tail Gas	Syria
	Programmatic CDM on the Installation of Efficient Fluorescent Lamp Ballasts	Viet Nam

LULUCF: Land Use, Land Use Change and Forestry

REDD: Reducing Emissions from Deforestation and Forest Degradation in developing countries

CDM/JI Feasibility Study Projects in 2009



Aerobic Treatment of Household Waste (Viet Nam)



Energy Efficiency Activities Using Idling Stop Equipments for Buses (China)



Installation of PV LED Lanterns throughout the Republic of Uganda (Uganda)

'CDM/JI Symposium 2009'

GEC has hosted events annually since 2000 together with the Ministry of the Environment, Japan (MOE) to provide valuable information to the public as well as private companies interested in the CDM/JI.

In September 2009, GEC and MOE hosted the 'Symposium on CDM/JI Feasibility Study Programme for Climate Change Mitigation 2009 (CDM/JI Symposium 2009)' in Tokyo and Osaka.

The symposium featured lectures by experts providing participants with the latest information on current status of carbon credit, CDM reform and 'co-benefits' approach*. Four CDM/JI FS entities also reported the results of their studies undertaken in 2008, and then experts reviewed these reports and made constructive comments based on the latest findings and information, such as the various issues involved in realizing projects and methods for their resolution.

Participants also received the 'CDM/JI Symposium 2009' booklet containing summary reports on FSs conducted in 2008.



'CDM/JI Symposium 2009' in Tokyo

CER (Certified Emission Reduction)

A credit issued in response to the amount of greenhouse gas reduction resulting from a CDM Project. A single unit is equivalent to one ton of CO₂ (tCO₂).

ERU (Emission Reduction Unit)

A credit issued by a host nation by converting Assigned Amount Units (AAU) in response to the amount of greenhouse gas reduction resulting from a JI Project. A single unit is equivalent to one ton of CO₂ (tCO₂).

2009 CDM/JI Feasibility Studies

Please refer to the GEC website for further details on the study reports.

'CDM/JI Symposium 2009'

Participants:

Tokyo: Approx. 230

Osaka: Approx. 110

Co-benefits approach:

Initiatives to implement climate change measures and CDM projects while also meeting development needs in developing countries. In particular, the co-benefits approach encourages climate change measures and CDM projects which also contribute to solving local environmental issues (such as air and water pollution and waste) from the perspective of sustainable development.

Conference of the Parties (COP)

The supreme decision-making body of the UNFCCC. Held annually.

Conference of the Parties serving as the meeting of the Parties to the Kyoto Protocol (COP/MOP)

The supreme decision-making body in regards to the implementation of the Kyoto Protocol. Held annually.

Osaka CDM Network

A network established in February 2004 by GEC, OISCA Kansai Branch and Business Innovation Centre Osaka to promote active participation and independent initiatives in the CDM/JI by companies located in the Kansai region. The Network aims to provide workshops and other practical forums and currently has 23 member organizations as of July 2010.

Country Report

A report prepared by each participant describing the environmental administration system, environmental situation and other related issues in his or her country.

Action Plan

At the end of the training course, each participant works out action plans for environmental improvement in his or her country based on the findings and competence acquired through the training.

Collection and Distribution of CDM/JI-related Information

GEC attended the 15th Conference of the Parties to the United Nations Framework Convention on Climate Change (COP15)* and the 5th Conference of the Parties serving as the meeting of the Parties to the Kyoto Protocol (COP/MOP5)* held in Copenhagen, Denmark from 7 to 18 December 2009, where we collected information. GEC also set up an exhibition booth introducing the CDM/JI FS Programme commissioned by the Ministry of the Environment, Japan (MOE), displayed posters to raise awareness of the 'Co-benefits approach to climate change and CDM', and distributed the 'CDM/JI Manual for Project Developers and Policy Makers – 2009' issued by the MOE as well as its electronic media and other related materials.

We also co-hosted an official COP side event announcing the results of quantitative assessments of co-benefits conducted during CDM/JI feasibility studies, and promoted the use of the 'Co-benefits Quantitative Assessment Manual' published by MOE.

The information collected at these conferences and their side events was published on the GEC website to support private entities in Japan involved in CDM/JI projects.



COP15 (Copenhagen, Denmark)

Osaka CDM Network*

The Osaka CDM Network (O-CDM) holds internal seminars to provide information exclusively to its member organizations, and hosts events on climate change policies and carbon business which are open to the general public.

In 2009, O-CDM hosted a series of five 'Carbon Offset Seminar in Kansai' to raise awareness and encourage implementation of carbon offsetting.

On 6 January 2010, O-CDM also hosted the 'Osaka Carbon Conference & Fair 2009'.



Osaka Carbon Conference & Fair 2009

Training of Environmental Technology**Human Resource Development in Developing Countries****Japan International Cooperation Agency (JICA) Group Training Project**

GEC operated the following 11 JICA-commissioned group training courses for engineers and government officials from developing countries. In addition to the existing training courses, GEC also launched the 'Cool Earth Partnership Seminar' to improve understanding of climate change policies, and revamped the 'Air Pollution Control Course' which we operated for 20 years into the 'Countermeasure against Automobile Pollution in Urban Area' which focuses on measures to address mobile emission sources.

Before the start of each course, all participants presented a 'Country Report*' to share awareness of the issues facing their respective nations. Upon completion of the course, participants also made an 'Action Plan*' presentation to define their goals upon returning home.

Training period	Nationality of participants	Main course contents
Cool Earth Partnership Seminar*		
A: 13–23 April 2009 12 participants from Costa Rica (2), Dominican Republic (2), Nicaragua (2), Panama (2), Peru (2), Uruguay (2)		<u>Cooperating bodies</u> <ul style="list-style-type: none"> • Ministry of Foreign Affairs • Ministry of the Environment • Ministry of Land, Infrastructure, Transport and Tourism • Japan Meteorological Agency • Asia-Pacific Network for Global Change Research • Osaka CDM Network, etc <u>Lectures</u> <ul style="list-style-type: none"> • Phenomena and effects of climate change • Japan's countermeasures against climate change, etc. <u>Facility tours</u> <ul style="list-style-type: none"> • The Earth Simulator • Energy-Saving buildings • Bioethanol plant using waste wood, etc. <u>Purpose</u> To enhance understanding among Cool Earth Partner nations of the impact of climate change and measures for its mitigation.
B: 13–24 July 2009 20 participants from Belize (2), Burundi (2), East Timor (2), Georgia (2), Guyana (1), Mongolia (2), Nigeria (2), Serbia (2), Suriname (1), Togo (2), Viet Nam (2)		<u>Cooperating bodies</u> <ul style="list-style-type: none"> • Ministry of Foreign Affairs • Ministry of the Environment • Ministry of Land, Infrastructure, Transport and Tourism • Japan Meteorological Agency • Asia-Pacific Network for Global Change Research • Osaka CDM Network, etc <u>Lectures</u> <ul style="list-style-type: none"> • Phenomena and effects of climate change • Japan's countermeasures against climate change, etc. <u>Facility tours</u> <ul style="list-style-type: none"> • The Earth Simulator • Energy-Saving buildings • Bioethanol plant using waste wood, etc. <u>Purpose</u> To enhance understanding among Cool Earth Partner nations of the impact of climate change and measures for its mitigation.
Environmental Policy & Environmental Management System*		
11 May–3 July 2009	10 participants from Indonesia (2), Kenya (2), Laos (2), Mauritius (1), Senegal (1), Ukraine (1), Viet Nam (1)	<u>Cooperating bodies</u> <ul style="list-style-type: none"> • Osaka City Environment Bureau • New Japan Certification Service Co., Ltd. • United Nations University, etc <u>Lectures</u> <ul style="list-style-type: none"> • Environmental administration in Japan • Experience of Urban Environmental Management in Osaka City • Environmental Management System, etc. <u>Facility tours</u> <ul style="list-style-type: none"> • Sewage treatment plant • Waste incineration plant, etc. <u>Purpose</u> To master pragmatic and practical methodologies, such as the framing of environmental policies, techniques of the environmental assessment, guiding corporation policies, Environmental Management Systems and methods of enlightening citizens.
Pollution Controls for Hazardous Substances in the Environment*		
10 June–7 August 2009	3 participants from Algeria (1), El Salvador (1), Philippines (1)	<u>Cooperating bodies</u> <ul style="list-style-type: none"> • Department of Environment, Agriculture, Forestry and Fisheries, Osaka Prefectural Government • Research Institute of Environment, Agriculture and Fisheries, Osaka Prefectural Government • Environmental Management and Technology Center in Kansai • Minamata City • Toyama Prefectural Government, etc. <u>Lectures</u> <ul style="list-style-type: none"> • Introduction to hazardous metals • Air and water pollution control measures, etc <u>Practical training</u> <ul style="list-style-type: none"> • Sampling and analysis of air and water, etc. <u>Facility tours</u> <ul style="list-style-type: none"> • Water and sewer facilities • Minamata Disease Municipal Museum, etc. <u>Purpose</u> To develop well-qualified human resources who are able to collectively evaluate emission sources and environmental contamination by heavy metals and hazardous chemical substances and to establish preventive measures against environmental pollution.
China-Japan Policies of Climate Change and CDM*		
24 August–4 September 2009	10 participants from China	<u>Cooperating bodies</u> <ul style="list-style-type: none"> • Climate Experts Ltd. • The General Environmental Technos Co., Ltd., etc. <u>Lectures</u> <ul style="list-style-type: none"> • CDM project case studies • PDD case reports • PDD draft guidance, etc. <u>Facility tours</u> <ul style="list-style-type: none"> • Thermal power plant • Biodiesel plant • Waste incineration plant, etc. <u>Purpose</u> To provide technical support for discovery of Clean Development Mechanism (CDM) projects and help to enhance ability of China's CDM centre personnel to unearth new projects.

Cool Earth Partnership Seminar

Visit to bioethanol plant



Visit to the Earth Simulator

Environmental Policy & Environmental Management System

Visit to the Aito Eco-Plaza 'Nanohana Kan'

Pollution Controls for Hazardous Substances in the Environment

Visit to medical waste treatment plant

China-Japan Policies of Climate Change and CDMVisit to CO₂ recovery facility in the thermal power plant

Urban Solid Waste Management by Local Government



Town cleanup activity

Countermeasure against Automobile Pollution in Urban Area



Study tour of chassis dynamometer testing

Waste Effluent Pollution Control Caused by Mining and Manufacturing Industries for Central and South America



Talk by Minamata Disease Municipal Museum's 'Narration Group'

Capacity Development in Environmental Management (Air and Water Pollution Control) for Middle Eastern Countries



Flue gas measurement practice

Training period	Nationality of participants	Main course contents
Urban Solid Waste Management by Local Government*		
26 August– 20 October 2009	9 participants from Belize(1), El Salvador (1), Maldives (1), Mongolia (1), Sri Lanka (1), Turkey (1), Uruguay (2), Viet Nam (1)	<u>Cooperating bodies</u> <ul style="list-style-type: none"> Osaka City Environment Bureau Foundation of Environmental Management, Osaka Fukuoka University, etc. <u>Lectures</u> <ul style="list-style-type: none"> Outline of industrial waste control, etc. <u>Practical training</u> <ul style="list-style-type: none"> Practice in designing a landfill site, etc. <u>Facility tours</u> <ul style="list-style-type: none"> Recycling plant Final disposing sites, etc. <u>Purpose</u> <p>To develop leaders and core people who can play a major role in making solid waste treatment plans and in implementing treatment businesses in their countries.</p>
Countermeasure against Automobile Pollution in Urban Area*		
1 October– 13 November 2009	9 participants from Egypt (1), Laos (2), Mongolia (2), Pakistan (1), Philippines (1), Sri Lanka (1), Viet Nam (1)	<u>Cooperating bodies</u> <ul style="list-style-type: none"> Osaka City Government Osaka City University Osaka Prefectural Police Headquarters Sakai City Hanshin Expressway Company Limited The Tokyo Metropolitan Research Institute for Environmental Protection Daihatsu Motor Co., Ltd. Sagawa Express Co., Ltd., etc. <u>Lectures</u> <ul style="list-style-type: none"> Economic development & environmental issues Urban transport & the environment Mobility management, etc. <u>Facility tours</u> <ul style="list-style-type: none"> Traffic control system Vehicle Inspection Centre Monitoring stations, etc. <u>Purpose</u> <p>To formulate & implement automobile pollution prevention plans etc. in target countries to resolve air pollution problems caused by city-based vehicles from the dual perspectives of environmental countermeasure technologies & urban transport policies.</p>
Waste Effluent Pollution Control Caused by Mining and Manufacturing Industries for Central and South America*		
12 November– 11 December 2009	20 participants, from Argentina (2), Bolivia (3), Chile (2), Colombia (4), Cuba (3), Peru (3), Venezuela (3)	<u>Cooperating bodies</u> <ul style="list-style-type: none"> Osaka City Environment Bureau Osaka City Public Works Bureau Sumitomo Metal Mining Co., Ltd. National Institute for Minamata Disease Toyama Prefectural Government, etc. <u>Lectures</u> <ul style="list-style-type: none"> Soil contamination control measures Industrial wastewater control, etc. <u>Facility tours</u> <ul style="list-style-type: none"> Mines Treatment facility for wastewater containing heavy metals, etc. <u>Purpose</u> <p>To draw up effective solutions and policies to mitigate environmental destruction and pollution in relevant countries, caused by hazardous substances contained in effluent from mining and manufacturing industries.</p>
Capacity Development in Environmental Management (Air and Water Pollution Control) for Middle Eastern Countries*		
18 January– 26 February 2010	6 participants from Egypt (2), Iran (1), Lebanon (1), Syria (2)	<u>Cooperating bodies</u> <ul style="list-style-type: none"> Osaka City Environment Bureau Suuri-Keikaku Co., Ltd. Nakayama Steel Works, Ltd. Osaka Environmental Technology and Research Co., Ltd., etc. <u>Lectures</u> <ul style="list-style-type: none"> Methods for formulating prevention programs Environmental Impact Assessment, etc. <u>Facility tours</u> <ul style="list-style-type: none"> Monitoring stations Cement kiln waste treatment plant, etc. <u>Purpose</u> <p>To enhance the environmental management capacity of central and local government organizations in the target countries to formulate and execute policies and regulatory techniques in the areas of air & water pollution prevention.</p>

Training period	Nationality of participants	Main course contents
TRAINING PROGRAMME FOR YOUNG LEADERS, Indonesia, Urban Environmental Management Course*		
19 February– 4 March 2010	16 participants from Indonesia	<u>Cooperating bodies</u> <ul style="list-style-type: none"> Osaka City Environment Bureau • Osaka City Public Works Bureau Department of Environment, Agriculture, Forestry and Fisheries, Osaka Prefectural Government Lake Biwa-Yodo River Water Quality Preservation Organization NPO Aoibiwako, etc. <u>Lectures</u> <ul style="list-style-type: none"> Japan's environmental measures and Osaka's waste administration Osaka City's Monitoring Systems, etc. <u>Facility tours</u> <ul style="list-style-type: none"> Sewage treatment plant • Waste incineration plant, etc. <u>Purpose</u> <p>To improve knowledge & awareness towards problem-solving initiatives among young human resources responsible for future nation-building through basic training to understand Japan's experiences & technologies in specialized fields.</p>
Environmental Policy and Environmental Management System in Nigeria*		
4–26 March 2010	10 participants from Nigeria	<u>Cooperating bodies</u> <ul style="list-style-type: none"> Japan Water Agency Osaka City Institute of Public Health and Environmental Sciences Osaka City Public Works Bureau • Hotani Natural Farm Department of Public Health and Welfare, Osaka Prefectural Government, etc. <u>Lectures</u> <ul style="list-style-type: none"> Environmental Policy in Japan • Outline of Water and Sanitation, etc. <u>Facility tours</u> <ul style="list-style-type: none"> Small-scale septic tanks • Composting, etc. <u>Purpose</u> <p>To implement sustainable water environment policies & management systems by formulating suitable environmental management plans in participating nations or the local governments to which participants belong.</p>

GEC Networking Project for Former Training Participants*

In an effort to follow up on former JICA participants and ascertain the needs of developing nations, GEC established the 'GEC Network' for former training course participants in 1998, publishes the 'GEC PLAZA' newsletter and 'Connect the World' e-mail newsletter, and conducts follow-up seminars* to consolidate the network through the exchange of information.

At the commission of JICA, GEC continued to manage the 'JICA-GEC Network' website for network members in 2009 and has sought to diversify the site's content by publishing training course texts and details of participants Q&A sessions.

GEC also co-hosted a follow-up seminar with JICA from 23 to 25 February 2010 in Lima, Peru to follow up on the 'Waste Effluent Pollution Control Caused by Mining and Manufacturing Industries for Central and South America' training course which ran for three years from 2007 to 2009. In this follow-up seminar, GEC scrutinized the progress made by each participating country in implementing the Action Plan, and advised on technical matters. We also advised the organizations to which the participants belong with the aims of supporting the ongoing promotion of the Action Plan and developing mutual cooperation between the participating countries. The seminar was attended by 21 former participants from Argentina, Chile, Columbia, Cuba, Peru and Venezuela; officials from Organization of Environmental



Inspection of Graciela Mine

TRAINING PROGRAMME FOR YOUNG LEADERS, Indonesia, Urban Environmental Management Course



Visit to Maishima Incineration Plant

Environmental Policy and Environmental Management System in Nigeria



Field trip to learn about small-scale septic tanks

GEC Networking Project for Former Training Participants

There are 1,183 overseas GEC participants on the network in 115 countries. (as of March 2010)

Follow-up Seminar

Held in countries where Network membership is high, the theme of each seminar is intended to reflect the specific needs of that country. These seminars were previously known as 'One Day Seminars' until 2008.

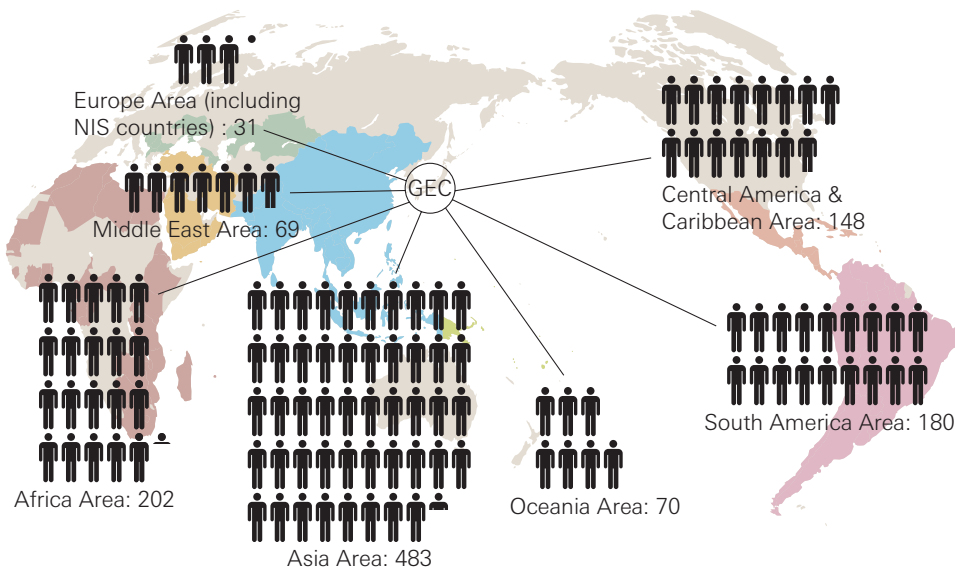
- Thailand & Philippines (March 1999)
- Malaysia & Viet Nam (January 2000)
- Indonesia (February 2001)
- Egypt (March 2002)
- Thailand (March 2005)
- Cuba (March 2007)
- Philippines (March 2008)
- Indonesia (March 2009)
- Peru (February 2010)

Assessment and Inspection Agency (OEFA) in Peru which acted as the local coordinator; and Japanese trading and mining companies. The former participants gave presentations on the progress of their Action Plan, and a lively discussion ensued. We also visited the Graciela mine located on the outskirts of Lima on 24 February with the seminar participants where we witnessed the effective use of an abandoned mine.

Upgrading the GEC Participants Network

1998	GEC commenced one-day seminar and publication of newsletters
May 2001	Full-scale operation of the GEC Information Board began
April 2002	GEC Network expanded to include four environmental JICA training courses offered by the Osaka City Government
May 2003	JICA training course curriculum text made available online
April 2004	Country reports, other reports and photo album made available online
April 2005	Change of name to the 'JICA-GEC Network'
January 2007	Publication of mail magazine 'Connect the World' begins
March 2009	Publication of questions from training course participants commences

Network Member Distribution Diagram (As of March 2010)



Institute of Environmental Management and Assessment (IEMA)

U.K.-based organization which registers environmental auditors and carries out accreditation of educational establishments providing environmental training. By achieving a given exam score on the final day of the course, participants in the 'Environmental Policy & Environmental Management Systems Course' are able to acquire a maximum of five of the ten points required to obtain the IEMA qualification of Associate Environmental Auditor.

Dissemination of Environmental Management Systems (EMS)

EMS Training Courses

GEC operates the Internal Environmental Auditor Training Course targeting both corporate and administrative internal environment auditors. The 2009 course was undertaken by 11 people.

Dissemination of EMS Overseas

By enhancing the seminars on EMS in GEC-managed JICA training programmes, we have promoted the dissemination of EMS overseas including developing countries. As part of the Environmental Policy & Environmental Management System Course, we organized a six-day session using texts certified by the Institute of Environmental Management and Assessment* for environmental auditor training. Such lectures on EMS have also been introduced to other JICA training courses, and efforts were made to improve the contents of the lectures.

Promotion of IETC Projects & Joint PR

GEC distributed the GEC Newsletter (Japanese & English) and Annual Report to affiliated organizations, and performed timely PR activities via our website and other media to introduce the activities of IETC and GEC to a wider audience. We also screened a PR video and provided explanations of our facilities to visitors.

Key events hosted in 2009

Date	Event	Host
16–22 October 2009	UN Week 2009 Global Environment Exhibition <u>Venue:</u> Osaka City Hall <u>Description:</u> Panel exhibition displaying environmental photos and initiatives of IETC, GEC & Osaka City.	<ul style="list-style-type: none"> • IETC • GEC • Osaka City
29 November 2009	Part 1 of the ‘Tour of the World’s Water’ lecture series ‘Improving the Water Environment in Vietnam’s Ha Long Bay’ <u>Venue:</u> Osaka Municipal Central Library <u>Description:</u> Lecture introducing water contamination issues currently facing Ha Long Bay, and progress of the ‘Ha Long Bay Project’ jointly operated by GEC & Osaka Prefecture University.	<ul style="list-style-type: none"> • IETC • GEC • Osaka Municipal Central Library
13 December 2009	Part 2 of the ‘Tour of the World’s Water’ lecture series ‘Global Water Issues’ <u>Venue:</u> Osaka Municipal Central Library <u>Description:</u> Lecture by IETC Director Nakamura on the state of global water resources and IETC’s activities.	<ul style="list-style-type: none"> • IETC • GEC • Osaka Municipal Central Library
20 November–13 December 2009	UNEP World Environmental Photo Exhibition—Focus on Water <u>Venue:</u> Osaka Municipal Central Library <u>Description:</u> Exhibit of previous prize-winning photos from UNEP’s ‘Focus on Your World’ photo competition.	<ul style="list-style-type: none"> • IETC • GEC • Osaka City
11 March 2010	Symposium on low-carbon urban development (Regional Environment Networking Event) ‘Future Direction of Low-Carbon Cities: environmental innovation for improved sustainability’ <u>Venue:</u> L Osaka <u>Description:</u> Symposium discussing the challenges to promoting global warming policies and the direction of low-carbon urban development.	<ul style="list-style-type: none"> • GEC • Center for Environmental Information Science

Key events attended in 2009

Date	Event	Participants
13 September 2009	Tsurumi Ward Festival <u>Venue:</u> Tsurumi Park <u>Description:</u> Outline of activities via display booth, pamphlet distribution, and panel exhibit. Also operated the ‘Eco Declaration’ event, and displayed ‘eco declarations’ of visitors to the GEC booth.	<ul style="list-style-type: none"> • GEC
17–18 October 2009	Eco Fair 2009 <u>Venue:</u> Tsurumi Park <u>Description:</u> Outline of activities via display booth, pamphlet distribution, and panel exhibit. Also held an environmental conservation quiz for visitors to the GEC booth.	<ul style="list-style-type: none"> • GEC
6–7 February 2010	One World Festival <u>Venue:</u> International House Osaka <u>Description:</u> Outline of activities via display booth, pamphlet distribution, and panel exhibit. Also, cooperated on quiz rally held at venue.	<ul style="list-style-type: none"> • IETC • GEC
20–21 March 2010	Biodiversity EXPO 2010 in Osaka <u>Venue:</u> Osaka International Convention Center <u>Description:</u> Outline of activities via display booth, pamphlet distribution, and panel exhibit. Also, introduction of the ‘Ha Long Bay Project’ jointly operated by GEC & Osaka Prefecture University.	<ul style="list-style-type: none"> • GEC

GEC Publications

Please refer to page 15.

Number of visitors to GEC

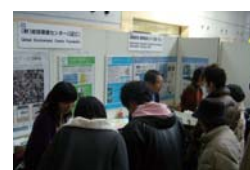
92 (1 April 2009–31 March 2010)



UN Week 2009 Global Environment Exhibition



Part 2 of the ‘Tour of the World’s Water’ lecture series



One World Festival (IETC & GEC’s booth)

**UNEP Special Envoy
Ms. Tokiko Kato**

Since her appointment as UNEP Special Envoy in October 2000, Ms. Tokiko Kato has been actively involved in awareness-raising activities through the media, in addition to visiting areas of environmental concern both in Japan and overseas and encouraging the work of involved parties and NGOs. A report on Ms. Kato's activities as Special Envoy is available on the GEC website.



Exchange with people of
Tuvalu through song



Waste on Funafuti

Library use

The library is open on Tuesday & Friday (excluding public, year-end & New Year holidays) from 10:00 to 12:00 & 13:00 to 17:00. Visitors are required to make an appointment, and books may be viewed and copied but are not available for loan (as of March 2010).

**Provision of Facilities to
IETC**

GEC continues to provide facilities to IETC at no cost as part of Osaka City's incentive to attract UNEP to the region.

Support for UNEP Special Envoy Activities

Since its commission by the Ministry of the Environment in 2001, GEC has provided support for the activities of the UNEP Special Envoy Ms. Tokiko Kato* both in Japan and abroad, including visits to areas of environmental concern and encouraging the work of NGOs and local communities.

Ms. Kato visited Fiji and Tuvalu from 14 to 24 April 2009 to observe the environmental issues facing South Pacific island nations, particularly the rising sea level



With Hon. Mr. Ielemia, Prime Minister of
Tuvalu

accompanying climate change and waste-related issues. In Tuvalu, Ms. Kato witnessed firsthand just how fragile island environments really are after observing the coastal erosion of the Funafuti Atoll, a waste disposal site on the island Fongafale, and an illegal dump site. Meeting with Tuvalu's Prime Minister Ielemia and government officials, Ms. Kato discussed the issue of climate change, the island lifestyle and bilateral relations between Japan and Tuvalu. Ms. Kato also contributed to amicable relations between the two nations through music by performing a concert at the island's parliament which doubles as the main assembly hall.

On 1 July 2009, Ms. Kato attended a discussion with UN Secretary General Ban Ki-moon, UN Goodwill Ambassadors and supporters held at the United Nations University, where she exchanged opinions with the Secretary General on global warming and other environmental issues, and engaged in exchanges with the other UN agency goodwill ambassadors and supporters. Ms. Kato also made a courtesy call with UNEP/IETC Director Nakamura to the Mayor of Osaka Mr. Kunio Hiramatsu, where they agreed to underscore the importance of environmental conservation to developing nations through ongoing cooperation between UNEP and Osaka City.

GEC will continue to support Ms. Kato's activities in her capacity as the UNEP Special Envoy to communicate and raise awareness of the importance of environmental conservation and promote grassroots conservation activities.

Upkeep of the Library*

Since 1997, GEC has provided public access (by appointment) to the library containing specialist literature on the global environment and especially UNEP-related publications. In 2009, we continued to improve the library by cataloging and expanding the list of available publications such as UNEP-related literature and GEC reports. A list of the library's UNEP-related publications is also available on GEC's website to promote the library's use.

Maintenance and Enhancement of Information Systems

GEC has strived to maintain our information provision systems, and has implemented system and software upgrades to enhance operational efficiency and ensure system stability and reliability.

Provision of Facilities to IETC*

GEC continued to provide facilities to IETC.

Publications List

Publications in 2009

Publication name	Contents	Format	Size/pages/date of publication
Indonesia One-day Seminar Report FY2008	A report on a one-day seminar conducted in Indonesia in 2008	Booklet	A4/114 pages May 2009 (Japanese version) ①
CDM/JI Symposium 2009	Survey reports from the 2008 CDM/JI Feasibility Study Implementation Group (distributed on the day of the symposium)	Booklet PDF	A4/54 pages October 2009 (Japanese version) ②
IETC Brochure	Provides an outline of UNEP/IETC and introduces its activities.	Booklet	A4/4 pages February 2009 (Japanese/English version) ③
Survey Report on Environmental Technologies and Systems for 2 Eco-Town Candidate Cities	A report on need survey conducted in Penang and Bandung in 2009	Booklet	A4/82 pages March 2010 (Japanese version)
Peru Follow-up Seminar Report FY2009	A report on a follow-up seminar conducted in Peru in 2009	Booklet	A4/162 pages March 2010 (Spanish version) ④

Periodicals

Publication name	Contents	Format	Size/pages/date of publication
GEC Newsletter No.36 (Japanese version)	An introduction to the activities of GEC	Booklet PDF	A4/8 pages August 2009
GEC Newsletter No.37 (Japanese version)	An introduction to the activities of GEC	Booklet PDF	A4/8 pages February 2010
GEC Newsletter No.26 (English version)	An introduction to the activities of GEC	Booklet PDF	A4/8 pages October 2009 ⑤
GEC Newsletter No.27 (English version)	An introduction to the activities of GEC	Booklet PDF	A4/8 pages March 2010 ⑥
Global Environment Centre Foundation Annual Report 2008 (Japanese version)	Report on project of GEC for fiscal year 2008	Booklet PDF	A4/20 pages July 2009 ⑦
Global Environment Centre Foundation Annual Report 2008 (English version)	Report on project of GEC for fiscal year 2008	Booklet PDF	A4/20 pages September 2009 ⑧

GEC Publications

Please visit the GEC website for all of our publications in PDF form.

CDM/JI Feasibility Study Programme

Please refer to page 6–7.



①



②



③



④



⑤



⑥



⑦



⑧

Background of the Establishment

Establishment of the UNEP/DTIE/International Environmental Technology Centre

Beginning in the 1960s, Osaka City experienced a series of acute socio-environmental issues on the back of rapid industrialization, such as air, noise and water pollution and land subsidence. The city succeeded in substantially mitigating these problems, however, through the combined efforts of government and industry. Seeking to leverage these experiences for the benefit of others, the Osaka City Government actively cooperated with developing nations to help resolve their environmental problems, such as the formulation of a master plan to address air pollution in Shanghai, China.

In 1990, the International Garden and Greenery Exposition was held in Osaka based on the theme of 'harmonious coexistence between nature and mankind'. In anticipation of this event, Osaka City announced its intention in August of 1989 to invite an international environmental organization to the city as a way of carrying on the spirit of the exposition and taking advantage of Osaka's experience in environmental conservation. The announcement was followed by moves to attract relevant organizations, including an official invitation from Osaka Mayor Masaya Nishio handed to the Executive Director of the United Nations Environment Programme (UNEP) Dr. Mostafa K. Tolba during his visit to Japan.

These efforts culminated in July 1990 with a proposal by Japan's then Prime Minister Toshiki Kaifu at the G7 Summit in Houston to establish a UNEP facility in Japan. In August of the same year, Japan's Ambassador to Kenya Mr. Naohiro Kumagai made a proposal to the 2nd Special Session of the UNEP Governing Council to set up the International Environmental Technology Centre (IETC). In May of the following year, a resolution to establish IETC with the mandate of promoting the adoption, application and operation of Environmentally Sound Technologies (ESTs) in developing countries and countries in transition was unanimously approved at the 16th Session of the UNEP Governing Council. In October 1992, UNEP Executive Director Tolba and Parliamentary Vice-Minister for Foreign Affairs Mr. Koji Kakizawa signed an agreement in Osaka on the founding of IETC in Osaka, which officially commenced operations in April 1994. Since 1998, IETC has operated as part of UNEP's Division of Technology, Industry and Economics Division (DTIE).

Note: official positions listed above were current at the dates listed.

Establishment of the Global Environment Centre Foundation

Following the UNEP Governing Council's official decision to establish IETC in Japan, the Osaka City Government set up the UNEP/IETC Osaka Planning Office on 3 July 1991 to investigate IETC's operations and to facilitate the establishment of a support foundation to be launched at the start of 1992.

Following initial preparations by the Planning Office, the Global Environment Centre Foundation (GEC) was launched as a UNEP support entity on 28 January 1992 with a capital endowment from the Osaka prefectural and city governments.

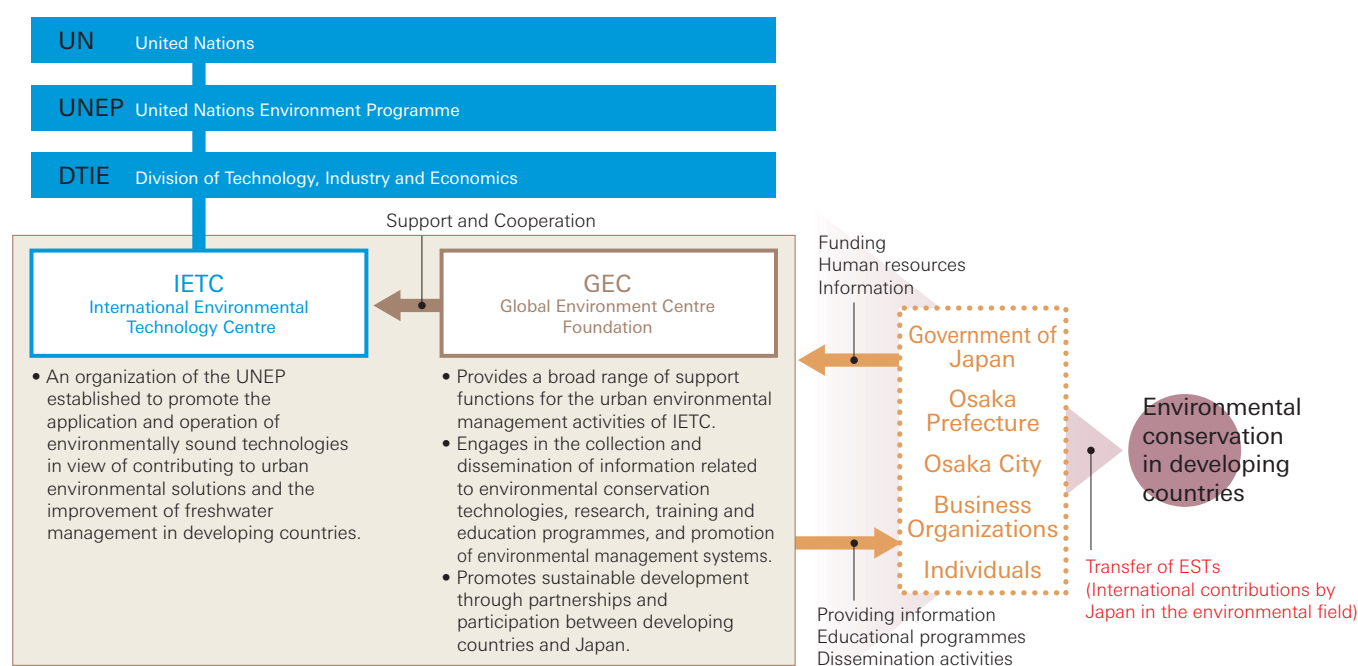
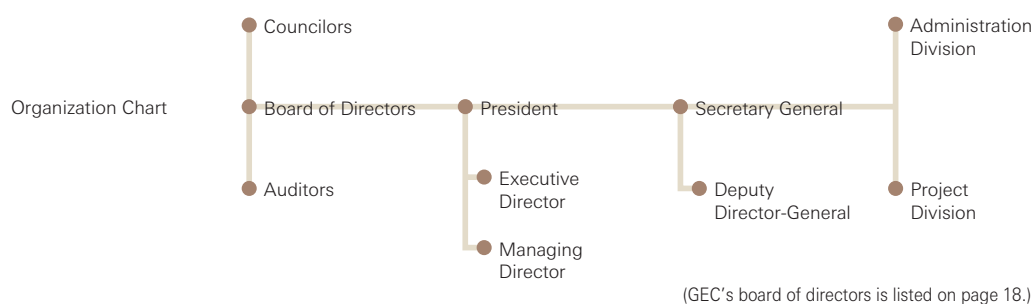
In 2008, GEC subsequently filed an application for change of legal entity from an incorporated foundation to a public interest incorporated foundation on 27 October 2009 in response to the 2008 enforcement of the three laws relating to reform of the public interest corporation system. After receiving the approval of the Prime Minister, GEC made a new start as a public interest incorporated foundation on 1 April 2010.

GEC was founded with the aim of contributing to the conservation of the environment in developing nations and around the world by leveraging Japan's wealth of conservation knowledge and experience in support of UNEP's urban environment conservation activities in developing nations, and undertaking activities to promote international cooperation to protect the global environment.

GEC's Activities

In addition to providing various types of support to IETC such as facility sharing and project collaboration, GEC also acts as an intermediary between IETC and its affiliated institutions in Japan to help ensure that its activities proceed smoothly and efficiently. Through activities to protect the global environment including surveys & research, collection & dissemination of information, and hosting of training & seminars, GEC contributes to Japan's international efforts on the environment.

Name	Global Environment Centre Foundation (GEC)
Date of Establishment	28 January 1992
Supervisory Authorities	Cabinet Office, Government of Japan
Office Location	2-110 Ryokuchi-koen, Tsurumi-ku, Osaka 538-0036 Japan Telephone: +81-6-6915-4121 Facsimile: +81-6-6915-0181
Endowments	1,754,160,000 yen (as of 1 April 2010)
Activities	(1) Projects in support of UNEP/DTIE/IETC stated aims of technical transfers and spreading information on environmentally sound technologies (ESTs) to promote environmental conservation in major urban areas of developing nations. (2) Collection, dissemination, surveying & research of information on environmental conservation in developing nations & the world as well as global warming countermeasures to promote technical cooperation and foster human resources in developing nations. (3) Other projects required to achieve GEC's stated aims.
Number of Staff	24 (including temporary staff; as of 31 March 2010)



*International Lake Environment Committee (ILEC) also supports IETC in promoting activities.

Board Members of the Global Environment Centre Foundation

President	MIYAHARA, Hideo	President, National Institute of Information and Communications Technology
Executive Director	MOCHIZUKI, Katsuichi	Former Director General for Environmental Policy, Environment Bureau, Osaka City Government (Former Managing Director, Osaka Bay Regional Offshore Environmental Improvement Center)
Managing Director	MITSUOKA, Kazuhiko	Former Director General for Environmental Policy, Environment Bureau, Osaka City Government
Directors	FUJIWARA, Yukinori	General Manager, Economic Research Department, Kansai Economic Federation
	NAKAGAWA, Masataka	Director, Economy and Industry Division, The Osaka Chamber of Commerce and Industry
	SOURI, Norio	Professor Emeritus, Osaka City University
	YAGI, Yasuo	Former Senior Executive Director - Environmental Management, Department of Environment, Agriculture, Forestry and Fisheries, Osaka Prefectural Government
Auditors	IWAMOTO, Kenichi	Certified Tax Accountant
	IWATANI, Motoi	Attorney
Councilors	IZUMI, Masahiro	Executive Officer, Environmental Considerations, Kansai Electric Power Co., Inc.
	KAGAJYO, Toshimasa	General Manager, CSR and Environment Department, Osaka Gas Co., Ltd.
	KANEKO, Kumao	Chairperson, Japan Council on Energy & Security
	KATAOKA, Shigehiro	Attorney
	KATAYAMA, Toru	Executive Managing Director, Overseas Environmental Cooperation Center
	MIZUNO, Minoru	Professor Emeritus, Osaka University
	MORIOKA, Toru	Professor, Faculty of Environmental and Urban Engineering, Kansai University (Professor Emeritus, Osaka University)
	OSUMI, Kazuyoshi	Senior Executive Director - Environmental Management, Department of Environment, Agriculture, Forestry and Fisheries, Osaka Prefectural Government
	SAKAI, Toshifumi	Director General, Osaka International Centre of the Japan International Cooperation Agency
	SUZUKI, Yutaka	Director, Institute for Global Environmental Strategies, Kansai Research Centre (Professor Emeritus, Osaka University)
	TAMAI, Tokuo	Director General, Environment Bureau, Osaka City Government

(as of 1 July 2010, honorific omitted; name in alphabetical order <Surname>)

Overview of the UNEP/DTIE/IETC

Name	United Nations Environment Programme (UNEP) Division of Technology, Industry and Economics (DTIE) International Environmental Technology Centre (IETC)
Date of Conclusion of the Agreement between Japanese Government and UNEP	30 October 1992
Mandate	Promoting the application and transfer of Environmentally Sound Technologies (ESTs) particularly among developing countries in the three key fields of "Water and Sanitation", "Waste Management" and "Disaster Prevention and Management"
Contacts	Osaka Office 2-110 Ryokuchi-koen, Tsurumi-ku, Osaka 538-0036 Japan tel: +81-6-6915-4581 fax: +81-6-6915-0304 Shiga Office 1091 Oroshimo-cho, Kusatsu-city, Shiga, 525-0001 Japan tel: +81-77-568-4581 fax: +81-77-568-4587 e-mail: ietc@unep.org IETC homepage: http://www.unep.or.jp/
Posts (As of 1 July 2010)	Director, Deputy Director, Senior Liaison Officer, Programme Officers (4), Administrative/Fund Management Officer
Programme Activities (implemented in 2009)	<p><u>Waste Management</u></p> <ul style="list-style-type: none"> • Integrated Solid Waste Management (ISWM) project <ul style="list-style-type: none"> - ISWM Plans and Implementation Strategy were accepted by the concerned authorities and pilot activities were implemented in Novo Hamburgo, Brazil; Nairobi, Kenya; and Bahir Dar, Ethiopia - 4 training manuals for integrated waste management planning were prepared. • E-waste management project <ul style="list-style-type: none"> - E-waste management project in Phnom Penh, Cambodia was implemented. • Continued to support the 3R Initiative of the Government of Japan and participated in the High-Level Asia Regional Seminar for Sustainable Resource Management and the Preparatory Meeting of the Regional 3R Forum in Asia held in Tokyo, Japan. • Continued to support the Osaka 3R Consortium and provided advice and inputs to the Consortium's activities in China, Malaysia, Thailand and Vietnam. • Organized the 5th Asia-Pacific Eco-business Forum with City of Kawasaki. • Project on Converting Waste Plastics into a Resource <ul style="list-style-type: none"> - A compendium of technologies and assessment guidance were compiled. - An International Expert Workshop was held. • Project on Converting Waste Agricultural Biomass into a Resource <ul style="list-style-type: none"> - A compendium of technologies was compiled. - An International Workshop was held. • Development of Eco-Towns in the Asia Pacific Region <ul style="list-style-type: none"> - 'Policy Framework for Eco-Town' was developed in Penang in Malaysia, Bandung in Indonesia and Shenyang in China. • The consultation workshop on development of a 'Global Platform on Waste Management' was held in Geneva. <p><u>Water and Sanitation</u></p> <ul style="list-style-type: none"> • Support for Environmental Management of the Iraqi Marshlands project was finished in December 2009 and the completion report was published. • UNEP-UNESCO initiative for the Iraqi Marshlands to develop and implement a longer-term management structure in the Iraqi Marshlands, utilizing the World Heritage inscription process as a tool was implemented. • Pilot demonstration on the application of the phytotechnology to improve water quality in Bocaina City, Brazil continued. • The work on upgrading the IETC software (Sub Wet2.0) to design artificial wetlands to allow for the inclusion of temperate and cold climates was completed. • A project to address the need for improving access to water and wastewater provision in rural communities in environmentally vulnerable areas in Jamaica was implemented. • A Seminar/Training Workshop using 'Every Drop Counts, the sourcebook and training materials on water use efficiency in the urban and domestic environment' was conducted.

Disaster Management and Prevention

- Project DEBRI - Demonstrating ESTs for Building Waste Reduction in Indonesia
- Application of ESTs for tsunami disaster waste reduction, processing, reuse & recycling; installation of related equipment in Banda Aceh; project completed in March 2009
- Cooperation with United Nations Disaster Assessment & Coordination (UNDAC) mission: Advice & technical support to UNDAC missions in countries requesting support to prevent & mitigate natural disasters under the UNDAC mechanism (cyclone in Burma; earthquake in Sichuan, China; Papua New Guinea)

Others

- Co-hosting of exhibit to commemorate World Environment Day & Environment Month with the International Lake Environment Committee (ILEC) under the theme 'Combating climate change & world lake conservation' at the Lake Biwa Museum
 - Participation in the Osaka Prefecture Urban Greenery Fair, panel exhibit & distribution of materials on the environment
 - Admission of Study tours: Josai International University, University of Shiga Prefecture, Gyeongsang National University (South Korea)
 - Publication & distribution of pamphlets introducing IETC's activities
 - IETC website update: improvement of English & Japanese language versions and project information
 - Participation in MOFA & international organizations' joint campaign 'Issho ni Kokuren' ('Together with the UN')
-

INDEX

Series of NETT21 (New Environmental Technology Transfer in the 21st Century):

A database developed by GEC from 1996 onward to disseminate information on Japan's environmental technologies for the purpose of promoting EST transfer in developing countries, and the number of data listings for each topic.

Database on: • Air Pollution Control Technology in Japan: 133
 • Waste Management Technology in Japan: 42
 • Water Pollution Control Technology in Japan: 81
 • On-Site Green Technique (OGT) in Japan: 83
 • Air Pollution Continuous Monitoring Technology in Japan: 83
 • Water Pollution Continuous Monitoring Technology in Japan: 53
 • Cleaner Production Technology in Japan: 241
 • Energy-Saving Technology at Business-Related Buildings: 69
 • Soil and Groundwater Contamination Survey and Countermeasure Technologies: 37
 • Japanese Advanced Environmental Equipment (provided by JSIM): 621

Total: 1,443 data listings (as of 31 March 2010, complete data available in English via the GEC Website)

Stored publications: 6,949 including 473 UNEP-related books (as of 31 March 2010)

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