Sustainability Assessment of Municipal Wastewater Treatment

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Abstract : In this paper, our methodology to assess sustainability of wastewater treatment technologies in Egypt is presented. The preliminary list of factors to be considered, as well as their ranking listed. The factors include, but are not limited to pollutants removal efficiency and energy consumption under the environmental dimension, construction cost, operation and maintenance costs and required land area cost under the economic dimension and public acceptance, noise and generating job opportunities for local residents. This methodology is intended to be a user-friendly screening tool to support the decision making process when investigating different wastewater treatment technologies in Egypt. Based on the research work results presented in this paper, it can be generally concluded that the categorization of some of the social and environmental aspects of sustainability is subjective and highly dependent on the local conditions and researchers' background.

Keywords : sustainability, wastewater treatment, sustainability assessment, Egypt

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