Workshop on the Development of Climate Information Systems for Heat Health Early Warning: Assessing Knowledge, Needs and the Path Forward

July 28-30, 2015
Chicago, Illinois

TERMS OF REFERENCE

This work shop brings together the Deutscher Wetterdienst (DWD), National Oceanic and Atmospheric Administration (NOAA), the Centers for Disease Control and Prevention (CDC), the World Meteorological Organization (WMO), the Global Framework on Climate Services (GFCS), and other partners to explore lessons learned and share best practices in order to develop climate information systems for heat health early warning. Scientists from climate, weather, public health and decision making communities will assess the state of knowledge with regard to:

1) characterizing prediction parameters and effectiveness of existing heat health early warning systems in context of application to weather and climate (sub-seasonal to decadal) time scales;
2) understanding heat exposure outcomes across temporal and spatial scales; and
3) identifying useful methodologies for producing, issuing and communicating warnings and alerts and their potential for use on climate time scales.

This workshop will also host a 'Town Hall on Climate, Weather, Heat and Your Health,' focused on communicating with the Chicago and broader Great Lakes Community.

Background:

Heat wave early warning systems can be effective in reducing illnesses and deaths associated with heatwaves, and many nations have these systems in place to protect public health. Following the 2003 heat wave in Europe, the DWD developed a heat health early warning system which is triggered when the 'perceived temperature' exceeds a certain limit. This system has been highly successful in Germany, and there are many lessons learned. Similarly in the U.S., NOAA's National Weather Service (NWS) issues excessive heat alerts, and provides heat outlooks to inform preparedness. Recent assessments, such as the Intergovernmental Panel on Climate Change, and the US National Climate Assessment, have concluded that extreme heat events will be more frequent and more intense in the future. In the context of developing the capacity to address climate time scales, it is critical to assess the current state of knowledge of existing systems, identify climate scale decision context, and articulate research needs. This assessment, and the partnerships built or enhanced, will provide foundational input to the development and enhancement of climate information systems for heat health early warning.

Workshop Goals:

- Exchange information, best practices and lessons learned on developing heat health forecasts relative to health outcome and related planning decisions on weather and climate time scales, as well as systems for delivering heat health early warning.
- Engage key public health scientists and decision makers to refine needs for developing and delivering climate information systems for heat health early warning.
- Characterize prediction parameters based on geography and human exposure risk, leading to eventual harmonization of methods. Discuss advantages and disadvantages of systems based on simple thermal indices and systems based on complex indices.

- Identify and prioritize needs for observations, monitoring, data, forecast products and research to improve heat health early warning systems.

Outcomes:

- Knowledge assessment document describing gaps in our understanding of heat exposure and health outcomes across different timescales and geographies; observations, monitoring, data, forecast product needs, and research gaps.
- Synthesis of existing systems and their prediction parameters, i.e., What do they forecast, and does it work for the desired health outcomes measured?
- Identification of specific partnerships, dialogues or processes needed to improve existing heat health early warning systems and develop heat related climate services for the public health sector.