



LIVE with Water

Learn, InVestigate and Experiment

An Indo–Dutch water programme

**A school educational program on Barapullah drain
New Delhi**

Project Background Note

Rationale

The increasing growth in population in India has adversely impacted the per capita water availability and is expected to reduce to 1,367 cubic meters in 2021 (Ministry of Jal Shakti, 2020). Also as per Niti Aayog, Government of India, 21 major cities (including Delhi, Bengaluru, Chennai, and Hyderabad) are racing towards zero groundwater levels, affecting access for 100 million people. The capital is already affected with water shortage and declining ground water levels. The release of sewage and effluents into rivers further compounds the problem. The city is dependent on neighbouring states for its water supply which is affected in the summer season. Hence there is a need to look for alternate sources of water to the feed the increasing water demands.

The use of treated wastewater has the potential to become the next most important source of water, as it will not only increase the water quantity, but also has a two-fold benefit for the environment: it avoids tapping into natural resources and significantly reduces pollutant discharges. The level of treatment of wastewater is subject to the kind and level of pollutant load, for instance black water which is from toilets and urinals has a high content of bacterial contamination, whereas grey water from kitchen sink, hand-wash and bathing areas has high levels of chemicals from cleaning and washing soaps whereas wastewater discharged from household water purifiers or water after washing rice/vegetables can be used for gardening purpose without any treatment. In addition to putting wastewater to alternate use for anthropogenic activities, it can be used to revive the ground water table.

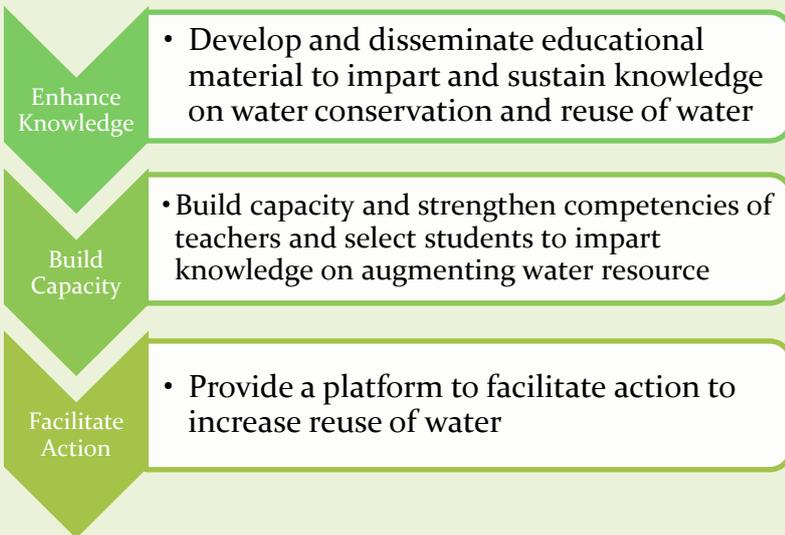
The LOTUS HR project showcases and demonstrates Dutch-Indian Solutions on wastewater at Barapullah Drain in Delhi. The centre has been drawing attention of researchers, policy makers and companies on account of the on-going innovative live research. It has been felt that the impact of this centre can be enhanced if the learnings are simplified and showcased to public and school students. In 2019 an initiative of the Netherlands Enterprise Agency to organize a design challenge at the site of the Barapullah Drain (via Wetskills foundation) with student teams highlighted the need for more public involvement, participation of schools and opening the space for corporates to undertake testing activities.

Given the above background, a school education program to augment and sustain an extremely critical natural resource - water has been designed. This program will have a three pronged approach viz, enhance knowledge, build capacity and facilitate action to increase wastewater use to meet increasing water demand for health and sanitation. This program will use innovative educational approaches to help school students (of grade 6-8, i.e. 12-15 years) which are open to experimentation and exploration of new ideas¹. The program will provide an overview of the prevailing water scenario (both regional and national level) so as to make it relevant for the students. Moreover, it will engage them to find possible measures to innovatively use wastewater and thus reduce the demand for clean water and encourage change in attitudes and behaviour to accept treated wastewater to put their city on a more sustainable development path, and thus build a cadre of sensitized and water sensitive new generation.

¹ The academic rigour sets in from grade 9 as grade 10 in schools in India as schools gear their students for the competitive board exam in grade 10. As a result of which, our experience has been that schools will not be very supportive and this can affect the quality of the program outcomes. Hence grade 6-8 has been proposed.

PROJECT HIGHLIGHTS

Objectives



Project Duration

December, 2020-October 2021

Project Participants

- Schools around Barapullah Drain
- Students of grade 6-8
- Teachers of project school
- Community

Activities

- ❖ Online and offline activities
 - ❖ Waste water activity based curriculum
 - ❖ Competitions for teachers and students
- ❖ Knowledge workshops and interactions with experts
- ❖ Action projects/assignments to be mentored and showcased digitally
 - ❖ Training and capacity building workshop for teachers
 - ❖ Access to resource and IEC materials
 - ❖ Establish LIVE With Water Clubs
 - ❖ Project impact assessment

Project Schools

- Amity International School, Sanket
- Cambridge school, Srinivaspuri
- Gyan Bharati School, Saket
- Green fields school, Safdarjung Enclave
- Saraswati Bal Mandir, Lajpat Nagar

Project Facebook page: <https://www.facebook.com/LIVE-with-Water-An-Indo-Dutch-Water-Programme-101426582177826/>