



Troubled Waters: India and the hydropolitics of South Asia

THE FEARLESS NADIA OCCASIONAL PAPERS ON INDIA-AUSTRALIA RELATIONS

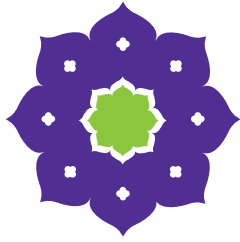
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Australia India
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Winter 2014: Volume Four



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India-Australia Relations

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The Australia India Institute, based at the University of Melbourne, is funded by the Australian Government Department of Education, the State Government of Victoria and the University of Melbourne.

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Troubled Waters: India and the hydropolitics of South Asia

By Paula Hanasz

Introduction

The year 2013 was the United Nations International Year of Water Cooperation. It was also the year that saw the Indian geostrategist Brahma Chellaney publish *Water, peace and war: Confronting the global water crisis* not long after his award-winning *Water: Asia's new battleground*. One year, two very different perspectives. Which is it then? Is water a nexus for peace, or a nexus for war? And what does the answer imply for the future of hydropolitics in the world generally, and for India in particular?

Since the 1990s it has been a truism that the conflicts of this century will be about water, and looking at South Asia specifically at first glance this seems a compelling concern. The region is rapidly growing while water appears increasingly scarce. Zero-sum competition over water resources is said to be intensifying, while recent state fragility makes for volatile geopolitics. At the same time, India, the regional hydro-hegemon, is not taking clear leadership of South Asia's troubled hydropolitics. On closer inspection however the situation is far more complex and ambiguous than alarmist headlines or the UN's wishful thinking would suggest.

For a start, there is no such thing as 'water war'. A broader concept, water conflict, is ill-defined, multi-faceted, and usually based on the fallacious assumption that conflict is the opposite of cooperation. Cooperation and conflict, however, coexist in every relationship in various configurations. More importantly, ostensible cooperation, such as the signing of a water-sharing treaty, can cement inequalities in the status quo while conflict can lead to the airing and ultimately the resolution of grievances (Zeitoun and Mirumachi, 2008, 297-307). Water interactions, in short, are much more complex than the simplistic and alarmist fear of water wars would suggest.

Nonetheless, there does seem to be a 'perfect storm' of water-related issues and tensions in South Asia that appear to put the region particularly at risk of imminent hydro-conflict. This *Fearless Nadia* paper begins by addressing the three most common fears about water wars on the Indian sub-continent: water scarcity, increasing competition and the specter of China. It goes on to discuss the bilateral issues between India and its co-riparians and asks whether any of these could escalate to a water war. The basis of water wars is then challenged, and the paper concludes with an exploration of ways in which India could take leadership of multilateral approaches to the region's water woes.

Water woes in the region are, of course, not exclusively transboundary. Domestic water conflicts are also common. In India, for example, the widespread over-exploitation of groundwater for irrigation is creating serious problems for policy (Pearce, 2006, 36). It has even been said that the unsustainable depletion of groundwater resources may be the biggest threat to South Asian rivers (National Research Council of the National Academies, 2012, 90). The management of India's groundwater is complicated by relevant laws and regulations dispersed across central and state jurisdictions and a multiplicity of administrative bodies, thus creating conflict and confusion (Saravanan, 2008, 231-232; Lahiri-Dutt, 2008, xxvii). Water disputes within India thus tend to



be intractable, bitter, and enmeshed in party politics. It is ironic therefore that India, though it seems unable to resolve internal disputes within its federal structure, has been largely successful in minimizing conflict in transboundary hydrogeopolitics and in developing treaties that appear to be working moderately well (Iyer, 2007, 25). It is these regional water interactions that are the focus here, while domestic disputes have been largely covered elsewhere.¹

Is South Asia at risk of water wars?

Water is clearly a point of friction on the Indian subcontinent, which is home to more than 21% of the world's population yet must make do with barely 8.3% of global freshwater (Chellaney, 2011, 277). To complicate matters, most watersheds in the region are transboundary (National Research Council of the National Academies, 2012, 85). Indeed, many countries here are significantly dependent on the inflow of river and aquifer waters from across national borders (Chellaney, 2011, 244). Together these may seem a recipe for inevitable inter-state conflict, but the reality is not so straightforward. According to one credible report, of only 23 water conflicts in the Hindu-Kush-Himalaya region in the past 40 years, *only one* was international (National Research Council of the National Academies, 2012, 88-89).²

The mere existence of transboundary basins is not a sufficient condition for transboundary water conflicts (though, by definition, a necessary one). Even so, in the case of the Indian subcontinent other trends and circumstances make the prospect of such conflict a credible concern. For a start, the region's population is growing rapidly at the same time as its water supplies are dwindling; climate change, with rising sea levels and erratic glacial melt, are adding to the imbalance. South Asia is regularly affected by both natural calamities – flooding, drought, desertification – and social unrest, political turmoil and simmering separatist tensions. Lastly, a growing push for hydropower has seen rivers dammed faster than diplomacy can manage the consequences (Wirsing et al., 2013, 14).

South Asia is not the most politically and socially stable of regions. State fragility, recent violence, obstacles to economic development, and weak management institutions, in combination with high water stress, are strong indicators of the potential for water conflict (National Research Council of the National Academies, 2012, 92). India has fought wars with China and Pakistan in living memory, and these neighbors are nuclear weapon states. Their armies are among the ten largest on earth (Wirsing et al., 2013, 4). How, then to assuage some of the most prominent fears about water wars?

Fear #1: water scarcity

Water scarcity has indeed become acute in South Asia (Wirsing et al., 2013, 203). It is a problem the region has little experience in managing, brought on by unprecedented population growth (Chellaney, 2013, 57). Those who believe water scarcity will cause violent conflict envisage a shift in the balance of power between states either regionally or globally, causing instabilities that could lead to war. Or they envisage an increasing gap between rich and poor, or frustrations and resentment arising out of the free rider problem, or waves of environmental refugees (Homer-Dixon, 1998, 342).

Exacerbating the fear over water scarcity is climate change. An increase of just 3° Celsius in the average global temperature above pre-industrial levels will put densely populated mega-deltas, such as the Ganges-Brahmaputra-Meghna basin, at greatly increased risk of acute flood and storm damage, chronic coastal flooding and loss of coastal wetlands (Evans, 2010, 4). As climate change causes the glaciers of the Himalayas, Hindu Kush and Tibetan Plateau to melt, the regions bounding the Indus and Ganges rivers will likely experience severe flooding. Once the ice packs are gone, the floods will be replaced by profound and protracted drought, and the inland backflow of salt water, caused by higher sea levels, will contaminate low-lying, fertile delta regions (Campbell et al., 2007, 75). Such projections have, unsurprisingly, increased concerns about the potential risk that



particular countries will capture water resources of a region ill-prepared institutionally for climate change (Evans, 2010, 12). For example, none of the treaties and agreements between Nepal and India address climate change or the uncertainty posed by the potential effects of changing melt dynamics in Himalayan glaciers (National Research Council of the National Academies, 2012, 86).

But scarcity does not inevitably lead to conflict. Ultimately, economic and social factors tend to have a much larger bearing on conflict, outweighing the effect of scarcity in environmental elements (Tamas, 2003, 4). There is little evidence to make a causal link between resource scarcity and violent conflict, and an academic focus on scarcity has the unintended consequence of depoliticizing the conflict (Evans, 2010, 7; Zeitoun and Mirumachi, 2008, 298). Typically and conversely, cooperation actually increases during droughts, and naturally arid countries have high levels of cooperation over water, both within and between states (Wolf et al., 2005, 90).

Fear #2: increasing competition

A second argument cited to support the idea that water wars are imminent in South Asia is increasing competition. It has been said a zero-sum game is being established around water resources in the region, fuelling intense geopolitical rivalry among resource-poor states (Wirsing et al., 2013, 13). Growing energy demand is also driving the construction of hydropower projects, often with adverse unintended consequences downstream that often become the principal cause of water-related tensions between neighbors in Asia (Chellaney, 2011, 25).

Competition within the water-energy-food nexus is also likely to be affected by climate change. As water flow declines following the recession and eventual disappearance of high-altitude reservoirs of snow and ice, it will compromise hydropower generation (Renner, 2009, 8). Dams are likely to see huge increases in inflows initially and then highly reduced inflows in subsequent decades, which in turn may undermine their safety and economic viability (Kumar and Furlong, 2012, 10). In the agricultural sector, the production of foodstuffs and commodities such as cotton will be severely affected, which could lead to rising food prices, increased poverty and social disparities, escalating rural-urban migration, and conflict between up- and downstream states due to growing competition over water (Renner, 2009, 8). Yet competition in itself is not a determinant of conflict, especially when it occurs in a framework within which positive-sum outcomes are possible.

Water is unique in that it has multiple uses and therefore manifold values. Water cannot be managed for a single purpose, and the management of water resources serves multiple objectives and competing interests (Wolf et al., 2005, 81). This usually elevates the potential for developing mutually beneficial solutions to shared water problems. 'Benefit sharing' is the most common approach to bypass the thorny issue of water ownership. Benefit sharing switches the focus from physical volumes of water to the various values derived from water use (i.e., the unique property of water is that the same quantity can be used multiple times by multiple users for multiple purposes). Benefit sharing thus makes riparians view the problem as one of positive-sum outcomes associated with optimizing benefits rather than the zero-sum outcomes associated with dividing water (Qaddumi, 2008, 1).

Water use has value in multiple spheres, including economic, social, political and environmental, and the practical benefits of cooperation may include cost-sharing for infrastructure projects, favorable terms for the purchase of hydropower (or other resources), joint flood and drought mitigation strategies, and improved environmental management. This benefit-sharing approach is already decreasing the potential for inter-state zero-sum water conflict between, for example, China and its downstream co-riparians in the Mekong River Basin by creating non-zero-sum outcomes linking water resources and non-water resources (Onishin, 2008, 4-5, 217).

Fear #3: the specter of China

The third common fear about regional water wars is China. Growing regional competition over water has seen some countries build hydro-engineering projects on transnational rivers, with



apparently little concern for the interests of downstream co-riparians (Chellaney, 2011, 25). China is seen as the biggest threat in this respect. Its secretive and unilateralist approach to developing a series of dams on the Chinese portion of the Brahmaputra could have negative consequences for downstream Bangladesh and India (Hangzo, 2012, 4). China is, of course, entwined in the hydrological make-up of South Asia, but politically it is more of an observer than a protagonist.

Could the tensions growing between China and India herald a water war? It is unlikely (Wirsing et al., 2013, 205-206). There is certainly some bad blood between the two powers—the legacy of the 1962 Sino-India war has been difficult for India to live down and territorial disputes over Aksai Chin and Arunachal Pradesh continue to fester (Mitra, 2013, 412; National Research Council of the National Academies, 2012, 84). Furthermore, the vast expansion in China's hydropower sector may lead to increased competition with India over the development of dams in Nepal and Bhutan. But India is not without leverage in persuading China to behave with some generosity in regard to the Brahmaputra, and could take the leadership in developing benefit-sharing arrangements (Wirsing et al., 2013, 101, 205-206). Indeed, India is well placed to become a leader of regional water cooperation. This idea is explored in the concluding section of this article.

Fear of China's water policy is magnified because China has no water sharing agreements with its riparian neighbors (Chellaney, 2011, 185). Given its growing demand for water, and its impressive economic strength, military power, and uniquely advantageous upper riparian position, it is perhaps unsurprising that China reinforces its advantage by avoiding legally binding obligations (Wirsing et al., 2013, 205-206). But a treaty alone would not necessarily tilt the balance back in favor of the smaller players in the region. Apparently stable shared control of water resources by means of treaty may perpetuate inequitable outcomes (Zeitoun and Warner, 2006, 453). Even when signed, international water agreements do not mean contracting states are cooperating meaningfully; similarly, the lack of an agreement does not mean riparian states are in conflict (Zeitoun and Zawahari, 2012, 215).

Could bilateral water disputes escalate into war?

The geopolitics of South Asia are defined by the dominance of India, and the question of whether transboundary disputes should be handled bilaterally or multilaterally continues to provoke tensions (Hill, 2008, 75). India is not only the political heart of the region, but also the geographical center. India is located upstream from Pakistan and Bangladesh, but downstream from Nepal and Bhutan, and all countries in the region, other than the island states, share land borders with India but not with each other (Chellaney, 2011, 277). All the states in the region are keenly aware that their share of transboundary freshwater resources – and their overall water security – are far from assured. Their capacity to hold onto and successfully manage these renewable but far from limitless resources will shape their future prospects. The result is an emerging zero-sum mentality that intrudes more and more upon water policy calculations in the region (Wirsing et al., 2013, 8).

Except for Bhutan, India's political relations with its neighbors are far from cordial, and because the region has not only some of the poorest nations on earth but also an extremely limited supply of cultivable land, water will always remain a key political issue (Ray, 2008, 88). Ongoing disputes with Nepal and Bangladesh over flood control and river diversion are likely to continue, though the risk of armed conflict with these states is low (Condon et al., 2009, xv). On the other hand, it has been argued that the water issues India has with Pakistan and China could become the catalyst for conflict (National Research Council of the National Academies, 2012, 87). These bilateral disputes are discussed below and the question is asked whether they could plausibly escalate into water wars.



India and Pakistan

The bilateral water interactions expected to be the region's most contentious, and potentially most dangerous, are between India and Pakistan (Condon et al., 2009, 36). The perception that Indian control of the Indus water head can be misused to block water supply to Pakistan and devastate its economy is widespread in Pakistan (Singh, 2008, 87). The situation is not helped by the Indian media's tendency to treat water as an issue of national security, and to use alarmist phrases such as 'battle for peace', 'arch enemies', 'ancient feud' when disputes over it arise. Concurrently, policy makers in Pakistan appear to link every issue with India to the resolution of the Kashmir issue (Baqai, 2011, 88, 117). The contested state of Jammu and Kashmir has been the site of water-related disputes between India and Pakistan are so divisive that a senior Pakistani official warned in 2010 they could lead to war between the two nuclear-armed countries. Water claims now take precedence over land claims, and issues related to water are increasingly linked to the problem of terrorism (Chellaney, 2011, 278, 286-287). Disputes over water will likely continue to undermine the prospect of a more stable and sustainable peace between India and Pakistan, especially if alarmism remains the prevalent tone in discussion of shared water concerns (Condon et al., 2009, xv).

Highlighting a counter-argument to the imminence of a water war between India and Pakistan is a long-standing treaty that guides the resolution of water-related tensions and their establishment of the Permanent Indus Commission to manage disputes. But meaningful cooperation is not guaranteed by the signing of a treaty. Indeed the Indus Waters Treaty (IWT) between India and Pakistan, though often considered a triumph of bilateral cooperation over conflict between the riparian states (Hill, 2009, 89), is far from an efficient or equitable solution (Singh, 2008, 32). Treaties can formalize a discriminatory status quo and may thus be ultimately detrimental to cooperation and perhaps even foment conflict. Uncritical acceptance of traditional forms of 'cooperative' arrangements, such as the IWT, may in fact sustain the conflict they were intended to avoid (Zeitoun and Mirumachi, 2008, 297). That, however, does not suggest water war is inevitable while tensions remain about the provisions of the IWT. Rather, the salient point is that conflict and cooperation coexist, and should not be thought of as binary opposites. This idea is returned to below.

India and Bangladesh

Of all the South Asian states, Bangladesh is in the weakest negotiating position with India. It is also most likely to suffer the most dire consequences of upstream river diversions, or transboundary water resource mismanagement. Fifty-four rivers cross the border between India and Bangladesh and Bangladesh's low elevation makes it prone not only to flooding during the monsoon season, but also to drought during the dry season (Singh, 2008, 10; Condon et al., 2009, 8). Furthermore, Bangladesh is particularly vulnerable to the deleterious effects of upstream water engineering, such as large hydroelectric dams in the Himalayas, and numerous diversions and water-storage dams in the middle and lower portions of the Ganges (Wohl, 2012, 3). Cooperative management of shared river resources is therefore particularly critical for Bangladesh (Condon et al., 2009, 8).

A focus on data-sharing between some of their national institutions suggests India and Bangladesh are cooperating. The Ganges Treaty and Joint Water Commission between India and Bangladesh may have been based on the principles of the 1997 UN Convention on the Non-Navigational Uses of International Water Course, although India never signed this convention (Tiwar, 2006, 1691). However, the foundational issues that underpin potential conflict remain largely ignored by those who have the power to resolve them (Zeitoun and Mirumachi, 2008, 305). Critics see the water-sharing arrangements between India and Bangladesh as inequitable and symptomatic of the generally fractious relationship between the two countries. Bangladesh has been left out of Indian negotiations with Nepal over the Sapt-Kosi barrage even though the project affects the flow of the Ganges to Bangladesh in the dry season (Singh, 2008, 34). Bangladesh also claims the Farraka barrage in the Indian state of West Bengal harms Bangladeshi agro-ecological and economic wellbeing. Furthermore, the proposed Indian National River Linking Project may



exacerbate flooding, intensify Bangladesh's dry season and give India strategic leverage (Condon et al., 2009, 10-11; Singh, 2008, 16).

From the Bangladeshi perspective, India has aggressively asserted its own interest to the detriment of Bangladesh. The Indian perspective, in contrast, is that Bangladesh has been unwilling to compromise and has expected that its share of water resources will always remain undiminished (Hill, 2009, 92). This sort of subjective interpretation of political realities is common between most neighboring countries, and should not be considered a harbinger of war unless accompanied by military posturing.

India and Nepal

Nepal's enormous hydropower potential could provide a convenient and significant supply of clean energy for India's growing needs (Onta, 2001, 107, 110). Moreover, revenues from hydropower sales could multiply the growth rate in several Nepalese sectors, including industry, agriculture and tourism (Kayastha, 2001, 141). Properly planned and managed, the development of Nepal's hydropower capacity could also yield tremendous benefits in terms of flood control during the monsoon, flow augmentation for downstream irrigation, and navigation (Onta, 2001, 106).

Nepal has numerous agreements with India about the joint development of hydropower dams but the implementation of these treaties remains problematic (Cooley et al, 2012, 6). The early Indo-Nepal water resources projects, though considered reasonable from India's viewpoint, are considered a sell-out by many in Nepal (Onta, 2001, 109-110). For instance, the failure of the Kosi and Gandak river treaties of the 1950s to live up to their promise has left a bad legacy which weighs down bilateral cooperation (Chellaney, 2011, 283). More recently, the saga of the 1996 Mahakali Treaty presents a case in point of the unresolved issues between Nepal and its troubled relationship with its big southern neighbor (Gyawali and Dixit, 1999, 561). But while the relationship is fraught, it is not irreparable and Nepal is too dependent on India for trade and transport to benefit from war with the hydro-hegemon.

India and Bhutan

In stark contrast to India's occasionally troubled relationship with Nepal is India's apparently symbiotic one with Bhutan. Bhutan's hydroelectric dam projects have been developed with foreign aid, primarily from India, simultaneously the largest customer for Bhutanese hydropower (Nexant SARI/Energy, 2002, xiii). The collaborative and seemingly friendly nature of the relationship between Bhutan and India in transboundary water resource management can be attributed more to Bhutan's far-sightedness and political adeptness than to India's leadership in regional water cooperation. Certainly tensions exist in this bilateral relationship as in all relationships, but it is one marked by a positive-sum outlook and thus as far away from water wars as it is possible to be.

The assistance Bhutan has gained from India in developing its hydropower capacity has been crucial in its socio-economic development. Indeed, Bhutan has the distinction of achieving the highest per capita income in South Asia by exploiting its hydropower reserves through environmentally sound projects, mostly small in scale and based on run-of-the-river technology, and then exporting to India the power it generates (Chellaney, 2011, 285). Export income from hydropower transfers constitutes more than half of Bhutan's total revenue (Nexant SARI/Energy, 2002, xiii). India has not begrudged Bhutan these benefits, and perhaps its willingness to facilitate mutually beneficial outcomes with a cooperative partner could serve as a model for similar cooperation with a more forthcoming and coherent Nepal.

This brief overview of the potential for water wars in India's bilateral water interactions illustrates that despite numerous disputes over transboundary water resources in the region, areas of cooperation significantly lessen the likelihood of war. The most compelling argument, however, against the imminence of water wars in the region is that there is no such thing as water war.



What are water wars anyway?

It has been said that ‘water wars are no longer just the stuff of Hollywood melodrama’ (Chellaney, 2013, 1). The apparently increasing global zero-sum competition and emergence of a ‘new Great Game’ for interstate water resources is certainly titillating fodder for scare-mongering commentaries. But there is no such thing as water war. The extrapolation of tension over water resources into a traditional war as a military clash between two or more sovereign states is a facile and futile response to the plethora of nuanced tensions, economic interdependencies, environmental implications, multilevel political considerations, and other complexities of transboundary water management. All-out war over water is not strategically rational, hydrographically effective, nor economically viable (Wolf, 1998, 1).

Moreover, questions remain about what could constitute a water war. If military force was used to address water-related tensions, would it qualify as a water war only if one or both sides declare it as such? Must water be the central element or can it be an auxiliary yet significant factor in armed actions? (Chellaney, 2013, 48, 55) The lack of a widely accepted definition of water war, even among proponents of the water wars thesis, causes lively disagreement about whether or not a water war has ever been fought (Wirsing et al., 2013, 9-10).

Water conflicts come in many shapes and sizes

Water wars would not be a source of concern and debate if the sharing and management of transboundary water resources was un-conflicted. Clearly tensions and disputes exist, and classifying their intensity and likelihood of escalation to armed conflict is very difficult. Water wars may be a myth, but the connection between water and political stability certainly is not. The lack, or inequitable distribution of clean freshwater clearly does lead to social instability which, in turn, can create an environment more vulnerable to political or even military conflict (Wolf, 1998, 9). Water-related discontent can also engender civil disobedience, acts of sabotage, violent protest, and national or international disputes even though the parties are not fighting explicitly about water (Wolf et al., 2005, 88).

Water is certainly a stress multiplier. When water stress occurs in conjunctions with, say, a population boom in socially volatile regions such as the Middle East or the Pakistan-Afghanistan belt, underlying political tensions are likely to be exacerbated (Campbell et al., 2007, 60-61). Certainly the water-related conflicts of South Asia have multiple and diverse roots (Wirsing et al., 2013, 212). And while a war has never been fought purely over water, in many cases water has been a contributing factor to armed conflicts (Chellaney, 2013, 54-55). Thus it is meaningless to speak of water wars, and very difficult to pin down the meaning of water conflict because it comes in some many different guises.

Alarmism is dangerous; but so is naive optimism

Can water wars can be fought and won without firing a single shot—for instance by using hydro-engineering to change natural flows to the detriment of downstream neighbors? (Chellaney, 2013, 6, 47) The problem with answering yes to this question is that it makes the definition of water war too broad to be useful. The alarmism implicit in it is also dangerous because it obfuscates the complexity and breadth of water interactions. As discussed, conflicts and tensions over water do indeed take many forms, but calling regular inter-state power plays a ‘war’ is dangerous. Use of the term ‘water wars’ establishes an adversarial relationship (if there is a war, there is an enemy) and sets the parameters of interaction as zero-sum negotiations. The perpetuation of the water wars thesis has the effect of turning water issues into national security ones and this is not conducive to meaningful cooperation or multilateralism.

On the other hand, the view that water leads to peace is equally naive and dangerous. The popular argument that because no major wars have been fought over water resources, none will ever be fought is specious (Uitto and Duda, 2002, 367; Kibaroglu et al., 2008, 231). The past is



not an infallible predictor of the future and it is unwise to make such sweeping forecasts in a world as complex and rapidly changing as ours (Chellaney, 2013, 42). Likewise, the long and well documented history of seemingly cooperative relationships over shared water resources obscures the complex nature of cooperation and conflict (Yoffe et al., 2004, 7; Wolf et al., 2005, 81). Those who argue that water brings about peace more often than not erroneously assume that cooperation can be quantified by, say, the number of treaties.

Water interactions are complex

Assessing the risk of regional water war is not straightforward. There is no homogenous, quantified model of what constitutes a conflict over transboundary waters. What is broadly understood as water conflict comes in many guises, for many reasons, and with many implications. It is thus meaningless to fear water conflict in general because every instance of it is context specific, with complex causes and layers of interconnected factors that mitigate or exacerbate its effects. Moreover, what the attempts at defining water conflict summarized above fail to fully articulate is that a state of conflict is not mutually exclusive of a state of peace. Indeed, more often than not, conflict and cooperation coexist.

Although 'water conflict' and 'water cooperation' are commonly accepted terms, more insight and understanding will be gained if they are thought of as water-related *interactions*. Cooperation, for a start, is not merely the absence of conflict. Indeed, various forms of cooperation over water occur almost without exception alongside various forms of conflict. Moreover, tensions over transboundary waters are too sophisticated and complex to be adequately categorized as either conflict or cooperation (Zeitoun and Mirumachi, 2008, 299).

How conflict and cooperation are apportioned in a water interaction is largely, if not exclusively, governed by the power asymmetry of the riparians. The stronger party to an interaction has the prerogative to determine the agenda and framework of that interaction. *A priori* this is not a negative or zero-sum situation. Power asymmetry can under certain conditions be a stabilizing force; while under others, it can have the opposite effect (Zeitoun and Warner, 2006, 436). India's hydro-hegemony in South Asia is of the former kind.

Could India emerge as leader for regional water cooperation?

India is the regional hydro-hegemon. Its relative political, military and economic might allows it to mitigate its geography– the fact that it does not control the headwaters of all the rivers that pass through its territory. India is able to influence its upstream riparians to gain access to their water resources, and its downstream riparians to bear with transboundary water arrangements that may adversely affect them. It has exercised its hydro-hegemony in various ways, such as influence through soft power, or the establishment of bilateral treaties, but never through violence or the threat of violence.

In 1997 India abstained from voting for the United Nations convention governing non-navigational international watercourses (Ray, 2008, 83), meaning that it is not obliged to abide by the internationally accepted principles of equitable and reasonable utilization, and an obligation not to cause appreciable harm (Biswas, 2001, 13). India also maintains secrecy about any facts, figures, and data regarding transboundary water. A striking feature of many transboundary hydro projects in South Asia is that they were not made public through the release of information, but through newspaper reports. As India's co-riparians frequently complain, timely and adequate information is never published readily or in full by Indian authorities (Singh, 2008, 16). Downriver states can view India's effective denial of hydrological data in a critically important season as tantamount to political manipulation or worse (Chellaney, 2013, 56). In a token of good-neighborliness, India's



2012 National Water Policy hints at declassifying more hydrological data, though the practical effect of this policy change remains to be seen.

While India is often seen as a bully, when analyzed closely its actions are more benign. India has not yet become a constructive regional leader on transboundary water issues, but it has also not used its position to dominate the region. India has never resorted to coercion, though it does have a strong and long-standing preference for bilateralism. Its insistence on managing water issues through strictly two-sided relationships has not been successfully challenged by sub-regional groupings or multilateral institutions in South Asia, though there is plenty of scope for such restraints on India's power to develop in future. The only regional institution that could counter-balance India's hegemonic behavior, the South Asia Association for Regional Cooperation (SAARC), is weak and ineffectual (Dash, 2008, 120).

If it acts judiciously and with foresight, India the hydro-hegemon could, and arguably should, become a constructive leader in managing South Asia's water resources. Currently, however, India's great size relative to its neighbors has not translated into overwhelming power over them, but instead creates a sort of political stalemate in South Asia (Mitra, 2003, 399). This reveals an opportunity for meaningful leadership and multilateral cooperation on issues of mutual interest. The problems of transboundary water management are just such an issue of mutual interest – one in which, for reasons already discussed, military action is either irrelevant or counterproductive and where coordinated action is therefore the better choice (Dinar, 2002, 239).

India has several opportunities to lead on regional water issues. India might change the region's approach to water scarcity and transform the way the region addresses its water problems. Instead of an environmental problem requiring hydro-engineering solutions, it might be seen, if India led the way, as a problem primarily of mismanagement and inequitable distribution. Similarly, India could do more to ensure equitable sharing of the benefits of transboundary water agreements—particularly in regard to China's dam-building ambitions on the Brahmaputra and its consequences for Bangladesh.

India also has many opportunities for improving cooperation in its bilateral water interactions. India and Pakistan would do well to minimize the language and posturing that turns water into a security issue, and to focus instead on developing the Indus Waters Treaty into a more robust mechanism for conflict resolution. Similarly, India has good reasons to be more sensitive to the concerns of Bangladesh and Nepal. Even though India's relations with these countries are far from becoming water wars, current tensions undermine more meaningful cooperation and the development of benefit-sharing arrangements.

Lastly, India should set an example for the region by abandoning the false dichotomy of conflict/cooperation and instead accept the ambiguity and complexity of water interactions. This will lead to more appropriate transboundary water management approaches and minimize counterproductive fears of water wars. After all, in a region where watercourses traverse international boundaries, the challenges to improve the quality, quantity, and distribution of water necessitate collaboration between riparians (Chellaney, 2013, 16).



So what for Australia?

Australia is increasingly interested in the challenges of inter-state water governance in South Asia and the potential for significant conflict over unresolved issues. Australia is a major partner in the World Bank-led South Asia Water Initiative which aims to increase regional cooperation on shared water issues (South Asia Water Initiative, 2014). In October 2012, Australian Prime Minister Gillard visited India to launch the India-Australia Water Science and Technology Partnership to enhance cooperation on water management in the region (Australian Government, 2013). These are two prominent initiatives involving Australia, among many more examples of lower-level collaboration between academic institutions and businesses.

Understanding the nuances of transboundary water interactions in South Asia will help Australia to develop a conflict assessment that is neither unnecessarily alarmist nor simplistic. Australia is strongly placed to bring a sophisticated view to the regional initiatives for transboundary water cooperation it has engaged in. Otherwise a tendency in the analysis of regional hydropolitics to see conflict and cooperation as binary opposites predominates when in fact they always coexist, and this misconception hinders the development of appropriate conflict resolution frameworks and benefit sharing solutions.

An appreciation of India's role as hydro-hegemon is also important if Australia is to support the development of multilateral cooperative arrangements. India has avoided violence or the threat of violence in establishing its preferred status quo, but its water interactions remain problematic and resentment abounds about the sometimes inequitable outcomes for its co-riparians. India, for example, has always favored dealing bilaterally with its neighbors. Bilateral arrangements usually favor the stronger party, while multilateral arrangements tend to give more power to weaker actors. Australia should support India to grow into a leader of meaningful regional cooperation, especially through the South Asia Water Initiative. And on domestic water issues, Australia is already sharing its experiences of inter-jurisdictional water management and river basin modeling with India. This should continue.

Conclusion

Tensions certainly exist about the management and development of shared rivers in South Asia, but all-out war or violent clashes are likely to undermine the complex system of mutually beneficial arrangements that currently exist, and are unlikely to resolve the root causes of the tensions. This state of affairs can be said to epitomize the seemingly ambiguous but ultimately neutral 'business as usual' of transboundary water interactions. That is not to say, however, that there is no room for improvement. India, as the regional hydro-hegemon, is well placed to lead multilateral approaches to some of South Asia's most pressing water issues such as water scarcity arising out of mismanagement, the development of benefit sharing in transboundary agreements, and constructively engaging China in its hydro-engineering plans. Australia is well placed to support India as it develops from the regional hydro-hegemon to a regional leader of meaningful multilateralism.



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Endnotes

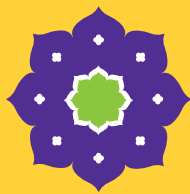
- 1 See for example Lahiri-Dutt, 2008.
- 2 That was between India and China in 2009 regarding a part of Tibet that is now under Indian control.



Biography



Paula Hanasz is a PhD scholar at the Australian National University and a visiting fellow at the Observer Research Foundation in New Delhi. Her research concerns the transboundary hydro politics in the Ganges-Brahmaputra-Meghna basin.



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