

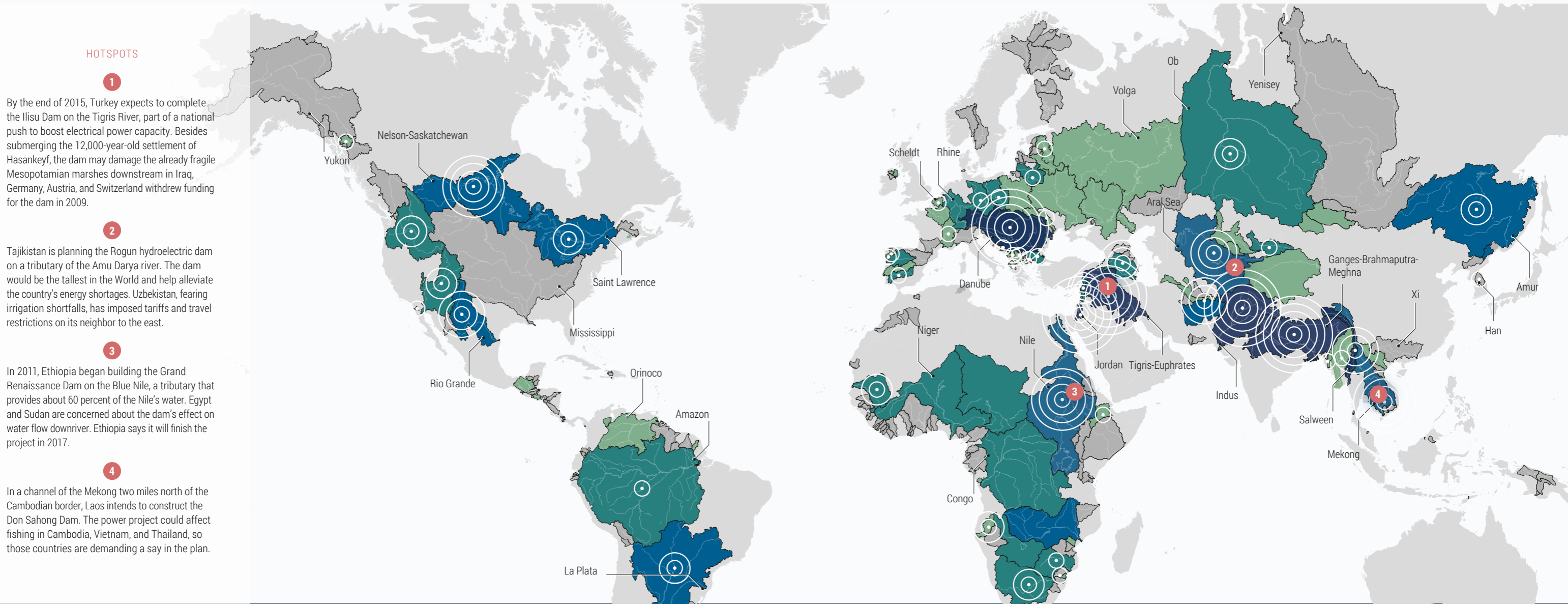
HEAT MAP

Where is the highest risk of water conflict?

WATER: A map on conflict and cooperation

This map shows almost 2,000 incidents related to conflict and cooperation in transboundary basins that took place between 1990 and 2008. The coloured circles include an additional 200 disputes over resources other than shared water resources. Overall, there were approximately twice as many cooperative events as conflictual events during this period. Circle size does not automatically translate into conflict danger, as the circles illustrate the

total number of events with varying degree of hostility. However, when external events overwhelm institutional coping mechanisms, conflict becomes dangerous (Wolf et al. 2003). This is reflected in the hotspots on the map, which coincide with regions where resilient conflict resolution mechanisms are absent. In the Danube River basin, for example, conflictual events were mitigated by the presence of strong cooperation incentives, embedded in the process of European integration (Pohl et al. 2014).



HOTSPOTS

1

By the end of 2015, Turkey expects to complete the Ilisu Dam on the Tigris River, a part of a national push to boost electrical power capacity. Besides submerging the 12,000-year-old settlement of Hasankeyf, the dam may damage the already fragile Mesopotamian marshes downstream in Iraq, Germany, Austria, and Switzerland withdrew funding for the dam in 2009.

2

Tajikistan is planning the Rogun hydroelectric dam on a tributary of the Amu Darya river. The dam would be the tallest in the World and help alleviate the country's energy shortages. Uzbekistan, fearing irrigation shortfalls, has imposed tariffs and travel restrictions on its neighbor to the east.

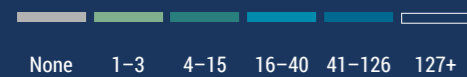
3

In 2011, Ethiopia began building the Grand Renaissance Dam on the Blue Nile, a tributary that provides about 60 percent of the Nile's water. Egypt and Sudan are concerned about the dam's effect on water flow downriver. Ethiopia says it will finish the project in 2017.

4

In a channel of the Mekong two miles north of the Cambodian border, Laos intends to construct the Don Sahong Dam. The power project could affect fishing in Cambodia, Vietnam, and Thailand, so those countries are demanding a say in the plan.

The color of each international river basin indicates the total number of interactions there from 1990 to 2008.

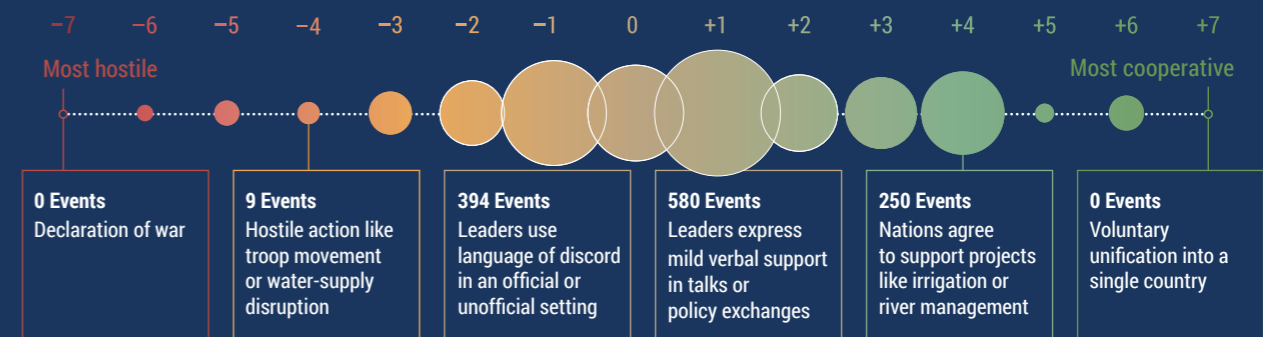


Circle size indicates the number of hostile events in each basin.



EVENTS BY INTENSITY

The researchers graded each exchange on a 15-point scale. Collaborative interactions outnumber hostile ones.



Map reproduced from the June 2014 issue of Popular Science courtesy of Katie Peek. Data visualization by Pitch Interactive.

Map based on the Transboundary Freshwater Dispute Database by the Department of Geosciences, Oregon State University.