The Water Institute at UNC – adapt and thrive

Jamie Bartram, PhD, knows it's important to understand the impacts of droughts, floods and increasingly variable precipitation patterns. But the director of The Water Institute at UNC knows that's not enough.

"We also need to understand how to adapt and cope with such change," he says. "We know the process, to some extent, is going to happen and that certain challenging events and situations will become more common."

Consider, he says, "what happened in New Orleans (with Hurricane Katrina) and what happened recently with the flooding in Brazil. Australia also suffered catastrophic water-related events. We are not good at managing our water supplies in the face of great rainfall or drought."

That will change, Bartram hopes, with the impact of the institute, launched in October 2010 as part of the UNC Gillings School of Global Public Health. The launch brought

more than 400 experts from more than 40 countries to Chapel Hill, N.C.

Bartram, professor of environmental sciences and engineering, says the institute will focus upon select "critical challenges" – major issues of concern for health which attract too little attention and require concerted action to achieve real progress. One of the challenges, he says, is adapting drinking water supply and sanitation guidelines to the rapidly emerging reality of water scarcity in both developed and developing nations.

Institute goals include learning how to assess country vulnerability and preparedness for water issues; discovering and reporting how some communities adapt to changes in rainfall; and cooperating with groups in





A group of School faculty members and alumni, many from the environmental sciences and engineering department, gather at the launch of The Water Institute at UNC in October 2010.

developed and developing nations to share experience, pool understanding, and advance science and good practice.

While most of the institute's work involves experts around the world, it also provides opportunities for students.

One student-led project examines how 21 countries might adjust their water supplies and sanitation programs in light of climate changes. Edema Ojomo, master's degree student in environmental sciences and engineering (ESE) and Donald and Jennifer Holzworth Scholar, works with UNICEF to assess programs about availability and quality of water and sanitation. "[Ojomo] is working to deliver practical suggestions for decreasing the vulnerability of water supply and sanitation related to projected impacts of changes in climate," Bartram says.

A second initiative involves the United Nations Environmental Program (UNEP). Mark Elliott, PhD, ESE postdoctoral fellow, leads the compilation of short articles that offer practical measures countries can take to ensure a constant water supply despite rainfall changes.

Due out in mid-2011, the book will guide policymakers in developing countries. As with other institute projects on this topic, the book, Bartram says, "demystifies how to adapt to climate changes."

- Susan Shackelford

The Water Institute at UNC is fortunate to have many global partners, with more on the way. Among its early collaborators were the:

- National Institutes of Health's Fogarty International Center
- International Association of Plumbing and Mechanical Officials (IAPMO) - see page 42
- International Water Association (IWA)
- Procter & Gamble Children's Safe Water Fund
- United Nations Environment Programme Risoe Centre on Energy, Climate and Sustainable Development
- United Nations Children's Fund (UNICEF)
- University of Bristol, U.K.
- WaterAid, a U.K.-based nongovernmental organization
- World Health Organization (WHO)
- PLAN USA

Since the institute launch, other organizations have become active collaborators, including the:

- Drinking Water Inspectorate (England & Wales)
- United Nations Educational, Scientific and Cultural Organization (UNESCO)
- World Bank
- Health Canada (Canada's federal health department)
- Water and Sanitation Rotarian Action Group (Rotary WASRAG)

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