

Thapar model technology for liquid waste management in Dhianpur



Shri Parm Sunil Singh, the proactive Sarpanch of Dhianpur village in Gurdaspur District of Punjab is one of the first to have initiated a liquid waste management project in his village. The project has led to generation of employment and overall cleanliness of the village while contributing to better health of the community.

Adhering to the guidelines issued by the Swachh Bharat Mission Grameen Phase II, the district administration of Gurdaspur has been taking active steps towards making their villages neat and clean; one the elements being to ensure there is no overflow or sewage water or stagnation that leads to vector borne diseases.

To build awareness about various components of SBM-G II, and to encourage the communities to take up solid and liquid waste management projects in their villages, the district administration carried out intensive IEC (Information Education and Communication) and capacity building activities.

Leading from the front, Sarpanch of Dhianpur which is in Dera Baba Nanak Block convinced his community about the need to address the issue of liquid waste. The village which is home to 550 households and a population of 4200 individuals has three filthy ponds.

Initially, according to the Sarpanch, just one of the ponds that is spread across an area of 1.5 acres was taken up for the project that would benefit approximately 200 marginalised families living alongside.

In the absence of desilting for an exceptionally long period, the capacity of the pond had decreased considerably resulting in the back flow of the water on to the streets of the village while emitting foul smell.



was while searching for the solution that PRI members coordinated with the officials of the Department of Rural Development Panchayats. To their surprise, they were informed that the village can be renovated by availing of grants from both MGNREGA and the Finance Commission. Moreover, they recommended various technology options that could be adopted for the renovation of the pond.

The decision to adopt the Thapar Model WSP (Waste Stabilisation Pond) technology was unanimously decided at a Gram Sabha meeting.

The treatment plant as per the Thapar Model consists of the following:

- **Screening chamber:** Sewage water from all the households is collected in the screening chamber where floating materials are separated.
- **Digestion Well:** Water revolves, and solid materials settle down in the base while the liquid floats
- **Skimming tank (Well 2):** In this tank, liquids present in the water get separated
- **Stabilization tank (Well 3):** This is the third well, known as the stabilization tank and almost clean water is collected in this

- **Oxidation Pond:** Water from the Stabilization tank is then transferred to the Oxidation pond. The main function of the oxidation pond is to treat wastewater through the interaction of sunlight, bacteria, and algae. Algae grow using energy from the sun and carbon dioxide and inorganic compounds released by bacteria in water.
- **Storage or Maturation Pond:** The water is finally transferred to the Maturation pond

Benefits to the community:

- As the pond has been renovated under MNREGA scheme it has generated employment for the village community.
- The renovation of the pond has beautified the village
- The village has become neat and clean and is free from foul smell
- It will contribute to improvement of health
- After renovation, the capacity of water in the pond has increased
- Visitors to the village have appreciated the efforts of the GP

The whole project was constructed at the cost of Rs 34.18 lakhs and Gram Panchayat ensures the operation and maintenance.

When asked about the plans for using the treated water, Parm Sunil Singh replied that initially the water will be used for irrigating the 600-acre land of the Ashram of Baba Lal Dyal Temple in the village. The GP is also exploring the option of pisciculture (breeding of fish) and encouraging farmers to utilize the treated water. This will also help generate income.

