

# **China's Global Quest for Resources and Implications for the United States**

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## **Introduction**

China's quest for resources to fuel its continued rapid economic growth has brought thousands of Chinese enterprises and millions of Chinese workers to every corner of the world. Already China accounts for approximately one-fourth of world demand for zinc, iron and steel, lead, copper, and aluminum. It is also the world's second largest importer of oil after the United States. And as hundreds of millions of Chinese continue to move from rural to urban areas, the need for energy and other commodities will only continue to increase.

No resource, however, is more essential to continued Chinese economic growth than water. It is critical for meeting basic human needs, as well as demands for food and energy. As China's leaders survey their water landscape, the view is not reassuring. More than forty mid to large-sized cities in northern China, such as Beijing and Tianjin, boast crisis-level water shortages.<sup>i</sup> As a result, northern and western cities have been drawing down their groundwater reserves and causing subsidence, which now affects a 60 thousand kilometer area of the North China Plain.<sup>ii</sup> According to the director of the Water Research Centre at Peking University, Zheng Chunmiao, the water table under the North China Plain is falling at a rate of about a meter per year.<sup>iii</sup> Meanwhile, industrialization and urbanization have seriously deteriorated the quality of underground water: over 90 percent of groundwater is polluted by urban sewage, refuse, and industrial waste.<sup>iv</sup> Estimates are that 400,000 people are driven from their homes annually as a result of lack of water.<sup>v</sup> Ten provinces in China—including Jiangsu, Shandong, Hebei, and Henan—now sit below the World Bank's

water poverty level of one thousand cubic meters per person per year, and these provinces account for 45 percent of the mainland's GDP, 40 percent of its agricultural output and more than half of its industrial production. Even traditionally water-rich Guangdong is now near the water poverty line.<sup>vi</sup>

Beijing recognizes the challenge and is undertaking a wide range of measures to address the emerging crisis, including the planned construction of several large-scale desalination plants along the eastern seaboard, intra-provincial river diversion projects, additional wastewater treatment plants, and increased water efficiency and conservation measures. Experiments with water pricing have also been underway for decades. Yet a number of factors, such as corruption, lack of human and financial resources, and a weak policy environment have often undermined fulfillment of Beijing's goals. A preference for large projects also hampers effective planning. For several years, for example, Beijing has drained water from neighboring Hebei province, forcing sacrifices on one water-poor area for the sake of another. In the process, farmers in Hebei were forced to switch from rice to corn in order to save water.<sup>vii</sup> Hebei has complained that with merely stronger efficiency and conservation measures, Beijing would be able to manage its own water needs more effectively.

None of these policies—taken alone or collectively—has been sufficient to address the challenge at hand. As a result, China has “gone out” in search of water. While China’s “go out” strategy does not formally embrace water as a strategic resource, China’s search for food and land in Southeast Asia, Latin America, and Africa, as well as its regional hydropower projects and trans-boundary water policies, reflects the country’s pressing scarcity of water. And, as with other aspects of China’s go out strategy, China’s approach has set off some alarm bells in the region, as well as among other resource-rich developing countries.

## River Diversions and Dams

Several of Asia’s longest and most important rivers begin in the Himalayas and the Tibetan Plateau, and China is a central player in many of the controversies surrounding shared water resources in Central, South, and Southeast Asia. Several of these conflicts, such as those centered on the water resources of the Mekong, Irtysh, and Brahmaputra Rivers are raising regional tensions as China develops plans for its upstream reserves that will have dramatic impacts on the lower reaches. While there are negotiating mechanisms in place for most of these shared resources, the power dynamic means that satisfactory resolution continues to elude the downstream countries. China is one of only three countries, along with Burundi and Turkey, not to sign onto the 1997 United Nations Convention on the Law of Non-Navigational Uses of International Watercourses. It rejects the idea of national integrity, which asserts that states have the right not to be adversely affected in their development potential by activities of the upstream riparian countries. Instead, Beijing asserts its sovereignty: the right to harness the potential of national resources.<sup>viii</sup> As a result, a number of countries that share trans-boundary water resources with China, including India, Vietnam, Cambodia, Laos, Thailand, and Kazakhstan are engaged in ongoing efforts to bring China to the negotiating table over issues such as water flow, water quality, and water allocation.

In his written testimony before this commission, Brahma Chellaney details Beijing’s expansive and ongoing drive to “corner the resources” of the Mekong, Yarlung Tsangpo/Brahmaputra, and Irtysh Rivers through dams and diversions. Chinese activities with regard to each river pose a specific and unique set of political and economic challenges, but all speak to a relative reluctance by China to consider the interests of its downstream neighbors. Dam building for China, moreover, will remain a priority. In 2010, Chinese water expert Zhang Boting stated, “the Twelfth Five Year Plan calls for greater use of hydroelectric power because for a variety of reasons during the Eleventh Five Year Plan, China only completed two-thirds of its planned hydroelectric projects.”<sup>ix</sup> In addition, dam building is a big business for Chinese state power companies. According to the International Rivers Network, China has about three hundred hydropower projects in seventy countries.<sup>x</sup> Such projects are often part of China’s vast “aid for trade”

system, in which China develops large-scale infrastructure in developing countries at low costs and is repaid in natural resources.

Pressure on Beijing to modify its plans and behavior is mounting, however, both within China and from the international community. With regard to the Mekong River, for example, pressure from the Mekong River Commission, as well as negative publicity, led Beijing in 2010 to agree to release more information on inflows and outflows from its cascade of dams on the upper reaches of the river. Pressure from local and international NGOs reportedly also contributed to China's state owned power company Sino-Hydro developing a more serious approach to environmental impact assessments based on international standards.<sup>xi</sup>

Recent events in Kazakhstan's negotiations with China over the Irtysh River also suggest that external pressure may be effective in certain cases. China began diverting water in the 1990s from the Irtysh—upon which more than one-quarter of Kazakhs depend for their livelihood—to irrigate its agriculture and supply water to the Karamai oil fields. (By 2020, China has plans to double the volume of water diverted to one billion cubic meters, and local officials have been pushing forward aggressively to develop water intensive industries such as cotton and petroleum production, as well as increasing agricultural production in wheat. The development of the region corresponds with plans by Beijing to move Han Chinese into Xinjiang.)

In response, Kazakhstan raised concerns about not only a growing shortfall in the river's water resources but also rising pollution. The river carries nitrates, petroleum products, and heavy metals, the concentration of which would increase if flows diminished.<sup>xii</sup> After a series of unfavorable articles about China's water usage in the Kazakh press in 1998, China sat down and negotiated a framework agreement that was signed in 2001. The agreement didn't produce a common understanding concerning the utilization of the river's resources, but in 2006, a Sino-Kazakh consultative commission drafted an agreement to share information about water quality.<sup>xiii</sup> Moreover, in 2007, Russia and Kazakhstan succeeded in raising water usage and water rights from international rivers as a topic for discussion at the Shanghai Cooperation Organization Forum.<sup>xiv</sup> Finally in February 2011, China and Kazakhstan signed an Agreement on Water Quality in Transboundary Rivers. Even more critically, perhaps, the two countries have started preparatory work on the technical aspects of water allocation, which is supposed to be completed by 2014.<sup>xv</sup>

Kazakhstan's apparent relative success in getting China to the negotiating table may result from the country's value to China as a source of copper and, in particular, oil. China now sources around three percent of its oil from Kazakhstan, and its share is expected to grow over time.<sup>xvi</sup> (This suggests that other commodity-rich countries such as Vietnam might consider adopting a strategy of linking access to their commodities or energy to Chinese willingness to negotiate water allocation issues.) Raising the water issue within the context of the Shanghai Cooperation Forum may also have helped to bring pressure to bear on China.

The controversy surrounding China's plans to pursue the western route of the South-North Water Diversion Project, which might also include an effort to divert water from the Brahmaputra, is especially heated. There is little tradition of formal Sino-Indian cooperation on trans-boundary water issues, other than a 2002 Memorandum of Understanding to share data on the water level, discharge and rainfall on the upper reaches of the Brahmaputra from three Chinese sites with the Indian Water Ministry. According to this MOU, the Chinese must also notify the Indian Water Ministry in advance of any plan to divert water from the Brahmaputra.<sup>xvii</sup>

An overall lack of trust and transparency between the two countries, however, means that suspicion of Chinese intentions remains rife within India.<sup>xviii</sup> Opposition to both the South to North River Diversion project and a potential diversion of water from the Brahmaputra, moreover, is arising not only from India but also from Chinese officials, scientists, and netizens. In early October, 2011, China's Vice Minister of Water Resources Jiao Yong stated that China had no plans to divert the Brahmaputra, citing "technical difficulties, environmental impact, and relations

with the neighboring countries.”<sup>xix</sup> In August 2011, the Chinese NGO Green Earth Volunteers organized a discussion among Chinese scientists on the project. The scientists articulated a number of reasons why the project should be stopped: earthquakes and geological disasters on the Tibetan Plateau; numerous points along the river don’t have enough water to be diverted into the Shuotian Canal; the canal would change the entire distribution of water across China, particularly in the South West so that existing dams and power stations would end up lying idle; and the project would exacerbate problems of drought and local climatic changes.<sup>xx</sup> Moreover, after the Ministry of Water Resources published a series of articles and discussions on the project on their website, Chinese citizens responded with largely negative commentary concerning the likely impact of the project, with some referring to western references such as Jared Diamond and a movie about the U.S. National Parks system.

Still, there is substantial support within China not only for the broader South-North Water Diversion Project but also for the diversion of water from the Brahmaputra. On the nationalistic and popular “Strengthening the Nation” online forum, netizens generally support the project, with some even arguing that cutting off the Yarlung Tsangpo would not only help solve China’s water shortage problems but also “force India to compromise over disputed territory by controlling their water flow.” Moreover, China has already begun damming the Yarlung Tsangpo, without consultation with India or Bangladesh, leading many analysts to worry that any future moves to divert water would similarly be pursued without discussion.

A few Chinese scholars have begun to recognize the costs of Beijing’s single-minded pursuit of economic benefit in its “go out” effort, and its failure to include governance issues as part of its overall strategy. The case of the Myitsone dam in Burma is instructive in this regard. In developing the plan to construct the Myitsone dam in Burma, the Chinese Power Investment Corporation reportedly refused to engage with any concerned parties outside the government, such as the local villagers, community groups, or international NGOs. The company also ignored the independent environmental impact assessment that claimed that there was no need for such a large dam on the Irrawaddy; two smaller dams could be built upstream instead.<sup>xxi</sup> While the Chinese argued that the project would bring significant economic benefits to the region, the Burmese were not convinced given that some 90 percent of the electricity would go to China.<sup>xxii</sup>

When Burmese President Thein Sein decided to suspend development of the dam on the grounds that he needed to “listen to the people,” Beijing was shocked. Peking University scholar Zhu Feng wrote, “China’s neighbors will not be reliably good to Chinese interests unless and until China begins to provide essential public goods—not just commerce but also full-fledged regional governance based on the rule of law, respect for human rights, and regional economic growth.”<sup>xxiii</sup> (It is also worth considering that President Sein’s decision was part of a broader shift toward political openness and accountability, as well as an opening to the West.)

## **Agricultural Development**

Chinese officials often note that they have roughly one-fifth of the world’s population but only 7 percent of its arable land, prompting an historical concern over food security. Traditionally, China addressed its food security concerns by growing grain domestically, no matter the cost. Today, however, Beijing seeks arable land abroad to secure access to food and avoid over-reliance on the market.

China is not alone, of course, in its pursuit of land abroad. Saudi Arabia, South Korea, and the UAE, among others, have all been trolling the world for fertile land. Yet no other country appears to provoke quite the same concern, perhaps because of the involvement of the Chinese government in this investment abroad and the country’s tendency to export its labor. As Tan Xiao writes, “Involvement in overseas contracts enables our country to improve employment and also enhances the exportation of domestic machinery and raw materials. For a long period ahead of us, we will face very serious employment problems. We must not forget the fact that our huge quantity of cheap labor

is one of our comparative advantages, which enable us to compete in the international market.”<sup>xxiv</sup> Or as one Chinese scientist noted in the press, “We have six hundred rivers in China, four hundred of which have been killed by pollution. We will have to send at least 300 million people to Africa before we begin to see the end of our problems.”<sup>xxv</sup> And in 2007, the head of the Chinese Export-Import Bank, Li Ruogu, suggested that Africa has plenty of land, but not a correspondingly significant level of agricultural production. His answer: “There’s no harm in allowing [Chinese] farmers to leave the country to become farm owners [in Africa].” Moreover, Li promised that the bank would support this effort through “investment, project development, and help with the sale of products.”<sup>xxvi</sup>

As Chinese agricultural concerns have sought to buy land in Africa, Latin America, and Southeast Asia, there has been some resistance. In Kazakhstan, for example, there were protests in 2010 over Chinese plans to lease one million hectares of farmland to grow soya and other crops.<sup>xxvii</sup> And a Chinese attempt to lease almost three million acres in Philippines failed in the face of substantial opposition.<sup>xxviii</sup>

Some states are adopting formal measure to prevent a Chinese land grab. In Argentina, for example, Nobel Prize winner Dr. Raul Montenegro has spoken explicitly about the challenge posed by China. In reference to a proposal for the Beidahuang Group to lease and develop 300,000 hectares of farmland in the Patagonian province of Rio Negro, he said, “On a global level, China is the country most affected by the extension, intensity, and economic impact of land degradation. So it is difficult to believe that they won’t make the same mistakes with their land in Rio Negro as they have in their own country.”<sup>xxix</sup> In December 2011, Argentine President Fernandez won passage of a law that will place a 20 percent cap on the amount of land available to foreign landowners, within which no single nationality can own more than 30 percent. Moreover, per buyer, there will be a one thousand hectare limit.<sup>xxx</sup>

Even more telling, Brazil is considering a measure directed uniquely against China that would ban the Chinese purchase of land in Brazil since China, itself, does not permit private ownership of land. Former Trade Minister and current president of the China-Brazil Business Council also articulates the broader concern over Chinese state investment: “Sometimes you don’t know whether the investments are looking for Brazil as a market or whether they correspond to strategic purposes of the Chinese government.”<sup>xxxi</sup> Brazilians are trying to be smart about Chinese investments by ensuring that the Chinese will not only buy soybeans from Brazilian producers but also manufacture soy oil in Brazil rather than in China.

## **Recommendations**

On a macro-level, water insecurity in Asia raises several challenges for the United States, chief among them the potential for a sustained crisis in the provision of safe water and sanitation to contribute to destabilizing politics within the region. In addition significant water-induced constraints on growth in Asia could affect the U.S. economy by raising the price of many consumer goods and agricultural products.

The United States, therefore, has a direct and significant interest in working actively to help Asia address its water security needs. As a first step, the United States could articulate a vision of water security akin to that put forward in the United Nations Human Development Report: “Water sharing is not a zero sum game. Two overarching challenges define trans-boundary water governance strategies at the start of the twenty-first century. The first is to move beyond inward-looking national strategies and unilateral action to shared strategies for multilateral cooperation...the second is to put human development at the center of trans-boundary cooperation and governance.”<sup>xxxii</sup>

Second, at the regional level, the United States should seek opportunities to work with actors committed to a long-term and sustainable water policy that ensures the broadest protection of water security interest and avoids highly asymmetrical outcomes that will significantly advantage one party at the expense of another. The U.S.’s engagement

in the Lower Mekong Initiative is one such positive example. The United States could similarly approach India and Bangladesh to offer capacity building assistance in anticipation of challenges arising from China’s damming and potential diversion of the Yarlung Tsangpo/Brahmaputra. The United States can help provide science-based support for data sharing, mapping of geologic consequences, and more.

In addition, sensitivities concerning U.S. government involvement in countries’ internal affairs suggest that direct support for foreign NGOs might be problematic. However, the United States could support U.S. NGOs and other actors that help build capacity for indigenous NGOs—in China and in resource-rich countries—to advocate for a higher level of Chinese government and corporate social responsibility.

Fourth, the United States, particularly the U.S. Embassy in Beijing, could also take the lead in promoting an Internet-based environmental awareness campaign. It could capitalize on the U.S. experience—as well as that of other countries, including China—in managing shared water resources. It could also provide information about what can go right or wrong in constructing dams. For example, the United States could share the experience of the Elwha and Glines Canyon dams that after decades in operation are now being removed.

Last, the United States should start thinking through the rules of the road for Chinese companies as they begin to seek more investment opportunities in the United States. Is it worth exploring, as Brazil has done, the opportunity to match Chinese regulations with those in the United States? For example, China, itself, does not allow private ownership of farmland and has cautioned local governments against granting large-scale or long-term leases. It also bans foreign companies from buying mines and oil fields.<sup>xxxiii</sup> How to welcome Chinese investment in the United States while protecting U.S. interests is an issue that urgently needs attention, perhaps in cooperation with other countries.

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<sup>ii</sup> Ibid.

<sup>iii</sup> Jonathan Watts, "China Told to Reduce Food Production or face 'dire' water levels," *The Guardian*, June 28, 2011).

<sup>iv</sup> Jiangtao Shi, *South China Morning Post* (August 26, 2011).

<sup>v</sup> Jon Bowermaster, "Made in China: World's Harshest Water Shortage," (February 15, 2011) [www.takepart.com/article/2011/02/15/made-china-worlds-harshest-water-shortage](http://www.takepart.com/article/2011/02/15/made-china-worlds-harshest-water-shortage)

<sup>vi</sup> Toh Han Shih, "Business caught in grip of mainland water crisis, *South China Morning Post* (November 14, 2011)

<sup>vii</sup> Nadya Ivanova, "Off the Deep End—Beijing's Water Demand Outpaces Supply Despite Conservation, Recycling and Imports," Circle of Blue (2011).

<sup>viii</sup> United Nations Department for Economic and Social Affairs, "International Rivers and Lakes," Newsletter no. 39, June 2003, 6-7.

<sup>ix</sup> Chinatibetnews.com, "Three Rivers Area: 25 Cascade Hydropower Stations to be Built," (January 18, 2011)

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<sup>x</sup> International River Network, "China's Global Role" <http://www.internationalrivers.org/en/china/chinas-global-role>

<sup>xi</sup> Peter Boshard, "China's dam builders clean up overseas" *The Asia Times*, May 12, 2010.

<sup>xii</sup> Sebastian Peyrouse, "Flowing Downstream: the Sino-Kazakh Water Dispute," Jamestown Foundation China Brief, vol.7, no. 10, May 16, 2007, pp. 7-10.

<sup>xiii</sup> Sebastian Peyrouse, "Flowing Downstream: the Sino-Kazakh Water Dispute," Jamestown Foundation China Brief, vol.7, no. 10, May 16, 2007, pp. 7-10.

<sup>xiv</sup> Bruce Pannier, "Central Asia: SCO Leaders Focus on energy, Security, Cooperation," Radio Free Europe/Radio Liberty, August 16, 2007.

<sup>xv</sup> A.K. Kenshimov, "Some issues of cooperation in transboundary river basins with the People's Republic of China," UNDP Office in Astana, Republic of Kazakhstan

<sup>xvi</sup> Chinaoilweb.com data

<sup>xvii</sup> Yan Wang, "The River Wild," *NewsChina* (January 2012).

<sup>xviii</sup> Hari Bansh Jha, "Diversion of the Brahmaputra: Myth or Reality," Institute for Defence Studies and Analyses Comment (August 9, 2011).

<sup>xix</sup> Yan Wang, "The River Wild," *NewsChina* (January 2012).

<sup>xx</sup> Wei Zhou, "Divided waters in China," Chinadialogue.net (September 20, 2011).

<sup>xxi</sup> Liao Ruo, "Lessons from the Irrawaddy," chinadialogue.net (October 10, 2011)

<sup>xxii</sup> Ibid.

<sup>xxiii</sup> Zhu Feng, "China's Trouble with the Neighbors" [www.project-syndicate.org](http://www.project-syndicate.org/2011-10-31-chinas-trouble-with-neighbors) (October 31, 2011)

<sup>xxiv</sup> Tan Xiao, *Zhongguo zouchuqu de fazhan celue*, (The China Strategy of "Going Global"), China Social Science Press, 2003, p. 542

<sup>xxv</sup> Kevin Bloom, "Why China Needs Africa More," Daily Maverick (October 27, 2010).

<sup>xxvi</sup> Michael Bristow, "China in Africa: Developing ties," BBC News (November 29, 2007).

<sup>xxvii</sup> JM Anthorpe, "China's Global Hunt for Food Security," *Vancouver Sun* (February 3, 2010).

<sup>xxviii</sup> Carlos H. Conde, "Philippines suspends Chinese-funded projects in wake of scandal" *The New York Times* (September 25, 2007)

<sup>xxix</sup> Mia de Graaf, "Limiting Foreign Land Ownership: A Law in the Making" *The Argentina Independent* (September 28, 2011)

<sup>xxx</sup> Ibid.

<sup>xxxi</sup> Solana Pyne, "China's Brazilian shopping spree" Global Post (November 22, 2010)

<sup>xxxii</sup> United Nations Development Programme, *Human Development Report 2006* (New York Palgrave Macmillan, 2006), 204.

<sup>xxxiii</sup> Alexei Barrionuevo, "China's Interest in Farmland Makes Brazil Uneasy," *The New York Times* (May 26, 2011).