



World Sustainable Development Summit (WSDS) 2018

Thematic Track: Cities and heat stress - a call for action

Date: February 15, 2018

Time: 11:00 AM – 01:00 PM

Venue: Amaltas Hall, India Habitat Centre, New Delhi, India

Summary

This two hour discussion on the side-lines of the World Sustainable Development Summit (15th to 17th February, 2018), being jointly organised by The Energy and Resources Institute (TERI) and Wageningen University and Research (WUR), aims to understand the need for, and the current action around heat stress in Indian cities. The event is Jointly supported under “Climate adaptation and Services Community (CASCO) project” funded by European Union and Himalayan Adaptation, Water and Resilience (HI-AWARE) research under CARIIA programme of IDRC. The event would like to play host to an informed panel comprising of urban researchers, sector experts and mayors from cities (tentatively Ahmedabad, Delhi and Bhubaneshwar), to discuss the current lay of land around measures adopted for combating heat stress and related losses (social, economic and other losses). The event aims to add to the raising need for making cities resilient, and mainstream action against heat stress into city development plans.

Background Note

Urbanization and industrialization have major consequences on the environment. As cities sprawl to accommodate the growing population and economic activity, they result in replacing vegetation and natural surfaces and play a role in increasing the surface temperature in urbanized and industrialized areas, which have implications on atmospheric phenomenon. Localised temperature increase is one of the environmental consequences of rapid urbanization and industrialization. Urbanization and industrialization transform natural landscapes to anthropogenic features, thus changing the physical surface, causing changes in land use/land cover. The physical changes in land surface due to urban development affect surface temperature in these areas, so the excess warmth of the urban atmosphere as compared to its surroundings causes development of Urban Heat Islands (UHIs). Some areas experience higher temperature due to higher solar radiation absorption, mainly by impervious urban surfaces, such as asphalt and concrete, which have thermal capacity and conductivity that decrease the available surface moisture and leads to development of urban microclimates.



In addition to that, climate change leads to higher temperatures and longer, more severe and more frequent heat waves. Urban areas already suffering from the heat island effect will bear the brunt of these harsher heat events. As an example, over the last 20 years, extreme summer heat has become more frequent across the Deccan Plateau and in the entire Indo-Gangetic planes. The interaction of rising temperatures, more heat waves, and the heat island effect will be increasingly harmful to people's health and the air and water quality in our communities. Therefore, it is important to develop mitigation strategies to reduce the causes of UHI and adaptation strategies to cope with the heat stress. However, the execution of these strategies requires investment, commitment and coordination from each sector, community group, and local and state government agencies. The key challenges to implement these strategies are primarily related to proper execution of industrial and institutional framework as well as inadequate drive, capacity and awareness among the institutions and in affected population.

In the view of the discussion presented above, the event would like to play host to an informed panel comprising of urban researchers, sector experts and mayors from cities, to discuss the current lay of land around measures adopted for combating heat stress and related losses (social, economic and other losses). The event aims to add to the raising need for making cities resilient, and mainstream action against heat stress into city development plans.

