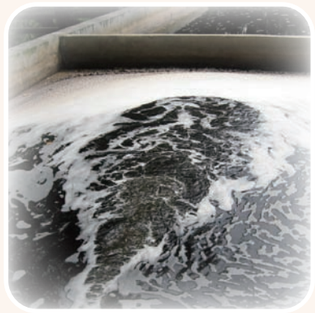
A Co-benefits Approach to GHG Emission Reduction




Useful Links

Co-benefits Approach: http://www.kyomecha.org/cobene/e/index.html
Policy Tools for Co-benefits Projects: http://www.kyomecha.org/cobene/e/tools.html
Other Japanese Initiatives on Co-benefits Approach: http://www.kyomecha.org/cobene/e/link.html

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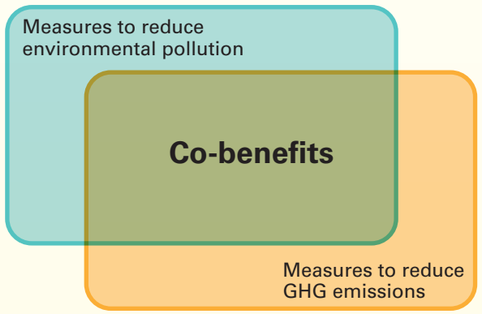
Ministry of the Environment, Japan

A Co-benefits Approach to Climate Change

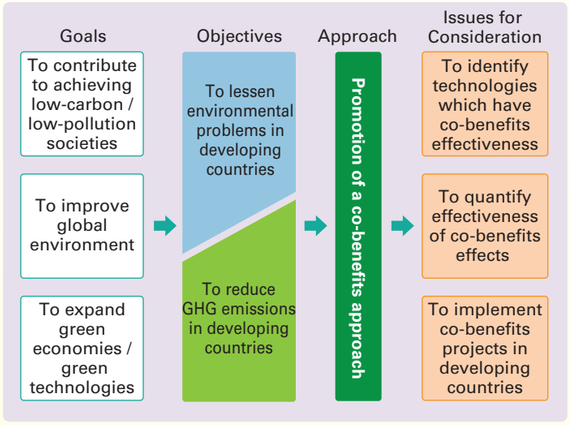
A co-benefits approach to climate change involves activities that can simultaneously reduce environmental pollution (challenges many developing countries face) and reduce greenhouse gas (GHG) emissions (urgent global need). The co-benefits approach to climate change is an important policy issue for Japan.

Specific examples include air pollution and GHG emissions reduction through improving efficiency at thermal power plants; water pollution and GHG emissions reduction through methane recovery and electricity generation in wastewater treatment; and air pollution and GHG emissions reduction through improvements in public transportation networks.



An Overview of Co-benefits Approach Initiatives

The Japanese Ministry of the Environment (MOEJ) focuses its cooperation on countries in Asia, as a priority region for applying the co-benefits approach to climate change. The MOEJ has been working on identifying technologies that has co-benefits effectiveness; developing evaluation tools that help quantify effectiveness of co-benefits approach; and implementation of climate change countermeasures with co-benefits technologies.



Bilateral Cooperation

The Japanese Minister of the Environment signed joint statements with the Environment Ministers of the People's Republic of China and the Republic of Indonesia to promote the co-benefits approach through bilateral cooperation.

Training in Xiangtan City

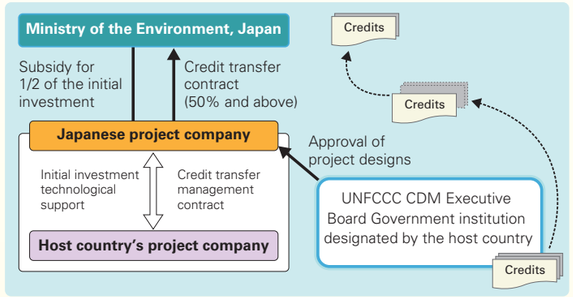
Cooperation in China:
In Panzhihua City, Sichuan Province, a joint research (on environmental pollution reduction plan), and training courses (targeting central and local government officials) were carried out. In 2010, Xiangtan City in Hunan Province was selected to be the next cooperation target.

Cooperation in Indonesia:
Feasibility studies were prepared on two locations, a landfill site in Banjarmasin City and a slaughterhouse in Palembang City, to find out effectiveness of co-benefits in these two locations.


Waste dump and leachate
(Landfill in Banjarmasin City)

Co-benefits CDM Model Projects

Since 2008, the MOEJ has provided subsidy to private sector companies to implement promising co-benefits-type CDM model projects using Japanese environmental technologies. The subsidy would be provided to cover half of the initial investment cost on condition that 50% or above of the credits obtained from the project will be transferred to the Government of Japan.



Approved Projects:

Malaysia	Environmental improvement project to reduce GHG emissions from a closed landfill site (2008)
	Methane recovery and electricity generation project from palm oil factory effluent, and water purification (2009)
Thailand	Biogas project to generate electricity from wastewater at an ethanol factory (2008)
China	Waste heat recovery and electricity generation project at a Chongqing cement plant (2010)

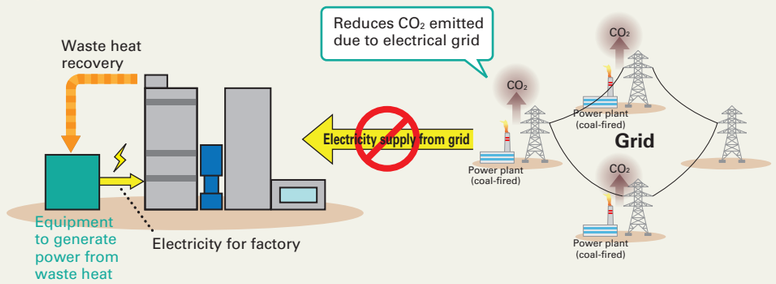
Examples of Co-benefits Activities

CASE 1 Waste Heat Recovery from Cement Plant — Air

By recovering waste heat from a dry rotary kiln in a cement plant and using the heat to generate electricity, this project substitute electricity from the power grid, this indirectly reduces the amount of sulfur dioxide emitted from power plants elsewhere.


Dry rotary kiln under construction (Chongqing City, China)

Project Scenario

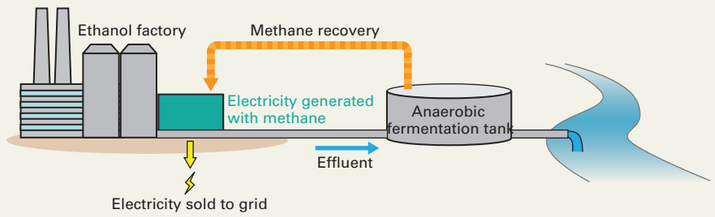


CASE 2 Biogas Recovery and Electricity Generation from Ethanol Factory Wastewater — Water

By using a sealed anaerobic fermentation tank to treat wastewater from an ethanol factory, this project recovers emitted CH_4 and uses it to generate electricity, thereby helping to improve water quality.


Anaerobic open lagoon on factory grounds (Ayutthaya Province, Thailand)

Project Scenario

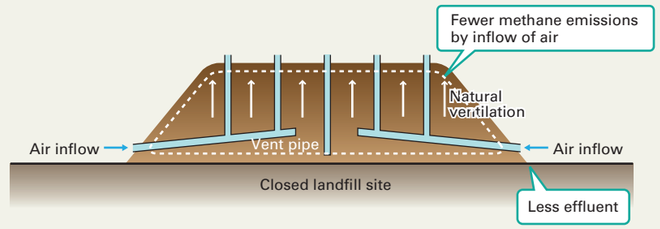


CASE 3 Environmental Improvements and Reduced GHG Emissions from Closed Landfill Site — Waste

By improving the site from anaerobic to more energy-efficient semi-aerobic conditions, this project limits CH_4 emissions. The project also aims to improve water quality of wastewater and reduce offensive odors.


Site inspection at landfill site (Penang, Malaysia)

Project Scenario



CASE 4 Installation of Composting Equipment at Waste Disposal Site — Waste

By introducing composting equipment at an active landfill site, this project promotes the composting of organic waste, thereby limiting CH_4 emissions that would otherwise be generated, and extending the service life of the site. The project also aims to improve the water quality of leachate and reduce offensive odors.


Composting (Banjarmasin City, Indonesia)

Project Scenario