

FINAL REPORT

January 2006

Name of Project: The Cebu Pilot Project: The Wastewater Treatment Plant Project

Project Location: Sitio Balang Kapuna, Barangay Sambag 1, Cebu City, Philippines

1. Summary

First component

The Cebu Pilot project has two components. The first component is the construction of the pilot wastewater treatment plant (WTP) in Barangay Sambag 1, Cebu City. Sambag 1 is one of the thirteen barangays bounding the Guadalupe River, a major river in Cebu City. Total project cost is 828,962.00 Philippine Pesos (PhP). Funding sources come from the Cebu City Government and the UNESCAP. Total financial grant from the UNESCAP is 10,000 USD. 50% of which was appropriated for the construction of the WTP and the remaining 50 % was spent for the holding of the Environmental Seminar held on February 2005 in Cebu City, Philippines.

Phase 1

The construction of the WTP was carried out in two phases. Phase 1 has a total budgeted cost of 500,000.00 PhP funding for which was taken from the Cebu City Government coffers. This phase consisted of the following activities: 1. General requirements (16 % of the cost for Phase 1), earthworks (9.83%), concrete works and reinforcing steel (37.12 %), formworks and scaffoldings (34.28 %) and miscellaneous (2.77 %).

The scope of works for this phase included excavation (with a depth of approximately 3.80 m), concrete works (whole bottom slab, exterior walls of the four sides, and lean concrete), and pipes and fittings.

Phase 2

Total cost of Phase 2 is PhP 328,962.00. Funding comes from a portion of the UNESCAP grant and the Cebu City Government. This phase is divided into the following: earthworks (1.14 % of the cost for this phase), concrete works and reinforcing steel (38.88 %), formworks and scaffoldings (32.14 %), and miscellaneous (27.84 %).

The scope of works consisted of concrete works (involving the top part of the exterior walls, partitions, corbel, gutter, filter media bars and others), water proofing, and filter stones in tank 1 and tank 3.

Second Component

The second component of the Cebu Pilot Project is the organization of a national workshop which was conducted on February 2-4, 2005 in Cebu City. The workshop, aptly entitled, the Kitakyushu Initiative Workshop on Wastewater and Solid Waste

Management of Guadalupe River in Cebu City, focused not only on how to manage wastewaters discharged into the Guadalupe River but also on how to manage solid wastes and the watersheds of the city.

Participants to the workshops included relevant stakeholders like government officials (city and barangays), non-government organizations, community-based organizations (in the barangay), academic and research institutions, industry associations, business and civic groups, the private sector and international organizations.

One of the important topics discussed during the workshop was the concept and implementation of the Wastewater Treatment Plant pilot project in addition to solid waste management and water resources management issues in Guadalupe River.

The workshop was jointly funded by UNESCAP and the Cebu City Government.

2. Project Objectives and Targets

The Cebu pilot project (WTP) has the objective of improving the quality of the Guadalupe River of Cebu City through treatment of domestic wastewaters from households near the riverbank. The idea is to put up a model plant at this site and successfully operate it. The successful operation of the facility will change the awareness of the people and will contribute to their environmental management capacity.

The workshop-seminar has the objective to inform and improve the understanding of the stakeholders on how to properly manage wastewaters and solid wastes in Guadalupe River.

Target beneficiaries for the WTP project are the residents near the Guadalupe River in particular the members of the Balang Kapuna urban poor association. The WTP, when completed, will be maintained and operated by the association. The facility is designed to receive and treat wastewaters coming from 60 households in Balang Kapuna.

3. Implementation

A. Project Components and Implementation Process

Project Components:

I. WTP Pilot Project

A. Phase 1

Implementation date: May 30, 2005 – August 10, 2005
(100 calendar days)

Percentage completion: 97.18 %
(Good as physically completed)

Total Cost: PhP 500,000.00

The WTP pilot project described in Item 1 above only covers the construction of the WTP and does not include the costs for the construction of the additional works as well as the pipe connections from the 60 households to the facility. The POWE for the pipe connections from the houses will be prepared next. Taking into consideration all of these factors and also the government standard procedures in the bidding process, it is expected that the WTP will be operational by the end of December 2006.

2. Seminar Workshop

Title of Workshop: Kitakyushu Initiative Workshop on Wastewater and Solid Waste Management of Guadalupe River in Cebu City
Dates when workshop was conducted: February 2-4, 2005
Source of Funds: UNESCAP, Cebu City Government

B. Processes or issues related to stakeholder collaboration and gender consideration

The technology for the WTP pilot project is entirely new to the Cebu City residents although the city has been operating a Sewage Treatment Plant using an Activated Sludge Process for years. That was why there was a need for the concerned DEPW staffs as well as the stakeholders particularly the riverbank residents to be oriented on the WTP, how it works, how it is different from the conventional wastewater treatment system operated by the city, what are the economic benefits that can be derived from the project as well as the social benefits the residents will get resulting from the operation of the facility. This issue was taken up during the workshop seminar held on February 2005.

The JICA experts visited the city several times during the pre-construction phase of the WTP to assist the city in the assessment of the appropriate site for the project and more importantly to discuss about the new technology especially the design of the facility. Even with the many meetings conducted for this purpose, problems were encountered during the implementation stage. The design plans prepared by the Japanese experts were not followed to the letter by the staffs at DEPW since they saw something which was not foreseen during the previous meetings between the experts and the Cebu City officials. As a result, the facility was constructed several meters below the ground and when it was almost completed, the residents in the area complained. They brought this issue to the visiting Japanese experts during a consultation held on November 2005. The residents claimed that the WTP is going to be a hazard particularly to the children because the facility is not on ground level and they fear for the safety of their children.

A meeting was held to discuss the problem on the design as well as the complaints of the residents. During the meeting, it was agreed to temporarily construct a fence around the facility to prevent accidents to happen. There was

also the question on raising the topmost portion of the WTP to the ground level, where to get the funds for the additional works and how to go about operating the facility when there is no connection from the WTP to the households.

It was decided to proceed for the additional civil works wherein the WTP will be raised to the ground level by extending the walls and to look for funds needed for this. The POWE is presently being prepared and processed for the additional works. This also includes the provision for the comfort/rest room at the ground level near the facility while waiting for the design and also the POWE for the piping network connecting the households to the facility is finalized. A common laundry area will also be put up near the facility.

It is envisioned that the WTP will be operational by the end of 2006 and it will be the homeowners association of Balang Kapuna that will operate and maintain the project. The association will be able to economically benefit from the operation of the project by introducing a charging system for the use of the comfort/rest room and the common laundry area. The construction of a common toilet and washing area will socially benefit the residents considering that there are households along the riverbanks that do not have toilets.

When the facility will be at ground level, the top portion will remain vacant and will be used for various activities in the area. This can be used as a basketball court for the young residents in the area. This is just one of the social benefits that the residents can get out of the project.

4. Outcomes and Constraints

The outcomes of the projects are as follows:

1. A model wastewater treatment plant facility is constructed, tested and in operation.
2. A national workshop is conducted to increase the awareness of relevant stakeholders on wastewater management and enhance their participation in the efforts to improve water quality.
3. A cleaner and more sanitized river is achieved through the construction of common toilet for use by the residents in the area.

The following are the constraints of the project:

1. Limited funds for the construction of the project.
2. Lesser supervision by the Japanese experts during project construction considering the distance and the cost involved.
3. Language problem and different technical terminologies.
4. Government procedures in the bidding and purchasing causing delay in the implementation of the project.
5. No public consultation conducted at the initial stage of the project.

5. Financial Statement

Funds:

Source	Date	Amount (in USD)	Amount (in PhP)
UNESCAP grant	Jan. 13,'05	9,000.00	501,411.40
Cebu City Government			500,000.00
Other sources			50,000.00
Total Funds			1,051,411.40

Expenditures

Project Component	Source	Budgeted Cost (in PhP)	Actual Cost (in PhP)
Component 1			
WTP Phase 1	Cebu City Govt.	500,000.00	418,937.13
WTP Phase 2	Cebu City Govt.		90,311.83
	UNESCAP		222,849.51
Total (Phase 2)		328,962.00	313,937.34
Total (Component 1)			732,874.47
Component 2			
Seminar-Workshop	UNESCAP	5,000.00 USD	278,561.89
	Cebu City Govt		30,588.11
Total (Component 2)			309,150.00
Total Expenditures			1,042,024.47
Remaining Funds			9,386.93