1. Project Name

3.2.10 Investigation Regarding the Rationalization of Water Source Circulative Use within Southeast Asian Countries.(part 3)

2. Objectives

WRPC has done cooperative research regarding wastewater treatment and reuse in Southeast Asian countries.

In this project, we provide documents stating the effective usage plans of the water sources in these countries by investigating and analyzing water use based on experiences.

3. Contents

The created documents will contribute to the healthy and stable economic development of Southeast Asian countries and also to the smooth operation of companies operating from Japan

Also, as for investigations, we will accept the demand from the members of WRPC and the outside.

4. Results

We have visited Indonesia in August of 2013 and January of 2014, as well as Cambodia In December of 2013 for research.

(1) The Republic of Indonesia visit survey

In Indonesia, large economic growth has been witnessed after overcoming a worldwide economic crisis. However, the country's sewage and wastewater treatment has not been updated with the economic growth. Old facilities are dominant with some remaining from when the country was a Dutch colony. Water quality is decreasing with only 2% of sewage water treatment application. Sewage gathering and treatment is non-existent in many regions

As a result of research regarding wastewater treatment in a few factories, although there are wastewater treatment devices in food manufacturing factories, most of them are not functioning, with discharge into river waters in some cases.

The MBR technology, and Integrated Intelligent Satellite System (IISS) was introduced as a method of water treatment improvement to related organizations such as the Ministry of Industry and PD PAL JAYA (Wastewater Management Enterprise, City of Jakarta). IISS was judged as feasible by the Indonesian side. The procedures to the establishment of a project have been considered.

On the other hand, a seminar is planned in 2014 from requests of introduction of the latest Japanese wastewater treatment and reuse technologies.

(2) Kingdom of Cambodia visit survey

In Cambodia, water supply facilities were investigated. And a meeting with SOMA, leading local company, was held in order to understand the current situation of wastewater, livestock wastewater, wastewater treatment facilities, and the training of engineers. It was clarified that although the water supply system is prepared in Phnom Penh, people cannot access clean water in the countryside. Also, due to limited funds for water supply facilities, low cost facilities are at need. The proposals of a feasible water supply facility and the methods to introduce are the issues.

As for the investigated wastewater from livestock farms, the wastewater is discharged without treatment to drainage pond in close proximity to the lake where water is taken and treated for drinking. In addition, wastewater is discharged from surrounding villages. Therefore the contamination of the lake water is concerned. We have decided to research and consider wastewater treatment of livestock wastewater and surrounding wastewaters originating from the village, in the future.

Also, demand is high for training engineers as there is a lack in wastewater treatment engineers. For this reason, there are plans to establish programs within existing universities to train wastewater treatment engineers. The local side has agreed to this plan and WRPC is considering the areas we can support.

5. Reference

Project by Water Reuse Promotion Center (WRPC)