

Event Name: Training Programme on Water Sensitive Urban Design and Planning

Date: 25th Sept to 29th Sept 2017

Venue: CSE Delhi

Name and designation of researcher(s): Sonali Anusree Patro, Research Analyst

Event organiser(s): Centre for Science and Environment

Purpose or topic of event: The topic emphasised on urban water management through rain water harvesting and re-use of waste water. Water-Sensitive Urban Design and Planning (WSUDP) integrates the urban water cycle, water supply, wastewater, and storm-water and groundwater management with spatial and urban design. This approach contributes to sustainability and liveability, particularly when considered as a part of an overall urban strategy. The purpose of the workshop was to explore possible innovations, spanning areas of alternative approaches to water management, and show how they can be applied in cities, while taking up existing opportunities to use it for improving cities' amenities and quality of life.

Eminent persons who attended or composition of the audience: Architects, civil engineers, Ph.D. scholars, entrepreneurs, etc., from different parts of the country, participated in the training programme. The participants had great insights on the topic, which helped in an interactive learning experience.

Why the event/topic was important? Why are you attending the event?

As researchers are cognizant, urban water is a very significant part of urban infrastructure provisions and management of urban water has become a pressing issue in all cities today, it is important to explore different ways in which we can tackle this issue to make cities more sustainable. Water sensitive urban design and planning is one of the sustainable approaches.

How CSTEP has contributed? OR How does it connect to CSTEPs objectives?

Since CSTEP is dedicated towards providing a technology based policy approach for achieving sustainable cities, this training was very relevant to CSTEP's objective. The training elaborated on various technologies that can be employed in case of urban water management.

How does the event/topic connect to your role or your team's role at CSTEP?

What interesting points were discussed or covered at the event?

Day 1&2 – Since the urban team is part of the GOK study – sustainable strategies for Karnataka cities – and various internal projects involving creating a water flow diagram, various water technologies and urban flood management techniques, the training was very useful. Water is the major sector we are addressing in these projects. The workshop was very useful in terms of deepening our knowledge in the water sector.

- Urban Water Challenges
- Introduction to WSUDP (Water Sensitive Urban Design and Planning), RWH (Rain water Harvesting) and SUDS (Sustainable Urban Drainage Systems)
- Planning of RWH and SUDS
- Tools and techniques for designing of RWH and SUDS systems
- Case examples for implementation of RWH and SUDS

Some of the major points

- Usually the entire plan of augmenting water is always related to supply; however, there is need for more demand side management in urban areas
- Unplanned development precedes planned development

- To achieve sustainable water management in urban areas a process of integrating water cycle management with the built environment, through planning and design is important. This approach is known as water sensitive urban design and planning.
- Integration of social, economic and technological aspects for water are crucial
- There is inequality in ways in which water reaches people
- People's basic bond with water has to be rebuilt
- People used to employ principles of catching water where it falls. We can still see historical structures such step wells, etc., that were used to collect rainwater and store water for times of scarcity. But these practices have diminished over the years.
- In case of urban areas – increased hard paved areas, increased runoff, decreased rate of recharge and high extraction of ground and surface water are critical problems that need to be looked into
- Solution for shortage of water, usually suggested, is to carry water from far distance of the city
- Locally available water is not used – rainwater, waste water, storm water.
- Thus, it is important to slow down the speed of water that is going out of the area
- RWH is an effective way of water augmentation
- Pushing for data is important
- We should change our behaviour patterns depending on variations in the resource availability
- One of the important questions to ask is, 'Is water a human right or an economic good – how do we price water?'
- Water is a human right if we return the water back into the environment in the same condition it was drawn earlier
- Storm water harvesting is also important – diverting storm water into recharge structure
- Preserving livelihood linked to water may help in better implementation of water management strategies. For examples, there were families who worked as masons making recharge structure. Involving them would provide employment and ensure a reasonable cost of construction. It will ease construction and provide awareness to the communities
- Demonstration through pilot projects to the communities will increase the implementation of RWH in urban areas.
- SUDS will help in slowing down the water flow by increasing the infiltration into the ground.

Day 3&4 –

- Urban wastewater challenges
- Introduction to and importance of DWATS (Decentralized Wastewater Treatment System) systems
- Planning of DWATS systems
- Tools and techniques to design DWATS systems

Day 5 –

- Field visit to Delhi Jal Board to see implementation of DWATS systems designed by CSE
- Field visit to Jammia Humdard University to see implementation of RWH and SUDS

Follow up action:

- Disseminate the knowledge to team members and interested colleagues
- Using technical knowledge in all the three projects mentioned earlier
- Building a city level model for RWH derived from assumptions and techniques provided in the training