

Clean Asia Initiative

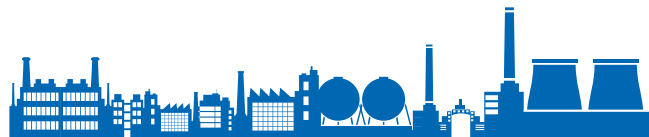
CAI

Newsletter

vol.11 June 2013

Building “Low Carbon and Environmentally Sustainable Cities”

Leapfrog-Type Growth in
developing countries



Contents

- 02 The role that Japanese Advanced technologies should play in realizing “Low-Carbon and Environmentally Sustainable City”
- 04 Toward Development of a Low-Carbon City in Surabaya, Indonesia
Through Collaboration with the Environmental Sister City, Kitakyushu
- 06 Initiatives in Ho Chi Minh City, Vietnam to Provide Low-Carbon Model for Megacities in Asia
Collaboration with Sister-City Osaka
- 08 Cooperation Toward Development and Implementation of Low-Carbon Plan
Iskandar Malaysia Special Economic Zone
- 10 Funding Support Program for Deployment of Low-Carbon and Environmentally Sound Technologies in Asia
A New Initiative by MOEJ
- 12 [Event Notice] ISAP2013 International Forum for Sustainable Asia and the Pacific / Smart City Week 2013

The role that Japanese Advanced technologies should play in realizing “Low-Carbon and Environmentally Sustainable City”

To reduce greenhouse gas as a result of its rapid urbanization in Asia

In Asia, on average 40% of the population lives in cities and it is predicted that the rate will reach 60% by 2050. However, rapid growth of populations causes serious problems with water supply, sewage disposal, waste management and other infrastructures. 30% of greenhouse gasses are emitted in Asia, and that amount is predicted to increase. In view of these circumstances, Japanese outstanding environmental technologies are expected to protect global environment.

Ministry of the Environment, Japan (MOEJ) expressed its policy to start new businesses which support city develop-

ment in Asia by utilizing Japanese advanced environmental technologies. MOEJ launched investigations into recyclable energy, water management and waste disposal efficiency in 15 countries including Indonesia and Vietnam to seek collaboration with locals. In 2014, MOEJ will create a new funding mechanism which supports introduction of advanced technologies in order to realize “Low-Carbon and Environmentally Sustainable City”.



The Low Carbon Society Blueprint for Iskandar Malaysia Smart-town planning in the Iskandar region

P. 8

Malaysia, which aims to count itself among advanced economic nations by the year 2020, is building a smart-town in Iskandar special economic zone. “Fujisawa Sustainable Smart Town (FSST)” by Panasonic is a good model of the smart-town. Iskandar Regional Development Authority (IRDA) pays attention to FSST as a good example of “Low-Carbonized society” with advanced Japanese technologies such as solar energy, energy-saving home electronics and LEDs.

At the same time, to foster agreement between IRDA, local land owners, and other concerned parties in Malaysia, MOEJ will not only supply technologies and products but also provide financial support to the project as well. MOEJ will also be gathering information on the local financial environment and consider a funding support program for projects that may be eligible under a Joint Crediting Mechanism. Looking ahead, a study will be conducted in order to identify priority areas by matching the programs envisioned for the 12 actions established by the Low Carbon Society Blueprint (LCSBP) with businesses that can provide the solutions and services considered by the FSST township.



* The Low Carbon Society Blueprint for Iskandar Malaysia 2025 is a result of a joint effort between Japan and Malaysia. Sponsored by the Japanese International Cooperation Agency (JICA) and Japan Science and Technology Agency (JST), the project team of researchers from Universiti Teknologi Malaysia (UTM), Kyoto University, Okayama University, and the National Institute for Environmental Studies created the blueprint.

Cooperation Toward Development and Implementation of Low-Carbon Plan Iskandar Malaysia Special Economic Zone

Iskandar, Malaysia Development Region Initiative



Low-Carbon Model for Megacities in Asia

Ho Chi Minh City has severely increased its strain on the environment as a result of its rapid urbanization and economic growth. This city is taking initiatives in Asia using technologies from TOTO, Hitachi Zosen, and other Japanese companies to reduce CO₂ through water efficiency and reduce GHG through waste-to-energy power generation. Vietnam, known as the world's true "motorcycle nations", has launched a project to curtail the number of motorcycles.



Ho Chi Minh City, Vietnam

Initiatives in Ho Chi Minh City, Vietnam to Provide Low-Carbon Model for Megacities in Asia Collaboration with Sister-City Osaka

Create Low-Carbon Society in the Field of Energy and water supply

Surabaya city, a city that accomplished certain results by composting organic waste, has started new projects in energy area and water treatment. However the city's own activities still remain in experimental level. The potential of energy saving in the city, the investigation for the needs, tactical projects based on the investigation and the evaluation for the potential (e.g. ESCO business) have not yet been done. Therefore, MOEJ started to examine how Japanese technologies could be used in the city. MOEJ will start the project to achieve "Low-Carbonization throughout All of Surabaya City" including a method of management and maintenance.



About ESCO

ESCO (energy service company) is a commercial business that will identify and evaluate energy saving, remodel, install the required elements and maintain the system to ensure energy savings is paid for through energy cost reductions. Users can start without any additional cost, and after termination the savings will be profit. Therefore this scheme will assure the energy-saving and promote advanced technologies as well.



Initiatives in Surabaya, Indonesia

Toward Development of a Low-Carbon City in Surabaya, Indonesia Through Collaboration with the Environmental Sister City, Kitakyushu

The New Initiative by MOEJ Beginning in 2014

Levels of greenhouse gas emissions in developing countries are ever-increasing. Between 1990 and 2010, they have roughly doubled. In light of these circumstances, developing countries are required to make "Leapfrog" growth. A new initiative planned by MOEJ aims to assist it through advanced technology deployment and financial support. MOEJ is seeking to make the Asia-Pacific region the launching point for a new paradigm, the "Human Society that Harmonizes and Enriches the Environment and Life", that will be suited to the 21st century but oriented toward the 22nd, by integrating the three ideals of "a low-carbon society," "a recycling society," and "a society in harmony with nature."



Funding Support Program for Deployment of Low-Carbon and Environmentally Sound Technologies in Asia A New Initiative by MOEJ



Indonesia

Initiatives in Surabaya, Indonesia

Toward Development of a Low-Carbon City in Surabaya, Indonesia

Through Collaboration with the Environmental Sister City, Kitakyushu



Energy efficiency improved and measurement of CO₂ reduction

In the field of energy, Indonesia's leading environmental city, Surabaya, is now taking active measures through energy efficiency and the utilization of unused energy to achieve Low-Carbon and Environmentally Sustainable City.

The city government has, for instance, taken the initiative to use fewer lights and to switch to ultra high-efficiency lighting in city offices, as well as to convert street lights to LED powered by solar energy. Pilot programs to use recovered methane gas from final waste disposal sites are also under way. Furthermore, the city's largest industrial park, Surabaya Industrial Estate Rungkut (SIER), is considering introducing commercialized combined-heat-and-power services using a Japanese cogeneration system as a means to improve overall energy-use efficiency. Concrete business models are also being developed.

Yet, while CO₂ emission reduction from these activities are roughly estimated, there is still no system established to measure, report and verify (MRV) the impact that factor in the use of Joint

Crediting Mechanism (JCM). Moreover, although Indonesia currently has formulated guidelines on methods to reduce CO₂, there are still no municipal-level plans that refer to them. With its strong interest in measures to build a Low-Carbon society, Surabaya is at the forefront of municipalities in Indonesia, yet still lacks the know-how to quantify CO₂ emissions and develop concrete projects based on such measurements.

This is why Surabaya's own activities to date have been limited to experimental projects. It is necessary to conduct further activities such as research on the city-wide potential and need for energy efficiency, creation of strategic model projects based on such research, and evaluation of ESCO-type commercial operations. Moreover, a feasibility study for Japanese-style combined-heat-and-power businesses has been conducted only at SIER and nowhere else.

Hence our research objective is to identify how Japanese advanced technology and system could be applied locally. Our intention is to strengthen the environment managerial capacity of the city in which Surabaya's Low-Carbon efforts are measured for a successful JCM project development with a sound operation and maintenance system with active involvement of stakeholders.



Achieving Energy Efficiency while Providing a Stable Supply of Clean Water

Clean water is essential to our everyday lives. However, the water supply system consumes an enormous amount of electricity throughout the water production and delivery process, including the operation of intake pumps, treatment of water, and operation of delivery pumps for water distribution. Moreover, this electrical consumption in general accounts for the vast majority of greenhouse gas (GHG) emissions produced by water supply facilities. After Jakarta, the city of Surabaya has the largest number of water supply customers in Indonesia. Hence

it is thought that the creation of a water supply system with a Japan's energy efficiency level would lead to a substantial reduction in the level of GHG emissions in the area.

At the same time, it is important to take measures against water leakages. The Kitakyushu Water and Sewer Bureau extends its experience in Kitakyushu to support countries in Asia in their efforts against water leakages. For instance, Phnom Penh in Cambodia improved its rate of water leakage from 72% to 6%, a rate that is on par with Japan's standard.

Looking ahead, they plan to apply this model for water leakages in Surabaya as well.





Surabaya has seen its urban environment improved by managing the solid waste ardently through implementing a decentralized composting system. Surabaya, one of the best environmental cities in Indonesia, has started a new project in energy management and water treatment with a support from the City of Kitakyushu.

[Action Items to Strengthen the Environmental Managerial Capacity]

- 01: Formulate JCM-oriented MRV methodologies for activities that already have rough estimates of CO₂ reduction impact
- 02: Undertake basic studies in selected industries that has a large potential to reduce CO₂ emissions but the means for that has not yet been studied thoroughly
- 03: Research the potential to scale-up and expand proved energy-saving models in Surabaya to neighboring areas



Establish a sister city relationship

to deliver the waste using an estimated 3,600-4,000 liters of fuel each day. Moreover, this waste is believed to be a major source of greenhouse gas emissions due to the methane that is produced by the anaerobic fermentation of organic waste which comprises roughly 70% of all the waste, or 840 tons/day.

Responding to such conditions, Kitakyushu-based Nishihara Corporation studied the commercial feasibility of intermediate processing facilities in Surabaya. The conclusion based on their pilot venture was that a business could successfully reduce the amount of general waste destined for final disposal by 70-80% if the sorted recyclables and compost produced from the organic waste are sold at a reasonable price.

Looking ahead, the company plans to consider two new ventures to address Surabaya's 1,200 tons of daily general waste – one based on composting, the other on waste-combustion power-generation – thus raising expectations in improving the environment further in Surabaya.



Waste separation at a composting facility



Promotion of Waste Separation and Recycling and Power-Generation from the Residual Waste

While composting initiatives have achieved a 30% reduction in waste in Surabaya, the city's only final disposal site at Benowo still receives 1,200 tons of waste every day. It requires 300 trucks



Initiatives to Make Effective Use of Water Resources and Prevent Water Pollution

To achieve a Low-Carbon society in Surabaya, energy-efficiency measures in the area of water resources as well as measures to prevent water pollution are being studied.

As one example, updates to facilities and improvements in operational methods are being considered for primary equipment at the wastewater treatment facility at SIER, an industrial park created in 1974 that is used today by over 300 companies. Such updates and improvements would not only be energy efficient, but could also be expected to reduce CO₂.

Additionally, technical support and the introduction of water-efficient devices at polluted-water and sludge treatment facilities are currently being considered as well to increase energy efficiency, reduce CO₂, and lower leakage rates.

As we move beyond the problem of waste disposal in Surabaya, initiatives

to improve the environment in new areas are now under way.



Waste water treatment facility





Vietnam

Initiatives in Ho Chi Minh City, Vietnam to Provide Low-Carbon Model for Megacities in Asia

Collaboration with Sister-City Osaka

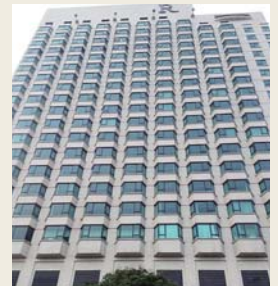


Reducing CO₂ emissions through high-efficiency toilets and showers at large-scale facilities

In Ho Chi Minh City, where shortages of water and water pollution are ongoing concerns, a feasibility study will be conducted on ways that water supply improvements and water efficiency using TOTO's technologies.

The study will launch an investigation into how much water efficiency and CO₂ reduction are possible in Ho Chi Minh City through a pilot study of installing water saving showers and toilets in a hotel which use high volumes of heated and unheated water.

In addition to analyzing the operational dynamics of building-internal water-supply pumping systems that have water-efficient equipment installed, the study will also promote the development of a methodology for JCM credits that can be earned for buildings that achieve water efficiency. At present, using a single hotel, we are working quickly to gather data for optimizing water-supply system water-efficiency compliance.



Renaissance Riverside Hotel Saigon

High-efficiency Shower Technology

By injecting air into water, TOTO's technology increases the size of individual water droplets. This enables increased water efficiency of approximately 35% over conventional products. Before now, water-efficient showers achieved "droplet speed" with less water by decreasing the size of the shower head openings. While this method does achieve "droplet speed," the smaller "droplet size" results in reduced comfort. The high-efficiency shower technology used in this project mixes water and air at the shower head, thus maintaining comfort by aerating the water without losing "droplet speed."

Traditional Shower

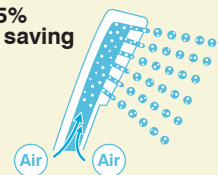
Optimum volume of flow
10L / min

Air-In Shower

Optimum volume of flow
6.5L / min



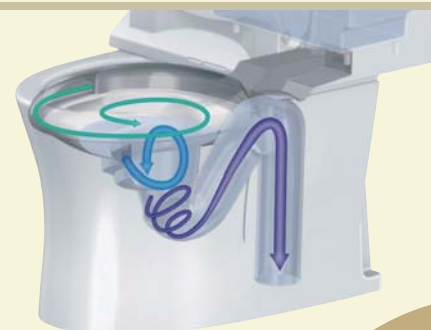
35% Water saving



High-efficiency Toilet Technology

A toilet's water is used to flush waste from the toilet and carry it properly through the connected sewage pipes. Before now, toilets used the potential energy of water stored in the tank to create a downward flow that carried waste away. By decreasing downward-flow resistance through more advanced design of traps and the like, these toilets sought to reduce the amount of water needed for flushing. This project uses toilets equipped with TOTO's proprietary Double Cyclone technology. This technology carries waste away as effectively as conventional products but reduces the volume of water used by 71%.

Additionally, the project expects the development of JCM credit operations to begin in earnest next year and will propose business models based on a study of owner incentives to popularize and encourage water-efficiency and high-efficiency devices. An ESCO business has also been identified as one possible approach.



Double Cyclone flushing system

Using two nozzles, water can be used more efficiently for a better rim and bowl wash, while directing more water to the siphon, for a more powerful flush.





Ho Chi Minh City is Vietnam's most populous and economically active city and the increasing strain on the environment as a result of its rapid urbanization and economic growth is severe. Moreover, Ho Chi Minh City is well known as one of the world's cities most severely impacted by climate change. This is why Ho Chi Minh City aims to be a model for other megacities in Asia with similar concerns. Through initiatives that use technologies from TOTO, Hitachi Zosen, and other Japanese companies, this city seeks to reduce CO₂ through water efficiency and reduce GHG through waste-to-energy power generation.



Reducing Greenhouse Gases (GHG) by Introducing Waste-to-Energy Power Generation

Waste is another problem that results from rapid urbanization. As one means of resolving this difficult problem, Ho Chi Minh City is working in collaboration with Hitachi Zosen to introduce the city's first-ever power-generating urban-waste incinerator. In addition to construction of a waste incinerator, the project aims to reduce GHG by generating power using the heat recovered from the high-temperature gas that is produced when urban waste is incinerated.

Using incinerator technology developed in Japan over many years, it is possible to safely treat and dispose of exhaust gas, waste water, incinerator ash, and such byproducts. Beginning this year, the project is using scenario analysis to develop GHG-reduction projections while assessing the viability of waste-to-energy operations.



Reference picture: Hazardous waste incineration plant in Japan

Interview

Mr. Ha Minh CHAU, MSc
Deputy Manager, Ho Chi Minh City Climate Change Bureau (HCCB)

Impression from training course, Osaka City



The training held in Osaka was a part of the capacity building programme under the cooperation framework between Ho Chi Minh City (HCMC) and Osaka City and is supported by Osaka City.

Osaka City has an advanced solid waste management system which is organised synchronisingly from policy, management to treatment technology. The city's successful solid waste separation helps to promote the reduction of waste and almost 100% of waste is reused, recycled, or exploited to recover energy. The combustion remnants are also useful for constructing artificial islands. In other words, almost all of the solid waste in Osaka City is considered as a resource.

It was impressive that Osaka City government focused significantly on public education and propaganda rather than applying environmental punishment measures. Therefore, they integrate environmental protection into elementary education programme, and organise field trips to waste treatment facilities for children to build up their own perception and good deeds towards the environment at the early age.



Initiatives to Curtail the Number of Motorcycles

Vietnam, with a population of nearly 90 million people, lays claim to over 25 million motorcycles, making it one of the world's true "motorcycle nations". Today, that distinction has become a source of severe societal concern in view of traffic accidents, traffic jams, and the impact of air pollution and emissions on the human body. Indeed, according to the Asian Institute of Technology, "the particle levels in the atmosphere of Hanoi City and Ho Chi Minh City exceed

tolerable health limits."

With assistance from Nikken Sekkei Research Institute and Chuo Fukken Consultants, motorcycle-saturated Ho Chi Minh City has launched a project to curtail the number of motorcycles. The project aims to limit gasoline usage and reduce GHG by transitioning from the use of motorcycles to the use of public transportation, as well as by replacing personal motorcycles with electric motorcycles and "community bicycles" (rental

bicycles). By making buses, electric motorcycles, and electric bicycles more convenient, the project will encourage people to transition away from motorcycles.





Malaysia

Iskandar Malaysia Development Region Initiative

Cooperation Toward Development and Implementation of Low-Carbon Plan

Iskandar Malaysia Special Economic Zone

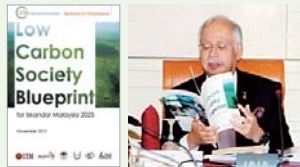


The Low Carbon Society Blueprint for Iskandar Malaysia Announced by Prime Minister Najib Razak

The Low Carbon Society Blueprint for Iskandar Malaysia 2025 (LCSBP) is a document that presents comprehensive climate change mitigation policies and detailed strategies.

The blueprint is an outcome of a joint effort between Japan and Malaysia.

Sponsored by the Japanese International Cooperation Agency (JICA) and Japan Science and Technology Agency (JST), the project team of researchers from Universiti Teknologi Malaysia (UTM), Kyoto University, Okayama University, and the National Institute for Environmental Studies created the blueprint. The blueprint was announced by Prime Minister Najib Razak in 2012 to seek sustainable developments socially, economically, and environmentally.



The blueprint and Prime Minister Najib Razak

12 actions, 53 sub-actions, 96 measures and 300 programs are indicated at present. To execute these actions and programs, more concrete plans are needed including staffing, technology, products, methods, schedule, and location.

As a good example of low-carbon society, "Fujisawa Sustainable Smart Town (FSST)" by Panasonic gains an attention by Iskandar Regional Development Authority. The proposal of business based on FSST with advanced Japanese technologies is expected as one of the plans to embody the blueprint.



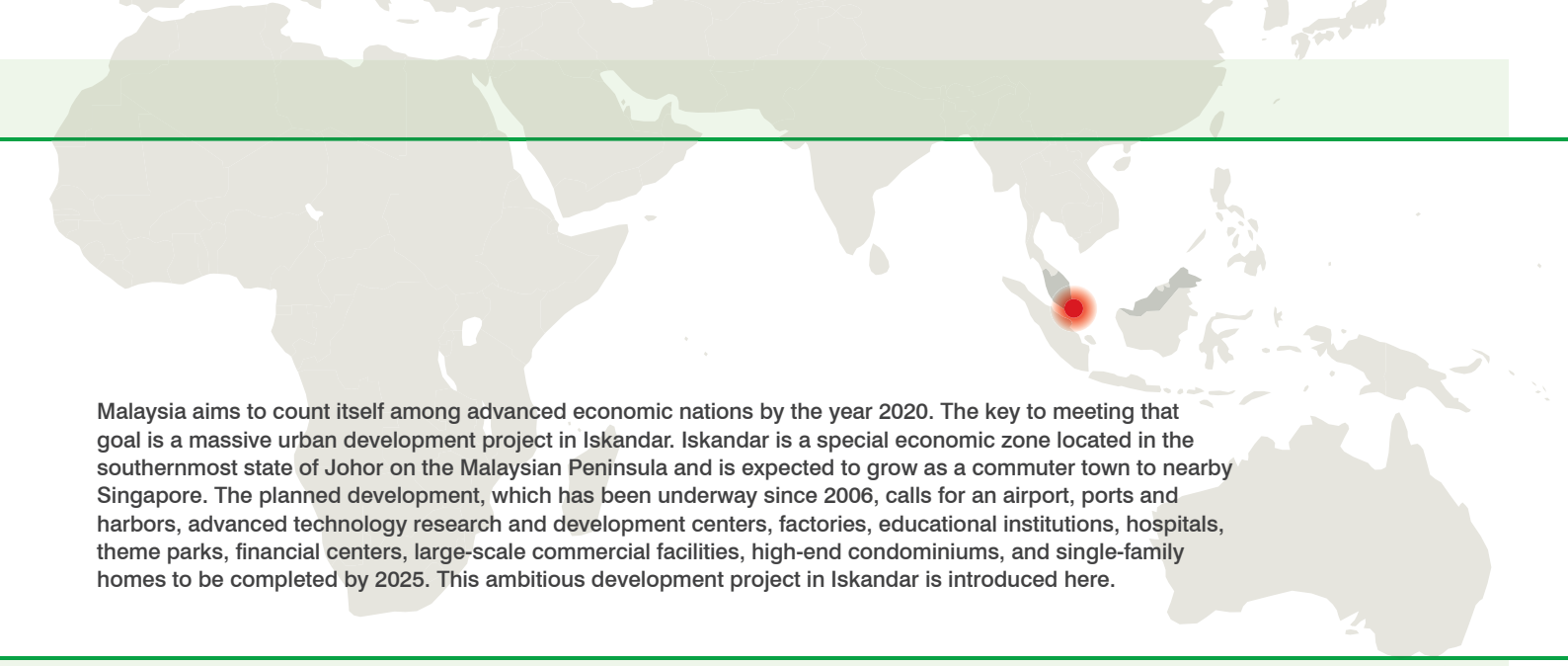
Fujisawa Sustainable Smart Town provides foundation for smart town planning in the Iskandar region

Having smart town project knowledge and experience is beneficial when it comes to developing an implementation plan for the Iskandar regional development project. That is why the FSST initiative by Panasonic in Fujisawa City, Japan has drawn special attention. The project, which introduces solar power generation, energy efficient appliances, LED lighting and other advanced Japanese technologies as part of its urban development plan centered on



everyday living and sustainable "eco and smart" lifestyles making full use of nature's blessings, has even raised expectations at the Iskandar Regional Development Authority (IRDA).

FSST began as a showcase for Panasonic's "comprehensive solutions" business aiming to create "comprehensive solutions for homes, facilities, and towns." The concept behind FSST, which is scheduled to open in spring 2014, is the creation of an advanced energy useage



Malaysia aims to count itself among advanced economic nations by the year 2020. The key to meeting that goal is a massive urban development project in Iskandar. Iskandar is a special economic zone located in the southernmost state of Johor on the Malaysian Peninsula and is expected to grow as a commuter town to nearby Singapore. The planned development, which has been underway since 2006, calls for an airport, ports and harbors, advanced technology research and development centers, factories, educational institutions, hospitals, theme parks, financial centers, large-scale commercial facilities, high-end condominiums, and single-family homes to be completed by 2025. This ambitious development project in Iskandar is introduced here.

model that promotes energy efficient devices and integrates new technologies for generating, storing, and managing energy.

For instance, the home energy management system “Smart HEMS,” based on Panasonic’s “Eco Ideas” concept of creating green lifestyles, serves to connect equipments and devices over a network to create a safe, reliable, and highly energy efficient residential environment.

The FSST concept also includes plans to install community wide technologies and eco solutions, such as solar power generation systems and home use storage batteries, in detached homes, high rise residences, and commercial, social, and public facilities. These initiatives will also serve to reduce CO₂ emissions and in-home water consumption. Furthermore, the project strives to preserve biodiversity through its concept of “wind and green network-building.”

Looking ahead, a study will be conducted in order to identify priority areas by matching the programs envisioned for the 12 actions established by the Low Carbon Society Blueprint (LCSBP)

with businesses that can provide the solutions and services considered by the FSST township.

Furthermore, with the goal of actualizing the LCSBP, Panasonic will work for securing pilot project land. Once these actual sites have been identified, joint discussions with local land owners will be held to discuss services-centered urban planning that benefits local residents.

At the same time, Ministry of the Environment, Japan (MOEJ) will not only support introduction of technologies and products but also assist financial aspects of the project. MOEJ will be gathering information on the local financial environment and consider a funding support program for projects that may be eligible under a Joint Crediting Mechanism. Additionally, in collaboration with IRDA, businesses that are highly effective at CO₂ reduction will be selected by comparing the LCSBP baseline against smart town development. An environmental impact evaluation will be undertaken, for instance, to measure levels of reduction in greenhouse gas emissions.

ESCO Project

Through Malaysia ESCO association, several local enterprises which have ability to implement ESCO projects in

Iskandar were identified. In cooperation with those enterprises, “Buildings which need energy-saving retrofit” will be determined, and Japan Facility Solutions, Inc. (JFS) will send engineers to the buildings.

Audit of energy-saving will be carried out in cooperation with local enterprises. Through these activities, business model for ESCO project in this region will be examined and established.

Water Efficiency

To supply running water requires water pressure controllers that are compatible with the water supply destination. Japan and other advanced countries use inverter-based electronic controllers, which is a widely used technology and system that properly controls water supply pressure. However, a majority of developing countries lack the technology and personnel to control their water supply, meaning that energy is often

wasted. Thus, introducing Japanese water-pressure control technology would make it possible to reduce the level of greenhouse gas emissions that result from too much electric power consumption, which would then provide an environment ready for the smooth introduction of power-generation technologies that utilize various forms of renewable energy. For instance, many water supply facilities have space on their grounds to install solar power generation equipment on the water storage tank covers and

elsewhere. In the case of water supply facilities located in mountainous areas, micro/small scale hydropower system can be installed at water treatment plants with a certain amount of flow and drop without large-scale and long-term construction work. By introducing energy efficient technologies and renewable energy power generation, water supply systems in developing countries thus have the potential to meet two needs, a substantial reduction in greenhouse gas emissions and the supply of electric power.



Funding Support Program for Deployment of Low-Carbon and Environmentally Sound Technologies in Asia

A New Initiative by MOEJ

Levels of greenhouse gas emissions in developing countries are ever-increasing. Between 1990 and 2010, they have roughly doubled. Moreover, given current climate change policy, the level of emissions by 2030 is predicted to reach three times that of 1990. In view of these circumstances, developing countries are required to take “leapfrog” growth and a new initiative planned by Ministry of the Environment, Japan (MOEJ) aims to assist it.

01 Attention Turns to “Leapfrog” Growth

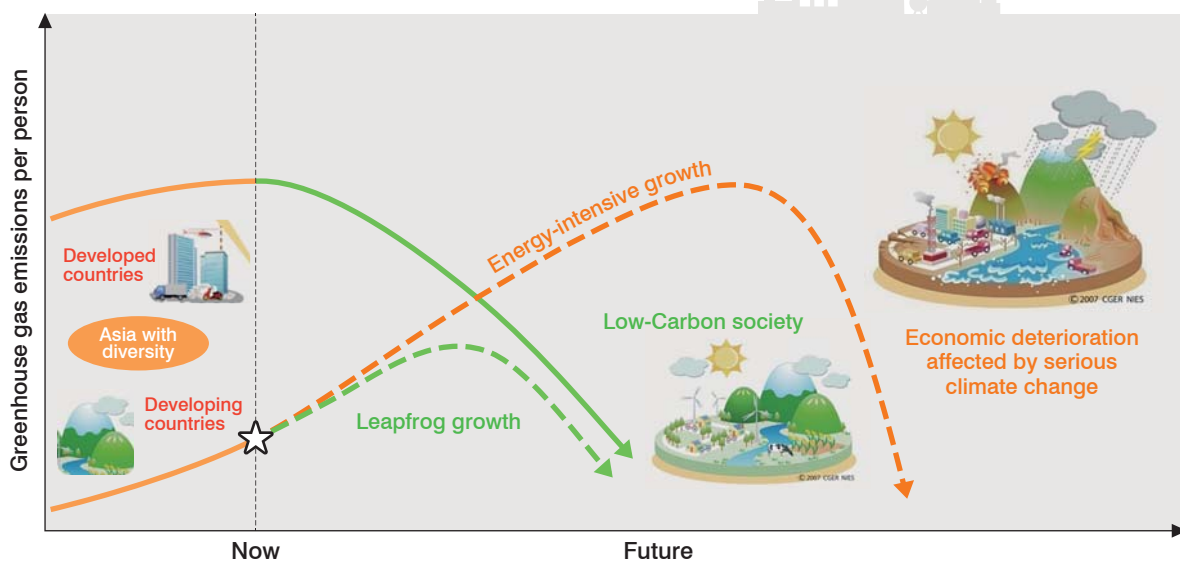
For developed countries, economic development has come at the cost of wasted energy and natural resources, as well as environmental degradation. In response, they have swiftly developed technologies that make more efficient use of energy and natural resources. Just as developing countries were able to skip over fixed-line telephones and go directly to mobile phones, so too can they benefit from “leapfrog-type growth” by utilizing advanced environmental technologies that allow them to achieve both economic growth and a low-carbon society at the same time. In the developing countries of Asia, where emissions are on the rise, this kind of growth is needed in order to avoid the severely detri-

mental effects of climate change. With Low-Carbonization come many conveniences and benefits. For instance, the introduction of waste-to-energy power generation reduces greenhouse gases while at the same time resolving local waste problems.

02 Program to Enable International Deployment of Environmental Technology

In general, advanced environmentally sound technologies are expensive. For that reason, it is important to create an environment in which expensive but high-performing technologies are able to spread. This means for instance the development of low-carbon plans like Iskandar Malaysia’s or the spread of ESCO business

From low energy-efficient society to Low-Carbon society



Reference: National Institute for Environmental Studies

models. In Japan, we not only possess such environmental technologies but we also have broad knowledge and know-how regarding programs to promote their adoption. Japan intends to collaborate with local municipalities, corporations, development assistance agencies, and research institutes to support developing nations, including in human resources development.

The primary targets will be developing nations in the Asia-Pacific region, such as Indonesia, Vietnam, Myanmar, Mongolia, India, and Palau. Targeted fields will include independent and decentralized energy systems (solar, wind power, biomass, waste-heat recovery, ESCO businesses, etc.), transport (public transport, electric vehicles/motorcycles, etc.), waste treatment (incinerators, sorting and collection, composting, etc.), and water-related facilities (water supply, sewage, water-conservation equipment, etc.).

03 “Funding Support Program” to Achieve Leapfrog Growth

Beginning in 2014, MOEJ will initiate a new funding program for projects supported by JICA and other Japanese agencies in order to support projects that are highly effective at reducing GHG emissions. Through such investment, MOEJ aims to disseminate advanced Japanese technologies that are highly effective at reducing emissions, even when such technologies have high initial costs. In addition, MOEJ will likewise initiate a similar funding program with the Asian Development Bank (ADB).


04 Introducing a New Paradigm: “Human Society that Harmonizes and Enriches the Environment and Life”

Through these efforts, MOEJ will support the leapfrog transition of developing nations to advanced, low-carbon societies through the use of Japan’s best technologies. By doing so, we are also seeking to make the Asia-Pacific region the launching point for a new paradigm, the “Human Society that Harmonizes and Enriches the Environment and Life,” by integrating the three ideals of “a low-carbon society,” “a recycling society,” and “a society in harmony with nature.”

Kitakyushu City’s Cambodian Waterworks Project Human Resources Development Project

Since the early 1990s, City of Kitakyushu has been sending staff to Cambodia where they have dedicated themselves to the diffusion of water treatment technology. As a result of their efforts, the prevalence of piped water in Phnom Penh has risen from 25% in 1993 to over 90%, while water leakage has fallen from roughly 72% to 6%, which is almost the same level with Japan. Their success is praised around the world as the “miracle of Phnom Penh.”

In recognition of these past achievements, Mr. Kitahashi, mayor of Kitakyushu City and nine members of the Waterworks Bureau were awarded the Royal Order of SAHAMETREI by the Cambodian government.



Royal Order of SAHAMETREI by the Cambodian government & Certificates

Image of Low-Carbon society

Mega city

To embody the human society that harmonizes and enriches the environment and life

Town development	Basic infrastructure		Smart infrastructure	
Smart-city development 	Biomass power 	Wind power generation on the ocean 	LRT 	Zero emission building 
	ICT (VICS, ETC) 	Electricity system 	Zero emission house 	

Insufficient areas until now

Life infrastructure	Water supply 	Sewage water 	Waste management 
	Demand Response 	Cool Biz 	MOTTAINAI 
Life services Life style			



Comprehensive proposal by packaging low-carbon technologies and know-hows from Japanese enterprises

Reference: Azbil Corporation, Kawasaki Heavy Industries, Ltd., SHIMIZU CORPORATION, Nikken Sekkei Ltd., Mitsui Fudosan Co., Ltd., Mitsui Home Co., Ltd.

▶ Event Notice

ISAP2013 International Forum for Sustainable Asia and the Pacific

ISAP (International Forum for Sustainable Asia and the Pacific) will be held on 23rd and 24th of July in Yokohama

Session on Low-Carbon Cities will be held as one of parallel sessions. This session reports and discusses new support programs by MOEJ for developing countries by utilizing advanced Japanese environmental technologies as well as the case of Low-Carbonization in Surabaya city collaboration with City of Kitakyushu.



➔ Outline

Title	Paving the Way for a Sustainable Asia-Pacific: Regional Perspectives on Green Economy
Date	23-24 July 2013 (Tue./Wed.) [1st day] 23 July 9:30-18:00 (9:00 open) [2nd day] 24 July 10:00-17:30 (9:30 open)
Venue	PACIFICO YOKOHAMA, Conference Center 5F 1-1-1 Minato Mirai, Nishi-ku, Yokohama 220-0012, Japan
Organizers	Institute for Global Environmental Strategies (IGES) United Nations University Institute of Advanced Studies (UNU-IAS)
Collaborators (tentative)	United Nations Environment Programme (UNEP) United Nations Economic and Social Commission for Asia and the Pacific (UNESCAP) Asian Development Bank (ADB)
Supporters (tentative)	Ministry of the Environment, Japan (MOEJ) / Kanagawa Prefectural Government / Hyogo Prefectural Government / City of Kitakyushu / City of Yokohama / City of Kawasaki / National Institute for Environmental Studies / The Energy and Resources Institute (TERI) / Sustainability Science Consortium / Research Institute for Humanity and Nature (RIHN) / Yokohama National University

Smart City Week 2013

Smart City Week is a place where domestic and international people, information business gather to solve the city's problems. The theme for this year is "City Innovation." In addition to presentation of various innovations required to solve problems, a wide variety of solutions will be introduced. As local government summit, mayors from Asian cities including the cities which participate in MOEJ's "Leapfrog Development" project will gather and discuss issues on low-carbonization in the future.



➔ Outline

Theme	City Innovation	Special Collaborator	City of Yokohama
Date	October 21 (Monday) - October 25 (Friday), 2013	Supporters (tentative)	Ministry of Foreign Affairs of Japan (MOFA) Ministry of the Environment, Japan (MOEJ) Ministry of Economy, Trade and Industry (METI) Ministry of Land, Infrastructure, Transport and Tourism (MLIT) Cabinet Office
Venue	PACIFICO YOKOHAMA 1-1-1 Minato Mirai, Nishi-ku, Yokohama 220-0012, Japan		
Organizers	Nikkei Business Publications, Inc.		

Clean Asia Initiative Newsletter vol.11, Edited/Published by the Kyodo Public Relations Co., Ltd. in June 2013

[Edited/Published]

Kyodo Public Relations Co., Ltd. KYODO PUBLIC RELATIONS CO., LTD.

Dowa Building, 7-2-22 Ginza, Chuo-ku, Tokyo, 104-8158, Japan
Tel: +81-(0)3-3571-5171 Fax: +81-(0)3-3574-1005

International Cooperation Office, International Strategy Division,
Global Environment Bureau,
Ministry of the Environment, Japan

1-4-2 Kasumigaseki, Chiyoda-ku, Tokyo, 100-0013, Japan
Tel: +81-(0)3-5521-8248 Fax: +81-(0)3-3581-3423
<http://www.env.go.jp/earth/coop/coop/english/index.html>

