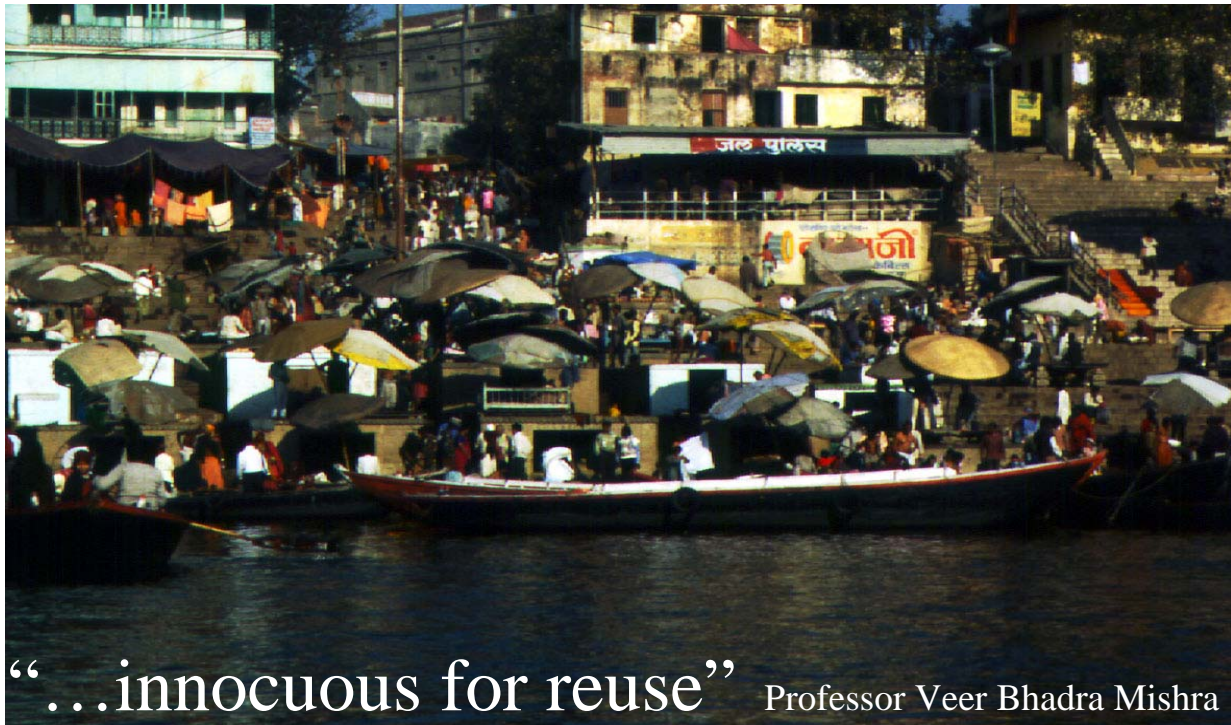


**DEMONSTRATION AIWPS® SEWAGE TREATMENT PLANT AT VARANASI  
ON THE GANGES RIVER IN UTTAR PRADESH, INDIA**



“...innocuous for reuse” Professor Veer Bhadra Mishra

A Detailed Project Report (DPR) was prepared by the Sankat Mochan Foundation, Oswald Green, LLC and GO<sub>2</sub> Water, Inc. for the Government of India and was submitted in February 2010. The DPR plans for a 37-mld Sewage Treatment Plant (STP) that will use and demonstrate for the first time in India an innovative wastewater treatment technology that is more efficient, more reliable, more cost-effective, and easier to operate when compared with conventional technologies. Developed in the USA at the University of California, Berkeley, Advanced Integrated Wastewater Pond Systems and the AIWPS® Technology offer sustainable solutions for municipal, industrial and agricultural wastewater treatment by combining advanced treatment with more complete resource recovery. The demonstration AIWPS® STP at Varanasi will reclaim water, nutrients and possibly energy. The principal objectives of the Government of India’s Ganga Action Plan (GAP) are to stop the discharge of untreated sewage into the Ganga by intercepting all sewage outfalls and drains and diverting the entire sewage flow to one or more STPs for treatment, reclamation and reuse. Prior STPs built in Varanasi and other river cities under the GAP have yet to provide disinfection or pathogen removal. The natural disinfection efficiency of the AIWPS® Process maximizes pathogen removal and safeguards water recycling.

The Government of India selected the AIWPS® Technology for demonstration at the City of Varanasi. The Project Site is 71 hectares and is located in the Assi-BHU South Sewerage District of Varanasi near the upstream village of Ramana. We estimate the cost to construct the 37-mld AIWPS STP is approximately 46 Crore Rs. (approximately US \$10M) excluding the cost of biogas collection and utilization. The required earthwork excavation is approximately 1,175,000 Bank Cubic Meters (BCM). The required earthwork fill is approximately 1,034,000 BCM.

GO<sub>2</sub> Water, Inc., Oswald Green, LLC and SMF seek a long term Indian or multi-national construction partner. This Design-Build-Operate-Transfer (DBOT) project will be contracted and financed by the Government of India, Ministry of Environment & Forests, National River Conservation Directorate (NRCD). A second DPR for riverfront interceptors and a larger AIWPS® STP at Sota is underway.

**Table 1.** Construction Information

Estimated Construction Cost	46 Crore Rs.
Total Area	71 hectares
Total Earthwork (cut + fill)	2,200,000 BCM

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