Water, Conflict, and Cooperation

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Fierce competition for fresh water may well become a source of conflict and wars in the future.
Kofi Annan, March 2001

But the water problems of our world need not be only a cause of tension; they can also be a catalyst for cooperation....If we work together, a secure and sustainable water future can be ours.
Kofi Annan, February 2002

Water poses both a threat and an opportunity for the UN system. Increasing scarcity of clean fresh water impedes development, undercuts human health, and plays critical roles along the conflict continuum between and within states. While rarely (if ever) starting a war between states, water allocation is often a key sticking point in ending conflict and undertaking national and regional reconstruction and development. Within states, water scarcity can assume an increasingly contentious and violent role when, for example, water-dependent sectors such as irrigated agriculture can no longer sustain farming livelihoods, leading to destabilizing migration flows. Conflict prevention, conflict resolution, and post-conflict reconstruction efforts ignore water at their peril in key regions of the world (e.g., Southern and East Africa, including the Great Lakes region; the Middle East; and Central, Southeast, and South Asia).

Water has also proven to be a productive pathway for confidence building, cooperation, and arguably, conflict prevention. Cooperative incidents outnumbered conflicts by more than two to one from 1945-1999 (Wolf, Yoffe, & Giordano, 2003). The key variable is not absolute water scarcity, but the resilience of the institutions that manage water and its associated tensions. In some cases, water provides one of the few paths for dialogue in otherwise heated bilateral conflicts. In politically unsettled regions, water is often essential to regional development negotiations that serve as de facto conflict-prevention strategies. The UN system and its partners have ripe opportunities to capitalize on water's cooperation promise while undercutting its conflict potential.

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Water-Related Violence: What, Where, and How?

Water-related violence often occurs on the local rather than international level, and the intensity of conflict is generally inversely related to geographic scale (Wolf, 1999). Even if international disputes over water-related issues do not typically cause violent conflict, they have led to interstate tensions and significantly hampered development, such as along the Nile, Mekong, Euphrates, Amu Darya, Syr Darya, and Ganges rivers. And while conflicts often remain local, they can also impact stability at the national and regional levels.

The Basins at Risk project's analytical tool helps identify areas where hydrological and

political conditions suggest a higher likelihood of conflict over water (Wolf et al., 2003). Based on extensive analysis of the world's 263 international river basins, the project hypothesizes that "the likelihood of conflict rises as the rate of change within the basin exceeds the institutional capacity to absorb that change." Sudden physical changes or reduced institutional capacity are more conducive to disputes. Key examples include uncoordinated development of major projects that affect flow (e.g., dams) *in the absence* of a treaty or commission; basins that suddenly become "internationalized," as occurred in post-Soviet Central Asia; and general animosity among parties. This approach provides a set of indicators for monitoring potential hot spots, thus allowing us to get ahead of the "crisis curve" and promote institutional capacity in advance of intractable conflict.

There are three major linkages between conflict and water:

1) ***Access to adequate water supplies:*** Conflict is most likely to occur over water when disputes involve access to water of adequate quantity and quality. Even when water supplies are not severely limited, allocation of water among different users and uses (urban residents and agriculture, for example) can be highly contested. Degraded water quality, which can pose serious threats to health and aggravate scarcity, is also a source of potentially violent disputes. Finally, when water supplies for broadly irrigated regions decline either in terms of quantity or quality, those declines can spur migrations that could politically destabilize the receiving cities or neighboring countries.

2) ***Water, livelihood loss, and civil conflict:*** Water's importance in sustaining human livelihoods can indirectly link it to conflict. Water is a basic resource for agriculture, which is traditionally the largest source of livelihoods. If this livelihood is no longer available, people are often forced to search for job opportunities in the cities or turn to other, sometimes illicit, ways to make a living. Migration—induced by lack of water, sudden droughts and floods, infrastructure construction (e.g., dams), pollution disasters, or livelihood loss—can produce tensions between local and incoming communities, especially when it increases pressure on already scarce resources. And poverty due to livelihood loss has been identified as a common denominator of the causes of conflict in most of the civil wars that emerged in Africa, South Asia, and Latin America during the last decade (Ohlsson, 2000).

3) ***Water management and conflict:*** In most cases, it is not the *lack* of water that leads to conflict, but the inadequate way the resource is governed and managed. There are many reasons why water management fails, including lack of adequate water institutions, inadequate administrative capacity, lack of transparency, ambiguous jurisdictions, overlapping functions, fragmented institutional structures, and lack of necessary infrastructure.

Water management is highly complex and extremely political. Balancing competing interests over water allocation and managing water scarcity require strong institutions. A reliable database, including meteorological, hydrological, and socio-economic data, is a fundamental tool for deliberate and farsighted management of water resources. Yet, reliable information is often difficult to obtain, especially in developing countries. Further, disparities among riparians' capacity to generate, interpret, and legitimize data can lead to mistrust and thus hinder cooperative action.

Water management in many countries is also characterized by overlapping and competing responsibilities among government bodies. Disaggregated decision-making often produces divergent management approaches that serve contradictory objectives and lead to competing claims from different sectors. And such claims are even more likely to contribute to disputes in countries where there is no formal system of water-use permits, or where enforcement and monitoring are inadequate. Controversy also

often arises when management decisions are formulated without sufficient participation by local communities and water users, thus failing to take into account local rights and practices. Protests are especially likely when the public suspects that water allocations are diverting public resources for private gain or when water use rights are assigned in a secretive and possibly corrupt manner, as demonstrated by the violent confrontations in 2000 following the privatization of the water utility in Cochabamba, Bolivia.

Water as a Pathway to Peace

Transboundary cooperation around water issues, which stems from a drive for sustainable development in the face of shared stress, has a long and successful history. This development imperative—not the fear of conflict per se—motivates countries to pursue tough, protracted negotiations such as the Nile Basin Initiative (NBI).

Aggressively pursuing a water peacemaking strategy can provide dividends beyond water for stakeholders. It can build trust and serve as an avenue for dialogue when parties are stalemated on other issues. Transboundary water institutions have proven resilient, even as conflict is waged over other issues (e.g., the "Picnic Table Talks" between Jordan and Israel, Mekong Committee, and Indus River Commission). This strategy can also establish habits of cooperation among states, some with little experience, such as the states in the Kura-Araks basin in the Caucasus, or the Central Asian states of the former Soviet Union.

Water can also be a key point in negotiating the end of a conflict, even if water did not precipitate it. While water did not cause the wars between India and Pakistan, for example, an updated agreement on the Indus River has played a central role in recent bilateral negotiations to end the conflict. In addition, peacemaking through water issues can forge people-to-people links, as demonstrated by the Good Water Makes Good Neighbors programs of the NGO Friends of the Earth Middle East or expert-to-expert (Track II) linkages along the Jordan or Indus rivers.

Finally, a water peacemaking strategy can create shared regional identities and institutionalize cooperation on a broader range of issues. Examples of this dynamic include the institutionalized environmental cooperation around the Baltic Sea during the Cold War (Helsinki Commission) and the current cooperation in post-apartheid Southern Africa through the Southern African Development Community (Conca & Dabelko, 2002).

The United Nations and Water, Conflict, and Cooperation

Gaps

Water is a powerfully unifying resource, but because of its centrality to human life and our ecosystem, its management is generally diffused among the world's agencies and institutions. The UN is no exception: water-related expertise is spread throughout the system, including such bodies as UN Development Programme (UNDP), UN Environment Programme (UNEP), United Nations Educational, Scientific, and Cultural Organization (UNESCO), United Nations Children's Fund (UNICEF), Food and Agriculture Organization (FAO), and the UN Economic Commissions, along with partners like the World Bank and the Global Environment Facility.[2] The fragmentation of this impressive expertise has historically prevented the UN from taking the lead in water-related conflict mitigation. To redress this problem, the UN system must integrate policy and coordinate its extensive but diffuse expertise on water, conflict, and cooperation across its bodies.

International waters: The UN should develop an integrated, systematic program of preventive water diplomacy based on modified versions of the World Bank and Global Environment Facility frameworks. This program would (1) bolster early warning for regions with potential for water conflicts (conducted by, for example, UNEP's Division of Early Warning and Assessment); (2) develop a

systematic program for enhancing institutional capacity between nations, including reconciling national legal frameworks (perhaps led by FAO's Development Law Service); and (3) craft, by unifying existing expertise, a "one-stop shop" for developing programs to enhance cooperation (such as UNESCO's recently launched Water Cooperation Facility). All these efforts should integrate traditional conflict-prevention bodies, such UNDP's Bureau for Crisis Prevention and Recovery, in both the design and use of these products and capacities.

The UN must address a number of gaps that impede the implementation of this systematic, integrated program. First, only a small number of experienced water-dispute facilitators are viewed as truly neutral. The World Bank has a few, but they are in short supply at other UN bodies. The UN system should rebuild its ability by recruiting and training facilitators in hydrology, international law, regional history, and conflict prevention (the Universities Partnership for Transboundary Waters offers a model for developing and executing this training).

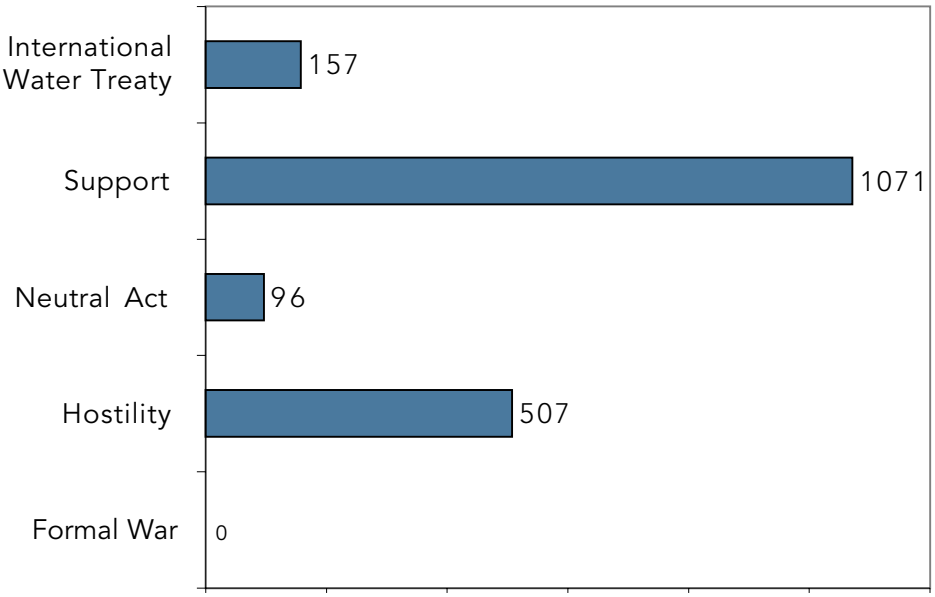
Second, UN conveners and facilitators, and their bilateral funders, must be willing to support long processes without requiring instant or easily measurable results. The World Bank's 20-year commitment to the NBI is an exemplary model, which the bank is reproducing in other African basins. The UN should extend this model beyond Africa and encourage disparate UN bodies to cooperate as equal partners. Third, to achieve sustainable implementation, the UN must find ways to include all stakeholders throughout the process, in order to offset the secrecy that traditionally surrounds high-level negotiations. Unlike the NBI, this should not wait until state-to-state agreements have been reached.

Finally, the UN should seek to strengthen the capacity of parties to negotiate contested water issues. Disparities in capacity and knowledge have often led to mistrust between riparian countries, hindering cooperative action. Strengthening the negotiating skills of less powerful riparians can therefore help prevent conflict, as can strengthening their capacity to generate and authorize relevant data (Turton, 2003). A hydrological database that is accepted by all stakeholders is essential for any joint management efforts, as it builds trust and enables water-sharing parties to make decisions based on the same understanding of the situation.

Headwaters of the Nile River, Uganda (Credit: Inger Andersen)

While pursuing this integrated program, the UN must avoid falling back on media-friendly but historically inaccurate scare tactics like warning of impending "water wars" between states. This is not the appropriate frame for these issues because (1) most organized violence from water conflict occurs not between states, but at the subnational and local levels or between sectors; (2) the "water wars" angle discourages the engagement of key developmental and environmental partners in favor of security actors; (3) it does not easily lead to a program of action for conflict prevention and human development; and (4) we do not need to use violent conflict to prove that water is a matter of life and death. Indeed, by directly or indirectly contributing to two million to three million deaths annually, unsafe drinking water poses a primary challenge to human security, as recognized by both the Millennium Development Goals and the Johannesburg Plan of Implementation.

State-to-State Water Interactions in Transboundary Basins, 1946-1999



Source: Adapted from Wolf, Yoffe, & Giordano (2003)

Intranational level: Many countries need stronger internal policies to regulate water use and to enable equal and sustainable management of their water resources. The UN should help strengthen the institutional and legal frameworks for managing water resources at the national level. To ensure that these national frameworks are implemented, the local level—at which water is actually used—requires more assistance (e.g., developing management institutions on the catchment level and institutionalizing community-based cooperative management mechanisms).

Regardless of the level of analysis, building capacity for integrated water management and conflict prevention is a critical role for the UN. Developing the human, technical, and administrative capacity to generate and analyze data, to develop sustainable management plans, and to implement these plans is necessary to enable water institutions to fulfill their management tasks and to prevent water-related disputes over the long term. Building capacity in conflict-management techniques, such as mediation and facilitation, as well as in stakeholder participation, helps mitigate conflicts and prevent disputes from emerging during decision-making.

Options

What form would a systematic, integrated program of preventive diplomacy and water take? Since most initiatives dealing with water, conflict, and cooperation are substantially underfunded and rarely reach beyond the project level, the challenge for the international community is to create an obvious earmark for international water conflict and cooperation funds, as the Global Fund is for HIV/AIDS, tuberculosis, and malaria. Such a fund could utilize water to build confidence and prevent conflict, assess water facilitation skills to match capacity and opportunities, and reduce the number of overlapping and duplicative bilateral approaches.

As part of its program, the UN should create a forum to identify and articulate the needs of Southern stakeholders for transboundary water management, dispute resolution, and conflict transformation. Such forums as the

World Commission on Water, Peace, and Security or the Water Cooperation Facility have already been proposed. The UN should also seek to integrate existing networks and platforms that address water and security linkages in the South.

In addition, water venues such as the 13th Commission on Sustainable Development in 2005, UN-Water, and the World Water Assessment Programme must move beyond technical management questions and situate water and development issues in a larger peace and security context, integrating lessons from ongoing efforts like UNESCO's Potential Conflict to Cooperation Potential (PCCP) program and UNEP's Post-Conflict Assessment Unit.[3] By collaborating with these water forums, UN bodies focused on conflict could support the environmental priorities outlined in the Secretary-General's 2003 interim report on prevention of armed conflict (United Nations, 2003).

Conclusion

By establishing a program of preventive diplomacy focused on water, the UN could coordinate its extensive but diffuse expertise. Such a program would assess basins at risk and bolster the early-warning process for regions with conflict potential. The program would also enhance institutional capacity between nations (by reconciling national legal frameworks over water issues, for example) and craft a "one-stop shop" with tools to develop programs that encourage transboundary cooperation. Through a Global Fund for Water—with special emphasis on understanding the Southern perspective and integrating conflict prevention units—the UN could improve water management and facilitation skills, reduce duplicate efforts, and use water to build confidence and prevent conflict.

Notes

1. This background paper builds on a policy brief on water and conflict commissioned by the Office of Conflict Management and Mitigation in the Bureau for Democracy, Conflict, and Humanitarian Assistance of the United States Agency for International Development (USAID); see Kramer (2004). For more information on USAID's Office of Conflict Management and Mitigation, visit http://www.usaid.gov/our_work/cross-cutting_programs/conflict/.

2. UN programs on water include the following:

• The Global Environment Facility (a partnership between the World Bank, UNDP, and UNEP) has an extensive program on international waters; see http://www.gefweb.org/.

• UNDP, through its program in Sustainable Water Management, developed an extensive toolkit for efficient water use and shepherded the Global Water Partnership; see http://www.undp.org/water/resource.html for more information. Since 1999, it has worked with the World Bank in an International Waters Partnership to "seek complimentarity in support of management of transboundary fresh water resources" (http://www.undp.org/seed/water/region/partner.htm). UNDP's Transboundary River Basin Initiative (TRIB) aims to foster inter-riparian dialogue to strengthen emerging basin institutions, and is currently providing focused support in the Mekong, Niger, Rio Frio, and Senegal basins.

• UNESCO's International Hydrologic Programme (http://www.unesco.org/water/ihp/index.shtml) is now beginning its seventh cycle. More recently, UNESCO coordinated the World Water Assessment Programme, designed to assess the state of the world's water resources (http://www.unesco.org/water/wwap). For international waters, UNESCO launched its Potential Conflict to Cooperation Potential (PCCP) program, designed specifically to collect, assess, and disseminate the world's experience in sharing international waters (http://www.unesco.org/water/wwap/pccp/index.shtml). It is investigating the possibility of a Water Cooperation Facility to help stakeholders manage international water disputes.

• UNEP's Division of Early Warning and Assessment (http://www.unep.org/dewa) provides early warning of environmental change; its mandate is to "help increase the capacity of governments to use environmental information for decision-making and action planning for sustainable human development."

• The World Bank is the lead agency in water resources development for poverty alleviation in the developing world; see http://lnweb18.worldbank.org/ESSD/ardext.nsf/18ByDocName/WaterResourcesManagement for more information. Through its regional desks and its International Waters Window, it has developed a comprehensive program for the management of international basins, including legal and political frameworks.

• The FAO Development Law Service and various UN Economic Commissions—notably the Economic Commission for Latin America and the Caribbean (http://www.eclac.cl) and the Economic and Social Commission for Asia and the Pacific (http://www.unescap.org)—have taken the lead in building legal capacity for water-related issues, both within nations and internationally. In addition, the International Court of Justice has decided on one case regarding international waterways, and the Permanent Court of Arbitration has recently broadened its expertise to include the arbitration of environmental disputes.

3. For a summary of PCCP's actions and recommendations to the Ministerial Conference of the Third World Water Forum in May 2003, see PCCP's *From Potential Conflict to Co-operation Potential: Water for Peace* brochure at http://www.unesco.org/water/wwap/pccp/pdf/brochure_2.pdf

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