

Exploring revenue generation options during O&M through wastewater reuse

Problem statement: The NRCP scheme focuses on sewage treatment infrastructure only and the full responsibility of the O&M of the STPs created rests with the state government and PIAs. In some cases, it was noted that Project Implementing Agencies (PIAs) are unable to provide adequate funds and hence limited maintenance activities are being undertaken on the assets created such as upgradation to new technologies, retrofitting, cleaning etc. This has led to some STPs becoming defunct and not functioning to full capacity. There is also limited focus on revenue generating activities during O&M.

Intervention: Learnings can be derived from the case study of River Nag and Pili in Nagpur on wastewater treatment and reuse. In April 2020, pollution abatement works on Rivers Nag and Pili in Nagpur has been approved at a total cost of Rs. 2,324 Cr. to be funded by JICA and partially (15%) by Nagpur Municipal Corporation. The project includes construction of 2 STPs (48 MLD and 43 MLD respectively) and laying of 1,362 km of sewage lines for diversion of sewage from 100 small streams that flow into River Nag/ Pili downstream. An arrangement of water swap has been undertaken for wastewater reuse. Raw water sent in bulk to the industries under Nagpur Municipal Authority is diverted to water treatment plants for the city, thus increasing availability of potable water for Nagpur residents. In turn, recycled water from the city is again being diverted for industrial use. This water swap arrangement, operational since 2015, is additionally using municipal treated wastewater from Nagpur for cooling purposes in the power plants at Koradi, Khaparkheda and Mauda.

Impact: The above water swap arrangement has helped Nagpur Municipal Corporation take up wastewater reuse in a unique way and ensuring long term sustainability of the project.

Sustainability: The above model is sustainable in the long term since there will always be a demand for water from the industries and there will always be wastewater generated from the city. This model can be adopted where there are major towns and cities situated on riverbanks.

(Reference: Nagpur Pili river water swap arrangement published in news articles)