

Water and Security in the Developing World

Washington-area professionals gathered on February 19th for the fourteenth IRG Discussion Forum, "Water and Security in the Developing World." Panelists Dr. Geoffrey Dabelko, Director of the Environmental Change and Security Project at the Woodrow Wilson Center, and Dr. Charles Lawson, Senior Advisor for Science & Technology in the Bureau of Near Eastern Affairs at the U.S. Department of State, emphasized the fact that, while rhetoric among politicians and the press creates fears of "water wars" around the world, cooperative efforts to address issues of water use are common and quite successful in civil society and among lower-level local government officials, even in conflicted areas. Dr. Eugene Stakhiv, Policy Division Chief at the Institute for Water Resources, U.S. Army Corps of Engineers, described his efforts as Interim Minister of Water Resources in Iraq to rebuild the country's water infrastructure, devastated by years of misuse and looting after the recent conflict.

Freshwater resources have always figured prominently as an element of international relations and national security. As far back as 1780 B.C., King Hammurabi of Babylonia ruled that "If any one open his ditches to water his crop, but is careless, and the water flood the field of his neighbor, then he shall pay his neighbor corn for his loss."

More recently, world leaders have warned that water shortages and disputes over water use hold the potential for violence on a large scale. In 1985, Boutros Boutros Ghali, former Secretary-General of the United Nations warned that "The next war in the Middle East will be fought over water, not politics." In 1995, Ismail Serageldin, then Vice President for Special Programs at the World Bank and founder and chairman of the Consultative Group to Assist the Poorest, believed that "Wars of the next century will be over water, not oil."

In many areas of the world today,

population pressure has escalated competition for access to clean water for domestic use, agriculture, and industrial production. Shortages are becoming acute in a number of countries, which some have predicted could become as important a motivator for war as gold, land, and oil have been in the past. The Nile, Jordan, Tigris, and Euphrates rivers of the Middle East have been the primary focus of concerns relating water to

security, but others are attracting increasing attention, such as the Okavango River in South Africa, the Ganges on the Indian subcontinent, and the Mekong in Southeast Asia.

Today politicians and the press, as well as groups who are opposed to the privatization of water utilities, echo the concerns of statesmen that water shortages may cause conflict. However, inflammatory rhetoric that wars over water are inevitable

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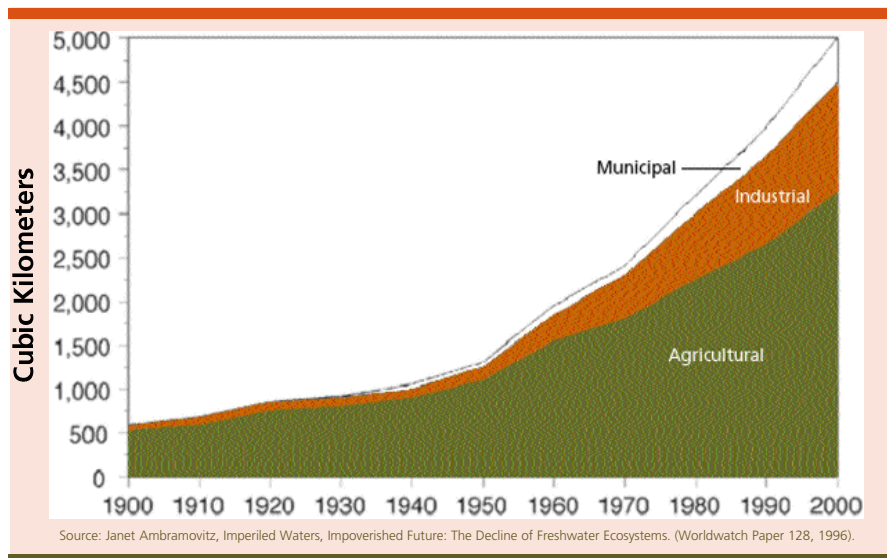
often results in missed opportunities for using water resource issues to promote cooperation between peoples and nations. The reality is that such cooperation is ongoing and, in many cases, remarkably successful.

Cooperating for Success: The Nile

Egypt, Sudan, and Ethiopia are prime examples of nations that could have been brought to the



Figure 1
Rising Water Use
 Global Annual Water Withdrawal by Sector, 1900–2000



brink of war over conflicts regarding the use of the Nile. However, since 1997, UN Development Programme and World Bank initiatives have encouraged these and other countries to work together to identify water needs and devise means to share the Nile waters.

Academic studies have come to a similar conclusion: of the 1,700 state-to-state water interactions in transboundary basins that occurred between 1946 and 1999, none resulted in a formal war. Only 37 resulted in military action of any kind, and only 56 “hostile acts” were reported. While there was “verbal hostility” in 414 cases, they were outnumbered by the 628 cases that were given “verbal support.” Just over 600 of the interactions resulted in bi- or multilateral agreements or international treaties. Dr. Aaron Wolf, who coordinates the Transboundary Freshwater Dispute Database, agrees that “The real story is cooperation.”

The danger of actual violence over

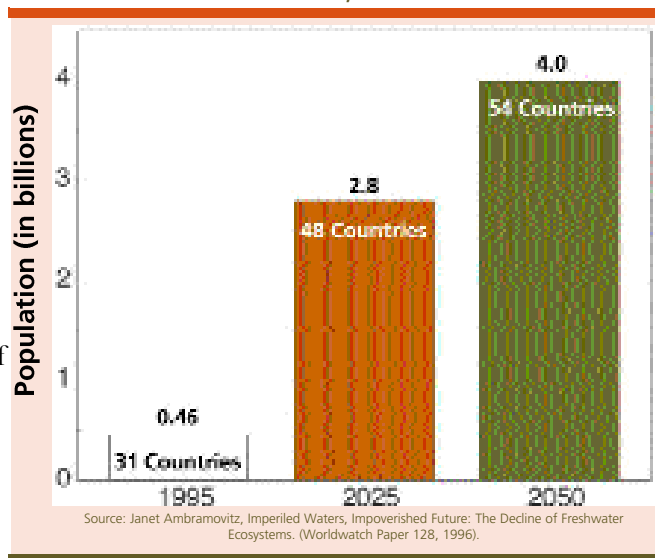
water issues is most likely to occur when there is a sudden change in the situation in regard to water, as, for example, when a new dam results in the displacement of whole communities. There is also increased danger of conflict when institutions are not in place or are too weak to successfully negotiate water issues. Even in these cases, however, cooperation can occur and may even become more likely.


Overcoming Weak Institutions: Okavango Delta

In the area of the Okavango Delta, the governments of Botswana, Angola, and Namibia are working with international organizations,

donors, and civil society to develop a management plan. One of the largest and most important wetlands in the world, the delta is home to over 140,000 people, half of them living in villages of less than 500 inhabitants and dependent on the delta water for their livelihoods. The Okevango Delta is also one of the world’s pre-eminent destinations for eco-tourists. Unmanaged and uncontrolled expansion of human activities and structures, unclear ownership of resources, and increased use of water resources for irrigation threaten the character of the delta and the productivity of the basin as a whole. Because the governments facing these complex problems have been weakened by years of civil strife and lack sufficient human and financial resources, they are encouraging the involvement of civil society in the negotiations and have ceded some of the development efforts typically undertaken by government institutions to them.

Figure 2
Water Scarcity and Stress
 Population in Water-scarce and Water-stressed Countries, 1995-2050





Success in resolving water issues is further enhanced when the data that is shared is accepted as reliable and meaningful.

Engagement Amidst Political Conflict: The Middle East

Cooperation over water issues is common even in the Middle East, even when the lack of normal relations among Israel, Jordan, Syria, Lebanon, and the Palestinian Authority means there are no formal mechanisms for negotiation in place. During the peace talks in the 1990s, water was a key element of the negotiations, although the press never accords it the prominence of other issues, such as refugees, land, or acts of terrorism. Thus, even when the peace talks failed, technical personnel from all the countries involved continued to cooperate on practical issues of water use, with the agreement of their governments, because the mutual benefits realized are great enough.

Need for Transparency: Iraq

Iraq at present provides an extreme example of the issues of water supply, scarcity, and mismanagement touched on above, which, although not the cause of, have been exacerbated by internal and international conflict. The list of difficulties that must be overcome in order to rebuild is staggering: It includes destroyed office facilities, damaged and therefore dangerous infrastructure, limited funds, limited communications, serious security concerns, and a civil service in

turmoil. Other topics that need to be addressed under these conditions include: privatization of state-owned enterprises (SOEs); establishment of a national water allocation policy; addressing transboundary water allocation with Turkey, Iran, and Syria; assessing national water demand and availability; working to restore marshlands; repairing and reconstructing pumping stations and field offices; improving

the safety of existing dams and siting and construction of new ones; and rehabilitating irrigation systems.


The past and present situation in Iraq highlights an important factor for the success of cooperative efforts to settle water use issues: the need for transparency. Difficulties abound when water is regarded as a national security issue and the facts regarding its use are held as state secrets, as was the case in Iraq under Sadaam Hussein. When information is freely shared,

About the Panelists

Geoffrey D. Dabelko, as Director of Woodrow Wilson Center Environmental Change and Security Project, is the principal investigator of "Navigating Peace: Forging New Water Partnerships Initiative" and co-principal investigator of the "Environment, Development, and Sustainable Peace Initiative," an international effort to bridge the gap between Northern and Southern policy perspectives. Dabelko has held prior positions at the Georgetown University School of Foreign Service, Council on Foreign Relations, and Foreign Policy Magazine. He is co-editor of *Green Planet Blues: Environmental Politics from Stockholm to Johannesburg* (3rd ed., January 2004) and *Environmental Peacemaking* (2002). He is also a term member of the Council on Foreign Relations.

Charles A. Lawson is responsible for water and environmental issues in the Middle East peace negotiations and advises the U.S. Department of State's Bureau of Near Eastern Affairs on a broad range of water, environment, and science and technology issues. He has served as Special Assistant for Science and Technology to Ambassador Richard L. Armitage (Deputy to the Coordinator for U.S. Government Assistance to the New Independent States) and as Attaché for Environmental, Scientific and Technological Affairs at the U.S. Embassy in Tel Aviv. He began his 17-year career at the Department of State with the responsibility for cooperative science and technology activities in Africa, Near East, and South Asia. Prior to joining the State Department, Lawson was actively involved in scientific research in the geological sciences.

Eugene Stakhiv, Policy Division Chief of the U.S. Army Corps of Engineers' Institute for Water Resources, has served as U.S. representative to many international efforts on climate change and water, including the Intergovernmental Panel on Climate Change and as American-Co-Director of the International Joint Commission's Lake Ontario-St. Lawrence River Study Board. He has worked with the World Bank as senior advisor to the Water Ministries of Bangladesh, Ukraine, Armenia, and the Aral Sea Basin countries. In 2003, he served as Interim Minister of Irrigation (now Water Resources) in charge of repairing and operating all of Iraq's dams, irrigation, water treatment and distribution systems; preparing plans for restoring Iraq's famous marshes, and for water research centers.



however, problems are more easily resolved. Success in resolving water issues is further enhanced when the data that is shared is accepted as reliable and meaningful; hence the institutional capacity to develop and verify useable data is also important.

Conclusion

Water wars are rare, but increased cooperation is needed due to rapidly

increasing demand for water. The only recorded incident of outright war over water happened 4,500 years ago between the two Mesopotamian city-states of Lagash and Umma. Between the years 805 and 1984, in contrast, more than 3,600 water-related treaties were signed. Two thirds of the 1,831 recorded international water-related events that occurred around the

world over the last 50 years were cooperative in nature, and 157 more water treaties were signed during that time. Nevertheless, the potential for conflict remains, and the possibility of future “water wars” cannot be ignored. The kind of creative, cooperative efforts described above must continue and expand if water wars are to be prevented.

FORUM FEEDBACK

- ◆ Nations take predictable stands on water-related issues depending on whether they are located upstream or downstream on a major river. Egypt, for example, situated downstream, stresses its historical rights to the use of the Nile, and argues that it must agree to any proposed newer uses or infrastructure. Ethiopia, however, asserts its right to use water that falls in its mountains (the source of the Blue Nile). Similar debates are found between Turkey and Iraq over the use of water from the Euphrates.
- ◆ The Iraqi argument for restoring marshlands is not environmental or economic so much as it is driven by the desire to restore a way of life. Officials in the Iraqi Ministry of Water Resources are not motivated to restore the marshes, and while the roughly one-half million “Marsh Arab” refugees might return to the marshes if they are restored, most would probably do so only if modern social services are also in place.
- ◆ Efficiency of water use is not typically a consideration in cooperative efforts between nations regarding water rights and uses. Israel, for example, is considerably more efficient in its use of water than Jordan, but considers Jordan’s inefficiencies to be a national issue and as such the subject does not come up in negotiations. Progress is nevertheless being made regarding efficiency issues; agricultural water use is, for historical and cultural reasons, among the most inefficient, but even here steps toward improvement are being taken.
- ◆ There is some question whether durable national security can be achieved if human security is not first addressed. Water problems at the local level are among the most serious in terms of human suffering. Addressing the problems at this level by working to provide sufficient supplies of safe water can provide the most benefit in both national and human security.

For More Information...

Woodrow Wilson International Center for Scholars:
www.wilsoncenter.org/ecsp

U.S. Department of State Bureau of Near Eastern Affairs:
www.state.gov/www/regions/nea/

Institute for Water Resources, U.S. Army Corps of Engineers:
www.iwr.usace.army.mil

Transboundary Freshwater Dispute Database:
www.transboundarywaters.orst.edu

World Bank Nile Basin Initiative:
www.worldbank.org/af/nilebasin/overview.htm

World Conservation Union (IUCN) Regional Office for Southern Africa: www.iucnrosa.org.zw/news/okavango

International Rivers Network: www.irn.org

International Joint Commission, Canada & U.S.: www.ijc.org

About the IRG Discussion Forum

The IRG Discussion Forum, a monthly event hosted by Henri-Claude Bailly (chairman of IRG’s Board of Advisors), addresses issues affecting international development. Each session is informal, with guest speakers and attendees participating in a personal capacity. For comments, questions, or information on the Discussion Forum, contact discussionforum@irgltd.com or call IRG at 202-289-0100.

2004 Schedule

March 18	Nepal’s Maoist Revolt
April 15	Middle East Oil
May 20	Rule of Law
June 17	Knowledge Management

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