

In Partial Fulfillment of the Requirements for the Degree of
Master of Sustainability Solutions (MSUS)

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Will defend her Master's Capstone Internship

**Explorative Study of the Water-Bodies in the IT Corridor in Chennai –
Summer Internship with the DHAN Foundation, India**

Abstract

Chennai, the fourth largest metropolis in India and the capital state of Tamil Nadu, experiences recurring flooding where hundreds of lives are lost, thousands of people are displaced from their homes and several hectares of crops are damaged. The recent floods during the months of November and December 2015 claimed around 280 lives and displaced over 10,000 residents. Lack of infrastructure, rapid urbanization, climate change and topography are some of the main causes of urban flooding in Chennai. One of the major impacts of Chennai's rapid urbanization is the destruction of the surface water-bodies, which in a coastal city like Chennai include irrigation tanks, temple tanks, lakes and ponds. The destruction of water bodies leads to limited groundwater recharge, increased areas under flooding and/or water stagnation, water table depletion and salt water intrusion.

The overarching purpose of the summer internship with the Development of Humane Action (DHAN) Foundation was to establish the underlying reasons causing the dysfunction of the water-bodies and the aims of the project were to **identify the status of the waterbodies along on of the worst hit regions of Chennai, the IT Corridor** and to **devise interventions to rejuvenate and maintain the waterbodies**. Three regions (Adyar, Navalur & Mahabalipuram) along the 35-mile IT Corridor were chosen and community surveys and transect walks were conducted around the water-bodies in these regions.

Results of this study showed that increasing dumping of solid and liquid waste into the lakes, and the lack of appropriate drainage facilities, are the primary factors that deteriorate the integrity of the water-bodies. The presence of solid waste in the lakes blocks the movement of water from the outlets of the lake, causing the water level to

rise above the usual limit during heavy rainfall and ultimately, leading to flooding of the city. This investigation demonstrated that in addition to implementing simple structural measures such as fencing to protect the water-bodies, interventions in the form of community involvement projects are extremely necessary to educate the community about the effects of dumping waste irresponsibly into the lakes and ponds.

Thursday, December 1, 2016
12:00 – 2:00 p.m.
Wrigley Hall, 481

Faculty, students, and the general public are invited.