

WHO and WMO Issue Guidance on Heat Health Warning Systems

Geneva 1 July 2015 -- The World Health Organization (WHO) and The World Meteorological Organization (WMO) have issued new joint guidance on Heat–Health Warning Systems to address the health risks posed by heatwaves, which are becoming more frequent and more intense as a result of climate change.

“Heatwaves are a dangerous natural hazard, and one that requires increased attention,” said Maxx Dilley, Director of WMO’s Climate Prediction and Adaptation Branch, and Maria Neira, Director of WHO’s Department of Public Health, Environment and Social Determinants of Health. “They lack the spectacular and sudden violence of other hazards, such as tropical cyclones or flash floods but the consequences can be severe.”

Over the past 50 years, hot days, hot nights and heatwaves have become more frequent. The length, frequency and intensity of heatwaves will likely increase over most land areas during this century, according to the Intergovernmental Panel on Climate Change. In addition to the health impact, heatwaves also place an increased strain on infrastructure such as power, water and transport.

In recent weeks alone, both India and Pakistan have been hit by deadly heatwaves, killing hundreds of people. The European heatwaves in the northern hemisphere summer of 2003 was responsible for the deaths of tens of thousands of people, as were the Russian heatwaves, forest fires and associated air pollution in 2010.

WHO and WMO have recently strengthened their collaboration to respond to the health risks of extreme weather events, and the growing threat presented by climate change. Building on previous joint assessments, the two Organizations have established a joint office to improve the use of climate information to protect health, for example ensuring that heatwave forecasts issued by meteorological agencies are connected to public health responses, and that long-term health planning takes account of climate risks.

These efforts are becoming increasingly important.

In a report issued on 22 June, the 2015 Lancet Commission on Health and Climate Change said that future projections of climate change represent an unacceptably high and potentially catastrophic risk to human health. It highlighted predictions that events with the magnitude of the Russian heatwave of 2010 could become much more common and, under high-end climate change scenarios, could become almost the summer norm for many regions. It warned that the growing proportion of people over the age of 65 and migration to cities would exacerbate the problem.

Action reduces risks

The good news is that heat-related health risks can be reduced through systematic development of heatwave early warning systems. These provide meteorological and/or

climate-prediction-based information on the likelihood of forthcoming hot weather that may have an effect on health. This information is used to alert decision-makers, health services and the general public to trigger timely action to reduce the effects of hot-weather extremes on health.

A number of countries around the world have successfully developed these early warning systems, which necessitates close coordination between meteorological and health services. The WMO-WHO publication *Heatwaves and Health: Guidance on Warning-System Development* is intended to promote more widespread development and implementation of these warning systems.

It is hoped that the Guidance will act as a catalyst for bringing together key players from climate, health, emergency-response agencies and decision-makers, as well as the general public, for initiating action concerning the overall management of heat as a hazard.

“Growing concerns over climate change have brought to the fore three important aspects: adaptation, disaster-risk reduction and the need for climate information and services to support these;” said Mr Dilley and Dr Neira in the joint foreword.

“Heat-Health Warning Systems bring together these three facets and exemplify an effective demonstration of climate-risk management in practice. We expect this publication to enable National Meteorological and Hydrological Services and health-sector agencies to provide effective climate services and save lives in vulnerable communities around the world,” they said.

The publication is part of the joint action by WMO and WHO on climate and health. The two organizations last year set up a joint office under the auspices of the Global Framework for Climate Services (GFCS). This aims to improve the provision and use of climate services such as heat-health warnings underpinned by sub-seasonal to seasonal climate outlooks.

Consolidated Experience

The Guidance considers who is at risk from heat, outlines approaches to assessing heat stress, surveys heat-intervention strategies which are a necessary part of any truly integrated Heat Health Warning System and presents the underpinning science and methodologies.

Since the implementation of the first Heat-Health Warning System in the city of Philadelphia, USA, in 1995, a large amount of international experience has been accumulated. The WMO-WHO publication consolidates this experience into a single volume.

It will inform discussions at a Workshop on the Development of Climate Information Systems for Heat Health Early Warning, to be held July 28-30 in Chicago. This workshop brings together the Deutscher Wetterdienst (DWD), which pioneered a heat health early warning system following the 2003 heatwave in Europe, the U.S. National Oceanic and Atmospheric Administration (NOAA), the Centers for Disease Control and Prevention (CDC), WMO, the GFCS and other partners to explore lessons learned and best practices in order to develop climate information systems for heat health early warning.

Heatwaves and Health: Guidance on Warning System Development was developed with the advice and leadership of scientists from around the world in the fields of weather, climate and health and related disciplines under the auspices of WMO and WHO. The experts involved, under coordination by WMO Commission for Climatology, brought the diversity of research, academic, intergovernmental and operational experience to this work.
