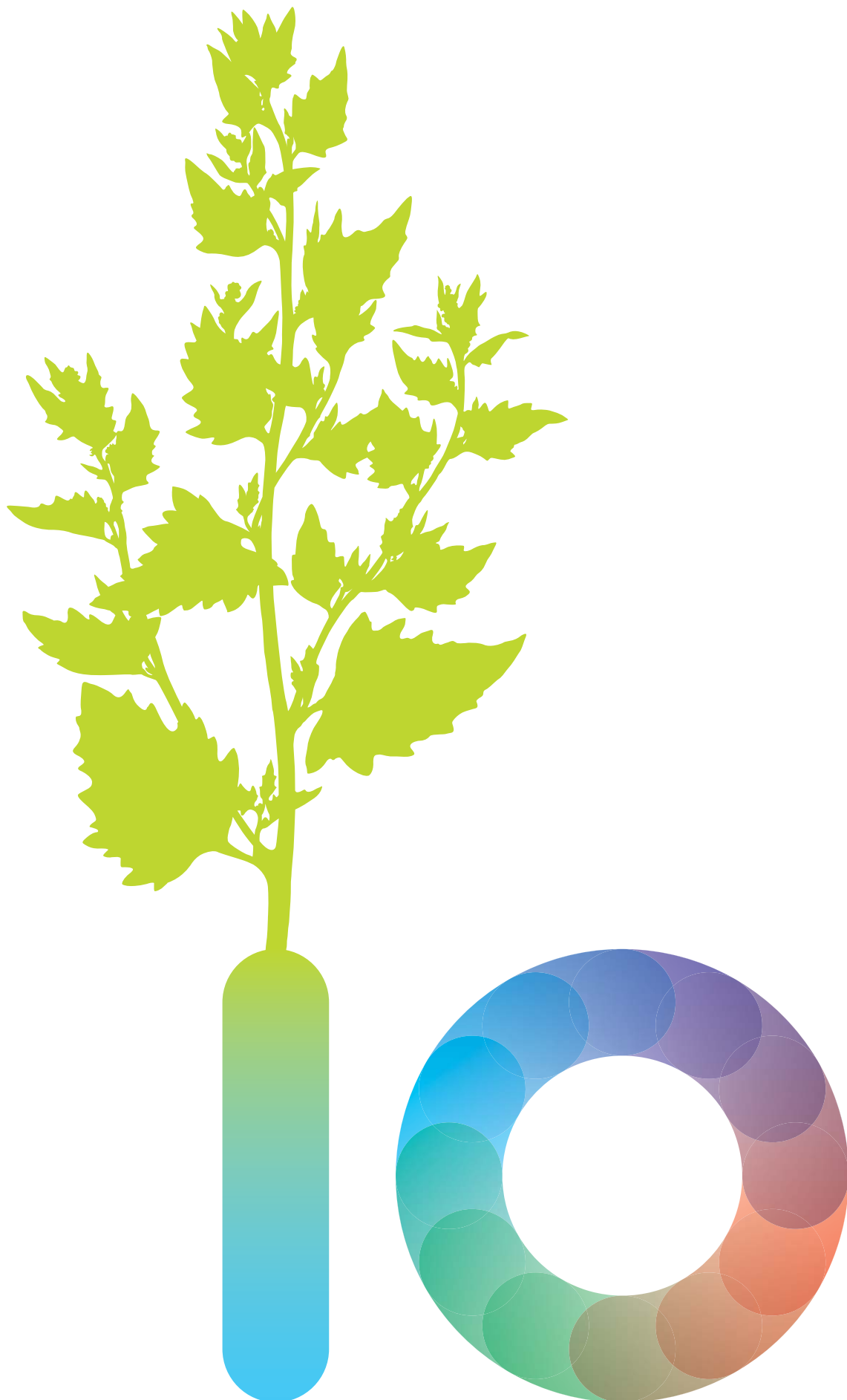


Global Environment Centre Foundation

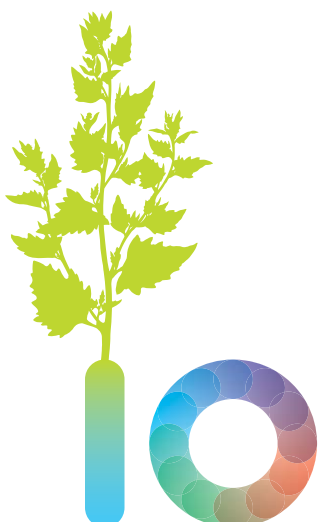
Supporting organization of UNEP/International Environmental Technology Centre (IETC) **Annual Report 2010**



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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

On behalf of the Global Environment Centre Foundation (GEC), I would like to take this opportunity to extend our deepest condolences to all of those affected by the Great East Japan Earthquake, and to express our sincere wishes for the earliest possible recovery of disaster-stricken areas. I would also like to thank our overseas project affiliates and former JICA training course participants for their kind words of sympathy and encouragement throughout this difficult time.

Almost 20 years have passed since the Global Environment Centre Foundation (GEC) was founded following Osaka City's invitation to the United Nations Environment Programme (UNEP) International Environmental Technology Centre (IETC) to establish an environmental facility in the city.

GEC initially strived to make a contribution to pollution control and environmental conservation in developing nations by leveraging Osaka's renowned green technologies in collaboration with the city's public & private sectors and UNEP.

However, UNEP's status as international organization meant that it could not conduct programs focusing solely on Osaka-based technologies, so GEC expanded its scope beyond Osaka and began cooperating with affiliated organizations on initiatives to solve environmental problems in developing nations in a manner more befitting our global moniker. At the same time, GEC is being urged to make a contribution to the local community that is commensurate with the support we receive from local government.

We must therefore find a way to balance these contrasting global and local perspectives, but this is a considerable task that will require the efforts not only of GEC, but also UNEP/IETC and local government.

We at GEC must therefore demonstrate our *raison d'être* and adapt the scope of our activities in response to the socio-economic climate without being dominated by our changing circumstances. We must instigate reforms to make GEC an organization worthy of our legal status as an incorporated foundation.

To that end, each and every one of GEC's personnel must think and act in solidarity to maximize our contribution to global environmental conservation and the resolution of environmental problems in developing nations. We intend to actively procure external funding and do our utmost to ensure local government support while also maintaining accountability. Building new relationships with businesses in Osaka City and the Kansai region will also become an important part of our future operations as we contribute to the overseas expansion of Osaka City's water and environmental technologies.

Despite these challenges, our entire board of directors and personnel are committed to working together to ensure that GEC makes a significant contribution to society.

I look forward to your unwavering support and understanding in the years ahead.



September 2011

A handwritten signature in black ink, appearing to read 'H. Miyahara'.

MIYAHARA, Hideo

President

Global Environment Centre Foundation

Supporting UNEP/IETC's Activities of Information Dissemination and Technology Transfer on ESTs* in the Area of 'Waste Management' and 'Water & Sanitation'

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.

E-waste

A term that refers to waste electrical and electronic equipment including refrigerators and TVs. Despite containing hazardous substances such as lead, cadmium and mercury, the proper processing of e-waste is lagging, particularly in developing nations, leading to concerns about e-waste's adverse environmental and health effects, and causing it to be recognized as a pressing environmental issue.

Regional Workshop on WEEE/E-waste Management

The workshop's presentation materials & country reports are available on IETC's website.

Organizing Regional Workshop on WEEE/E-waste* Management

IETC is currently engaged in the management of waste electrical and electronic equipment (e-waste) as one of its priority waste management activities. In 2009, IETC carried out a pilot project in Phnom Penh, Cambodia, and developed a manual on e-waste management. Based on the outcomes of these activities, IETC organized the 'Regional Workshop on WEEE/E-waste Management*' in collaboration with GEC from 6 to 9 July 2010. The sessions on 6 and 7 July for government officials from 10 Asian nations introduced a range of information on e-waste management including its definition, inventory survey, assessment, legal frameworks, recovery & processing technologies, and financing mechanisms, as well as presentations from each country analyzing their current e-waste situations and challenges. At the session on 8 July, various waste management initiatives were introduced by these government officials as well as a range of stakeholders including Japanese home appliance manufacturers, trading companies, universities, research organizations, and international agencies. On 9 July, the participants visited a home appliance recycling plant in the Kansai region.

One aspect of the workshop that generated considerable interest from overseas participants was the "take back system" being adopted in Southeast Asia, whereby manufacturers buy back end-of-life products. The workshop also promoted knowledge-sharing on proper e-waste processing & recycling and facilitated discussions to propose new joint projects between participating nations and international agencies.



Regional Workshop on WEEE/E-waste Management



Visit to the household appliance recycling facility

Organizing Workshop on the Global Partnership on Waste Management

Total waste generation in developing nations has now surpassed that of developed nations as a result of rapid population growth and urbanization. As living standards rise and globalization continues, developing nations must find ways to respond to emerging waste problems. However, developing nations are struggling to cope with their waste issues due to a lack of financial resources and technologies, and changing this situation will require the facilitation of information sharing and partnership among stakeholders on various waste management technologies, systems, case studies, human resource (HR) development and assistance. IETC is therefore working with a range of stakeholders including international agencies, local & national governments, the private sector and NGOs to establish the 'Global Partnership on Waste Management' (GPWM). From 18 to 19 November 2010, IETC organized the Second Consultation Workshop on Waste to discuss the GPWM's objectives, activities, and operational guidelines. At the workshop, the draft framework for the GPWM was prepared based on discussions among representatives from 14 national governments and 6 international organizations/institutions.



Workshop on the Global Partnership on Waste Management



Participants in the workshop

Participation in the Workshop on 'Waste Plastics Management in Developing Countries'

Since 2009, IETC has been implementing a 3-year pilot project to convert waste plastics into resources in Thailand and the Philippines based on the 3R* approach. From 1 to 4 March 2011, IETC organized the Workshop on 'Waste Plastics Management in Developing Countries' with the National Institute of Advanced Industrial Science and Technology (AIST) in order to evaluate the progress of this pilot project. GEC presented a report at the workshop introducing private sector and local government initiatives on plastic recycling in eco-towns in Japan, as well as their innovative ideas and successes in promoting the recycling industry. The report was well received by participants from developing nations for providing valuable information.

Promoting & Applying the Eco-Town* Concept in the Asia-Pacific Region

Since 2004, IETC has been working on initiatives to promote and apply the eco-town concept in the Asia-Pacific region to encourage environmentally-sound, sustainable industrial development in economically-prosperous developing nations by leveraging the knowledge and experiences of Japan's eco-town programmes. As part of our support for IETC, GEC is engaged in activities to disseminate information to developing nations on Japan's eco-town recycling technologies and systems and, since 2009, we have been implementing the 'Eco-Town Environmental Technology Database Development Project for Building Resource Recycling-based Societies in Developing Countries' under the auspices of the Mitsui & Co., Ltd., Environment Fund.

In 2010, GEC surveyed 12 companies and 9 local governments of Japanese eco-towns possessing recycling technologies suited to the needs of developing nations based on the findings of a 2009 recycling technology needs survey in Penang, Malaysia and Bandung, Indonesia. The survey examined the conditions and considerations for adopting recycling technologies in eco-towns in Japan including the properties of each technology, factors for success, background for adoption, and surmounting of challenges.

GEC also organized the 'Bandung Eco-town Workshop*' with IETC, the Development Planning Board of Bandung City Government (BAPPEDA) and the Institute of Ecology (IOE) of Padjadjaran University on 21 September 2010 as a side event of the 'Eco-Creative Fest-Fair' commemorating Bandung's bicentenary. At the workshop, GEC presented an interim report on the survey to Penang and Bandung's eco-town project stakeholders, and conducted a questionnaire to identify required information on Japanese recycling including relevant laws, ordinances and systems.

GEC is now planning to compile a database from the results of Japan eco-town surveys as well as information on legal systems and other matters related to Japanese recycling for publication on the GEC website.



Eco-Town Workshop (Bandung)



Eco-Town Workshop participants (Bandung)

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.

Eco-Town

In Japan, the term 'eco-town' refers to regions approved by the Ministry of Economy, Trade & Industry (METI) and the Ministry of the Environment (MOE) where local governments are undertaking projects that leverage the region's attributes to reduce waste and promote recycling, and that utilize local industry clusters to foster green industries. Overseas, however, 'eco-town' is used in a broader context to denote regions seeking to achieve environmentally-friendly socio-economic development.

Bandung Eco-town Workshop

The workshop's presentation materials are available on GEC's website.

Participation in the 7th Asia-Pacific Eco-Business Forum

Kawasaki City Government organized the '7th Asia-Pacific Eco-Business Forum' from 14 to 15 February 2011 which was attended by representatives from UNEP/IETC, South Korea's University of Ulsan, the Chinese Academy of Sciences, Shenyang City in China, and Penang in Malaysia as well as Japanese research institutions and the private sector. The forum featured presentations and Q&A sessions on national and municipal environmental initiatives, proposed green innovations, and overseas expansion of environmental technologies. GEC presented a report on the results of the Eco-town Workshop held in Bandung, Indonesia in September 2010 as well as private sector and local government initiatives and their innovative ideas and successes in promoting the recycling industry in Japanese eco-towns. The report was well received by participants from developing nations for providing valuable information.



7th Asia-Pacific Eco-Business Forum

Organizing the Consultative Workshop on Water Footprint, Neutrality & Efficiency

UNEP has been implementing the 'Water Footprint, Neutrality & Efficiency' project since 2009. In order to discuss the progress and future direction of this project, IETC and GEC co-organized the 'Consultative Workshop on Water Footprint, Neutrality & Efficiency*' from 1 to 3 June 2010. The workshop featured reports and discussions on methods to assess the impact of water use based on water footprint (WF) when planning and reviewing regional & national water policies and private sector projects, comparison of currently-proposed WF calculation methods, the future direction of WF in the context of ISO standardization, and UNEP's future plans for the project. Meanwhile, GEC reported on the results of its WF survey conducted in 2009. On the final day of the workshop, an open session inviting participants from the private sector and public was held, with presentations on WF concepts and objectives, corporate initiatives, the background and challenges of WF, and the present status of ISO standardization.



Consultative Workshop on Water Footprint, Neutrality & Efficiency

Consultative Workshop on Water Footprint, Neutrality & Efficiency

The workshop's presentation materials are available on GEC's website.

Column

What is water footprint?

'Water footprint' is a measure of water appropriation from goods and services derived through the integration of water consumption over the complete production and supply chain (direct and indirect water use).

What is water neutrality?

'Water neutrality' refers to the reduction and offsetting of the negative externalities resulting from the water footprint of a unit of analysis, such as product, service, individual consumer, business or other organization.

What is IETC's WaFNE project?

IETC's project on WaFNE (Water Footprint, Neutrality and Efficiency) is being implemented jointly with two Branches of UNEP Division of Technology, Industry and Economics (DTIE) – one is Sustainable Consumption and Production Branch and the other is UNEP Financial Initiative. The project addresses the growing need to further enhance water efficiency and to improve water quality more holistically, by applying two concepts of 'water footprint' and 'water neutrality.'

Promoting the Dissemination of Information on ESTs

In 1996, GEC developed a series of databases known as 'New Environmental Technology Transfer in the 21st Century' (NETT21*) and made them available on the GEC website to disseminate and transfer environmental technologies to developing nations. Since then, GEC have continually updated the content of NETT21's databases including the 'Water Pollution Control Technology in Japan' database in 2005, the 'Waste Management Technology in Japan' database in 2006, and the 'Cleaner Production Technology in Japan' database in 2008. In 2010, GEC began collecting technical information relating to resource/energy recovery from sewage sludge. GEC also disseminates Japan's environmental technology information abroad by responding to numerous inquiries on NETT21 from overseas.

The Number of Data Listings for Each Topic:

- 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: 235
- 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: 1,437 data listings as of 31 March 2011

The screenshot shows the NETT21 database interface with a table of technology listings. The table has columns for 'Technology Name', 'Country', 'Year', and 'Status'. The 'Technology Name' column lists various environmental technologies such as 'Air Pollution Control Technology', 'Water Pollution Control Technology', and 'Waste Management Technology'. The 'Country' column lists 'Japan'. The 'Year' column shows the year of the technology, and the 'Status' column indicates the current status of the technology.

NETT21

NETT21

Short for the 'New Environmental Technology Transfer in the 21st Century', NETT21 is a collection of GEC databases containing information on environmental technologies.

International Cooperation in Developing Countries

Project on Support for Building a Community-Based Recycle-Oriented System in Viet Nam's Ha Long Bay Area

Ha Long Bay is situated in the northwest of the Gulf of Tonkin to the north of Viet Nam. One of the world's most visually stunning locations, it was designated as a UNESCO World Heritage site in 1994 but measures are now required to address the recent increase in pollution.

The 'Project on Support for Building a Community-Based Recycle-Oriented System in Viet Nam's Ha Long Bay Area' is a JICA grassroots technical cooperation project being implemented by GEC in collaboration with Osaka Prefecture University for 3 years from October 2009 to October 2012. The project's activities aim to reduce the load of emissions into Ha Long Bay from floating communities and tour boat operators, and are carried out with the cooperation of local counterparts Ha Long Bay Management Department, the Women's Union and the Youth Union.

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

Activities in 2010

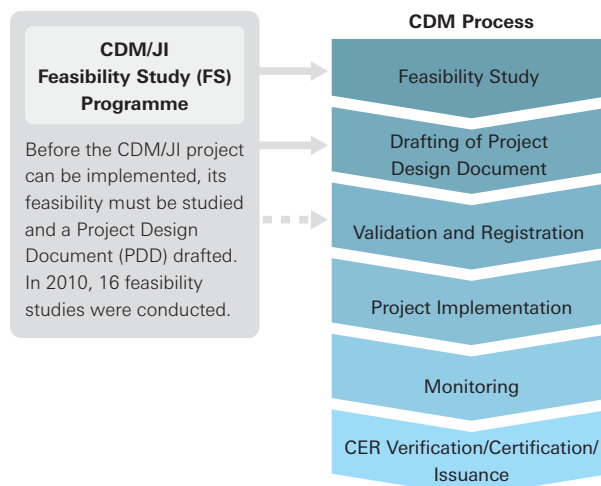
Main Activity	Description	
Waste survey	Continuing on from 2009, the project team surveyed seasonal waste generation (spring & summer of 2010) with the cooperation of 1 floating community and 2 tourist boat operators. The survey results indicated that: ash from coal briquettes accounted for most of the waste in the floating communities; residents were working to reduce their waste by using food scraps as fish, chicken & dog feed and; food scraps accounted for most of the waste from the tourist boat operators but some operators were actively working to reduce this waste by preparing their food on land.	 <p>Floating community waste collection boat</p>
Waste reduction	The project team visited a local cement factory and a waste composting plant to discuss their acceptance of coal briquette ash & food scraps. The team also performed experiments etc. on compost method selection and organized a seminar for tourist boat operators.	 <p>Household composting experiment</p>
Reduction of pollutant load in wastewater	After surveying how the floating communities wash their dishes and clothes, the project team decided to raise awareness to encourage the use of acrylic scrubbing pads and reduce overuse of laundry detergent. The team also distributed acrylic scrubbing pads to all households in 2 floating communities and provided training to core local leaders. In addition, the team organized a seminar for residents in 1 floating community to raise awareness on these issues.	 <p>Training for fostering environmental leaders</p>
Environmental education & awareness	The project team conducted a lecture entitled 'What happens when we pollute the sea?' and a lecture on basic water quality monitoring in 2 floating community elementary schools to raise awareness of the marine environment among children. A pilot mangrove planting project was also conducted by Osaka Prefecture University in preparation for a full-scale mangrove planting initiative scheduled for 2011 (mainly implemented by Osaka Prefecture University).	 <p>Class at floating community elementary school</p>
Training environmental leaders	From 20 to 23 July 2010, the project team provided training for 15 members of the Ha Long Bay Management Department, Women's Union, Youth Union, floating communities and tourist boat operators in Viet Nam. The training consisted of lectures on water environments, waste & environmental education, and site visits to waste sorting and reduction initiatives in Ha Long and Hanoi. The team also provided training to 5 representatives from the Ha Long Bay Management Department, Women's Union and Youth Union etc. in Japan (Osaka/Shiga) from 1 to 12 November introducing Japan's approaches to environmental protection as well as experiences and case studies on environmental rehabilitation and mitigation, and allowing the participants to experience environmental activities.	 <p>Education & training of environmental activity leaders (Japan)</p>

Contribution to Measures for the Mitigation of Climate Change

CDM*/JI* Feasibility Study Programme

Since our commission by the Ministry of the Environment (MOE) 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 projects, accumulate knowledge, and disseminate information useful for project development & implementation. In 2010, GEC recruited, selected and implemented feasibility studies for projects and activities relating to new flexible mechanisms scheduled to be implemented under the framework after the first commitment period of the Kyoto Protocol, in addition to existing CDM/JI project feasibility studies.

CDM Flow & GEC Projects



CDM/JI Feasibility Studies

GEC solicited, selected and implemented CDM/JI FSs with the aims of acquiring carbon credits for achievement of Japan's greenhouse gas (GHG) emission reduction targets in the first commitment period of the Kyoto Protocol, and improving existing CDM/JI systems. In 2010, we sought project proposals according to 3 categories: projects that contribute to system development; projects to develop new methodologies & revise existing methodologies; and projects that are highly-feasible. We also promoted CDM projects that realize co-benefits by requesting project operators to assess the benefits of their project in reducing environmental pollution as well as reducing GHG emissions.

Furthermore, we set up an expert committee to closely manage and support the progress of the FSs while providing useful, specific advice on study details and project realization.

As a result, new methodologies were prepared and validation assessments were initiated according to the selection category, and project design documents (PDDs) were prepared for all projects towards validation*.

To date, 6 methodologies have been approved (with 1 other currently under application) and 11 projects have been registered by the CDM Executive Board, while a number of others are currently in the validation stage.



Programmatic CDM on the Biogas Utility Programme for Rural Cities



Programme CDM to Introduce the High-Performance Tents to the Dye Works



NAMA in the Transportation Sector

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.

Validation

Assesses whether a proposed project is suitable for adoption as a CDM. Carried out by an accredited organization designated by CMP known as a 'Designated Operational Entity' (DOE). Validation of JI is referred to as 'determination', and is conducted by an accredited independent entity (AIE) accredited by the Joint Implementation Supervisory Committee (JISC).

2010 CDM/JI Feasibility Studies

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

List of 2010 CDM/JI Feasibility Studies*

Aim	Project Category	FS	Country
To Expand Scheme Applicability	Reforestation	Eucommia ulmoides Reforestation	China
	Waste Management	Programmatic CDM on the Biogas Utility Programme for Rural Cities	Bangladesh
	Biomass Utilization	Biodiesel Fuel (BDF) Production from Organic Oils of Jatropha and Usage for Transportation Vehicles	Viet Nam
	Energy Efficiency Improvement	Programme CDM to Introduce the High-Performance Tenters to the Dye Works	China
To Develop New Methodologies	Transportation	Programmatic CDM on Energy Efficiency Activities Using Idling Stop Equipments for Buses	China
		Introduction of Fuel Efficiency Improvement Technologies to Motorcycle	Viet Nam
To Realize Highly-Feasible Projects	Waste Management	Programmatic CDM for Municipal Solid Waste Composting	Viet Nam
		Multiple CDM of the Solid Waste Intermediate Treatment Facility and Methane Gas Power Generation	Malaysia
		CDM Project for Pineapple Waste-to-Energy	Philippines
		Achieving CDM Using Electric Power Generated by Waste Disposal Site Gas and Sewage Sludge Treatment Gas	China
	Biomass Utilization	Programmatic CDM for Biomass (Gliricidia) Utilisation for Thermal Energy to Be Used at Industrial Facilities	Sri Lanka
		Biomass-based Power Generation by Utilization of Rice Husks	Thailand
	Renewable Energy	Feasibility Study on Wind Power Generation CDM Project	Ecuador
	Energy Efficiency Improvement	Energy Saving Project through Coal Moisture Control (CMC) Technique	China
	Others	Waste Heat Recovery Project	China
		Ventilation Air Methane Power Generation Project at Dafosi Coal Mine	China

New Flexible Mechanism Feasibility Studies

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

New Flexible Mechanism Feasibility Studies

New Flexible Mechanism FSs were first sought, adopted and implemented in 2010 as case studies to gather useful information for system design discussions on new flexible mechanisms currently being examined in global negotiations for implementation under the future framework following the first commitment period of the Kyoto Protocol.

Specifically, we sought FS proposals for 'Nationally Appropriate Mitigation Actions' (NAMAs*) that could apply new approaches; including methods for calculating GHG emissions, to areas/projects in which the application of existing mechanisms has proven difficult, and that could collect information on the outcomes of these new approaches. Three NAMA FSs were subsequently selected, and have since examined proposed methods of 'measurement, reporting, verification' (MRV) the anticipated GHG emission reductions of target projects/activities.

We established an expert committee to manage the progress of the NAMA FSs in the same manner as the CDM/JI FSs, and also set up an expert task force to support their study activities. Task force meetings were held to promote FS progress by facilitating discussions with the FS entities and providing expert advice while establishing consensus on the course of action and matters to be studied. We also established host country committees in efforts to consult with host nation counterparts and share information on new flexible mechanism approaches with the host nation's governments.

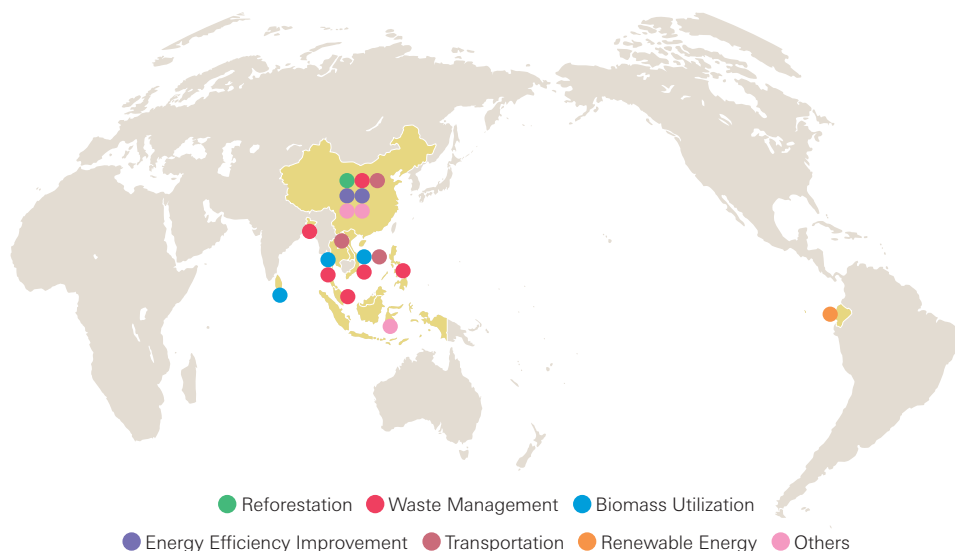
List of 2010 New Flexible Mechanism Feasibility Studies*

Type	Project Category	FS	Country
Nationally Appropriate Mitigation Actions (NAMAs)	Waste Management	Feasibility Study for NAMA in Waste and Wastewater Management Sector	Thailand
	Transportation	Feasibility Study on NAMA in the Transport Sector	Lao P.D.R.
	Others	Feasibility Study on Sustainable Peatland Management in Indonesia under NAMAs	Indonesia

NAMAs (Nationally Appropriate Mitigation Actions by developing countries)

Climate change mitigation actions implemented in response to the individual circumstances of developing nations. The term was first referred to in the COP13 Bali Action Plan. Developing nations requested submission of a list of NAMAs in the COP15 Copenhagen Accord, and creation of the NAMA Registry was incorporated into COP16 Cancun. This registry contains NAMAs for which support is sought in order to facilitate their funding.

CDM/JI & New Flexible Mechanism Feasibility Studies in 2010



Column

What are new flexible mechanisms?

Negotiations on the framework to succeed the first commitment period of the Kyoto Protocol have been characterized by a difference of opinions between developing nations who assert that their developed parties must first set ambitious reduction targets, and developed nations who argue that the handling of complementary measures including flexible mechanisms needs to be decided before reduction targets can be set. These flexible mechanisms advocated by developed nations include new systems in addition to the existing CDM and JI. (collectively referred to as 'new flexible mechanisms', but a clear definition is yet to be established.)

The basic concept of new flexible mechanisms is to utilize market principles without being limited to a project-based approach, but less apparent is the underlying desire to target initiatives with greater economies of scale than CDM/JI projects. Specifically, these new flexible mechanisms could be described as an attempt to make 'creditable' the GHG reduction effects (or part thereof) of REDD*, NAMAs, and sector-based approaches. Based on bilateral agreements with host nation, the Government of Japan has proposed the 'Bilateral Offset Credit Mechanism (BOCM)' to obtain credits for the emission reduction benefits achieved by transferring Japan's sophisticated green technologies to developing nations to help establish low-carbon societies.

However, none of these new flexible mechanisms have been officially adopted at this stage, and even if their GHG reduction effects were recognized, they are not creditable without a means for quantitative assessment. Given the current trend in international negotiations towards conducting quantitative assessments based on international or domestic MRV standards, the setting of reference scenarios* becomes an important starting point for calculating emission reduction benefits. To that end, the new flexible mechanism FSs overseen by GEC are reviewing these issues, and we expect that the resulting knowledge, experiences and outcomes will also prove useful in future international negotiations.

REDD (Reducing Emissions from Deforestation and forest Degradation in developing countries)

initiative to curb CO₂ output by preventing deforestation (including forest fires) and forest degradation (depletion of forest carbon storage) which accounts for a considerable share of global GHG emissions. Measures are currently being discussed to promote the REDD+ initiative which goes beyond REDD to include forest conservation, sustainable forest management and enhancement of forest carbon stock.

Reference Scenario

A plausible scenario of GHG emissions without the implementation of new flexible mechanism projects/activities.

'CDM/JI Symposium 2010'

Participants:
Tokyo: 225
Osaka: 74

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 (CMP)

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 2011.

Carbon Offset

A means to partially or wholly compensate for CO₂ emissions that inevitably arise in the course of social and economic activities and that cannot be curbed by conventional reduction efforts by purchasing actual reductions/absorption (credits) achieved elsewhere.

Hosting of the CDM/JI Symposium 2010*

GEC co-hosted the 'CDM/JI Symposium 2010' with MOE in Tokyo on 1 September and Osaka on 2 September 2010 to provide the latest information on CDM/JI and other GHG mitigation measures. The symposium featured expert presentations delivering the latest information on ways to improve CDM/JI systems and approaches to MRV of emission reduction effects under new flexible mechanisms. It also included reports from private entities that conducted CDM/JI feasibility studies in 2009 on CDM schematic improvements and new flexible mechanisms, particularly REDD, new methodologies, and programmatic CDM (3 FSs each in Tokyo and Osaka), followed by discussions between CDM/JI experts and FS entities on challenges and solutions towards project implementation.



'CDM/JI Symposium 2010' in Tokyo

Collection and Distribution of CDM/JI-related Information

GEC attended the 16th Conference of the Parties to the United Nations Framework Convention on Climate Change (COP16)* and the 6th Conference of the Parties serving as the meeting of the Parties to the Kyoto Protocol (CMP6)* held in Cancun, Mexico from 29 November to 10 December 2010, where we collected information on CDM/JI and new flexible mechanisms both at the conference and official side events. GEC operated an exhibition booth where we introduced CDM/JI FSs adopted in 2010, as well as FSs on new flexible mechanisms. We also distributed the MOE's 'CDM/JI Manual for Project Developers and Policy Makers 2010' and CD-ROMs 'GHG Mitigation Flexible Mechanism Support Programme—Activities of Japan' to disseminate information on initiatives being undertaken with MOE and affiliated organizations, and provided an overview of FSs to host nation government officials to seek their cooperation and support on study and project implementation.



COP16 (Cancun, Mexico)

GEC also hosted an official side event to foster a shared understanding of new mechanisms by delivering a presentation on the anticipated outcomes of the new flexible mechanism FSs.

By publishing information collected at the conference and side events on the GEC website, we provided support to businesses in Japan involved in CDM/JI and new flexible mechanism initiatives.

Osaka CDM Network*

GEC undertook the following activities in 2010 in its capacity as secretariat of the Osaka CDM Network composed of member organizations.

- Hosting of member-oriented seminars on REDD
- Convening of 'Carbon Offset* Awareness Raising Seminar in Kansai 2010' as part of 'Osaka Carbon Offset Concierge (OCONOMI)' activities (3 separate sessions targeting local governments, members of the public & the private sector)
- Hosting of 'Osaka Carbon Conference 2010' on the results of COP16
- Disseminating information & responding to queries via our website



Osaka Carbon Conference 2010

Human Resource Development in Developing Countries

Japan International Cooperation Agency (JICA) Group Training Project

GEC operated the following 8 JICA-commissioned group training courses for engineers and government officials from developing countries. In 2010, GEC launched the Japan-Mexico Exchange Programme 'Total Environmental Contamination Control' training course to provide training to students and young engineers as part of a bilateral cultural exchange.

The participants in each course presented a 'Country Report*' at the start of each course to share awareness of their nations' respective environmental issues, and an 'Action Plan*' at the end of the training specifying their intended objectives upon repatriation.

GEC will continue to provide training while coordinating with affiliates in order to respond to changing needs in courses that are in high demand in developing nations. We will also strengthen our partnerships with research & affiliate organizations to cater to the strong demand from developing nations for new environmental training.

Training period	Nationality of participants	Main course contents
Japan-Mexico Exchange Programme 'Total Environmental Contamination Control'*		
6 May–26 November 2010	2 participants from Mexico	<u>Cooperating bodies</u> <ul style="list-style-type: none"> Osaka Bay Regional Offshore Environmental Improvement Center Osaka City Port and Harbor Bureau Osaka City Institute of Public Health and Environmental Sciences National Institute for Environmental Studies, etc. <u>Lectures</u> <ul style="list-style-type: none"> Environmental policy frameworks, etc. <u>Facility tours</u> <ul style="list-style-type: none"> Waste landfill site Air pollution monitoring system, etc. <u>Purpose</u> <p>To develop the participant's capacity in the field of comprehensive environmental contamination control by providing a broad range of relevant expertise and experience through participation in multiple JICA group training courses.</p>
Environmental Policy & Environmental Management System*		
17 May–2 July 2010	8 participants from Cote d'Ivoire (2), Egypt (1), Indonesia (2), Kosovo (2), Mexico (1)	<u>Cooperating bodies</u> <ul style="list-style-type: none"> Osaka City Environment Bureau United Nations Centre for Regional Development Research Institute for Environmental Strategies United Nations University, etc. <u>Lectures</u> <ul style="list-style-type: none"> Environmental administration in Japan Environmental Management System, etc. <u>Facility tours</u> <ul style="list-style-type: none"> Sewage treatment plant Waste incineration plant, etc. <u>Purpose</u> <p>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.</p>
Pollution Controls for Hazardous Substances in the Environment*		
14 June–6 August 2010	7 participants from Algeria (1), El Salvador (1), Jordan (1), Philippines (1), Saudi Arabia (1), The former Yugoslav Republic of Macedonia (1), Viet Nam (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 Government Toyama Prefectural Government Kyoei Mesona Inc. Daiei Kankyo Co., Ltd. Cypres Corporation, etc. <u>Lectures</u> <ul style="list-style-type: none"> History of hazardous metals victim relief/compensation systems, etc. <u>Practical training</u> <ul style="list-style-type: none"> River water sampling & analysis Analysis of heavy metals in industrial waste, etc. <u>Facility tours</u> <ul style="list-style-type: none"> Medical waste treatment facility Minamata Disease Municipal Museum, etc. <u>Purpose</u> <p>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.</p>

Country Report

A report prepared by each participant describing the environmental administration system, environmental situation and other related issues in his/her country. These Country Reports are presented at the start of the training course to minimize the gap in issue awareness between trainees and instructors.

Action Plan

A plan prepared by each of the trainees to improve the environment in their own country based on knowledge acquired during the training. Trainees present their Action Plan at the end of the training and receive advice from course instructors and GEC personnel on how to improve its feasibility.

Japan-Mexico Exchange Programme 'Total Environmental Contamination Control'



Visit to waste landfill site

Environmental Policy & Environmental Management System



Field trip to Tsurumi Recycling Centre

Pollution Controls for Hazardous Substances in the Environment



Visit to soil restoration project

Urban Solid Waste Management by Local Government



Field trip to vehicle dismantling plant

TRAINING PROGRAMME FOR YOUNG LEADERS, Latin American Countries, Urban Environmental Management



Field trip to sewage treatment plant

Countermeasure against Automobile Pollution in Urban Area



Nitrogen oxides analysis practice

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



Field trip to Hishikari Mine

Training period	Nationality of participants	Main course contents
Urban Solid Waste Management by Local Government*		
23 August–19 October 2010	9 participants from Jamaica (1), Maldives (1), Mongolia (2), Sri Lanka (2), Turkey (1), Uruguay (1), Viet Nam (1)	<p><u>Cooperating bodies</u></p> <ul style="list-style-type: none"> Osaka City Environment Bureau • Fukuoka University and other universities National Institute for Environmental Studies • Kokusai Kogyo Co., Ltd. Panasonic Eco Technology Center Co., Ltd., etc. <p><u>Lectures</u></p> <ul style="list-style-type: none"> Outline of waste treatment • Industrial waste treatment planning etc. <p><u>Facility tours</u></p> <ul style="list-style-type: none"> Participation in volunteer beautification activities Household appliance recycling facility • Industrial waste treatment facility, etc. <p><u>Purpose</u></p> <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>
TRAINING PROGRAMME FOR YOUNG LEADERS, Latin American Countries, Urban Environmental Management*		
26 August–7 September 2010	11 participants from Bolivia (1), Chile (1), Costa Rica (2), Cuba (1), El Salvador (2), Guatemala (1), Mexico (3)	<p><u>Cooperating bodies</u></p> <ul style="list-style-type: none"> Osaka City Public Works Bureau • Department of Environment, Agriculture, Forestry and Fisheries, Osaka Prefectural Government • International Lake Environment Committee (ILEC) • Hotani Natural Farm • NPO Aoibiwako, etc. <p><u>Lectures</u></p> <ul style="list-style-type: none"> Japan's environmental measures • History of hazardous metals, etc. <p><u>Facility tours</u></p> <ul style="list-style-type: none"> Sewage treatment plant • Water purification plant • Composting facility, etc. <p><u>Purpose</u></p> <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>
Countermeasure against Automobile Pollution in Urban Area*		
27 September–12 November 2010	8 participants from Egypt (2), Lao P.D.R (2), Mongolia (1), Philippines (1), Sri Lanka (1), Viet Nam (1)	<p><u>Cooperating bodies</u></p> <ul style="list-style-type: none"> Osaka City Environment Bureau • Osaka City University Ministry of Land, Infrastructure and Transport Kinki Regional Development Bureau Hyogo Prefectural Police Headquarters • Hanshin Expressway Co., Ltd. Mitsubishi Fuso Truck and Bus Corporation • National Traffic Safety and Environment Laboratory • Metropolitan Expressway Co., Ltd. • Sagawa Express Co., Ltd., etc. <p><u>Lectures</u></p> <ul style="list-style-type: none"> Economic development & environmental issues • Urban transport & the environment • Pollution victims and opposition movements, etc. <p><u>Facility tours</u></p> <ul style="list-style-type: none"> Traffic control system • Vehicle Inspection Centre • Monitoring stations, etc. <p><u>Purpose</u></p> <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*		
11 November–10 December 2010	14 participants, from Argentina (3), Bolivia (2), Costa Rica (2), Cuba (3), Peru (4)	<p><u>Cooperating bodies</u></p> <ul style="list-style-type: none"> Osaka City Environment Bureau • Osaka City Public Works Bureau • National Institute for Minamata Disease • Iwate Prefectural Government, Residential Life and Environment Department • Japan Oil, Gas and Metals National Corporation Sumitomo Metal Mining Co., Ltd. • Satosen Co., Ltd. • Harmonix Co., Ltd., etc. <p><u>Lectures</u></p> <ul style="list-style-type: none"> Soil contamination control measures • Industrial wastewater control • Mine safety laws, etc. <p><u>Facility tours</u></p> <ul style="list-style-type: none"> Mines • Treatment facility for wastewater containing heavy metals, etc. <p><u>Purpose</u></p> <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>

Training period	Nationality of participants	Main course contents
Capacity Development in Environmental Management (Air and Water Pollution Control) for Middle Eastern Countries*		
14 January–25 February 2011	7 participants from Egypt (3), Lebanon (1), Palestinian National Authority (1), Syria (2)	<p><u>Cooperating bodies</u></p> <ul style="list-style-type: none"> • Department of Environment, Agriculture, Forestry and Fisheries, Osaka Prefectural Government • Osaka City Environment Bureau • Osaka City Institute of Public Health and Environmental Sciences • Hannan Elementary School • Japan Water Agency • The Tokyo Metropolitan Research Institute for Environmental Protection • IDEA Consultants, Inc. • Nakayama Steel Works, Ltd. • Osaka Environmental Technology and Research Co., Ltd. • DELICA FOODS Co., Ltd. • Taiyo Manufacturing Co., Ltd. • Toray Industries, Inc., etc. <p><u>Lectures</u></p> <ul style="list-style-type: none"> • Legal systems for management of enclosed coastal areas • Osaka municipal sewerage projects • Techniques for estimating water contamination, etc. <p><u>Facility tours</u></p> <ul style="list-style-type: none"> • Sewage treatment plant • Practical environmental education at elementary school, etc. <p><u>Purpose</u></p> <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>

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.

We continued to support the exchange of information between members of the JICA-GEC Network in 2010 by conducting questionnaire surveys over the network's members-only website.

We also visited Viet Nam from 6 to 10 March 2011 with JICA's cooperation to conduct a needs-based follow-up seminar on waste management and wastewater treatment, and visited a local composting plant. The follow-up seminar on 8 March was attended by about 50 people including former JICA participants. It featured plenary lectures from the Japanese delegation entitled 'Waste Plastics Recycling Technology for the Society' and 'Waste Treatment & Global Warming'. GEC also gave presentations on the history of Japan's water contamination measures and a JICA grassroots technical cooperation project being conducted with Osaka Prefecture University known as the 'Project on Support for Building a Community-based Recycling System in Viet Nam's Ha Long Bay Area' (see Page 5). Meanwhile, the former Vietnamese training course participants from Hanoi and Ho Chi Minh reported on hazardous industrial waste management and a wastewater monitoring system. On 9 and 10 March, the seminar participants visited a Hanoi composting plant and Ha Long Bay. At the composting plant, the participants observed the processes and operations



Plenary lecture by Japan delegation instructors



Viet Nam follow-up seminar

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



Water sampling from biotope pond at an elementary school

GEC Networking Project for Former Training Participants

There are 1,263 overseas GEC participants on the network in 114 countries. (as of March 2011)

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)
- Viet Nam (March 2011)

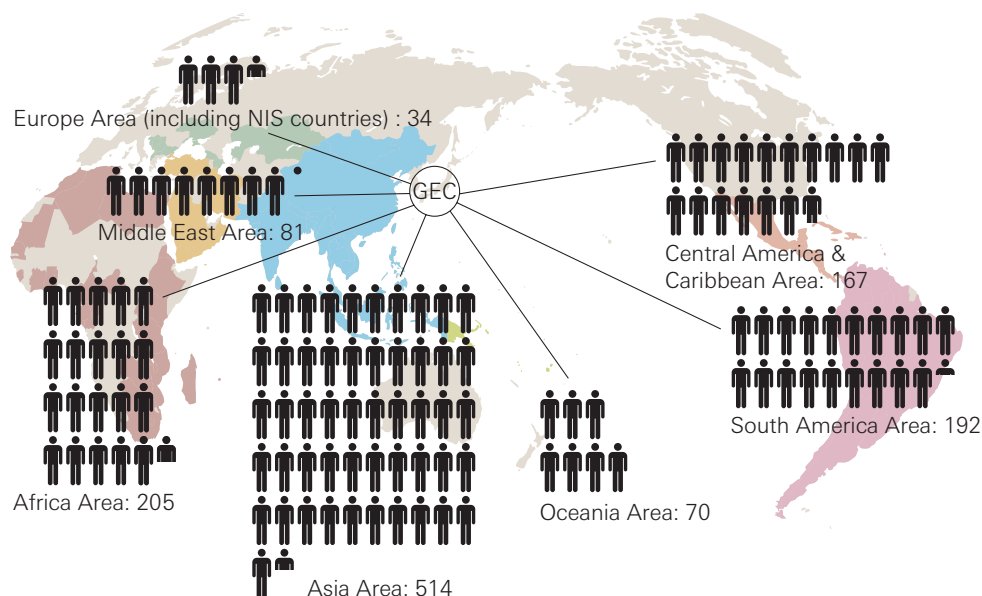
from waste collection to compost manufacture. At Ha Long Bay, GEC introduced the details of the above-mentioned support project to the Vietnamese participants.

GEC will carry out more follow-up seminars in the future to support sustainable development in developing nations

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 the website's 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 2011)



Dissemination of Environmental Management Systems (EMS)

Operating the 'Internal Environmental Auditor Training Course'

GEC established the 'Internal Environmental Auditor Training Course' for environmental auditors in the private and public sectors. The course lectures provide essential information on creating and operating environmental management systems (EMS). In 2010, the course was undertaken by 12 people.

Dissemination of EMS Overseas

GEC helped disseminate EMSs to developing and other nations by enhancing the content of EMS lectures offered in the JICA group training.

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 2010

Date	Event	Host
20 November 2010	'Tour of the World's Water' public lecture series Part 1: 'Traditional water practice in the Middle East' <u>Venue:</u> Osaka Municipal Central Library <u>Description:</u> IETC Project Officer Fukuhara introduced Middle Eastern traditional water distribution system ('qanat') currently being reconsidered as effective technology for sustainable use of limited water resources.	<ul style="list-style-type: none"> • IETC • GEC • Osaka Municipal Central Library
4 December 2010	'Tour of the World's Water' public lecture series Part 2: 'Water Footprint' <u>Venue:</u> Osaka Municipal Central Library <u>Description:</u> Based on content of IETC's international workshop on water footprint, GEC introduced concept of water footprint and global water issues & how they relate to Japan.	<ul style="list-style-type: none"> • IETC • GEC • Osaka Municipal Central Library
19 November–1 December 2010	UNEP special exhibit 'Nature in Iraq' <u>Venue:</u> Osaka Municipal Central Library <u>Description:</u> Featured photos, paintings & traditional crafts showcasing Iraq's natural environment & cultural heritage, and introduced UNEP's efforts in Iraqi Marshlands.	<ul style="list-style-type: none"> • IETC • GEC • Osaka Municipal Central Library

Key events attended in 2010

Date	Event	Participants
29 April 2010	Opening ceremony of 'Challenge 24 Green Walkathon' <u>Venue:</u> Tsurumi Park (Osaka) <u>Description:</u> Introduced GEC's activities with a speech and promotional pamphlet.	<ul style="list-style-type: none"> • IETC • GEC
7–16 June 2010	Osaka City Environment Month event 'Environmental Exhibition' <u>Venue:</u> Osaka City Hall <u>Description:</u> Introduced GEC's activities via a panel exhibit etc.	<ul style="list-style-type: none"> • IETC • GEC
12 September 2010	36th Tsurumi Ward Citizens Festival <u>Venue:</u> Tsurumi Park (Osaka) <u>Description:</u> Introduced GEC activities via display booth, promotional pamphlets & panel exhibit. Also operated the 'Eco Declaration' event. Displayed 'Eco Declarations' of visitors at GEC booth.	<ul style="list-style-type: none"> • GEC
2–3 October 2010	Global Festa Japan 2010 <u>Venue:</u> Hibiya Park (Tokyo) <u>Description:</u> Introduced GEC activities via display booth, promotional pamphlets & panel exhibit.	<ul style="list-style-type: none"> • GEC
18–29 October 2010	Interactive Fair for Biodiversity <u>Venue:</u> Shiratori Park (Nagoya) <u>Description:</u> Introduced GEC activities via display booth, promotional pamphlets & panel exhibit.	<ul style="list-style-type: none"> • IETC • GEC
5–6 February 2011	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

GEC Publications

Please refer to page 19.



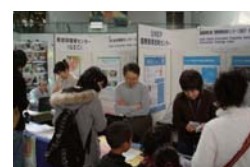
Part 1 of the 'Tour of the World's Water' public lecture series



Part 2 of the 'Tour of the World's Water' public lecture series



Global Festa Japan 2010



One World Festival

Support for UNEP Special Envoy Activities

**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.



Report by UNEP Special Envoy Kato (Shiga)

Visit to Bangladesh and Nepal

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 since 2001.

In fiscal 2010, Ms. Kato visited Bangladesh and Nepal from 11 to 20 January 2011 to observe and discuss the environmental issues facing each nation.

In Bangladesh, Ms. Kato met with Minister of State Dr. Hasan Mahmud and Grameen Bank founder Dr. Muhammad Yunus to discuss environmental and agricultural issues, and then visited a well that had been built to prevent groundwater arsenic contamination and a waste landfill site located in Dhaka. In Nepal, Ms. Kato met with Environment Minister Mr. Thakur Sharma and International Centre for Integrated Mountain Development (ICIMOD) Director General Mr. Andreas Schild to discuss climate change issue, and then visited the UNESCO World Heritage Site Chitwan National Park where she experienced Nepalese-style eco-tourism.

Ms. Kato also held briefing sessions in Otsu City, Shiga Prefecture on 11 February and Osaka City on 12 February 2011 to share the results of her overseas visits with the public. The Shiga session began with a report by Ms. Kato and a lecture by Kyoto University Professor Emeritus Dr. Saburo Matsui, followed by a 'talk show' with Shiga Governor Dr. Yukiko Kada discussing water and hygiene problems in developing nations; specifically the state of toilets and methods for encouraging the spread of organic farming. At the Osaka session, the Mayor of Osaka City Mr. Kunio Hiramatsu presented the opening remarks, followed by the report by Ms. Kato and a lecture by Japan Asian Association & Asian Friendship Society Deputy Chairperson Ms. Junko Ohara. Next, a discussion was held with NPO Tuvalu Overview's Representative Director Mr. Shuichi Endo on waste issues, toilets and forest conservation in developing nations, and members of the audience participated in a discussion on ways to engage the public in international cooperation efforts.

Activities Highlights of Ms. Kato, UNEP Special Envoy

Date	Countries Visited
30 October 2000	Appointed as UNEP Special Envoy
17–27 April 2001	Visit to Thailand and Indonesia
10–19 August 2001	Visit to Mongolia
6–13 April 2002	Visit to Korea
2–4 June 2002	Attended the 'WSSD PrepCom 4 Meeting' on sustainable development in Bali, Indonesia
22–31 August 2002	Attended and held a concert at 'WSSD' held in Johannesburg, South Africa
13–24 May 2003	Visit to Uzbekistan and Kyrgyzstan
8–18 September 2003	Visit to Fiji and Tonga
16–23 May 2004	Visit to India
19–28 July 2004	Visit to China
30 August–8 September 2005	Visit to Thailand and Sri Lanka
17–25 August 2006	Visit to Malaysia
13–23 August 2007	Visit to Viet Nam
21 May 2008	Visit to Fujimae Mudflats
12–22 August 2008	Visit to Australia
12 September 2008	Attended 'ECO Asia Symposium'
12–24 April 2009	Visit to Fiji and Tuvalu
11–20 January 2011	Visit to Bangladesh and Nepal



Inspection of government-built well in Bangladesh (Bangladesh)



Courtesy call to Grameen Bank Founder Dr. Yunus (Bangladesh)



Discussion with ICIMOD Director General Mr. Schild (Nepal)

Participation in CBD COP10 exhibition in Nagoya, Japan

On 29 October 2010, Ms. Kato attended the CBD COP10 exhibition 'Interactive Fair for Biodiversity' where she introduced her activities to date as Special Envoy and appealed directly to audience members about the serious state of environmental problems in developing countries and the need for action.

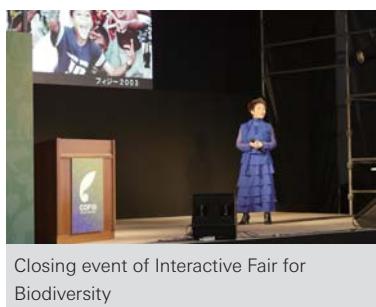
Ms. Kato also attended the 'UNEP Donation Presentation Ceremony' of the 'Ink Cartridge Satogaeri Project*' organized by 6 printer manufacturers together with the Director of the UNEP Regional Office for Asia & the Pacific (ROAP) Mr. Young-Woo Park. At the ceremony, Ms. Kato distributed the 'UNEP Special Envoy 10th Anniversary Pamphlet' to members of the local media and spoke plainly about her activities as UNEP Special Envoy over the past decade to the accompaniment of songs and images.

Ms. Kato visited Shiratori Park where the Interactive Fair for Biodiversity was held, and inspected an exhibit booth jointly operated by UNEP/IETC and Iraq's Environment Ministry as well as booths operated by Japan's Ministry of Environment, WWF and GEC, while engaging in discussions with representatives from each organization on their conservation activities.

Ms. Kato also attended the fair's closing event entitled 'The Circle of Life - Towards the Future' where she appealed to the audience with the aid of songs and images about the need for global cooperation on environmental conservation by drawing on the example of the wetlands agreement to protect migratory birds between the Fujimae Mudflats in Nagoya and Geelong in Australia.



Donation presentation ceremony



Closing event of Interactive Fair for Biodiversity

The 'Ink Cartridge Satogaeri Project'

A joint initiative launched in April 2008 by Brother, Canon, Dell, Epson, Hewlett-Packard Japan, and Lexmark to collect and recycle used ink cartridges from household printers. The project donates ¥3 from each collected cartridge to UNEP as part of the project's contribution to green activities.

Hosting of Seminars & Symposia

Hosting of 'Towards the Realization of Low-carbon Societies in Japan & China'

On 15 June 2010, GEC co-hosted an international symposium entitled 'Towards the Realization of Low-carbon Societies in Japan & China' with UNEP/IETC to commemorate the Shanghai World Expo. Part 1 of the symposium introduced the Shanghai World Expo including China's environmental considerations while hosting the event, the philosophy behind Osaka's exhibit, and details of exhibits in the Osaka Pavilion. Part 2 of the symposium introduced initiatives and concepts for creation of a low-carbon society in China from the perspective of international organizations, government, academics, and affiliated groups. Part 3 contained a discussion of the challenges and measures for Japan and China to build low-carbon societies in partnership, concluding that although Japan possesses individual environmental technologies, it lacks an organized system capable of sufficiently harnessing these technologies in China and elsewhere, and that a significant future challenge lies in making the Kansai region, which is a green technology hub, capable of assimilating these technologies into a system that can be applied overseas.



Panel discussion

Hosting of 'Biodiversity Symposium - Enjoying Life with Living Creatures in Osaka'

In conjunction with the Osaka Institute for Environmental Management, Osaka City Sports and Greenery Association, Osaka International House Foundation and GEC hosted the 'Biodiversity Symposium - Enjoying Life with Living Creatures in Osaka' on 7 August 2010.

The symposium featured discussions on a range of topics including conservation of Osaka's biodiversity, creation of a citizen-based conservation system and biodiversity information platform, methods to utilize captured adventive species, raising awareness, and the importance of interacting with nature.

GEC also participated in the 'Interactive Fair for Biodiversity' held in Nagoya in conjunction with COP10 as a representative of the 'Biodiversity Symposium Executive Committee', where we introduced the symposium's outcomes along with Osaka City's biodiversity conservation initiatives.



Biodiversity Symposium

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 2011).



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.

Stored publications: 7,621 including 551 UNEP-related books (as of 31 March 2011)

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.

Publications List

Publications in 2010

Publication name	Description	Format	Size/pages/date of publication
CDM/JI Symposium 2010	Survey reports from the 2009 CDM/JI Feasibility Study Implementation Group (distributed on the day of the symposium)	Booklet PDF	A4/57 pages October 2010 (Japanese version) ①
Report on Hosting of the 'Biodiversity Symposium - Enjoying Life with Animals in Osaka'	Summary of the 'Biodiversity Symposium - Enjoying Life with Animals in Osaka' held in August 2010.	Booklet	A4/36 pages March 2011 (Japanese version)

Periodicals

Publication name	Contents	Format	Size/pages/date of publication
GEC Newsletter No.38 (Japanese version)	An introduction to the activities of GEC	Booklet PDF	A4/8 pages August 2010
GEC Newsletter No.39 (Japanese version)	An introduction to the activities of GEC	Booklet PDF	A4/8 pages February 2011
GEC Newsletter No.28 (English version)	An introduction to the activities of GEC	Booklet PDF	A4/8 pages October 2010 ②
GEC Newsletter No.29 (English version)	An introduction to the activities of GEC	Booklet PDF	A4/8 pages March 2011 ③
Global Environment Centre Foundation Annual Report 2009 (Japanese version)	Report on project of GEC for fiscal year 2009	Booklet PDF	A4/20 pages July 2010 ④
Global Environment Centre Foundation Annual Report 2009 (English version)	Report on project of GEC for fiscal year 2009	Booklet PDF	A4/20 pages September 2010 ⑤

GEC Publications

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

CDM/JI Feasibility Study Programme

Please refer to page 7-9.



①



②



③



④



⑤

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 with economies 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 April 2011, IETC operates in Osaka after its two offices were merged into one office.

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.

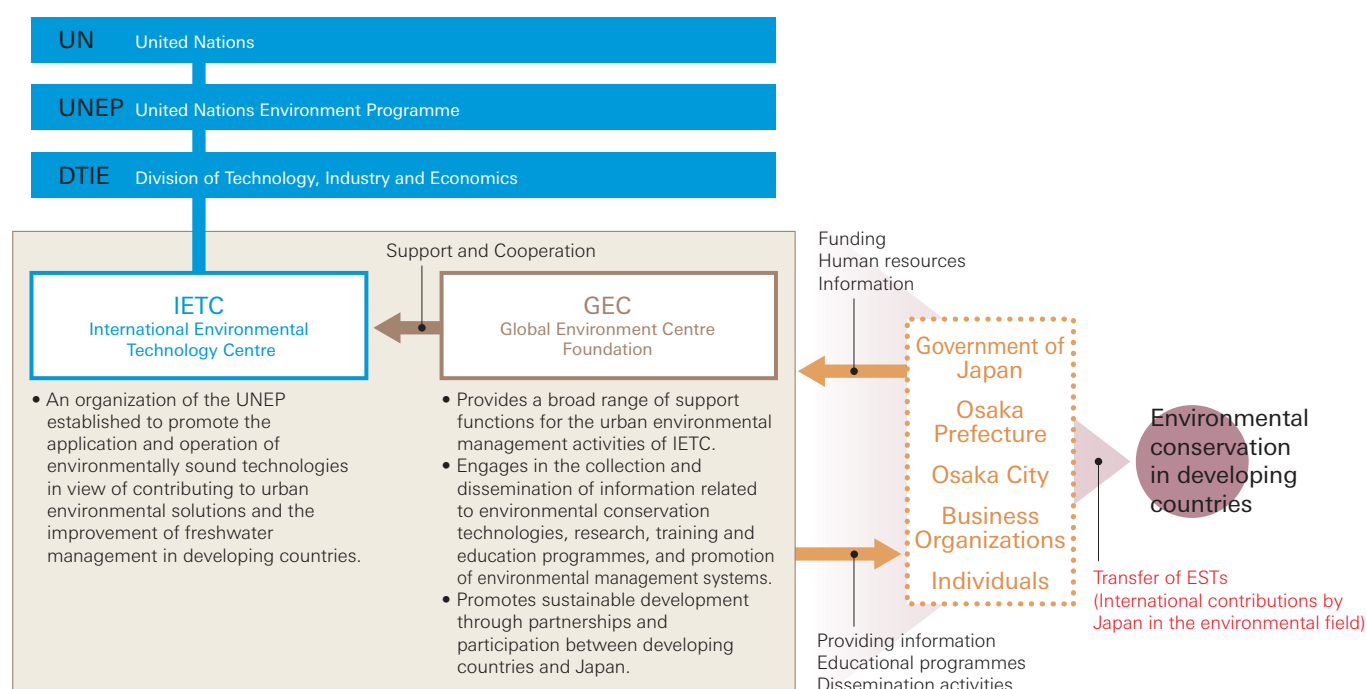
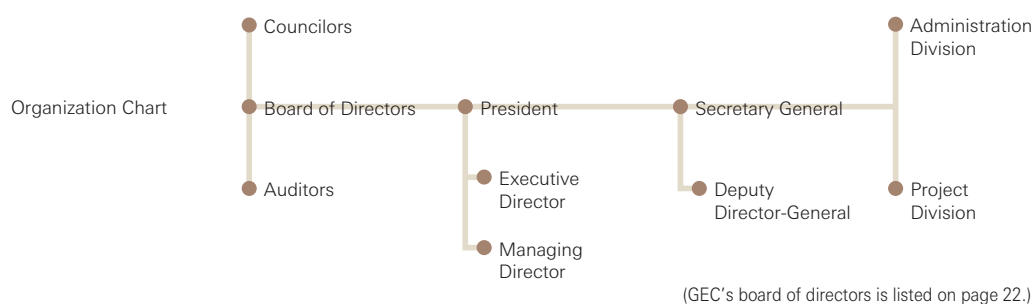
In 2008, GEC subsequently filed an application for change of legal entity from an incorporated foundation to a public interest incorporated foundation on 27 October 2009 in response to the 2008 enforcement of the three laws relating to reform of the public interest corporation system. After receiving 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 2011)
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	22 (as of 1 April 2011)



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	NISHIYAMA, Kenichiro	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	Corporate Auditor, The 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)
	OE, Keiko	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 2011, 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 two key fields of 'Waste Management' and 'Water and Sanitation'

Contacts	Osaka Office: 2-110 Ryokuchi-koen, Tsurumi-ku, Osaka 538-0036 Japan tel: +81-6-6915-4581 fax: +81-6-6915-0304 e-mail: ietc@unep.org IETC homepage: http://www.unep.or.jp/
Staff (As of 1 July 2011)	Per Menzony Bakken, Officer-in-Charge Surya Prakash Chandak, Senior Programme Officer Mushtaq Ahmed Memon, Programme Officer Ryuichi Fukuhara, Programme Officer Ainhua Carpintero, Associate Programme Officer John Peter Oosterhoff, Administrative/Fund Management Officer
Programme Activities (implemented in 2010)	<p><u>Waste Management</u></p> <ul style="list-style-type: none"> • Global Partnership on Waste Management: IETC with GEC organized the Second Consultation Workshop on the Global Partnership on Waste Management in Osaka on 18-19 November 2010, with the objective of finalizing the framework of the GPWM including the implementation strategy, and launching the GPWM (page 2 to be referred). In order to promote the GPWM widely, IETC made a series of presentations and events at UNEP Governing Council Special Session (February in Bali, Indonesia), 18th session of Commission on Sustainable Development (CSD18, May in New York), 7th session of Open-ended Working Group of the Basel Convention (OEWG7, May in Geneva). • Information Platform: IETC developed the in-house Information Platform, a framework which aims to promote, share and exchange information on solid waste-related issues in different countries/regions or cities. • UNEP's Report - Waste and Climate Change: Global Trend and Strategy Framework: The Report prepared by IETC was launched at 16th session of Conference of Parties to UNFCCC (COP16-CMP6) in Cancun, Mexico from 29 November to 10 December 2010. • Waste Electrical and Electronics Equipment (WEEE)/E-waste project: IETC with GEC organized a Regional Workshop on WEEE/E-waste in Osaka in July 2010 for capacity building and discussion of current challenges (page 2 to be referred). • Converting Waste Agricultural Biomass into a Resource project: IETC continued the work on the demonstration projects in Cabiao (Philippines), Sanghar district (Pakistan), Madhyapur Thimi Municipality (Nepal), and Monaragala district (Sri Lanka). In March 2010 IETC with GEC organized a Regional Workshop in Osaka to discuss the progress in demonstration projects to assist partners in technology assessment and selection. • Converting Waste Plastics into Fuel project: IETC continued the project funded by Government of Japan. Two Training Workshops for national and local governments, and private sector as well as other identified stakeholders such as academia and NGOs were organized and conducted in the Philippines (August 2010) and Thailand (September 2010) to attain a broad understanding of various technology options including basic ideas on identification, assessment and selection of ESTs. IETC developed and started testing Sustainability Assessment of Technologies (SAT) methodology in the project. • Integrated Solid Waste Management (ISWM) project: IETC continued to implement ISWM project for Nairobi City and a draft ISWM Plan was discussed in the stakeholders' consultation workshops during February and June 2010. The project was concluded with a Regional Dissemination Workshop organized by the City Council of Nairobi in cooperation with the National Government of Kenya and UNEP in November 2010 to formally launch the ISWM Plan. IETC completed the ISWM project for Bahir Dar City in Ethiopia - in February 2010 a comprehensive training was provided to the local project team and in October 2010 the project has concluded with a National Dissemination Workshop in Addis Ababa, Ethiopia. IETC has started a new ISWM project for Pathum Thani Province in Thailand and in November 2010 a training was organized for the project team. • Eco-town project: IETC continued its collaborative activities with Kawasaki City and for promotion of Eco-town project in Asia, IETC attended 6th Asia Pacific Eco-Business Forum held by Kawasaki City in February 2010. <p><u>Water and Sanitation</u></p> <ul style="list-style-type: none"> • In January 2010, IETC participated in the Follow-up Conference of the International Year of Sanitation in Tokyo and made a presentation on Selection of ESTs for Wastewater Management. • In April 2010, IETC with International Lake Environment Committee (ILEC) held Consultative Meeting on Water and Wastewater in Shiga to discuss how to enhance partnerships and networks for water and wastewater management and replication of EST implementation. • IETC, together with DTIE's Sustainable Consumption and Production Branch (SCP) and

UNEP Financial Initiative (UNEP FI), has launched a new project entitled 'Water Footprint, Neutrality & Efficiency (WaFNE)' and in June 2010, a Consultative Workshop in Osaka was organized by IETC with GEC (page 4 to be referred).

- In September 2010, IETC participated in the World Water Week in Stockholm, attending several meetings/workshops related to the WaFNE project.
- In March 2010, IETC was invited to the meetings in Tokyo organized by Government of Japan under the framework of Islamic Areas Studies Programme. IETC, with extensive experiences on the Iraqi water issues through its Marshlands project, made a presentation on the chronology of water resources development on the Tigris and Euphrates Rivers basin and its environmentally negative consequences on the Iraqi Marshlands over the past decades.
- The first half of 2010, IETC continued with the implementation of UNEP-UNESCO initiative of the Iraqi Marshlands to implement a longer-term management structure by utilizing World Heritage inscription process as an institutional and operational guideline.
- To enhance institutional capacity of ecosystem management of Iraqi Marshlands, a preliminary survey of biological diversity for the Marshlands was launched in collaboration with IUCN Regional Office for West Asia, the advisory body to World Heritage Convention.
- In October 2010, within the framework of UNEP-UNESCO Joint Project 'Natural and Cultural Management of the Iraqi Marshlands as a World Heritage,' IETC with Iraqi Ministry of Environment organized side events of CBD COP10 in Nagoya. The events consisted of two luncheon sessions on 'Long-Term Sustainable Development of the Iraqi Marshlands and Natural Reserves' and 'Current Status on Biological Diversity in Iraq' as well as the exhibition on 'Nature in Iraq.'

Cooperation between GEC and IETC

- To commemorate UNEP World Environment Day (WED) on 5 June 2010 and Japanese Environment Month during June 2010, IETC displayed poster panels for the WED and IETC's activities a) with ILEC at the Lake Biwa Museum in Kusatsu and b) with GEC at the Osaka City Hall in Osaka (page 15 to be referred).
- In 2010 IETC with GEC jointly held a large number of symposia, workshops, and events (pages 2–4 & 15 to be referred).

Others

- IETC assisted UNEP Regional Office for Asia and the Pacific (ROAP) to organize a Regional Training on ISWM for Asia-Pacific in cooperation with Government of Republic of Korea in June 2010. After the Training in Korea, subsequent regional training on application of SAT for ISWM was organized in Thailand in December 2010.
- In July 2010 in Jeju of Republic of Korea 2nd Ministerial Forum on Environment and Health in Southeast and East Asian Countries was organized by Ministry of Environment and Ministry of Health & Welfare of Korea, UNEP, and WHO. IETC participated in the forum as member of the Solid Waste Thematic Working Group.
- Two-year campaign by Japanese Ministry of Foreign Affairs (MOFAJ) called 'Issho-ni Kokuren (= Together for the UN)' was launched in January 2009 and the campaign was completed in 2010. IETC participated in the campaign by providing information on its events and programme to be disseminated mainly to civil society through the MOFAJ's website and its mail magazine.
- On 8 March 2010, UN Agencies in Japan jointly organized International Women's Day event in Tokyo and IETC provided information materials for display/distribution to publicize its activities.
- In April 2010, IETC delivered a speech at the opening ceremony for a series of walking events 'Osaka Walking Relay of Green: Challenge 24' and part of their project was donated to IETC.
- On 5 June 2010, an Osaka-based radio station (FM COCOLO) broadcasted a special programme on the World Environment Day and IETC Director sent a message to the programme.
- On 22 October 2010 in Nagoya during the CBD COP10, UNEP Spokesperson threw the opening pitch at a professional baseball pay-off game and IETC assisted the event.
- On 22 October 2010 in Tokyo, UN Agencies in Japan jointly organized UN Day events and IETC provided information materials for display/distribution to publicize its activities.
- In March 2010 in Osaka and in November in Kusatsu, IETC received university students (Jyosai International University and University of Shiga Prefecture). They received information not only on IETC but also on UN and UNEP as a whole and actively participated in the question and answer session.



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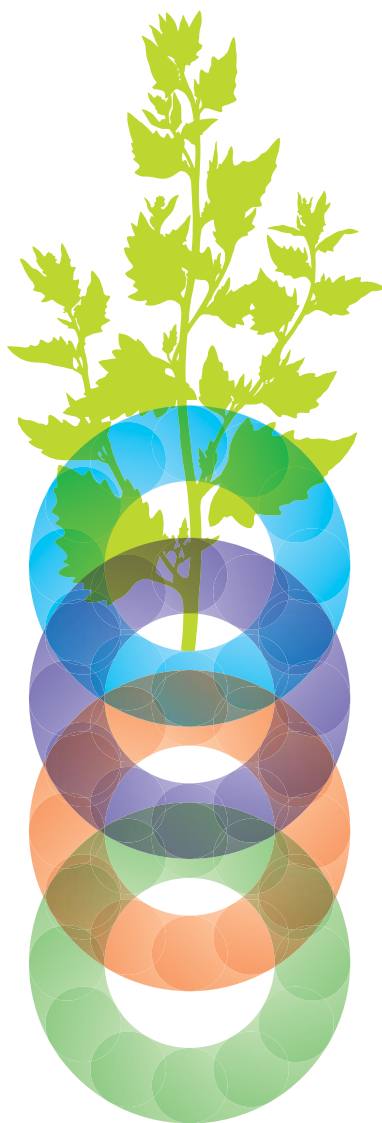
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