

Spatial Autocorrelation of Sewage Treatment Plants and Population distribution in Bengaluru

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Abstract: Wastewater treatment is being considered as a resource. For a city like Bengaluru, its freshwater demand is increasing consequently which results to increase in wastewater generation. So, there is a need for alternative approach: Water Circular Economy (WCE). The water circularity approach aims to reduce freshwater extraction by focusing on wastewater treatment and reuse purposes. This study conducts a spatial autocorrelation (Global and Local Moran's I) of population clusters to be significantly correlated in contrast to weak correlation of Sewage Treatment Plants along with gaps in the present adoption of treatment technologies. Tackling these issues is crucial for Bengaluru to successfully adopt Circular economy of water framework.

Keywords: Spatial Autocorrelation, Circular Water Economy, Sewage Treatment Plants (STPs), Population, Urban Water Resilience

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