

Clean Asia Initiative

CAI

Newsletter

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**What is the “FutureCity” Initiative?
Address the global human challenges
and Globally lead proposing
their model solutions**

“FutureCity” Initiative



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“FutureCity” Initiative

Towards the Creation of Future Cities

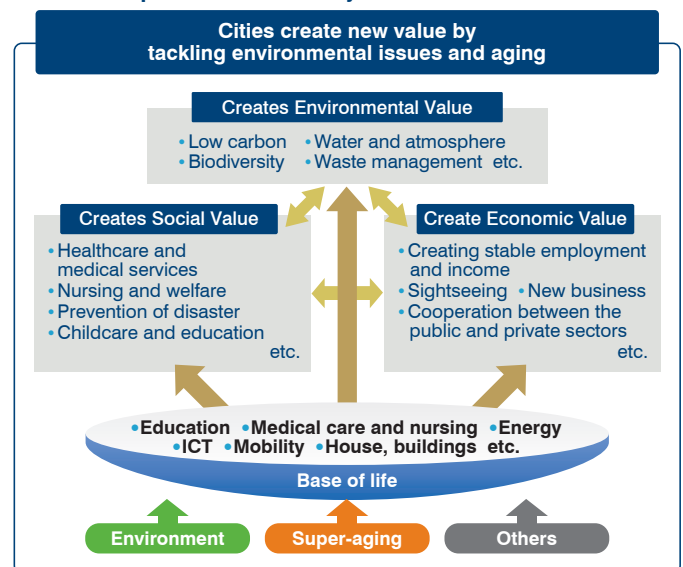
Urbanization has been accelerating at the international level as witnessed by the fact that urban populations now comprise half of the world’s population. This trend is predominant in the Asian region and has caused various environmental and urban problems. The 21st century is referred to as the age of the city. In this age, the challenge of realizing an affluent life without increasing the burden on the urban environment is a challenge common to all human-beings – a challenge based on an urban perspective.

Furthermore, it also has become a major challenge for countries facing a rapidly aging population such as Japan to realize cities and regions where senior citizens can live a fruitful, healthy and secure life in a vital society. In this context, it is extremely important to mutually recognize the problems, to pose the problems in a general way, and to think about the framework for solutions to such common human challenges as the environment, aging and revitalization of societies and economies.

At the United Nations Conference on Sustainable Development (Rio+20), the Japanese Government made an announcement on promoting the “FutureCity” Initiative which creates human-centered new value to resolve the challenges of the environment and aging.

Towards the creation of future cities, the Japanese Government selected 11 cities and realizes world-leading successful cases in terms of technology, socioeconomic systems, services, business models and city building in order to resolve common 21st century human issues such as the environment and aging, as well as disseminates them not only within Japan but also to the world.

Basic concept of the “FutureCity” Initiative



Outline of Activities Implemented by Selected Cities under the “FutureCity” Initiative

City of Yokohama

OPEN YOKOHAMA

Create Port City where People, Things and Events Connect and Develop

The City of Yokohama is proposing activities on the civil power of the city’s population of 3,692,000 and the historical background of the opening of the port, as well as the accumulated knowledge about the environment and energy which led Yokohama to be assigned as Eco-Model city by the Cabinet Secretariat and next-generation energy, social system demonstration by the Ministry of Economy, Trade and Industry (METI). As for the environment, this proposal features implementation of the Yokohama Smart City Project (YSCP), which is focused on solar power, EV (Electric Vehicles), CEMS (Severe Environmental Memory System), domestic and international dissemination of water supply and sewerage technology that has been promoted since the opening of the port, and mutual support in the local area through NPOs and major support networks for the super-aging society, implementation of life support functions to renovate elderly housings and transportation facilities to make them barrier free, and the creation and transmission of culture and art.

City of Kitakyushu

Kitakyushu FutureCity

A bustling, secure, and vigorous city where people can shine

Taking advantage of the experiences in technology of art and crafts and global environmental cooperation and domestic and international networks which the Kitakyushu citizens have fostered until now, the Kitakyushu FutureCity has the following objectives: (1) Locally produce and efficiently use energy by introducing renewable energy and promoting the smart community, etc. ; (2) Healthy elderly population and comfortable environment for raising children by such efforts as health promotion and inter-generations communication nearby their homes; and (3) Becoming the base of the environmental business by, for example, internationally outreaching urban infrastructure from the “Asian Low-Carbon Center”, which was established for strongly promoting environmental business in Asia. The City of Kitakyushu is currently making efforts to become the “Environmental capital of the world”, utilizing its strongest advantage, the power of the citizens. In 2011, the City of Kitakyushu was selected as the “Green Growth Model City” by OECD.

● “FutureCity” Initiative [English] <http://futurecity.rro.go.jp/en/> [Chinese] <http://futurecity.rro.go.jp/zh/>

The Joint Crediting Mechanism

Towards the Creation of Future Cities Tool for Supporting Low Carbon Cities

Over 80% of global greenhouse gas (GHG) emissions are coming from the activities in cities and their residents. In order to solve the climate change issues, introducing renewable energy and promoting energy saving are necessary for balancing environmental values with the economic and social values.

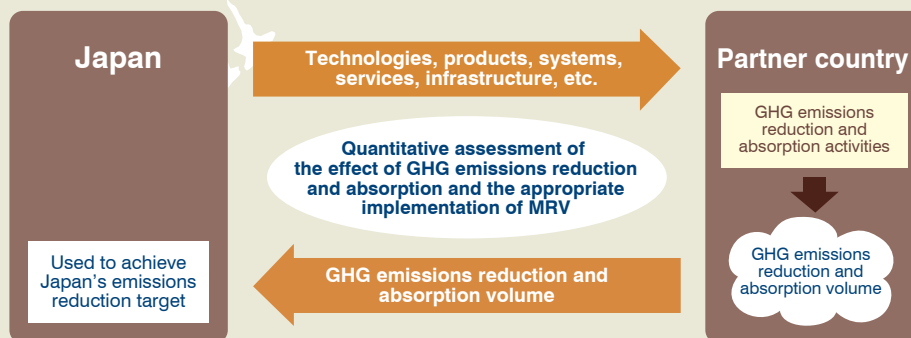
Government of Japan is promoting the Joint Crediting Mechanism as one of the tools for supporting solutions for global warming in the developing countries.



What is the Joint Crediting Mechanism?

The Joint Crediting Mechanism covers a wide range of activities to reduce GHG emissions and is designed to quickly and flexibly respond to the situations in developing countries. This mechanism aims to promote establishing the framework for

transferring technologies and implementing the measures, and to (1) accelerate the dissemination of technologies, products, systems, services, infrastructure, etc., together with the implementation of measures to reduce GHG emissions in developing countries, thereby contributing to the sustainable development of these countries; and (2) promote activities to reduce GHG emissions at the global level.



► List of feasibility studies conducted in Asian cities (country names in alphabetical order)

The Government of Japan has been implementing feasibility studies on the MRV model for developing and improving methodologies on “Measurement, Reporting, and Verification” under the Joint Crediting Mechanism. Feasibility studies for

developing new Joint Crediting Mechanism projects are also conducted.

Of all the studies, 11 studies are related to Asian cities as listed below.

Lao PDR	<ul style="list-style-type: none"> ● Introduction of Mechanical Biological Treatment (MBT) of Municipal Solid Waste, and Landfill Gas (LFG) Capture, Flaring and Utilisation ● Transportation Improvement through Introduction of Efficient Busses and Provision of Good Services
Mongolia	<ul style="list-style-type: none"> ● Upgrading and Installation of High-Efficiency Heat Only Boilers (HOBs) ● Replacement of Coal-Fired Boiler by Geo-Thermal Heat Pump for Heating
Thailand	<ul style="list-style-type: none"> ● Energy Savings through Building Energy Management System (BEMS) ● Transport Modal Shift through Construction of Mass Rapid Transit (MRT) System
Thailand/Viet Nam	<ul style="list-style-type: none"> ● Green Convenience Stores
Thailand/Viet Nam/Malaysia	<ul style="list-style-type: none"> ● Energy Saving Systems at Commercial Facilities
Viet Nam	<ul style="list-style-type: none"> ● Improvement of Vehicle Fuel Efficiency through Introduction of Eco-Drive Management System ● Disseminating and Promoting Electric Motorcycles
Viet Nam/Indonesia	<ul style="list-style-type: none"> ● Promotion of Modal Shift from Road-based Transport to Mass Rapid Transit (MRT) System

- Adoption of Demonstration/Feasibility Studies 2012 - for GHG Mitigation Projects/Activities http://gec.jp/main.nsf/en/Activities-Climate_Change_Mitigation-adopt2012
- CDM/JI Feasibility Study (FS) Programme http://gec.jp/main.nsf/en/Activities-CDMJI_FS_Programme-Top
- KYOTO Mechanisms Information Platform <http://www.kyomecha.org/e/index.html>
- IGES Market Mechanism (CDM Programme) <http://www.iges.or.jp/en/cdm/index.html>

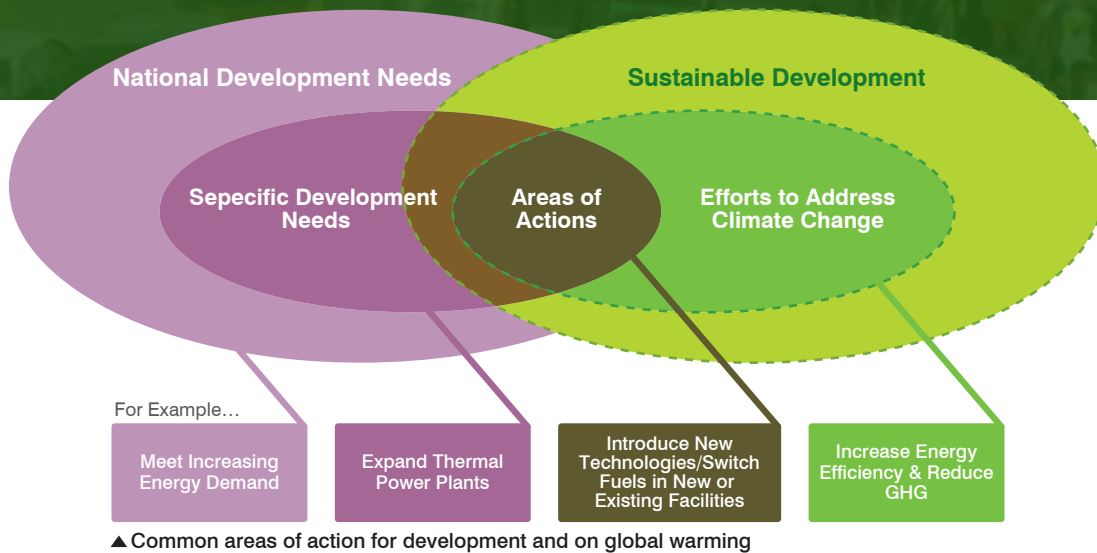


Co-benefits Approach

Towards the Creation of Future Cities
Urban Development through Climate Control and Meeting Development Needs

In developing countries, the stable supply of electricity, economic development such as growth in the manufacturing industry or an environmental problem at the national level such as water, air pollution and waste management are often the most immediate challenges to tackle. The co-benefits approach aims to support developing countries to strike a balance between

such development needs and climate change remedies, thereby to promote highly effective climate action implemented at the initiative of the developing countries. In developing countries, especially those that are facing urbanization, it is expected that the urban planning will be formulated with due consideration in achieving co-benefits.



The Ministry of the Environment of Japan (MOEJ) has been supporting to identify the useful technologies for co-benefits solutions for climate change as well as to develop tools for the quantitative evaluation of co-benefits effects. In addition, the MOEJ implements pilot projects to address climate change with co-benefits technologies to achieve low-carbon and low-pollutant city.

Thailand

Biogas recovery and electricity generation from ethanol factory wastewater

The project introduced an anaerobic fermentation tank system for treating the wastewater from an ethanol plant which was previously treated in an anaerobic open lagoon. The newly installed system recovers methane from the fermentation tanks, which are used for power generation. The power is locally supplied by the local electric grid. This system minimizes the methane emission from the wastewater treatment and reduces carbon emission for power generation if supplied by fossil energy sources, and reduces water pollution and odor as well. This is the co-benefits-type project using the clean development mechanism (CDM) scheme.



Anaerobic open lagoon



Newly installed anaerobic fermentation tanks

- Co-benefits Approach – Aligning Climate and Development <http://www.kyomecha.org/cobene/e/index.html>
- Urban Development with Co-benefits Approach <http://www.ias.unu.edu/urban/index.php/co-benefits-project/>
- Asian Co-benefits Partnership <http://www.cobenefit.org/>

3R Initiative – Reduce, Reuse and Recycling –

Towards the Creation of Future Cities Overseas Dissemination of Waste Treatment and Recycling Technologies

Generally, the amount of waste rapidly increases as the economy grows. Urbanization causes critical problems in waste management because population growth in cities reduces the spaces needed for waste management.

Japan is not an exception. Along with the urbanization and economic growth until now, Japan has been dealing with many environmental challenges such as sanitation, the NIMBY* issue, the limited capacity of landfills, and the incidents of severe environmental pollution represented by the four major environmental pollution in Minamata, the Agano river, Yokkaichi and the Jinzu river. Japan has been overcoming these problems, according to the needs of the era, by formulating and revising the laws and regulations such as the Waste Management and Public Cleansing Act and the respective Recycling Acts, by

promoting 3R (reduce, reuse and recycle), and by developing the venous industries with advanced technologies in waste treatment and recycling.

For globally promoting 3R, the government of Japan proposed the “3R Initiative” to the G8 Summit in 2004. The G8 approved it as a new G8’s initiative. The Ministry of the Environment of Japan (MOEJ) has been promoting 3R throughout Asia as one of the hosts for the Regional 3R Forum in Asia since 2009, along with other bilateral cooperation programmes. Co-benefits between 3R and GHG reduction are also expected by the reduction of waste incineration, waste thermal power generation and the reduction and recovery of methane emission from landfills.

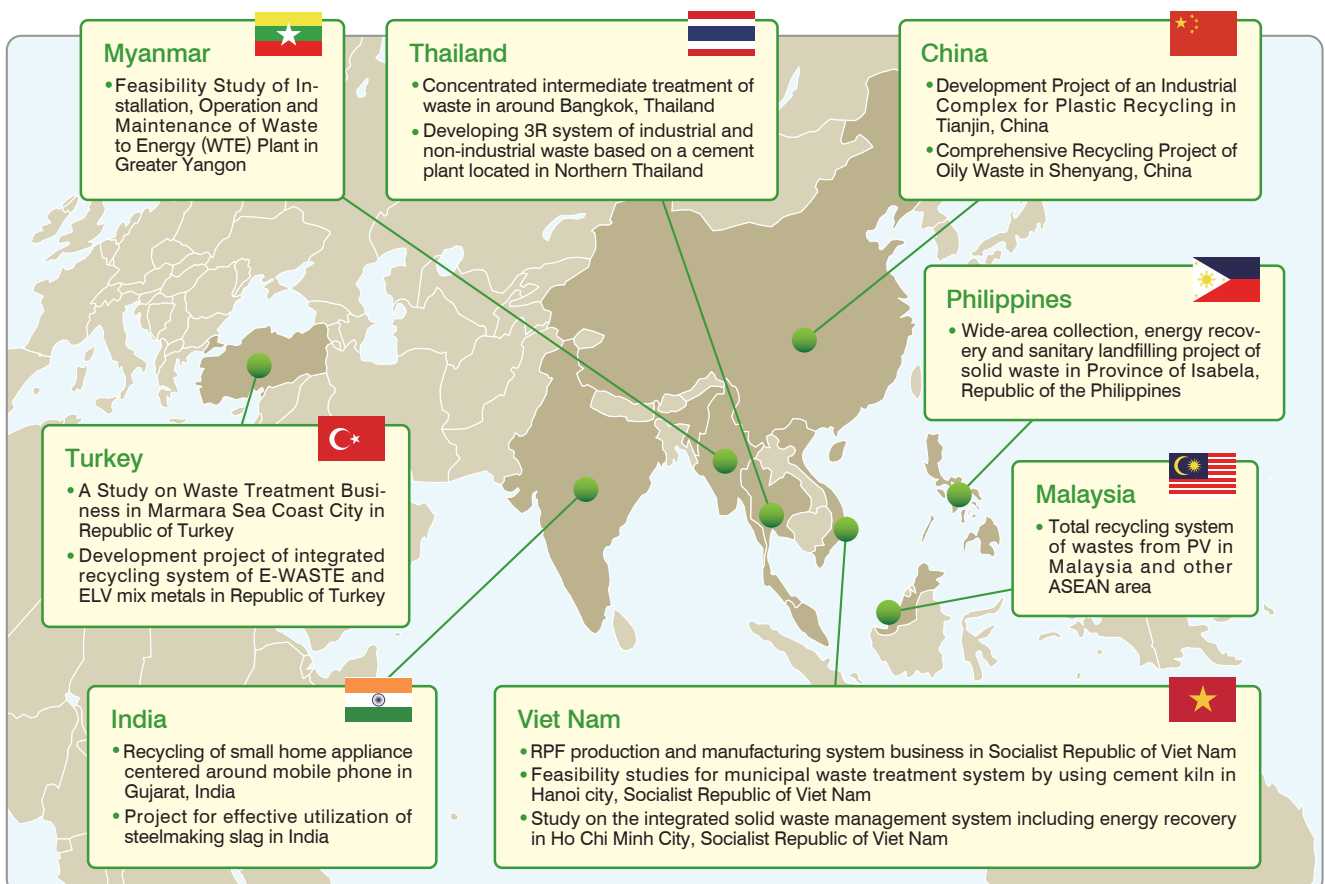
Expecting that these experiences and technologies from Japan can spread overseas and support promoting 3R and reducing environmental impacts, the MOEJ has been implementing “the Project for Developing Major Companies in Japan’s Venous Industry and Helping them Expand their Business” since 2011.



The following URL provides the detailed information about the overseas expansion of the Japan’s venous industry in Japanese, English and Chinese languages: http://www.env.go.jp/recycle/circul/venous_industry/index.html

The following URL provides the detailed information on 3R in Japanese and English languages: <http://www.env.go.jp/recycle/3r/en/index.html>

An overview of Feasibility Studies in 2012



* NIMBY stands for “Not in my backyard”. This is a metaphor for the individuals’ attitude who understand the public needs of certain facilities, such as waste incinerator, but oppose to having such facilities nearby their residence.

Improving Water Environment in Asia



Towards the Creation of Future Cities Efforts to Improve Water Quality

Water degradation due to rapid industrial concentration, population growth and urbanization has become a serious problem in developing countries in Asia. It is extremely important to maintain and improve water quality for securing life of growing city populations and supporting the sustainable economic development of cities. These efforts should be incorporated in the city policies with the consideration of relevant factors, such as broader water circulation and land uses.

In FY2011, the Ministry of the Environment initiated “The Model Projects for Improving Water Environment in Asia” in order to contribute realization of both sound water environment and sustainable development by helping Japanese private-sector companies expand their water environment improvement business including small and medium-scale domestic wastewater treatment, industrial wastewater treatment, on-site water area purification, etc., in Asia.



An example of a feasibility study in “The Model Projects for Improving Water Environment in Asia, 2011”

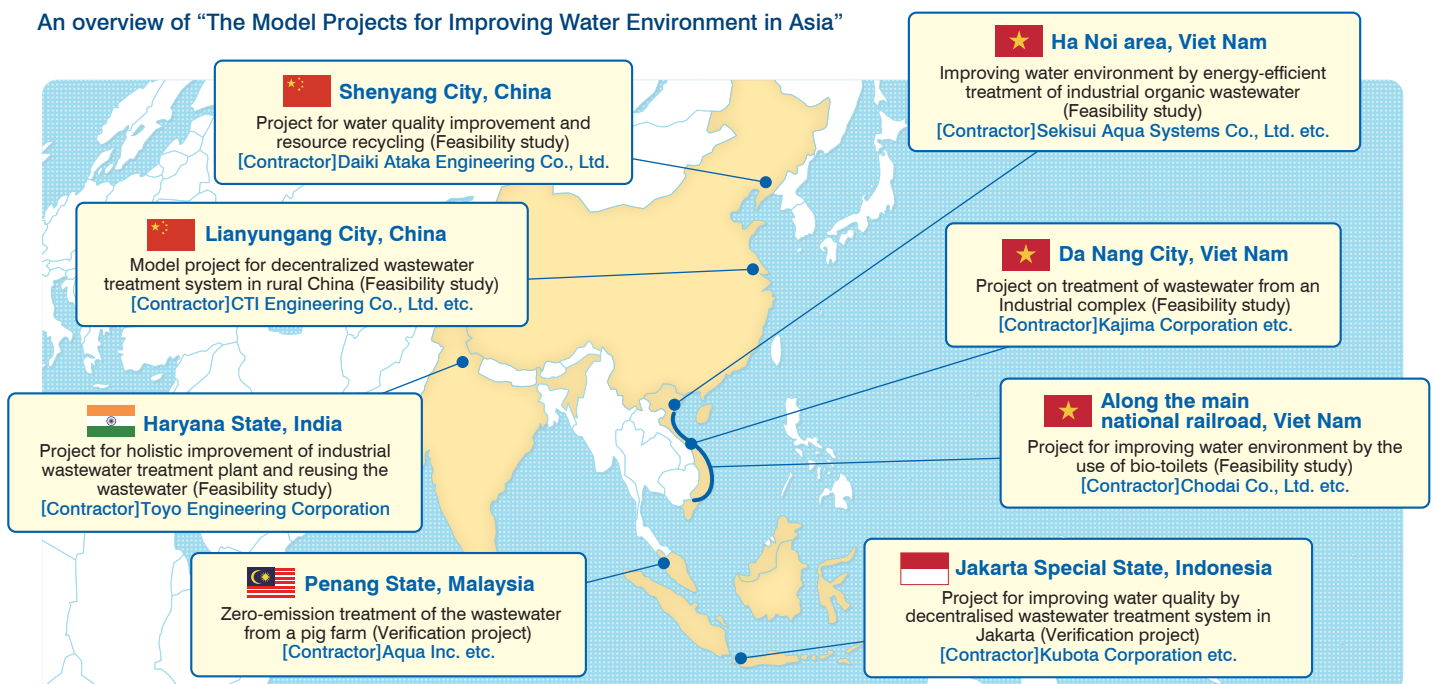
The Project for Improving Water Quality by Decentralised Wastewater Treatment System in Jakarta

[Company name] Kubota Corporation / [Project site] Jakarta Special State, Indonesia

- Water pollution has become a critical issue in the Jakarta Special State, due to increasing domestic wastewater from rapidly growing population in the city area and its inappropriate treatment by existing septic tanks: Water from approximately 40% of wells in the city area is polluted with fecal material, which has been triggering increasing incidents of waterborne infectious diseases.
- On the other hand, the rapid urbanization and heavy traffic jams in the city area do not easily allow installing sewer system and the sewage treatment plant. Also considering the frequent floods, the decentralised domestic wastewater treatment tanks have advantage in improving water environment in the city.
- The verification project has been installing the Japanese-style domestic wastewater treatment tanks for detached and compound houses, monitoring the water quality of the treated water and sludge, and evaluating the contribution to water quality improvement in the area by checking the quality of surrounding surface and ground waters.
- By the project, improvement in the quality of surrounding water bodies, spread use of the Japanese-style domestic wastewater treatment tanks and improved capacity of local staffs for the maintenance of these facilities by the training programs.



An overview of “The Model Projects for Improving Water Environment in Asia”



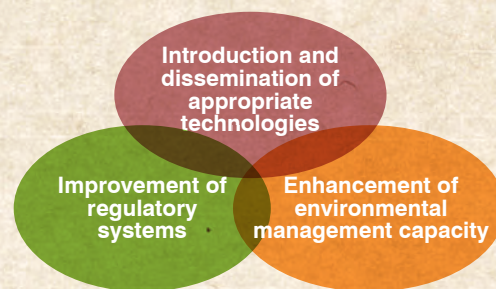
● Outline of “The Model Projects for Improving Water Environment in Asia” <http://www.env.go.jp/earth/coop/coop/english/efforts/water.html>

Improving the urban environment has become a pressing issue in the Asian countries where environmental problems such as air and water pollution, mainly in city areas, have been deteriorating. For addressing these issues, the Ministry of the Environment of Japan (MOEJ) has been implementing the Project “Overseas Development Based on Japanese Model of Environmental Technologies” since FY 2009, transferring the packages of “Introduction and dissemination of appropriate technologies”, “Improvement of regulatory systems” and “Enhancement of environment management capacity” to other Asian countries based on

the past Japanese experiences in overcoming environmental pollution.

The Project has been supporting the implementation of the packages of regulatory systems and human resources development for the introduction and dissemination of the appropriate environmental technologies in China, Indonesia and Viet Nam, on the basis of the Japanese experiences. It also aims to strengthen the efforts to improve environment and the capacity for environmental management by extending Japanese advanced environmental technologies to the Asian countries.

Overseas Implementation of the technologies, regulatory systems and human resources development



China ▶ Total Emission Reduction of Nitrogen Oxides in Air

For contributing to the Chinese domestic policy solutions for adopting the total NOx pollution load reduction system, MOEJ has been implementing the cooperation projects in policy and technology terms based on the Japanese experiences since FY 2009.



Viet Nam ▶ Industrial wastewater management and the revision of the Law on Environmental Protection

Since July 2009, MOEJ has been implementing cooperation projects centred on industrial wastewater treatment with the Institute of Science for Environmental Management, the Viet Nam Environment Administration of the Ministry of Natural Resources and Environment of Viet Nam. The eighth meeting of the Japan – Viet Nam Joint Study Group (an inter-governmental meeting) was held on 5th March 2012 in Tokyo, for wrapping up this three year's Project.

In the meeting, the Viet Nam side expressed their intention to reflect the outputs from this three year's cooperation project between the two governments in revising their national Environmental Protection Law and related regulations, and to roll them out throughout the country. MOEJ has continuously been supporting the cooperation project until now.



Indonesia ▶ A pilot project on industrial wastewater management

MOEJ has been implementing a cooperation project on industrial wastewater management with the Deputy VII of the State Ministry of Environment of Indonesia since March 2011. The Project selected a crude palm oil manufacturing factory in the Langkat Regency, North Sumatra Province, as the pilot case for developing and disseminating the appropriate environmental technologies and environmental management systems. The first meeting of the Japan – Indonesia Joint Policy Research Working Group was held in June 2012 for discussing the programmes in the pilot project.





Interview



“Cooperation on the Solid Waste Management Project in Malaysia”

● Interviewee: Dr. L.C. THENG

National Coordinator, MHLG-MOEJ Collaboration Project,
National Solid Waste Management Department, Ministry of Housing and Local Government, Malaysia

Dr.Theng is working for the Malaysia-Japan cooperation project on solid waste management. The interview focused on the current condition and outcome of the cooperation project.

- Overview on the solid waste management in Malaysia

Solid waste management is one of the serious environmental challenges for many developing countries, including Malaysia. In particular, the disposal of organic waste in landfills poses serious environmental impacts. Solid waste in Malaysia consists of 50% of food waste as generated at source, and the composition reaches as high as 70% upon disposal at the landfill sites.

- Benefits / outcomes of the project for Malaysia

The main outcome from the project

would be the formulation of National Strategic Plan for Food Waste Management of Malaysia. This specifies the optimized treatment of waste from different sources on the basis of the quantity and the chain of custody of food waste from households and industries.

- Future direction of your project

The National Strategic Plan for Food Waste Management will serve as an important document for the Ministry of Housing and Local Government Malaysia, towards proper management of food waste in the future. The Plan is so flexible that the implementation strategies and their timelines could be decided according to the overall plan of the Ministry and to any other relevant issues. I hope that other developing countries

suffering from food waste problems can implement proper solutions by using our experience as the role model.



Pilot Project in University of Malaya



Pilot Project in Kampar

Notice of a Seminar and Meeting

Fourth High Level Seminar on Environmentally Sustainable Cities [HLS ESC] !!

21-22 March 2013 at Hanoi

Facing the rapid urbanization in the Asian region and environmental issues in cities, at the Inaugural East Asia Summit Environment Ministers Meeting (EAS-EMM) in 2008, “Environmentally Sustainable Cities (ESC)” was agreed as a priority area for environmental cooperation in the EAS countries. Following this decision, Ministry of the Environment, Japan (MOEJ) has been

supporting for organizing the High Level Seminar (HLS) on ESC.

The first HLS ESC was held in Jakarta, Indonesia in 2010, with the second and the third held in Kitakyushu, Fukuoka Prefecture, Japan (2011) and Siem Reap, Cambodia (2012), respectively.

The fourth HLS ESC is scheduled to be held in Hanoi, Viet Nam on March 21-22,

2013. This time, those local governments with advanced environmental programs and those private companies with sophisticated technologies for environmental solutions in Japan, as well as the ADB and JICA will participate. Also, experience and efforts on solving environmental issues in Japanese cities will be introduced and discussed with the participants from Asian countries.

● High Level Seminar on Environmentally Sustainable Cities <http://www.hls-esc.org/>

Fourth Meeting of the Regional 3R Forum in Asia!!

18-20 March 2013 at Hanoi

The fourth Meeting of the Regional 3R Forum in Asia is planned to be held in Hanoi, Viet Nam on March 18-20, 2013, back to back with the aforementioned fourth HLS ESC. In a nod to the idea that promotion of 3R in cities is inextricably linked with realization of ESC, the MOEJ, in collaboration with the relevant countries and organizations, is

supporting the forum in order to increase synergy of both meetings.

Based on the proposal from the MOEJ, the Regional 3R Forum in Asia was established towards the sound material-cycle society through promotion of 3R. The forum aims to provide a platform for cooperation between a wide variety of stakeholders including

the governments in Asia, international organizations, donors organizations, private sector, research institutes, NGOs, etc. Through the efforts in the forum, actions on 3R are expanding to the Asian countries such as formulation of the national strategy on the promotion of 3R.

● Regional 3R Forum in Asia http://www.env.go.jp/recycle/3r/en/forum_asia/index.html

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