

‘Big brother, little brothers’: comparing China’s and India’s transboundary river policies

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Abstract

Hydro-hegemons can provide both positive and negative forms of leadership, the former leading to cooperative outcomes and the latter to conflict in transboundary river basins. What constrains hydro-hegemons and under what conditions do they cooperate? This paper examines China’s and India’s hydro-hegemonic behavior, using case studies of the Mekong and the Ganges, respectively. As a positive hydro-hegemon, China cooperates multilaterally with other Mekong riparians, while India takes a limited sovereignty view by sharing water with Bangladesh and Nepal in the Ganges. China and India behave as dominant hydro-hegemons when they engage in resource capture strategies, such as water diversion projects and unilateral dam-building activities. The regional context and domestic politics of hydro-hegemons constrain their behavior, and determine the forms of positive and negative leadership they provide. When strong multilateral mechanisms already exist in the regional context, hydro-hegemons are more likely to cooperate multilaterally. This explains why China cooperates multilaterally in the Mekong while India rejects multilateralism in the Ganges. Domestic considerations also explain why China cooperates multilaterally in the Mekong but avoids water-sharing discussions. In India’s case, electoral politics account for the eventual signing of the Ganges and Mahakali treaties after decades of negotiations.

Keywords: China; Ganges; Hydro-hegemony; India; Mekong; Transboundary rivers

Introduction

Both China and India are regional hegemon¹, China in East, Central, and South-east Asia, and India in South Asia. Adding to their influence and power is the role they play in many of Asia’s international river basins. China is clearly the ‘upstream superpower’ (Nickum, 2008), as several important rivers

¹ The term ‘hegemon’ has been very much misused and maligned by the media, opinion-makers, and even scholars. In this paper, a hegemonic state is a neutral term. It refers to a state with a preponderance of military, economic, demographic, and cultural power that is able to assert its preferences on other states through a mix of coercive and persuasive means.

doi: 10.2166/wp.2016.103

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including the Mekong, Brahmaputra, Sutlej, Indus, Salween, and Irrawaddy have their source in the Tibetan plateau. In South Asia, India is a middle riparian; it is upstream from Pakistan and Bangladesh on the Indus and Ganges rivers, respectively, but downstream from Nepal on the Ganges, and China on the Brahmaputra. Although not an upper riparian like China, India is nevertheless a hydro-hegemon in terms of resource utilization and employing resource control strategies. Particularly with respect to the Ganges, this paper will show that India dominates over Bangladesh and Nepal. Riparian position has some influence but is not a determining factor in characterizing a hydro-hegemon (Zeitoun & Warner, 2006). Rather, it is China's and India's respective preponderant material power that gives them significant leverage over smaller and weaker co-riparians. Whether in terms of population size, economic development, or military strength, there is substantial power asymmetry between China and India, and their respective riparian neighbors. This paper seeks to answer two related questions: what constrains China's and India's behavior as hydro-hegemons, and under what conditions do they cooperate with smaller co-riparians? The Mekong and the Ganges are chosen as case studies as the other riparians of these rivers are significantly smaller and weaker than China and India, respectively. See Table 1.

Scholars have explored the relationship between power asymmetry and intra-basin conflict. Zeitoun & Warner (2006), for instance, came up with a conceptual framework of hydro-hegemony, defined as 'hegemony at the basin level, achieved through water resource control strategies such as resource capture, integration and containment', which establishes the relationship between the power of riparians and varying intensities of conflict in river basins. Hydro-hegemons set the rules of the game, the nature of interaction among riparians, and the extent to which the benefits of the rivers will be shared with smaller and weaker co-riparians. Zeitoun & Warner's (2006) findings suggest that hydro-hegemons may behave in two ways – they may exercise positive leadership to ensure cooperative outcomes for all ('leadership buttressed by authority') or seek to dominate by adopting coercive means leading to some form of conflict ('leadership buttressed by coercion'). Most hydro-hegemons 'fall somewhere between the poles of enlightened leadership and oppressive domination' (Zeitoun & Warner, 2006). Both conflict and cooperation are thus features of riparian relations; the behavior of hydro-hegemons determines the range of conflict or cooperation that exists in a river basin.

Table 1. Power distribution among riparian states in the Mekong and the Ganges (as of 2012*).

The Mekong				The Ganges			
Countries	GDP per capita (US\$)	Population	Military Spending (US\$ in millions)	Countries	GDP per capita (US\$)	Population	Military Spending (US\$ in millions)
China	6,264.60	1,350,695,000	169,604	India	1,481.20	1,236,686,732	47,217
Thailand	5,479.80	66,785,001	5,492	Bangladesh	862.10	154,695,368	1,600
Myanmar	1,414.70	52,797,319	2,969	Nepal	686.10	27,474,377	257
Cambodia	945.50	14,864,646	217				
Vietnam	1,755.30	88,772,900	3,361				
Laos	1,408.30	6,645,827	20				

Source: World Bank Database, SIPRI Database.

*2012 figures are used because the military spending figures for Laos in 2013 and 2014 are unavailable.

In this paper, I use Zeitoun and Warner's hydro-hegemony framework as a basis to assess China's and India's behavior towards smaller and weaker co-riparians. The two countries display both the positive and negative forms of hydro-hegemonic leadership, resulting in both conflict and cooperation in the Mekong and Ganges river basins. I argue, however, that despite India having signed water-sharing treaties with its co-riparians, namely Bangladesh and Nepal (as well as Pakistan, although the Indus is not part of this study), the relations among riparians in the Ganges are more conflictual than China's relations with the Mekong states. Even though China does not have any water-sharing arrangements with its co-riparians, there is cooperation at the multilateral level, albeit with limitations among the Mekong riparians. By contrast, multilateral cooperation, which is critical for river basin development, is missing in the Ganges. While both China and India prefer to deal with their co-riparians at the bilateral level, China has become more amenable to multilateral cooperation over time compared to India. Moreover, India's water-sharing arrangements with Bangladesh and Nepal are conflict-ridden, as will be illustrated later in this paper.

What accounts for the differences in China's and India's transboundary river policies towards their smaller co-riparians? *Zeitoun & Warner (2006)* did not explain why hydro-hegemons behave negatively or positively although both scholars alluded to the 'broader political context' that hydro-hegemons operate in. I argue that the regional context and domestic politics impose constraints on hydro-hegemons. While hydro-hegemons do set the rules of the game to a large extent, they are not entirely free to act at will at the river basin level.

In China's case, it has adopted multilateral cooperation towards the other Mekong states because such cooperation benefits Yunnan, a western province in China, and more broadly, the 'Go West' program, which is aimed at developing China's western provinces in an effort to reduce the economic gap between western and eastern provinces. Moreover, there are existing multilateral mechanisms that engage Indochina states and China in a broader setting. These multilateral mechanisms help build confidence and trust that have positive spillover effects on cooperation in the Mekong River Basin. However, China's cooperation is limited. It has no water-sharing agreements with its riparian neighbors, given its absolutist stance on sovereignty and autonomy issues, which is a critical component of its national narrative and the legitimacy of the Chinese Communist Party (CCP). Water-sharing arrangements encroach on Chinese notions of sovereignty although *Wouters & Chen (2013)* have argued that China observes limited sovereignty, defined as equal reasonable use and obligation not to cause significant harm to other riparians. China has also been adamant about not being bound to strict aquatic environmental standards and restrictions on dam-building activities, given the priority it places on economic growth (although there is increasing recognition that environmental sustainability is critical to China's long-term growth).

India, by contrast, has several bilateral water-sharing treaties with its riparian neighbors. In the Ganges, India signed the Ganges and Mahakali treaties with Bangladesh and Nepal, respectively, in 1996. These are significant achievements on India's part as water-sharing treaties are intrinsically difficult to negotiate because of the sensitive nature of water and riparians' desire to maximize their allotted portion of water. As will be illustrated later in this article, India's electoral politics and federal system of government also help explain why negotiations were stalled for decades as well as why the treaties were eventually signed. Yet, despite these treaties, India has eschewed any form of multilateral cooperation on the Ganges. The complicated historical relations among the riparians and the deep distrust among the riparians have prevented multilateral cooperation. Bangladesh and Nepal view India as playing the 'big brother, little brothers' card and intent on taking advantage of its smaller neighbors. That bilateralism is

India's method of engaging its smaller neighbors (Crow & Singh, 2000) adds fuel to this view. Unlike South-east Asia's multilateral approach to cooperation, South Asia lacks robust multilateral mechanisms of engagement. The South Asian Association for Regional Cooperation (SAARC) is probably the most prominent regional institution in South Asia but it discusses the least controversial topics. With the exception of one meeting in 1986, negotiations over water have been exclusively bilateral (Crow & Singh, 2009). Others such as the Bangladesh, Bhutan, India, and Nepal Initiative (BBIN) have limited efficacy as progress has been slow; the BBIN was formalized in 1997 but it held its first Joint Working Group meeting only in January 2015. Moreover, the implementation of the Ganges and Mahakali treaties are not problem-free. India's negotiations with Bangladesh on the sharing of the Teesta River have also been protracted and contentious.

In the next section, I seek to answer the question of whether China and India have comprehensive transboundary river policies. Following this section, I compare China's and India's hydro-hegemonic behavior in the Mekong and the Ganges, respectively, pointing out similarities and differences. I then assess the factors that facilitate or hinder cooperation, and conclude with observations of China's and India's hydro-hegemonic behavior.

China's and India's transboundary river policies

Only one article in China's 2002 Water Law deals with international water, an indication of the low priority that China accords to managing its international rivers. China's government apparatus is also not well designed to deal with international rivers. Its water management structure is fragmented. Although the Department of International Cooperation, Science and Technology, under the Ministry of Water Resources (MOWR), is tasked to carry out cooperation and exchanges with its foreign counterparts on international river issues, formulate policies to manage transboundary rivers, and coordinate negotiations, the Department's focus appears to be technical rather than policy-oriented, as its main duties are to conduct science and technological exchanges with water organizations in other countries (Ministry of Water Resources, n.d.). Moreover, while the MOWR is mandated to deal with a plethora of issues, its main focus has been inward-looking with flood control as its top priority. In terms of rivers, it is most concerned with domestic river disputes. It has neither the skilled personnel to deal with managing complex relations with other riparian countries nor the mandate to resolve international water disputes with other riparians. While the Ministry of Foreign Affairs (MOFA) would have been well placed to deal with transboundary water issues, transboundary rivers do not feature highly on its list of priorities. For instance, when the MOFA established the Department of Boundary and Ocean Affairs in 2009 to manage China's territorial and maritime disputes, international river disputes were not included among its mandate.

The lack of central attention on managing international rivers means that management of transboundary rivers is left to the discretion of the provinces. For instance, Yunnan province drives China's policy on the Mekong and represents the central government in Mekong forums (Ho, 2014). China's hydro-power companies are also important stakeholders; as studies in the energy sector have shown, Chinese state-owned enterprises play an important role in formulating policies in China's energy sector (Kong, 2010). A multiplicity of stakeholders without close attention from the center results in a fractured decision-making structure with respect to the management of transboundary rivers.

India's transboundary river policies are relatively better developed than China's. Its water treaties with Pakistan, Bangladesh, and Nepal are detailed in stating the principles of water apportionment

with these countries. However, India's internal legal and government apparatus for managing its international rivers remains weak. Its 2002 National Water Policy primarily deals with water issues as they pertain to India internally. The main priority of the Indian Ministry of Water Resources, the main central government agency in charge of international rivers, is on intra-state water disputes and the development of integrated river basin management within its borders. In addition, other government agencies are also involved in the management of India's transboundary rivers. For instance, it was the Minister for Agriculture and Irrigation who signed the 1977 agreement between India and Bangladesh on the sharing of the Ganges waters in Farakka. The sharing of mandates across a number of government agencies therefore results in a fragmented decision-making structure, as is the case for China (Araral & Yu, 2013).

India's federal system adds another layer of complication to the management of international rivers. Under India's Constitution, states are responsible for the management of water. However, because foreign affairs fall under the purview of the federal government, the Indian central government, not the states, is responsible for managing international rivers. States are, however, heavily reliant on rivers for sustaining their populations, and therefore have significant stakes in how international rivers are managed. The Ganges, for instance, runs through Uttar Pradesh, Uttarakhand, Bihar, and West Bengal. Hence, states should have a role in decision-making on international rivers. However, whether states are involved depends on the federal government; West Bengal was heavily consulted on the Ganges Treaty but not in the negotiations with Bangladesh on the Teesta waters. This fragmentation in water management further complicates the handling of international rivers.

Without a comprehensive transboundary river policy or a government agency mandated to managing international rivers, China manages its international rivers as a subset of its larger relations with its co-riparians (Ho, 2014). It often adopts issue linkage when managing its international rivers. For instance, a number of Chinese academics have told the author that China's goal with respect to the Brahmaputra is to maintain equanimity and the status quo with India, and will consider any significant forward movement in cooperation on the Brahmaputra only when there is substantial progress towards resolving the other outstanding issues between them, namely Tibet and territorial disputes (Interviews, 2014, 2015). For India, despite having a framework for sharing water with its neighbors, its broader relations with co-riparians often dictate the outcomes of negotiations. The progress between India and Bangladesh in sharing the waters of the Ganges is a case in point. As this paper will later demonstrate, improved relations between the two, mainly the result of a change of government in both countries, facilitated the signing of the 1996 Ganges Treaty after decades of stalled negotiations.

The Mekong

The Chinese government appears to take an absolutist stance on its sovereign rights to develop the water resources that flow through its territory. It has resisted signing water-sharing agreements with its co-riparians and is one of three countries (the others are Turkey and Burundi) that voted against the United Nations Convention on the Law of the Non-Navigational Use of International Watercourses. It withdrew its commissioner from the World Commission on Dams in 1998 and rejected the final report of the commission. China fears that participation in these agreements and commissions will encroach on its freedom of action in managing a key natural resource for economic development. In its 12th Five-Year Energy Plan (2011–2015), it intends to construct more than 60 hydropower projects, including on the Mekong, the Brahmaputra, and the Salween rivers. China is already the largest producer of

hydro-electricity in the world and by 2020, it is expected that hydropower will account for 15% of its annual national electricity production (Lee & Chua, 2013).

China is unilateral in its dam-building activities. It does not consult lower riparians of the Mekong on its plans to build a cascade of eight dams along the upper Mekong. Five of these dams are now operational while the rest are under construction. Chinese unilateralism in the upper reaches of the Mekong is a source of consternation for the lower riparians. However, with the exception of Thailand, the rest of the lower riparians, Vietnam, Myanmar, Cambodia, and Laos, have largely kept quiet about the impact of China's dams. China has also been evasive about its dam-building activities. Even in hydrological data-sharing, China is not always forthcoming – it has provided limited data on the operation of its dams and has not shared research results on their downstream impact (Cronin, 2012a, 2012b).

China is not a full member of the Mekong River Commission (MRC), the key body that governs the Mekong River Basin, although it has been a dialogue partner since 1996. It has adamantly refused to join the MRC so as to maintain maximum sovereignty in utilizing the Mekong's resources, as the MRC has strict aquatic environmental standards and dam-building restrictions. China also does not have a water-sharing arrangement with the Mekong states.

From this perspective, China, according to Zeitoun & Warner's (2006) concept of hydro-hegemony, behaves like a dominant hydro-hegemon that uses tactics of resource-capture, defined as 'active unilateralism', 'whereby a riparian in the absence of formal understandings moves ahead with projects that affect the flow or quality of the resource'. However, although China's relations with the lower riparians of the Mekong are not without conflict, a high level of cooperation exists between them. China engages with the Mekong states at both the bilateral and multilateral levels on a variety of issues including navigation, transportation, infrastructure development, trade and investments, and tourism along the Mekong River Basin. Viewed from these areas of cooperation, China appears to be a positive hydro-hegemon, taking leadership roles in establishing cooperation that facilitates the growth of the Mekong region. In these roles, China has demonstrated both 'containment' and 'integration' strategies, the former defined as a bilateral or multilateral strategy to integrate or contain competitors in an asymmetric position and the latter defined as encouraging compliance through the use of incentives (Zeitoun & Warner, 2006).

China has shown a preference for engaging other riparian states at the bilateral level. China's actions in this area accord with the 'containment' strategy in that the other riparians are economically dependent on China in an asymmetrical fashion. China is an important economic partner of the Indochina states and vital for their economic development. China is Vietnam's largest trading partner – China overtook Japan to become Vietnam's largest trading partner in 2004 (Vuving, 2014) – although both are competitors for influence, foreign direct investment (FDI), and markets, in the Indochina region. China is also Thailand's largest trading partner and, with Thailand's junta facing increasing isolation from the United States and Europe, Thailand is turning to China to revive its sluggish economy (Parameswaran, 2014).

For Cambodia and Laos, China is the most important donor and foreign investor. China invested a total of US\$9.17 billion² between 1994 and 2012 and, by 2012, Chinese loans and grants to Cambodia amounted to US\$2.7 billion, making it Cambodia's second-largest donor after Japan (Pheakdey, 2013). China has edged out Thailand and Vietnam in becoming Laos's largest foreign investor, with accumulative Chinese investment in Laos standing at US\$5.1 billion as of January 2014 (Pasick, 2014). In 2013, China agreed to give Laos US\$49 million in grant aid and US\$32.6 million in interest-free

² Billion = 10⁹ throughout the paper.

loans ([Bangkok Post, 2013](#)). It is also collaborating with Laos to construct a US\$7 billion high-speed railway project from Kunming to Vientiane, which will extend to Thailand.

China remains a key player in Myanmar's development, even though China's relations with Myanmar have been troubled lately, the clearest indication of which is the suspension of the China-backed Myitsone dam project in 2010. China's influence appears to have waned with the new government's decision to open up Myanmar in 2011. Nevertheless, Chinese companies account for a third of the nearly US\$44 billion of foreign investment in Myanmar since 1988 ([International Business Times, 2013](#)).

Despite China's initial reluctance and wariness of multilateral engagements for fear that states will gang up against it in such settings, it has in the past decade become much more forthcoming in engaging other states multilaterally. In these multilateral engagements, China adopts a 'containment' strategy in that its asymmetric position is preserved. For instance, China joined the Greater Mekong Subregion (GMS) project because the GMS does not require China to observe dam restriction rules and strict aquatic environmental standards, while benefiting the development of Yunnan province. Until April 2015, the GMS was the only Mekong forum to comprise all six riparians. The GMS was initiated by the Asian Development Bank in 1992 to integrate the Mekong region through the construction of power, transport, and communication networks. Its focus on economic and infrastructure development is critical for Yunnan's development.

Navigation is another significant area in which China has cooperated with the Mekong states at the multilateral level. In these navigation agreements, the benefits to China have also been asymmetrical; the gains in trade have been most significant for China, as nearly all freight vessels plying the middle Mekong are reportedly Chinese ([Goh, 2007](#)). China's cooperation in this area is motivated by Yunnan's economic needs, as Yunnan is reliant on river trade with the Mekong states. China, together with Laos, Myanmar and Thailand, are signatories of the Lancang-Upper Mekong River Commercial Navigation Agreement, which aims to increase the use of the river for transporting goods and people to promote trade and tourism. China has also signed a GMS agreement with Laos, Myanmar, and Thailand for a trial program shipping oil along the Mekong during the wet season. The river route provides an alternative to the maritime route through the Malacca Straits. In another significant move, China took the lead in forming joint patrols with Thailand, Myanmar, and Laos, in December 2011, which for the first time allowed China to establish a downstream military presence in the Mekong ([Cronin, 2012a, 2012b](#)). The patrols are aimed at protecting commercial vessels plying the Mekong.

It is significant that China has, for the first time, initiated a Mekong forum that involves all six riparian states. In April 2015, the China-initiated Lancang-Mekong River Dialogue and Cooperation held its first Senior Officials' Meeting in Beijing. The Lancang-Mekong River Dialogue and Cooperation forms an integral part of China's 'One Belt, One Road' initiative, which envisions a development strategy that focuses on connectivity and infrastructure development among countries in Eurasia. It is also China's response to the United States' Lower Mekong Initiative and an attempt to exercise leadership in the Mekong. Although it remains too early at this point to tell whether China is indeed moving towards an 'integration' strategy, statements made by Chinese officials in the run-up to the first Foreign Ministers' meeting of the forum in November 2015 suggest that China might be willing to concede some of its asymmetrical benefits. For instance, former Chinese ambassador to Thailand and current Vice-Chairman of the China Public Diplomacy Association, Zhang Jiuhuan, said 'countries downstream of the Mekong river, which are concerned about the implications of the dam construction upstream, could raise the issue for consultation with countries upstream' ([The Nation, 2015](#)). Moreover, the forum will go beyond most Mekong forums, which only cover economic and infrastructure development, to include

discussions on a wider array of sensitive political and security issues as well as people-to-people relations.

The Ganges

Like China, India has a mixed record as a hydro-hegemon. India has water-sharing treaties with all of its riparian neighbors, which is an indication of positive leadership. In the Ganges, the Ganges and Mahakali treaties were signed with Bangladesh and Nepal, respectively, in 1996. While India eschews multilateral cooperation in the Ganges, and was particularly unhappy when Bangladesh attempted to internationalize the Farakka Barrage issue by bringing in the United Nations General Assembly and the SAARC, it has been willing to cooperate bilaterally with Bangladesh and Nepal. It has, for instance, invited Bangladesh to have a joint stake in the proposed Tipaimukh Dam in Manipur in Northeast India, of which a portion of the electricity produced will reportedly be transferred to Bangladesh ([The Hindu, 2013](#)). However, Indian Prime Minister Narendra Modi has indicated during his visit to Bangladesh in June 2015 that the Tipaimukh Dam would not be moving forward in its present form due to statutory requirements on the Indian side, and he also reassured Bangladesh that India would not take any unilateral decision that may adversely impact Bangladesh ([Ministry of External Affairs, 2015](#)). Bangladesh itself has shown interest in jointly developing nine hydro-electric projects in the Northeast and Sikkim; of these, three are under construction – Subansiri, Myntdu, and Teesta-III ([The Hindu, 2013](#)). Dhaka is also reportedly interested in six other projects in the planning stage ([The Hindu, 2013](#)).

India has also cooperated with Nepal on a bilateral basis. In particular, since Modi came into power, he has reached out to India's smaller neighbors. In August 2014, Modi made his first visit to Nepal, the first Indian prime minister to visit Nepal in 17 years. Following his visit, Nepal signed deals with India to build two major hydropower plants with US\$2.4 billion provided by Indian funding – one by India's GMR Group to build a 900-megawatt US\$1.4 billion plant in Upper Karnali, making it Nepal's largest ever FDI at that point in time, and the other was an agreement to develop the 900-megawatt Arun III hydro-electricity plant in north-eastern Nepal ([Ministry of External Affairs, 2014](#)). Nepal will get 22% of the energy from each dam for free ([Bhushal, 2014](#)).

India's water-sharing treaties and bilateral hydropower projects with its smaller co-riparians suggest a positive form of hydro-hegemonic leadership. There are also indications that India has adopted an 'integration' strategy by conceding some of its hegemonic benefits to its smaller co-riparians in terms of free hydro-electric power or allowing its neighbors first use of the electricity produced. However, its record in other areas shows a negative form of leadership. India's plans for water diversion, river linkages, and dam-building activities point to a 'resource capture' strategy ([Zeitoun & Warner, 2006](#)).

In what is known as the National River Linking Project (NRLP), India has plans to link 37 rivers through 31 links with 9,000 kilometers of canal in order to divert flows from the Ganges and the Brahmaputra rivers to the water-scarce regions of western and central India. The project is aimed at reducing floods in water-surplus areas and droughts in water-scarce parts of India, and was conceived as part of the National Perspective for Water Development, developed by the MOWR in 1980. In late 2002, the NRLP received a major boost when the Supreme Court passed a Public Interest Litigation ordering the Indian government to complete the construction of the project within the next 12 years. The Supreme Court's order was controversial, both within and outside India, because of the high environmental, social, and financial costs of the project. As a result of these controversies, the project was stalled

and suspended when the Congress Party came into power in 2004. With the Bharatiya Janata Party (BJP), a proponent of the NRLP, in power since 2014, the project received a renewed push. Together with the clean-up of the Ganges Rivers, Modi has made the NRLP a key component of his development agenda.

The NRLP, if it is carried out as planned, will significantly impact India's co-riparians. In particular, Bangladesh has raised major objections, arguing that the NRLP will reduce its share of Ganges waters. It is estimated that a 10–20% reduction in the Ganges flow into Bangladesh could dry out large areas of the country (Misra *et al.*, 2007). Given Bangladesh's rural-based population and dependence on agricultural production, diversion of the Ganges is likely to have significant impact on its economy and contribute to the economic hardships of its people. Although Nepal's reactions have been much more muted than Bangladesh's, as it is the upstream riparian and has abundant water resources, there are also some implications for Nepal ecologically as well as in terms of the displacement of people (Islam, 2010). India has thus far not shared information or asked for the other riparians' environmental impact assessment of the NRLP.

India's dams are also a source of friction with its neighbors. According to the National Register of Large Dams, India has 4,857 completed large dams and 314 more are under construction (Central Water Commission, 2014). On the Ganges, the Farakka Barrage has been a major thorn in India–Bangladesh relations since it was conceived in the 1950s. The dam, which became operational in 1975, aims to divert the waters of the Ganges to the Hooghly River so as to ensure that the river remains navigable and to flush out the silt deposited in Calcutta Port in West Bengal. According to the Bangladeshi government, the reduction in the flow of the Ganges as a result of the diversion of the water at Farraka has had a detrimental effect on Bangladesh. As for Nepal, the building of the Sarada, Kosi, and Gandhak barrages in 1920, 1954, and 1959, respectively, along the India–Nepal border was seen as a 'sell-out' of Nepali interest by the political opposition in Nepal.

Although India's water treaties with its riparian neighbors are major achievements, they are nevertheless beset with problems. The Ganges Treaty of 1996 can be considered a major triumph for India's efforts to manage its riparian relations with Bangladesh. Following Bangladesh's independence in 1971, a joint river commission between India and Bangladesh was set up in 1972 to manage the Farakka Barrage issue. The negotiations were protracted and contentious but a number of Memorandums of Understanding and two treaties, in 1977 and 1996, were signed to manage the issue. The 1977 treaty, which lasted five years, included a 'guarantee' clause reserving 80% of the river water during the lean season for Bangladesh (Pandey, 2014). When the 1977 treaty expired, several ad hoc arrangements took its place until 1988 when negotiations came to a complete halt. The deadlock lasted until 1996 when the Ganges Treaty was signed. The 'guarantee' clause was not included in the 1996 Ganges treaty, but the treaty requires India to release to Bangladesh 'water at a rate not less than 90 percent of Bangladesh's share' (The Government of the People's Republic of Bangladesh and the Government of the Republic of India, 1996). However, the treaty suffers from certain limitations. For one, it does not have any provision for judicial settlement of disputes arising out of the treaty. Moreover, no agreement was reached between the two parties on how to augment the flow of the river and address water allocation issues during the dry season, which remain the crux of the dispute between India and Bangladesh (Uprety & Salman, 2011).

The other treaties that India negotiated with Bangladesh and Nepal are even more problematic. India and Bangladesh have not been able to come to agreement on the Teesta River. In 1997, a Joint Committee of Experts was formed to look into the sharing of the river but little progress has been made

despite a series of meetings held between 1997 and 2004. A Joint Technical Group was formed in 2004 to develop an interim agreement on water allocation during the lean season but was unable to come up with a solution (The Asia Foundation, 2013). In 2010, a draft agreement on the Teesta, which would form the basis of an interim agreement on the Teesta, was prepared but the deal fell through during then Indian Prime Minister Manmohan Singh's visit to Dhaka in 2011. The Chief Minister of West Bengal, Mamata Banerjee, withdrew from the visit and refused to support the interim agreement, protesting that her government was not sufficiently consulted on the allocation of water.

With Nepal, although the Mahakali Treaty was signed in 1996, very little progress has been made on the implementation. The treaty addresses the allocation of power from two existing barrages, the Sarada and Tanakpur, and the allocation of power from the Pancheshwar Dam, which is to be built as part of the treaty. The agreement to build a barrage on the Kosi River signed between Nepal and India in 1954 to regulate the flow of the river and ensure flood management has also not gone smoothly. Nepal blamed India's neglect in maintaining the embankments of the Kosi Barrage when a major flood in 2008 displaced 50,000 people in Nepal (Malhotra, 2010). Nepal and India have also disputed over the compensation issue of the Kosi Barrage, with Nepal alleging that it did not get a fair deal from India and was not compensated for the submergence of territory and displacement of people (Malhotra, 2010).

Why do hydro-hegemons cooperate?

China and India display both the positive and negative aspects of leadership. 'Resource capture' in the form of constructing dams and diverting river flows in a unilateral manner typifies the behavior of the dominant hydro-hegemon. At the same time, both countries have shown positive leadership in other areas by adopting 'containment' and, to some extent, 'integration' strategies. In China's case, various forms of cooperation in multilateral settings indicate positive leadership. In particular, the initiative it took to establish the Lancang-Mekong River Dialogue and Cooperation is a significant demonstration of efforts to set norms and establish institutions for cooperative outcomes. India has also exercised positive leadership with its water-sharing treaties, which indicate its recognition that the Ganges is an international river and that it is not the sole proprietor.

However, despite the lack of water-sharing treaties between China and the lower riparians of the Mekong, the existence of multilateral cooperation across a variety of issues suggests that there is a relatively greater level of cooperation in developing the Mekong River Basin than there is for the Ganges River Basin. Although China's relations with its Mekong co-riparians are not conflict-free, India's relations with its riparian neighbors tend to be more acrimonious than China's and its neighbors, with a high level of rhetoric and vitriolic accusations. Wolf *et al.* (2003) have developed a Basins at Risk (BAR) event intensity scale that captures the spectrum of cooperation and conflict that can exist among riparians. See Table 2 for scale. On this scale, in the Ganges, India and its co-riparians have displayed 'strong verbal expressions displaying hostility in interaction' (−2) as well as, on occasions, engaging in 'diplomatic–economic hostile actions' (−3). In the case of the Mekong, although lower riparians take a dim view of China's cascade of eight dams, the most vocal protests have not come from states but from environmental non-governmental organizations and other non-state actors. The fact that lower riparians are equally culpable in damming the Mekong probably contributes to the lack of coordinated protests from the lower riparians. China's economic influence and the dependence of the Mekong states on China also explain the lack of protests. However, the existence of multilateral platforms in

Table 2. BAR event intensity scale.

BAR scale	BAR event description
–7	Formal declaration of war; extensive war acts causing deaths, dislocation, or high strategic costs
–6	Extensive military acts
–5	Small-scale military acts
–4	Political–military hostile actions
–3	Diplomatic–economic hostile actions
–2	Strong verbal expressions displaying hostility in interaction
–1	Mild verbal expressions displaying discord in interaction
0	Neutral or non-significant acts for the inter-nation situation
1	Minor official exchanges, talks or policy expressions – mild verbal support
2	Official verbal support of goals, values or regime
3	Cultural or scientific agreement or support (non-strategic)
4	Non-military economic, technological or industrial agreement
5	Military, economic or strategic support
6	International freshwater treaty; major strategic alliance (regional or international)
7	Voluntary unification into one nation

Source: Wolf *et al.* (2003).

the Mekong River Basin in an array of issues including navigation, infrastructure development, tourism, and trade and investment is a sharp contrast to the low level of cooperation in the Ganges. On the BAR scale, the cooperation among Mekong states would rank quite high up on the cooperative scale, from 1 to 5, just short of ‘international freshwater treaty; major strategic alliance (regional or international)’.

One could argue that India’s willingness to sign water treaties shows a higher level of positive leadership as it indicates a recognition that it is not the sole proprietor of the rivers that run through its territory, as opposed to China’s stubborn refusal to discuss water-sharing. However, the outcomes at the river basin level do not accord with this higher level of positive leadership. The level of cooperation is quantitatively and qualitatively higher in the Mekong than in the Ganges. Why is this the case? In the following paragraphs, I show that two key factors, regional context and domestic politics, shape the behavior of hydro-hegemony, which in turn facilitates or hinders cooperation in river basins.

Regional context

Water politics is an extension of the larger political interplay among countries sharing rivers in a region. Hydro-hegemony is constrained by the regional context they operate in. China and India operate in very different regional theaters. Although conflicts do exist among states in South-east Asia, there is nevertheless a high degree of interdependency and cooperation at the multilateral level. This contrasts sharply with the situation in South Asia, where states distrust each other and security dilemmas characterize regional interactions. These differences in regional context impact cooperation at the river basin level. Engagement between China and the Mekong states at the multilateral level is an extension of the already existing platforms between China and South-east Asia. These existing platforms provide an environment that enables China to exercise positive leadership in the Mekong. Socialization in multilateral institutions over the years has had an effect on Chinese behavior. Alastair Iain Johnston has argued that ‘the ASEAN way’ of non-interference and consensus-building has had a fundamental

impact on Chinese international behavior, specifically in changing Chinese attitudes and mindsets towards multilateral cooperation (Johnston, 2003). Multilateral engagement between India and its co-riparians is harder to achieve as there is a lack of robust multilateral-level mechanisms for South Asian states to leverage. Water issues are not discussed in SAARC meetings as they are considered too controversial and thus more appropriately dealt with bilaterally between countries sharing trans-boundary rivers (Shahjahan & Harvey, 2012).

The historical relations between China and the Indochina states, and between India and the smaller South Asian states set the tone and substance of contemporary relations. The Mekong states have historically fallen within China's sphere of influence. During the dynastic period, China interacted with South-east Asia through the 'tributary system', which was based on a hierarchical system of power and status. According to David Kang, this hierarchical system with China at the apex provided stability in East Asia in the past (Kang, 2003). China's influence in the Indochina region is such that Vietnam, Cambodia, and Laos are among the countries that established relations with it, even before China won recognition at the United Nations. During the colonial era and the Cold War period, China's influence in South-east Asia was diluted as it had to accommodate external powers in the region. Nevertheless, it retained a dominant presence and, with opening up in 1978, China has stepped up engagement with the region, especially in the economic sphere. South-east Asian states, attracted to China's economic potential, have also made considerable efforts to reach out to China. South-east Asia's engagement with China is also motivated by a desire to enmesh China in a web of interdependent relationships to guard against the possibility of a belligerent China. The establishment of various multilateral forums such as ASEAN Plus Three and the ASEAN Regional Forum, among others, are aimed at integrating China into the region. China, on its part, has made substantial efforts to reassure the region that its re-emergence is not a threat but an opportunity. China's 'new security concept', 'peaceful development', 'peripheral diplomacy', and 'One Road, One Belt' initiative are all aimed at reassuring its neighbors and fostering cooperation in the region.

China's cooperation in the Mekong River Basin is an extension of its commitment to regional cooperation with South-east Asian states. The interactions between China and South-east Asian states, and the efforts made by both sides to engage each other help build confidence and trust that extends to cooperation in the Mekong River. While China remains wary of multilateral cooperation that could potentially limit its sovereignty and autonomous utilization of river resources, and has been selective in its participation of Mekong institutions, it has nevertheless gone beyond bilateral cooperation to multilateral cooperation, particularly in navigation, shipping, and infrastructure development. It is keen to portray itself as a cooperative and benevolent actor in the Mekong – for instance, Chinese state media played up its decision to release water from the Jinghong dam, one of its cascade of eight dams, from 15 March to 10 April 2016 to help alleviate the drought plaguing lower Mekong states (Xinhua, 2016).

By comparison, the South Asian region is characterized by unresolved historical animosities, lack of trust, and deep suspicion of one another. Relations between India and Bangladesh and Nepal have improved but remain tense. Both smaller co-riparians are dependent on India for trade and exports as they share a vast portion of their borders with India; Bangladesh is described as 'India-locked', that is, 90 percent of its international border is shared with India (Majumdar, 2014), while Nepal is surrounded on three sides by India and its only access to the sea is via India (Shahjahan & Harvey, 2012). Both Bangladesh and Nepal have accused India of interfering in their internal affairs. They are also resentful of India's dominance and what they view as India deriving benefits at their expense.

Bangladesh, for instance, sees the Farakka Barrage as injurious to its national prestige and interest, and independence. The Nepali opposition views India's dam-building projects as an encroachment on Nepal's territorial sovereignty, and deems all treaties with India to be unequal treaties, starting from the Sharadam Dam, Koshi Agreement, Gandak Agreement, and Tanakpur Agreement, as well as the Mahakali Treaty (Malhotra, 2010). In fact, following the Mahakali Treaty, article 126(2) of the Nepal Constitution was adopted, requiring that any treaty pertaining to natural resources be ratified by a two-thirds majority of the Nepali parliament. India, on its part, views both countries to be ungrateful for the assistance it has rendered both countries, and the part it played in securing Bangladesh's independence from Pakistan.

In a *Foreign Affairs* article, Mohan (2006) describes India's grand strategy as comprising three concentric circles: immediate neighborhood, extended neighborhood stretching across Asia and the Indian Ocean, and the entire global arena. In the immediate neighborhood, India's objectives are primacy and to prevent outside powers from intruding into its neighborhood. Bilateralism is its primary strategy for engaging its neighbors as well as ensuring acceptance that it is the major power in the region (Crow & Singh, 2009). These goals and strategies account for India's lack of enthusiasm for multilateralism and its rejection of the involvement of third parties at the river basin level. India fears that its smaller neighbors, with the backing of external powers and international institutions, will form a 'bargaining coalition' against it (Crow & Singh, 2009). This in large part explains why whenever Bangladesh has sought to internationalize the Farakka Barrage issue or involve Nepal in trilateral negotiations on the Ganges, India has dug in its heels and refused to accede to Bangladesh's demands. It was only when Bangladesh abandoned its strategy of internationalizing the Farakka Barrage issue that there was a breakthrough in negotiations and the Ganges Treaty was signed. The irony for India is that it appears willing to engage in multilateral settings involving the Ganges so long as other South Asian countries are not participants. For instance, the Mekong–Ganga Cooperation, which focuses on tourism, culture, education, and transportation, comprises India, Thailand, Myanmar, Cambodia, Laos, and Vietnam, but not Bangladesh and Nepal.

India, from time to time, has sought to improve its relations with its smaller neighbors. One such period was during the prime ministership of I. K. Gujral, from April 1997 to March 1998. Gujral developed the 'Gujral Doctrine of Non-Reciprocity' to remake India's relations with its neighbors; it is based on the idea of political altruism, whereby India undertook the policy of not seeking absolute reciprocity from its smaller neighbors but instead treating them generously, and helping to alleviate poverty and promote economic development in the region. It was in the spirit of the 'Gujral Doctrine' that the Ganges Treaty and the Mahakali Treaty were signed. Since Modi became prime minister, there has also been a renewed emphasis on improving relations with India's smaller neighbors. He has visited India's smaller neighbors since coming into power. During his visit to Bangladesh in June 2015, for instance, the two countries made important strides in improving relations when they signed 22 pacts to deepen cooperation as well as ratifying the Land Boundary Agreement. Modi also attempted to move forward negotiations on the Teesta River by inviting Chief Minister of West Bengal, Mamata Banarjee, to be part of his delegation.

Domestic politics

China's and India's domestic politics are critical to understanding their role as hydro-hegemony. Both countries have different political systems – China is an authoritarian state while India is the largest

democracy in the world. However, leadership matters in both countries. In China's case, one-party rule means that leadership preferences tend to perpetuate policies while breaks in policies, such as the transition from Mao Zedong to Deng Xiaoping's open-door policy, are rare. In this sense, there is greater consistency in China's policies towards the Mekong, thus allowing China to continue engaging the Mekong states without significant disruptions in policies. While both China and India are sensitive about national and territorial issues, given the various unresolved territorial disputes they have with their neighbors, China takes a more strident view on safeguarding its national sovereignty and autonomy because nationalism is a key legitimating tool of the CCP. Chinese leaders cannot afford to appear to have relented on issues that impact national sovereignty, including that of the use of international rivers.

In India's case, the more frequent electoral changes in India's leadership mean that there are greater vagaries in policies. For example, non-Congress governments in India have tended to make greater efforts to improve relations with India's neighbors (Hossain, 2010). The 1977 Farakka Agreement and 1996 Ganges Treaty were made possible by changes in the Indian government. The defeat of the Congress Party under Indira Gandhi in March 1977 and formation of the Janata Party government paved the way for a breakthrough in negotiations, and the Farakka Agreement was concluded shortly after that. However, with political upheavals in Bangladesh and the return of the Congress Party in 1980, the 1977 agreement was allowed to lapse as negotiations for a new treaty failed to take off. The next significant landmark was the signing of the 1996 Ganges Treaty, made possible by the formation of a United Front government in 1996. At the same time, a change in leadership in Bangladesh also brought about a change in policy. When the Awami League under Sheikh Hasina Wazed came into power, Sheikh Hasina made improving relations with India a major foreign policy goal and was personally committed to finding an acceptable solution to the Ganges problem (Hossain, 2010). She also decided not to internationalize the Farakka Barrage issue, thus removing a major sticking point for India.

Apart from national politics, province-level politics in China and state-level politics in India also play critical roles in the management of international river basins. China is a centralized system while India is a federal system. However, on the ground, how international river basins are managed belies their formal institutional arrangements. In China's case, while the center maintains strong control, a substantial amount of authority has been devolved to the provinces under Deng Xiaoping's reforms. The 'Go West' program has also bolstered the autonomy and authority of the inner and western provinces. In the case of the Mekong, Yunnan represents the central government in meeting with other riparian states of the Mekong (Ho, 2014). It also conducts trade and investments, and foreign liaison activities with Mekong countries.

China's cooperation with the Mekong states is largely driven by the needs of Yunnan as well as the hydropower requirements of Chinese provinces (Ho, 2014). There is a high degree of economic interdependence between Yunnan and the lower riparians of the Mekong. The GMS, for instance, is integral to developing Yunnan's infrastructure needs, which facilitates connectivity with the Mekong states. Yunnan's development is an integral part of the 'Go West' program and will help alleviate poverty in China's impoverished west. Yunnan is also China's most promising hydropower site, and thus an important contributor to the energy needs of other provinces in China, particularly in energy-hungry coastal provinces such as Guangdong.

As for India, foreign affairs fall under the purview of the central government. The regulation of transboundary rivers is thus vested in the central government. However, states are critical for the management of international rivers because many Indian states draw their economic lifeline from the rivers that run through their territory. Whether the central government involves state governments in their negotiations

with co-riparian countries has a substantial impact on the success of negotiations. This is clearly illustrated in the negotiations with Bangladesh on the Ganges and Teesta rivers. The contrast between the two cases demonstrates the influence of local politics on national-level policies towards transboundary rivers.

In the case of the Ganges Treaty, the role played by the government of West Bengal was critical in ensuring the success of the negotiations. The Indian irrigation minister at that time had justified the involvement of West Bengal on the grounds that the river flows from Farakka would directly impact Calcutta Port (Pandey, 2014). Then Chief Minister of West Bengal, Jyoti Basu, played a major role in finalizing the treaty. Bangladesh's Sheikh Hasina had specifically reached out to West Bengal because she was convinced that any agreement over the Ganges required the involvement of West Bengal, since it is most affected by the water flows from Farakka (Hossain, 2010).

Conversely, the lack of support from West Bengal played a critical role in the failure to conclude the Teesta River Treaty. In an arrangement agreed upon in 1983, India and Bangladesh share 39% and 36% of the Teesta waters, respectively. However, there is no agreement as to how the remaining 25% should be shared. An attempt was made by Manmohan Singh during his visit to Bangladesh to resolve the issue and, as mentioned earlier, both India and Bangladesh had put up a draft agreement that would have formed the basis of an interim treaty to be signed during the visit. However, Singh's efforts failed at the last minute when West Bengal Chief Minister, Mamata Banarjee, pulled out of the visit and refused to give her support to the water allocation arrangements. Banarjee felt that the distribution would be detrimental to West Bengal's interests; she objected to giving Bangladesh 33,000–50,000 cusecs of the water, as mentioned in the final draft of the interim treaty, instead of the 25,000 cusecs referred to in an earlier draft (The Times of India, 2011). Banarjee argued that she was not sufficiently consulted before the federal government committed to the proposed allocation. Local electoral politics played a part in Banarjee's objections – the sharing of the Teesta River with Bangladesh is unpopular with the people of West Bengal. There is also speculation that her opposition to the Teesta Treaty is related to her attempts to appeal to the non-Bengali business community in West Bengal, who are supposedly not keen to see a new India–Bangladesh relationship develop, which would create more space for Bangladeshi entrepreneurs operating in the north-east states of India where non-Bengali businessmen have a monopoly on businesses (Ahmed, 2012).

Conclusion

Both China and India display characteristics of positive and negative leadership, but in different arenas. As a positive hydro-hegemon, China is involved in multilateral joint development of the Mekong, while India takes a limited view of its sovereignty over international rivers when it signs water-sharing treaties with Bangladesh and Nepal. The two countries are also dominant hydro-hegemons when they adopt resource capture strategies, such as building dams and diverting water. There is, however, greater information sharing on India's side and Modi has recently reiterated the commitment that India would not take any unilateral decision on the Himalayan component of the NRLP, which may affect Bangladesh (Ministry of External Affairs, 2015). He also indicated that the construction of the Tipaimukh Dam has been shelved partly due to considerations of the impact of the dam on Bangladesh (Ministry of External Affairs, 2015). China also displays a dominant form of

hydro-hegemony by refusing to discuss water allocation issues with its neighbors, while in India's case, it rejects multilateral solutions to developing shared water resources.

The larger political milieu that hydro-hegemony operates in influences their behavior, determining the forms of positive and negative leadership they provide. When multilateral institutions already exist in the regional context, hydro-hegemony is likely to cooperate multilaterally at the river basin level. China's multilateral engagement with the other riparians of the Mekong is an extension of its broader commitment to the South-east Asian region, and a reflection of the trust and multilateral norms that have been established in the region. India continues to adopt bilateralism while rejecting multilateral cooperation because the lack of robust multilateral mechanisms in South Asia reduces the incentives for India to cooperate multilaterally. When the BJP first came into power, Modi had espoused a 'neighborhood first' policy, emphasizing that the new Indian government would pursue friendly relations with its neighbors and strengthen regional forums like SAARC. These have led to hopes that regional integration including 'common basin management' can be enhanced. Common basin management is a stated goal between Bangladesh and India, as encapsulated in the 2011 Framework Agreement on Cooperation for Development and, more recently, in the Joint Statement between Bangladesh and India, during the visit of the Prime Minister of India to Bangladesh, dated June 2015. However, cooperation has been on a bilateral basis. Bangladesh has been a proponent of a common basin management approach to the Ganges that would include India, Bangladesh, and Nepal, but so far, India has focused on deliverables on a bilateral basis (Jayaram, 2013). To date, Modi has achieved greater success in improving bilateral, rather than multilateral, ties with its smaller neighbors – in the words of a Brookings India report (2015), 'bilateralism has clearly trumped regionalism'.

Hydro-hegemony is also constrained by their domestic politics. India could sign the Ganges and Mahakali treaties because a change in national leadership enabled a breakthrough in negotiations. Local politics, specifically the support of West Bengal, was critical for the conclusion of the Ganges Treaty. Conversely, West Bengal's objection to the Teesta Treaty is a stumbling block to its smooth conclusion. In China's case, an authoritarian system with the perpetuation of one-party rule ensures continuity of policies in the Mekong, but prevents water-sharing discussions because the legitimating ideology of nationalism and economic growth means that China needs to retain maximum maneuvering space in utilizing a scarce resource.

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