

Program on Negotiation 2007 Summer Fellowship Report
Preventing and Resolving Transboundary Water Conflicts
September 2007

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The field of water conflict resolution is gaining more prominence as the earth's population soars, development rates continue unchecked, and climate change threatens the stability of the water supply in many places. As these growing pressures challenge our traditional relationships to freshwater, it is becoming increasingly necessary to anticipate where conflicts may arise over sharing water resources. In addition to anticipating and preventing new conflicts, it is vital to focus on those conflicts that already exist, and to work towards their resolution to ensure human security and ecosystem integrity.

UNESCO's *From Potential Conflict to Cooperation Potential* (PCCP) project is a high-level approach that facilitates multi-level and interdisciplinary dialogues in order to foster peace, cooperation, and development related to the management of shared water resources. PCCP achieves this goal by convening expert meetings, publishing and disseminating instructional literature, and organizing training courses in vulnerable regions of the world. Many organizations focus on conflict resolution, yet PCCP focuses on all phases: anticipation, prevention, and resolution.

Thanks to the generous support of PON, I had the opportunity to join PCCP this past summer and assist them with several exciting projects. These projects expanded my understanding of the nexus between transboundary waters and conflict resolution. Over the course of three months I delved into such topics as transboundary aquifers, water conflict

resolution in the Middle East, climate change in Darfur, and conflict prevention in the Mono River basin.

Transboundary aquifers

Resolving disputes over transboundary aquifers is a relatively new focus for international organizations. Aquifers are underground layers of permeable rock, sediment, or soil that yields ground water for wells or springs. The Association of Hydrogeologists and UNESCO's International Hydrological Program established the Internationally Shared (transboundary) Aquifer Resource Management (ISARM) Program in 2000. Since then, the program has completed inventories of transboundary aquifers in the Americas and Africa, and several ISARM case studies have commenced. In order to help the Member States tackle the social, economic, cultural, and environmental aspects of their shared aquifers, ISARM convened a meeting in June to develop guidance for the Member States. In preparation for this meeting, I drafted a section of the guidelines on competition for the water of the shared aquifers. This section is designed to extrapolate information on the interactions between the countries sharing the aquifer, whether those interactions are based on competition or cooperation, and the efforts that have been made to prevent the development of competition and improve existing cooperation.

Water conflict resolution in the Middle East

Some argue that the political conflicts of the Middle East must first be resolved before water issues can be addressed. However, population growth combined with increased standards of living mean that authorities do not have the luxury of waiting to resolve water conflicts. In response to this increasingly acknowledged responsibility, UNESCO is working to publish a

book on solutions to the main water conflicts in the region: the Golan Heights between Syria and Israel, the Wazzani Spring between Lebanon and Israel, the mountain aquifer system and its associated infrastructure of the West Bank, Wadi Gaza in the Gaza strip, and the Euphrates and Tigris Rivers shared by Turkey, Iraq, and Syria. I had the opportunity to work with the author to finalize this publication. In collaboration with UNESCO's publications office, I tackled issues such as the languages of publication, updated the book's content, and managed the feedback and comments from the book's reviewers.

Climate change in Darfur

The role climate change plays in exacerbating conflicts and causing fragile communities to fight over their dwindling resources remains unclear. However, practitioners and academics are quickly realizing the significance of this role and the importance of understanding how climate change will destabilize regions around the globe. In an effort to highlight the impact of climate change on the communities in Darfur, I wrote a short article that will be published in the next World Water Development Report. Research for this piece expanded my own understanding of how Darfur's descent into chaos was impacted by a change in climatic patterns that reduced the amount of land available for grazing and farming, and caused the Arab herders in the north to move southward in search of water on the land of the African farmers. The situation in Darfur exemplifies the disastrous effects climate change could have on unstable societies across Africa that are experiencing the same conditions that were present in Darfur before its crisis began. Preventing and resolving conflicts in these regions now necessitates a multifaceted comprehension of climate change.

Conflict prevention in the Mono River basin

PCCP has recently developed a conflict prevention procedure based on joint preparation of case studies by the countries that share the body of water in question (“riparians”). PCCP case studies explain a variety of important characteristics, such as the status of water sharing between riparians, levels of cooperation and conflict, and geographic distribution. These case studies involve high-level players, governmental advisers, and a host of experts and stakeholders. Their preparation offers a forum for open discussions about data, positions, interests, and unilateral and multilateral objectives. The paramount objective of these studies is to foster cooperation among the riparian states and build relationships that will improve transboundary water management.

The first case study was successfully conducted in Lake Titicaca between Bolivia and Peru in 2005. PCCP plans to replicate this procedure in other unstable, shared bodies of water and thus asked me to identify some potential basins at risk in western Africa, where they will implement the next case study. The only criterion was that the basin had to be shared by at least two countries of UNESCO’s regional office based out of Accra, Ghana. Countries managed by this cluster office include Benin, Côte d’Ivoire, Ghana, Nigeria and Togo. I researched the seven basin and/or lagoon systems that are shared by at least two of these countries to determine where conflict prevention was the most needed. After subsequent consultations with the Accra office, we agreed on the Mono River basin as the most appropriate for a case study.

The Mono River case study offers the potential to greatly enhance cooperation between the two riparian countries, Togo and Bénin. Through agreement over the sharing of hydropower from two dams on the Mono River, these two countries have already demonstrated their desire and ability to work together. Nevertheless, increasing pollution and growing demand for the water necessitates a more comprehensive approach. There is a crucial need to extend the existing

cooperation to management of the whole basin, including the system of lagoons in Togo and Bénin regulated by the Mono River.

I next drafted guidelines that will be first reviewed by the Accra office and then passed on to the teams conducting the case study. These guidelines are important to ensure that the case study authors jointly address a host of issues, some of which may be controversial, volatile, or even impossible to agree on. Topics to be covered include the history of water management between the two countries, the current status of bilateral cooperation, why they have not previously developed a basin-wide management plan, judicial and institutional details, and a systems analysis that engages the technical community.

In conclusion

The above projects comprised most of my work during the three months I spent with PCCP. While occasionally mundane, most of my work was quite engaging and informative. By exposing me to the challenges and opportunities surrounding water conflict prevention and resolution, this internship increased my awareness of the tools available for effective transboundary water dispute resolution.