

Country Name	The Strengthening of Environment Management Capacity of Local Governments in Indonesia
Republic of Indonesia	

I. Project Outline

Background	In Indonesia, one of the causes of the pollution of rivers were illegal dumping of domestic wastes by residents along these rivers, underdevelopment of sewerage treatment facilities and household septic tanks and the most importantly, environmental management administrations were not effective. Under such situation, the Indonesian government developed the legal systems on various environmental management including water quality management; however, relevant laws were still not properly enforced. One of the reasons was the insufficient capacity of the local governments (province, regency and municipality), which were primarily responsible for environmental management under the decentralization policy, to fully enforce the relevant laws.													
Objectives of the Project	Through clarifying responsibilities and mandates of local governments on water quality management and water pollution control (WQM/WPC), drafting WQM/WPC plan and implementing pilot activities along the plan in pilot sites, the project aimed at developing capacity of local governments for WQM/WPC, thereby contributing to enforcement of the laws and regulations on WQM/WPC by local governments in the Cisadane River. The project objectives set forth are as follows:													
	<ol style="list-style-type: none"> Overall Goal: The laws and regulations regarding water quality management and water pollution control (WQM/WPC) are enforced by local governments in the Cisadane River. Project Purpose: Local governments develop their capacity of water quality management and water pollution control (WQM/WPC) to enforce the environmental laws and regulations in the pilot sites. 													
Activities of the Project	<ol style="list-style-type: none"> Project site: The Cisadane River basin in West Java and Banten Provinces (Pilot Site: Bogor regency and Tangerang municipality) Main activities: (1) Clarify responsibilities and mandates for WQM/WPC in each institution and section at provincial and regency/municipality levels; (2) Prepare the booklets regarding the laws and regulations on WQM/WPC, the policy paper for strengthening organization and institution, a manual for province to support regency/municipality and a technical guideline for formulation of WQM/WPC plan; (3) Develop pollution source inventory (PSI) of the Cisadane River basin and database; and (4) Define target water quality of the Cisadane River in pilot sites, prepare a draft WQM/WPC plan and conduct pilot activities based on the plan in pilot sites. Inputs (to carry out above activities) <table border="0" style="width: 100%;"> <tr> <td style="width: 50%;">Japanese Side</td> <td style="width: 50%;">Indonesian Side</td> </tr> <tr> <td>1. Experts: 9 persons</td> <td>1. Staff allocated:</td> </tr> <tr> <td>2. Trainees received in Japan: 18 persons</td> <td>Central government: officers of Directorate General for Regional Development, Ministry of Home Affairs (BANGDA), Ministry of Environment (KLH) (number not stated)</td> </tr> <tr> <td>3. Provision of equipment: computers, printers, global positioning system (GPS) and uninterruptible power supply (UPS) etc.</td> <td>Local government: 57 persons</td> </tr> <tr> <td>4. Overseas activities cost: approximately 44 million yen</td> <td>2. Land and facilities: project office space</td> </tr> </table> 				Japanese Side	Indonesian Side	1. Experts: 9 persons	1. Staff allocated:	2. Trainees received in Japan: 18 persons	Central government: officers of Directorate General for Regional Development, Ministry of Home Affairs (BANGDA), Ministry of Environment (KLH) (number not stated)	3. Provision of equipment: computers, printers, global positioning system (GPS) and uninterruptible power supply (UPS) etc.	Local government: 57 persons	4. Overseas activities cost: approximately 44 million yen	2. Land and facilities: project office space
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Ex-Ante Evaluation	2006-2007	Project Period	March 2009 to September 2011	Project Cost	259 million yen									
Implementing Agency	Directorate General for Regional Development, Ministry of Home Affairs (BANGDA), Ministry of Environment (KLH), environmental institutions in the West Java province, the Banten province, the Bogor regency, the Bogor municipality, the Tangerang regency, the Tangerang municipality and the South Tangerang municipality													
Cooperation Agency in Japan	Nippon Koei Co., Ltd.													

II. Result of the Evaluation

1 Relevance
<p><Consistency with the Development Policy of Indonesia at the time of ex-ante and project completion></p> <p>The project was consistent with Indonesia's development policy on 'controlling environmental pollution and destruction' as set forth in the "National Medium Term Development Plan (RPJMN) (2005-2009)" and the RPJMN (2010-2014) at the time of both ex-ante evaluation and project completion.</p> <p><Consistency with the Development Needs of Indonesia at the time of ex-ante and project completion></p> <p>Various laws and regulations for WQM/WPC were issued at the time of both ex-ante evaluation and project completion, but local governments did not have sufficient enforcement capacity as mentioned in "Background" above. A comprehensive support for capacity development of local governments was required to enforce these laws and regulations. Thus, this project was consistent with the local needs.</p> <p><Consistency with Japan's ODA Policy at the time of ex-ante evaluation></p> <p>The project was consistent with Japan's ODA policy, as "the Country Assistance Program for Indonesia (2004)" stated that assistance for environmental administration and environmental management, including the establishment of a system to monitor atmospheric pollution and water contamination, would be provided.</p> <p><Evaluation Result> In light of the above, the relevance of the project is high.</p>
2 Effectiveness/Impact

<Status of Achievement for Project Purpose at the time of Project Completion>

The Project Purpose was mostly achieved by the time of project completion. The pollution source inventory (PSI) was developed, and based on the PSI, the technical guideline for formulation of WQM/WPC plan for local governments was prepared. The actual number of staff and facilities and the amount of budget in these institutions were considered to be sufficient, as all the activities in pilot sites were implemented as planned (Indicator 1). Draft WQM/WPC plan of Bogor regency was recognized at organizational level in pilot site, as the Regulation on Water Quality Monitoring and Water Pollution Control was issued by the regional government in 2011. Issuing of the regional government regulation (Peraturan Daerah: Perda) means that the regulation went through cross-government discussions. On the other hand, it cannot be said that the draft WQM/WPC plan of Tangerang municipality was recognized at organizational level in pilot site, as Perda was not issued by the time of project completion in Tangerang municipality (it was recognized after project completion) (Indicator 2). Performance on WQM/WPC such as water quality monitoring, development of WQM/WPC database, inspection, coordination with other institutions/sections, and public awareness, etc. was improved in pilot sites through on-the-job training (OJT) and pilot activities (Indicator 3) such as launching and promotion of a community based domestic wastewater treatment and solid waste management called the Green Village program (see the column and pictures at the end of this report). It should be noted that besides this project, there were other inputs from the central and local governments of Indonesia for environmental improvement in the Cisadane river basin under the Cisadane programs that had started in 1995, and the outputs of this project (manuals/booklets, WQM/WPC plans, inventories/ integrated databases, etc.) helped Bogor regency and Tangerang municipality utilize such inputs.

<Continuation Status of Project Effects at the time of Ex-post Evaluation>

The project effects have been maintained since project completion. The actual number of staff and facilities and the amount of budget in environmental institutions in Bogor regency and Tangerang municipality are still considered to be sufficient as all the activities in pilot sites have been continued as planned. The WQM/WPC plan of Bogor regency has continued to be recognized, as the environmental institution established a website for socializing its activities and conducted awareness raising through forums. In Tangerang municipality, the Regulation on Water Quality Monitoring and Water Pollution Control was issued by the regional government in 2013 and 2014, which indicates that draft WQM/WPC plan of Tangerang municipality has been recognized at organizational level in pilot site. Activities for improved WQM/WPC have been continued, such as water quality monitoring on a regular basis and livestock pollution control with biogas system etc. in Bogor regency, and inspection activities and the small-scale domestic wastewater treatment system as part of the Green Village program, etc. in Tangerang municipality.

<Status of Achievement for Overall Goal at the time of Ex-post Evaluation>

The Overall Goal was achieved at the time of ex-post evaluation. According to each local government, WQM/WPC plan has been formulated and adapted in all municipalities/regencies along the Cisadane river (Indicator 1). Some improvements in WQM/WPC performance have been seen in those municipalities/regencies. For example, waste treatment plants received instructions based on monitoring and inspection. (Indicator 2)¹. Support and coordination have been provided to local governments (regencies and municipalities) by provincial governments in the form of policy guidance on WQM/WPC and regular coordination meetings referring to national policies (Indicator 3). According to each local government, training and guidelines/manuals provided under this project have been utilized by all local governments, and thus contributed to the improvements in the provinces and non-pilot municipalities/regencies.

<Other Impacts at the time of Ex-post Evaluation>

As an impact, the awareness of local governments of water pollution control has increased. For instance, the pilot communal wastewater treatment plant has been duplicated by Tangerang Municipality. In 2014, they duplicated 11 communal wastewater treatment plants.

<Evaluation Result> Both the Project Purpose and the Overall Goal have been achieved. Therefore, effectiveness and impact of the project are high.

Achievement of Project Purpose and Overall Goal

Aim	Indicators	Results
(Project Purpose) Local governments develop their capacity of water quality management and water pollution control (WQM/WPC) to enforce the environmental laws and regulations in the pilot sites. * Pilot sites: Bogor regency and Tangerang municipality	1. Appropriate allocation of resources (staff, budget, facilities) to implement WQM/WPC plan in pilot site	<u>Status of achievement: Achieved (continued)</u> (Project Completion) The number of staff and facilities and the amount of budget allocated in environmental institutions of Bogor regency (70 staff and 556 million Rupiah in 2011) and Tangerang municipality (45 staff in 2011 and 12,121 million Rupiah from 2009 to 2013 ⁽¹⁾) were considered to be sufficient, as all the activities (water quality monitoring, inspection, development of an integrated WQM/WPC database, and public awareness etc.) in pilot sites were implemented as planned. (Ex-post Evaluation) The numbers of staff have not much changed (69 persons in Bogor regency and around 40 persons in Tangerang municipality in 2015). Although the exact amount of budget allocated for implementation of WQM/WPC was not officially disclosed, it is considered to be sufficient, as budget allocation was confirmed in both pilot sites in the field survey and all the activities in pilot sites have been implemented as planned. Moreover, local consultants are employed to conduct laboratory analysis for WQM/WPC in Bogor regency and Tangerang municipality.
	2. Recognition of draft WQM/WPC plan at organizational level in pilot site	<u>Status of achievement: Partially achieved by project completion (achieved and continued after project completion)</u> (Project Completion) The Regulation on Water Quality Monitoring and Water Pollution Control was issued by the regional government in Bogor regency in 2011, which indicates that draft WQM/WPC plan of Bogor regency was recognized at organizational

¹ Concrete information was not available about every aspect of WQM/WPC except the ones in the pilot sites as mentioned under “Continuation Status of Project Effects at the time of Ex-post Evaluation”.

		<p>level in pilot site. Issuing a regional government regulation (Perda) means that the regulation has been going through public dialog and as well as cross-government discussion.</p> <p>On the other hand, it is not clear whether draft WQM/WPC plan of Tangerang municipality was recognized at organizational level in pilot site, as the regional government regulation was not issued by the time of project completion.</p> <p>(Ex-post Evaluation) The Regulation on WQM and WPC in Bogor regency is still effective at the time of ex-post evaluation. The environmental institution of Bogor regency established a website for socializing its activities. It also established forums such as Environmentally Friendly Village Forum and "River for Life" Community with NGOs and local communities. The Regulation on Water Quality Monitoring and Water Pollution Control was issued by the regional government in Tangerang municipality in 2013 and 2014, which indicates that draft WQM/WPC plan of Tangerang municipality has been recognized at organizational level in pilot site.</p>
	3. Improved performance on WQM/WPC such as water quality monitoring, database, inspection, coordination with other institutions/sections, public awareness, etc. in pilot sites	<p><u>Status of achievement: Achieved (continued)</u></p> <p>(Project Completion) Regarding water quality monitoring, reconsideration of sampling points and improvement of sampling methods and site measurements were instructed at OJT. Improvement of the inspection activity (e.g. better preparation for inspection), database (e.g., construction of PSI and integration of existing database), and public awareness activity (e.g. Green Village program to promote community-based domestic wastewater treatment) were implemented as pilot activities.</p> <p>The pilot activities and the preparation process of the draft WQM/WPC plans promoted coordination with other organizations such as the Animal Husbandry Department and Public Works Department.</p> <p>(Ex-post Evaluation) Activities for improved WQM/WPC have been continued, such as water quality monitoring on a regular basis, livestock pollution control with biogas system, and several forums for public awareness, etc. in Bogor regency and inspection, a small-scale domestic wastewater treatment system (Green Village program) coupled with public awareness etc. in Tangerang municipality.</p>
<p>(Overall Goal) The laws and regulations regarding water quality management and water pollution control (WQM/WPC) are enforced by local governments in the Cisadane River.</p> <p><i>* Local governments other than pilot sites: West Java province, Banten province, Bogor municipality, Tangerang regency, South Tangerang municipality</i></p>	1. Formulation and adaption of WQM/WPC plan by all local governments along the Cisadane river	<p><u>Status of achievement: Achieved</u></p> <p>(Ex-post Evaluation) WQM/WPC plan has been formulated and adapted in all local governments along the Cisadane river. The Booklet on Environmental Laws and Regulations related to WQM/WPC, Manual for Province to Support Regency/Municipality, Technical Guideline for WQM/WPC Plan and PSI that were developed under the project have been utilized by all local governments in the Cisadane River basin.</p>
	2. Improved performance on WQM/WPC such as water quality monitoring, database, inspection, coordination with other institutions/sections, public awareness, etc. along Cisadane river	<p><u>Status of achievement: Achieved</u></p> <p>(Ex-post Evaluation) Improved law enforcement was observed. For example, waste disposal plants got rebuke (in Bogor municipality, Bogor regency, South Tangerang municipality), call session (Tangerang regency, Tangerang municipality), and temporary closure (Tangerang regency), based on monitoring and inspection. If there are no changes to the temporary closure of waste disposal management, the case will be lifted to close the permit for operation.</p> <p>Also, three laboratories to implement the WQM/WPC have achieved the national standardization (Bogor regency as Test Laboratory, Tangerang regency as Environmental Laboratory, and South Tangerang municipality as Environmental Laboratory).</p>
	3. Necessary support and coordination to local government by province on WQM/WPC	<p><u>Status of achievement: Achieved</u></p> <p>(Ex-post Evaluation) Provincial governments have provided policy guidance on WQM/WPC to local governments (regencies and municipalities) referring to national policies and held regular coordination meetings.</p>

Source : Project Completion Report, Questionnaire survey to local governments

Note: (1) The amount of budget in the environmental institution of Tangerang municipality during the project period was not available (only the aggregate amount of actual expenditures from 2009 to 2013 was available).

3 Efficiency

Both the project cost and the project period were within the plan (the ratio against the plan is 81% and 100% respectively). Therefore efficiency of the project is high.

4 Sustainability

<Policy Aspect>

The RPJMN (2015-2019) aims at strengthening of environmental management capacity through developing investigators. Moreover, both Banten and West Java Provinces have incorporated the issues related to WQM/WPC in all river basins into their Regional Medium-Term Development Plans.

<Institutional Aspect>

At the time of ex-post evaluation, while the number of quota (the required number of staff) and actual number of staff in environmental institutions of local governments in the Cisadane River basin are not available except Bogor regency and Tangerang municipality, the number of staff in these institutions is considered to be sufficient, as they utilize external human resources and local consultants with budget

allocation and necessary WQM/WPC activities have been implemented as planned, according to each local government.

<Technical Aspect>

At the time of ex-post evaluation, some project counterparts still work in environmental institutions of local governments in the Cisadane River basin, however, others have retired and/or been transferred to other institutions. Even though some staff left these environmental institutions, the skill level of remaining staff in these environmental institutions is considered to be sufficient to formulate and implement WQM/WPC plans, as necessary WQM/WPC activities have been implemented as planned. Trainings for technical capacity improvement of WQM/WPC are provided by provincial environmental institutions for three to four days every year. Moreover, the Booklet on Environmental Laws and Regulations related to WQM/WPC, Manual for Province to Support Regency/Municipality, Technical Guideline for WQM/WPC Plan and PSI that were developed under the project have been utilized by all local governments in the Cisadane River basin, although they have not been revised yet.

<Financial Aspect>

Although the budget data was not officially disclosed by local governments in the Cisadane River basin², it was confirmed that in each local government, the local budget (APBD) has been allocated for WQM/WPC, and that such activities, including identification of water pollution sources and pollutant load capacity of rivers, water quality monitoring, law enforcement to offenders of pollution control, development of Green Village program, trainings on domestic waste management for local communities etc., have been indeed properly conducted by environmental institutions of these local governments. Also, from the past years Ministry of Environment has allocated special budget (DAK) to support local governments in environmental quality monitoring and control, although the amount of budget cannot be informed during ex-post evaluation. Thus, it can be concluded that sufficient amount of budget has been stably allocated to cover these WQM/WPC activities and no problem is foreseen in the future prospect.

<Evaluation Result> No major problems have been observed in policy, institutional, technical and financial aspects of the project. Therefore, sustainability of effects of the project is high.

5 Summary of the Evaluation

The targets set in indicators for the Project Purpose were mostly achieved, and project effects have been maintained after project completion, showing WQM/WPC has been improved in Bogor regency and Tangerang municipality, the pilot sites. The Overall Goal was also achieved at the time of ex-post evaluation, as the project effects have been extended to the other local governments in the Cisadane river basin through the technical guidelines prepared by the project. In terms of sustainability, no major problems have been observed in policy, institutional, technical and financial aspects of the project.

In light of the above, this project is evaluated to be highly satisfactory.

III. Recommendations & Lessons Learned

<Recommendations for Implementing Agency>

The concerned local governments and environmental institutions are recommended to continue good performances of WQM/WPC and further improve them. To do so, the documents produced under this project, such as the Booklet on Environmental Laws and Regulations related to WQM/WPC, Manual for Province to Support Regency/Municipality, Technical Guideline for WQM/WPC Plan and PSI, should be updated when the contents are found old in the future.

<Lessons Learned for JICA>

To enhance law enforcement by environmental institutions, it is important that such institutions become capable of properly identifying and analyzing the data on environmental carrying capacity, environmental load and pollution sources and of formulating WQM/WPC plans based on the analysis. Further, as this project attained, implementation of some components of the WQM/WPC plans formulated through the above-mentioned process as pilot activities by means of OJT for the staff of the environmental institutions can lead to continuation of the activities after project completion.

² Bogor regency, Bogor municipality and Tangerang regency unofficially informed the approximate budget level during the interviews for the ex-post evaluation.

Green Village Program in Tangerang Municipality

Green Village program was developed in Bugel Mas Indah Housing area during the project period, including the construction of domestic waste water treatment plant for about 80 houses and recycling community development. The 6 cubic meters of wastewater treatment plant was still in good condition. The cost required for operation and maintenance including electrical bill which is about Rp. 500,000 per month was paid by the contributions of the community.



Communal wastewater treatment plant



Activities related to 3R (Reduce, Reuse, Recycle) and waste bank