Japan's support to realize "Leapfrog" Low Carbon Development in Asian Cities

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1.(1) Basic Concept of the JCM

- Facilitating diffusion of leading low carbon technologies, products, systems, services, and infrastructure as well as implementation of mitigation actions, and contributing to sustainable development of developing countries.
- Appropriately evaluating contributions to GHG emission reductions or removals from Japan in a quantitative manner, by applying measurement, reporting and verification (MRV) methodologies, and use them to achieve Japan's emission reduction target.
- Contributing to the ultimate objective of the UNFCCC by facilitating global actions for GHG emission reductions or removals, complementing the CDM.



1. (2) Countries with which Japan has signed on bilateral documents

Japan has held consultations for the JCM with developing countries since 2011 and signed the bilateral document for the JCM with Mongolia, Bangladesh, Ethiopia, Kenya, Maldives, Viet Nam, Lao PDR, Indonesia, Costa Rica and Palau.

> Intend to increase the number of signed countries to at least 16 in 3 years



<u>Mongolia</u> On January 8, 2013 (Ulaanbaatar)



<u>Bangladesh</u> On March 19, 2013 (Dhaka)



<u>Ethiopia</u> On May 27, 2013 (Addis Ababa)





<u>Kenya</u> On June 12,2013 (Nairobi)

<u>Maldives</u> On June 29, 2013 (Okinawa)



<u>Viet Nam</u> On July 2, 2013 (Hanoi)



<u>Lao PDR</u> On August 7, 2013 (Vientiane)



<u>Indonesia</u> On August 26, 2013 (Jakarta)



<u>Costa Rica</u> On December 9, 2013 (Tokyo)



Palau On January 13, 2014 (Ngerulmud)

Japan held the 1st Joint Committee with Mongolia, Bangladesh, Ethiopia, Kenya, Viet Nam and Indonesia respectively. 2. New Financial Support Program for the International Deployment of Low-Carbon Technologies ~Achieving "Leapfrog" Development in Developing Countries~

Japan helps developing countries in Asia Pacific region **"Leapfrog" toward Low-Carbon Societies** by Japanese advanced low-carbon technologies .

Basic Concept

- Creation of "Low Carbon Societies" by de-carbonizing social infrastructure (water supply and sewerage, waste to energy plant, etc.) in developing countries.
- Large-scale deployment of Japanese advanced low-carbon technologies
- Transfer technologies, know-how and social systems as a package



Approach

- ★ Deploying Japan 's advanced low-carbon technologies in Asia-Pacific region, in cooperation with development assistance agencies including JICA and ADB.
- ★ Establishing the "Joint Crediting Mechanism (JCM)" which provides win-win solution for developing countries and Japan.

[Support for Initial Costs]

-New Financial support for "Leapfrog" development

[Support for establishing the JCM Framework / Creating the JCM projects] —Promoting JCM Feasibility Studies and Capacity Building

3.(1) Project on Low-Carbon City Planning in Surabaya



Cooperation: Findings of other projects in Surabaya funded by other sources were shared to this project.

3.(2) City-to-City Cooperation between Ho Chi Minh & Osaka

Framework for City-to-City Cooperation

- Both cities have cooperated over 20 years for capacity building and technical assistance in various sectors such as industry, water and sewerage, and waste sector
- [October 22, 2013] MOU on Developing Low Carbon City between Ho Chi Minh City (HCMC) and Osaka City
 - Signed by Osaka City Mayor and Chairman of HCMC People's Committee
 - Aimed to promote as many low carbon projects as possible by utilizing Joint Crediting Mechanism (JCM) in identified priority areas in HCMC
 - Elaborate HCMC's Low carbon city Action Plan by 2015 in collaboration

Outline of Activities in JFY 2013

- (Research project funded by the MOEJ)
- 1. Establish a interdepartmental organization in both cities
- 2. Conduct Feasibility Studies (FS) of JCM (Low Carbonization) projects in each areas
- ·City planning/ Transportation, Energy , and Waste sector
- 3. Consider Low carbon city action plan of HCMC
- 4. Evaluate the possible financial mechanism for the future



International Symposium for Developing Low Carbon City (October 21, 2013)



(Website) http://osaka-hcm-lcc.net/

4. Advanced Low Carbon Technologies





power fluctuation from Renewable energy source

by utilizing Battery Charged Discharged function.

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ESCO (Energy Service Company) Business

- No initial cost for building owners
- > Cost for Installation of Energy Saving Technologies is paid by ESCO company
- ESCO company will get a part of energy saving benefits
- Market size of ESCO: US\$ 9 billion,000 (China), US\$ 400 M(Japan), US\$ 70 M (Thailand).
- ESCO are NOT familiar in the developing countries in Asia yet.





Water Saving (The relation of water and CO2)



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Thank you!

Please find more info on JCM at http://www.mmechanisms.org

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2 (1) Financing Programme for JCM Model Projects



- Scope of the financing: facilities, equipment, vehicles, etc. which reduce CO₂ from fossil fuel combustion as well as construction cost for installing those facilities, etc.
- Eligible Projects : starting installation after the adoption of the financing and finishing installation within three years.

2 (2) New Support Program Enabling "Leapfrog" Development (Fund)

Background and Purpose

By utilizing the superior and advanced low-carbon technologies, Japan assists the developing countries to enable to "Leapfrog" development and let the developing countries achieve the "Harmony with Nature, Low Carbon and Sound Material Cycle" Society" as the new paradigm suit to 21th Century in Asia Pacific Area

Scheme

(1) Financing from MOEJ to SPV(Special Purpose Vehicle)(2) Project Period: 2014 to 2020

Description

Establishing the fund to finance the projects which have the better efficiency of reducing GHG emission in collaboration with the ones supported by JICA and other national organizations. Due to this finance scheme, the expansion of superior and advanced low-carbon technologies in Japan could be done. By building the low carbon society as the whole city wise and area wise in the wider fields, acquiring Credit by JCM.

Effectiveness

- Contribution to acquire the Credit by JCM as well as reducing the GHG in the developing countries.
- Expanding the superior and advanced low-carbon technologies in Japan to Asia and Pacific.



2 (3) New Support Program Enabling "Leapfrog" Development (ADB)

Background and Purpose

By utilizing the superior and advanced low-carbon technologies, Japan assists the developing countries to enable to "Leapfrog" development and let the developing countries achieve the "Harmony with Nature, Low Carbon and Sound Material Cycle" Society" as the new paradigm suit to 21th Century in Asia Pacific Area

Scheme

Fund to ADB Project Period : 2014 to 2020

Description

The low-carbon technologies which are superior, advanced but too expensive would be adopted, as the cost is covered by the fund from Japan. Due to this finance scheme, the assistances to developing countries by ADB lead to the "Leapfrog" developments and Japan acquires Credit by JCM.

Effectiveness

- Contribution to acquire the Credit by JCM as well as reducing the GHG in the developing countries.
- Expanding the superior and advanced low-carbon technologies in Japan to Asia and Pacific.



Reference: http://www.env.go.jp/guide/budget/h26/h26-gaiyo/034.pdf