

Guwahati City water system management co-creation workshop

With participation of team members from Aaranyak, inno TSD, University of Exeter, Indian Institute of Technology Guwahati, Guwahati Jal Board, Ecole Polytechnique, Tata Institute of Social Science and JustPaani

This co-creation workshop aimed to understand the current use of water in the city's homes and how the LOTUS solution could help increase the citizens' trust in the tap water quality. It was particularly important to take into consideration that the people were not used to drink tap water. Therefore, one of the critical objectives of this workshop was to understand how the people use the tap water in Guwahati city. Then, the workshop focused on how the LOTUS solution could match public needs in terms of information, quality, functionality, and price.

The Guwahati city has ongoing green water projects to supply treated Brahmaputra river water to Guwahati citizens. Indeed, in some parts of Guwahati city, the raw water comes from the Brahmaputra river and is treated and supplied through pipelines. The remaining population is using either a groundwater source or tanker water supply. Irrespective of the water source, the quality of water is a concern in the city, particularly during the monsoon season. Indeed, the raw river water has a high turbidity level as the water carries a large amount of silt during this period. During the floods, polluted water enters into the water distribution pipelines through the cracks and holes in the old pipes, which reduces further the water quality.

Moreover, intermittent water supply also decreases water quality. The LOTUS project is coupled with a project conducted by the Guwahati Jal Board which

aims at providing 24/7 water to Guwahati's households, first in a small part of the city and then to a greater area. This shall be a huge improvement compared to the current situation. Constant running



Figure 1: Workshop in IIT Guwahati

water in the pipelines will highly contribute to increase its quality, and avoid the infiltration of sediments and other contaminants carried by rains.

In parallel to the modernisation of its infrastructure, the Guwahati Jal Board would want to install the LOTUS solutions in the water distribution system, which would enable the water provider to obtain real-time information about the water quality.

The workshop further aimed at engaging with the main beneficiaries of this project: middle/upper class people who are well educated and live in the South West zone of Guwahati city. Most of the workshop attendees reported that they do not test the water quality in their homes. Instead, they always filter the water using in-house methods. Even if they were told that the water was of high quality, they would add further treatment using a commercial filter that uses ultrafiltration, UV and reverse osmosis technology.

The attendees put emphasis on obtaining information on the total dissolved solids contained in water, the vital minerals that are often taken out during the filtration process, and bacterial contaminations. A range of suggestions on how to obtain the needed information from the sensor was provided. The preferred solution was to obtain the information via SMS messages when the water quality has declined and when it is unsafe to drink the water. It was generally agreed that people would be willing to pay more for their water if they obtained more information about its quality.

In general, the workshop provided important information about the users' needs and their willingness to pay for know quality of drinking water, as well as their needs in terms of water quality monitoring.

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