

TESTIMONY OF
AARON SALZBERG
SPECIAL COORDINATOR ON WATER RESOURCES
BUREAU OF OCEANS AND INTERNATIONAL ENVIRONMENTAL AND SCIENTIFIC
AFFAIRS

BEFORE THE SUBCOMMITTEE ON WATER AND POWER OF THE SENATE
COMMITTEE ON ENERGY AND NATURAL RESOURCES
UNITED STATES SENATE

ON

THE GLOBAL WATER CHALLENGE

DECEMBER 8, 2011

Chairperson Shaheen and other Members of the Water and Power Subcommittee, I appreciate the opportunity to appear before you today to discuss the global water challenge. As Secretary Clinton has noted, perhaps no two issues are more important to human health, economic growth and peace and security than basic sanitation and access to sustainable supplies of water.

The Challenge of Water

Both at home and abroad, water security is becoming one of the great challenges of our time. Today, an estimated 884 million people lack access to an “improved” drinking water source. (Improved drinking water sources include piped water, a borehole, or a protected dug well. We don’t know how many people lack access to “safe” water – drinking water quality is not measured globally.) More than two and a half billion people lack access to basic sanitation. While we are making some progress – particularly in increasing access to improved drinking water sources - over 1 billion people still defecate in the open. Each day, nearly 4,000 people (mostly children under five) die from diarrheal diseases which remain the second leading cause of death in children worldwide. Many of these deaths are preventable: increased access to safe drinking water, sanitation and hygiene (WASH) can reduce diarrheal disease by 30-40%. These interventions can also reduce or eliminate morbidity associated with water-related neglected tropical diseases such as Guinea worm disease, trachoma, and schistosomiasis.

Women and children are disproportionately impacted by these issues. Women and girls often bear the primary responsibility for meeting the water needs of the family – they often spending hours a day collecting water, with the consequence of foregoing other economic and educational opportunities. Similarly, the burden of tending to family members sickened by diarrheal diseases falls primarily on women. In some areas, collecting water consumes up to five hours per day and involves walking more than two miles carrying over 40 pounds of water. Collecting water can often involve walking through isolated, unsafe areas that expose women and girls to health and safety risks. Girls are also more likely to stop attending school when appropriate sanitation facilities are not available.

Water will have a great impact on food security. On a worldwide basis, more than 70% of the water used globally goes towards agriculture; in some developing countries, it's over 90%. As demand for food increases and countries shift to foodstuffs that require more water – such as beef – already scarce water resources will be under greater pressure. To expand food production we will need to improve the productivity of water (our ability to get more “crop per drop”) and work to ensure reliable access. This means expanding irrigated agriculture, using new technologies to reduce the water used in certain applications (such as drip irrigation and drought-tolerant crop varieties) and the use of natural and man-made systems to store and manage supplies. We will also have to take steps to protect our freshwater and coastal ecosystems. Fish are a significant source of protein for more than two and a half billion people in the developing countries. Overfishing, pollution and poor management have led to a decline in many freshwater fish species and populations and will also undermine food security. Finally, children who suffer from chronic diarrhea will have difficulties absorbing the nutrients they need and are therefore more likely to be malnourished.

Water will also play a key role in achieving energy security. Water needs to be brought to its point-of-use, and it's heavy. The pumping and transport of water can, in many cases, be one of the leading consumers of energy. Conversely, water can be a source of clean, renewable, energy. Dams can play a key role in meeting future energy needs and along with natural infrastructure can be critical to managing and mitigating the impacts of floods and droughts. But dams can also have an impact on people and the environment. Stakeholder involvement and sound management will be essential to ensuring the interests of people and the environments are protected. We also need to be sensitive to the impacts of new energy development on existing water resources.

Water is becoming an increased source of threats to peace and security. Within countries, water availability and access to basic drinking water and sanitation services may be a source of local conflict and a contributing factor to state fragility or failure. Among countries that share water, tensions are likely to rise as demands grow. Today, over 40% of the world's population lives in river basins shared by two or more countries. Disagreements are inevitable. The key is to keep these disagreements from escalating into violent conflict. At the same time, water can be unifying. Water can provide a platform for building trust and cooperation between countries. Water user groups, and increased transparency and accountability between the people and service providers, can both increase access and advance democratic values. While history is not necessarily a good predictor of our future, it's true that more often than not, water is a source of cooperation rather than conflict.

Climate change will exacerbate many of these challenges. In many regions, wet regions may get wetter; dry regions may get drier; glaciers will recede; and sea levels will rise. Greater variability in rainfall will increase the likelihood of floods and droughts in some regions. Rising sea levels, storm surges, flood damage, and saltwater intrusion will threaten freshwater supplies in many areas. Extreme weather (floods and droughts) is likely to increase in certain places - threatening both people and economies. Greater water run-off from more frequent and more intense precipitation events is likely to carry more pollutants into water systems. All these will put greater pressure on our ability to manage water holistically across a broad range of competing needs.

In sum, by 2025, experts predict that nearly two-thirds of the world's population will be living under water stressed conditions, including roughly a billion people that will face absolute water scarcity (a level that threatens economic development as well as human health). Water scarcity and

poor water quality will increase disease, undermine economic growth, limit food production, and become an increasing threat to peace and security.

There is hope. Some regions are truly water scarce. In those cases, countries will have to work hard to reduce demand and better manage supplies through proper pricing, improved water storage, conservation, and water reuse. But in most places, there is enough water to meet demands. What is lacking is a commitment to sound water resources management and to meeting the basic water and sanitation needs of the people.

The U.S. Approach

The goal of U.S. efforts on water internationally is to help countries achieve water security. This means that people have reliable and sustainable access to the water they need, when they need it, where they need it while reducing the risks from extreme hydrological events. To achieve this goal, the United States is working to increase access to safe drinking water and sanitation, improve water resources management, increase the productivity of water resources, and mitigate tensions associated with shared waters. We are also working to better integrate water and sanitation considerations into our efforts on food security, climate, and health. In other words, we cannot have food programs failing because the sustainability of the water resources was not considered; we cannot undermine children's health or education by failing to ensure they have safe water to drink or appropriate sanitation facilities; and we need to improve the management of water if we are going to effectively manage the projected impacts of climate change.

Secretary Clinton has outlined five primary areas of action for our efforts on water:

- **Build and strengthen institutional and human capacity at the local, national and regional levels.** Countries and communities must take the lead in securing their own water futures. We need to help them build capacity at all levels so as to better enable communities and countries to understand and respond to water and sanitation challenges. This includes strengthening regional cooperative mechanisms for managing shared water resources.
- **Increase and better coordinate our diplomatic efforts.** We need to work with donor countries and international organizations to raise international awareness and to address critical needs; to encourage developing countries to prioritize water and sanitation in national plans and budgets; and to integrate water into global food security, health, and climate change initiatives. We need to help countries establish a precedent for early action rather than letting the issue grow until it can no longer be ignored. Perhaps the greatest impediment we face is the lack of political will. The fact that countries themselves fail to prioritize meeting the basic water and sanitation needs of their own people is a major impediment to moving forward. We have seen a number of cases where, with the right political leadership, a country has turned itself around and made significant progress in meeting the water and sanitation needs of their people.
- **Mobilize financial support.** Managing water issues requires resources. Even if all of the world's official development assistance were directed towards water and sanitation it would still not be enough to meet developing country needs. In many cases, there is significant capital within developing countries to fund water projects. We need to focus our support on mobilizing those resources by strengthening local capital markets, providing credit enhancements, and exploring other avenues for support.

- **Promote science and technology.** There is no technological silver bullet. That said, science and technology can make a huge impact. We need to work harder to incentivize innovation on technologies that can make an impact in the water sector and to share U.S. expertise and knowledge with the rest of the world.
- **Build and sustain partnerships.** We cannot solve this problem on our own. There is a great deal of knowledge and experience that lies within the U.S. technical agencies, the private sector, and the U.S.-based non-profit community. We need a whole-of-government approach and stronger partnerships with the non-governmental community.

The United States remains one of the largest bilateral donors to water and sanitation efforts. Together, the United States Agency for International Development, the Millennium Challenge Corporation and the U.S. Army Corps of Engineers invested over \$950 million in fiscal year 2010 (the last year for which we have complete data) for all water sector and sanitation-related activities in developing countries. Of this amount, USAID and MCC invested over \$898 million in drinking water, sanitation and hygiene activities. As a result of USAID's activities, some 2.8 million people received improved access to safe drinking water and 2.9 million received improved access to sanitation in 2010. You can find additional details in our 2011 Report to Congress on the implementation of the Senator Paul Simon Water for the Poor Act (www.state.gov/g/oes/water).

We contribute annually to UN organizations and multilateral development banks through our dues and through special multi-donor trust funds related to water projects. More than twenty U.S. government agencies are engaged on international water challenges sharing their knowledge and expertise with developing country partners to help build international capacity to address the global water challenge. The United States also remains active in a number of transboundary water basins throughout the world, including the Nile and Mekong river basins.

As Secretary Clinton said, "It's not every day you find an issue where effective diplomacy and development will allow you to save millions of lives, feed the hungry, empower women, advance our national security interests, protect the environment, and demonstrate to billions of people that the United States cares, cares about you and your welfare. Water is that issue." We look forward to continuing our work with Members of the Committee, USAID, other U.S. government agencies, and other interested stakeholders to improve water resources management and get safe water and basic sanitation to the billions who are currently without.

Thank you again for this opportunity to testify before this subcommittee on behalf of the Department of State.