

Map Room

ASIA'S WATER WARS

BRAHMA CHELLANEY

Asia faces a dilemma. The continent has the lowest global per capita freshwater resources, less than half the global annual average of 222,480 cubic feet per head. At the same time, Asia has the fastest growing demand for water in the world. Asia can in no sense remain the engine of global economic growth without addressing its water crisis.

In an increasingly water-stressed Asia, the struggle for water is escalating political tensions and intensifying the impact on ecosystems. The water situation will worsen in the fastest growing Asian economies as well as in less developed countries where fertility rates remain high. In many Asian countries, decisions about where to place new manufacturing or energy plants are increasingly constrained by inadequate local water availability. The World Bank has estimated the economic cost of China's water shortages at 2.3 percent of its GDP. China, however, is not yet under "water stress"—a term defined as the availability of less than 60,000 cubic feet of water per person per year. But already water-stressed economies, from South Korea to India, are paying a higher price.

It is against this background that water wars are being waged between competing states in several regions. Tactics include building dams on international rivers or, if the country is located downstream, resorting to coercive diplomacy to prevent such construction. In the case of Sino-Indian relations, water is becoming a key security issue and a potential source of serious discord. China,

having established hydro-supremacy by annexing the starting places of multiple major international rivers, is now pursuing an increasingly ambitious dam-building program on the Tibetan plateau, which threatens to diminish international river flows into India and other states that share these same upland water sources.

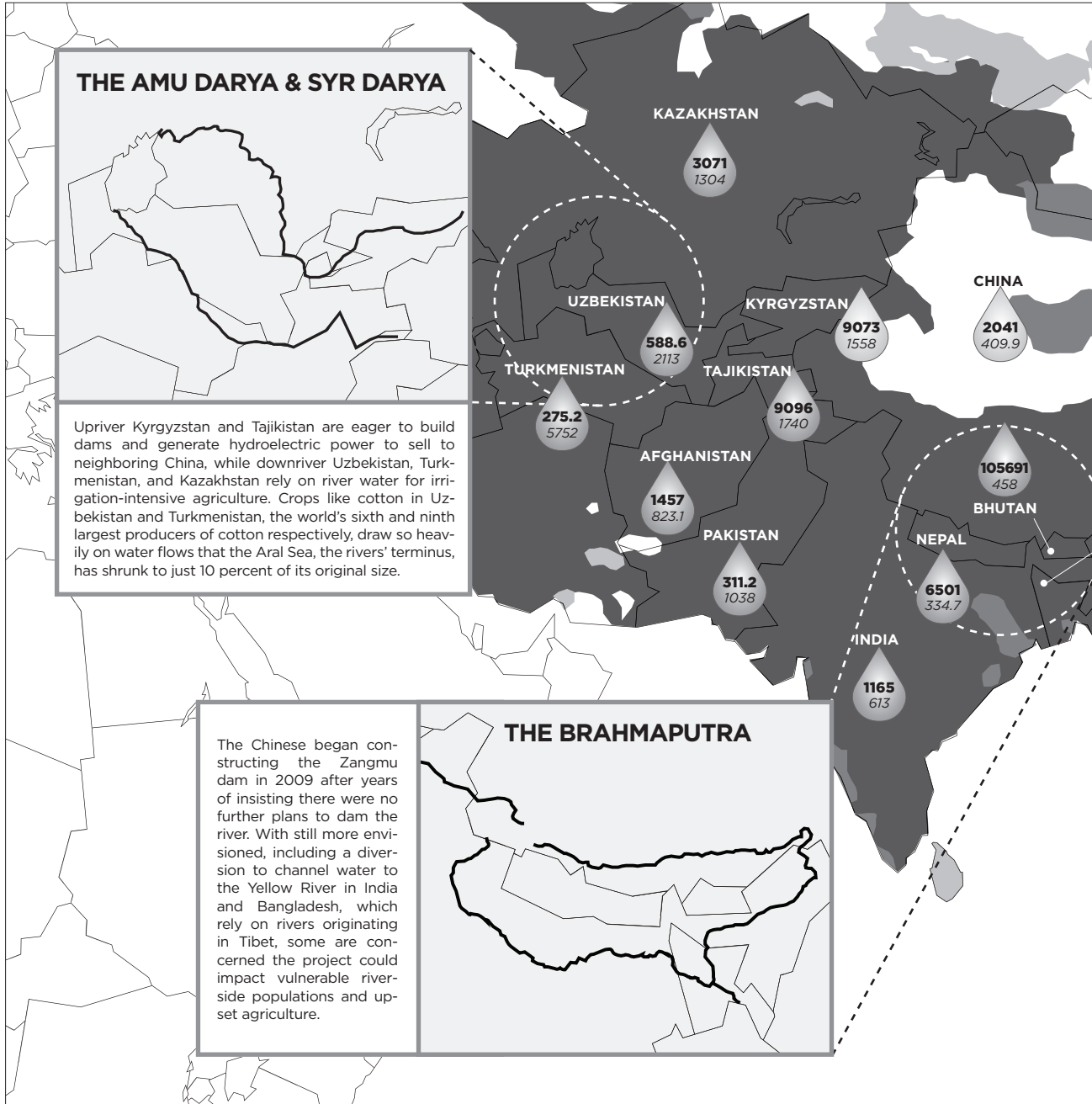
Averting water wars demands rules-based cooperation, water sharing, and dispute settlement mechanisms. China, however, is working to get its hand on Asia's water tap by constructing an extensive upstream hydro-infrastructure. China does not have a single water-sharing treaty with any of its neighbors. India, by contrast, has water-sharing treaties with its two downstream neighbors—Pakistan and Bangladesh, covering the Indus and Ganges Rivers and setting new precedents in international water law. In the 1996 Ganges Pact, India guaranteed Bangladesh an equal share of the downstream flows during the difficult dry season. The 1960 Indus Treaty remains the world's most generous water-sharing arrangement. India agreed to set aside 80 percent of the waters of the six-river Indus system for Pakistan indefinitely, in the hope that it could trade water for peace.

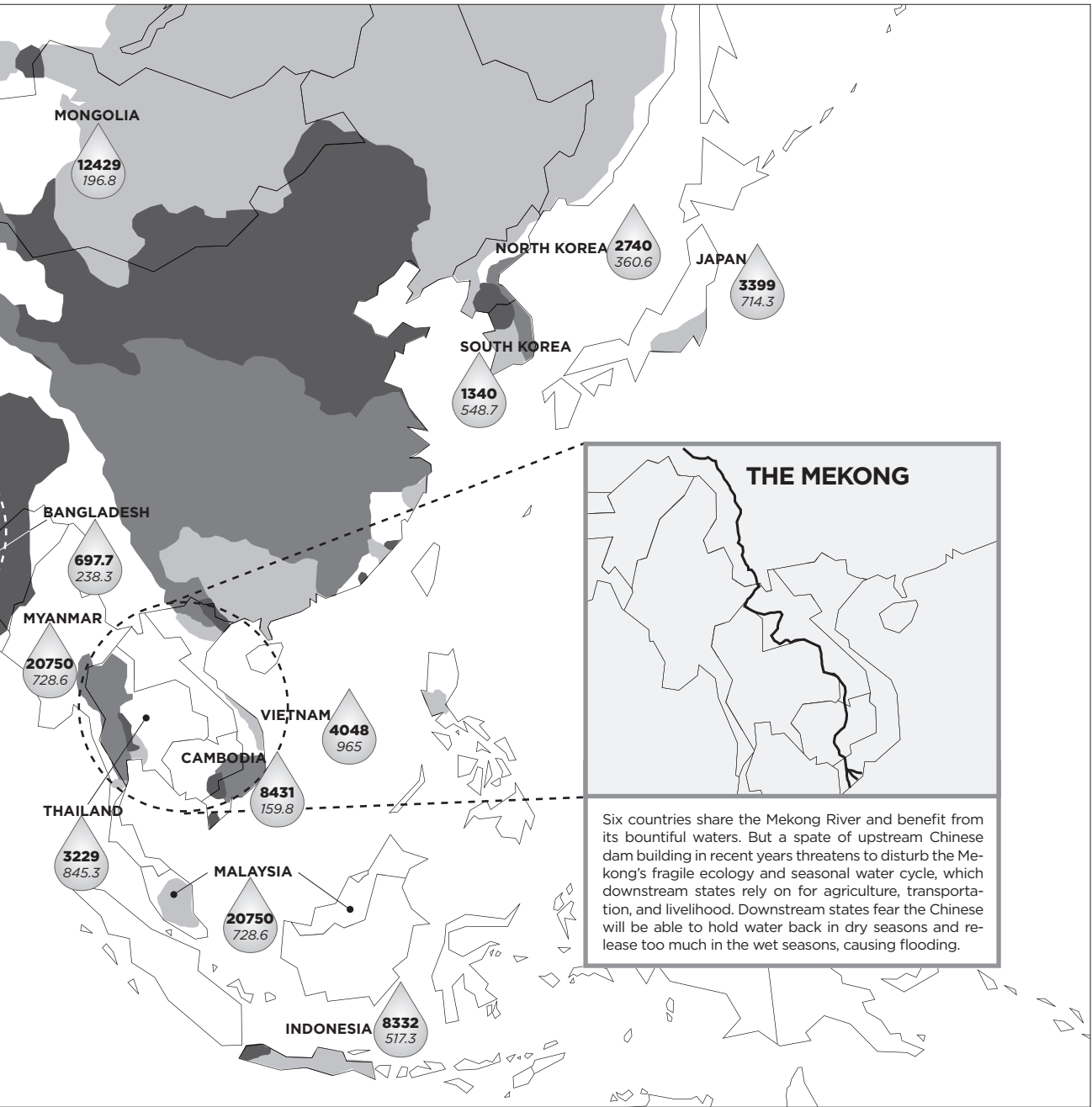
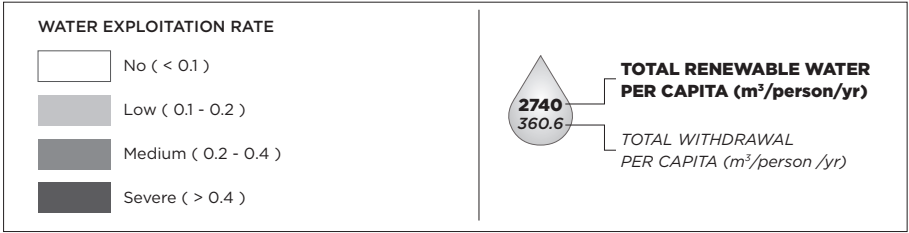
A central issue facing Asia is the need to persuade China's leaders to institutionalize cooperation with neighboring states on shared resources. Given China's centrality in Asia's water map, its rush to build more giant dams, promises to upset relations across Asia, imperiling prospects for any rules-based Asian water regime.

*Brahma Chellaney is the author of *Water, Peace, and War: Confronting the Global Water Crisis* (Rowman & Littlefield, 2013) and the earlier book, *Water: Asia's New Battleground*, which won the 2012 Bernard Schwartz Award.*

ASIAN WATER WOES

Asia's water resources are coming under increasing stress. *World Policy Journal* examines three areas where competition over water resources is creating the greatest potential for interstate conflict. The bold numbers in the water drops depict total annual renewable water resources per capita, while the non-bold numbers represent total annual withdrawal per capita. The shading on the map represents the severity of water exploitation, where darker regions represent the more severe areas of exploitation.





Compiled by Alexander Hobbs and Konrad Putzier
 Sources: World Bank, Food and Agriculture Organization of the United Nations, Brahma Chellaney
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