# Promotion of practical GHG emissions reduction through the Bilateral Offset Mechanism including REDD+ Projects

December 2, 2010

Ministry of Economy,
Trade and Industry

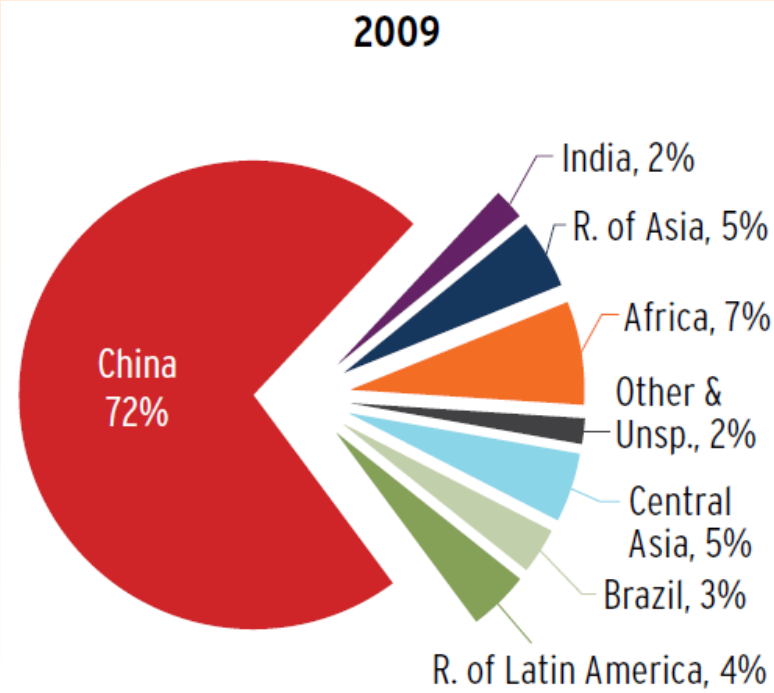
# Clean Development Mechanism 1

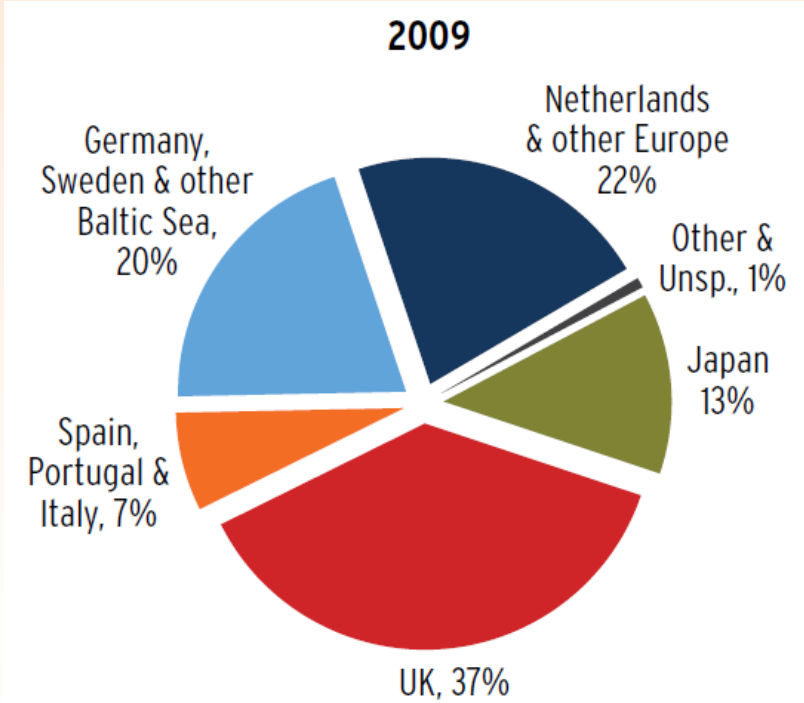
*CDM is …*

- A mechanism for purchasing back emission reductions as a credit.
- The UN strictly examines projects' additionality based not on business but on cooperation.
- It takes more than 2 years to be registered due to examinations by a partner country, a specialized agency and the UN.

*Past CDM projects*

- China is a large scale seller, maintaining overall dominance with a 72% share of the market (2009).
- The UK appears to be the largest buyer, with a nearly 40% share of volume purchased, yet the GHG emissions of the country are declining (2009 results).




Source : State and Trends of the Carbon Market 2010 (World Bank)

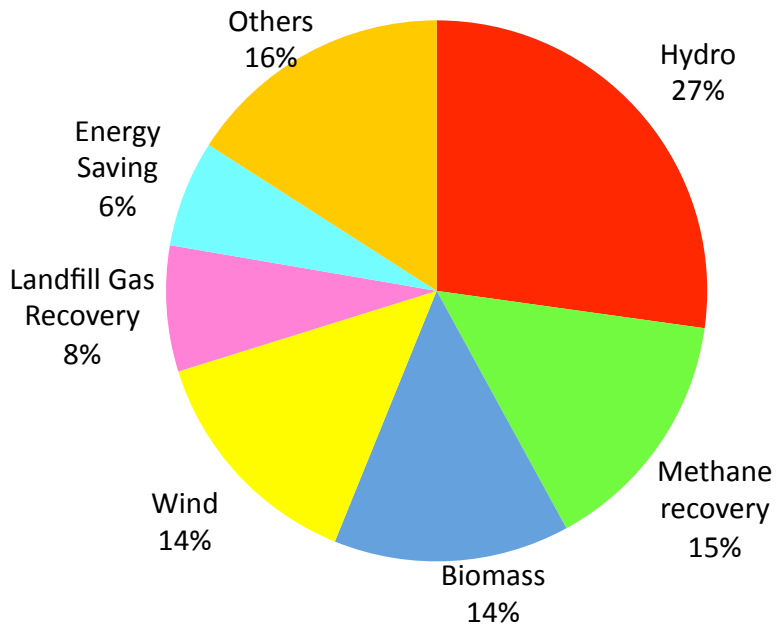
# Clean Development Mechanism 2

*Problems and limits of CDM*

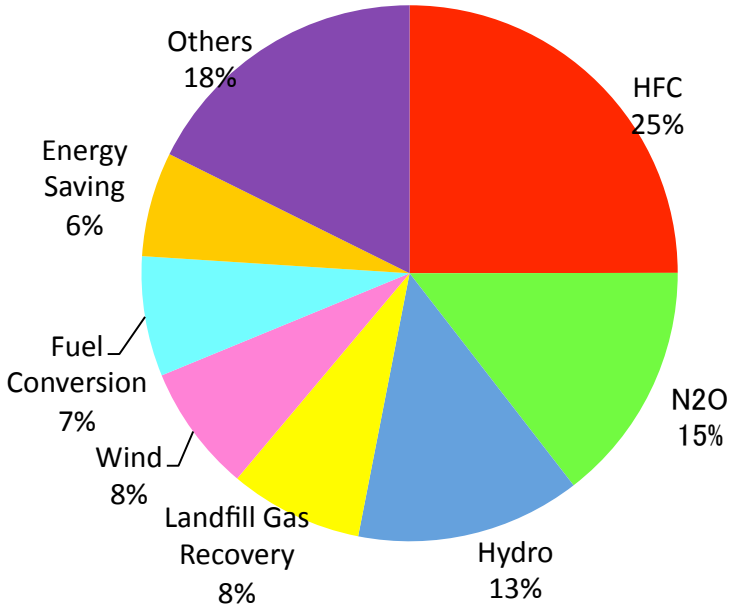
- Eligible projects tend to be non-CO2 projects.
- Energy saving products (automobiles, home electronics, etc.), nuclear power plants, clean coal power plants, etc. are in practice ineligible as CDM projects.*

*For example, nuclear power is prohibited by a UN decision. Coal power is also limited in countries which use coal for more than 50% of total energy in their country (in actuality, only China and India). There is only one large-scale coal project.

Percentage of projects, by sector
(Registered projects)




Credits issued, by project sector
(Registered projects)




Reference : UNEP

# Missed Mitigation Opportunities under the current CDM

## Coal Fired Power Plants

- If the most advanced coal-fired power technology operating was applied to the U.S., China, and India, the reduction in carbon emissions would be approx. 1.3 billion tons (this amounts to Japan's total annual carbon emissions).

## Nuclear Power Plants

- The amount of CO2 emissions reduction is almost 6 million tons per nuclear power plant.

## Steel Sector

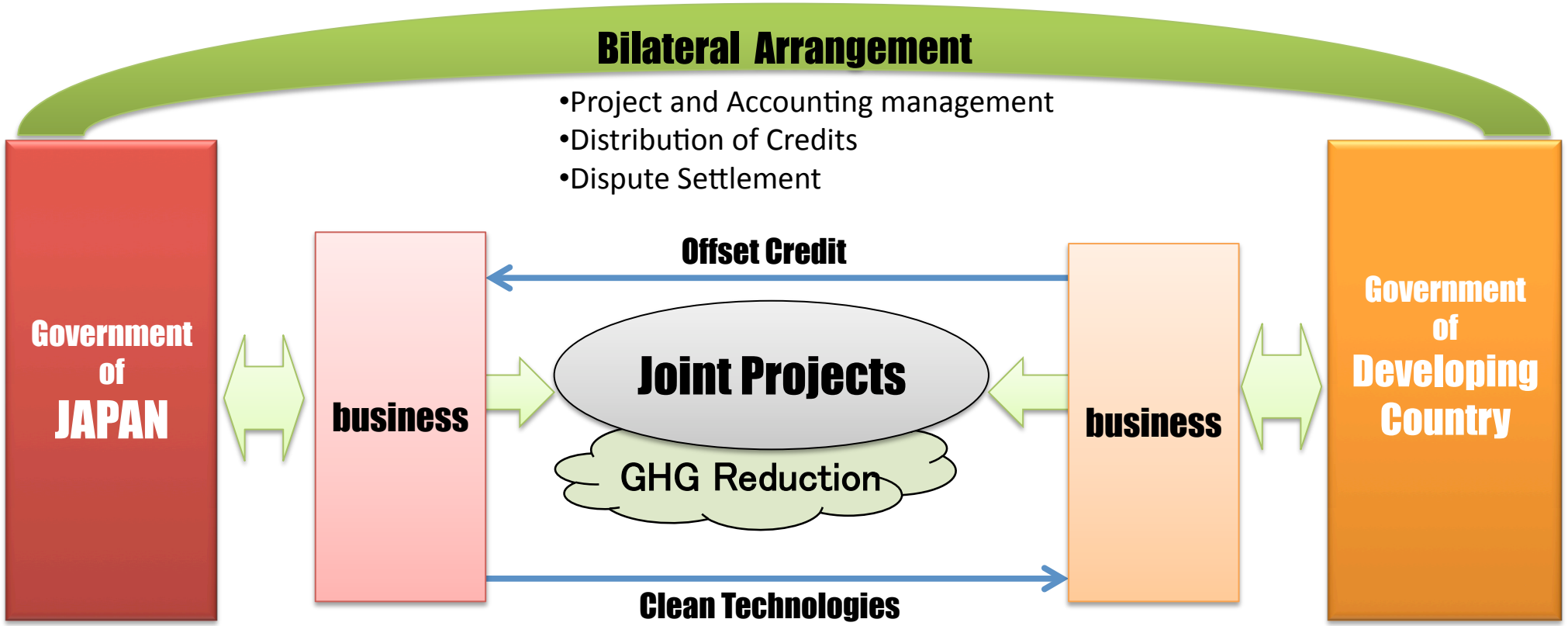
- If the most efficient steel production technology was applied around the world, the amount of CO2 emissions reduction potential would approach 340 million tons (almost 26% of Japan's emissions).

## REDD+ Activities

- 17% of the global GHG emissions is attributed to the forest destruction and degradation. Massive GHG emissions reduction potential could be captured through REDD+ activities.

# Key Elements of Japan's New Offset Mechanism

- Effective and Speedy Decision through Bilateral Processes
- Public-Private Initiative
- Wider range of Technologies
- Efficient and Flexible Process
- Transparent "Additionality" concept
- Building blocks towards global regime



# F/S for Bilateral Offset Mechanism in FY 2010（First）

◆**List of FS Projects on August 10**

Total Budget in FY2010: 10 million USD

| | Project | Host country | Main project entities | Covered field |
|---|---|---|---|---|
| 1 | Highly efficient coal power plant (Ultra super critical) | Indonesia | The Institute of Energy Economics, Japan | Coal thermal power |
| 2 | Highly efficient coal power plant (Ultra super critical) | Vietnam | TEPCO /Marubeni Co, | Coal thermal power |
| 3 | Highly efficient coal power plant (Ultra super critical) | India | Mizuho RI | Coal thermal power |
| 4 | Reduce power transmission loss by using highly efficient transformer | Vietnam | Mitsubishi UFJ Morgan Stanley Co. Ltd | Electric power grid |
| 5 | Introduction of energy efficient technologies at iron and steel plant | Philippines | JFE Steel Co. | Iron and steel |
| 6 | Introduction of energy efficient technologies at iron and steel plant | India | Nippon Steel Co. | Iron and steel |
| 7 | Introduction of energy efficient technologies at cement plant | Laos/Myanmar | Taiheiyo Engineering Co. | Cement |
| 8 | Geothermal power (new construction/rehabilitation) | Indonesia | Mitsubishi Co. | Renewable energy |
| 9 | Geothermal power (rehabilitation) | Philippines | Toshiba Co, | Renewable energy |
| 10 | Eco-friendly driving using digital tachograph | Thailand | Yazaki Co. | Road transportation |
| 11 | Optimum control of plant equipment (by IT) | Indonesia | Yamatake Co. | Energy saving at factory |
| 12 | Optimum control of plant equipment (by IT) | Thailand | Yokogawa Elec Co. | Energy saving at factory |
| 13 | Energy saving housing (eco-friendly house) | China | Nomura RI | Product CDM |
| 14 | REDD+ | Indonesia | Marubeni Co. | REDD+ |
| 15 | REDD+ | Peru | Mitsubishi Co | REDD+ |

# F/S for Bilateral Offset Mechanism in FY 2010（Second）

◆**List of FS adopted on October 20, 2010**

Total Budget in FY2010: 10 million USD

| | Project | Host country | Main project entities | Covered field |
|---|---|---|---|---|
| 1 | Introduction of Nuclear power | Vietnam | TEPCO | Nuclear power |
| 2 | Carbon Dioxide Capture and Storage | Indonesia | Arabian Oil Co, | CCS |
| 3 | Promotion high efficiency light and energy saving of home appliances | Mexico | JRI (SMBC, Toshiba Co, Panasonic Co,) | Energy saving at house |
| 4 | Promotion of Home appliances (air conditioner, refrigerator, Water heater, TV, lighjt) | Vietnam | Mitsubishi Co, | Energy saving at house |
| 5 | Reducing N2O emission by using coating fertilizer | Malaysia/Indonesia | Jcam Agri Co, | Chemistry |
| 6 | Introduction of CHP facility and privately-owned electrical power facility | Thailand | Mizuho Co, | Chemistry |
| 7 | Energy consumption reduction of air conditioners by using deep seawater | Maldives | Hitachi Plant Technologies, | Water provision |
| 8 | Introduction of Digital Tachograph | Vietnam /Laos/Malaysia/China | Nittsu Research Institute | Road transportation |
| 9 | Introduction of high efficiency motor system | China | Yasukawa Electric Co, | Energy saving at factory |
| 10 | Introduction of air-conditioning control system | Malaysia | JRI(SMBC, Toshiba Co,) | Energy saving at factory |
| 11 | REDD+ | Laos | Oji Paper Group | REDD+ |
| 12 | REDD+ | Brazil | Kanematsu ltd, | REDD+ |
| 13 | More efficient utilization of low grade coal in the power plant | Indonesia | Sojitz( Tsukishima Kikai Co,) | Coal power |
| 14 | Introduction of energy efficient technologies at cement plant | Indonesia | Kawasaki Heavy Industries, Ltd, | Cement |
| 15 | Introduction of energy efficient technologies at cement plant | Malaysia | Ube Industries, | Cement |