Operation and maintenance of sewerage systems: present challenges and possible solutions—an Indian experience

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\textbf{ABSTRACT}

A strong focus on increasing gross domestic product to meet demanding needs stretched the country on the brink of overstretching the ecological carrying capacity. Unfortunately, rivers are among the worst affected natural resource. The government of India thus initiated the Ganga and Yamuna action plans and spends around 20 billion rupees against this backdrop about a quarter century ago. However, the present status of these rivers is a sad testimony to carry out adequate efforts for pollution abatement. The lack of motivation, knowledge, and proficiency in operation and maintenance among technical personnel is the most crucial reason for poor functioning and underutilization of sewerage facilities. Only 31% population is covered by sewage treatment facility, out of which most of the sewage treatment plants are operating either under or over the design capacity or not in operation at all. The effluent from several plants failed to meet the disposal criteria. Therefore, multilayer training, development of common curriculum, establishment of dedicated O&M training centers, assessment of training institutions, and preparation of very simplified user-friendly O&M manuals are identified as a plausible solution. Implementation of concept of Built Own and Operate scheme for future policy in India based on Public–Private Participation mode could also be a novel idea.

\textit{Keywords:} River pollution; GAP; YAP; Operation and maintenance; STP