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GCSP Policy Brief Series

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Water, Globalization, and Global Security

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Review and Critique

Water is perhaps most frequently viewed in development terms. Yet, it is also a serious and multifaceted security issue. Helga Haftendorn captured very nicely the significance of water to security when she stated that "water is the foundation of human life, is a finite and scarce resource, and is a common and divided resource."[1] Due to its scarcity, its necessity for life and good health, and for sustained development, fresh water is likely to be the source of insecurity, tension, and perhaps conflict in the coming decades. Effectively managing human, economic, and ecosystem demands on water resources, as well as those of various regions that are reliant on a single water basin, constitutes one of the major challenges we face today.[2]

Poor water-quality management can lead to severe health problems. For example, lack of access to clean water, as well as bad sanitation, increases people's vulnerability to water-borne diseases, such as hepatitis A and E and cholera. Moreover, since poor water quality can often lead to diarrhea, inadequate water-quality management can also be an indirect cause of malnutrition. Ill health can, in turn, affect people's capacity to engage in productive economic activity, which can ultimately pose a significant problem for a country's capacity to sustain economic growth. This situation represents a major threat to achieving sustainable development.[3] Thus, inadequate water-quality management and allocation represent a threat not only to human security but also to the economic security of developing countries.

One of the most urgent aspects related to water and globalization that Peter H. Gleick[4] highlights in his policy brief is the failure to meet basic needs for clean water, which results in ill health and death. Ensuring safe, reliable, and reasonably priced water and sanitation presents an ongoing challenge. At present, many people still lack access to clean water and basic sanitation. In addition, the cost-effectiveness of water-quality management policies and activities is poor.

Yet, this represents only part of the problem. As Gleick notes, ecological damage resulting from ineffective water management also presents a major challenge. Water ecosystems are essential both for replenishing and purifying water resources that are vital to health and well-being. Yet, many water ecosystems are suffering from the effects of changes in land use, excessive water withdrawals, as well as contamination as a result of pollution.[5] Thus, there is a dire need to find ways to better support essential ecosystems.

Gleick also identifies the risk of subnational and international violence over shared water resources. The highly publicized dispute between Mexico and the United States over transboundary water management is a case in point.[6] Yet, water conflict is, of course, not limited to this region. In fact, it is increasing in many parts of the world, including the Nile Basin, the Jordan Basin, and the Ganges Basin,[7] often in relation to scarcity or pollution. It

can be local, as well as regional. As populations increase, conflicts over the distribution of water resources among different sectors, as well as between different groups, are likely to increase. For instance, conflict may occur over the use of water, e.g., for consumption, irrigation, and power generation. Conflict may also arise as a result of lack of access to freshwater resources, caused either by an inequitable distribution of water resources or absolute scarcity.

Dilemmas and Our Recommendations

Globalization presents both opportunities and challenges for water management. Developing successful strategies to effectively manage shared water resources is particularly difficult given conflicting interests among various actors, as well as diverse models for water management, insufficient understanding of the risks and benefits of globalization, and varying state institutional capacities around the world. We highlight eight dilemmas related to this issue and eight corresponding recommendations that may contribute to appropriate policy choices.

Since water scarcity and pollution are among the contributing factors of water conflict, governments face the difficult task of balancing increased water use as a result of economic development against the amplified need for water conservation and desalination technologies, which are costly ventures. We suggest that one way to deal with this problem is to encourage transnational technological innovation and cooperation in order to meet growing global demand for water through desalination of seawater. The huge costs involved in large-scale water projects, such as desalination, as well as the construction of dams, is simply unaffordable for many low-income states. Investments by multinationals and governments, provided that there is sufficient governmental oversight, offers a solution to this problem.

Another major challenge facing states and international organizations is to ensure access to clean water, as well as its quality. We suggest that governments, along with international organizations, should increase their commitment to ensuring that water meets adequate health standards. In order to minimize conflicts related to the use of water, governments also need to think seriously about how to avoid depletion and dependence on underground water resources. In our view, policy makers should prevent the use of underground water for large-scale agriculture and restrict its use for human consumption.

An additional issue that governments face is meeting water-acquisition needs, given the high cost of water transportation. This problem is particularly acute in developing countries, where a great deal of the population is unlikely to have the financial means to acquire water at high prices. A potential solution to this policy problem is to develop the political, economic, and security regulations with which to transport and distribute water at an affordable price.

Finally, some states are confronted with the difficulty of managing both subnational and international conflicts over shared water. In order to prevent both substate and international conflicts over water, states should view water as a basic human need and, as such, as an essential dimension of human security. States must transcend narrow economic and political self-interests in order to better provide for the security of their populations, as well as to avoid conflicts.

Conclusion

While normally perceived as a development and health issue, water is also an important security issue. Since it forms the foundation of human life, is scarce, and is a common resource, water can lead to ill health, death, lack of economic growth, as well as subnational and international conflicts if it is badly managed. We should, therefore, conceive of water management as an essential tool in the provision of human, societal, economic, and transnational security. Our aim has been to highlight some of the issues that need to be resolved in relation to water management, as well as to propose potential solutions to the problems facing governments in this area.

References

[1] H. Haftendorn, "Water and International Conflict," paper presented at the 40th Annual Convention of the International Studies Association, Washington, DC, February 16-20, 1999, p.1.
[2] The Economic and Development Review Committee, Organization for Economic Cooperation and Development, *Improving Water Management: Recent OECD Experience* (OECD, 2003).
[3] *Ibid.*
[4] For the brief in its entirety, please see the policy brief series as a part of the Geneva Centre for Security Policy's Program on the Geopolitical Implications of Globalization and Transnational Security at http://www.gcsp.ch/e/publications/Globalisation/index.htm.
[5] For further information, see the World Health Organization's website: http://www.who.int/heli/risks/water/water/en/index.html. Also see the World Health Organization's report "Ecosystems and Human Well-being: A Health Synthesis," 2005, available at http://www.who.int/globalchange/ecosystems/ecosystems05/en/index.html.
[6] A. Peshard-Sverdrup and M. Bishop, "U.S.-Mexico Transboundary Water Management: The Case of the Rio Grande/Rio Bravo: Recommendations for Policymakers for the Medium and Long Term," Center for Strategic and International Studies, January 2003.
[7] Haftendorn, *op. cit.,* note 1.