

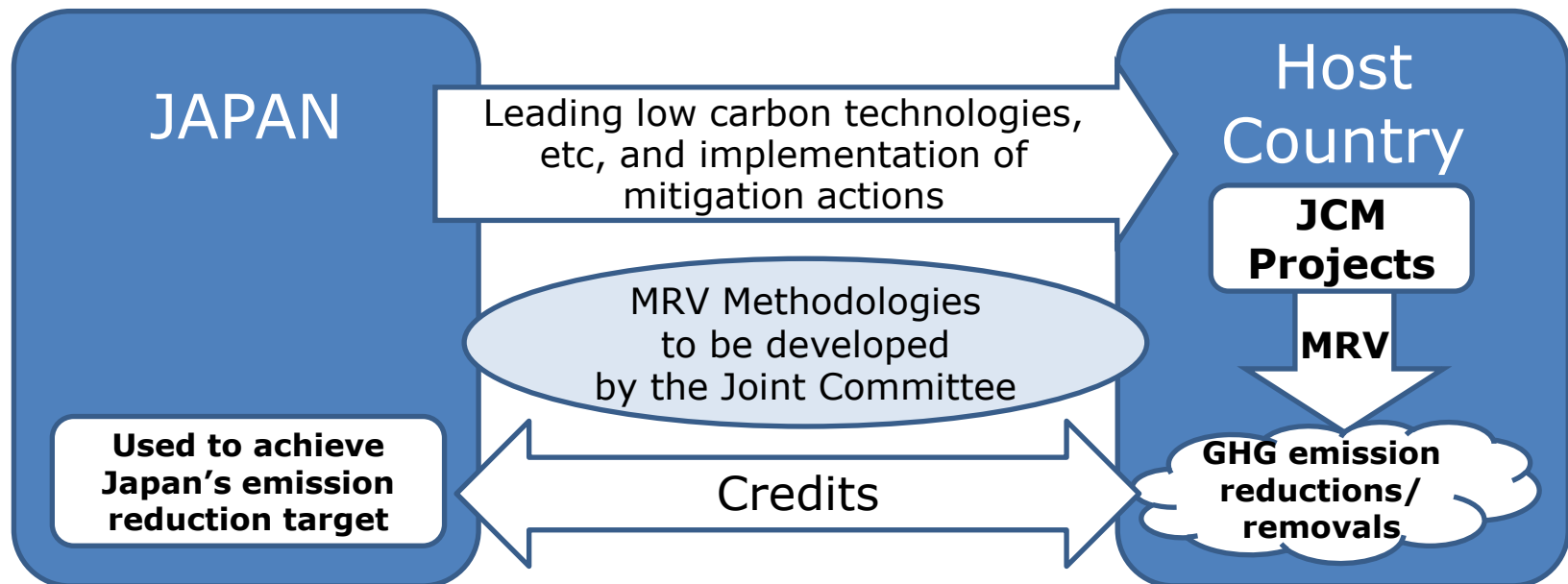
# Technology Transfer through the Joint Crediting Mechanism

December 2014

Toshiaki NAGATA  
Ministry of Economy, Trade and Industry

# 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 from Japan to GHG emission reductions or removals 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.



## Approaches of the JCM

- The JCM is designed and implemented, in such a way that:
- (1) Ensures transparency and environmental integrity through robust methodologies;
  - (2) Maintains simplicity and practicality based on the rules and guidelines;
  - (3) Promotes concrete actions for global GHG emission reductions or removals;
  - (4) Prevents uses of any mitigation projects registered under the JCM for the purpose of any other international climate mitigation mechanisms to avoid double counting on GHG emission reductions or removals.

# CDM and JCM

- The CDM has contributed to the sustainable development particularly in emerging economies.
- On the other hand, there are challenges with the CDM in promoting energy-saving at a global scale.
- JCM is designed to address the challenges in its role to complement CDM, including through implementation of energy-saving projects.

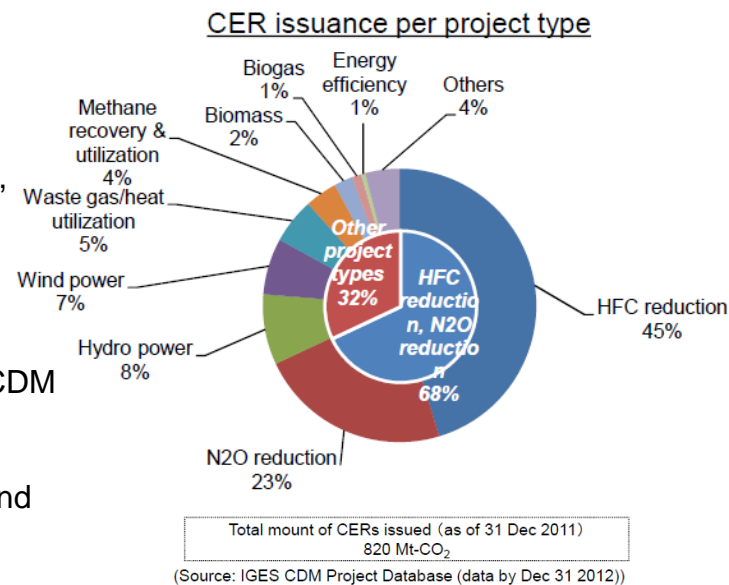
## Challenges of the CDM

### Inequitable locations and sectors of projects

- Industrial gas destruction projects have the significant share of CER issued, while CO2 emission reduction projects such as energy efficiency projects occupy only a minor share.

### Heavy administrative burdens for registration and issuance

- From the start date of “public comment” which is the initial process of the CDM project registration to the actual registration took very long time. The maximum period required for the registration was almost 2 years.
- There were duplicated roles being played by DOEs, UNFCCC secretariat and the CDM-EB, which led to inefficiency.



## Design of the JCM

- **Geographical balance:** Japan has already signed the bilateral documents for the JCM with 12 countries (Mongolia, Bangladesh, Ethiopia, Kenya, Maldives, Viet Nam, Lao PDR, Indonesia, Costa Rica, Palau, Cambodia and Mexico).
- **More focus on energy saving:** Some candidate projects are energy-saving projects, which have potential for wider use.
- **Streamlined administration:** Roles of relevant bodies are clearly defined to minimize duplication.

# Examples of FS projects for JCM by METI/NEDO

Japan-Indonesia Governments closely coordinating the implementation of the JCM  
**64** Feasibility Studies conducted in Indonesia by METI/NEDO (FY2010-2014)  
(Energy saving, renewal energy(wind power, hydro power, geothermal, biomass), CCS, Redd+)  
**3** demonstration projects being considered to be implemented by NEDO

## Mega-solar power plants using thin-film solar cells

Implemented by SHARP

Introducing thin-film solar cells, which perform with high efficiency in areas of low latitude/high temperature, into a remote island of Indonesia



## Energy efficiency in factories

Implemented By Yokogawa and Azbil

Introducing Advanced Process Control (APC) System for optimized factory operation, with capacity building for the operation of APC



## REDD+ (Peat land)

Implemented by Marubeni

Avoiding tens of millions of CO<sub>2</sub>-t emissions across 30 years of operation in peat lands in Central Kalimantan



# JCM Promotion Scheme by METI

## JCM Demonstration Projects

- JCM Demonstration Projects are implemented by NEDO (New Energy and Industrial Technology Development Organization), which supports the project costs necessary to verify the amount of GHG emission reductions in line with the JCM rules and guidelines.
- The budget for FY 2014: 6billion JPY (approximately \$61million)
- Coverage of the project costs: those necessary for MRV  
e.g. Costs of design, machines, materials, labor, travel, etc.
- Eligibility for the JCM Demonstration Projects:
  - Concrete Projects to demonstrate the effectiveness of leading technologies and/or products installed and operated in the projects and to achieve MRVed GHG emission reductions through operation of the projects
  - Project Participants consist of entities from both countries, only the Japanese entities being able to apply for the JCM Demonstration projects
  - The projects need to be completed within 3 years.

## JCM Feasibility Study (FS)

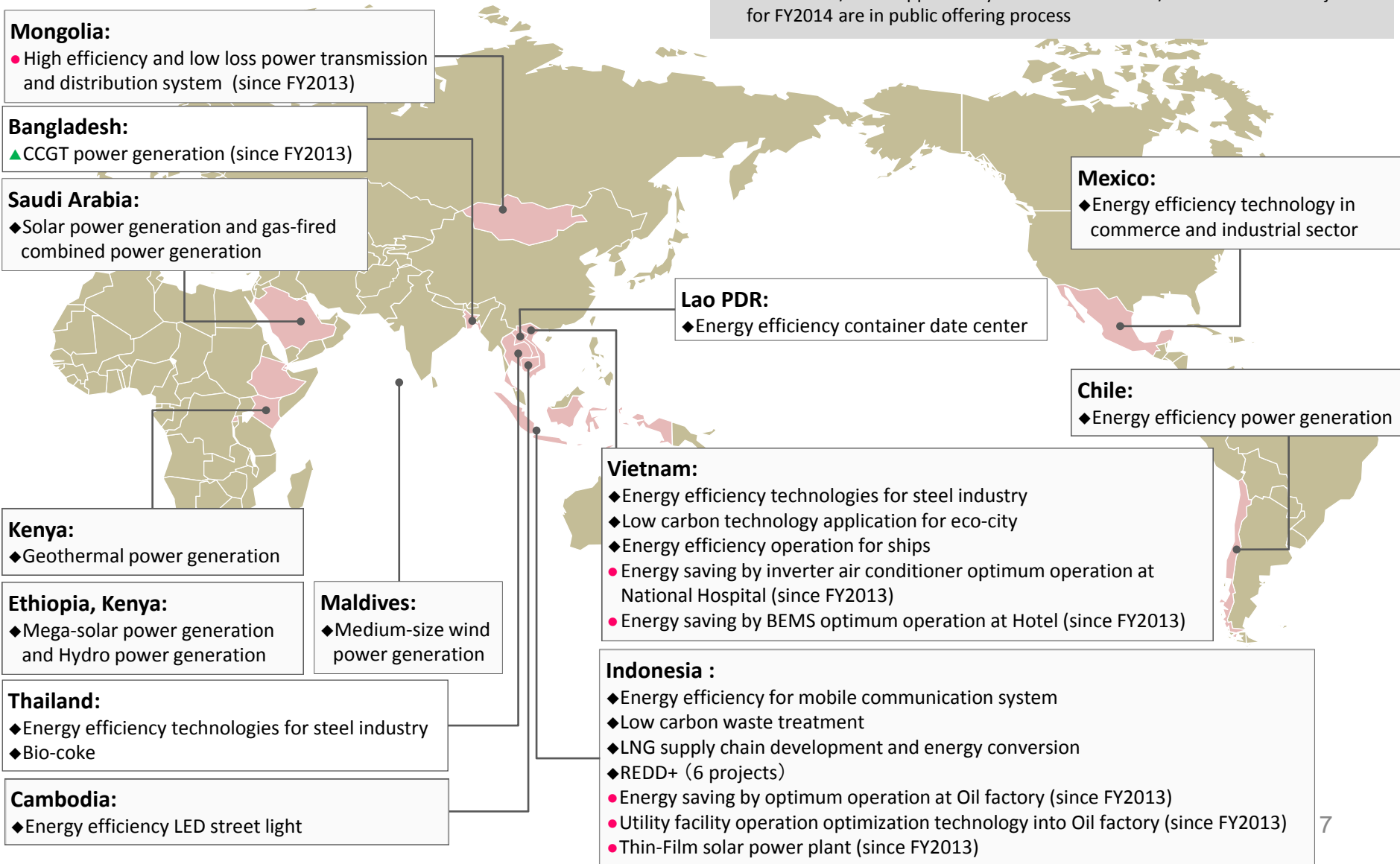
- Study to promote potential JCM projects and to assess their feasibility as well as practicality of the MRV methodology

## Capacity Building Programmes

- Variety of capacity building activities to increase technical expertise  
e.g., expertise for measuring the amount of emission reductions achieved through the introduction of low carbon technologies and products in the host country

# JCM Feasibility Studies, MRV Applicability Verification Studies and Demonstration Projects by METI & NEDO in FY2014

- ◆→ METI's FSs for Policy Recommendation
- ▲→ NEDO's MRV Applicability Verification Studies
- NEDO's Demonstration Projects
- ※NEDO's FSs / MRV Applicability Verification Studies / Demonstration Projects for FY2014 are in public offering process



# JCM Feasibility Studies, MRV Applicability Verification Study and Demonstration Projects by METI & NEDO in FY2013

- ◆→ METI's FSs for Policy Recommendation
- NEDO's FSs for Project Exploration /Development
- ▲→ NEDO's MRV Applicability Verification Study
- NEDO's Demonstration Projects

## Mongolia:

- ◆Wind-Power generation
- energy efficient housing complex at Ger area
- High efficiency and low loss power transmission and distribution system

## Myanmar:

- ◆Run-of-river Micro Hydro Power Generation

## Bangladesh:

- ▲CCGT power generation

## Kenya:

- ◆Dissemination of Solar lantern

## Kenya, Ethiopia :

- Micro Hydro power plant

## Djibouti, Rwanda:

- ◆Geothermal Power Generation

## Vietnam:

- ◆Highly Efficient Coal Power Plants(Ultra Super Critical)
- ◆Water purification/sludge reduction
- Energy recovery using organic waste
- Wind-Power generation
- Energy saving by inverter air conditioner optimum operation at National Hospital
- Energy saving by BEMS optimum operation at Hotel

## Lao PDR:

- ◆Energy saving at beer plant
- ◆REDD+

## Indonesia:

- ◆Biomass Power Generation
- ◆Energy saving stores based on CO2 refrigerant
- ◆REDD+ (4 projects)
- Energy saving by optimum operation at Oil factory
- Utility facility operation optimization technology into Oil factory
- Thin-Film solar power plant

## Thailand:

- ◆Energy saving at Industrial Estate
- Air Conditioners using CO2 refrigerant

## India:

- ◆Energy Efficient Air Conditioners (HFC 32)
- ◆Energy Efficient Technologies for Integrated Steel Works

## Mexico:

- ◆CCS (Carbon dioxide Capture and Storage)

## Peru:

- ◆REDD+