Side Event on Scaling Heat Action Plans to Leading States in India

One of the side event during TROPMET 2016 was a meeting on 'Scaling Heat Action Plans to Leading States in India' on 17th December in partnership of IMS, IMD, Indian Institute of Public Health (IIPH) Gandhinagar and Natural Resources Defence Council (NRDC). . International experts from NRDC and key leadership from India's National Disaster Management Authority (NDMA), State Disaster Management Authorities (SDMAs), health departments and meteorological offices from Gujarat, Odisha, Maharashtra and Telangana attended the discussion. Notable among participants were Shri Kamal Kishore, Member NDMA, Dr Muzzafar Ahmed, Ex-Member NDMA, and Dr.Knowlton Kim from NRDC, USA.

Heat Action Plans, based on robust scientific research, build public awareness of the risks of extreme heat, train medical and community workers to prevent and respond to heat-related illnesses, and coordinate an interagency emergency response effort when heat waves hit. So far, these strategies were carried out at the city level across India. For scaling to the state level, it is important to recognize that while some elements of the Heat Action Plan, such as community awareness messaging to keep cool, can be

easily adapted and scaled given the similarities across regions, other elements such as temperature thresholds for the early warning system need to be locally developed for priority regions within each state. The TROPMET discussion, therefore, focussed on each element of the Heat Action Plan and how it would be implemented in state governments of Gujarat, Maharashtra, Telengana and Odisha.

Key takeaways for state heat action plans:

Designating a State Nodal Officer: Appointing a head/nodal officer at the state and district level, and deputing an agency to oversee the Heat Action Plan helps prevent communication bottlenecks during extreme heat events. The Nodal Officer plays the very important role of monitoring daily temperature forecasts and taking the decision on calling a heat alert based on local thresholds. Designating a Nodal Officer also creates a method to receive feedback, complaints, and questions from the states and helps ensure the Plan's efficacy.

- **Vulnerability Assessment and Establishing Heat-Health Threshold Temperatures**: It is important to identify vulnerable areas and populations of a state in order to establish priorities and minimum thresholds for heat alerts and activities. The first method to determine thresholds is the percentile approach developed by the World Health Organization and World Meteorological Organization (WMO/WHO), that uses basic meteorological information to determine thresholds at the district level in states. The second method uses existing historical temperature and mortality data to develop a heat-health threshold based on specific health responses (i.e. mortality).

- **Developing the Early Warning System and the Interagency Emergency Response Plan**: Developing the colour-coded system to issue heat alerts is at the core of the Heat Action Plan. The state nodal agencies would then work with the

IMD for getting a five-day forecast to issue heat alerts based on that colour-coded system which links threshold temperatures to various activities based on the severity of the alert. It is important therefore to chart out the interagency flow of information for the early warning to be effective.

- **Building Statewide Capacity**: It is important for key officials and agencies to recognize their roles in State Heat Action Plan. Table-top exercises, simulations, and drills for heat season and heat alert events can help build capacity in the state and identify and resolve communications gaps and weaknesses between participating departments, partners and the public.

- **Implementation and Monitoring**: Government departments (and partners) are responsible for implementing many components of a heat action plan. It is also important for the public to be aware of ways to respond to extreme heat. Key messages developed and widely disseminated through information, education and communication (IEC) materials warn the public and raise awareness in advance of heat season (e.g., through pamphlets, ads, pictures and videos). Customized local language messages for identified vulnerable groups (including recent mothers, parents, educators, the elderly, children, illiterate persons, outdoor workers, immigrants, slum dwellers) ensure the key “Dos-and-Don’ts” during a heat wave and can be disseminate through the media (magazines, newspapers, websites, radio, television, and/or social media such as Facebook, Twitter, and WhatsApp).

With climate change fuelling more intense and frequent heat waves in India, a new scale of coordinated action is essential to protect communities, especially their most vulnerable members. As India gears up for another searing summer in 2017, state-level Heat Action Plans provide an opportunity for cities and states to take leadership in building heat-resilience in India and work with the National Disaster Management Authority and the Indian Meteorological Department to protect millions who may suffer from the dangerous health effects of extreme heat.