



THE ROLE OF WATER STRESS IN INSTABILITY AND CONFLICT

Water stress—the lack of adequate fresh water—is a growing factor in the world’s hot spots and conflict areas, many of vital interest to the United States. With escalating global population and the impact of a changing climate, the challenges of water stress are spreading and becoming more pronounced. It is critical to understand the mechanisms through which water factors into violence and conflict.

The growing role of water stress is found across much of Northern and Sub-Saharan Africa, the Middle East, South America, and other areas of the world where fresh water is no longer meeting the needs of burgeoning populations and urbanization. It can serve as a factor across the spectrum of conflict—civil unrest and localized violence, terrorism, insurgencies, and civil wars. Moreover, as an instrument of coercion, water stress can be exploited by non-state actors, violent extremist organizations (VEOs), insurgents, and other belligerents. By controlling access or availability of water, these groups can gain power, recruit, and advance their goals. Although water has never been a cause of outright war, it is clear that water stress can be central to inciting violence below that threshold.

As water stress is predicted to expand to new areas and intensify in those already stressed, it is likely to become a more prominent non-traditional security challenge. Without action there is a growing risk that fragile or feckless governments will be unable or unwilling to respond as water stress grows, opening the door to instability and even violent conflict. It is then that an isolated or localized event may escalate and threaten the national interests of the United States or its partners and allies.

MAJOR FINDINGS

When examining violence, conflict, and instability in areas of the world experiencing water stress, we see water as a factor across a full spectrum of conflict:

- **Decreased water availability can be a principle cause of civil unrest and localized violence.** When combined with other negative factors such as poor governance, poor water management, or pre-existing social tensions, civil unrest and localized violence can escalate and threaten local governments and U.S. interests, including U.S. citizens abroad, businesses, and supply chains.
- **Water can bring nation states to the negotiating table for talks across a broad range of issues, with water access being a key bargaining chip and a principal objective.**
- **Actual or perceived changes to current or future shared water resources can add to tensions between upstream and downstream states, but this has been and remains unlikely as a singular cause for state-on-state war.**

Water stress can be exploited by non-state actors, violent extremist organizations (VEOs), insurgents, and other belligerents. These groups can use control of access to or availability of water to gain power, recruit, and advance their goals. In this manner, water infrastructure can take on a strategic value.

In many areas of the world, water stress is the result of poor management, rather than absolute scarcity.

Water stress can trigger destabilizing secondary effects—disruption of livelihoods, food or energy shortages, mass migration—which can lead to conflict.

Globally, predicted changes in precipitation patterns, combined with burgeoning populations and changing demographics, will increase water stress across many nations, with three associated growing security challenges:

- **There will be more and widespread occasions of civil unrest and localized violence, with greater urgency to change perceived governmental inadequacies.** In extreme cases, the disenfranchised will look increasingly to non-traditional entities for solutions, which could include VEOs. This will manifest as increased threats to U.S. interests and citizens abroad.
- **As the availability of water decreases, it will become a more valuable tool in the operational strategy for belligerents as well as a larger bargaining chip in diplomatic negotiations.**
- **Less fresh water will likely add to tensions among neighbors sharing river basins, and finding mutually acceptable diplomatic solutions will become more challenging.**

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RECOMMENDATIONS

Security elements of the United States government should regard global water stress as a growing national security concern. Water stress should be considered an intensifying factor in instability, conflict, and crises that will impact U.S. national interests abroad and likely lead to future U.S. military responses.

In areas of strategic interest to the U.S. and our allies, the United States government should expand diplomatic efforts, investment, and technical leadership in the mitigation of water stress.

DIPLOMACY

- **Expand diplomatic efforts to prevent and mitigate conflicts among countries that share water resources. This will become increasingly important as water stress worsens.** Encourage adaptive and inclusive basin-wide agreements to manage transboundary water resources.
- **Increase U.S. engagement in the development and deployment of water management practices, technologies, and innovations.** Share the effective United States methods to mitigate water stress and address its challenges, including advances in agricultural productivity and energy efficiency.
- **Incentivize private-sector engagement to spur innovation and improve water management practices. Solutions won't come from government alone.** Private-sector innovations for managing water, forecasting, and improving supply or demand should be incentivized through grants, public-private investment, and other mechanisms.

SPECIFIC INVESTMENT AREAS

- **Develop a common foresight tool to identify areas of emerging water stress, with a focus on the potential for unrest.** While there are systems and processes in place at USAID and other agencies to monitor and forecast water stress, track flows, and predict droughts, there is no standard that also addresses the potential for violence and conflict.
- **Develop stronger communications nodes and strategies for alerting the interagency and the international community to the potential for conflict or violence in water-stressed areas.** Just as the Famine Early Warning System uses standardized communication and transmission nodes to relay information on food security vulnerabilities, USAID and others should expand models of water stress to incorporate the risk of conflict or violence.

THE DEPARTMENT OF DEFENSE

- **Integrate water stress into strategic-level documents and guidance, such as the National Military Strategy and National Defense Strategy, Geographic Combatant Command theater campaign plans, conflict assessments, and other material.**
- **Incorporate regional water stress information and impact into the U.S. strategy to counter violent extremism.**
- **Designate an office within the Office of the Secretary of Defense to be responsible for global water stress and to coordinate across the interagency on water-stress issues.**

ABOUT CNA CORPORATION

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