

Ex-Ante Evaluation (for Japanese ODA Loan)

1. Name of the Project

Country: The Republic of Indonesia

Project: Metropolitan Sanitation Management Investment Program: Engineering Service for Sewerage System Development in DKI Jakarta

Loan Agreement: February 24, 2014

Loan Amount: 1,968 million yen

Borrower: The Republic of Indonesia

2. Background and Necessity of the Project

(1) Current State and Issues of the Sewerage Sector in the Republic of Indonesia

The coverage of the sewerage system in Indonesia is around 2%, and related development is far behind that in surrounding ASEAN countries (Philippines: 7%; Vietnam: 14%; Thailand: 34%; Malaysia: 38%)¹.

While the growth of the population and commerce have been remarkable in DKI Jakarta along with the region's rapid economic expansion, the development of transportation, water and sewerage systems as well as other forms of urban infrastructure has been slow. The coverage of the sewage system in DKI Jakarta is only around 2% in line with the national average, and the rapid progress of urbanization has caused environmental problems such as pollution in rivers/other public bodies of water and groundwater, as well as damage to the health of local residents. As sewerage system construction is expected to remove the causes of such pollution, there is an urgent need for increased sewerage coverage and improvement of related systems.

(2) Development Policies for the Sewerage Sector in the Republic of Indonesia and the Priority of the Project

Indonesia's Medium-term Development Plan (RPJM: 2010 – 2014) lists sewerage system development as a priority task for contribution to environmental, sanitary and flood-control measures. Based on cooperation for a review of JICA's Wastewater Management Master Plan and other efforts, DKI Jakarta is planning to establish 15 sewerage zones with 2020, 2030 and 2050 as target years for its short-, medium- and long-term plans. Sewerage Zone No.1 in the center of the region and the adjoining Zone No.6 are the priority areas of the short-term plan. In addition, "Master Plan Study for Establishing Metropolitan

¹Global Water Market 2008

Priority Area for Investment and Industry (MPA) in JABODETABEK Area”, which was approved by the Japanese and Indonesian governments in October 2012, positions “Metropolitan Sanitation Management Investment Program: Sewerage System Development in DKI Jakarta” with particular focus on Zone no.1 as a flagship project to be conducted jointly by the public and private sectors of the two countries.

(3) Japan and JICA’s Policy and Operations in the Sewerage Sector

Japan’s Country Assistance Policies for the Republic of Indonesia (April 2012) lists support for further economic growth as a priority area and stipulates support for the development of urban basic infrastructure including sewerage systems in the Jakarta Metropolitan Area and elsewhere. JICA Analytical Work for the Republic of Indonesia also lists urban environmental development in the metropolitan area as a priority task, in which support for improvement of the water environment including sewerage system development will be provided. The project qualifies as an initiative relating to such policies and analysis.

(4) Other Donor’s Activity

The World Bank has supported sewerage system development in existing sewerage zones by conducting the Jakarta Sewerage and Sanitation Project (JSSP). The Water and Sanitation Program (WSP) supports improvement of the sanitary environment via the use of septic tanks for on-site sewerage treatment and other facilities.

The Asian Development Bank’s Country Partnership Strategy for Indonesia (CPS: 2012 – 2014) also positions sewerage system development as an important field, and has included the running of “Urban Sanitation and Rural Infrastructure to Support the PNPM Mandiri Project” since 2011.

(5) Necessity of the Project

The project for sewerage system development in Jakarta qualifies as an initiative to be given high priority in development policies and relating to the country’s issues and Japan’s and JICA’s assistance policies. Accordingly, there is a high level of necessity and validity to JICA’s support for the Project.

3. Project Description

(1) Project Objective(s)

The Project is intended to promote appropriate sewerage treatment in DKI Jakarta through construction, operation, maintenance, management and other work related to sewer networks and treatment facilities, and to contribute to the

improvement of the living and sanitary environments of local residents as well as to environmental conservation.

(2) Project Site/Target Area

Sewerage Zone No.1 of DKI Jakarta (area: 49.01 km²; planned target population: approx. 1,236,000)

(3) Project Component(s)

The Project involves the work outlined in 1), 2) and 3) below. In accordance with the Indonesian government's policy to fully utilize the private sector in infrastructure development, the construction and operation detailed in 2) will be implemented under the PPP system.

- 1) Construction of sewer networks (international competitive bidding)
- 2) Construction, operation, maintenance and management of sewerage treatment facilities (PPP system)
- 3) Consulting services ((i) Detailed design of sewer networks/bidding assistance, (ii) Basic design of sewerage treatment facilities/PPP bidding assistance, (iii) Survey of environmental Impact Assessment and social considerations, (iv) Construction supervision, and (v) Consolidation of financial and organizational functions (Short List))

This loan will be provided for above (i), (ii) and (iii) of 3) consulting services as the engineering service (E/S) for the Project.

(4) Estimated Project Cost (Loan Amount)

2,367 million Yen (Loan amount: 1,968 million Yen)

(5) Schedule

February 2014 - September 2017 (44 months in total)

The Project will be deemed completed when the disbursement is completed (June 2017).

(6) Project Implementation Structure

- 1) Borrower: The Republic of Indonesia
- 2) Executing Agency: Directorate General of Human Settlements, Ministry of Public Works (joint implementation with DKI Jakarta)
- 3) Operation and Maintenance System: The operation, maintenance and management systems of PD PAL JAYA under DKI Jakarta and the private sector will be examined in this E/S.

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

- 1) Environmental and Social Consideration

- ① Category B
 - ② Reasons for Categorization: The project is not expected to have serious adverse effects on the environment in light of sector, project and regional characteristics based on the JICA's Guidelines for Environmental and Social Considerations(issued in April 2010).
 - ③ Environmental Permit: The need for Environmental Impact Assessment (EIA) will be determined based on the design plan formulated in this E/S. EIA will be written by the Public Works Agency and approved by the Environmental Management Agency of DKI Jakarta. Details will be confirmed in this E/S.
 - ④ Anti-Pollution Measures: As this E/S involves geological and other surveys, measures necessary to alleviate air pollution and noise related to surveying will be taken by the implementing organization (DGHS). Details will be confirmed in this E/S.
 - ⑤ Natural Environment: to be confirmed in this E/S
 - ⑥ Social Environment: to be confirmed in this E/S
 - ⑦ Other/Monitoring: As this E/S involves geological and other surveys, monitoring of air pollution and noise related to surveying will be conducted by the implementing organization (DGHS). Details will be confirmed in this E/S.
- 2) Promotion of Poverty Reduction: to be confirmed in this E/S
- 3) Promotion of Social Development (e.g., Gender Perspective, Measure for Infectious Diseases including HIV/AIDS, Participatory Development, Consideration for the Person with Disability etc): to be confirmed in this E/S
- (8) Collaboration with Other Donors or Schemes: Project formulation was conducted under the Project for Capacity Development of the Wastewater Sector by reviewing the Wastewater Management Master Plan in DKI Jakarta (technical cooperation; completed in June 2012).
- (9) Other Important Issues: The Indonesian government is planning to conduct a pilot project for sewer network in Sewerage Zone No.1 at its own expense in advance of the Project. For the pilot project, JICA is planning to conduct "Supplemental Study for Metropolitan Management Investment Program: Sewerage System Development in DKI Jakarta (E/S)" from February 2014.

4. Targeted Outcomes

(1) Quantitative Effects

1) Performance indicators: To be finalized by appraisal of loan for construction

2) Internal rate of return: To be finalized by appraisal of loan for construction

(2) Qualitative Effects

Improvement of DKI Jakarta's urban environment including public water quality and natural surroundings, living environments of local residents and health via the mitigation of waterborne diseases

5. External Factors and Risk Control

None

6. Lessons Learned from Past Projects

(1) Results of Evaluation for Similar Projects

The results of ex-post evaluation for a similar past case ("Denpasar Sewerage Development Project (I)"; L/A signed in November 1994) showed that sewage was not treated properly in some cases due to clogging of sewer pipes caused by waste being dumped into drains and rivers. Educational activities, briefings and other measures taken by the implementing organization to prevent waste dumping by residents are considered highly effective.

(2) Lessons for the Current Project

To minimize the adverse effect of waste dumping in the Project, plans are in place to provide support for the consolidation of capacity among operation, maintenance and management organizations (including environmental education for residents of the target areas) via projects involving Japanese ODA Loans and support by consultants. Active collaboration with JICA Advisor for Sewage Management will also be promoted.

7. Plan for Future Evaluation

(1) Indicators to be Used

To be finalized by loan for construction

(2) Timing

To be finalized by loan for construction