



CASE STUDY 3.1

THE WATER, PEACE, AND SECURITY PARTNERSHIP IN ACTION IN MALI

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The lack of safe and adequate supplies of water poses significant challenges to socioeconomic development and human health. Currently, one-third of the world's population lives in areas with high levels of water stress and 50 million people are affected by droughts. In the future, water crises are likely to be exacerbated by population growth, urbanization, and the effects of climate change. Water insecurity is not only a threat to food production and livelihoods, it also creates societal tensions which can spill over into conflicts.

The Water, Peace, and Security (WPS) partnership was founded in 2018 to address increasing levels of water insecurity in multiple regions of the world. The WPS partnership analyzes water-related conflicts and undertakes advocacy and outreach efforts on mitigation mechanisms.⁶³

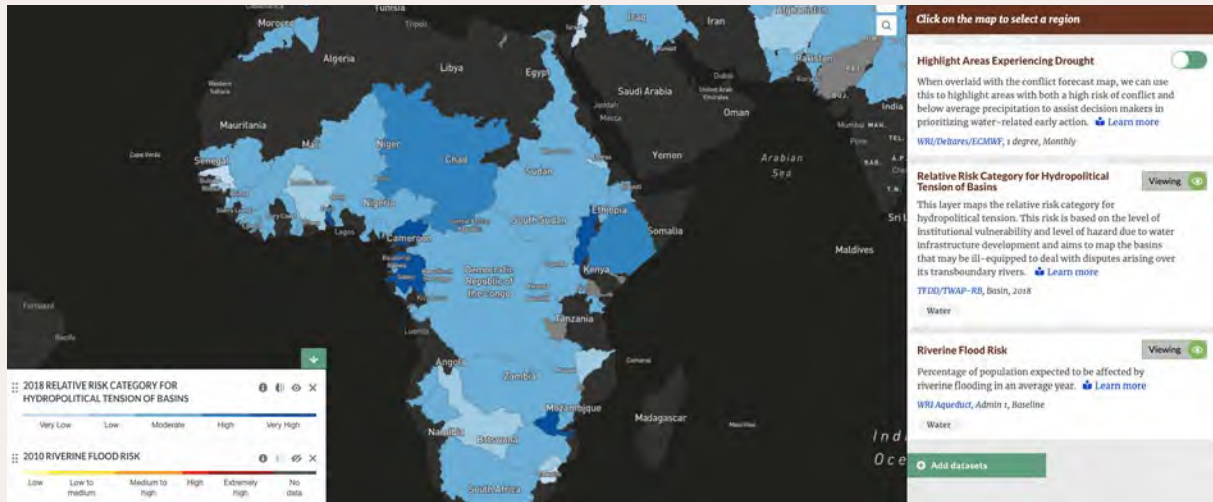
The WPS partnership uses cutting-edge technologies such as big data, artificial intelligence, remote sensing, and other tools to generate a data-driven understanding about the risks of water-related security threats. These technologies provide policy makers with warning signals and decision support tools that indicate both where and when risks are increasing, and how they might be addressed. The WPS uses a machine learning methodology to forecast water-driven conflict up to a year in advance using a random forest model. The forecasts are accessible via a digital map, which allows the user to examine conflicts instigated by multiple hydrological factors, such as floods, water pollution and seasonal variations (FIGURE 3.1).

The information generated by digital technologies is used by the WPS partnership to reach out to a broad range of stakeholders in governments, international organizations, and civil society to enhance their awareness and understanding of water-related security threats. This includes trainings and capacity development on mitigating current and future crises and facilitating dialogue on water cooperation and peacebuilding. Such workshops are preventive diplomacy in action on the basis of the risk analysis and early warning.

For example, in July 2019, WPS organized a training workshop for Malian stakeholders in Bamako (FIGURE 3.2) to build their capacity to use the information and models generated by WPS. The participants included experts from governmental organizations, such as the Niger River Basin Agency and the Directorate General of Civil Protection, as well as representatives of NGOs such as the Malian Red Cross. The focus of the workshop was water and security in the Inner Niger Delta, a fertile area which supports livelihoods of two million people. Through the insights provided by the WPS methods and tools, participants developed skills in conflict-sensitive planning and environmental cooperation and identified policy responses to the linkages between water scarcity and security in the Inner Niger Delta.

FIGURE 3.1: WATER, PEACE, AND SECURITY MAP SHOWCASING TRANSBOUNDARY RIVER BASINS

Relative hydro-political tensions in basins that may be ill-equipped to deal with disputes arising from the transboundary nature of rivers.



Source: WPS 2021.

FIGURE 3.2: WATER, PEACE, AND SECURITY ANALYSIS WITH MALIAN EXPERTS DURING WPS TRAINING IN 2019.

Source: WPS 2021.