

# The Co-benefits Approach for GHG Emission Reduction Projects



Ministry of the Environment, Japan (MOEJ)

## Background

Under the Kyoto Protocol, the Clean Development Mechanism (CDM) is intended to help non-Annex I Parties (developing countries) achieve sustainable development. They are intended to benefit from project activities resulting in certified emission reduction units (CERs). The active promotion of CDM projects is expected to produce more than 1.3 billion CERs by the end of 2012. It is important to note, however, that such projects do not always address economic and social development needs, which are often a higher priority for developing countries. Another problem is regional imbalances in the distribution of CDM projects.

New approaches are needed to address these issues. In response, Japan launched initiatives based on the “co-benefits approach” in 2006, and has been advocating the merits of project-based mechanisms based on this new approach at meetings of the Ad hoc Working Group on further Commitments for Annex I Parties under the Kyoto Protocol (AWG-KP) and in other international fora, such as the East Asia Summit in 2007 and the G8 Environmental Ministers Meeting in 2008.

## Co-benefits Projects Can Help Developing Countries Meet Economic and Social Development Needs

**The co-benefits approach is a new project-based approach to address climate change concerns while also improving the local environment. The need to find the initial investment is often a serious barrier for these projects.**

Local environmental problems are urgent issues to address among the priority development goals of developing countries. Air and water pollution and waste management result from rapid industrialization, urbanization, and population growth, and often cause serious problems for a country’s social and economic development as well as the natural environment.

The co-benefits approach aims to address climate change concerns while also improving the local environment—as part of actions by developing countries to achieve their development goals in a sustainable manner. The mitigation of climate change is essential if we are to achieve the ultimate objective of the United Nations Framework Convention on Climate Change (UNFCCC), and this objective should be pursued in a way to help developing countries address their economic and social development needs. One could also expect this approach to reduce imbalances in the regional distribution of CDM projects and other greenhouse gas (GHG) emission reduction projects. The co-benefits approach has been much-discussed recently, but unfortunately, the number of actual projects implemented is still small.

Japan has taken various steps to promote the co-benefits approach, including policy and technical dialogue, capacity building, bilateral statements, and pilot studies. Studies are currently being conducted to establish measurable, reportable and verifiable methods to assess the effectiveness of the co-benefits approach. At the same time, preferential treatment and various financial schemes are being discussed, in the interest of promoting the co-benefits approach. It is hoped that the findings and experiences gained through these efforts done in cooperation with developing countries will be reflected in future international rules and frameworks, for example, by incorporating the idea of co-benefits as one of the criteria for CDM registration, by offering preferential treatment for co-benefits CDM projects, and so on.

## Purpose of This Brochure

This brochure was prepared in order to contribute to discussions about future resumes, by describing the significance of the co-benefits approach and offering examples of good practices.

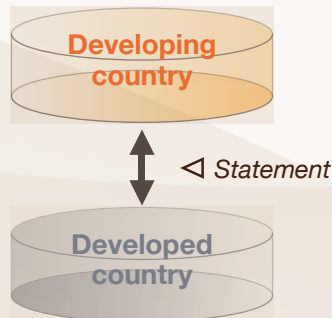
## Promotion of the Co-benefits Approach

Where can co-benefits projects be promoted? By whom? How? Efficient promotion of the co-benefits approach requires technical, financial and institutional support and cooperation. The following figures indicate examples of how the co-benefits approach could be promoted. Both co-benefits CDM projects and other co-benefits GHG emission reduction projects are covered.

Case 1 focuses on country-level initiatives, and also includes potential contributions to international initiatives for a future climate framework. Case 2 focuses on cooperation between developing and developed countries, particularly between the private sector and governmental organizations. The key here is communication between the main actors involved in reducing emissions (the private sector) and the main support entities (the government sector). Case 3 focuses on activities by private entities, where the co-benefit element of each project is financially supported through both public and private schemes.

*\* These scenarios need not be implemented in any particular sequence, as the co-benefits approach can be started in the most convenient way for each host country or entity.*

### Case 1: Country level



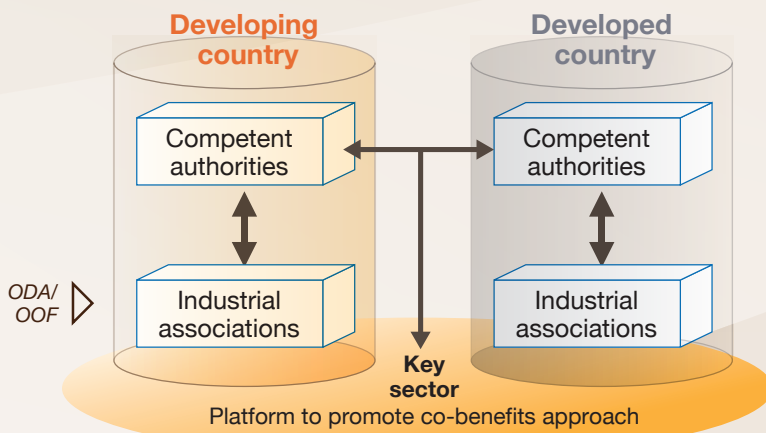
### Case 1

Country level activities include conclusion of a joint statement on the promotion of co-benefits projects, which might cover following.

- Targets: High-priority sectors, emission reduction amounts, number of projects, amount of energy consumption reduced, duration of activities, etc.
- Priorities: Regions, sectors, project types, etc.

For example, MOEJ and the Ministry of Environment Protection, China, concluded the "Statement of Intent on Cooperation on the Co-benefits Approach Addressing Climate Change and Environmental Improvement" in December 2007. Under the statement, both ministries will intensify their efforts to promote policy dialogue on development and implementation of several co-benefits projects in China. In 2008, some project candidates have been identified and preliminary studies are now underway to lead to implementation.

### Case 2: Private sector & government level



### Case 2

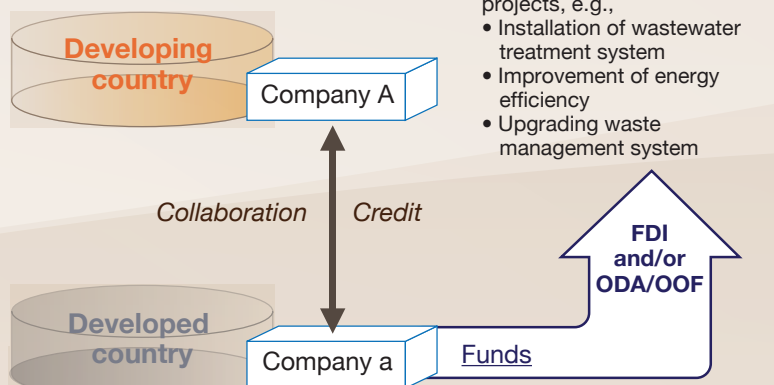
Cooperation between the competent authorities and industry (for example, industrial associations) could promote the co-benefits approach in major sectors of host countries. This may include the establishment or support of a platform for the co-benefits approach in a given sector.

Those projects might be eligible as CDM projects, but such eligibility is not an absolute condition for co-benefits approach. Development of the sector, accompanied by co-benefits, should be the most important criteria.

The platform might address the following issues in a cooperative manner:

- Best Available Technology (BAT), consideration and determination of indicators
- Understanding of current status and target setting
- Technical cooperation and human resources development

### Case 3: Company level



### Case 3

In this scenario, several financial sources from the public sector support private companies for the implementation of co-benefits projects. The target projects are not limited to CDM projects, but may also include other GHG emission reduction projects. Funds will be mainly allocated to the co-benefit element of the project.

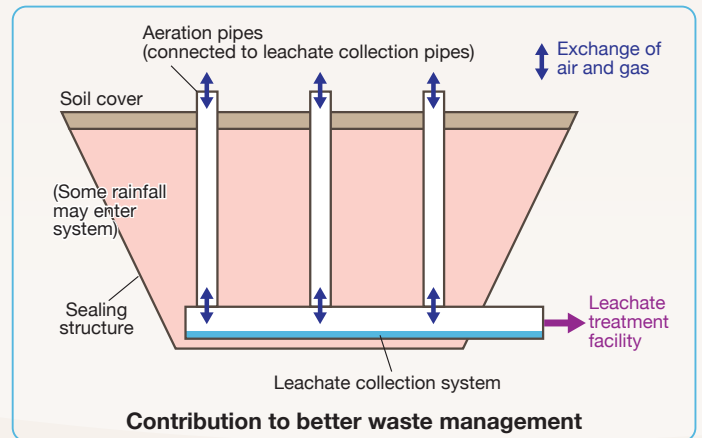
For private companies, initial costs are one barrier to the realization of projects. To support private entities, Japan has already established and implemented financial systems, including subsidies and allocation of funds from Official Development Assistance (ODA)/Other Official Flows (OOF).

## Examples in Action

### Reducing methane emissions with semi-aerobic landfill systems

Many developing countries face increasing waste management challenges. Open dumping and poorly managed landfill sites cause serious environmental problems, such as the release of odors, toxic leachate, and methane emissions.

The semi-aerobic “Fukuoka Method” developed in Japan is an economically viable and effective way to manage landfill sites. This method has multiple benefits, including the reduction of local environment impacts, stabilization of landfill sites, and reduction of methane emissions. An example of this “co-benefits” approach is currently under way as a CDM project in Malaysia, in cooperation with Japan’s Ministry of the Environment.



Source: NIES

### Reducing methane emissions with wastewater technology/equipment

Industrial and household wastewater discharge may cause water pollution if not properly treated, or if treated by unstable conventional methods. High levels of organic wastewater emit methane as well as water pollution and odors to the surrounding community.

Proper treatment technologies and equipment will offer co-benefits and control these problems. Co-benefits project of this type are currently under way as CDM projects in Malaysia, Thailand, and Vietnam, in cooperation with Japan, supported by the Ministry of the Environment.



Source: GEC, Konzen

### Saving energy with high efficiency boilers/processes

Air pollution has become a serious problem in many countries, especially where rapid industrial development is taking place. For industrial sectors, energy efficiency improvements offer co-benefits in terms of better air quality, energy saving, and reduced CO<sub>2</sub> emissions.

Cleaner production processes and high-efficiency boilers (including biomass-powered boilers), are examples of the co-benefits approach. One such project was implemented in China, in cooperation with Japan, both as a JICA cooperation project and yen loan project.



Source: JICA

### Improving transport systems by utilizing nonfood products such as waste cooking oil as fuel

Rapid economic growth in developing countries has resulted in economic, social and environmental problems related to urban transportation. Traffic congestion has many negative impacts, and air pollution is an urgent challenge.

The production and utilization of biodiesel for fuel switching in the transport sector can be considered a co-benefits approach if the biodiesel is derived from sources that do not compete with food production.

Possible co-benefits include cleaner air, more effective use of energy resources, and reduced GHG emissions. JICA offers a training course on community-based systems for the collection and utilization of waste cooking oil for use as a biodiesel fuel.



## Potential Financial Schemes to Promote Co-benefits Approach

As a part of the “Cool Earth Partnership” announced by Japanese Prime Minister Yasuo Fukuda at the World Economic Forum in 2008, the Government of Japan plans to offer loans under its ODA program on terms that are even more concessional than those currently applicable for environmental projects. Financial assistance and practical projects/examples are critical to implement the co-benefits approach. Several financial schemes could apply the co-benefits approach without diverting ODA funds:

- Yen loans (especially for infrastructure improvements)
- Two-step loans focusing on basic human needs (BHN) in least-developed countries (LDCs)
- Support systems for measurable, reportable and verifiable emission reduction activities in developing countries (currently underway)
- Subsidies to promote feasibility studies for CDM project-finding (currently underway)
- Systems to stimulate transfers of state-of-the-art technologies (e.g., support systems that promote “first-of-its-kind” technologies, such as NEDO model projects) (currently underway)
- Subsidies to help realize co-benefits-type CDM projects (currently underway)

## More Information from Japan on the Co-benefits Approach

### Examples of Japanese initiatives using the co-benefits approach

MOEJ and the Ministry of Environment Protection, China concluded the “Statement of Intent on Cooperation on the Co-benefits Approach Addressing Climate Change and Environmental Improvement” (3 Dec, 2007)

MOEJ and the Ministry of Environment, Indonesia agreed on the “Statement of Intent on Cooperation on the Co-benefits Approach” (12 Dec, 2007)

CDM/JI Feasibility Study (FS) Programme

[▶ gec.jp/gec/gec.nsf/en/Activities-CDMJJ\\_FS\\_Programme-Top](http://gec.jp/gec/gec.nsf/en/Activities-CDMJJ_FS_Programme-Top)

Better Air Quality 2008 Pre-Event “Climate-Friendly Transportation Strategies in Asia: Overcoming Obstacles to Co-benefits”

[▶ www.iges.or.jp/en/cp/activity20081111.html](http://www.iges.or.jp/en/cp/activity20081111.html)

Co-benefits CDM Model Projects (in Japanese)

[▶ www.env.go.jp/water/info/cdm/index.html](http://www.env.go.jp/water/info/cdm/index.html)

JICA’s Assistance for Mitigation to Climate Change — The Co-Benefits Approach to Climate Change

[▶ www.jica.go.jp/english/publications/reports/study/topical/climate\\_1/index.html](http://www.jica.go.jp/english/publications/reports/study/topical/climate_1/index.html)

### Related materials (downloads)

Development Needs-oriented Efforts to Address Climate Change and CDM (May, 2007)

Addressing Local and Global Environmental Issues through Working on Climate Change Mitigation and CDM in Developing Countries (Dec, 2007)

[▶ www.kyomecha.org/e/Co\\_benefits\\_Approach.html](http://www.kyomecha.org/e/Co_benefits_Approach.html)

Promoting the Co-benefits Approach, through the Financial Mechanisms, “Cool Earth Partnership” -Aligning Climate and Development- (May, 2008)

Implementation Manual - Catalogue for Identification of Co-benefits Projects to GHG Reduction and Local Environmental Improvement - Water, Air, and Waste, Asia-Pacific Gateway to Climate and Development

[▶ www.climateanddevelopment.org/cobenefits/index.html](http://www.climateanddevelopment.org/cobenefits/index.html)

## Inquiries



**Ministry of the Environment, Japan**

1-2-2-Kasumigaseki Chiyoda-ku, Tokyo 100-8975 Japan

**Office of Market Mechanisms,  
Climate Change Policy Division,  
Global Environment Bureau**

Tel: +81-3-5521-8354  
Email: [chikyu-ondanka@env.go.jp](mailto:chikyu-ondanka@env.go.jp)

**Office for International Cooperation,  
Environmental Management Bureau**

Tel: +81-3-5521-8309  
Email: [mizu-taiki-kokusai@env.go.jp](mailto:mizu-taiki-kokusai@env.go.jp)