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# C-PACT WATER BULLETIN

CPACT & WSP (Water Science Program) presents a monthly news bulletin of latest news from India and abroad on debates, concerns, and events related to water.

## CANALPY: The Canals of Alleppey Can Live

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## Canals are not Drains

Rapid urbanization and urban migration has resulted a sharp increase in water demand in Indian cities. With the ever-increasing water demand and usage, the volume of sewage also increases. It is worse in the urban areas due to the population density, limited waste management facilities as well as failure in the functioning of the few that do exist. The deteriorating health of the surface and ground water is a major concern in urban cities of Indian. As per the Central Pollution Control Board (CPCB) 'organic pollution as indicated by biochemical oxygen demand (BOD) continues to be the major quality issues. This is mainly due to discharge of untreated wastewater from the urban centers of the country' (CPCB, 2015a). The release of partially treated or untreated sewage (70% of the total pollution load) is one of the main reasons for deterioration of surface and ground water quality (CPCB, 2015a). Liquid waste management has thus become an important but much neglected issue in Indian cities. There is an urgent need to address the challenge of liquid waste management and better sanitation practices in every city in India. A city where this problem is painfully evident, is the city of Alleppy, the Venice of the East!

CANALPY: A Way Forward?

The canal revival programme in Alleppey, referred here as CANALPY, is an initiative taken by the citizens of Alleppy District in Kerala state. The intention is to reclaim and enliven the canals of their town. These canals hold and bind this city between the Arabian sea and the Vembanad Lake. With the tagline that translates to "Canals are not drains", this initiative includes a two-weeks long training and community mobilization programme conducted by IIT-Bombay along with Kerala Institute of Local Administration (KILA), every summer and winter, with the support of the Municipality of Alleppy. In this programme, water professionals from all sectors came together and work towards a common goal i.e. saving, and bringing life back to the dying canals. This program uses modern survey techniques along with smart tools to monitor the quality and assess the conditions of canals. Some of us, from the Water Science and Policy MSc class, were part of the Winter School in December 2018. This news item captures some CANALPY lessons we learnt.

The practice of waste disposal: In order to understand how the canal becomes a drain, the practice of waste disposal at the household level was captured via interviewing local people. Maps were prepared using GIS to enable visual description of the data collected using surveys. A detailed questionnaire was prepared and the data was collected using a mobile app called 'ODK COLLECT'. The questionnaire was structured using data from a series of pilot projects and services conducted over the previous year. The questionnaire was prepared in a way to understand the regular practice of waste disposal according to the socio-economic status in that particular area. The survey was conducted by four groups (23 members in each group) of students coming from different academic and professional backgrounds. This gave an opportunity of interdisciplinary approach towards understanding a problem. First, all the questionnaires were explained to the members of the house and then the data was collected using 'ODK Collect' over four days. Due to the heterogeneity of the community, the spatial distribution of the samples was checked and a sound distribution ensured during the survey. There was a discussion related to the practices of different waste management at the management site. Few important aspects of waste disposal practices were disclosed after the interactions with the main stakeholders. General observations were recorded during the surveys and interviews which enabled in a detailed socio-economic analysis to emerge. Inferences were made using both primary and secondary data, to come up with a robust understanding of the problems we face in addressing the solid as well as liquid waste management practices of the various economic sectors.

How We See Water: This study of the Alleppy canals, is a classic example of how the value of water has changed over the years. Earlier in the history of this port city, the free-flowing streams of the Vembanad Lake were tamed into canals to make way for the growing spice trade. Now, these canals are used as drains and ironically, these canals are hotspots for tourism. And due to the rapid growth of tourism, the water quality of these canals has deteriorated further. Dumping fecal matter from tourist boats into the lake and the canals has reduced costs and certainly added value to tourism. But this is bound to be a short term gain, as the city and its canals get choked with filth. Eutrophication is one of the major concerns, which again leads to the loss of biodiversity. Efforts by the Kerala Government and projects such as CANALPY are surely making an effort to bring back the beauty of these canals but the progress is slow.

Water Science and Policy: Paradigm Shifts

So, what do we learn from this Winter School, and the overall change in the value of water that Alleppy is attempting now? Can they make the transition from using their canals as drains, to seeing the real value of this precious biophysical system, the flow of water surrounding and constituting their city? Are there similar situations happening all across the country, which can be mitigated, using the lessons learnt from CANALPY? Is there any "one" right approach? One particular scheme that the government can design? Is there a role that the local community has, in safeguarding the canals and other waterbodies in their own cities?

Lessons from CANALPY tell us that there is no single right solution to this problem. If there was one, we would not be studying this course. Certainly, Government plays an important role in both causing the problem and in resolving it. Help in the form of access to information, financial support and institutional

collaboration will help solve this issue in a holistic way. Along with it, increasing awareness of the community, and its willingness to propose changes and adapt to these changes, is crucial. But this, as CANALPY shows, is much easier said than done. Policies have to be framed based on specific predetermined objectives as well as on ease of implementation by taking community participation into the picture. Solutions involving expensive technology may not always be an answer since it lacks community involvement. To conclude, this Winter School experience was informative and most importantly fun. We were exposed to the ground realities of the problems related to water and came back with some answers and a lot more questions to be explored. We enjoyed being in the most scenic and serene environment in Kerala!

## Latest News

**Just one-third of the world's long rivers run free**

More than 60,000 dams obstruct water flow and disrupt ecosystems. Just 37% of the world's 242 longest rivers remain free-flowing, a new study shows, and most of these are restricted to remote regions of the Arctic and the Amazon and Congo basins

Read more
https://cosmosmagazine.com/climate/just-one-third-of-the-world-s-long-rivers-run-free

**Govt. spends Rs. 800cr to quench drought-hit villagers' thirst**

Mumbai: In the last six months, the Maharashtra government has spent Rs 800 crore to make drinking water available to drought-affected villages, especially in the Marathwada and Vidarbha regions. Since November 2018, the government has spent Rs 672 crore on providing tankers and repairing borewells in villages.

Read more
https://timesofindia.indiatimes.com/city/mumbai/govt-spends-rs-800cr-to-quench-drought-hit-villagers-thirst/articleshow/69192542.cms

**Coping with droughts: Gender matters**

A study finds women are hit the hardest during droughts due to food and water scarcity, loss of income and a range of health problems resulting from it. Women in rural areas are already burdened with household work and their entry into agricultural labour has further added to their woes. In spite of toiling hard in the fields, women have no land rights nor decision-making powers and their health is often compromised.

Read more
https://www.indiawaterportal.org/articles/coping-droughts-gender-matters

**Namami Gange: Only 10 out of 100 sewage projects done**

Nearly Rs 28,000 crore has been sanctioned for the sewage management work under the mission but only Rs 6,700 crore spent till date. According to a report on the National Mission for Clean Ganga (NMCG) website, most of the projects completed under the current government's regime are the ones that were commissioned before the Ganga mission

Read more
https://www.indiawaterportal.org/articles/namami-gange-only-10-out-100-sewage-projects-done

**Poor rain forces farmers to depend on water tankers to meet irrigation needs**

Poor rains and water shortage in the region is forcing farmers to depend on commercial water tankers to meet irrigation needs. Several farmers are forced to spend over 1000 rupees to buy water to prevent drying of crops

**In South Delhi, basic issues of water supply, traffic congestion take centre-stage**

Water supply remains one of the biggest concerns for the residents of South Delhi

Read more
https://www.thehindu.com/news/cities/Coimbatore/poor-rain-forces-farmers-to-depend-on-water-tankers-to-meet-irrigation-needs/article27041351.ece

Read more
https://www.moneycontrol.com/news/india/in-south-delhi-basic-issues-of-water-supply-traffic-congestion-take-centre-stage-3934881.html

## Academic news: scholarships

**Policy and Social Modeling Postdoc**

A Post-Doctoral Research Associate position is available in Policy and Social Modeling at the University of Vermont as part of an NSF-funded research project on Lake Champlain Basin Resilience to Extreme Events.

For more information
http://www.isecoeco.org/policy-and-social-modeling-postdoc-2/

**Rotary Scholarships for water and Sanitation Professionals**
Through this partnership, a limited number of scholarships are awarded annually for graduate students at IHE Delft Institute for Water Education's campus in the Netherlands. These scholarships are designed to promote long-term productive relationships between Rotarians and highly skilled water and sanitation professionals in their communities.

For more information
https://www.un-ihe.org/rotary-scholarships-water-and-sanitation-professionals

## Conference/call for papers:

IWA-IDB Innovation Conference on Sustainable Use of Water: Cities, Industry and Agriculture
Country: Ecuador, City: Guayaquil
For more information visit: www.globalsustainablewater.org

11th IWA EE YWP Conference: Water for All, Water for Nature, Reliable Water Supply, Wastewater, Treatment and Reuse
Country: Czech Republic, City: Prague
For more information visit: iwa-ywp.eu

Amsterdam International Water Week Conference

Country: Netherland, City: Amsterdam
For more information visit: www.amsterdamiww.com

3rdWorld Water Summit – 2019**,** 21-23rd August, New Delhi, India
Deadline for abstract submission: June 15th, 2019
Full paper before June 30th, 2019
For more information visit:
http://worldwatersummit.in/index.html

**Proud graduates: M.Sc. in Water Science and Policy**
Tenzin Saldon and Cathrine J. from left to right

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