

Countering an approaching water crisis

As growing demand for clean water stretches even the resources of the world's largest industrialized nations, scientists and engineers are turning to new technology and novel ideas to find solutions.

Mark Shannon of the University of Illinois at Urbana-Champaign joined a slate of world leaders in water resource research to address this crisis in a review paper in the March 20, 2008, issue of *Nature*.

"As dire as the growing problems are with a lack of enough clean water in the world, I have a great deal of hope that many of these problems can be solved by increasing research into the science and technology of water purification," said Shannon, who also serves as director of the National Science Foundation (NSF) Center of Advanced Materials for the Purification of Water with Systems (WaterCAMPWS).

With an emphasis on environmentally friendly tools for killing microbes, membrane bioreactors, nanoscale filtration, and a host of other advanced technologies, the review paper addresses how these systems can be used for disinfection, decontamination, reuse and reclamation, and desalination of water supplies across the globe.

"Clearly, a coordinated, multi-faceted approach is needed to deal with complex water issues," said Geoffrey Prentice, the NSF program director supporting the WaterCAMPWS center and currently on detail to the U.S. Mission to UNESCO in Paris.

"Ours is one of several agencies working to address the water crisis before it grows worse. Working with the U.S. Mission to UNESCO, we are highlighting the international dimensions of inadequate water supplies, which lead to millions of deaths each year, primarily in the developing world," Prentice added.

One example is a June 27 international water forum at the Department of State at which NSF, UNESCO and a number of agencies and international organizations will be joining Shannon and other technical experts to confront some of the most pressing global water needs.

Shannon will lead the Congress for Water Purification Science and Technologies in the 21st Century in New Orleans on April 6-10, 2008, an event that coincides with an NSF public webcast on April 10 called Water in 2025, co-hosted by Popular Mechanics. Part of the larger Bridges to the Future forum (www.nsf.gov/bridges), the event is an opportunity for the public to call-in and ask questions of some of the top water researchers in the United States.

Source: National Science Foundation

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