

A Concept Note on Urban Climate Network Workshop

August 2-3, 2019

Venue : ICWaR, IISc Bangalore

With the urban population expected to grow upto about 50% of the population in the next few decades, the country must be prepared to face the accompanying challenges due to increase in greenhouse gases contributing to climate change, air and water pollution, urban transportation, infrastructure, water supply and sanitation, urban floods and droughts and implications on energy and other resources. Densely populated cities in the country are already vulnerable to many of these typically urban issues. Visible impacts of increasingly warmer climates in cities due to urban heat island effect and human activities are already evidenced in the health, water and energy sectors.

An in-depth scientific understanding of all interconnected issues related to urban climate is the urgent need in the country today. To address this need, a national climate network program is set up by the DST, under the urban climate initiative.

As a first action towards setting up the network program, a workshop was conducted at IIT Bhubaneswar, in September 2017. A comprehensive approach was undertaken in organising the workshop, inviting national and international experts on various aspects of climate and climate change, local and regional stake holders including flood hazard disaster mitigation urban planning out of that initiative involving more than hundred people that was covered by the media including The Economist. A resounding call for integrated proposal was then made that would be responding to this scientific and societal need and recognising the need for creating the science and work force. The DST network program invited proposals in wake of this need. These proposals were reviewed by experts for science and program requirements. They were presented to the science advisory team and ultimately projects have been approved focusing on the city of Dehradun through IIT Roorkee, the city of Bhubaneswar and Hyderabad through IIT Bhubaneswar and IIT Hyderabad, and the city of Bangalore through IISc Bangalore. The network program has partners through IIT Bombay and IIT BHU as well as various state and national agencies.

The broad intent of the projects is to take science of current and future climate change and integrate that with current and future landuse, urban expansion and human intervention and finally develop future climate projections that are integrated with landuse change for specific extreme events such as urban heat wave, urban pollution and heavy rain flooding.

Building on this framework, it is proposed that a kick off workshop is conducted to help integrate these different projects, discuss issues such as how to synthesise research with aspects such as evaluation, mentoring, data sharing, stakeholders interaction, and data archival best practices. This will ensure development of a community and a network rather than individualised speciality projects. Additionally, there is a need for non-IIT and premier institutes to have an effective partnership with stakeholders and research community. A peer

to peer mentoring and stakeholders integration for a wider footprint of the research impact is hence desired. Within this perspective, this two-day national workshop on urban climate and future resilience of cities is proposed to be held at IISc Bangalore.

The workshop will have following objectives.

1. In person meeting for network program associated PIs, co-investigators and stakeholders.
2. Development of the common network pathway and vision
3. Sharing of best practices on research, stakeholders participation, data sharing, and mentoring across the group.
4. Identification of additional partners and needs for effective network outcomes.
5. Coordination and evaluation

The workshop will provide a platform to discuss all aspects of urban climate including air pollution, urban heat island effect, extreme weather, urban meteorology, urban hydrology, infrastructure and policy, with a strong scientific underpinning. It is expected that the workshop would lead to collaborative research addressing exciting science questions.