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Universität Stuttgart · WAREM · Pfaffenwaldring 7a · 70569 Stuttgart

WAREM Seminar

Master Thesis Presentation

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Concept of Urban Water Management in Udaipur

The City of Udaipur is located in the biggest State of India, Rajasthan, which is also the Indian State with the least water resources. However, Udaipur has developed a lake system over the last few centuries, that is designed to preserve as much as possible of the precipitation that mainly happens during its monsoon season.

Even though these lakes have supplied Udaipur with its water for many centuries, they were found to be not enough to meet the entire water demand of the City today, and will not be able to meet the future water demands. The storage capacity and water quality of the lakes are further deteriorated by pollution coming from all sides of the Lakes; from the urban side the flowing of untreated sewage directly into the Lakes is a main cause of their enrichment and pollution, from the non-urban side deforestation of the hills around the City has contributed to the sedimentation of the Lakes.

As the renewable sources of the City are coming under stress to meet the water demands, a non-conventional water source is suggested to contribute to the City's water sources; the separation, treatment and reuse of grey water. The analysis in this study has shown that grey water could contribute greatly in increasing the water availability in the City, especially that it is easier to treat than conventional domestic wastewater.

With the existence of the Lakes in Udaipur, which already suffer from the discharge of untreated sewage into them, it is interesting to explore the idea of constructed wetlands around these lakes to treat the separated grey water, that is supposed to flow into the Lakes only, as constructed wetlands are gaining popularity recently for their abilities to treat different kinds of wastewater. This study presents the preliminary design parameters for such constructed wetlands in Udaipur's Lakes.

As the case with most developing countries, the main challenge facing the suggestion of practical solutions to water problems in a specific area is the lack of detailed data and information needed for the precise operational design of such solutions. The analysis conducted in this study gives a good impression of the potential of different solution to ease the water stress in Udaipur, but it is suggested to build on this analysis with more detailed data to finally be able to improve the situation of Udaipur's Lakes.

Date: Tuesday, December 6th, 2016

Time: 17:30

Location: Pfaffenwaldring 5a

WAREM Students and other interested parties are cordially invited.