

Simplified Ex-Post Evaluation for Grant Aid Project

Evaluator, Affiliation	Junko Noguchi Foundation for Advanced Studies on International Development	Duration of Evaluation Study
Project Name	The Project for the Upgrading of the Sewer Cleaning Equipment in Colombo City	January 2010 – December 2010

I Project Outline

Country Name	Democratic Socialist Republic of Sri Lanka	
Project Period	February 2005-March 2006	
Implementing Agency	National Water Supply and Drainage Board (NWS&DB), Colombo Municipal Council (CMC)	
Project Cost	Grant Limit: 146 million yen	Actual Grant Amount: 121.45 million yen
Main Contractors	Mitsubishi Corporation	
Main Consultants	NJS Consultants Co., Ltd.	
Basic Design	“Basin Design Study on the Project for the Upgrading of the Sewer Cleaning Equipment in Colombo City in the Democratic Socialist Republic of Sri Lanka,” NJS Consultants Co., Ltd., September 2004	
Related Projects (if any)	<ol style="list-style-type: none"> 1. JICA, “Development Study on Greater Kanky and Nuwara Eliya Water Supply” (1999) 2. JICA, Expert in Drainage Development (2002-2004) 3. JICA, Expert in Operation and Management of Drainage (2004-2006) 	
Project Background	<p>In Colombo the sewerage service areas are divided into the northern and southern areas. Since only preliminary treatment was carried out, the raw sewage was discharged from the pump stations to the ocean, and the discharged sewage sometimes caused water pollution in the ocean due to the absence of diffusion or dilution by current and wind. The sewerage system of Colombo and its suburbs faced many problems caused by many blockages which occur in the sewers due to the inflow of sand, sludge, domestic garbage, oils and fats.</p>	
Project Objective	To procure sewer cleaning equipment in order to enhance sewer cleaning operations and then to prevent sewerage overflow to drains, canal systems and water bodies	
Output[s] (Japanese Side)	<ol style="list-style-type: none"> 1. Procurement and installation works of the equipment 2. Technical support for planning the sewer cleaning 	

II Result of the Evaluation

Summary of the evaluation
<p>This Project aimed to promote the cleaning activities of the sewers in Colombo City and its suburbs so as to improve the convenience of the citizen's life. In this target area, the National Water Supply and Drainage Board (NWS&DB) and the Colombo Municipal Council (CMC) conduct sewer cleaning. Before the Project, NWS&DB and CMC used to just attend the problems when the sewers were blocked, but since the equipment was procured by the Project, both NWS&DB and CMC has conducted preventive maintenance of the sewers. The cleaning achievement of both organizations is slightly less than the original objective, but they still conduct sewer cleaning based on the regularly-revised plan, and so they will achieve the objective in the near future.</p> <p>A constraint of this evaluation study is that the information on financial matters of CMC was not available. Besides this, neither NWS&DB nor CMC face major problems in structural and technical aspects.</p> <p>In light of the above, this Project is evaluated to be highly satisfactory.</p> <p><Recommendations to NWS&DB></p> <ol style="list-style-type: none"> 1. Even after cleaning the sewers in all areas of responsibility, it is recommended to continue the preventive cleaning activities based on the needs in each area. 2. Regardless of the financial deficit, the cleaning activities have been implemented due to their public utility characteristics. However it is necessary to secure sufficient funding for the drainage section. In the meantime, the management needs to continue the cleaning activities regardless of the financial status of the drainage section. <p><Recommendation to CMC></p> <ol style="list-style-type: none"> 1. Even after cleaning the sewers in all areas of responsibility, it is recommended to continue the preventive cleaning activities base on the needs in each area.

<p>1 Relevance</p>
<p>(1) Relevance to the Development Plan of Sri Lanka In “Regaining Sri Lanka: 10-year Physical Infrastructure Development Plan” and “National Policy on Water Supply and Sanitation,” which have been in effect since the commencement of the Project, the following is described—(i) Colombo City is the center for the politics, finance and transportation; (ii) It is necessary to control the pollution and protect environmental and natural resources for the improvement of the citizens’ livelihood and economic development; and (iii) The sewage system is to be established in principal cities in the country.</p> <p>(2) Relevance with the Development Needs of Sri Lanka The sewerage system of Colombo and its suburbs has been established but frequently faced problems of sewer blockages due to the insufficient capacity of the facility, dumping of domestic garbage, etc. This brought inconvenience and hygienic problems to the citizen in the area. Most of these problems have been solved by this Project, but there are still sewer blockages and sewage flow. Thus, sewer cleaning is still necessary.</p> <p>(3) Relevance to Japan’s ODA Policy In “Country Assistance Program for the Democratic Socialist Republic of Sri Lanka” prepared in 2004, improvement of infrastructure is one of the important issues. Also, this program points out the necessity of protecting the social environment, which includes water and sewerage, so as to promote environmentally-sound tourism development. Besides, this Project was implemented based on the discussions held at the Tokyo Conference on Reconstruction and Development of Sri Lanka in 2003.</p> <p>This project has been highly relevant to the country’s development plan, development needs, as well as Japan’s ODA policy; therefore its relevance is high.</p>
<p>2 Efficiency</p>
<p>(1) Project Outputs Outputs were generated as planned; The equipment was procured as planned in terms of quantity and specifications, and the technical training was implemented as scheduled. According to NWS&DB, the training was useful for planning the sewer cleaning and making the work efficient.</p> <p>(2) Project Period (Project Inputs) It took 14 months to complete the Project, shorter than planned (93% of the time planned).</p> <p>(3) Project Cost (Project Inputs) The actual cost was 121 million yen, 84% lower than planned. Due to the fair bidding, part of the procurement cost was saved.</p> <p>Both project period and project cost were within the plan; therefore efficiency of the project is high.</p>
<p>3 Effectiveness / Impact</p>
<p>(1) Quantitative Effects After the equipments were procured, 224.55 km of the sewers were cleaned (169.7 km by NWS&DB and 54.85 km by CMC). The originally-set target by 2010 was 330 km, but when the equipments were procured this target figure was modified to 252 km. Comparing this modified target, about 90% was achieved.</p> <p>(2) Impacts (Impacts on the natural environment, Land Acquisition and Resettlement, Unintended Positive/Negative Impact) As a result of the sewer cleaning, the sewage blockages and floods have decreased. When the preventive cleaning was not done before 2006, as many as 110 complaints were made per year regarding the sewer blockages, but after the cleaning activities, these complaints decreased to 60. NWS&DB and CMC used to resolve 80% of the received complaints on average, but now they can work out more than 90%. Other impacts, after the sewage flood was decreased, include the improvement of traffic snarls and bad smell. Besides, it is reported that the clearing workers gained incentives from the new equipment, and that NWS&DB and CMC have come to realize the importance the preventive cleaning of the sewers, which hadn’t been implemented before.</p> <p>This project has largely achieved its objectives; therefore its effectiveness is high.</p>

4 Sustainability

(1) Structural Aspects of Operation Maintenance

When the Project started, NWS&DB and CMC newly established the Task Force for cleaning activities, but in 2007 this was dissolved. Now, each of NWS&DB and CMC formulate its cleaning team independently. This doesn't affect operation and equipment maintenance, because originally the two are different organizations and each has a target cleaning area. At NWS&DB, staff has been assigned as planned; It has 3 cleaning areas and in each area a leader, an assistant engineer, 3 operators/drivers and 4 workers are assigned. CMC has 2 cleaning areas, and in each an inspector, an operator, 2 drivers and 6 workers are assigned.

(2) Technical Aspects of Operation Maintenance

At NWS&DB, pre-service training is given to newly employed staff by the managers and engineers. Besides, technical training has been conducted annually for the supervisors, engineering assistants, operators, and laborers, using the training manual prepared by the Project. The clearing services have been conducted based on the annual cleaning program. The services are monitored directly by the inspector, and are reported to the Additional General Manager (AGM) via the engineering assistant and civil engineer. When the monitoring finds a problem, the AGM makes a decision on necessary actions to take.

At CMC, the training manual prepared by the Project has been utilized. The manual was revised to respond to the diversified priority cleaning areas, and based on this the technical staff and workers have been trained. The cleaning group report the monitoring result and people's complaints to the manager and AGM, via the engineers. When monitoring finds a problem, the manager or AGM makes a decision on necessary actions to take. Regular training has been conducted for the operators, and spare parts are available near the office.

(3) Financial Aspects of Operation Maintenance

In 2009, the budget for operation and maintenance of the drainage section of NWS&DB was 49.215 million rupees, and the expenditure was 131.31 million rupees. This section has constantly had a deficit since this Project started. However, the necessary amount has been spent for the drainage section, because its budget is just 1% of that of the total NWS&DB budget, and also because of the public utility of the sewer cleaning. As for CMC, the information related to the budget was not available, and so the financial status is not verifiable.

(4) Current Status of Operation Maintenance

The major equipment procured for NWS&DB is regularly inspected and functioning. Also, the equipment for CMC is regularly inspected and functioning after a repair. At both organizations, the equipment is maintained based on the sewer ledger.

Some problems have been observed in the financial aspects of operation Maintenance; therefore sustainability of the project effect is fair.