

Evaluation Summary

I. Outline of the Project

Country: Republic of Indonesia

Project Title: Project for Strengthening Decentralized Environmental Management System (DEMS)

Issue/Sector:

Cooperation Scheme: Technical Cooperation Project (formally known as “Project-type Technical Cooperation)

Division in Charge: Environmental Management Team I, Group II, Global Environment Department

Period of Cooperation
(R/D): 1 July 2002 - 30 June 2006

Total Cost (at the time of evaluation): 550 million yen

Partner Country’s Implementing Organization(s):
Environmental Management Center (EMC), Ministry of the Environment (KLH)
Provincial Environmental Impact Management Agency, North Sumatra Province (BAPEDALDA-NSP)

Supporting Organization(s) in Japan: Ministry of the Environment; National Institute for Environmental Studies (NIES)

Related Cooperation:

1. Background to the Project

In the Republic of Indonesia, rapid rural-to-urban migration and economic growth were taking their toll in the form of environmental pollution, including air and water pollution, in Greater Jakarta, other urban areas, and elsewhere. To tackle issues of deteriorating environment in Indonesia, Japan offered grant aid in 1993 and project-type technical cooperation between 1993 and 2000 to establish the Environmental Management Center (EMC), a hub institution in the environmental management sector in the country, and develop human resources for EMC. Through these schemes, Indonesia developed a framework for conducting basic environmental monitoring.

The decentralization process, which started in 2001 in Indonesia, makes it necessary for local governments to establish their own institutional framework for environmental management. In this context, EMC is urgently required to play a leading role in building up the organizational and individual capacity of Provincial Environmental Impact Management Agencies (BAPEDALDAs), including more effective use of equipment at regional laboratories that had been provided through a loan assistance and other cooperation schemes).

Moreover, the reorganization of the administrative machinery of Indonesia has resulted in more roles and functions for EMC. In other words, EMC needs not only to conduct environmental monitoring but also to produce recommendations on specific policies and address growing environmental challenges such as hazardous waste based on the findings of such monitoring.

In July 2002, JICA launched this Project for Strengthening Decentralized Environmental Management System in Indonesia (the “Project”), designed to develop the capacity of EMC to translate monitoring data into more specific environmental policies and build up the capacity of the environmental departments of local governments amid the decentralization process. The Project Purpose was to “establish, by the initiative of EMC, a framework of environmental management in which EMC and Provincial Environmental Impact Management Agencies (BAPEDALDAs) work together.” With six months to go before the Project was to be completed in June 2006, JICA sent the Termination Evaluation Team to Indonesia for the purpose of assessing the achievement of the Project Purpose in accordance with the JICA Guideline for Project Evaluation (March 2004).

2. Project Overview

(1) Overall Goal: To strengthen environmental management capabilities at the central and local government levels

(2) Project Purpose: To establish, by the initiative of EMC, a framework of environmental management in which EMC and BAPEDALDAs work together

(3) Outputs

1) Options for addressing specific environmental problems will be developed in the model site (North Sumatra Province) based on reliable monitoring data and scientific knowledge.

2) Capabilities of EMC for providing KLH and BAPEDALDAs with scientific knowledge and technical guidance on environmental management will be reinforced.

3) Expertise in proper environmental monitoring and surveillance methods will be transferred to local governments.

(4) Inputs (by the time of the Terminal Evaluation in February 2006)

Japanese side:

Long-term Experts: 4 experts

Short-term Experts: 22 experts

Trainees received: 12 persons

Equipment: approx. 113.55 million yen

Local cost: approx. 4,113 million Rp.

Indonesian side:

Counterparts: 84 persons

Local cost

EMC: 26,353 million Rp.

BAPEDALDA-NSP: 28,482 million Rp.

PUSARPEDALDA: 790 million Rp. (including costs for those other than the project activities)

Others: Land and facilities (an office for Japanese experts, a chemical laboratory, analytical equipment, etc.)

II. Evaluation Team

Members of Evaluation Team

Role/responsibility:	Name	Position
Team Leader	Kiyoshi MASUMOTO	Director, Group II, Global Environment Department
Environmental Policy	Kuninori OTSUBO	Vice Director, Water and Soil Environmental Division, National Institute for Environmental Studies
Environmental Management	Masaoki KOBAYASHI	Chief Senior Staff for Planning, Planning and General Affairs Division, Environmental Pollution Control Center, Osaka Prefecture
Cooperation Planning	Miwa HIASA	Environmental Management Team I, Group II, Global Environment Department, JICA
Evaluation Analysis	Hideaki HIGASHINO	Senior Consultant, RECS International Inc.

Period of Evaluation: 24 January - 7 February 2006

Type of Evaluation: Terminal Evaluation

III. Results of Evaluation

1. Summary of Evaluation Results

(1) Relevance: High even at the time of the Terminal Evaluation

The Evaluation Team concludes that the Project is highly relevant at the time of the evaluation for the following five factors. First, environmental pollution has been attracting increasing attention in recent years in Indonesia. For example, the National Development Program for 2005-2009 has defined addressing environmental problems including water pollution, air pollution, and deforestation as an issue of strategic importance for the sustainable national development. Second, the project goal of establishing an environmental management framework with increasing local autonomy in mind is highly relevant to the needs of Indonesian society. The process of decentralization, which started in 2001, is calling for local governments to establish their own institutional framework for environmental management. Third, technology transfer to personnel at EMC and local government officials in charge of environmental management is relevant to the need for building up the capacity of Indonesian administrators who have been and will be leading public administration in this sector. Fourth, environmental conservation is one of the focus sectors in the aid policy of the

Japanese government for Indonesia. Likewise, the JICA Country Program for Indonesia identifies environmental conservation (improving the urban environment) as one of its focus sectors. Fifth, a series of cooperation activities aimed at improving the analytical and monitoring capabilities and developing the environmental management framework based on accurate data represent one of the fields that Japan has a technical advantage over many other donors.

(2) Effectiveness: High (in terms of achievement on the Project Purpose)

The Evaluation Team concludes that the Project is highly effective because of its achievements in relation to the Project Purpose, including improved capabilities of personnel at PUSARPEDAL (EMC) and BAPEDALDA, and the establishment of a basic framework of environmental management. The Outputs toward the attainment of the Project Purpose have largely been achieved according to plan. The table below summarizes the Verifiable Indicators for the Project Purpose and the performance on them.

Verifiable Indicators for the Project Purpose
Performance

1. By 2006, BAPEDALDA-NSP implements some options for addressing water pollution of the Deli River with assistance from EMC.

In 2005, BAPEDALDA-NSP took the initiative in formulating and implementing a strategic environmental improvement program for North Sumatra Province (the Demonstration Site Station [DSS] Program), which was aimed at cleaning up the Deli River with the participation of local communities, the private sector, NGOs, and other entities, and in collaboration with EMC.

2. By 2006, the number of agreements for cooperation between EMC and environmental impact management agencies of local governments.

By the time of the Terminal Evaluation in December 2005, EMC has three partnership agreements and 60 cooperative agreements with environmental impact management agencies of local governments. This is a clear sign that the relationship between them has been improving gradually since the launch of the Project.

3. Every year, 30 provinces and ten cities submit a report on water quality monitoring and air quality monitoring, respectively, to EMC, which processes the data for the State of the Environment Report (SoER).

By December 2005, 30 cities and 30 provinces have submitted an environmental monitoring report on water and the air, respectively, to EMC. The data in these reports were compiled and used for the State of the Environment Report of 2002, 2003, and 2004.

(3) Efficiency: High-Moderate

Japan and Indonesia provided their respective inputs largely according to schedule. These inputs were appropriate in quality, quantity and timing, despite a delay in assigning JICA experts from Japan and inadequate operation and management of analytical equipment from Indonesia.

With regard to the outputs from these inputs, the Evaluation Team observes that the Project has achieved Output 1, Output 2 (capacity building of EMC personnel), and Output 3 (technology transfer to North Sumatra Province and training of personnel at regional laboratories and local governments). The achievement level for Outputs 1 and 3 is considered especially high. Considering all these factors, the Evaluation Team concludes that the efficiency of the Project is high-moderate.

(4) Impact: Positive with no major negative effects

The Project has had major positive effects at different levels. At the policy level, the Ministry of the Environment (KLH) has secured budget allocations to provide more than 300 districts/cities with analytical equipment that is necessary to establish an environmental monitoring framework at the local level. At the organizational level, the environmental laboratory has been promoted in status from a provisional entity to a formal entity of BAPEDALDA-NSP. At the technical level, the pollutant load model developed in the Project Purpose has been applied to the Cisadane River in Java for the purpose of watershed management.

It is too early to accurately predict whether the Overall Goal (“to strengthen environmental management capabilities at the central and local government levels”) will likely be achieved as a positive effect of the Project. This is mainly because the establishment of an environmental management framework will largely depend on the initiative by the central government and the decision and policy of local governments. There are some positive signs, however, that the environmental monitoring framework is being established in Indonesia as a whole. They include the successful case of PUSARPEDALDA-NSP, and the establishment of BAPEDALDA laboratories. The Evaluation Team therefore concludes that the Overall Goal can be achieved if the Indonesian side extends the project activities to other provinces under the collaborative framework that has been formed in the Project and if this in turn improves the environmental management capacity of the central government as well as local governments in Indonesia.

(5) Sustainability: High-Moderate

As has been noted in the earlier section on Relevance, the National Development Program gives high priority to environmental conservation in the context of sustainable national development. The Project, which is highly relevant to the policy of the Indonesian government, will likely be able to continue receiving policy support. As the only reference laboratory in Indonesia, EMC has the human capacity and experience to continue and develop project activities after the completion of the Project. As such, the organizational sustainability will likely be ensured.

BAPEDALDA-NSP has already developed its capacity as a result of the pilot project. The environmental impact management agency now conducts regular environmental monitoring.

Based on the monitoring data, the agency has already produced policy recommendations and implemented the DSS Program in an effort to control the pollution of the Deli River. It also operates and maintains its monitoring and other equipment more than satisfactorily

2. Contributing Factors

(1) Concerning the project plan

The Japanese government provided grant aid in 1993 and project-type technical cooperation between 1993 and 2000 to establish EMC, a hub institution in the environmental management sector in Indonesia, and develop human resources for EMC. Through these schemes, Indonesia developed a framework for conducting basic environmental monitoring.

Building on a series of these activities, the Project was designed to “establish, by the initiative of EMC, a framework of environmental management in which EMC and BAPEDALDAs work together” amid the process of decentralization that started in 2001. Because of its high relevance to the needs of Indonesian society, the Project won the support from the central government and active involvement of districts/cities and communities.

(2) Concerning the implementation process

1) The Project has been implemented in coordination with other Japanese cooperation schemes, including the assignment of Senior Volunteers to the environmental laboratory of BAPEDALDA-NSP, the assignment of an individual JICA expert to KLH as a policy advisor, and JBIC's Regional Monitoring Capacity Development (RMCD) Project, which provided analytical equipment to regional laboratories of the government. Close coordination with all these cooperation schemes has helped move the project process forward.

2) Another major contributing factor is appropriate inputs from the Japanese and Indonesian governments. The Japanese inputs include technology transfer by long-term and short-term experts, and trainings in Japan. The Indonesian inputs include the provision of facilities and equipment, and the retention at EMC of counterparts (C/P) who had gained basic technical skills through the grant aid and project-type technical cooperation mentioned earlier.

3. Inhibiting Factors

(1) Concerning the project plan

Although the Project is highly relevant, the project design was vague in the definition of some indicators and words and terms. These inadequacies had already been identified for improvement in the Mid-term Evaluation, but no fundamental improvements to them have been made.

(2) Concerning the implementation process

1) It is noted that communication between the Japanese experts and the Indonesian counterparts (C/Ps) was inadequate in the first half of the project period (due in part to language barriers and few opportunities to mingle with each other).

2) The Project organized a task force of C/Ps whenever the necessity arose. This approach has resulted in too many C/Ps to manage (84 persons). In some cases, C/Ps were not assigned in time for the assignment of Japanese short-term experts. JICA could not always accommodate the needs of C/Ps, failing to provide advanced technical guidance to C/Ps at EMC who already had basic technical skills.

3) The Indonesian side has not properly operated and maintained some of the analytical instruments that had been provided from the Japanese government through more than ten years of development assistance. The Japanese side inspected and repaired them as necessary at its expense.

4. Conclusion

The Evaluation Team has concluded that the Project is largely achieving its purpose based on a series of consultations with the project stakeholders and field inspections in Indonesia. The Project will be terminated by June 30, 2006 as specified in the Record of Discussions (R/D).

A major achievement of the Project that deserves attention is that technology transfer from EMC and the Japanese experts has allowed BAPEDALDA-NSP to acquire sufficient skills to obtain and analyze environmental data with high precision. By analyzing water quality monitoring data, this environmental impact management agency identified the pollution sources of the Deli River. It played the leading role in taking a package of measures to control these sources in cooperation with EMC. This package, known as the DSS Program, is being implemented with the participation of a wide range of stakeholders, including NGOs and local communities. It is now producing positive results.

Attaining the Overall Goal requires the initiative and commitment of Indonesian side to extending the project activities to other provinces under the collaborative framework that has been formed in the Project and to improving the environmental management capacity of the central as well as local governments in the process.

5. Recommendations (specific solutions, suggestions and advice for the Project)

(1) Continued efforts to attain the Overall Goal

Providing technical support to BAPEDALDAs and regional laboratories (environmental monitoring, and the development and implementation of corrective measures) is an important role of EMC as the only reference laboratory under the Ministry of the Environment (KLH). As a result of decentralization, BAPEDALDAs has come to assume additional important duties, including addressing environmental issues involving more than one district/city within the province, ensuring coordination among districts/cities, and planning and managing the provincial environmental monitoring system. In other words, EMC should continue to make efforts to build a collaborative relationship with BAPEDALDAs. To that end, it needs to provide technical guidance that suit their conditions and technical levels. Continued efforts are also required to the capacity of building personnel. KLH should properly appreciate the importance of the roles EMC plays in building a regional environmental management

framework in Indonesia. Accordingly, the ministry should secure budget allocations for the activities of EMC.

(2) Effective use of the knowledge gained in the Project, including data and its analytical findings

Two major products of the Project--the success of the pilot project in North Sumatra Province, and the remarkable improvement of the monitoring and analytical skills of the personnel at EMC--should be disseminated to other sections and departments of KLH, BAPEDALDAs, other ministries, and even the public at large. Information on these two products should be offered to other provincial governments and districts/cities as best practice in province-led environmental management.

(3) Proper O&M of equipment

Proper operation and maintenance (O&M) of equipment is increasingly important at EMC, which is required to perform advanced analysis and accurate data analysis as a reference laboratory. Nevertheless, the Evaluation Team has found that O&M of some analytical instruments may not be proper, although many of them were provided in the 1990s and time-worn. During the project period, major instruments were repaired by the Japanese experts and others. After the completion of the Project, however, EMC should waste no time to build a O&M framework (including planning, and financial and human resources) for performance efficiency. The Evaluation Team has learned that KLH and EMC have taken a step toward securing the budget for that purpose. EMC and the team of Japanese experts have decided to formulate an O&M plan by the completion of the Project. The Indonesian side should extradite this move.

The situation of regional laboratories is more serious. They are operated under severe budgetary and personnel constraints, except for those in only a few districts/cities. These laboratories have difficulty in operating and maintaining equipment, procuring expensive reagents, and recruiting and training staff. KLH and the Evaluation Team have agreed that the ministry should develop O&M and replacement plans and make other efforts to manage equipment from a long-term perspective. They have also agreed that it is necessary to devise measures to make better use of regional laboratories. The Indonesian side is advised to act on these shared views.

6. Lessons Learned (especially those that provide information that is useful for identifying/formulating, implementing, and administering similar projects)

+(1) Coordination with other cooperation scheme of the Japanese government

The Project has been implemented in coordination with other Japanese cooperation schemes, including the assignment of Senior Volunteers to the environmental laboratory of BAPEDALDA-NSP, the assignment of an individual JICA expert to KLH as a policy advisor, and JBIC's Regional Monitoring Capacity Development (RMCD) Project, which provided analytical equipment to regional laboratories of the government. The Project has also taken advantage of the outcomes of grant aid and project-type technical cooperation that were provided to Indonesia over more than ten years from 1993. Close coordination with and

effective use of all these cooperation activities have made the Project all the more efficient and effective.

(2) Coordination and collaboration with Indonesian organizations concerned

Close coordination and collaboration with KLH, EMC, BAPEDALDAs, municipalities, NGO, and other organizations concerned in Indonesia have enabled the integrated management of the Deli River and has served as a key to the success of the pilot project in North Sumatra Province. This experience clearly shows that cooperation with a range of government agencies, laboratories, and citizens is instrumental in developing an appropriate system for environmental management.