



TRANSBOUNDARY WATERS

A view of Iguazu Falls, on the border between Brazil and Argentina. UN Photo/Mark Garten



UNITED NATIONS



An aerial view of the Niger River near Gao, Mali. UN Photo/Marco Dormino

Transboundary waters – the aquifers, and lake and river basins shared by two or more countries – support the lives and livelihoods of vast numbers of people across the world. In an era of increasing water stress, how we manage these critical resources is vital to promoting peaceful cooperation and sustainable development.

Depleted and degraded transboundary water supplies have the potential to cause social unrest and spark conflict within and between countries. To deal with the impacts of climate change combined with the demands of increasing populations and economic growth requires a supranational, integrated approach to transboundary water resource management based on legal and institutional frameworks and shared benefits and costs.

Challenges and opportunities

The 263 transboundary lake and river basins cover almost half the Earth's surface. 145 States have territory in these basins, and 30 countries lie entirely within them. There are approximately 300 transboundary aquifers, helping to serve the 2 billion people who depend on groundwater. Cooperation is essential, especially in areas vulnerable to the impacts of climate change and where water is already scarce. Wetlands around lakes and floodplains that straddle national boundaries provide essential ecosystem services to the surrounding populations, such as food provision, barriers against flooding and the natural processing of pollution.

Overexploitation of lakes, rivers and aquifers can jeopardize these ecosystem services and have dire consequences for the reliability and sustainability of water

supplies, which can cause international tension if those impacts are felt more keenly on the other side of a border. Depleted aquifers can also allow saltwater intrusion in coastal areas and increase the concentration of arsenic and fluoride and other toxic substances.

Even an ostensibly positive action can have a negative reaction. For instance, a unilateral move by one country to adapt to climate change by building a dam could drastically reduce a river's flow downstream in another country. The way in which transboundary waters are managed affects sustainable development within and beyond a country's borders. Therefore, the various heavily water-dependent
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sectors – agriculture, industry, energy, navigation and water supply and sanitation – need to cooperate on a supranational level. For example, efficient, cooperative management and development of shared waters and adjacent flood plains can boost food and energy production, helping to reduce poverty and control rural-urban migration.

Transboundary water management creates benefits for everyone to share: international trade, climate change adaptation, economic growth, food security, improved governance and regional integration.

There are many reasons to be optimistic. Since 1948, there have been 37 incidents of acute conflict over water, while approximately 295 international water agreements were negotiated and signed in the same period. This includes the UNECE Water Convention, a legal framework for transboundary water cooperation worldwide, initially only open to countries in the pan-European region but globally available since 2003. However, around two-thirds of the world's transboundary rivers do not have a cooperative management framework.



Facts and figures

- There are 263 transboundary river basins and approximately 300 transboundary aquifers. ([UNECE/UNESCO 2015](#))
- 145 states have territory within transboundary lake or river basins, and 30 countries lie entirely within them. ([UNECE/UNESCO 2015](#))
- Since 1948, history shows only 37 incidents of acute conflict over water, while during the same period, approximately 295 international water agreements were negotiated and signed. ([UNECE/UNESCO 2015](#))
- Around two-thirds of the world's transboundary rivers do not have a cooperative management framework. ([SIWI](#))

Find out more:

UNECE: [Water Convention](#)

UNECE (2016): [The global opening of the 1992 Water Convention](#)

UNECE: [How to adapt water management to climate change in transboundary basins?](#)

UN Environment (2016): [Transboundary Waters Systems – Status and Trends: Crosscutting Analysis](#)

UNESCO (2012): [World Water Development Report 2012: Managing Water under Uncertainty and Risk](#)
