Ministry of the Environment
Government of Japan

Progress and next plan of technical assistance to improve water quality of Citarum River

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What is “Technical assistance” activity?

- B to B activities which will be conducted between Indonesian host companies and Japanese technology providing companies. Ministry of the Environment of Japan (**MOEJ**) financially supports the technical assistance activities.
- Considering its negative impact to water quality of Citarum river, the target industry was decided as the textile industry in Citarum river basin by the Ministry of Environment and forestry of Indonesia (**KLHK**) and **MOEJ**.
- During the project period, some pilot projects will be demonstrated. In 2018-2020, the first pilot project was completed. After the mid-2021, the second project will be started.
- The results of pilot projects will be shared among all stakeholders in Citarum river basin to get hints to improve Citarum river water quality.

Workshop for Introduction of water quality improvement technology

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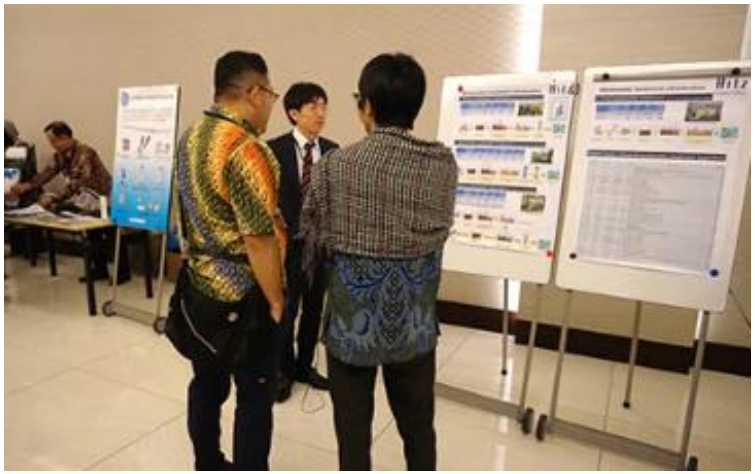
The first workshop for introducing Japanese wastewater quality improvement technologies was held in January 2019. During the workshop, experience of some pilot projects conducted by MOEJ's support in Asian countries were shared.

Date	23 and 24 January 2019
Venue	HARRIS Hotel and Convention Ciumbuleuit Bandung, Bandung, Indonesia
Participants	55 participants: WEPA Advisory Board Members, Ministry of Environment and Forestry of Indonesia (**KLHK**), Ministry of the Environment, Japan (**MOEJ**), Japan International Cooperation Agency (**JICA**), Japanese local authorities (Hyogo Prefecture and City of Kawasaki), Indonesian local authorities and academia, Japanese private companies
Organizers	**KLHK** and **MOEJ**



Introduced pilot projects

1. Introduction of pilot project for upgrading wastewater treatment and reducing CO_2 emissions by **aerator** in Indonesia
2. Pilot project on textile industry wastewater treatment technology (combination of **ABR**-**DHS**) in Citarum river basin (the 1st pilot project)
3. Dyeing wastewater treatment pilot plant for Myanmar traditional clothes "Longyi"
4. Promotion of Textile Dyeing Industrial Wastewater Treatment in Vietnam

Implementation organizations

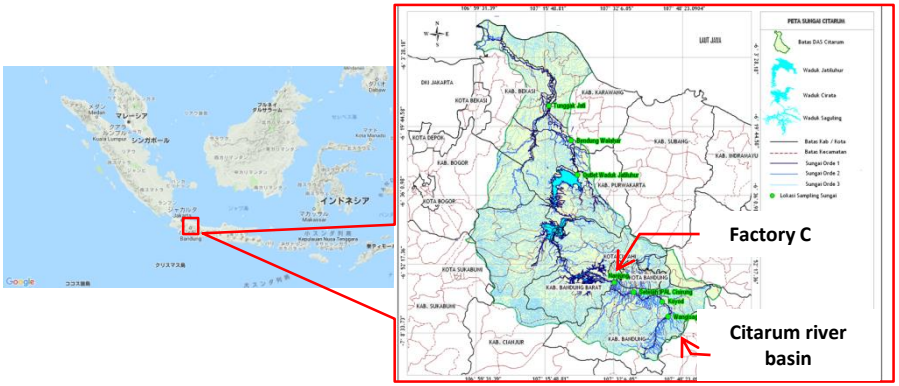
- Nihon Suido Consultants Co., Ltd.
- Sanki Engineering Co., Ltd.
- Nagaoka University of Technology

Implementation period

November 2018-March 2020

Location

Textile industry in Cimahi city (factory C with a capacity of 3,000 m^3/day)



Project outline

This project aims to disseminate energy-saving and low running cost wastewater treatment technology, combination of **ABR** (Anaerobic Baffled Reactor) and **DHS** (Down-flow Hanging Sponge) system, for textile industry in Citarum river basin.

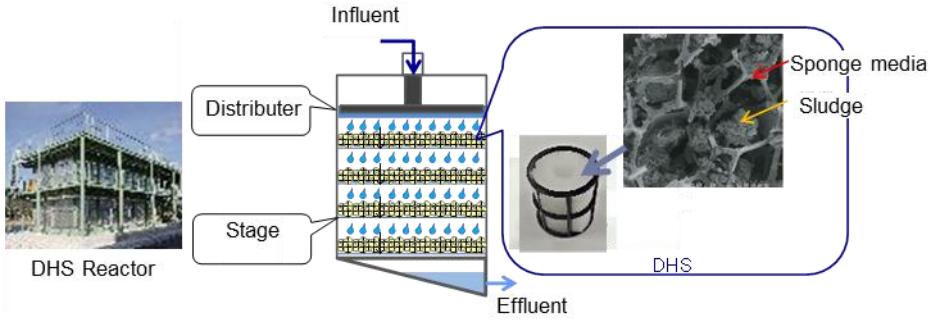
Outline of technology

<ABR>

- Chemical compounds of color contained in specific dye stuff can be biodegraded in ABR reactor, and ABR enables stable treatment even if flow rate and loadings fluctuated.

<DHS>

- No need for machinery aeration(i.e., energy-saving technology).
- Sponge can contain highly concentrated sludge (20～40 kg-DS/m^3-sponge) and amount of excessive sludge is small.
- Easy maintenance



Expected results and business prospects

Improvement of water quality in Citarum river and sub river that connects to Citarum river.

Project planning in 2021

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MOEJ and Japanese private companies will continue to propose both hard and soft technologies for the improvement of water quality of Citarum river.

Candidate technologies

- Enhancing wastewater treatment capacity and saving electricity by replacing existing diffuser (conventional aeration devices) by **aerator**
- Enhancing wastewater treatment capacity and reducing chemicals use by adding **ozone-treatment process**
- Enhancing wastewater treatment capacity, reducing electricity and chemicals use by improving **operation control** of wastewater treatment facilities (such as precise blower operation control with automatic water quality monitoring data)

aerator (as reference)

Schedule (tentative)

2021	**January**	Policy dialogue, reporting at the workshop.
	February March	Information collection about current wastewater treatment condition of candidate companies in target area and assess possibility of application of Japanese wastewater treatment technologies. Building cooperative relationship between Japanese company (technology provider) and Indonesian host company.
	April -	Implementation of a pilot project (feasibility study).