

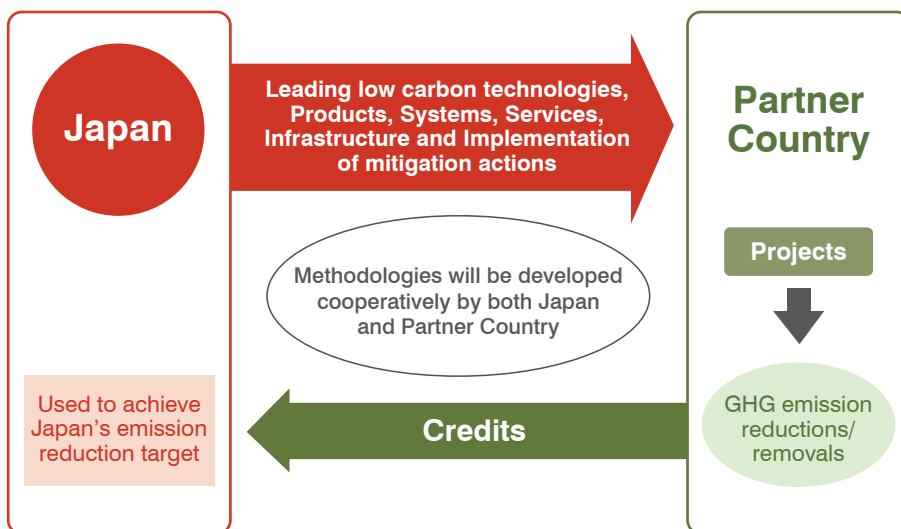
# Japan's International Cooperation on Climate Change in Developing Countries



Ministry of the Environment, Japan

## Joint Crediting Mechanism/Bilateral Offset Credit Mechanism [JCM/BOCM]

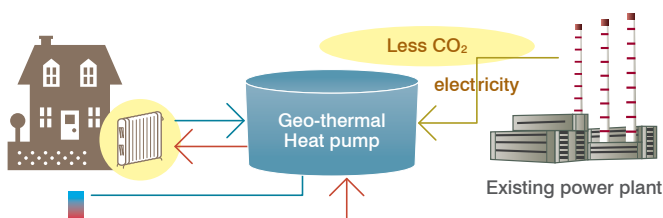
- To facilitate diffusion of leading low carbon technologies, products, systems, services, and infrastructure as well as implementation of mitigation actions, and contributing to sustainable development of developing countries.
- To appropriately evaluate contributions to GHG emission reductions or removals from developed countries in a quantitative manner, through mitigation actions implemented in developing countries and use those emission reductions or removals to achieve emission reduction targets of the developed countries.
- To contribute to the ultimate objective of the UNFCCC by facilitating global actions for emission reductions or removals.



### Example of MRV Model project in Mongolia Replacement of Coal-Fired Boiler by Geo-Thermal Heat Pump for Heating



**Geo-thermal heat pump** technology is installed to replace coal-fired boilers for building/district heating systems. In this study, a model project – a kindergarten already equipped with geo-thermal heat pump system for heating – demonstrates that the proposed MRV methodology is applicable and feasible and that the entire MRV process is completed in the host country.



### Example of Feasibility Study in India Micro-hydropower in rural villages



Electrifying non/weakly electrified rural villages by micro-hydropower in India.



Identified in total 1,625 very low head/fall sites in four targeted states dismissed by conventional technology, leading to 9,425 sites with 393,414 kW potential in all India.



# Japan's Cooperation toward Low-Carbon Growth and Climate Resilient World



## Mitigation

Asia

### Workshop on Greenhouse Gas Inventories in Asia [WGIA]

The WGIA, which 13 countries participate in, has been organized on an annual basis since 2003 by the MOE and the National Institute for Environmental Studies. This workshop aims at assisting Asian countries to improve the quality of their GHG inventories and build capacity for their inventory preparation by exchanging information and experiences obtained in the region. National GHG inventories are extremely important as they provide information on trends in GHG emissions and removals, which allows policy makers to adopt more effective and reliable measures to reduce emissions and increase removals. <http://www.gio.nies.go.jp/wgia/wgiaindex-e.html>



MOE

World

### Researchers' Networks on Low Carbon Societies

The International Research Network for Low Carbon Societies (LCS-RNet) and the Low Carbon Asia Research Network (LoCARNet) are knowledge-sharing networks of researchers who are deeply involved in policy-making processes to promote low carbon societies. The latter is particularly focused on low-carbon growth in Asia. <http://lcs-rnet.org/>



MOE

Asia

### Co-benefits Approach Initiative

Efforts under the co-benefits approach initiative include identification of technologies that have significant co-benefits impacts; development of evaluation tools to quantify co-benefits of projects; and piloting climate mitigation measures with co-benefits. One example of such pilot project is the biogas recovery and electricity generation from ethanol factory wastewater in Thailand. By using a sealed anaerobic fermentation tank to treat wastewater from the factory, the pilot project recovers emitted CH<sub>4</sub> and uses it to generate electricity thereby helping to improve water quality.



MOE

World

### The Global Superior Energy Performance Partnership [GSEP]

GSEP is an international partnership for improving energy efficiency and also an international framework to promote energy security and global warming measures, two sides of the same coin, through the development, diffusion and transfer of energy conservation and environmental technologies and through relevant technical cooperation under the public-private partnership. Japan leads and manages operations of Sectoral WG (Cement, Power, and Steel WG) of GSEP. Sectoral WG will each bring together experts and leaders from not only the public/private but also academic/research sectors to exchange information and to create practical projects.



METI

## Adaptation

Asia

Pacific

### The Asia Pacific Adaptation Network [APAN]

APAN is the 1st regional Network under Global Adaptation Network (GAN) that was proposed by UNEP. APAN aims to promote effective implementation of adaptation measures and capacity building actions to reduce vulnerability to climate change in the region. <http://www.apan-gan.net/>

Africa

### The African Adaptation Partnership [AAP]

The AAP in cooperation with UNDP has made a significant contribution to adaptation measures in Africa. Based on this support adaptation in important fields for development such as disaster reduction, water and food security by strengthening disaster preparedness including the establishment of early flood warning systems, water access including water supply plans, the enhancement of food productivity.

<http://www.mofa.go.jp/policy/environment/warm/>  
<http://www.undp-aap.org/resources>

Asia

Africa

### Technology support for adaptation

Japan conducts Feasibility Studies on support for adaptation in countries in adaptation area through dissemination of products and technologies from this year. In addition, projects in Africa and Asia have been adopted.



## APAN]

al Adaptation  
at COP15. It  
adaptation and  
ity to climate



MOE

## ogram [AAP]

a significant contribution to improving  
experience, Japan has continued to  
developing countries such as disaster  
ning their capacity to cope with natural  
d warning systems, the improvement of  
expansion of irrigation systems and the

cop/lowcarbongrowth\_vision\_1111.html

MOFA

## n Asia and Africa

or developing  
ing Japanese  
n this year, 7



METI

## Initiatives



### Asia-Pacific Seminar on Climate Change [AP Seminar]

The AP Seminar has served as a regional vehicle for countries to promote confidence-building by providing opportunities to exchange views and experiences on climate change issues in a practical manner. The recent seminars have been co-hosted by the MOE and the Department of Climate Change and Energy Efficiency, Australia. The Seminar has taken up and contributed to better understanding of critical issues, including low carbon society, technology development and transfer, NAMAs (Nationally Appropriate Mitigation Actions) and MRV (Measurable, Reportable and Verifiable) issues, and mainstreaming adaptation concerns into development strategies.



MOE



### East Asia Low Carbon Growth Partnership Dialogue

This Dialogue was held in Tokyo, Japan on April 15th 2012, which was co-chaired by Foreign Minister of Japan and President's Special Envoy for Climate Change and Executive Chair of the National Council on Climate Change of the Republic of Indonesia. Representatives from 18 countries of the EAS and 9 international/regional organizations attended the Dialogue. In the Dialogue, the participants shared the view that low-carbon growth is a key to realize sustainable growth and bilateral and regional initiatives could play an important role for achieving low-carbon growth.



MOFA



### Sixth Pacific Islands Leaders Meeting [PALM 6]

Japan organized Sixth Pacific Islands Leaders Meeting in Okinawa on 25th and 26th May 2012. At the meeting, Prime Minister Noda stated that the 50 billion-yen aid, which Japan announced at the previous summit, was achieved over the past three years, and stated that Japan would make maximum efforts to provide up to 500 million US dollars of assistance over the next three years in order to advance cooperation in accordance with these five pillars: (1) response to natural disasters; (2) environment and climate change; (3) sustainable development and human security; (4) people-to-people exchanges; and (5) maritime issues.



MOFA



### Greenhouse gases [GHG] Observing Satellite: "Ibuki" [GOSAT]

GOSAT is the world's first spacecraft to measure the concentrations of CO<sub>2</sub> and methane (CH<sub>4</sub>) from space. It was launched successfully on 23th January, 2009. It provides the scientific knowledge relating the global distribution of CO<sub>2</sub> and CH<sub>4</sub>, and the sources and sinks of these gases. These new findings will enhance scientific understanding on the causes of global warming. Also, they will serve as fundamental information for improving climate change prediction and establishing sound policy and plans for mitigating global warming. This is jointly tackled by the MOE, the National Institute for Environmental Studies, and the Japan Aerospace Exploration Agency.



MOE



### Asia-Pacific Network for Global Change Research [APN]

APN is a network of 22 Member Country governments that promotes global change research in the region, increases developing country involvement in that research, and strengthens interactions between the scientific community and governments.  
<http://www.apn-gcr.org/>



MOE



### Japan Fund for Poverty Reduction [JFPR]

The JFPR was established by the Government of Japan (GoJ) in May 2000 and provides direct grant assistance to the poorest and most vulnerable groups in developing member countries of the Asian Development Bank (ADB) while fostering long-term social and economic development. The grants target poverty reduction initiatives with the direct participation of NGOs, community groups, and civil society. The GoJ, through the JFPR, provided \$2.5 million for the "Establishment of Climate-Resilient Rural Livelihoods" in Mongolia. The 4-year project is piloting climate-resilient livestock husbandry in three districts in Bayankhongor province in response to the severe winter of 2009-2010 that caused significant loss of livestock and herders' livelihood across Mongolia. APAN provides technical support to the project.



MOF

# Japan's Strategy and Actions

## Innovative Strategy for Energy and the Environment (14 September, 2012)

The Innovative Strategy's basic policy is to strive to reduce the dependence on nuclear energy as well as on fossil fuels, by maximizing green energy such as the large-scale introduction of renewable energy and nationwide promotion of energy efficiency.

<http://www.npu.go.jp/en/policy/policy06/index.html>

### Pillars of the Strategies

- 1 Realization of a society not dependent on nuclear power
- 2 **Realization of green energy revolution**
- 3 Ensuring stable supply of energy
- 4 Bold implementation of reform of electricity power systems
- 5 Steady implementation of global warming countermeasures

- Japan has decided that it will aim at 80% reduction of GHG emissions by 2050.
- The Government will formulate its "Global Warming Action Plan" (tentative name) for the period from 2013 by the end of 2012.

Electricity saving:  
▲10% by 2030  
(compared to 2010)

Energy saving:  
▲19% by 2030  
(compared to 2010)

Renewable Energy:  
More than 3 times by 2030  
(compared to 2010)

Cogeneration:  
Approx. 5 times by 2030  
(compared to 2010)

Feed-in  
Tariff (FIT)

### Demonstration and Deployment projects

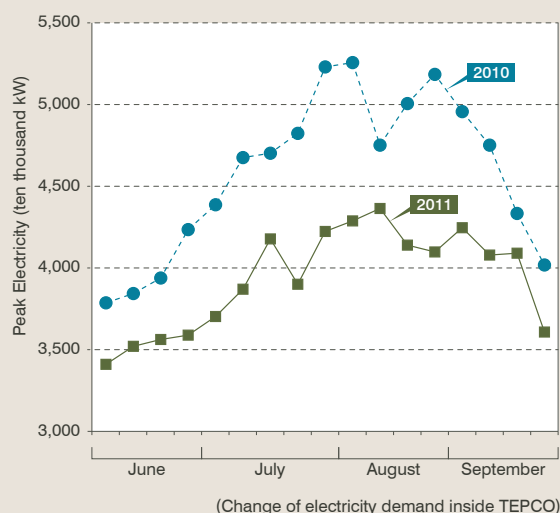
Floating offshore  
wind turbine (2MW)  
demonstration project  
in Nagasaki



Japan also implemented Carbon Tax (Tax for Measures to Cope with Global Warming) from 1st October 2012. By utilizing this tax revenue, various measures of energy-related CO<sub>2</sub> emission control, such as energy-saving measures, promotion of renewable energy, and clean and efficient use of fossil fuels, are steadily implemented.

## Japan's Efforts after the Great East Japan Earthquake

### Efforts to energy saving in Japan



To respond to the energy crisis after the Great East Japan Earthquake and the accident at TEPCO's Fukushima Daiichi Nuclear Power Station, Japan as a whole tackled to control demand of electricity in the summer of 2011. As a result, electricity demand was significantly reduced compared to the previous years (16% reduction from 2010 on average).

### Quick disaster waste removal and treatment

Almost all of the considerably large volume of disaster waste scattered in towns and villages hit by the tsunami was transferred to the storage sites, and approximately 30% of them were treated at the existing and newly built temporary facilities by the end of September 2012. More than 80% of the treated waste was reused for reconstruction of roads, embankments and elevated grounds.



Before removal (March 13, 2011)



After removal (May 12, 2011)

### Decontamination Efforts

Continuous efforts have been made to clean up the wide areas contaminated by the release of radioactive nuclides from the Fukushima Daiichi Nuclear Power Station.

With a priority given to the protection of human health, the decontamination works have been carried out in the living environment of the residents in accordance with the newly developed legal and policy frameworks.

