

Decentralized wastewater treatment system at “Adarsh Vidyaprasarak Sanstha’s College of Arts & Commerce”

Location: Badlapur, District Thane, Maharashtra, India

Badlapur Municipal Council and the Board of “Adarsh Vidya Mandir School” decided to incorporate an ecologically sound sanitation concept at the “Adarsh Vidyaprasarak Sanstha’s College of Arts & Commerce”. This concept does not only meet the sanitation needs of the students and the people attending special programmes such as wedding ceremonies at the school premises, but also protects the environment and raises awareness amongst the students, about the importance of water and sanitation in promoting health and hygiene.

The whole sanitation system was designed and implemented by ESF, with support from GTZ, seecon international and other partners, for about 3500 users. Daily wastewater generation is about 8m³. It comprises of toilet blocks for students which includes Water Saving Urinals (WSU) for male students and a treatment system for wastewater generated from the toilet blocks.

A membrane valve has been fixed to normal urinals; which allow only the urine to pass without the need of flushing water after every use. Thus they help conserving water and do not smell as well. A centralized flush system has been installed from where the water is flushed twice a day (but depends on the usage of the urinals) for the maintenance of the urinals. The urine is collected in a Urine collection tank separately, which is stored and reused in a reuse garden in the premises. The overflow is channelized to the treatment system. The wastewater coming from the toilets gets treated through a decentralized wastewater treatment system and urine from waterless urinals is collected separately. The treatment system consists of i) Biogas settler; ii) Anaerobic Baffle reactor; iii) Anaerobic up-flow filter; iv) Planted Gravel Filter; and v) Polishing pond. The treated wastewater and urine as a natural fertilizer is being reused for gardening purposes. This project has received 'National Urban Water Awards (NUWA)', 2009 in Special Category by Ministry of Urban Development, Government of India by the hands of Honorable President of India Smt. Pratibha Devisingh Patil