

Panel highlights climate change science that can improve global health

By Paula Whitacre

Efforts around the world to reduce the impacts of climate change on infectious and noncommunicable diseases, worldwide, were explored in a plenary panel convened by NIEHS Senior Advisor for Public Health John Balbus, M.D., at a conference of the [Consortium of Universities for Global Health \(CUGH\)](http://www.cugh.org/) (<http://www.cugh.org/>) March 16 in Washington, D.C.

Recognizing the urgency

In introducing the panel, Balbus referred to the most prevalent global health problems listed in the recently published [Global Burden of Disease Study 2010](http://www.thelancet.com/themed/global-burden-of-disease), (<http://www.thelancet.com/themed/global-burden-of-disease>) noting that both increases in short-term weather variability and long-term climate change can exacerbate chronic diseases or shift patterns of vectors affecting certain infectious diseases.

For some in the global health field, Balbus acknowledged, preoccupation with urgent health crises may lead to considering climate change as something outside of their areas of concern that can be dealt with in the future. He asked the audience to avoid this kind of complacency and recognize the urgency of the effects of changes in weather patterns.

“Climate change is occurring and it’s having an impact on the kinds of diseases we now take care of,” Balbus said. “The session was designed to show how bringing in scientific data and tools, related to climate change and meteorology, can enhance health programs.”

Collaboration and local solutions

Two common themes emerged in the discussions — the need to work across health, meteorology, agronomy, and other disciplines; and that while climate change is global, impacts and solutions are local. Demonstrating the multidisciplinary nature of addressing climate-related health impacts, the panel consisted of an epidemiologist, two engineers, and a biologist.

Kristie Ebi, Ph.D., a leader in the field of climate change health adaptation, noted that understanding risks involves three factors — the specific impact, such as flooding, heat waves, or drought; who or what is exposed to it; and underlying vulnerabilities, which are very context-dependent. She called for transitional and transformational learning that can lead to system-wide changes in approaches to complicated problems.

Rao Aiyagari, Ph.D., senior advisor for research development and scientific operations at the Public Health Foundation of India, discussed two examples — extreme heat in west India and the impact of indoor air pollution on acute respiratory conditions. He said that research and effective solutions require collaboration across institutions, agencies, and regions. “It is necessary for public health knowledge to be given to climate change professionals, and climate change knowledge to be given to public health professionals,” he concluded.

Pamela Anderson, Ph.D., director general of the International Potato Center (IPC) in Lima, Peru, spoke about food security. Without interventions, climate change is anticipated to significantly decrease production of wheat, rice, and potatoes, the world’s three most consumed crops. She said that IPC has three roles related to climate change — climate-proofing through crop improvement and breeding; preserving biodiversity of the 5,000 varieties of native potatoes in a gene bank and natural habitats; and mitigation research. Food security, she stressed, requires looking for local solutions and applying appropriate options.

NIH plays a prominent role at global health conference

The fourth annual meeting of the Consortium of Universities for Global Health brought together health professionals and students primarily from universities, but also from agencies and organizations in the U.S. and globally.

In addition to NIEHS, the National Cancer Institute and the Fogarty International Center were among the co-sponsors of the event held Mar. 14-16 in Washington, D.C. Several sessions highlighted the role of NIH in global health, including a presentation by NIH Director Francis Collins, M.D., Ph.D.



Members of the Climate Change and Global Health: Using Science to Protect Populations panel agreed on the urgency of the climate change issue, and the need to collaborate across disciplines and with local communities, to have an impact on health. Shown, left to right, are Balbus, Ebi, Anderson, Cisse, and Aiyagari. (Photo courtesy of Paula Whitacre)

Gueladio Cisse, Ph.D., environmental scientist at the Swiss Tropical and Public Health Institute, described the water, health, and climate change project he directs in four river-adjacent West African cities. Noting that the process was as important as the outcome, he pointed to successes that include an agreement on the project framework and focus, collection of local health and climate data, and a bridge to policymakers. Local and national authorities are enthusiastic about the research, but adaptation plans need to be developed and funded.

Questions for the panelists included their perspectives on partnering with the private sector and the role of local data.

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