

## Visit to Hanoi

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### International Affairs Department

At the end of November, I visited Hanoi, Vietnam, to attend a conference. On this occasion, I had a courtesy visit to the Hanoi City Hall. JS and Hanoi had not previously interacted with each other. Still, I met a Hanoi city official who had joined the JICA training program in Japan in October. He arranged an appointment with the Hanoi City for me.

The destination of my visit is the Wastewater Management Department of the Infrastructure Management Center, located within the Hanoi Department of Construction. The Infrastructure Management Center is responsible for managing public facilities in Hanoi, including roads, parks, streetlights, and sewerage systems.

I had the opportunity to meet with Mr. Thanh, Deputy Director of the Infrastructure Management Center, who provided an update on the status of wastewater services in Hanoi. He informed me that the Ensa treatment plant, with a capacity of 270,000 m<sup>3</sup>/day, which is currently under construction with Japanese assistance, will soon be put into service. However, even then, the wastewater service penetration rate is only about 20%, indicating that further improvement in wastewater services is still needed. Besides, Hanoi City considers sludge utilization; however, sludge contains plastic, which makes it challenging to reuse as fertilizer, posing a problem.



With members of the Infrastructure Management Center

After meeting at the Infrastructure Management Center, we toured a treatment facility in the city. We visited the Thai Lake Treatment Plant,

located near West Lake in the northwestern part of Hanoi. The area around West Lake is a scenic area with well-developed tourist and commercial facilities. To protect the water environment of West Lake, the center of the scenic area, a treatment district is established around the Lake.

Since the treatment plant is located on a site surrounded by tourist facilities and residential areas, I wondered why the treatment facility was built in such a challenging location, when a little more pipeline could have extended to farmland. The person from a local private company responsible for operating and managing the facility answered my question while providing an overview of the facility through a video introduction. When I asked if there were any complaints about odor, which was a concern due to its location, he assured me that there were none. Indeed, I did not sense any odor when I entered the treatment plant premises, so I decided to understand that there were no actual complaints.

The treatment method is the sequencing batch reactor (SBR). I could inspect the treatment conditions of the facility, which is located underground. When I entered the facility, I was unexpectedly excited by the sight that greeted me. Each facility was glass-walled like an aquarium tank to prevent odors from leaking out. The facility allows for presenting operational conditions while also preventing odors. The innovative idea was an eye-opening experience.

They dared to build the treatment plant in the center of an area where people gather, which highlighted the significance of wastewater treatment in improving the water environment and showing consideration for the surrounding area. I was impressed by their aggressive appeal and implementation.



Glass-fronted gravity thickening tank

On our way back, they showed me a river in an area of the city where the sewerage system had not yet been developed. Gray water from households' septic tanks (individual anaerobic treatment tanks) was flowing into the river from everywhere, and the river's water looked 100% sewage-like. The town was filled with an odor from the sewage that was not present at the treatment plant. I imagine that once the Ensa treatment plant is put into service, the sewage will flow into the treatment plant, and the river environment will undergo a complete transformation. I wanted to revisit this river to see the effect of the wastewater system.



View of the river in Hanoi