



WORKSTREAM 9: HEALTH

Lead Organizations:



➤➤➤ A LOOK BACK AT THE PAST 10 YEARS

The outcomes of drought can lead to public health threats. Over the last century, droughts caused more deaths internationally than any other climate- or weather-related extreme event (floods, hurricanes, etc.). Most of these deaths are the result of famine and malnutrition due to destabilization of food and water security. However, the connections of drought to human health are much broader than just these two outcomes. Because of the slower evolving nature of drought compared to other natural disasters, drought impacts on human health typically lack an initial surge in mortality and morbidity. It is well known that the lingering or long-term effects of a disaster often cause greater health outcomes than the initial event. Because of the potential large spatial and temporal extent of drought, it can act as a threat multiplier that can increase risks to human health, which can result in delayed or indirect health outcomes. These outcomes can manifest over days, weeks, or years. Changes in the environment from droughts can disrupt the various exposure pathways that lead to negative impacts on health. For example, droughts can intensify heat waves, reduce air quality, increase risk of wildfires, decrease water quality and quantity, increase risk of infectious disease, and exacerbate chronic health issues. Better understanding of these linkages between drought and human health can help public health agencies prepare for drought-associated health impacts, which, in turn, can reduce health risks and save lives.

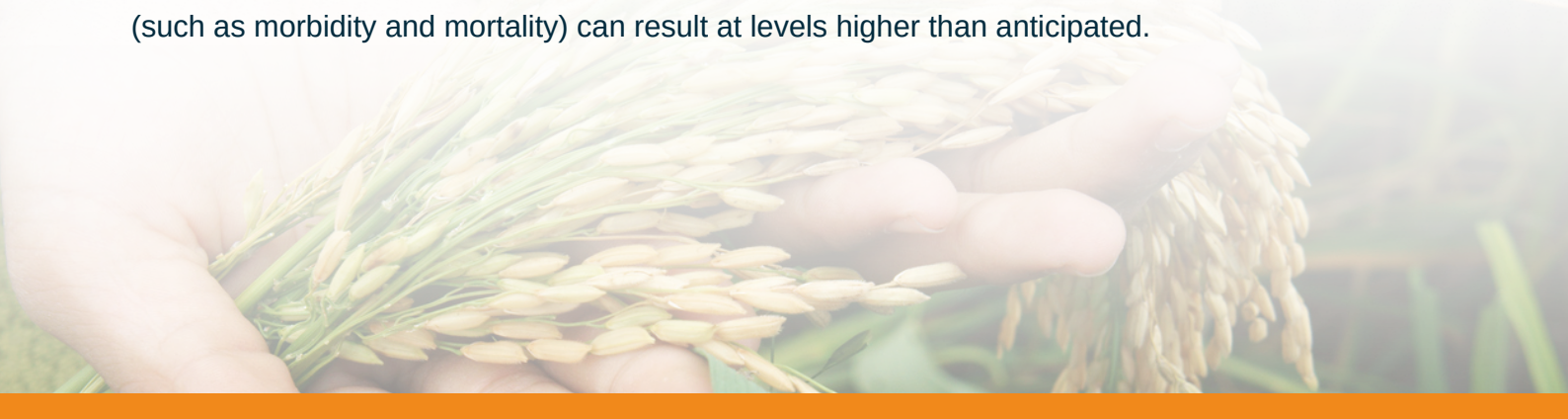
Over the past 40 years, drought has impacted more people worldwide than any other natural disaster and has caused 60% of all reported extreme weather deaths, despite representing only 15% of natural disasters. As a society, there is a tendency to downplay the consequences of drought as these events rarely result in the highly visible structural damage typically associated with other natural disasters. However, there are several established pathways in scientific literature for drought events to increase in mortality and produce negative health outcomes. Drought is perhaps best known for impacts on mental and behavioral health. Numerous studies have identified drought events to be associated with increased stress, depression, and suicide. There is a known association with increased heat-related mortality with drought events. Persistent drought will even impact infectious disease, including modifying tick and mosquito abundance, *Vibrio* prevalence in estuarine environments, incidence of fungal pathogens, and even an association with HIV. Studies have also found an increase in respiratory and cardiovascular mortality during drought events.

In addition, the health outcomes from drought do not occur equally among all populations. Although all populations face risks associated with droughts, studies have shown that some groups of people are more impacted during drought events than others. These outcomes vary by race, gender, age, occupation, and socioeconomic status. There are a variety of reasons that some populations are more at risk than others, including poverty, lack of access to healthcare, discrimination, preexisting health conditions, and environment.

➤➤➤ MAIN CHALLENGES

Drought can pose a significant threat to human health. However, the impacts of drought on health are often overlooked or marginalized. Due to these issues, there is a lack of robust research establishing the links between drought and human health. There is also limited messaging and information on responding to the health threats associated with drought.

Several challenges exist in dealing with the health impacts associated with drought. Public health departments and health ministries are often not well versed on the health issues associated with drought events. Because of the temporal and spatial nature of drought, the health outcomes from drought can be difficult to identify using standard health surveillance methods. Lack of robust information on health impacts can hinder public health actions and response. In turn, fewer public health materials decrease the ability to message to at-risk populations before, during, and after a drought. Without public health actions to reduce health impacts, at-risk populations may not understand threats and lack the ability to reduce impacts. Without these steps, health risks from drought are not mitigated, at-risk populations are more exposed, and negative health outcomes (such as morbidity and mortality) can result at levels higher than anticipated.



»»» NEXT STEPS

Reducing negative health outcomes from any threat typically requires a multifaceted approach. Rarely is there a single action that can instantaneously improve health. Thus, addressing health impacts associated with drought will require multiple approaches to reduce the risks.

There are opportunities to improve education and engagement with public health officials and health ministers on the health threats associated with drought. This will require more tools and resources illustrating the linkages between drought and health, and how to best communicate these risks to the public. To develop these tools, more regional information is needed on health outcomes associated with exposure to drought and the resulting changes in the environment.

Health should be included in drought planning and preparedness efforts. To help with inclusiveness in planning and preparedness efforts, leaders in the drought community need to be educated on the potential health threats associated with drought. In addition, incorporating public health departments and health ministries into planning and preparedness activities will increase opportunities for integration.

The Drought Resilience +10 will provide a platform to discuss opportunities to better integrate health in drought planning and preparedness efforts. Exchanging ideas and information on the current state of knowledge on drought and health work will provide a platform to determine next steps to reduce health risks associated with drought. Building a community of experts that are working on public health challenges associated with drought can help with disseminating best practices and case studies. The outcomes from this work could improve health and reduce negative health outcomes.

