

MOEJ Initiatives on Bilateral Offset Credit Mechanism for Mitigating Climate Change

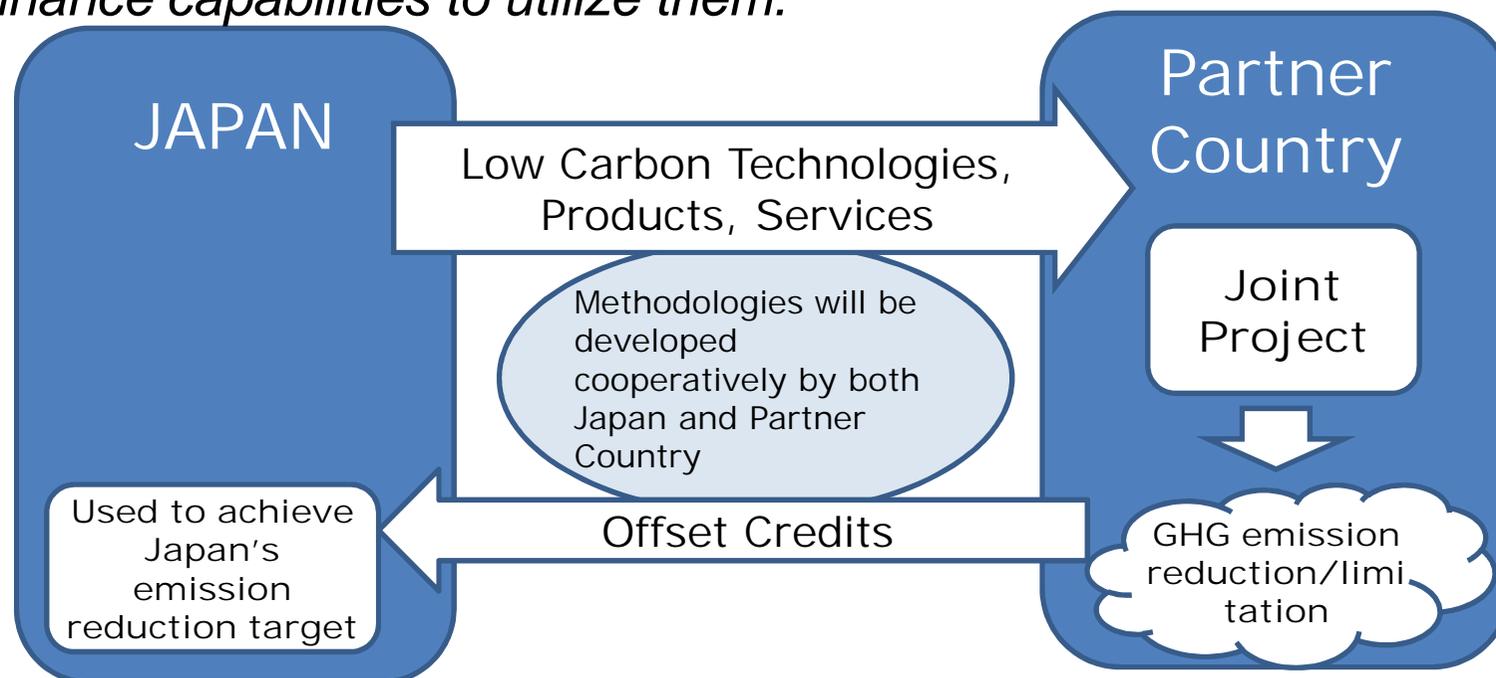
March 2012

Office of Market Mechanisms
Climate Change Policy Division
Ministry of the Environment, Japan (MOEJ)

Image of Bilateral Offset Credit Mechanism

Purposes of the BOCM

- ◆ *Contribute to the ultimate objective of the UNFCCC through promotion of mitigation activities globally.*
- ◆ *Facilitate the bilateral cooperation in the field of climate change in such a way that best suits each country's national circumstances.*
- ◆ *Contribute to the sustainable development of developing countries.*
- ◆ *Appropriately evaluate the contribution to GHG emission reductions or removals.*
- ◆ *Facilitate diffusion of low carbon technologies, products and services and enhance capabilities to utilize them.*



MOE-J's initiatives to promote the BOCM

(1) Feasibility Studies (FS) for potential BOCM projects/actions

- Called for proposals from Japanese entities on for potential BOCM projects/actions, in order to acquire knowledge and experience for designing and implementing the BOCM.
- 29 projects were selected for FY2011, increased from three in FY2010.

(2) Information platform for the BOCM

- New Mechanisms Information Platform website was established to provide the latest movements and information on the BOCM.
- Manage help desk for new market mechanisms, in order to respond inquiries.

(3) Capacity Building for the BOCM

- Consultations with government officials and private firms in developing countries in order to develop capacity to implement new market mechanisms.
- Capacity building for MRV was launched in Asia, Latin America and Africa, including developing MRV methodologies reflecting each national circumstance.

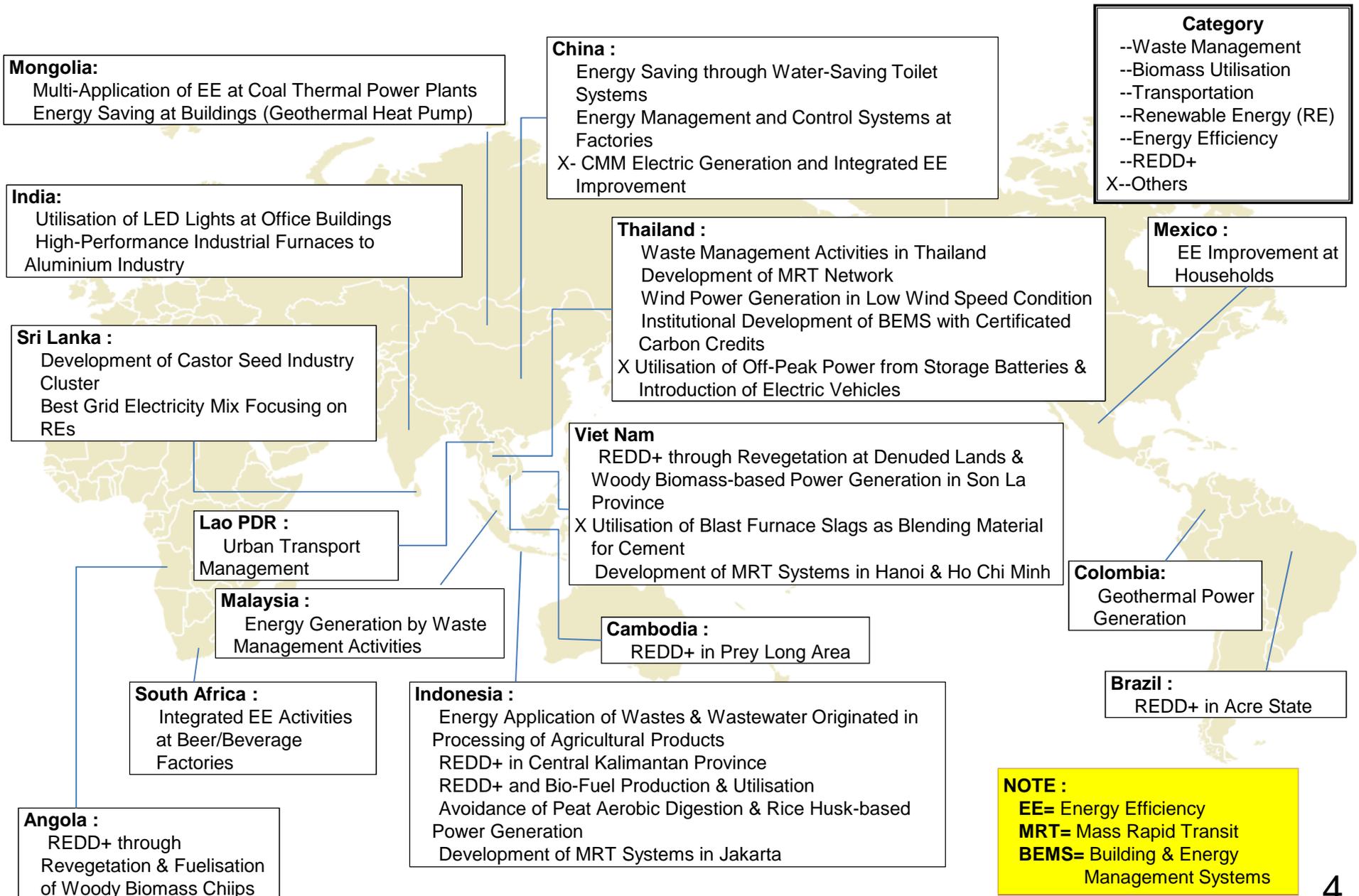
(4) New registry system for the BOCM

- Developing new registry for recording and tracking of emission reductions under the BOCM.

Feasibility Studies for potential BOCM projects/actions

- **Global Environment Centre Foundation (GEC)** is serving as a secretariat for the FS.
- 29 projects were selected for FY2011.
 - 6 potential CDM projects were also selected, to contribute developing new methodologies, standardized baselines and equitable geographical distribution of the CDM.
 - Relevant informations are available at GEC website
- **Taskforces** composed of experts for specific sectors (waste management, transportation, energy efficiency and REDD+) were set up and the FS is being performed under the guidance of the taskforces.
- **Host country committees**, were organized for some countries, in order to share mutual perspectives on the BOCM, by discussing FS projects in the country.

BOCM Feasibility Studies in FY2011(1)



BOCM Feasibility Studies in FY2011(2)

Category	Host Country	Emission Reduction Project/Activity	Research Entity
Waste Management	Thailand	Waste Management Activities in Thailand	Pacific Consultants
	Indonesia	Energy Application of Wastes and Wastewater Originated in Processing of Agricultural Products	Chugai Technos Corporation
	Malaysia	Energy Generation by Waste Management Activities, through Anaerobic Digestion as Model Technology	Ichikawa Kankyo Engineering
Biomass Utilisation	Sri Lanka	Development of Castor Seed Industry Cluster	PEAR Carbon Offset Initiative
Transportation	Thailand	Development of Mass Rapid Transit (MRT) Network in Bangkok	Japan Weather Association
	Lao PDR	Urban Transport Management in Vientiane	Katahira & Engineers International
	Indonesia, and Viet Nam	Development of Mass Rapid Transit (MRT) Systems in Jakarta, Indonesia, and Hanoi and Ho Chi Minh	Mitsubishi Research Institute
Renewable Energy	Thailand	Renewable Energy Development by Wind Power Generation in Low Wind Speed Condition	Yonden Engineering
	Sri Lanka	Best Grid Electricity Mix Focusing on Renewable Energy Sources	Ex Corporation
	Colombia	Renewable Energy Development Focusing on Geothermal Power Generation	Mitsubishi Research Institute

BOCM Feasibility Studies in FY2011(3)

Category	Host Country	Emission Reduction Project/Activity	Research Entity
Energy Efficiency/ Energy Saving	China	Energy Saving by Reducing Water Consumptions through Diffusion of Water-Saving Toilet Systems to Households in Dalian	Mitsubishi UFJ Morgan Stanley Securities
	China	Energy Efficiency Improvement by Introducing Energy Management and Control Systems at Factories in Shaanxi Province	Yaskawa Electric Corporation
	Mongolia	Multiple Application of Energy Efficiency Improvement Measures at Coal Thermal Power Plants	Suuri-Keikaku
	Mongolia	Energy Saving at Buildings by Utilising Geothermal Heat Pump and Other Technologies	Shimizu Corporation
	Thailand	Promotion of Energy Efficiency Improvement through Institutional Development of Building and Energy Management Systems (BEMS) with Certificated Carbon Credits	Yamatake Corporation
	India	Energy Savings by Utilising LED Lights at Office Buildings	The Japan Research Institute
	India	Energy Efficiency Improvement by Introducing High-Performance Industrial Furnaces to Aluminium Industry	Japan Industrial Furnace Manufacturers Association
	Mexico	Promotion of Energy Efficiency Improvement at Households through Introduction of Low-CO2 Houses and Diffusion of Energy-Efficient Appliances	The Japan Research Institute
	South Africa	Integrated Energy Efficiency Activities at Beer/Beverage Factories Using Specific Energy Consumption Methods	Recycle One.

BOCM Feasibility Studies in FY2011(4)

Category	Host Country	Emission Reduction Project/Activity	Research Entity
REDD+	Indonesia	REDD+ in Central Kalimantan Province	Mitsubishi UFJ Research & Consulting
	Indonesia	REDD+ and Bio-Fuel Production and Utilisation in Gorontalo Province	Kanematsu Corporation
	Indonesia	Avoidance of Peat Aerobic Degradation by Peatland Rewetting and Rice Husk-based Power Generation Associated with Rice Production Increase in Jambi Province	Shimizu Corporation
	Cambodia	REDD+ in Prey Long Area	Conservation International Japan
	Viet Nam	REDD+ through Revegetation at Denuded Lands and Woody Biomass-based Power Generation in Son La Province	Sumitomo Forestry
	Brazil	REDD+ in Acre State	Marubeni Corporation
	Angola	REDD+ through Revegetation at Derelict Commercial Forested Lands and Fuelisation of Woody Biomass Chips for Cement Plants	PricewaterhouseCoopers Aarata Sustainability
Others	China	Electric Generation based on Low-Level Coal Mine Methane and Integrated Energy Efficiency Improvement in Yunnan Province	Tepia Corporation Japan
	Thailand	CO2 Reduction through Utilising Off-Peak Power from Storage Batteries and Introducing Electric Vehicles	Mizuho Information & Research Institute
	Viet Nam	CO2 Abatement through Utilisation of Blast Furnace Slags as Blending Material for Cement	Mitsubishi Research Institute

Information platform for the BOCM

- **Overseas Environmental Cooperation Center (OECC)** is serving as a secretariat for the platform.
- **New Mechanisms Information Platform** website was established to provide the latest movements and information on the BOCM
 - URL is <http://www.mmechanisms.org/e/index.html>
 - Or serch '*OECC, new mechanism*'
 - MOEJ has long experience for operating “the Kyoto Mechanisms Information Platform”, and it has received average 290,000 visitors per year.
- **Help Desk** also accepts and answers inquiries regarding new mechanisms, including those regarding the BOCM.
- Seminars on new mechanisms including the BOCM were organized in Tokyo, inviting government officials from developing countries.

Information platform for the BOCM

New Mechanisms Information Platform

Inquiry E-mail Newsletter Japanese

Font Size Standard Big Maximum Site Search Google Custom Search

HOME Sitemap Links Disclaimer

Japan's Initiatives Support Programmes Useful Experiences Useful Calculation Methodology REDD/REDD+

Topics of Japan List

- Jul 22, 2011
Solar cooling system project in the United Arab Emirates (NEDO) [PDF]
- Jul 19, 2011
Brief Report of the 9th Workshop on Greenhouse Gas Inventories in Asia (WGIA9) (MOE)
- Jul 12, 2011
Overview of the 9th Workshop on Greenhouse Gas Inventories in Asia (WGIA9) (MOE)
- Jul 4, 2011
Climate Change: The Second Meeting of the Transitional Committee for the

Publications List

New Mechanisms Express

- Promoting New Market Mechanisms for Climate Change Mitigation - November 2011

Information List

- Nov 22, 2011
The pamphlet "New Mechanisms Express : November 2011" has been

Capacity Building for the BOCM

- Starting from FY2003, MOEJ has been supporting **CDM capacity building in Asian countries** to support the establishment of institutional arrangements and procedures.
 - **Institute for Global Environmental Strategies (IGES)** has been collaborating with Asian countries for capacity building.
- Building on the existing CDM capacity building initiative, MOEJ launched capacity building for new mechanisms including the BOCM.
 - Such capacity building may utilize experience of **J-VER** (Japan-verified emission reduction) scheme, which have unique features applicable to developing countries.
- MOEJ also started capacity building especially for **MRV**.
 - Such capacity building will be conducted in **Asia, Latin America and Africa** uniquely, to reflect specific circumstances and capacities of those countries for implementing MRV.

J-VER (Japan-verified emission reduction) scheme

- MOEJ established the J-VER Scheme in November 2008 with Certification Center on Climate Change, Japan (CCCCJ or 4CJ) serving as the secretariat.
- Using a positive list as a criteria for validation
 - Defining and validating the types of projects that should be promoted as a government policy, rather than assessing the “additionality” of each project.
- Judgment based on eligibility criteria
 - Ensuring environmental integrity by applying designated eligibility criteria in judging whether or not a proposed project satisfies conditions prescribed in the positive list.
- Reducing monitoring requirements
 - For example, no need to measure emissions from transportation of biomass under some conditions.
 - For example, exclude low emission sources (those accounting for less than 0.1% of the estimated emission reduction) from monitoring requirements.

Contribution to the World Bank PMR

Partnership for Market Readiness (PMR)

- It is the initiatives to support developing countries to prepare and implement market mechanisms for GHG reductions.
- It is expected to play important role for developing international rules for new market mechanisms.
- Japan contributed 600 million yen to the PMR.

- The first Partnership Assembly was held in Barcelona, in the end of May 2011. The second PA was held in Istanbul in October 2011.
- Brazil, Chile, China, Colombia, Costa Rica, India, Indonesia, Jordan, Mexico, Morocco, South Africa, Thailand, Turkey, Ukraine and Viet Nam were selected to proceed to preparation phase.
- Australia, European Commission, Germany, Japan, Netherland, Norway, Spain, Switzerland, United Kingdom, and United States pledged contribution to the PMR

High Level Joint Statement

[India]

At their meeting on October 25, 2010, the prime ministers of Japan and India agreed to enhance bilateral discussions to build a framework for bilateral cooperation in the area of climate change.

Excerpt from the joint statement: The two Prime Ministers also reaffirmed the importance of strengthening bilateral discussions on climate change on various occasions, including **a possible establishment of a framework of comprehensive bilateral cooperation.**

High Level Joint Statement

[Vietnam]

At their meeting on October 31, 2010, the prime ministers of Japan and Vietnam agreed to start consultation on the establishment of BOCM.

Excerpt from the joint statement: The two sides agreed to task relevant agencies of the two countries to exchange views for the realization of these objectives* **including the potential establishment of bilateral offset credit mechanism.**

* Making the environment and economy compatible, thereby addressing the climate change issues while achieving sustainable growth.

At their meeting on October 31, 2011, the prime ministers of Japan and Vietnam reconfirmed continuation of discussions on BOCM.

Excerpt from the joint statement: The two sides welcomed the progress in the negotiations on **Bilateral Offset Credit Mechanism** and confirmed to continue discussions between the two countries.

High Level Joint Statement

Action Plan for "A Decade toward the Green Mekong" Initiative (Hanoi, October 29, 2010)

Excerpt: Promote measures to identify and formulate emission-cutting projects featuring the use of Japan's advanced technologies and products and the utilization of renewable energy sources. By undertaking feasibility studies on greenhouse gas emissions reduction volumes and measurement methods, **Japan and the Mekong region will promote the development of bilateral offset mechanisms.**

Joint Statement of the Third Mekong – Japan Summit
(Bali, November 18, 2011)

Excerpt: We welcomed **fruitful consultations between Japan and some of the Mekong region countries on the Bilateral Offset Credit Mechanism** and underlined the importance to have further discussions. The Mekong region countries highly appreciated Japan's initiative to promote "East Asia Low Carbon Growth Partnership" through the EAS architecture.

Bilateral documents

Bilateral Cooperation on Climate Change Between the Government of Japan and the Government of Indonesia (November 25, 2011)

Excerpt from the document: Both sides welcome the progress of discussions for establishing an offset credit mechanism, and they will, under close coordination between DNPI (National Council on Climate Change) on the Indonesian side and the Embassy of Japan on the Japanese side, broaden the consultation process both at public and private sectors through identifying and implementing model projects, capacity building and joint studies, building on the on-going activities, in order to enhance mutual understanding on the mechanism in line with the principles of UNFCCC and the Cancun Agreements, and to promote concrete actions for GHG emission reductions.

Memorandum of Cooperation Between the Ministry of the Environment of Japan and the Ministry of Nature, Environment and Tourism of Mongolia on Environmental Cooperation (December 8, 2011)

AREAS OF COOPERATION

1. Mitigation and Adaptation on Climate Change;
 - (A) Feasibility studies for Bilateral Offset Credit Mechanism;
 - (B) Capacity building on new mechanisms such as NAMA, MRV etc.;

Progress in International Negotiations

[Decision of COP17]

Noting that Parties may, individually or jointly, develop and implement such approaches in accordance with their national circumstances,

79. Emphasizes that various approaches, including opportunities for using markets, to enhance the cost-effectiveness of, and to promote, mitigation actions, bearing in mind different circumstances of developed and developing countries, must meet standards that deliver real, permanent, additional and verified mitigation outcomes, avoid double counting of effort, and achieve a net decrease and/or avoidance of greenhouse gas emissions;
80. Requests the AWG-LCA to conduct a work programme to consider a framework for such approaches, with a view to recommending a decision to the COP18;
81. Invites Parties and admitted UNFCCC observer organizations to submit to the secretariat, by 5 March 2012, their views on the matters referred to in paragraphs 79 and 80 above, including their experiences, positive and negative, with existing approaches and mechanisms as well as lessons learned;

Japan's approach for developing the BOCM

- Japan will take the following steps for developing the BOCM:
 - ✓ Facilitate mutual understanding with developing countries through dialogues, exploration of potential projects and capacity building.
 - ✓ Seek to enter into bilateral arrangements with developing countries after having sufficient understanding on the BOCM so as to ensure credibility of the mechanism.
- In parallel with the above steps, and drawing on the outcome of such steps, institutional designs for the BOCM will be reviewed for improvements.
- Japan will address its position in international negotiations so as to ensure that the BOCM will be consistent with the new framework applicable from 2013 onward.

BOCM Methodology Formats

■ Key Features of the methodology formats

- The methodology formats should be designed, so that project proponents can use them easily, verifiers can verify the data easily, and calculation logic is disclosed transparently.
- In order to reduce monitoring burden, default values should be widely used in conservative manner.

Applicability	<ul style="list-style-type: none">• A “check list” will allow easy determination of applicability of methodologies to the proposed project.
Method	<ul style="list-style-type: none">• Flow chart will guide project proponents to the most appropriate calculation method for the proposed project.
Data	<ul style="list-style-type: none">• List of required parameters will inform project proponents what data is necessary to calculate GHG emission reductions/removals with methodologies.• Default values for specific country and sector are provided beforehand.
Calculation	<ul style="list-style-type: none">• Premade spread sheets will calculate GHG emission reductions/removals automatically by inputting required parameters, in accordance with methodologies.

Appendix: Image of BOCM Methodology Formats

■ Applicability

- Simple check list is provided for project proponents to determine the applicability of the methodology
- All conditions have to be met in order to apply a methodology.

Example: High-Performance Industrial

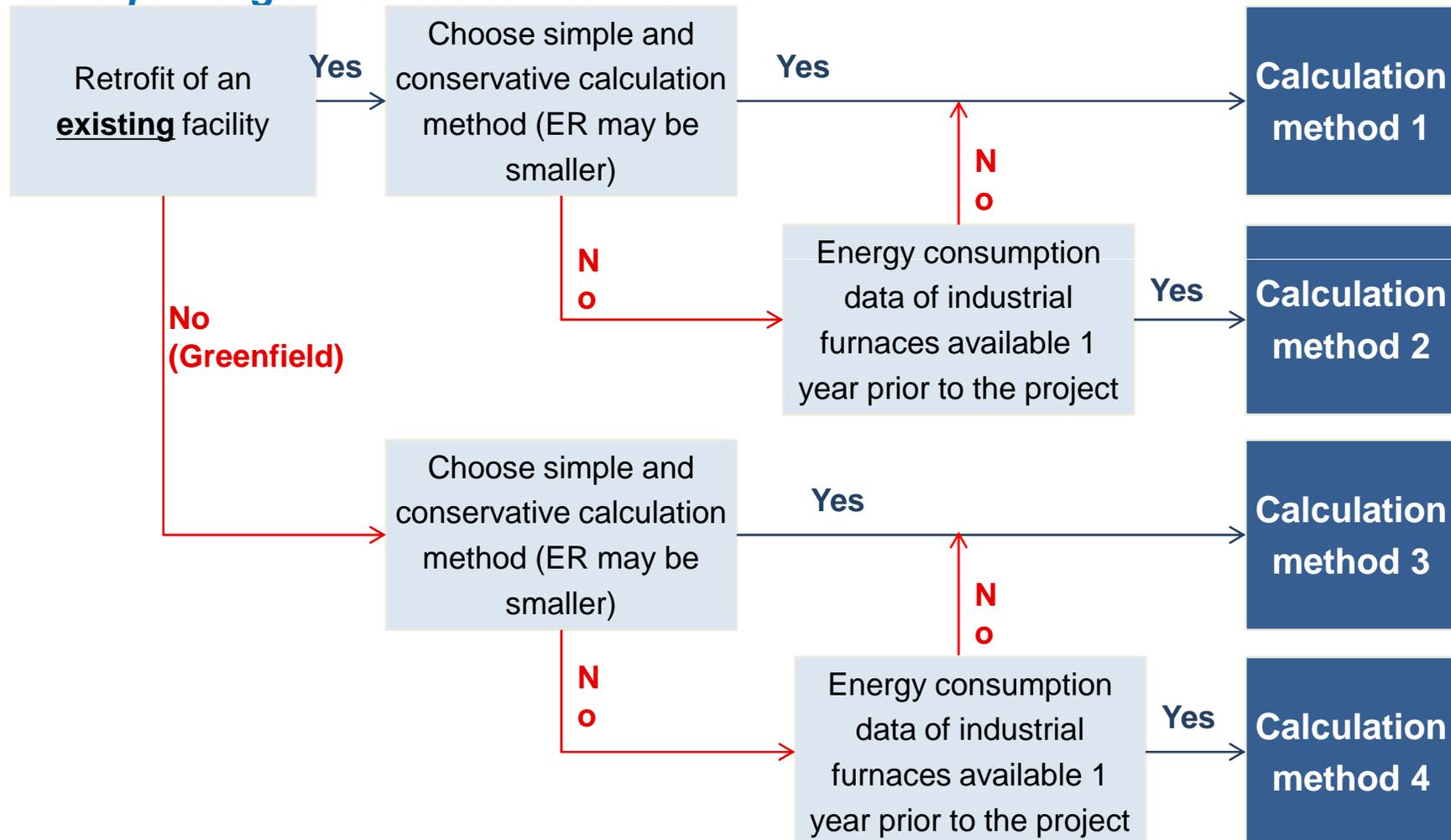
	Applicability	Check
Condition 1	<ul style="list-style-type: none">• High-performance industrial furnaces implemented in the planned project are equipped with regenerative burners.	<input checked="" type="checkbox"/>
Condition 2	<ul style="list-style-type: none">• High-performance industrial furnaces are implemented in the aluminum sector of the host country.	<input checked="" type="checkbox"/>
Condition 3	<ul style="list-style-type: none">• The same heat source is used by the waste heat generating facility and the recipient facility of waste heat.	<input checked="" type="checkbox"/>
Condition 4	<ul style="list-style-type: none">• Unused waste heat has to exist within the project boundary prior to the planned project implementation.	<input checked="" type="checkbox"/>
Condition 5	<ul style="list-style-type: none">• Fossil fuels and electricity consumption by the high-performance industrial furnaces have to be measurable after the project implementation.	<input checked="" type="checkbox"/>

Appendix: Image of BOCM Methodology Formats

■ Method

- Flow chart will guide project proponents to the most appropriate calculation method for the proposed project

Example: High-Performance Industrial



Appendix: Image of BOCM Methodology Formats

■ Data input

- Project proponents are requested to input data in the data sheet only.
- Spread sheets are prepared for different methods.

Example: High-Performance Industrial Furnace

Greenfield & Project Specific Data

Greenfield & Default Data

Replacement & Project Specific Data

Replacement & Default Data

Cells for data input

Pull-down menu allows a user to select types of fuel used in the project

1. Input monitored data after implementation of the project		Value	Units
Data description			
Project product output during the period of year y		20,000	t/y
Project fuel consumption by High-Performance Industrial Furnace		LPG 500	t/y
Project electricity consumption by High-Performance Industrial Furnace		LPG Natural gas 500	MWh/y
2. CO2 emission reductions			
CO2 emission reductions		22,851	tCO2/y

An example above provides different cases for greenfield project and existing (replacement) project and required data for each case.

Appendix: Image of BOCM Methodology Formats

■ Calculation of Emission Reductions/removals

- Spread sheets for calculation logic are provided in separate sheets and data input in the “data input sheet” automatically calculate emission reductions/removals.
- Default values should be widely used, in conservative manner, in order to reduce monitoring burden.

Example: High-Performance Industrial Furnace

	Energy type	Value	Units	Symbol
1. Estimation of CO2 emission reductions				
CO2 emission reductions		22,850.5	tCO2/y	ER _y
2. Default values of the selected energy				
Net calorific value of fossil fuel	LPG	50.8	GJ/t	NCV _{L,y}
CO2 emission factor of fossil fuel	LPG	0.0599	tCO2/GJ	EF _{fl,y}
CO2 emission factor of electricity	Electricity	0.456	tCO2/MWh	EF _{e,y}
3. Estimation of reference emissions				
Reference CO2 emissions		24,600.0	tCO2/y	RE _y
CO2 emissions per product unit in the reference scenario		1.23	tCO2/t	ARE _{EN,y}
Project product output during the period of year y		20,000	t/y	PO _y
4. Estimation of project emissions				
Project CO2 emissions		1,749.5	tCO2/y	PE _y
Project fuel consumption by High-Performance Industrial Furnace	LPG	500	t/y	PFC _{L,y}
Net calorific value of fossil fuel	LPG	50.8	GJ/t	NCV _{L,y}
CO2 emission factor of fossil fuel	LPG	0.0599	tCO2/GJ	EF _{fl,y}
Project electricity consumption by High-Performance Industrial Furnace	Electricity	500	MWh/y	PEC _y
CO2 emission factor of electricity	Electricity	0.456	tCO2/MWh	EF _{e,y}
【Default values】				
Net calorific value of fossil fuel	NCV _{L,y}			
LPG		50.8	GJ/t	
Natural gas		43.5	GJ/1 000Nm ³	

Appendix: Image of BOCM Methodology Formats

■ Description of methodologies

- Details of methodologies should be described by writing and calculation formula so that project proponents can understand logic behind and to enhance transparency.

Structure of the methodology

- Project description
- Applicability
- Calculation method selection
- List of required data
- Project boundary
- Reference scenario
- Calculation
- Monitoring

