

Ex-ante Evaluation**1. Name of the Program**

Country: The Republic of Indonesia
Program: Climate Change Program Loan (III)
Loan Agreement: June 23, 2010
Loan Amount: 27,195 million yen
Borrower: The Republic of Indonesia

2. Background and Necessity of the Program**(1) Current State and Issues of Climate Change in Indonesia**

Indonesia was the world's fourth largest emitter of greenhouse gases after China and the United States (2,042 MtCO₂ (million tons of carbon dioxide equivalent)) in 2010, if emissions of carbon dioxide caused by loss of forests and devastation of peatlands are included. Furthermore, as a consequence of increasing energy demands associated with economic growth, coal consumption has expanded, which led to increased emissions of greenhouse gases from the energy sector. For this reason, giving concrete shape to measures aimed at reducing greenhouse gases emissions has become an urgent issue for Indonesia, such as inhibiting the loss of forested areas, developing renewable energy and conserving energy.

On the other hand, as global warming advances, it is predicted that annual rainfall patterns will change, and particularly in regions south of the equator, it is predicted that there will be increased climate change risks, such as prolonged dry seasons and a smaller volume of rainfall, and shorter rainy seasons and a greater volume of rainfall. There are concerns that more intense and more frequent floods or other disasters arising from climate change could bring about economic stagnation, increased poverty or the like, and could be a serious risk factor for the sustainable development of the country.

(2) Climate Change Policies in Indonesia and the Priority of the Program

At the 13th Conference of Parties of the United Nations Climate Change Conference (COP13) held in Bali in December 2007, the Government of Indonesia announced a national action plan for the implementation of comprehensive mitigation and adaptation measures against climate change. In September 2009, President Yudhoyono announced that Indonesia will reduce its CO₂ emissions by 26% compared to the business as usual (BAU) case by 2020. The government has submitted this plan to the United Nations Framework Convention on Climate Change (UNFCCC) in January 2010 as its emission reduction strategy within the framework of Copenhagen Agreement.

This program is comprised of the following three priority areas, and aims to promote and accelerate the implementation of policy actions in each of the priority areas: (1) key policy issues for climate change (issuance of the national action plan to reduce emissions by 26% by 2020 as a presidential regulation, establishment of funding mechanisms for the implementation of climate change policies, national inventory of GHG emissions as the basis for Indonesia's measurable, reportable and verifiable (MRV) mechanism, etc.), (2) mitigation (forest preservation and management, peatland preservation, diversification of energy sources,

promotion of energy efficiency, etc.); and (3) adaptation (improvement of climate forecasting models, strengthening of organizations/systems for integrated river basin management, etc.).

(3) Japan and JICA's Policy and Operations for Support for Climate Change Countermeasures, and Other Donors' Activities

In the August-2007 “Joint Statement by Japan and the Republic of Indonesia on the Enhancement of the Cooperation on Climate Change, Environment and Energy Issues,” the two leaders of Japan and the Government of Indonesia affirmed to set a target of cutting global emissions by half from the current level by 2050, and to promote sustainable forest management, CDM, appropriate mitigation and adaptation measures for climate change, and close cooperation in various fields such as the improvement of energy efficiency. In September 2008, the first phase of the program (300 million US dollar equivalent yen) was provided through the “Cool Earth Partnership” financing mechanism announced by the Government of Japan in January 2008. The second phase of the program (400 million US dollar equivalent yen (including 100 million US dollar equivalent yen of Economic and Budget Support Loan)) was provided in December 2009 as the first case of the “Hatoyama Initiative”, Japan’s new policy of providing assistance on climate change to developing countries, announced in September 2009.

Furthermore, in Japan’s “Country Assistance Program for Indonesia”, formulated in November 2004, assistance for environmental conservation has been listed as one of the priority areas, and JICA sets assistance for countermeasures against climate change as one of the areas to strengthen its support.

As co-financing for the program (first phase), the French Development Agency (Agence Française de Développement: AFD) provided 200 million dollars in November 2008, and a further 300 million dollars for the second phase in August 2009. For the third phase of the Program, in addition to AfD, the World Bank has become a co-financing partner and joined the policy dialogue with the government of Indonesia.

(5) Necessity of the Program

The steering committee —established as the place for monitoring the program and conducting policy dialogue, and represented by the governments of Japan, Indonesia and France—has assessed that, of the 54 policy actions that had been planned in 2009, about 75% had either “achieved beyond their target” or had “achieved their target.” New actions for 2010 focus more on key macro policies of the government of Indonesia with significant impacts and mitigation issues that contribute to the MRV mechanism, promoted by the Hatoyama Initiative. Thus, it is highly necessary and relevant for JICA to provide assistance through this program to support the policies of the government of Indonesia, which aims to reduce its GHG emissions by 26% by 2020

3. Program Description

(1) Program Objectives

By supporting climate change countermeasures promoted by Indonesia through policy dialogue and other means, the program aims to: (1) key policy issues for climate change, (2) mitigation of global warming by greenhouse gas absorption and emissions control, and (3)

strengthening of adaptive capacity to deal with the adverse effects of climate change, thereby contributing to reducing the risks of disasters and so forth brought about by climate change.

(2) Program Components

The program promotes the following reforms as measures concerning climate change (only main policy actions (PAs) are listed below).

Item	Actions achieved in 2009	Future Actions (2010)
Key policy issues for climate change (Upstream strategies)	<ul style="list-style-type: none"> ○ Reflection of climate change measures in the next national development plan (2010-2014) ○ Increase in the number of CDM projects approved (90 projects in total) ○ Continued expansion of observation facilities aimed at strengthening weather observation systems 	<ul style="list-style-type: none"> ○ Issuance of the national action plan to reduce emissions by 26% by 2020 as a presidential regulation, ○ Establishment of funding mechanisms for the implementation of climate change policies ○ Submission of Second National Communications to UNFCCC
Mitigation of global warming by greenhouse gas absorption and emissions control (forestry, energy, transportation)	<ul style="list-style-type: none"> ○ Formulation of the details of implementation mechanism and plans of REDD pilot project ○ Issuance of incentive measures for renewable energy development, including geothermal ○ Issuance of ministerial regulation for energy conservation 	<ul style="list-style-type: none"> ○ Establishment of management standards and procedures for forest management units (FMU) ○ Strengthening of cross-ministerial coordination for the reduction of GHG emissions from peatland ○ Expansion of incentive mechanisms for the promotion of renewable energy development ○ Formulation of energy conservation master plan ○ Acceleration of modal shift in transportation by the expansion of bus rapid transport system
Strengthening of adaptation capacity to deal with the adverse effects of climate change (water resources, irrigation, agriculture, marine)	<ul style="list-style-type: none"> ○ Continued expansion of weather observation facilities ○ Formulation of integrated river basin management plans for major river basins ○ Continued implementation of agricultural advisory programs for climate change and water conservation ○ Formulation of a national action plan for marine conservation 	<ul style="list-style-type: none"> ○ Development of climate change modeling as the basis for impact and vulnerability assessment ○ Continued formulation of integrated river basin management plans for major river basins ○ Continued implementation of agricultural advisory programs that deal with climate change and water conservation, and plans for efficient use of farm

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(3) Total Program Cost/Estimated Amount of Cooperation

Loan amount: 27,195 million yen

(4) Program Implementation Structure

- 1) Borrower: The Republic of Indonesia
- 2) Executing Agency: National Development Planning Agency (BAPPENAS)

(5) Environmental and Social Consideration/Poverty Reduction/Social Development

- 1) Environmental and Social Consideration
 - (i) Category: C
 - (ii) Reason for Categorization: The program is classified as Category C, because it applies (provides loans for policy support) to a sector in which no particular environmental impact is expected, and because the program is not located in a sensitive area, nor has it sensitive characteristics under the JBIC Environmental Guidelines, and it is likely to have minimal environmental impacts.
- 2) Promotion of Poverty Reduction: By implementing appropriate measures against climate change, it is expected that disaster risks will be reduced and adaptation capacity will be strengthened among the poor who are vulnerable to the impacts of flood, drought and other disasters arising from climate change.
- 3) Promotion of Social Development (gender perspective, measures for infectious diseases including HIV/AIDS, participatory development, consideration for persons with disabilities, etc.): None in particular

(6) Coordination with Other Donors: The AFD provided 300 million dollars and the World Bank provided 200 million dollars as co-financing for the second phase of the program.

(7) Other Important Issues: Steering Committee for policy dialogue and the monitoring of the progress of the program has been established by all three parties (Indonesia, Japan and France), and the committee will continue to be the place for dialogue and monitoring. As related technical cooperation programs, JICA is conducting Project for Supporting Low Carbon Development Strategies and Study on Demand Side Management and plans to conduct Project for Capacity Building for Enhancement of the Geothermal Exploration Technologies in 2010.

4. Targeted Outcomes

(1) Performance Indicators (Operation and Effect Indicators)

Indicator	Baseline (2009)	Target (2010)
Key policy issues for	○ Sectoral plans for climate change are not established	○ Formulation of sectoral roadmap for climate change

climate change (Upstream strategies)	<ul style="list-style-type: none"> ○ GHG emissions reduction target is not issued as regulation ○ Second National Communications is not submitted to UNFCCC 	<ul style="list-style-type: none"> ○ Issuance of presidential decree for the target of reducing GHG emissions by 26% by 2020 ○ Submission of Second National Communications to UNFCCC 	
Expected CO2 emissions and reduction targets *	Indicators (MtCO2)	Traget (2020)	
		Expected CO2 emissions (BAU)	CO2 emissions targets
	Energy (Jawa-Bali)	1713	106.21
	Energy (Sumatra)	206.93	45.97
	Industry	562.95	43.15
	Transportation	917.1	91.4
	Forest and peatland	14,738	3,937

* Numbers are taken from *Indonesia Climate Change Sectoral Roadmap (ICCSR)* (Synthesis Report: March 2010). The reduction targets for each sector will be re-examined as the BAU case (to be examined through inventory survey by the Government of Indonesia) and short-term targets are finalized.

(2) Internal Rate of Return: Not calculated

5. External Factors and Risk Control

There is a risk that issues beyond the control of individual ministries and government agencies may arise in the improvement of the targeted policies and systems.

6. Lessons Learned from Findings of Similar Programs Undertaken in the Past

From the development policy loans and other loan programs for policy and institution building, it was learned that it is important to exchange information closely with relevant organizations, from the appraisal stage to the monitoring of implementation. Based on this lesson, carrying on from the first phase of the program, JICA will carry out supervision of the loans with advisories from external experts and in close cooperation with the Government of Indonesia and co-financing partners.

7. Plan for Future Evaluation

(1) Indicators for Future Evaluation:

- 1) Outcomes relating to the key policy issues for climate change (upstream strategies) (formulation of climate change sectoral roadmap, etc.)
- 2) Outcomes relating to expected CO2 emissions and reduction targets (energy, forest and pealand, etc.)

(2) Timing of Next Evaluation: after the completion of the program.