

March 2019

Progress report of Coca-Cola Department of Regional Water Studies

Jan 1- Mar 31, 2019



Highlights

This report gives information related to the activities of the Department carried out during Jan-Mar 2019. These activities include:

- Events/Seminars/Workshops
- Field Based Learning
- Projects
- Research Publications
- Faculty Update

1 Events/Seminars/Workshops

1.1 Organised by the department

1.1.1 School University Network Program at Gurukool Kids in Gurugram on 05 Feb 2019

The students along with Dr Fawzia Tarannum conducted a session on environmental values and sustainability for the underprivileged students of Gurukool Kids in Gurugram on 05 Feb 2019. There was enormous amount of enthusiasm in the students to learn about little actions that they could take to protect the environment. As part of this programme, we engage with school students based in Delhi NCR to generate awareness on different aspects of sustainability like Climate change; Energy efficiency; Waste management and Water management. This initiative is driven entirely by the students under the mentorship of the faculty members of TERI SAS. Multiple pedagogical tools like interactive sessions, discussion centric deliberations; documentaries and other experiential and visual methods of learning were used to interact with the students.



1.1.2 SWASH (Save Water Save Humanity) 2019 on 27 Mar 2019

The students of Coca-Cola Department of Regional Water Studies at the TERI School of Advanced Studies brought together policy makers, NGOs, Academicians and Youth to discuss and deliberate on the issues of inequity in water access at the annual event SWASH -Save Water and Save Humanity on 27 March 2019 at TERI School of Advanced Studies, Vasant Kunj,

New Delhi. The theme for the event was “Leaving no one behind – Human Rights Based Approach to Water Management”. The objective of the event was to create awareness on inequity in water distribution and motivate the participants to become catalysts of promoting human rights-based approach to water management within their sphere of influence and beyond. The activities included panel discussion, Nukkad Natak, Photography Competition, Systems Thinking Group Activity, Quiz among others. Over 300+ students joined the event.



1.2 Organised by other organizations

1.2.1 Invited Speaker at Symbiosis International, Pune in January 2019

Prof Arun Kansal was invited as a Panel speaker on Energy, Water, and Sanitation at National Conference on Transforming Rural India 2030: Strategies for Sustainable Development Goals in January 2019.

1.2.2 Invited Speaker at Telangana Jagruthi International Youth Leadership Conference, 19-20 Jan 2019

The international conference was held at Hyderabad on 19 and 20 January, 2019. The focus was on Youth and the key theme was Gandhian path to sustainability and innovation. TERI School of Advanced Studies was a workshop partner in this conference. Ms. Ranjana Ray Chaudhuri from the department was one of the resource persons at the Conference. We had a stall in the exhibition centre and conducted a breakaway session on climate and water. During both the days, conference attendees visited our stall and enquired about courses run by the university. This session was attended by students from various backgrounds including international students from Afghanistan and central Asia. We had an excellent interaction with youth during this session which highlighted the importance of youth taking leadership in the field of water research, water efficiency and climate change.



1.2.3 Invited Panelist at workshop on Emerging Role of Women in Energy Sector – End User to Stakeholder, 24 Jan 2019

Dr. Fawzia Tarannum was one of the panelist in the a half-day workshop on 'Women inEnergy: Breaking Stereotypes and Inspiring Change' organised by TERI on December 20, 2018. The aim of the workshop was to promote exchange of ideas on the theme of gender mainstreaming in the energysector and present the Gender Strategy Framework, developed by TERI, based on case studies conducted in India and Nepal.



1.2.4 Invited lecture at ICIMOD on Strengthening Water Resources Management in Afghanistan (SWaRMA) from 27 Jan – 08 Feb 2019

Dr Anjal Prakash was invited to take a module – Water Diplomacy and Transboundary Cooperation at ICIMOD 's initiative-Strengthening Water Resources Management in Afghanistan (SWaRMA). The module was part of the Training Workshop on Multi-scale Integrated River Basin Management from the HKH Perspective during January 27 Feb 2019.



1.2.5 Inaugural Lecture in NCERT Stakeholder Meeting on "Contemporary Environmental issues" by Dr Fawzia Tarannum on 21 Feb 2019

Dr Fawzia Tarannum was invited to deliver the inaugural lecture on "Contemporary Environmental issues" during the Meeting of Stakeholders from different States and UTs on Environmental Education which was held on February 21- 22,2019. The meeting was organized by the Department of Education in Science and Mathematics, NCERT.



1.2.6 Invited Guest Speaker at 'EcoThon- Solutions for Sustainability' 2019,

Dr. Fawzia Tarannum was invited as a guest speaker to the event, 'EcoThon- Solutions for Sustainability' 2019, organized by EcoSpurs, focusing on multiple environmental issues like Solid, Plastic and E-Waste Management, Water Pollution, Climate Change and Clean Energy, which was organized on 1-2 March 2019. The core objective behind conducting the conference & exhibition was to promote the earth-friendly products and technologies, encourage and inspire the participants to lead and adopt sustainable life style towards improving people's health and the planet in a sustainable way.



1.2.7 Participated in Women Leadership Programme by Deakin university, 12 Mar 2019

Dr Fawzia Tarannum participated in Women in Leadership Seminar on 12 March 2019. The seminar was organised by Deakin University as part of its programme to celebrate 25 years of its engagement with India. The University hosted a range of events in collaboration with Australian Trade and Investment Commission to explore future engagements in areas of strategic importance to India and Australia.



1.2.8 Invited talk at Institute of Home Economics, Delhi University on Water, climate change and sustainability on 12 Mar 2019

Prof Arun Kansal was invited by the Institute of Home Economics, Delhi University to deliver a talk on Water, Climate Change and Sustainability on 12 Mar 2019.

1.2.9 Participation in the first World Water Day Talk on 22 Mar 2019 organised by NWM

The National Water Mission (NWM) initiated a seminar series '**WATER TALK**' to promote dialogue and information sharing among participants on variety of water related topics. The first edition of '**WATER TALK**' was organised on 22 March 2019 to celebrate the **World Water Day**. The aim of '**WATER TALK**' was to stimulate awareness, build capacities of stakeholders and to encourage people to become active participants to sustain life by saving water on earth. Dr Sherly M A and Dr Fawzia Tarannum from the department attended the talk.



2 Field Based Learning

2.1.1 Visit to Indian Agricultural Research Institute on 20 Feb 2019

The students of the department visited the Indian Agricultural Research Institute (IARI), Pusa on the 20th of February 2019 along with Ms. Ranjana Ray Chaudhuri. They saw 4 different areas of IARI, namely 'The Centre for Protected Irrigation', The Waste Water Treatment Plant, The Water Technology Centre' (WTC) and 'Integrated Farming System' (IFS). This visit was very insightful into the modern irrigation practices and new technologies being implemented by the scientists, for the benefit of our nation's farmers.



2.1.2 Eco-trail in Sanjay Van, Vasant Kunj by the Eco-club, TERI SAS on 23 Feb 2019

The Eco-club of TERI School of Advanced Studies organised an eco-trail on 23rd February 2019. Ms. Ranjana Chaudhuri, faculty at TERI SAS was invited to give a perspective on urban wetlands to the participants. She spoke about the hydro-geography and history of Sanjay Van and wetlands and their interconnections in ecosystem. About ten to fifteen different birds'



species like, purple sunbird, tailor bird, myna, brown headed barbet, peacock, pond heron, green heron, babblers, etc. were spotted throughout the trail. The discussion ended with talk on current challenges that the wetlands like Sanjay Van.

2.1.3 Academic Field trip to Sikkim from 03 – 09 March 2019

The students of the Coca-Cola Department of Regional Water Studies, TERI School of Advanced Studies visited Sikkim, for a period of 7 days; as a part of their academic requirement. Sikkim has numerous snow-fed streams that combine into

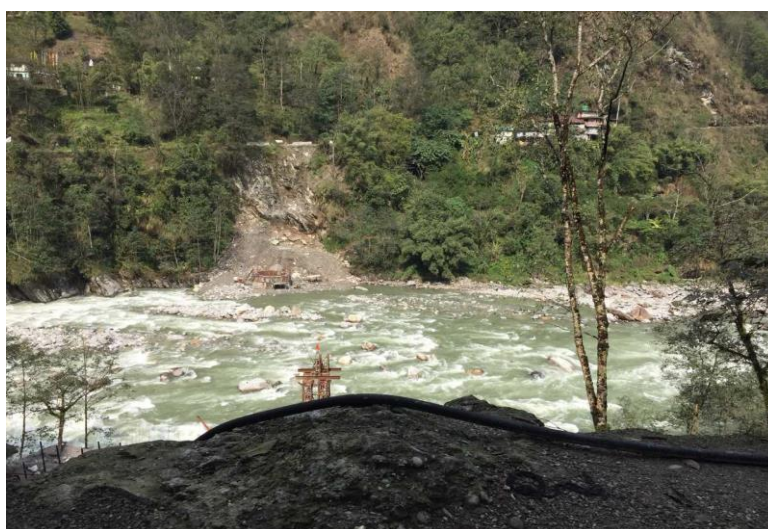


the major river Teesta. Throughout the journey students were spellbound by the majestic river and scenic beauty of the state.

The students at first visited Vidhan Sabha in Gangtok, where they interacted with representatives of the Sikkim Government. Here, they were informed about 'Dhara Vikas', the spring rejuvenation program of the Sikkim Government. Then, the students visited the Mountain Institute, where the students were made to understand the importance of a spring in the mountainous regions and the need for a spring shed management.



The next day, students visited a remote part in Northern Sikkim, Mangan and Dzongdu; where they were introduced to local culture, traditions and understood the importance and value of spring water in the lives of the locals.



D'zongu province

The students also went to Jamthang, a province in southern Sikkim, where they saw a spring shed management project under 'Dhara Vikas'. They were explained the hydro-geology and 8 steps involved in the spring shed management. They were shown various recharge trenches, how they were located and constructed.

Teesta River



Recharge trench

On the last day the students got an opportunity to see the frozen glacial lake – Tsongmo lake, the lake is at elevation of 3,753m. The lake is of great cultural importance for the local Sikkimese people.

2.1.4 Visit to Yamuna Biodiversity Park on 25 March 2019

The students of MTech Water Resources Engineering and Management and M.Sc. Water Science and Governance along with Dr Fawzia Tarannum visited the Yamuna Biodiversity Park on 25th March 2019. The park is a restored site with three functionally active wetlands. This exposure visit was organised to introduce various aspects of wetlands ecosystem and its biodiversity and restoration and management process of the park to the students. Dr Saxena, a scientist, shared the journey of the establishment of the park starting from the year 2002. The project is a collaboration between the Delhi Development Authority (landowner and funding agency) and Delhi University (implementation agency). The park is divided into Phase I and Phase II. Phase I is located on an inactive flood plain and has two wetlands while Phase II is located on an active flood plain and has a larger wetland spread of 100 acres.

The land was completely barren at the beginning of the project. The major challenge was the highly alkaline and saline soil which was prohibiting the plants to grow. To tackle this issue, selective plantation of grasses and plants which have high salt absorbing capacity was done. Slowly other species of plants, trees, fishes etc; which are native to Yamuna river basin were introduced to create a functional ecosystem. She also explained in detail about the various ecological aspects of wetlands through a power point presentation. She highlighted the role of flood plains and wetlands in a river basin. She also explained various indicators to identify a potential wetland site for its rehabilitation.

Students were also taken on a walk to the two successfully restored wetlands in Phase I – i) Deep Wetland which is 15 to 18 feet deep, built in an area of 7 acres and; ii) Narrow Shallow Wetland which has a depth of 5 to 7 feet and stretches to about 1.5 Kms. The assemblage of various plant species was clearly visible at the sites. Students were also introduced to the native grasses, plants, shrubs, trees planted in the park. Students could also witness how the native and migratory birds and fishes are thriving in the park.



3 Projects

3.1 Consultancy assignment by Karvy Ltd on Swachh Survekshan 2019 survey.

The assignment included- review of Innovations and Best Practices documents submitted by ULBs and citizen led initiatives; Score them on criteria such as- implementation, novelty, scalability, financial sustainability and impact; Shortlist best initiatives nationally, zone-wise, state-wise, and category-wise and submit an assessment report of the survey. The assignment was carried out by prof Arun Kansal.

3.2 Funded project "Transboundary water governance and role of institution to enhance the capacities of Marginalized communities in Mahakali River basin". funded by HUC and Tribhuvan University

- Prof Arun Kansal is the Principal Investigator from TERI SAS for this project. In this project we will assess role of institutions in water governance (transboundary) and enhancement of capacities of marginalized communities in the study area. Nepal is the lead partner of the project.
- Dr Anjal Prakash was selected as team leader for the Preparation of Chapter on Vulnerability and Adaptation Assessment for Kingdom of Bhutan's Third National Communication by the Climate Change Division of National Environment Commission, Bhutan
- Dr Anjal Prakash was selected as team member for the mid-term evaluation of Oxfam's programme – Transboundary Rivers of South Asia (TROSA). He would be handling the Nepal part and would cover river Ganges as part of the evaluation team.

4 Research Publications

- Goodrich, C. G., Prakash, A., & Udas, P. B. (2019). Gendered Vulnerability and Adaptation in Hindu-Kush Himalayas: Research insights. Environmental Development. DOI - <https://doi.org/10.1016/j.envdev.2019.01.001>
- Acharya, A., & Prakash, A. (2019). When the river talks to its people: Local knowledge-based flood forecasting in Gandak River basin, India. Environmental Development.
- Prakash, A., Cundill, G., Scodanibbio, L., Vincent, K., Nathe, N., Morchain, D., DeMaria-Kinney, J., Soumelong Ehode, L., Sukla, D., Mishra, A., and Piryani, A. 2019. Climate Change Adaptation Research for Impact. CARIIA Working Paper no. 22. International Development Research Centre, Ottawa, Canada and UK Aid, London, United Kingdom.
- Resurrección, B. P., Goodrich, C. G., Song, Y., Bastola, A., Prakash, A., Joshi, D., Liebrand, J & Shah, S. A. (2019). In the Shadows of the Himalayan Mountains: Persistent Gender and Social Exclusion in Development. In The Hindu Kush Himalaya Assessment (pp. 491-516). Springer, Cham.
- Dilshad, Tanzina, Dwijen Mallick, Pranita B. Udas, Chanda G. Goodrich, Anjal Prakash, Ganesh Gorti, Suruchi Bhadwal et al (2019). "Growing social vulnerability in the river basins: Evidence from the Hindu Kush Himalaya (HKH) Region." Environmental Development.

5 Faculty Update

5.1 Appointment

Dr Sherly M A joined as an Assistant Professor at the TERI School of Advanced Studies on 11 March 2019 in the Coca-Cola Department of Regional Water Studies. Dr Sherly has done her Ph.D. on “Urban flood risk mapping of a coastal megacity – An application to Mumbai India” from IITB – Monash Research Academy in the year 2017. Before joining TERI School of Advanced Studies, Dr Sherly was doing her Post-doctoral research at the International Water Management Institute in Sri Lanka. Her areas of interest include: Urban flood risk mapping, flood modelling, disaster vulnerability assessment and hydrologic & hydraulic modelling.

5.2 Resignation

Dr Rinki Deo resigned from the department on 22 January 2019.
