

## Helping Our Water-Stressed World

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The picture on this issue's cover haunts me. The girl's name is Aminata Dicko, according to WaterAid, the nonprofit group that supplied the photo, and she's collecting water from a pond near the Mali village of Ourare Alaye Tem, which is close to the border with Burkina Faso. Ponds and deep wells that fill during the rainy season are the village's only source of water, according to a [WaterAid slideshow](#). The water Dicko is collecting is unclear. The pond is polluted with animal excreta and all kinds of dirt that blow into it, but it's all the village has. In the dry season, villagers travel for days seeking water, sometimes into Burkina Faso.

I cannot bear to think that this beautiful girl, who must be in her early teens, may never know much beyond the backbreaking life in her tiny arid village. [Elsewhere](#) on the Internet are pictures showing the enormous cost of water access to females in Africa. One shows a girl in Ethiopia holding a poster that says, "We are exposed to rape when we go long distance to fetch water." Another shows a woman with a young girl collecting water from a river in Rwanda that is home to crocodiles. I can cite many statistics about the disastrous effects of lack of access to clean, safe, potable water. But Dicko's visage of solitary, resigned struggle speaks enough to me of the enormity of the challenge.

Recognizing the global problem, the U.S. Agency for International Development (USAID) for the first time this year formulated a [strategy to address water-related development needs](#). "By 2025," USAID says, "two-thirds of the world's population could be living in severe water stress conditions." This stress adversely affects individuals, communities, economies, and ecosystems around the world, especially in developing countries.

This week's cover story and employment feature focus on the need for access to clean water. "Running Dry," on page 10, examines the problem in both developing and developed countries and the efforts of chemical companies toward solutions. According to "Industry's Water Stewards," on page 33, the crisis is opening up job opportunities for chemists and chemical engineers in companies providing technologies and services to treat and reuse water. However, "chemistry alone is not enough," Riikka Timonen, the director of sustainability of Kemira, a Finland-based producer of water treatment chemicals, told C&EN. "You also need other players in the ecosystem—most importantly, the infrastructure and regulation framework." And in the developing world especially, solutions must be affordable by people who live on \$2.00 or less per day.

Faced with overwhelming need, people sometimes can be paralyzed into thinking they couldn't possibly do anything to make a difference. As members of the American Chemical Society, we can help. For example, water was the first global challenge addressed by the [ACS Global Innovation Imperatives program](#) to foster solutions to global problems. Through this program ACS has organized workshops and symposia to help find pragmatic solutions.

And back in May, Bassam Z. Shkhashiri, David L. Sedlak, and Jerald L. Schnoor proposed something that could be doable and potentially high impact in effect: an [ACS Global Water Initiative \(C&EN, May 20, page 37\)](#). Shkhashiri is a chemistry professor at the University of Wisconsin, Madison, and was ACS president in 2012; Sedlak is codirector of the Berkeley Water Center and an associate editor of *Environmental Science & Technology (ES&T)*; and Schnoor is a professor of civil and environmental engineering at the University of Iowa and editor-in-chief

of *ES&T*. They call on ACS to “raise awareness and build support among people and organizations that will invest in our water future,” to “help educate citizens and government officials” about the threat to water resources, and to “help the chemical enterprise find creative ways of making water systems more sustainable and affordable.” They also urge ACS “to join with other organizations and agencies to prepare for a better water future. For without water, there is no future.”

As an ACS member, I will support such an initiative. How about you?

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