

Separate Volume of the Report
Study on JICA's future assistance for the CDM —How can JICA confront the CDM? —

JICA CDM

JICA's Assistance and the Clean Development Mechanism (CDM)

October 2006



For a better tomorrow for all.
Japan International Cooperation Agency

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What is JICA?

Summary of the activities and projects by JICA

As globalization accelerates in the 21st century, we are faced with a range of issues that cannot be solved by individual countries, but must be addressed by the whole human race. Notable scientific advances and industrial development have brought many improvements to the lives of those in developing countries, but seen as a whole, an overwhelming number of people have been unable to benefit and remain cut off from hopes of prosperity. In reality, there is an ever-widening gap between the world's wealthy and impoverished countries. Various problems in developing countries are intricately interrelated, and solving these problems is becoming more difficult and serious.

As a member of international community, Japan is actively involved in helping to resolve these problems by promoting socio-economic development in the developing countries through its Official Development Assistance (ODA). The Japan International Cooperation Agency (JICA) undertakes an important role in the implementation of ODA.

JICA's assistance focuses on capacity development, which includes systems building, organization strengthening and human resource development. To maintain the benefits of JICA projects over the long term and encourage those benefits to spread widely rather than be restricted to one region or sector, we believe it's important to offer support to bodies at all levels, from central government to local communities.

In addition, JICA strives to uphold the efficiency and quality of its projects by maintaining close links with NGOs, universities, research institutes, private sector, and other bilateral and multilateral aid organizations.

When implementing assistance projects, JICA follows three important principles.

Field Oriented Approach: JICA's projects make use of people in the fields accurate grasp of people's real needs and to prompt response. This means continually strengthening the functions of JICA's overseas offices.

Human Security: To incorporate the concept of human security in JICA's assistance.

Effectiveness, Efficiency and Speed: To implement assistance projects more effectively and efficiently.

Developing countries and the CDM, importance of the CDM to JICA

Global warming and climate change is a serious threat to human beings and should be addressed on a global scale. It is predicted that the mean temperature will rise 5.8 degrees centigrade and the sea level will rise 88 cm in 2100. To mitigate the effects of global warming, it is essential to reduce emissions of greenhouse gases (GHGs).

Under the Kyoto Protocol, a legal framework to promote international GHG reduction, the “Kyoto Mechanisms” were established to assure flexibility of the activities. Clean development mechanism (CDM) is the only one which both developed and developing countries can cooperate in. The purpose of the CDM includes to assist developing countries in achieving sustainable development.

This objective has same direction as that of JICA. There we find the linkage between JICA’s activity and the CDM. Support for the promotion of CDM projects will be an effective tool to assist developing countries in achieving sustainable development through their capacity development, as well as to mitigate global warming. JICA, as a technical assistance organization in operating under Japanese ODA, has responded to the requests of CDM capacity development projects from developing countries. We will continuously implement assistance for capacity development to promote CDM projects in those developing countries.

JICA has established a study group to discuss the possibility and direction concerning how JICA should deal with assistance in the CDM field. The study group has completed a report addressing two basic policies as follows:

JICA’s standpoint is “to be a facilitator of CDM”.

As practical approaches to facilitate the CDM, JICA implements capacity development for promoting the CDM in the assisted countries, and introduces viewpoints of the CDM applicability in regular assistance programs.

This brochure summarizes the report and recommendations, as well as the outreach of JICA’s activity related to the CDM.



Relationship between CDM and JICA's assistance

What is the CDM?

CDM is one of the Kyoto Mechanisms as mentioned above. In Annex I of the United Nations Framework Convention on Climate Change (UNFCCC), countries are listed which have obligations to reduce their GHG emission. Those countries are called Annex I Parties. The CDM allows Annex I Parties (investment countries: developed countries) to implement projects that reduce GHG emissions in non-Annex I Parties (host countries: developing countries). The reductions in GHG emission must be in addition to any reductions that would occur in the absence of a CDM project. The reduced GHG generated by CDM projects are called certified emission reduction units (CERs). Annex I Parties can use the CER, which is also treated as a “credit”, to achieve their Kyoto Protocol targets.

CDM projects include renewable energy utilization (wind, hydro, etc.), energy efficiency, methane utilization from landfill gas and animal manure, afforestation and reforestation. As CDM projects are implemented in non-Annex I Parties which have no Kyoto Protocol targets, the additionality of GHG emission reductions must be validated and approved by third parties. The supervising authority is the CDM Executive Board (EB) under the conference of Parties serving at the meeting of the Parties to the Kyoto Protocol. Validation is implemented by designated operational entities (DOE), which are accredited by the EB.

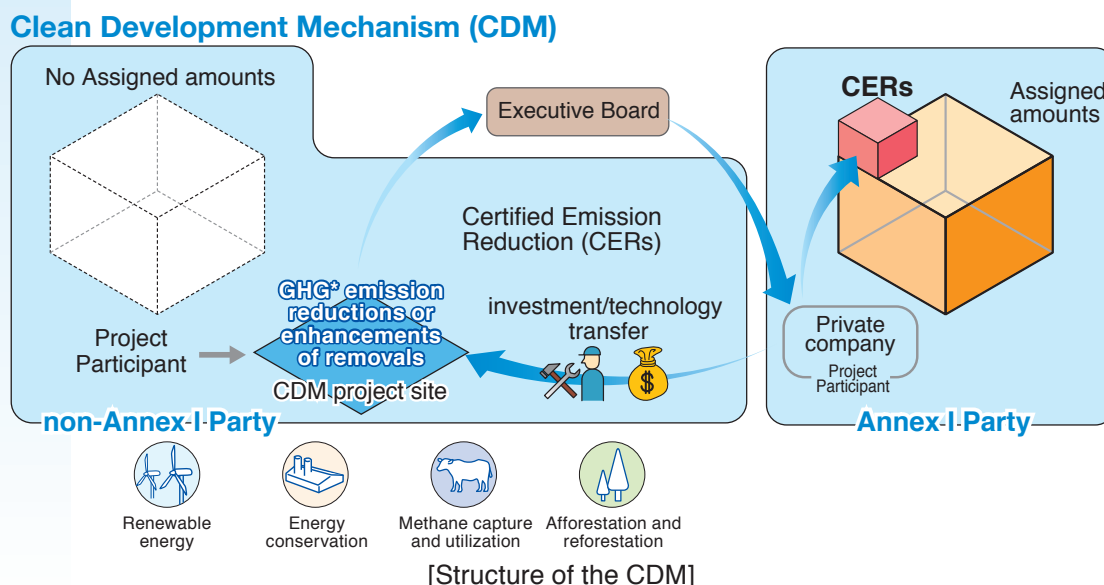
Interface between CDM and assistance to developing countries

One of the important characteristics of the CDM is the purpose, explicitly stated in the Kyoto Protocol, that the CDM shall be used to assist developing countries in achieving sustainable development. The host country of the project has the right to select and judge what kind of CDM projects will contribute to the sustainable development of the country.

In addition, the Kyoto Protocol stipulates that a share of the proceeds from CDM projects will be used to assist developing countries that are particularly vulnerable to the adverse effects of climate change and to meet the costs of adaptation.

GHG emission reduction has multiple ancillary benefits including air pollution control and the recovery of forest. Those projects are more costly compared to the usual development projects. In some cases, therefore, it is difficult to implement those projects in developing countries. However, if CER generated through the CDM will be purchased by developed countries, the benefit will be increased so that the feasibility of those projects will increase.

The interface between CDM projects and JICA's assistance to developing countries is the contribution to sustainable development for those countries. JICA can promote assistance to implement appropriate CDM projects within its assistance programs.



Source: Modified from New Energy and Industrial Technology Development Organization(NEDO)and Ministry of Natural Resources and Environment, The Socialist Republic of Viet Nam(MONRE)(2004)Introduction to the CDM for the Cooperation between Japan and Viet Nam

* GHG : Greenhouse Gas. Target GHG of the Kyoto Protocol include CO₂, CH₄, N₂O, HFC, PFC and SF₆.

Significance of the CDM for JICA

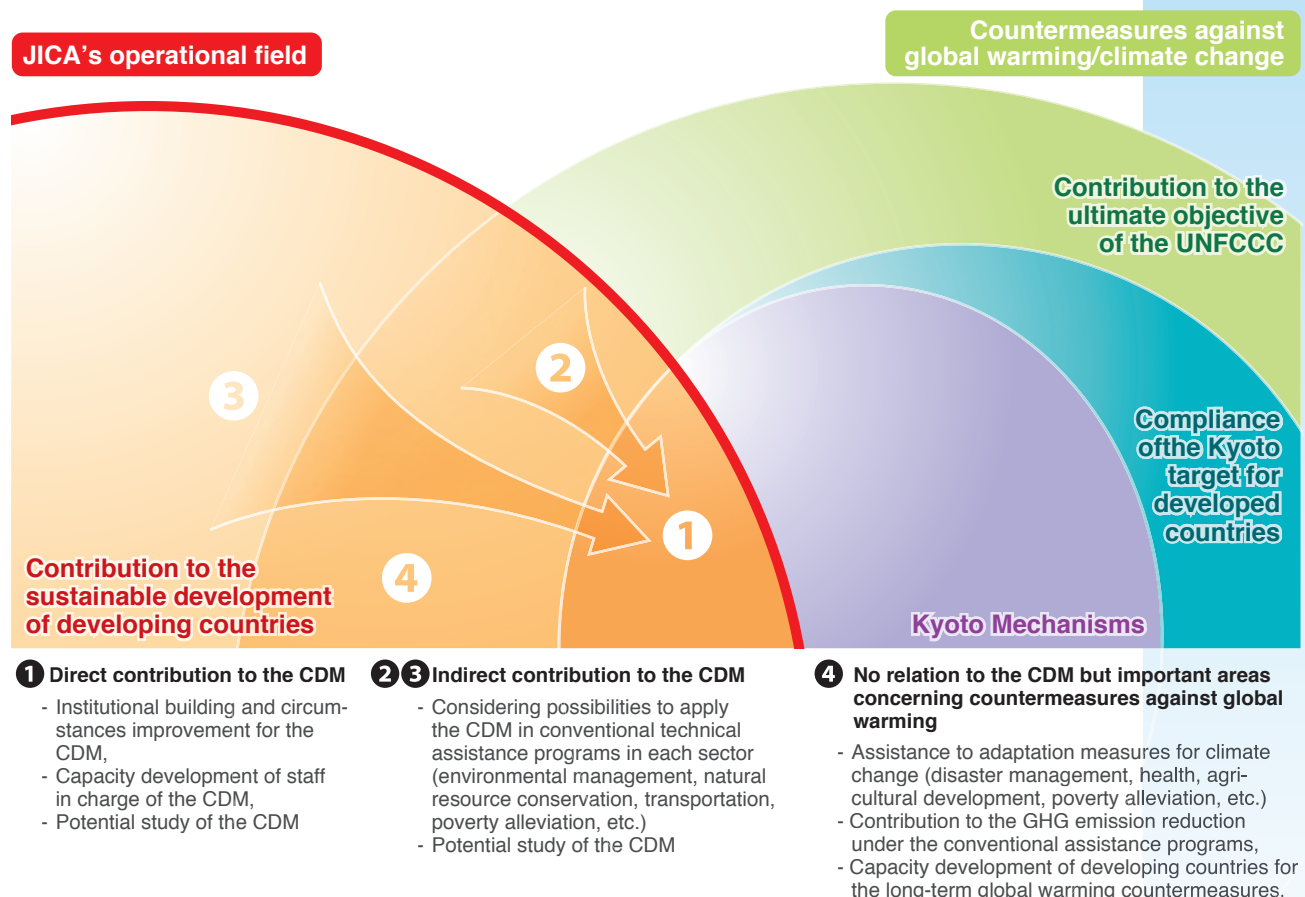
JICA's mission is the implementation of technical assistance to developing countries and its significance concerning the CDM is as follows:

1. Contribution to sustainable development of developing countries,
2. Contribution to international efforts to address global warming, and
3. Contribution to supporting the Japanese government to achieve its Kyoto Target.

To implement CDM projects efficiently, related organiza-

tions in the host countries should have the ability to understand and abide by the rules required by the UN. If JICA can assist their capacity development for the CDM, it would have an ancillary benefit of strengthening their general capacity development to address global warming.

It is predicted that the GHG emission in developing countries will increase in step with their level of economic development. JICA's technical assistance for the CDM, based on our know-how and wide-ranging schemes will be able to contribute to the capacity development of developing countries, as well as to the promotion of their own countermeasures to global warming problems.



[Objectives of the CDM and the area of JICA's activities]

► The figure indicates JICA's operational field and its relationship to global warming and CDM. ① means direct contributions to the CDM. ② and ③ mean indirect contributions to the CDM through considering possibilities to apply the CDM through conventional technical assistance programs. In particular, the activities in ② include energy efficiency improvement assistance, which also contributes to the ultimate objective of the UNFCCC: to achieve stabilization of GHG concentrations in the atmosphere at a level that would prevent dangerous anthropogenic interference with the climate system. ④ does not relate to the CDM but to those assistance programs that have ancillary effectiveness to address global warming in disaster prevention, health care and agricultural development.



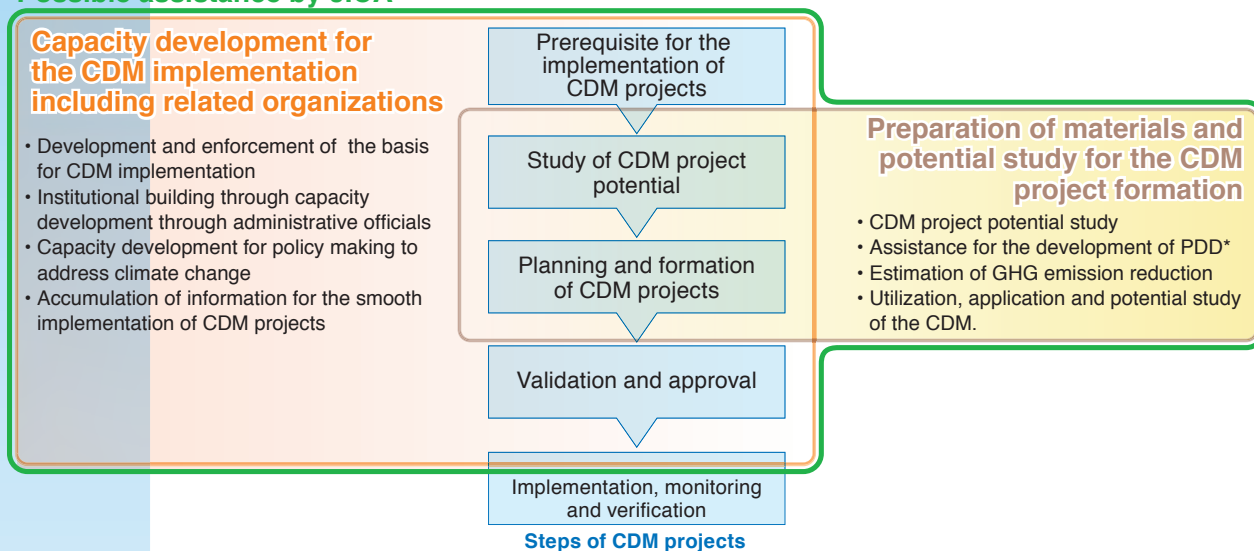
JICA's approach of assistance for the CDM

CDM related assistance projects implemented by JICA to date

As the CDM itself is a rather new mechanism, there are not many examples of CDM related assistance by JICA. Even so, JICA has already implemented some CDM assistance projects, through development studies, technical cooperation projects, dispatch of experts, acceptance of trainees,

etc. These assistance projects mostly aim to support early stages of CDM project implementation including capacity development of persons-in-charge, the establishment of approval system, and project formation.

Possible assistance by JICA

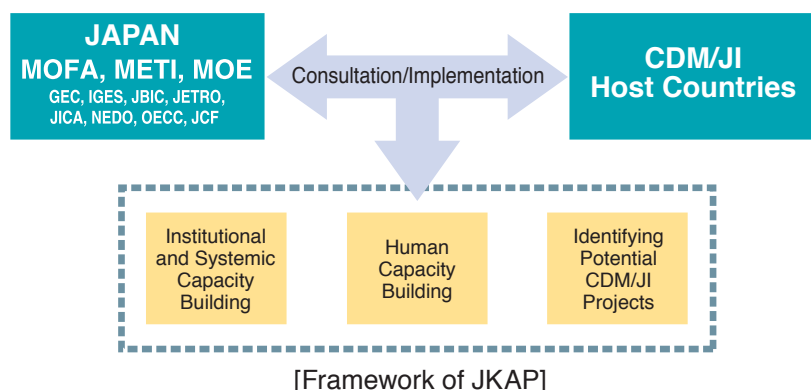


[Steps of CDM projects and possible assistance by JICA]

JKAP

In March 2005, the Japanese government and concerned organizations, a leading part taken by MOFA, METI and MOE, united as one and committed to the efficient promotion of the Kyoto Mechanisms, established the Japan Kyoto Mechanisms Acceleration Programme (JKAP). CDM assistance programs by JICA as mentioned above are stated as a part of the JKAP.

Capacity building activities for host countries	
Capacity building activities	Organizations
Information dissemination and awareness raising	IGES, JBIC, JICA, NEDO, OECC
Technical support (i.e. baseline methodology)	GEC, IGES, JBIC, JICA, NEDO
Support to host government	IGES, JBIC, JICA, NEDO
Support to the financial sector	IGES, JBIC, NEDO, JCF
Support to the private sector (project activities-related)	GEC, IGES, JBIC, JETRO, NEDO, OECC, JCF



[Framework of JKAP]

Source: Modified from Government of Japan (2005), Japan Kyoto Mechanisms Acceleration Programme 2005

* PDD (Project Design Document): Official document to describe the details of the CDM project in accordance with the UNFCCC format.

Capacity development for developing countries to implement the CDM

As mentioned above, CDM assistance projects by JICA mainly support early stage CDM project implementation; to establish necessary conditions and systems for the implementation of CDM projects through the capacity development of host countries.

Practical examples of assistance field and contents are

listed in the table below. However, assistance needs and effective assistant methods vary from a country to a country. It is important to implement needs-based assistance in accordance with the capacity assessment of personnel in charge of the CDM and to identify major barriers for the implementation of CDM projects, etc.

Examples of CDM assistance field and contents by JICA	
Assistance field	Contents of assistance by JICA
Policy making	Policy making assistance such as energy and forestry planning
Development of laws and regulations	Assistance for the development of laws and regulations concerning energy conservation, renewable energy and afforestation, etc.
Technical assistance and human resource development	Carbon emission factor of electric grid, human resource development for the DNA (designated national authority: CDM approval organization of the country), Assistance to develop DOE, capacity development for CDM project formation through model PDD development, etc.
Accumulation and dissemination of information	Assistance to establish “CDM Promotion Center”
Education and public awareness raising	Assistance to make brochures for the promotion of CDM public awareness

Introduction of CDM consideration

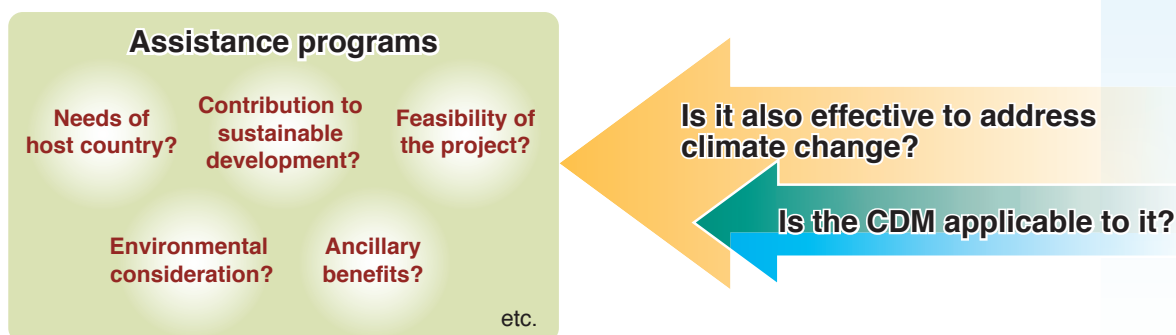
Another approach is to introduce a new point of view of CDM to conventional assistance projects by JICA.

With CDM projects, it can expect to find added economic value from CER. The added value will work as a potential incentive to implement GHG reduction projects that carry high economic costs and which could not otherwise be implemented in developing countries.

Therefore it is necessary to consider the possibility of CDM application, when JICA discusses the feasibility of the development plans and individual projects. The types and

fields have a broad and diverse range which can encompass the applicability of CDM. Including the “Applicability of the CDM” into the consideration items of the assistance program has the potential to find CDM applicable projects and enhance their profitability and effectiveness.

JICA will consider the application of CDM in the fields which are not positively promoted by the private sector in spite of their high potential to contribute to the sustainable development.



[Introduction of CDM consideration by JICA]



Potential and direction of JICA's assistance in CDM related fields

Major sectors of the CDM and JICA's main programs

Possible assistance in CDM related fields are considered as follows. CDM projects can be divided into GHG emission related ones and forestry related projects as CO₂ levels sink. Each of them has their own characteristics and issues, and JICA also has programs, technology and human resources to address those issues.

The table below indicates major sectors of the CDM and JICA's main programs. Following pages introduce what kind of assistance will be made available by JICA.

	Major sectors of the CDM	JICA's main programs
Emission sources	Energy (Fuel burning, energy industry, manufacturing & construction, transport)	Energy supply, renewable energy, energy conservation, industrial technology, CP, transport & traffic, urban development, community development)
	Fugitive emission from fuel (solid fuel, oil and natural gas)	Energy conservation, industrial technology, CP
	Industrial process (Mineral manufacture, chemical industry, metal industry, other industry, manufacture and consumption of halo-carbon and SF ₆)	Energy conservation, CP, industrial waste treatment, industrial technology
	Utilization of solvents and other products	Energy conservation, CP, industrial technology
	Agriculture (Digestive fermentation, animal manure management, rice paddy cultivation, cropland soil management, planned burning of savanna, open burning of agricultural residue)	Agricultural development, rural development, municipal waste, air pollution
	Waste (Solid waste management in land, waste water treatment, incineration of waste)	Municipal waste, industrial waste, water pollution
Sink	Afforestation	Forest resource management, afforestation, natural environment conservation
	Reforestation	Forest resource management, afforestation, natural environment conservation

Possibility and direction of assistance in each sector

Renewable energy

Promotion of renewable energy is important to sustainable development as an environmental friendly energy option. JICA has already implemented many kinds of assistance in the renewable energy sector. Concerning the CDM and renewable energy, human resource development was implemented through training of virtual PDD drafting.

Basic policy for the future assistance

Consideration of CDM applicability in the assistance programs of renewable energy sector

Considering applicability of the CDM with JICA's assistance programs in the renewable energy sector, it can contribute to increase economical efficiency as well as the increased incentive of developing further activities.

Potential study of renewable energy from the viewpoint of CDM projects

It is effective to implement a potential study of each energy source within conventional renewable energy assistance programs from the viewpoint of the CDM. For example, bundling of small and micro hydro power plants under local electrification programs might have possibility to apply as CDM projects.



Energy conservation

Energy conservation is one of the most important issues for developing countries. It can contribute to sustainable development through the alleviation of resource constraints, energy security, strengthening competitiveness, increasing income, etc. However, the number of CDM projects and approved methodologies in the energy conservation sector are very limited so far.

► Basic policy for the future assistance

Consideration of CDM applicability in the assistance programs of the energy conservation sector (development studies, technical assistance projects)

A steep rise in the price of oil and other factors has made developing countries more conscious about energy conservation. It is possible to promote more energy conservation activities through considering CDM applicability with JICA's assistance programs in this sector. In particular, CDM applicability can also contribute to promote ESCO*, which has been just started in developing countries.

Potential study and technology transfer in the energy conservation CDM projects

It is effective to implement a basic study to cover industrial structure and energy utilization as well as the potential study and technology transfer in energy conservation CDM.



* ESCO (Energy Service Company): Services to propose, install and assure comprehensive energy saving measures and equipment to factories and/or buildings. The cost will be covered by the share of reduced energy cost.

Waste

Landfill waste disposal is most common in developing countries. It causes a huge amount of methane emissions to be released into the air. As the global warming potential (GWP) of methane is twenty one times that of CO₂, CDM projects to reduce methane emission can expect to get considerable amount of CER. Therefore, a number of CDM projects are proposed and implemented mainly in urban landfill sites.

The CDM projects to reduce methane emissions from landfill site includes: 1) Recovery and utilization of methane, 2) Improvement of landfill structure to reduce methane emission, and 3) Waste separation and recovery of biomass energy. Those projects can expect to create ancillary benefits for the prevention of fire disaster and gas explosion, improvement of odor and water pollution.

► Basic policy for the future assistance

Consideration of CDM applicability in the assistance programs of the waste sector

JICA can consider the possibility of CDM application, when JICA plans and implements waste management projects as the new view point. Assistance for basic data collection concerning waste composition, treatment amounts, information on landfill sites, which are essential to estimate the amount of methane emission is also important.

Promotion of CDM projects in the waste sector

It is effective to collaborate with host countries to implement basic studies concerning waste management, potential studies of CDM projects in waste sector, and analysis/discussion of issues and options to implement CDM projects.





Potential and direction of JICA's assistance in CDM related fields

Transportation

CO₂ emissions from the transportation sector accounts for 25 % of the total amount of emission in the world and are still on the rise. In particular, increases in developing countries are remarkable. However, few projects have been realized so far. Several barriers are considered as follows: projects are usually implemented as a part of social infrastructure development; it is difficult for the private sector to invest because of cost effectiveness; and, a scientific method is not established to verify emission reductions in the transportation sector, etc.

▶ Basic policy for the future assistance

Assistance to promote a shift from demand-following development to demand-controlling development

Infrastructure development sometimes includes negative factors to the environment. On the other hand, it has the positive effect to reduce fuel consumption and to contribute to solutions that address global warming. In the recent JICA's assistance in the transportation sector, development to mitigate and control transportation demand is emphasized, instead of demand following development. Although it is not related to the CDM directly right now, this approach can contribute to both the mitigation of global warming and to environmental conservation in developing countries.



Agricultural and rural development

The main aim of assistance for agricultural and rural development by JICA is "Poverty alleviation". It precisely corresponds to the eligibility of the CDM, "CDM shall be used to assist developing countries in achieving sustainable development". Therefore, it is considered that the CDM projects in this sector have high priority. It is also important to clarify the ancillary benefit of CDM projects as part of poverty programs for rural communities, together with reduction of GHG emissions, when planning the CDM projects.



▶ Basic policy for the future assistance

Feasibility of small scale CDM projects

The scale of economic activity is not large in rural areas of developing countries. It means the amount of GHG emission is limited in those areas. Under these circumstances, there is possibility to consider small scale CDM projects, which can meet the needs of the community and may create a chance to receive stable cash income through CER, even though the amount of CER is limited. To realize these projects it is necessary to establish a framework for the utilization of such small scale CDM projects ensuring the participation of local citizens and fair distribution of benefits from the projects.

Relationship with conventional assistance and the future potential of the assistance

In the sector of JICA's conventional assistance, some projects have applicability for CDM concerning sustainable rural development with environmental considerations. For example, introduction of improved kitchen ranges, utilization of animal manure as household fuel, and composting will be effective as small scale CDM projects. Though these fuel switching and methane recovery methods bring a limited amount of CER, they can reduce GHG as well as contribute to the improvement of the quality of life in the community. If the necessary condition is met, such as establishing a baseline scenario and monitoring plan, those projects have the potential to apply for CDM.

Afforestation and reforestation

As trees absorb and store carbon, they can be used to mitigate global warming. The Kyoto Protocol allows for the implementation of afforestation and reforestation CDM (hereinafter called A/R CDM) projects. Many benefits can be expected from A/R CDM projects which reflect local needs and characteristics.



For example, A/R CDM; (1) on degraded land where normal commercial based plantation is not feasible, (2) aim to environmental conservation and watershed management, (3) management by local residents, can be expected.

However, the proposal and implementation of A/R CDM is still limited compared to other sectors. It is because of the difficulty of A/R projects themselves and the technical/institutional difficulties involved in CDM projects. In the meantime, validity period of CER under A/R CDM is fixed because of risk of carbon discharge caused by forest fire and others. Therefore, it is predicted that the value of CER from A/R CDM will be lower.

► Basic policy for the future assistance

Capacity development for host countries to implement A/R CDM

First of all, the most important point is to assist the DNA of host countries to have enough knowledge about A/R CDM. There are a lot of issues to be noticed concerning A/R CDM, e.g., land ownership, understanding the condition of project sites, the difference between commercial based A/R. Both private and public entities can be project participants of CDM projects. As JICA assistance programs, possible activities will include basic capacity development for the DNA to understand the above mentioned issues, project finding and feasibility studies of A/R CDM considering the needs and characteristics of host countries.

Small scale CDM (definition and characteristics, and its utilization)

The CDM projects with small amounts of CER will generally have difficulty in implementing commercial based activities because of cost - benefit imbalances. To promote those small scale CDM projects under certain scales, simplified modalities and procedures have been established.

Small scale CDM projects include four types as follows:

- Type I: Renewable energy (solar, wind, biomass, etc.)
- Type II: Energy efficiency improvement (factory, building, etc.)
- Type III: Others (agriculture, fuel switching, methane recovery, etc.)
- Small scale A/R CDM

Small scale CDM projects can be closely related to JICA's assistance. For example, introduction of improved cooking ranges, solar cookers and micro hydropower projects offer the ancillary benefit of poverty reduction and the creation of a better quality of life for local people.

JICA is able to contribute directly to sustainable development in community through supporting development of small scale CDM projects in cooperation with local communities and NGOs.





Introduction of JICA's assistance

Global

Capacity development for staff in charge of the Kyoto Mechanisms *Acceptance of Technical Training Participants*

▶▶ from FY 2003 to FY 2007

The aim is the capacity development of staff who are in charge of the Kyoto Mechanisms: 1) Rules of the Kyoto Protocol and the Kyoto Mechanisms, 2) Impacts of climate change by the accumulation of GHG, and 3) Role of developing countries in CDM projects, etc.

Technical training course for the global warming countermeasures *Acceptance of Technical Training Participants*

▶▶ from FY 1998 to FY 2002

It aimed to implement the capacity development of technology for the mitigation of global warming.

Global warming countermeasures *Acceptance of Technical Training Participants*

▶▶ from FY 1992 to FY 2005

It aimed to implement the capacity development of policy formation in climate change fields; 1) Practical measures, and 2) International frameworks.

Hungary

Assistance for the mitigation of global warming *Dispatch of Experts*

▶▶ from Aug. 2000 to June 2002

▶▶ from October 2002 to October 2004

1) Control the REC's climate change program, 2) Management of the Japan Special Fund, 3) Participation in decision making concerns regarding the total direction of the organization as an executive member of REC.

South and East Europe

CDM training course for south and east European countries *Acceptance of Technical Training Participants*

▶▶ from FY 2003 to FY 2005

It aimed to strengthen the organizational and human resource development for the CDM/JI promotion divisions, as well as to establish a Japan-South and East European cooperation system. It introduced the perspective of CDM projects in transportation and agricultural sectors.

Uzbekistan

Modernization of the Tashkent thermal power plant: Detailed design *Development Study*

▶▶ from June 2002 to Mar. 2004

It aimed at the construction and operation of a gas combined cycle generator at the Tashkent thermal power plant.

Sri Lanka

Hydropower optimization plan *Development Study*

▶▶ from Mar. 2002 to Mar. 2004

It considered optimization through the effective operation and increase of energy output, and developed a power supply increase plan to cover the power supply shortage.

Others

- (1) Guideline on "Global warming countermeasures" ▶▶2003
- (2) Publication of "CDM Project Coordination Committee Report" by the Mining and Industrial Development Study Department and Division, Mining and Industrial Development Cooperation Department ▶▶2002
- (3) Study of issues and potential for rural electrification by solar power projects: discussion about CDM applicability ▶▶2005
- (4) Study on JICA's future assistance for CDM ▶▶ March 2006
- (5) Guideline on "Renewable energy" ▶▶2006, ongoing

JICA's major assistance experience in CDM related fields

JICA has implemented a number of assistance projects concerning global warming countermeasures and Kyoto mechanisms. The assistance includes wide-ranging activities, e.g., acceptance of trainees, dispatch of experts, development studies, and technical cooperation projects.

In particular, the acceptance of trainees has brought great performance. The courses have accepted about 280 trainees from 82 countries in the developing world to date.

Major examples of CDM related assistance is shown as below.

Laos

Study for a small hydro power development plan in the northern region

Development Study

▶▶ from Jan. 2004 to Dec. 2005

It included a small hydro power development plan for eight prefectures in the northern region, recommendation of project policy considering sustainable operation, maintenance and budget, and capacity development for self-planning small hydro power generation.

Philippine

Capacity development for the CDM project promotion

Development Study

▶▶ from Nov. 2005 to Nov. 2006

It includes capacity development for the DNA under the Ministry of the Natural Resources and Environment: 1) Development of CDM promotion policy, 2) Case study studies of small scale CDM projects, 3) Simplification and standardization of baseline setting and monitoring plan for the small scale CDM, 4) Recommendation of financial schemes for domestic project participants, and 5) Development of an information clearing house.

Indonesia

Master plan for geothermal power generation

Development Study

▶▶ from Mar. 2006 to Sept. 2007

It aims to implement a feasibility study concerning CDM project realization.

Mitigation of global warming

Dispatch of Experts

▶▶ from Feb. 2004 to May 2005

It included 1) Assistance to develop public awareness and dissemination program, (i) Establish a web site, (ii) Develop tools and kit for public awareness and publication, and 2) Organization of dissemination seminars.

Development study for the forest management as carbon storage

Technical Cooperation Project

▶▶ from Jan. 2001 to Jan. 2006

It aimed to establish appropriate new technologies and measures for forest management such as carbon storage, which can expect promotion of domestic and international investment.

Uruguay

Capacity development for the implementation of AR-CDM

Technical Cooperation Project

▶▶ from Dec. 2005 to Nov. 2007

It aims to promote AR-CDM for the Ministry of Agriculture, Livestock and Fishery and Ministry of the Environment for the implementation capacity development and technical assistance through pilot project formulation studies.

Argentina

Capacity development to the DNA

Technical Cooperation Project

▶▶ from May 2006 to May 2007

It aims to implement capacity development for the DNA: 1) Development and maintenance of CDM information database to promote DNA's activities, 2) Public awareness for domestic related sectors (workshops, etc.), and 3) Assistance to develop PDDs.

Organizational improvement for the promotion of the CDM

Dispatch of Experts

▶▶ Jan. 2005 to May 2005

It included 1) Planning and implementation of dissemination seminars, 2) General consultation for the DNA, 3) Potential study of CDM project candidates and introduction of those candidates to Japan, and 4) Actual condition survey concerning the CDM in neighboring South American countries.

Organizational improvement for the CDM project formulation

Dispatch of Experts

▶▶ from Feb. 2004 to April 2004

It included 1) General consultation for the DNA's activities, 2) Organizational improvement and assistance for the CDM project formulation, 3) CDM seminars for domestic and southern South American regions, and 4) Information collection about CDM related activities in the southern South American region.

Chile

Development study for capacity development and promotion of AR-CDM

Development Study

▶▶ from Dec. 2005 to Nov. 2007

It aims to implement capacity development and the strengthening of support system for the Forestry Institute and the Ministry of Agriculture, through development of AR-CDM methodologies and PDDs.



Examples of JICA's assistance

Example 1

Capacity Development to the DNA (Argentina)

JICA Argentina Office

Edificio Maipu 1300, Maipu 1300 piso 21,
C1006ACT-Buenos Aires, ARGENTINA

Tel: (54-11) 4313-8901

Fax: (54-11) 4313-5778

Mail: jicaag@jica.go.jp

Website: <http://www.jica.go.jp/argentine/index.html> (Japanese)

<http://www.jica.go.jp/argentine/espanol.html> (Spanish)

Secretariat of Environment and Sustainable Development, Ministry of Health and Environment, Argentina

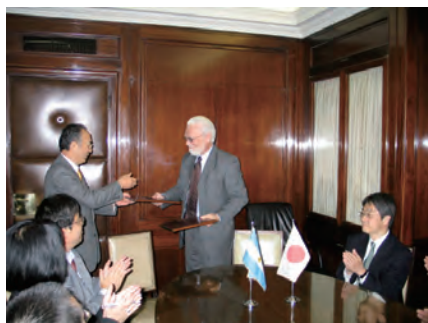
Website: http://www2.medioambiente.gov.ar/cambio_climatico/default.htm (Spanish)

Argentina ratified the Kyoto Protocol in 2001 and established the DNA in the same year at the Secretariat of Environment and Sustainable Development. Argentina has been very active dealing with global warming and CDM related issues from long before, and has hosted COP4 in 1988 and COP10 in 2004. However, the number of realized CDM projects are still limited. Until the end of May 2006, only four projects have been registered with the UN, less than neighboring countries like Brazil (which has forty-four registered CDM projects) and Chile (ten).

JICA has sent a CDM expert twice to Argentina to advise and assist in the establishment of a framework and capacity development for the DNA. As a result, it was found that the lack of domestic awareness as well as insufficient capacity of CDM promotion system including the DNA, in addition to the fiscal crisis in 2001, are the major reasons behind the low numbers of CDM projects. Concerning the DNA, it was pointed out that there was more room for improvement, though they were very active.

In response to the results, further assistance in the CDM field was requested from the Argentinean government and the technical cooperation project was started. The project aims to increase the capacity of staff who are in charge of CDM project formation, focusing on public awareness and understanding among domestic stakeholders, and the improvement of DNA for the promotion of CDM projects (from May 2005 to May 2007).

The contents of the project include; (1) Improvement of CDM information system (improvement of the CDM website, publication of CDM manual for domestic users, development of CDM database, etc.), (2) Raising public awareness of latest CDM knowledge (seminars for stakeholders including project developers and municipal governments, etc.), and (3) Development and dissemination of model PDDs (utilization of model PDDs which reflects the characteristics and conditions of Argentina, and the capacity development of DNA through the development of such PDDs). In particular, the development of model PDDs are expected to bring potential influence for the further promotion of CDM projects in Argentina as a seeding activity.



(1) August 2005, Agreement of the project framework. Head of climate change unit, the Secretariat of Environment and Sustainable Development, Argentina (left) and the Head of JICA Preparatory Study Team (right).

(2) May 2006, Agreement of the project commencement: Director-General of the Secretariat of Environment and Sustainable Development, Argentina (right) and the Head of JICA Project Consultation Team (left).

(3) June, 2006, Activity of the project: A meeting with staff of the Secretariat of Environment and Sustainable Development and JICA expert team.

Example 2

Development study for capacity development and promotion of afforestation and reforestation CDM (A/R CDM) in the Republic of Chile

JICA Chile Office

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Chile ratified the UNFCCC in December 1994 and the Kyoto Protocol in August 2002 to promote the mitigation of global warming. Chile's DNA was established at the National Environmental Committee (CONAMA) in May 2003 and started to organize an approval system of CDM projects. Therefore, Chile is referred to as one of the most advanced host countries with a sophisticated governmental organization.

As a country with an advanced forestry industry, Chile has implemented large scale afforestation efforts by domestic forestry companies. Recently, the Chilean government has offered new financial support including subsidies and loans to promote not only large scale afforestation but also smaller scale afforestation and reforestation to degraded land by small and medium size farmers. The utilization of A/R CDM is considered one of the promotional tools for these activities.

The Chilean government has implemented their own A/R CDM studies. However, their organization and capacity to promote A/R CDM has not been sufficient. Therefore, it was pointed out that capacity development in institutional and technical issues is necessary for project formation and implementation. Based on this condition, the Chilean government requested Japan's assistance in the A/R CDM field and this development study has started as a result of that. (from December 2005 to November 2007). The study includes (1) Capacity development for related organizations concerning A/R CDM management, organizations concerning A/R CDM administration, (2) Information collection and compilation concerning AR-CDM, and (3) Public awareness and disseminating the latest knowledge to stakeholders.



Example 3

Development Study for consideration of CDM project in geothermal sector in Indonesia

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Indonesia ratified the Kyoto Protocol in 2004. The national approval system is in the process of being established, as the National Commission for CDM has been appointed. The DNA, secretariat and technical team have been set up under the DNA.

As one of the biggest volcanic countries in the world, Indonesia has abundant geothermal resources for more than 200,000 MW of power generation. However, the National Geothermal Power Development Plan, which is essential to promote the geothermal development policy, has not yet been established. Considering this condition, the Indonesian government requested JICA to support the development study.

The study (March 2006 to September 2007) aims to promote geothermal development through the development of the National Geothermal Power Development Plan, which considers in consistency with the Power Development Plan based on potential resource and power demand. The study will formulate a master plan for the geothermal power development in accordance with the Geothermal Development Load Map 2025-2025. The plan will consider the condition and circumstances of Indonesian geothermal resources, power demand, power development, improvement of transmission networks, and geothermal law. The study includes (1) Data and information collection, (2) Nation-wide survey of geothermal resources, (3) Natural and social environmental study, and (4) Formulation of the master plan. The study will also implement CDM potential studies and development of the standardized PDD. It is expected that the study will contribute to promote investment for CDM projects in the geothermal power sector.



The analysis and recommendations of this brochure do not necessarily reflect the official views of JICA. It is the fruit of a collaborative effort by the study group on “Study on JICA’s future assistance for the CDM,” organized by JICA.

The brochure and other study reports of JICA are available in PDF format on the JICA’s HP.
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