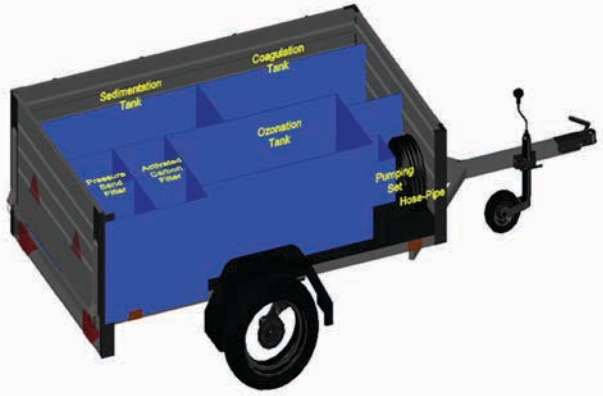
Mobile Water Treatment Plant (mWTP) for Emergency Situations



Problem Statement: India faces several natural disasters every year, mainly floods and storms. It is a daunting task for the government and relief organisations to provide clean water to the affected population in such situations. The disasters like floods and cyclonic storms severely affect the lives of the population, causing displacement of population, loss of life and property, a struggle for survival, food and water shortage. To provide relief to the affected population, we need specific solutions that can provide clean water on site. Addressing this need, researchers at IIT Bombay have designed a mobile water treatment plants system for emergency situations.

Uniqueness of the Solution: The proposed solution has a two-stage treatment approach. The solution contains a decision support system (DSS) along with a water quality testing system within it. Once the water source is fed, the water quality testing system assesses for water quality and shares the results with the DSS. Based on the nature of water quality, the DSS will recommend/decide if the water should be treated in only one or two stages. In the first stage, the treatment options include coagulation, sedimentation, filtration and ozonation. Then, depending on the water quality and as per the DSS recommendations, the second stage of treatment is administered. In the second stage, the treatment options include membrane filtration and chlorination. Thus, depending on the water quality, one or two-stage treatment would be done for the water to make it potable.

Current Status of Technology: The conceptual design is ready, and further system design and fabrication is in progress.

Societal Impact: The system will help the disaster-affected population in reducing the chances of health problems in the aftermath of the disaster.

Patent(s): Nil

Relevant Industries: Metal Industry, Water and Power Industry, Mechanical Engineering, Pump & Filter Water Industry, Cities, Towns, Urban Local Bodies, Municipalities, Disaster Management Authorities, Army, Resorts.

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