



Path to a Low-Carbon Asia

Creating a Joint Crediting Mechanism that aids leapfrog development



Contents

- 02 Achieving Leapfrog Development in Asia Feasibility Study on Joint Crediting Mechanism
- 04 Toward the Environmentally-Friendly Development of the City of Surabaya, Indonesia In Collaboration with the City of Kitakyushu
- 06 Low-Carbon Development of Ho Chi Minh City Team OSAKA & Ho Chi Minh City Cooperation Project for Developing a Low-Carbon City
- 08 Practices of Iskandar Economic Zone, Malaysia Low Carbon Society Blueprint for Iskandar, Malaysia
- 10 Three Platforms to Support Leapfrog Development in Asia Key to Realize Low-Carbon Development for Entire Cities
- 12 Using Japan's Low-Carbon Technologies to Achieve Leapfrog Development in Developing Countries Financial Support Programs by the Ministry of the Environment, Japan (from FY2014)
- 14 Report on Meeting Outcomes Publicity Activities by the Japanese Government to Support "Leapfrog Development of Developing Countries"
- 16 Participating Countries in Joint Crediting Mechanism / Event Notice

Achieving Leapfrog Development in Asia

Feasibility Study on Joint Crediting Mechanism

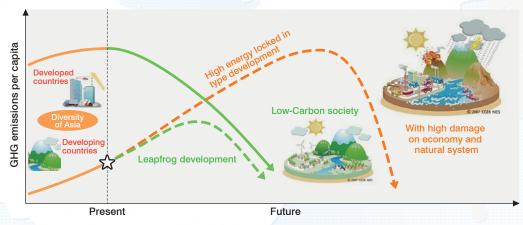
In those developing countries in Asia that have seen rapid economic development and remarkable increases in population, the environment has been deteriorating. This environmental decline has intensified as a result of increased greenhouse gas (GHG) emissions and shortages in urban infrastructure that go hand-in-hand with increased economic activity and lifestyle changes.

The Ministry of the Environment of Japan (MOEJ) supports leapfrog development in developing countries in Asia, so that a low-carbon society, sound material-cycle society and society in harmony with nature can be achieved simultaneously with

economic development. To achieve this, Japan has proposed and is advocating a new market mechanism called a Joint Crediting Mechanism (JCM).

In FY2013, 17 feasibility studies on large-scale JCM projects were carried out in eight Asian countries. This paper documents the outline and progress of these studies, focusing on Surabaya (Indonesia), Ho Chi Minh (Viet Nam), and Iskandar Development Region (Malaysia).

From now on, Japan will continue to support the realization of these projects, and expand similar projects to other cities in Asia.



<Conceptual diagram of leapfrog development>

Source: National Institute for Environmental Studies

Activities in Iskandar Development Region, Malaysia

P. 8



Practices of Iskandar Economic Zone, Malaysia Low Carbon Society Blueprint for Iskandar, Malaysia

Iskandar is working towards the low-carbon development of the entire region to achieve the goals set out in the "Low Carbon Society Blueprint for Iskandar Malaysia 2025"*, which was formally announced by Prime Minister Najib Razak in December 2012.

*This is a low-carbon development plan based on joint research by the Universiti Teknologi Malaysia (UTM), Kyoto University, Okayama University, and the National Institute for Environmental Studies with support from the Japan International Cooperation Agency (JICA) and the Japan Science and Technology Agency (JST).

Activities in Ho Chi Minh, Viet Nam



Low-Carbon Development of Ho Chi Minh City

P. 6

Team OSAKA & Ho Chi Minh City Cooperation Project for Developing a Low-Carbon City

In October 2013, the two cities of Ho Chi Minh and Osaka exchanged a memorandum of understanding aiming at the creation of a low-carbon society, and by using JCM, this transformation has already begun. With a combination of private sector state-of-the-art technology and appropriate system service infrastructure, Osaka City will promote the transfer of its comprehensive know-how on city management and urban development to Ho Chi Minh.

Activities in Surabaya, Indonesia

P. 4

Toward the Environmentally-Friendly
Development of the City of Surabaya, Indonesia
In Collaboration with the City of Kitakyushu

Surabaya has carried out cooperative activities with its Green Sister City, the City of Kitakyushu in Japan, in order to achieve a low-carbon city by using the JCM. In addition to the projects that are already being carried out in the city, Surabaya aims to reduce GHG emissions through energy-saving in buildings, controlling gasoline consumption of vehicles, and waste separation and reduction. Surabaya is achieving this through the introduction of low-carbon technologies and local governmental support from Japan.

Three Platforms to Support Leapfrog Development in Asia

P. 10

P. 12

Key to Realize Low-Carbon Development for Entire Cities

MOEJ is working to identify potential GHG emission reduction projects and design large-scale projects in Asia. To this end, platforms for businesses, local governments, and researchers have been set up so that partner countries, partner cities, and domestic stakeholders can exchange information.

Using Japan's Low-Carbon Technologies to Achieve Leapfrog Development in Developing Countries

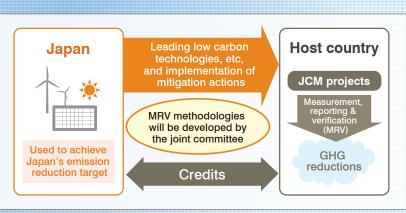
Financial Support Programs by the Ministry of the Environment, Japan (from FY2014)

MOEJ plans to introduce a funding support program from FY2014 in order to support the diffusion of low-carbon technologies and achieve low-carbon development at the global level. Low-carbon technologies that are highly efficient in reducing emissions tend to be difficult to introduce into developing countries due to high initial costs. MOEJ's new support program aims to assist the expansion of such advanced technology.



Joint Crediting Mechanism

The Joint Crediting Mechanism (JCM) is a mechanism that contributes to global emissions reduction and removal by ensuring flexible and quick implementation of technology transfers and measures in response to the specific conditions of developing countries. The mechanism is also used to quantitatively evaluate Japan's contributions to GHG emissions reduction, and achieve Japan's own reduction targets through various measures and the expansion of low-carbon technologies, products, and system service infrastructure to developing countries.



Toward the Environmentally-Friendly Development of the City of Surabaya, Indonesia

In Collaboration with the City of Kitakyushu

Over the past few years of cooperation with Kitakyushu, Surabaya has achieved remarkable improvements in its urban environment. One good example is the success of waste reduction through the promotion of composting and the greening of urban areas using the compost produced. These two cities became Green Sister Cities in November 2012 and have further strengthened their cooperation in the field of the environment. Taking advantage of their relationship and access to knowledge and technologies of Kitakyushu and local companies, Japan has started feasibility studies on a large-scale project design of JCM in four sectors: energy, transportation, waste, and water resources.

Energy conservation in industrial estates and large-scale commercial facilities

Surabaya is the second largest city in Indonesia with a population of over three million. The city is home to large-scale commercial facilities and the largest industrial estates in Indonesia. The NTT Data Institute of Management Consulting carried out a project feasibility study in the area, looking at energy conservation for these facilities. The study indicated that there was potential to reduce energy consumption through the introduction of efficient heating/cooling systems,





switching to LED lighting, and carrying out fuel conversion from heavy oil to gas for boilers used for cleaning. In addition, the study indicated that GHG emissions could be drastically reduced with the introduction of a co-generation system in SIER (Surabaya Industrial Estate Rungkut), which has been promoted in a study by the Ministry of Economy, Trade and Industry (METI) and the

City of Kitakyushu since FY 2011. The application of the same system to PIER (Pasuruan Industrial Estate Rungkut) was also suggested.





Large-scale commercial facility

Introduction of low-carbon vehicles and improvement of operation efficiency

Like many developing countries in Asia, traffic congestion in Surabaya is getting worse due to the growing numbers of cars and motorbikes. Almec VPI carried out a study on the potential to improve car operation efficiency using GPS in vehicles and introduce low-carbon vehicles as a low-carbon measure for transportation.

The study on GPS systems indicated that there is potential to reduce GHG emissions by improving traffic management in areas with heavy traffic congestion, discouraging idling, and promoting eco-driving. The study also showed the potential to promote the use of natural gas in buses and taxis. Construction of infrastructure like natural gas supply stations has already started in Surabaya, and the Indonesian government has expressed its strong support of the use of natural gas.



Waste reduction and reuse

Waste in Surabaya is landfilled at Benowo Landfill, the city's only disposal site which has almost reached its capacity.

To improve the existing waste relay stations in the city, Nishihara Corporation constructed a "Super Depo", an intermediate waste treatment/recycling facility and started operations in March 2013. A large-scale reduction of waste (80%) is expected through separation and recycling, and will also lead to a cut in fuel consumption for garbage trucks. It will also contribute to reductions in GHG emissions.

A study carried out by Amita Corporation showed that local cement contractors use less cement raw material from industrial waste than their counterparts in Japan do. This indicates that the use of the industrial waste as cement raw material could significantly reduce the amount of waste landfilled.

In addition, Hitachi Zosen Corporation is carrying out a study on the possible reduction of landfilled waste and energy recovery from waste combustion in anticipation of the possibility of constructing waste incineration facilities.

These 3 projects are expected to reduce waste substantially and solve waste problems in Surabaya.





Outside and inside views of Super Depo

Improvement of water supply system and energy conservation in sludge and sewage treatment plants

Matsuo Sekkei and the Kitakyushu Water and Sewer Bureau carried out a study on the potential to reduce GHG emissions by improving sewage treatment plants and distribution pipes. The study showed that the plants and piping networks were being regularly maintained. Therefore, there is little potential to achieve a dramatic reduction in GHG emissions with the exception of replacing aging pumps at the plants. On the other hand, the sludge discharged from sludge treatment plants in the SIER

Industrial Estate (about 120-160 tonnes per month) is transported by truck to a distant treatment plant in Bogor, which is 650 km away. Therefore, dehydration of sludge may help reduce fuel consumption of the trucks.

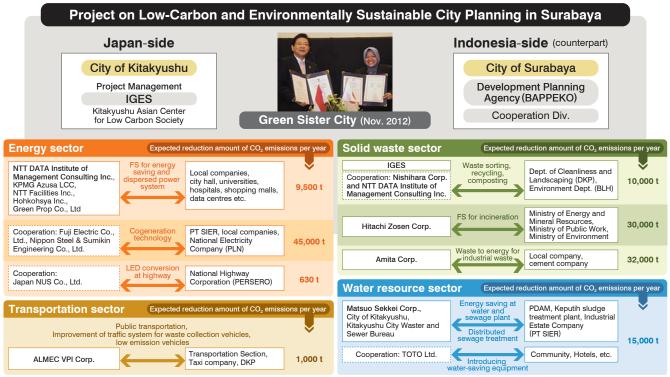


Water treatment facility

Future prospects

Based on the solid relationship between Surabaya and Kitakyushu for many years, these studies could be undertaken over a relatively short period of time. This city to city cooperation really is a major advantage for the promotion of these kinds of studies and also contributes to the efficient realization of low-carbon cities in developing countries.

These studies showed that it is possible to develop projects on energy conservation in large-scale commercial facilities, as well as highlighting the use of natural gas in vehicles, and reduction of waste. Detailed studies will continue for other potential projects in order to develop practical proposals.



<Organizational chart>

(Note) Projects of partner companies are carried out independently of studies on large-scale JCM project design (Ministry of the Environment).

Low-Carbon Development of Ho Chi Minh City

Team OSAKA & Ho Chi Minh City Cooperation Project for **Developing a Low-Carbon City**

Ho Chi Minh City is Viet Nam's largest economic centre with a population of seven million, and is known to be particularly vulnerable to climate change. It is estimated that 70% of the city is in danger of flooding, so low-carbon and climate resilient city development is urgently needed.

Osaka City has cooperated with Ho Chi Minh City as a business partner in various fields for more than 20 years. These cities exchanged a memorandum of understanding on the development of a low-carbon city of Ho Chi Minh on 21 October 2013, and have started their activities with the use of the JCM. This section will introduce the project overview and study results proposed for the sectors of waste, water resources, energy, and transportation.



Conceptual Diagram of a Low-Carbon City

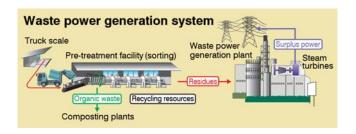
Global Ho Chi Minh Osaka Steering Environmen Centre City (HCMC) Climate Change Developing Foundation (GEC) Steering Board Low Carbon City HCMC/Osaka city Conference Joint Conference (Secretariat:GEC) **Private Companies** NIKKEN SEKKEI RESEARCH INSTITUTE CHUO FUKKEN CONSULTANTS CO., LTD. SHIMIZU CORPORARION NIPPON EXPRESS Group Hitachi Zosen Corporation K. K. Satisfactory International Kobelco Eco-Solutions Co., Ltd. EX Research Institute Ltd.

Survey Implementation System

Introduction of waste power generation system

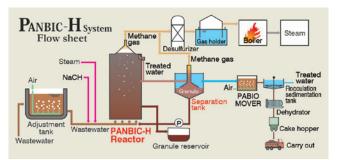
Each day, 8,000 tonnes of waste is generated in Ho Chi Minh City. All of that is landfilled except 100 tonnes of waste that is composted. In preparation for future increases in waste and the shortage of disposal sites, Hitachi Zosen Corporation and K.K. Satisfactory International recommended the introduction of a waste power generation facility (expected reduction in GHG emissions annually: 7,200 tonnes). To date, the companies have collected basic data for waste separation and collection, as well as waste composition from some model households. The study

will investigate appropriate waste collection methods and systems (collection vehicles/staff, data management, etc.) in anticipation of the introduction of waste separation at source for implementing incineration of urban waste.



Introduction of highly efficient factory effluent treatment systems

Kobelco Eco-Solutions combines water pollution control technologies in Japan and makes recommendations to Ho Chi Minh City in order to create optimal processes for efficient and proper treatment levels (expected reduction in CO₂ emissions annually: 7,000 tonnes). The interviews with HEPZA (Ho Chi Minh City Export Processing and Industrial Zones Authority), which manages industrial estates in Ho Chi Minh City, and individual industrial estates, as well as on-site surveys revealed the local needs regarding sludge treatment, anaerobic treatment, and wastewater recycling. Detailed studies will continue to examine how economic support and incentives can assist in the introduction of highly efficient treatment technologies.



Fluidized bed-type high load anaerobic wastewater treatment equipment

Use of Japan's energy-saving technologies and development of local energy supply systems

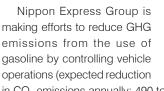
Rapid urbanization and the need to improve living environments have increased energy consumption in urban buildings. In order to turn Ho Chi Minh into a low-carbon city, it is necessary to promote energy saving not only in individual buildings, but also in city blocks.

Shimizu Corporation is promoting energy saving in buildings with a combination of Japan's state-of-the-art products and technologies. This includes optimizing lighting fixtures, optimizing efficient space heating and cooling (HVAC) equipment and operating conditions, and energy management and control of buildings through the introduction of smart building energy management systems (BEMS). The company is also promoting energy saving in individual city blocks with the installation of energyefficient urban energy supply centres (expected reduction in CO₂ emissions annually: 1,600 tonnes). To date, systems set around dehumidifying air conditioning have been developed based on the outcomes of studies on energy-saving building technologies that are suitable for local conditions. In the future, energy consumption and GHG emissions reduction will be calculated to reflect actual usage and equipment/facility scale in order to develop project proposals.

Improving the urban transport environment making full use of various approaches

Ho Chi Minh City is plagued by chronic traffic congestion. This causes environmental problems and affects human health, with a rising number of traffic accidents and increased air pollution. The city can take various approaches to overcome such environmental problems and reduce GHG emissions.

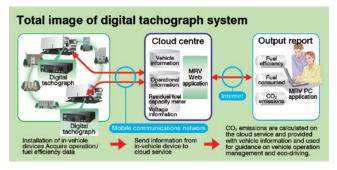
gasoline by controlling vehicle

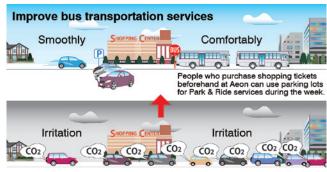


in CO₂ emissions annually: 490 tonnes). The company is focusing on improving (1) the fuel efficiency of trucks based on the analysis of data from digital tachographs and (2) transportation efficiency by aggregating transport/delivery vehicles. Studies have revealed that there is room to examine financial frameworks for reducing initial investments and allocation of incentives for local businesses.

In cooperation with large-scale shopping centres in the suburbs, Nikken Sekkei Research Institute is looking into the possibility of a "Park & Ride (P&R)" system. This will use parking lots, which are not full during the week, as places for people to board buses to commute into the city centre. The effects of each policy scenario are evaluated by developing a model on behavioural changes of residents based on the results of person trip surveys and questionnaires. In addition, the institute has carried out surveys of shopping centres in order to find out candidate sites for the P&R system.

Chuo Fukken Consultants is investigating the potential to introduce electric motorbikes and community bicycles. Since Ho Chi Minh has many narrow streets, it is expected that the use of motorbikes will continue to serve as an important means of transportation in the city. The study will examine issues related to operation regulations for electric bikes, examination of electric charging infrastructure arrangements, and sharing mobility, in addition to parking management and project schemes.





Future prospects

Studies have identified technological, financial and system-based issues that must be addressed in order to transfer Japan's lowcarbon technologies to Ho Chi Minh City. Under the city-to-city cooperation and government-private sector cooperation, Osaka and Ho Chi Minh will team up and continue to look for solutions for developing project proposals by referring to Japan's low-carbon policies and systems.



Practices of Iskandar Economic Zone, Malaysia

Low Carbon Society Blueprint for Iskandar, Malaysia

Since 2006, a large-scale urban development project has been carried out in the Iskandar Economic Zone located in the State of Johor in Malaysia. Research institutes in Japan and Malaysia worked together to create the Low Carbon Society Blueprint for Iskandar Malaysia 2025 (LCSBP), in order to promote the low-carbon development of the entire city while also maintaining economic growth. The LCSBP was formally announced by Prime Minister Najib Razak in December 2012.

A definitive measure of the LCSBP is the development of a "smart town" in the Iskandar region that uses the knowledge and experiences of the Smart City Project in Japan and the development of the ESCO project. Studies are currently being carried out for large-scale project formation of JCM.

Low Carbon Society Blueprint for Iskandar Malaysia (LCSBP)

The Low Carbon Society Blueprint for Iskandar Malaysia 2025 (LCSBP) is a plan for low-carbon development that was emerged from joint research by the Universiti Teknologi Malaysia (UTM), Kyoto University, Okayama University, and the National Institute for Environmental Studies with support from the Japan International

Cooperation Agency (JICA) and the Japan Science and Technology Agency (JST). Currently, the LCSBP contains 12 actions, 53 sub-actions, 96 activities, and 300 programmes. Almost 13 million tonnes of GHG emissions are expected to be cut annually when all actions are implemented.



Prime Minister Najib

LCSBP implemented with the optimal use of energy in "Fujisawa" homes

The "Fujisawa Sustainable Smart Town (FSST)" is a project implemented by Panasonic in Fujisawa city, Kanagawa Prefecture in Japan. Experiences from this would help implement the LCSBP. By comparing Iskandar's low-carbon vision with FSST,

appropriate solutions and Japanese technologies and products will be identified for the low-carbon development of the Iskandar

First there needs to be optimization of energy use in households. Then, it will be scaled up to city blocks and the entire community. Discussions have already started with several local developers to specify sites for demonstration projects. Specific city designs and solution services will be examined in the future.

LCSBP action plans for achieving a low carbon society

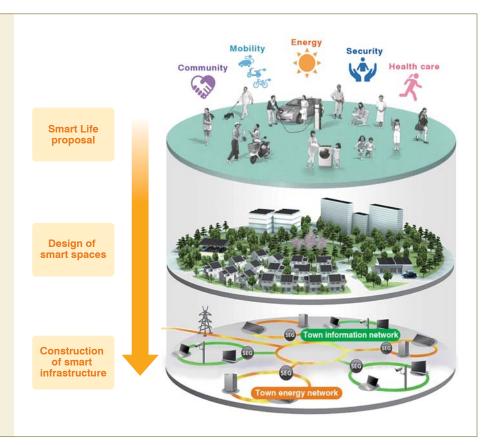
Action Names		Themes	The Fujisawa Experience			Contributions to Iskandar
1	Integrated Green Transportation	GREEN ECONOMY		The Fujisawa Experience		Contributions to iskandar
2	Green Industry			Best mix of energy conservation, energy creation, and energy storage Visualization of electricity consumption		Reduction of CO ₂ emissions with the optimal use of energy in households
3	Low Carbon Urban Governance					
4	Green Buildings & Construction					
5	Green Energy System & Renewable Energy					
6	Low Carbon Lifestyle	GREEN COMMUNITY		Creation of community platform		Expansion from households to housing sections and community areas
7	Community Engagement & Consensus Building					
8	Walkable, Safe, Livable City Design	GREEN ENVIRONMENT		Casual observation services for entire city Formation of community activities to reduce waste Mobility sharing to expand the use of eco-cars and electric bikes		
9	Smart Growth					
10	Green and Blue Infrastructure & Rural Resources					
11	Sustainable Waste Management					
12	Clean Air Environment					

Selection and implementation plan for demonstration project to achieve goals set out in LCSBP

Fujisawa Sustainable Smart Town (FSST)

Panasonic and Fujisawa City offer the latest services to residents. with local features, the residents' comfort and future lifestyles are considered from various angles, including energy, security, mobility, and healthcare, to put unique solutions into place to support the development of smart community life.

Figure (right): Concept of the Panasonic "Fujisawa Model"



Moving towards the business development of ESCO projects

Japan Facility Solutions (JFS) is studying the feasibility of an ESCO project in the Iskandar region. To date, JFS has obtained a cooperation agreement with a subsidiary of Tenaga Nasional berhad (TNB), a major electric power company run by the



Cooperation agreement for study

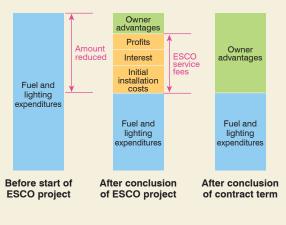
government. TNB was selected based on its willingness and capability to develop the ESCO project. JFS has also selected a shopping mall and office building in Iskandar as potential buildings for energy-saving renovation. In the future, work will be carried out with local businesses on energy-saving audits and analysis and a detailed design of the ESCO business model will be developed.



Local shopping mall (Angsana Shopping Mall)

What are ESCO projects?

ESCO projects guarantee energy-saving effects with the integrated implementation of energy-saving audits and analysis, repair work and the operation of newly introduced equipments. ESCO projects cover the expenses associated with these operations by reducing light, heating, and water utility costs. Users can pay expenses from the reduced utility costs, and are not responsible for investments such as equipment repair expenses. All reduced utility costs after the end of the contract term become the profits of the users. These projects help users gain an understanding of energy savings and promote the diffusion of energy-saving technologies.



ESCO Business Model

Three Platforms to Support Leapfrog Development in Asia

Key to Realize Low-Carbon Development for Entire Cities

MOEJ is working to identify potential GHG emissions reduction projects and design large-scale projects in Asia. To this end, it established three platforms in 2013 for businesses, local governments, and researchers (research institutes and universities) so that partner countries, cities, and domestic stakeholders can exchange ideas.

Each platform contributes to the low-carbon development of Asia by setting up an exclusive portal site to provide information on the status of environmental problems and related policies in Asian countries. Various events and seminars are also organized.

Creating low-carbon cities in Asia Large-scale project design Environmental improvement to expand the use of low-carbon technologies International Exchange Portal site events meetings Local government **Business platform** Research platform platform One-stop service to support Promotion of cooperation and Support for exchange and business development overseas linkages between environmentallycooperation between researchers advanced local governments and policymakers Sharing important information Support for overseas promotion for businesses (local environmental Support for the creation of regulations, needs, list of support of local businesses through low-carbon development plans in intercity linkages with developing measures of government agencies) different cities/countries countries Strategic partnership support for Promotion of joint research businesses

Platforms by topic



Portals and information published

Information site for low-carbon development in Asia

http://www.env.go.jp/earth/coop/lowcarbon-asia/english/



- Trends in international negotiations and related systems
- Low-carbon/environmental policies in Asian countries
- Governmental agencies in Asian countries
- · Governmental support systems for overseas business development, other

Business linkage support site for low-carbon development in Asia

http://lowcarbon-asia.org/english/



- Low-carbon information of Japanese companies
- Consultation services for overseas development
- Consultation information that offers support for the development of eco-businesses overseas, other



Information site for local governments for the development of a low-carbon Asia

http://www.env.go.jp/earth/coop/lowcarbon-asia/english/localgov/



- Support measures for international environmental cooperation
- International networks and linkages/cooperation activities of local governments
- Consortium information with businesses



Low Carbon Asia Research Network: LoCARNet

http://lcs-rnet.org/



- Low-carbon activities in Asia
- Researchers in low-carbon fields Low-carbon research outcomes



Business platform

This platform provides information and support for private companies aiming to deploy advanced low-carbon technologies in Asia. A portal site offers information on how to meet local needs and what regulations are in place across the region. There is also information on assistance available from the Japanese government. Through seminars and other activities, the platform gives supports to companies wanting to transfer their advanced low-carbon technologies.



Local government platform

The City of Kitakyushu utilizes its experiences in city-to-city cooperation to provide support for local companies that are deploying advanced low-carbon technologies in Asia. The cities of Osaka, Kawasaki and Yokohama have also launched similar support services. These local government platforms offer information that is needed to help more local governments establish business models to support the transfer of environmental technologies by companies in Japan, including small- and mid-sized businesses.

The platform also assists city-to-city cooperation so that know-how is transferred to cities in developing countries.



Research platform

The Low Carbon Asia Research Network (LoCARNet) is an open network for researchers, experts, and supporters that take part in the development of scientific low-carbon policies and their implementation in Asia. The research platform contributes to concrete projects by further strengthening its function of facilitating policy and research dialogues, supporting the development of low-carbon plans (NAMA), creating a research community, and building capacity with the LoCARNet researchers and research institutes. The research platform ensures comprehensive information dissemination, systemic collection of information in various areas of knowledge, and makes information available to international communities.

Using Japan's Low-Carbon Technologies to Achieve

Leapfrog Development in Developing Countries

Financial Support Programs by the Ministry of the Environment, Japan (from FY2014)

Financial support for leapfrog development (fund)

Project outline

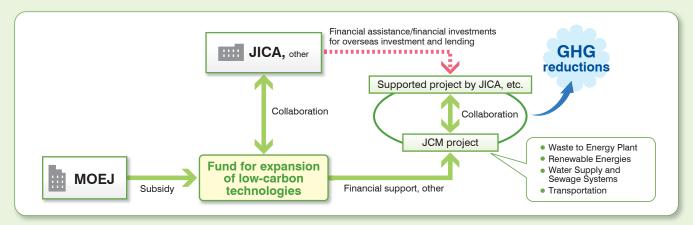
MOEJ will establish a fund for supporting projects that collaborate with Japanese organizations and agencies such as JICA, and reduce GHG emissions. Through this fund, Japan aims to advance the spread of the latest low-carbon technologies, which are highly effective in cutting emissions even if initial costs are high. MOEJ aims to help cities and regions make the transition to a low-carbon

society by developing low-carbon projects in various sectors. JCM projects are expected to provide credits which contribute to GHG reduction target in Japan.

Project scheme

Subsidies from Japanese government to create funds

<Project period> FY2014-2020



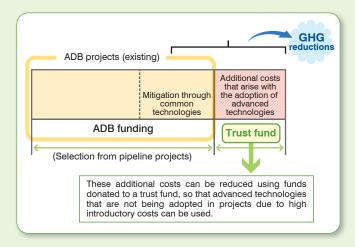
Financial support for leapfrog development [contributions to Asian Development Bank (ADB)]

Project outline

Introducing advanced low-carbon technologies can give rise to additional costs. With support from the MOEJ, the ADB will create a trust fund to fill the gap between the cost of advanced technologies and conventional technologies, so that advanced technologies can be adopted in ADB projects. This financial support will tie development support from the ADB to the shift to leapfrog development toward low-carbon societies.

Project scheme

- <Contributions> Asian Development Bank Trust Fund
- <Project period> FY2014-2020





Ministry of the Environment, Japan (MOEJ) will introduce financial programs from FY2014 to help developing countries achieve low-carbon development using advanced low-carbon technologies. With the use of these technologies, Japan will support the broad expansion of advanced technologies that have a high impact on reducing emissions, but that tend to be difficult to introduce in developing countries due to high initial costs. MOEJ will support developing countries so that they can leapfrog to low-carbon societies.

Introduction of facilities and equipment under the Joint Crediting Mechanism (JCM)

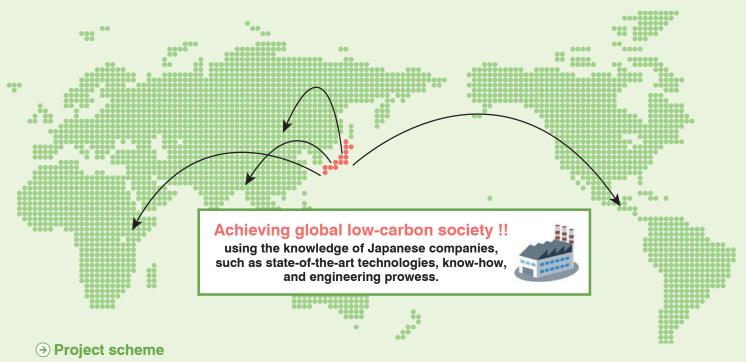
Project outline

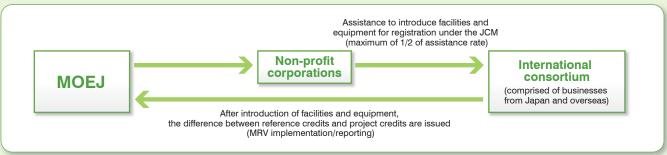
In order to reduce energy-origin CO₂ emissions using state-ofthe-art technologies, subsidies are provided to introduce facilities and equipment into developing countries that have agreed to, or are expected to agree to the JCM. Measurement, reporting and verification (MRV) is carried out after the introduction of these facilities and equipment, and the difference between reference emissions and project emissions will be registered as JCM credits.

This financial support will assist with the introduction of low-carbon technologies as it will be offered in investment stages.

Project scheme

- <Eligible for subsidy> International consortium comprised of businesses from Japan and overseas
- <Subsidy rate > Maximum of 1/2 of assistance rate
- <Project period> FY2014-2020









Publicity Activities by the Japanese Government to Support

Leapfrog Development of Developing Countries"

Japan's support policies for "leapfrog development of developing countries" have been actively introduced at various conferences organized both in and outside Japan.

Japan-ASEAN Ministerial Dialogue on Environmental Cooperation and the 12th ASEAN+3 Environment Ministers Meeting

The first Japan-ASEAN Ministerial Dialogue on Environmental Cooperation was held in Surabaya, Indonesia on 26 September 2013, together with the 12th ASEAN+3 Environment Ministers Meeting.

The Dialogue was held to commemorate the 40th anniversary of cooperation between Japan and ASEAN. It focused on the JCM and activities of environmentally sustainable cities, built on the city-to-city environmental cooperation between the cities of Kitakyushu and Surabaya.

ASEAN countries expressed gratitude for Japan's cooperation and indicated their expectations of the progress of projects using

JCM, as well as the intention to expand city-to-city environmental cooperation with Japanese cities to other cities in ASEAN.

The ASEAN+3 Environment Ministers Meeting with China and Korea featured reports and discussions on environmental cooperation between Japan, China, Korea, and ASEAN. ASEAN participants expressed a strong interest in supporting policies presented by Japan that help achieve "leapfrog development in developing countries". Japan also presented regional cooperation for air pollution measures in Asia, which was agreed upon at the Tripartite Environment Ministers Meeting of Japan, China, and Korea in May 2013. Participants agreed to cooperate to promote regional cooperation through the use of existing frameworks including those by UNEP and CAA.

The next ASEAN+3 Environment Ministers Meeting will be held in Laos in 2014.



Statement by Mr. Kozo Akino, Parliamentary Vice-Minister of the Environment, at the meeting of the ASEAN-Japan Dialogue on Environmental Cooperation



Commemorative photo of the ASEAN+3 **Environment Ministers Meeting**

Smart City Week 2013

MOEJ organized two seminars, "Introducing Low Carbon Cities in Asia" and a seminar for businesses on "Low Carbon Development in Asia," during Smart City Week 2013 on 22 October 2013 in Yokohama, Japan. Participants discussed how to cooperate towards the low-carbon cities in the Asian region.

Introducing Low Carbon Cities in Asia

Cities from developing countries in Asia, the Japanese government, and international organizations took part in this seminar. Participants shared good practices for the leapfrog development toward low-carbon cities while achieving economic growth. They also discussed how to overcome barriers. In conclusion, participants recognized that Asian cities have to address not only local environment issues but global climate change issues. Participants also realized that it is important to develop low-carbon cities with the integral use of financial support through JCM, city-to-city cooperation and development of human resources.

Business Seminar on "Low Carbon Development in Asia"

This seminar explained various support schemes implemented by the Japanese government (MOEJ, Ministry of Foreign Affairs, and METI) for companies with state-of-the-art environmental technologies that can be deployed overseas. Local governments (Kawasaki, Kitakyushu, Yokohama) shared their activities supporting those companies through city-to-city cooperation. In addition, a platform (p10-11) was launched that offers information required by companies.



Panel discussions





Participants at the Business Seminar on "Low Carbon Development in Asia"



Participants at the seminar on "Introducing Low Carbon Cities in Asia"

19th Conference of the Parties to the United Nations Framework Convention on Climate Change (COP19)

COP19 was held in Warsaw, Poland from 11-23 November 2013. On behalf of the Japanese government, Mr. Nobuteru Ishihara, Minister of the Environment, presented Japan's new diplomatic strategy to deal with global warming named the "Actions for Cool Earth: ACE," announced by Prime Minister Shinzo Abe just

before COP19. Actions for "Cool Earth" are (1) Innovation of Low Carbon Technologies, (2) Application of existing technologies and (3) Partnership with various stakeholders. It includes financial support to developing countries of JPY1,600 billion (approx. USD 16 billion) of both public and private funding for three years from 2013. In addition, Mr. Ishihara held a JCM Partners Roundtable at which all eight countries that signed the JCM met to discuss the promotion of related projects. In addition to this, ten side events on JCM were held introducing Japanese policies and actions.



Ministerial statement



With representatives from JCM signatory countries

Participating Countries in Joint Crediting Mechanism

Japan has held discussions on the JCM with developing countries since 2011. As of January 2014, Japan has signed bilateral agreements with ten countries (Mongolia, Bangladesh, Ethiopia, Kenya, the Maldives, Viet Nam, Laos, Indonesia, Costa Rica and Palau). Over the next three years, Japan is planning to expand the number of JCM signatory countries to more than 16.



Mongolia 8 January 2013 (Ulan Bator)



Bangladesh 19 March 2013 (Dhaka)



Ethiopia 27 May 2013 (Addis Ababa)



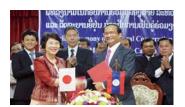
Kenya 12 June 2013 (Nairobi)



Maldives 29 June 2013 (Okinawa)



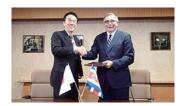
Vietnam 2 July 2013 (Hanoi)



Lao-PDR 7 August 2013 (Vientiane)



Indonesia 26 August 2013 (Jakarta)



Costa Rica 9 December 2013 (Tokyo)



Palau 13 January 2014 (Ngerulmud)

Event Notice

- Regional Workshop of the Climate and Clean Air Coalition (CCAC) initiative "Mitigating short-lived climate pollutants (SLCPs) from the municipal solid waste (MSW) sector" (23-24 February 2014, Surabaya, Indonesia)
- 5th Regional 3R Forum in Asia (25-27 February 2014, Surabaya, Indonesia)
- 5th High Level Seminar on Environmentally Sustainable Cities (28 February 1 March 2014, Surabaya, Indonesia)
- The 16th Tripartite Environment Ministers Meeting Among China, Japan, and Korea (TEMM) (28-29 April 2014, Daegu, Republic of Korea)

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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/



2108-11 Kamiyamaguchi, Hayama, Kanagawa, 240-0115, Japan Tel: +81-(0)46-855-3700 E-mail: cai@iges.or.jp http://www.env.go.jp/earth/coop/coop/english/cai/about.html





