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Muddy Waters: International Actors and Transboundary Water Cooperation in the Ganges-Brahmaputra Problemshed

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ABSTRACT: The portion of the Ganges-Brahmaputra-Meghna mega-basin shared between Nepal, Bhutan, northern India, and Bangladesh is one of the poorest, most densely populated, ecologically vulnerable, and socially and politically unstable areas in the world. As such, reducing the potential for transboundary water conflict by increasing cooperation between riparian states has been of increasing interest to policy-makers and foreign aid donors.

The World Bank-led South Asia Water Initiative (SAWI) commenced in the mid-2000s. Yet, in more than a decade of existence, neither SAWI nor other international initiatives, have been able to improve transboundary water interactions between India, Nepal, Bhutan and Bangladesh. In part this is because of the sheer complexity of transboundary water governance, and in part because of contextual factors. Addressing transboundary water issues is not a priority for the riparian states; there is significant distrust between them and resentment about India's hydro-hegemony; and bilateral, rather than multilateral, arrangements prevail. These factors make collective action both more urgent and more difficult. If they are to increase transboundary water cooperation, international actors should, among other things, resolve historical grievances; strengthen water-sharing institutions; build trust between riparian states; and work toward outcomes based on principles of water justice.

KEYWORDS: Water conflict, water governance, foreign aid and investment, World Bank, South Asia

INTRODUCTION

In 2011, Swain summarised the effect of donor-led, basin-wide cooperative frameworks in the Nile Basin. Five years later, his conclusions can well be applied to foreign-led initiatives into transboundary water cooperation between India, Nepal, Bhutan and Bangladesh over the Ganges and Brahmaputra rivers:

The so-called basin-based cooperative framework in the Nile was initiated with the active involvement of international donor agencies, and it still survives with their help and assistance. Even after more than a decade of existence, the Nile Basin Initiative (NBI) receives still very little contribution from the basin's states themselves, exposing the lack of interest of the basin states towards joint management of the shared river resources. (Swain, 2011: 698).

The NBI served as a model for the World Bank-led South Asia Water Initiative (SAWI) (Earle et al., 2015: 41). This decade-long, multi-donor project aims to increase transboundary water cooperation between the riparians of the Indus, Ganges and Brahmaputra basins.

This article examines the effectiveness of SAWI, and associated water governance initiatives, led and funded by other foreign actors (e.g. the Australian government), in the part of the Ganges and Brahmaputra basins shared by northern India, Nepal, Bhutan and Bangladesh. For purposes of this article, this is called the Ganges-Brahmaputra problemshed – a problemshed being "a geographic area that is large enough to encompass management issues, but small enough to make implementation feasible" (Islam and Susskind, 2013: 321). The problemshed, then, has both a physical – geographic –

dimension, as well as a socially constructed one. As Mollinga et al. (2007) argue, problemsheds are a socio-political construct and are thus more appropriate as a unit of management, and hence a regulatory organisation, than a watershed or river basin.

This article shows that, much like in the Nile Basin, the effectiveness of foreign-led interventions in increasing transboundary water cooperation in the Ganges-Brahmaputra problemshed has been limited by the sheer complexity of the task at hand. The region is particularly vulnerable to water-related shocks, yet transboundary water governance is considered a relatively low priority for riparian states. There are competing issues for political will (including many non-water related ones), and much distrust between India, Nepal, Bhutan and Bangladesh due in part to numerous historical grievances and in part to India's hydro-hegemony. This also creates a situation in which transboundary water issues are addressed through bilateral, rather than multilateral, approaches. Yet, the need for collective action is great.

These points – the transboundary water governance challenges in the Ganges-Brahmaputra problemshed, and the case for collective action – are discussed in the first half of this article. The second half turns to the work of international actors. What can we learn from the World Bank and other third parties working to increase transboundary water cooperation in the Ganges-Brahmaputra problemshed? That is the central question of this article. As Swain's remarks above illustrate, the urgency "to meet the new challenges that might arise from climate change" (Swain, 2011: 698) is increasing, but workable solutions are not necessarily forthcoming from either the international donor community or the riparian states themselves.

The second half of this article discusses attempts by international organisations, the World Bank in particular, at increasing transboundary water cooperation in the Ganges-Brahmaputra problemshed. It describes the genesis in 2006 of the Abu-Dhabi Dialogue, a high-level process that aimed to increase cooperation over shared water resources in South Asia. The story continues with the Abu Dhabi Dialogue establishing the World Bank-led South Asia Water Initiative (SAWI) a few years later. The most significant early accomplishment of SAWI was the Ganges Strategic Basin Assessment, a comprehensive hydrological, economic and social mapping of the Ganges Basin. It was intended as a boundary object to provide the knowledge base for a benefit-sharing arrangement in the basin. But the assessment was rejected by the very countries it was intending to support, India, Nepal and Bangladesh. This was a significant setback for SAWI and the project of increasing transboundary water cooperation in the region.

Furthermore, the approaches favoured by international actors may be inadequate to bring about a significant improvement in transboundary water interactions. In particular, Track II dialogue – the main method through which SAWI attempts to improve transboundary water governance – by itself is not enough to achieve this goal. There are numerous definitions of this and the other tracks of diplomacy, but for the purposes of this article Track II dialogue is understood simply as the interactions, facilitated by a third party, between government and non-government actors with the general aim of enhancing the effectiveness of state processes (Dore, 2014: 203). Such dialogue is a necessary condition of cooperation, but alone – without political will or trust between riparians – it is insufficient. Likewise, the relatively short donor-funding cycles and other weaknesses in the system of foreign aid, may be mismatched with the long-term, complex, and unpredictable process of improving transboundary water governance. Track II dialogue can increase cooperation only over the long term, but the engagement of international actors tends to be relatively short, thus undermining the effectiveness of this tactic.

With these challenges in mind, the question arises: are external interventions able to improve transboundary water cooperation at all? International actors cannot bring about transboundary water cooperation, but they may play a limited role in supporting conditions in which positive interactions may flourish. By continuing to facilitate discussions between government and non-government stakeholders, international organisations may be able to slowly increase political will and build trust

between riparian states – especially if historical grievances are resolved. Other approaches identified by riparian stakeholders include: de-securing water; taking a problemshed view; strengthening water-sharing institutions; and moving beyond narratives of water scarcity and supply-side solutions. Although limited, there are some positive effects that third parties may achieve as part of what one riparian stakeholder described as a slow but steady "chipping away" at the problem of transboundary water interactions.

WHAT ARE THE WATER GOVERNANCE CHALLENGES FOR INDIA, NEPAL, BHUTAN AND BANGLADESH?

There are numerous issues for transboundary water governance in the Ganges-Brahmaputra problemshed – the geographic area of Nepal, Bhutan, Bangladesh and northern India that is of most concern to third parties, especially the World Bank. For a start, it is a region particularly vulnerable to hydrological and ecological shocks; it is one of the most densely populated, rapidly growing, and poorest parts of the world. The increasing demand for food, energy and water is putting tremendous stress on the problemshed's already strained natural resources. At the same time, governance of these resources is generally weak and marred by suspicion, mistrust, and long-standing grievances between riparians. These factors pose a challenge for international actors and at the same time make their work more urgent.

The Ganges-Brahmaputra problemshed is vulnerable to water-related shocks

The Hindu Kush Himalayan Region, of which the Ganges-Brahmaputra problemshed is a part, has one of the largest bodies of ice outside the polar caps, and the mountains are often referred to as the "water towers" of Asia. These mountains constitute the major source of both surface water and groundwater in the region during the dry season, and have the potential to play a vital role in energy security; if properly harnessed, hydropower could transform the lives of the people living in these river basins. But, as Vaidya and Sharma (2014: 3) point out,

in the wet monsoon season, the contributions of meltwater and rainfall coincide, creating a situation of too much water in the wet season and too little water in the dry season, which is exacerbated by the lack of water-storage facilities. The increasing gap between water availability and demand in months other than the monsoonal season is already posing a serious threat to livelihoods and economic development in the region.

The Ganges-Brahmaputra problemshed is an area of both plenty and scarcity. Both extremes are likely to be exacerbated by the effects of climate change. As Hill (2015: 739) notes, "[t]he phrase 'too much and too little water' has been used as a shorthand for the challenges that climate presents for the Hindukush Himalayas, with droughts and floods becoming more commonplace".

The Ganges-Brahmaputra-Meghna Basin is one of the richest basins in the world in terms of natural resources (hydropower, fisheries, forestry, irrigated agriculture, navigation, environmental amenities, tourism, minerals, etc). Yet India, Nepal, and Bangladesh are some of the poorest in the world and sometimes called "the poverty triangle" (Dinar et al., 2007: 251). It also has a high population of approximately 630 million in an area of 1.7 million km² (Vaidya and Sharma, 2014: 17).

India today has to support over 17% of the world's population on just over 2% of the world's land area, while Bangladesh supports about 2.27% of the world population on 0.11% of the world's land area. These ratios are bound to widen by the mid-century (Wirsing et al., 2013: 14). This population growth, combined with rapid urbanisation and fast-paced economic development means that demand for water already outstrips supply (Kumar and Furlong, 2012: 12-13). Rapid urbanisation alone "is driving increased water demand both for municipal supply and for the industrial and agricultural products in demand in cities" (Chellaney, 2014: 622).

Wirsing et al. (2013: 14) identify this "[w]ater scarcity and demographic plenty" as one of the circumstances that make the Ganges-Brahmaputra problemshed particularly vulnerable. The others include flooding/drought, damming of the rivers, faltering hydro-diplomacy, and political turmoil. Climate change is also on their list. The compounded effects of rising temperature, flooding, sea-level rise, loss of wetlands and cyclones will leave densely populated 'mega-deltas', such as the Ganges-Brahmaputra-Meghna Basin particularly at risk (Evans, A.; 2010: 4; Evans, J.W.; 2015: 80). Other potential effects of climate change include complications with spatial and temporal rainfall variability, evaporation rates, and temperatures in different agro-climatic zones and river basins (Asthana and Shukla, 2014: 139). These, in turn, will likely affect "agricultural production and food security, ecology, biodiversity, river flows, floods and droughts, water security, and human and animal health" (Vaidya and Sharma, 2014: 17).

The frequency and intensity of floods in the river basins are expected to increase as a result of greater precipitation during the monsoon season (Vaidya and Sharma, 2014: 3). Changes in climatic conditions also affect diseases transmitted by water, via such vectors as mosquitoes (Werz and Conley, 2012: 20). Moreover, the countries in the Ganges-Brahmaputra problemshed are less resilient to water-related disasters than other Asia-Pacific countries, which creates a further challenge for transboundary water governance and climate change adaptation (Vaidya and Sharma, 2014: 12).

There are competing transboundary water issues

In addition to these sources of volatility, there are competing issues on the transboundary governance agenda. Each presents unique risks and opportunities, but they are largely interrelated and, as with any wicked problem, addressing one issue in the problem set may adversely affect another. The issues identified by the World Bank as being most pressing in the Ganges-Brahmaputra problemshed, and therefore of most relevance here, are upstream water storage, lack of sufficient water for irrigation, hydropower generation, flood mitigation, and sedimentation. (Pollution and groundwater exploitation are also major issues for the riparians, but of lesser consequence for transboundary interactions.)

The Hindu-Kush-Himalaya mountain range, from which the Ganges and Brahmaputra rivers flow, holds one of the largest bodies of ice outside the polar caps, and these glaciers, ice fields, and snow packs provide important intra- and interannual water storage facilities. But, as discussed above, the monsoonal contributions of meltwater and rainfall coincide, creating a situation of too much water in the wet season and too little water in the dry season. The increasing gap between water availability and demand in months other than in the monsoonal season is threatening livelihoods and economic development in the region, but could be alleviated with man-made water storage facilities (Vaidya and Sharma, 2014: 3).

Water storage is a particularly important issue for transboundary governance because it can be used to even out water supply between where it is comparatively plentiful – Nepal and Bhutan – and where it is scarce – India. In addition to flow augmentation for downstream irrigation, Nepal's storage potential of 88 billion cubic metres could bring other mutual benefits, such as hydropower generation, flood control during the monsoon, and flow augmentation for navigation (Onta, 2001: 106).

Water and energy are said to pose the biggest constraint on India's growth because demand for both is increasing at a rate faster than current capacity can provide (Kumar and Furlong, 2012: 8). Nepal's enormous hydropower potential could provide a convenient and significant supply of 'clean' energy for India's growing needs, particularly in the north of the country (Onta, 2001: 110).

Although the issue of hydropower generation in the Ganges-Brahmaputra problemshed is the one most often – and most vigorously – debated within the region and internationally, it is water for irrigation that has broader effects in terms of human security, livelihoods, and food production. As Dinar et al. (2007: 254) point out, "[a]griculture accounts for nearly one half of all freshwater usage in

the [Ganges-Brahmaputra-Meghna] basin, making water supply one of the most significant barriers to economic development". Agriculture, in turn, is vulnerable to drought and flooding.

Floods are a natural part of the hydrology of the Ganges-Brahmaputra problemshed and serve essential ecosystem functions such as groundwater recharge, soil fertilisation, and renewal of fish stock (Thomas, 2012). Flooding also brings nutrient-rich sediment, and rice harvests were segmented in pre-colonial times throughout the year to hedge against flood-pattern fluctuations (D'Souza, 2007: 263-264). But the understanding of floods as bringing benefits as well as danger has been lost with the development of the 'command and control' approach to water governance in the past century. The problem of flooding, especially for Bangladesh, is not just one of a surfeit of water, but also a surfeit of sedimentation. Compounding the diversions of Ganges River flow to Bangladesh is the rapid rise in silt deposition rates since the Farakka Barrage was erected upstream in India in 1975. Such sedimentation substantially reduces the riverbed's storage capacity and further increases flood risk (Thomas, 2012).

These issues of hydropower generation, irrigation, flooding and sedimentation are brought together in the prevailing narrative of development of freshwater resources in the region. The assumption is that there is almost infinite hydropower potential in the Himalayas (especially Nepal) and that it should be exploited for the benefit of all riparians. This narrative is based on the dominant paradigm of water management; command and control of nature, and the pursuit of technological and engineering solutions to water related problems.

The World Bank has attempted to challenge some of the assumptions in this narrative through the 2014 Ganges Strategic Basin Assessment. This study was the first to comprehensively model the hydrological, economic and social aspects of this basin, and to provide the foundations for evidence-led policy. The Ganges Strategic Basin Assessment intended to challenge existing misconceptions about how to manage the region's freshwater resources, and commence a new era of cooperative governance based on benefit sharing. The World Bank has taken a scientific approach to mapping out how to optimise the various benefits that can be derived from the Ganges Basin. But the response from riparian states was less than expected. India, Nepal and Bangladesh rejected the World-Bank study. The Ganges Strategic Basin Assessment had touched a raw nerve, that of underlying and unresolved grievances between these riparians.

Water interactions between northern India, Nepal, Bhutan and Bangladesh are not positive

The competing transboundary water issues are also a source of tension between riparian states and contribute to the less than positive water interactions between them. Condon et al. (2009: 13) argue that Nepal's limited diversion or storage capacity is at the root of water disputes with India. While for Nepal the issue of water storage is largely one of untapped potential, for Bangladesh it is a question of mitigating the negative effects of India's upstream projects. Bangladesh has a seeming abundance of water resources, but most of its annual flow comes in the form of monsoonal floods that quickly flush out to the Bay of Bengal; Bangladesh is a predominantly flat, deltaic country with limited water storage potential (Wirsing et al., 2013: 15). At the same time, Bangladesh has not benefited from water storage and diversion in upstream India.

In contrast, the water interactions between India and Bhutan is largely positive. The cooperative relationship between Bhutan and India over transboundary water resources can be attributed in large part to the kingdom's far-sightedness and political savvy in fostering the non-zero-sum-thinking that allows the interests of both Bhutan and India to be addressed through hydropower development. Bhutan's stance toward the hydro-hegemon can be said to be an instance of 'bandwaggoning', whereby weaker states in a regional system seek accommodation with the local hegemon in order to receive economic and military benefits (Dash, 2008: 117).

As Dinar et al. (2007: 248) note, "the Ganges has tremendous joint development potential that has not yet been realised by its riparian states. Rather, the Ganges Basin is more popularly known for its

rich history of disputes". Problems in this 'rich history of disputes' include the lack of strong regional identity, the securitisation of water issues, the presence of a hydro-hegemon that struggles to be a regional leader, and the reliance on bilateral rather than multilateral approaches to transboundary water governance. Wirsing et al. (2013: 14) also add faltering river diplomacy, and simmering separatist tensions and political turmoil to these conflict-inducing problems.

These non-water issues also have a bearing on the governance of international rivers. Tiwary (2006: 1686) points out that considerations outside of the negotiation table affect the outcome of formal negotiations. He argues that states negotiate not only in reaction to other riparians, but also in reaction to domestic politics. In the Ganges-Brahmaputra-Meghna Basin, Dinar (2002: 246-247) shows that "domestic politics play a large role in the hydropolitics between the basin riparians". One illustration of this is that Nepal has been unable to negotiate effectively with India over shared water issues because of numerous domestic distractions (political upheaval, insurgency, etc). In contrast, Bhutan, with fewer domestic non-water-related considerations for the polity, has been able to reach more satisfactory negotiation outcomes with India (Hanasz, 2015).

Hill (2015: 737) also cites the example of India's bureaucracy as another domestic, non-water related challenge to positive transboundary water interactions. He describes the bureaucratic culture prevailing in India as paternalistic, coercive, favouring top-down planning, and lacking in support or feedback from locals. In other words, cultural factors also contribute to less than positive water interactions. Uprety (2014) summarises the transboundary water interactions in South Asia by saying that while some riparians claim to be in favour of cooperative, multinational approaches to water governance, "collective multilateral attention to the problems of transboundary waters has been rare. Historically, the region has lacked a collective strategy and bilateralism remains the focus". He adds that the "prevailing mutual distrust" between riparian states contributes to self-serving water management rather than positive-sum outcomes.

The trust deficit in the Ganges-Brahmaputra problemshed is extremely high, according to Earle et al. (2015: 41-42). There are numerous and long-standing factors that contribute to the mutual distrust in South Asia, not all of them related to shared rivers. In regard to transboundary waters, however, India's hydro-hegemony is one contributing factor to lack of trust in the region. This is discussed below, along with some of the water-sharing agreements that, despite ostensibly being acts of cooperation, continue to foment resentment. Another source of festering relations is the construction of hydroengineering projects, both existing and planned. For example, the Farakka Barrage is a sore point between Bangladesh and India (Hanasz, 2014), while Nepal feels aggrieved over India's construction of the Tanakpur Barrage (Mirumachi, 2013: 309-319).

The distrust between riparian states has consequences for transboundary water cooperation. Asthana and Shukla (2014: 275-277) show that water remains "securitised across borders due to a bitter past, mistrust and hatred that dominate the sociopolitical structure in these countries". Without trust, argues Uprety (2014), "the strategic approach of most of the countries is merely to theoretically engage in water-related initiatives, but practically advance only those serving their own specific interests". In other words, without trust between riparians, a zero-sum attitude to water sharing prevails. A zero-sum view of transboundary water resources presumes that the water can only be used once, and only by one party. "Not surprisingly", argue Islam and Susskind (2013: 134-135), "it yields outcomes in which one side 'wins' and others 'lose'". In contrast, a positive-sum view enables win-win arrangements, but "it is predicted that riparian states will cooperate because they have a shared interest in doing so" (Julien, 2012: 51). In short, trust is integral to cooperation and collaboration.

Transboundary waters are not governed in a collaborative way

South Asia is one of the most poorly governed regions in the world, with inefficient and inequitable deployment of resources, crippling debt burden, social divisions along ethnic and sectarian lines, as well

as rampant corruption and vulnerability of civil society organisations (Baqai, 2011: 27). As Baqai (2011: 31) argues, "[t]he South Asian state is both strong and weak. On the one hand, a high degree of 'state-ness' is witnessed and on the other, the breakdown of state authority, as a result of social disorder makes political upheaval the norm".

The weak solidarity and regional identity in South Asia also mean that the region lacks a security community. A security community means that a group of states has "achieved such a level of cooperation, or even integration that they simply do not consider fighting each other as a realistic possibility to resolve disputes, and stop preparing to do so (although such states may well continue to prepare to fight others)" (Jones, 2008: 183-193). As Asthana and Shukla (2014: 275-277) show, there is also no sense of collective action for dealing with non-traditional security threats, such as water conflicts. Indeed, they argue that "[n]on-traditional threats are also securitised across borders due to a bitter past, mistrust and hatred that dominate the sociopolitical structure in these countries". The securitisation of water – shifting water governance issues from the domain of normal politics and its procedures to one of emergency politics or "panic politics" (Mirumachi, 2013: 2) – continues to be a driver of negative water interactions in the Ganges-Brahmaputra problemshed. Of course, there are instances of positive interactions between riparian states too, for example meetings of joint river commissions and memoranda of understanding on specific issues such as river navigation. But overall the hydro-politics in the region remain tense.

India's hydro-hegemony is a further point of tension for Nepal, Bhutan and Bangladesh (Ray, 2008: 88). India's relative political, military and economic strength allows it to mitigate the fact of geography that it does not control the headwaters of all the rivers that pass through its territory. India is thus able to influence its upstream neighbours to gain access to their water resources, and its downstream neighbours to overlook transboundary water arrangements that may adversely affect them. This influence, as that of any hydro-hegemony, can at times be constructive and at times coercive (Bhasin, 2008: 7).

Hydro-hegemony is not inherently a destabilising factor; indeed, a hydro-hegemony could be a strong regional leader that promotes cooperation among riparians. But, as Bhasin (2008: 19-21) argues, India has failed to provide political advice and economic guidance to neighbours without appearing domineering. The perception of India as a sometimes bullying 'big brother' continues to foment resentment, distrust, and political tension within Nepal, Bhutan and Bangladesh vis-à-vis the hydro-hegemony.

As Hill (2008: 75) shows, "[t]he geopolitics of the region is arguably defined by the dominance of India and issues surrounding whether transboundary disputes should be handled bilaterally or internationalised continue to provoke tensions" and furthermore these tensions "are likely to intensify as demand for water becomes more acute in the future". Even though all the rivers flowing through India are international and pass more than one country, all the treaties on these rivers are bilateral (Singh, 2008: 36). India's persistence in establishing strictly bilateral arrangements and not involving the international community in matters of transboundary water governance in South Asia has, argues Hill (2008: 60), shaped the transboundary water interactions in the Ganges-Brahmaputra problemshed.

Hill also argues (2015: 734) that India's insistence on bilateral, rather than multilateral, treaties regarding the region's international rivers is a source of enmity. Nepal still feels cheated over the Kosi and Gandak agreements from the 1950s and 1960s (Bhattarai, 2005: 15), and the legacy of these bilateral arrangements continues to weigh down cooperation with India (Chellaney, 2011: 283). More recently, the 1996 Mahakali Treaty has become a source of discontent and Nepalese resentment of India. Indeed, Gyawali and Dixit (1999: 561) argue that the saga of the Mahakali Treaty presents itself as a case in point of Nepali polity and its relationship with its big southern neighbour.

Bangladesh too feels aggrieved by bilateral arrangements with India. There is much criticism of the bilateral water-sharing arrangements between India and Bangladesh, which are, argues Hill (2009: 92),

inequitable and symptomatic of the broader relationship between the two countries. The 1996 Ganges Treaty in particular is resented by Bangladesh (Singh, 2008: 20) and exemplifies the hydro-hegemon's prerogative to set a bilateral water governance agenda, through which it benefits more than the weaker riparian states (National Research Council of the National Academies, 2012: 91). The Ganges Treaty neither takes a whole-of-basin approach to river management nor factors in the effects of India's consumptive water uses on the Ganges upstream of the Farakka Barrage (Hanasz, 2014).

Because India is able to set and benefit from bilateral arrangements, the likelihood of a basin-wide water governance framework emerging is low (Earle et al., 2015: 41-42). That poses a challenge for international actors working to increase transboundary water cooperation in the Ganges-Brahmaputra problemshed. India has been distrustful of the World Bank-led Abu Dhabi Dialogue that promoted regional cooperation on the Himalayan rivers (SAWI, 2015), and does not contribute financially to the South Asia Water Initiative (World Bank, 2014: 30-34).

India was also an unenthusiastic participant in the Ganges Strategic Basin Assessment, which was intended by SAWI as a knowledge base in support of creating basin-wide benefit-sharing arrangements. Nepal and Bangladesh also rejected the Ganges Strategic Basin Assessment, and were disgruntled with the way the World Bank led the study. This is another illustration of the low levels of commitment that the riparian states have towards transboundary water cooperation. Earle et al. (2015: 41-42) have argued that "there is certainly a lack of political will in the [Ganges-Brahmaputra] basin, particularly in India, to provide the space for multilateral river institutions to effectively emerge".

This lack of commitment hinders the effectiveness of international organisations working to increase transboundary water cooperation in the region. As Tiwary (2006: 1686-1687) argues, "international water conflict resolution requires considerable political will on all the sides" and sustained motivation to reach agreement. Desire for cooperation is important because, in the words of the Israeli hydrologist, Uri Shamir, "[i]f there is a political will for peace, water will not be a hindrance. If you want reasons to fight, water will give you ample opportunities" (cited in Julien, 2012: 62). India, Nepal and Bangladesh (but not Bhutan) do not place transboundary water governance at the top of their political priorities, and ongoing tensions over past failures at improving interactions continues to keep political will low. This makes transboundary water cooperation both more difficult and more important.

THE CASE FOR TRANSBOUNDARY WATER COOPERATION

The response of international organisations and donors to this situation – environmental vulnerability, competing transboundary water issues, and turbulent hydropolitics – has been to frame it as a collective action problem. Colopy (2012: 319) points out that intelligent choices about river management seem impossible without regional cooperation.

Grey et al. (all of whom have worked for the World Bank in South Asia) (2009: 17) note that there is "very limited existing transboundary cooperation" in the Ganges-Brahmaputra problemshed, and that although "[f]uture risks are undoubtedly high" they could nonetheless potentially be mitigated through cooperation. They propose that:

Joint institutions for information sharing could help predict and monitor the basin's changing hydrology and underpin early warning systems, thus enhancing both agricultural productivity and disaster preparedness. Cooperative infrastructure development and/or operation could help regulate river flows to mitigate floods and droughts, generate power and irrigate fields. Cooperative environmental management could enhance water quality and ensure environmental flows for ecosystem health. And all of this cooperative engagement could improve regional relationships "beyond the river" (Grey et al., 2009: 17).

The underlying assumption in these schemes for increasing transboundary water cooperation is that these schemes require third-party support or facilitation. After all, if riparian states had the capacity and political will to mitigate future water security risks on their own, they would have done so.

Hill (2013: 257) too agrees that "cooperation between all of South Asia's states for the benefit of the region's citizens... is essential if the multiple crises of water are to be overcome to any significant degree" but worries that transboundary water cooperation in the foreseeable future "is less likely than continual division and enmity". In contrast to Grey et al. (2009), however, Hill places less emphasis on the role of international organisations in facilitating transboundary cooperation and more on multi-scalar civil-society networks. But, he notes, "at present, such networks are weak, underdeveloped and unable to exert significant influence on state policy and inter-state relations" (Hill, 2013: 257). It is not within the scope of this article to examine the strengths and weaknesses of regional civil-society networks except insofar as the limited civil-society engagement in water governance is concerned, which creates an opportunity for international actors to intervene through Track II or Track III dialogue (that is, to facilitate formal and informal dialogues between state actors, civil society, and academics).

The framing of water-security issues as a collective action problem (one that riparian states, especially in the developing world, is presumably ill-equipped to tackle themselves) is not a phenomenon unique to the Ganges-Brahmaputra problemshed but rather a part of a recent global trend. Since around the year 2000, the new 'sanctioned discourse' of water management has, according to Mollinga and Gondhalekar (2014: 180), centred on the ideas of the market, good governance, and sustainability. This discourse has been supported by a set of global organisations (notably the World Bank and several UN organisations), and actively propagated through international development funding agencies. Thus, the framing of the situation in the Ganges-Brahmaputra problemshed as a collective action problem is part of the emerging 'global politics of water', or the globalisation of regional water security issues through international organisations and aid donors (Mollinga, 2008: 13).

That is not to say that there is no desire for cooperation and collective action from within the problemshed. On the contrary, scholars from India, Nepal and Bangladesh have been arguing that only collaborative approaches can resolve the water-related disputes in the region. Iyer (2007: 199), one of the most prominent and well-respected authorities on water issues in South Asia, points out that the idea of regional cooperation is gaining currency in South Asia – but the question remains, cooperation at what level, between whom, and for what purposes? The bilateral modes of collaboration that India prefers (as noted above) is only part of the solution and not a substitute for true regionalism.

Sharma (2014) argues that "a basin-scale approach would help manage the water resources better" but that such an approach would "require close coordination with all the countries sharing the Ganga, such as Nepal and Bangladesh, so that the interests of both upstream and downstream users are taken into consideration". Sharma (2014) also lists various government and non-government agencies, the private sector, civil-society groups, and the public at large as needing "to be actively engaged in these efforts" for improving water governance in the Ganges Basin. International actors are absent from this list of stakeholders.

Asthana and Shukla (2014: 271) also agree that "[c]urrent water resource development in South Asia is not sustainable. There needs to be a shift in emphasis on demand management practices and further incentives for conservation of water resources". They argue that

South Asia needs to move forward with a cooperative and participatory approach on river basins and water sharing. There needs to be a regional awareness that rivers can be better harnessed through collective efforts and recognition that cooperation is essential to alleviate threats to water security (Asthana and Shukla, 2014: 274).

Their suggested approach for fostering cooperation is that of inclusion and dialogue: "Policy-making needs to be more inclusive of other voices in the formation process, engaging civil society, and moving beyond the top-down exclusionary approach" (Asthana and Shukla, 2014: 273). For Asthana and Shukla, then, dialogue between state and non-state actors may be an appropriate approach to improving transboundary water interactions, but it does not necessarily have to be facilitated by international actors.

Even Chellaney (2011: 297), a proponent of the idea that Asia may be on the brink of water-related war, agrees that only an approach based on "integrated resource management that involves all basin states" can prevent water conflicts from worsening. He adds that "[o]nly collaborative paths that embrace all stakeholders and break free from the business-as-usual approach can help unlock solutions". Again, however, third parties are not explicitly made part of the solution to negative transboundary water interactions in the Ganges-Brahmaputra problemshed. Why, then, are international actors engaged in transboundary water governance here?

WHY ARE INTERNATIONAL ACTORS INTERESTED IN THE GANGES-BRAHMAPUTRA PROBLEMSHED?

The impetus for foreign-aid donors and international organisations in increasing transboundary water cooperation has come not from within the Ganges-Brahmaputra problemshed, but from these external actors. The new 'sanctioned discourse' of good governance and sustainable development, combined with the emergence of the global politics of water, is driving international organisations and donors to invest more and more in the water governance of regions of strategic importance to them. The global focus on climate change has also added a layer of urgency to 'fixing' transboundary water problems. As Mollinga and Gondhalekar (2014: 180) point out, "[t]he recent surge in attention to climate change, in debates on which water resources play a central role, has added to the perceived global nature of the 'water question', most recently popularly framed as a 'water security' question".

South Asia is increasingly portrayed as "the linchpin of humanity's collective effort" (Matthew, 2014: x) for problems of collective action. Asthana and Shukla (2014: 241), for example, argue that "[b]eyond doubt, hydropolitics between India and its neighbouring riparian states is one of the most urgent, complex, and contentious issues facing the regional community in the twenty-first century". International actors are rising to this challenge. In the Ganges-Brahmaputra problemshed, Colopy (2012: 319) shows that "[o]ne sign of this is an effort led by the World Bank called the South Asia Water Initiative, funded by Great Britain, Australia, and Norway. The bank has organised forums in different parts of the region and urged the various nations to share information". SAWI was established in 2009 by the Abu Dhabi Dialogue (ADD). The ADD was formed in 2006 to foster cooperation in the management of the rivers in the Greater Himalayas (SAWI, 2015).

The ADD process was not limited to the Ganges-Brahmaputra problemshed, but rather includes all seven countries (Afghanistan, Bangladesh, Bhutan, China, India, Nepal, and Pakistan) that share the rivers of the Himalayas. The members of the ADD were not only government officials, but also representatives from academia and civil society. In other words, the ADD was a formalised Track II dialogue process. It is exclusively modelled on the "common water-sharing framework in line with the Nile Basin Initiative" (Earle et al., 2015: 41).

According to the World Bank (2013), "[t]he key rationale for engagement is to demonstrate and then to help achieve the mutual benefits of cooperation across shared river basins". The focus of the ADD and SAWI on fostering regional cooperation is an appropriate one considering the myriad unresolved transboundary water issues in the Ganges-Brahmaputra problemshed discussed above. The need for increasing transboundary water cooperation has been noted by scholars from within the region, yet as has been noted above, the riparian states themselves are on the whole unwilling or unable to actively pursue positive water interactions with one another. The riparians are also largely indifferent to the efforts of international actors to facilitate cooperative processes. Furthermore, it may be that Track II dialogue – the primary approach of the ADD and SAWI – is alone not enough to develop positive water interactions between India-Nepal and India-Bangladesh (the interactions between India and Bhutan are already positive, on the whole). This is especially so that international actors tend to be engaged for relatively short periods of time whereas Track II dialogue is a long-term strategy; it cannot build trust between conflicting parties immediately. How, then, can international actors engage more effectively in this problemshed and beyond to increase transboundary water cooperation?

HOW CAN INTERNATIONAL ACTORS ENGAGE MORE EFFECTIVELY IN THE TRANSBOUNDARY WATER GOVERNANCE OF THE GANGES-BRAHMAPUTRA PROBLEMSHED?

Foreign-aid donors and international organisations have taken on the challenge of increasing transboundary water cooperation in the Ganges-Brahmaputra problemshed, but they are unlikely to meet it single-handedly. As Earle et al. (2015: 41) argue, the attempts to improve transboundary water interactions "have not ventured beyond political statements and setting up lofty goals" and that "the World Bank has failed in its hope to bring South Asian countries within a common water-sharing framework".

Because of the complex nature of transboundary water governance, and the inherent unpredictability of complex adaptive systems (such as international river basins), international actors alone are unable to directly bring about positive water interactions between riparians. They may, however, to some extent influence the conditions from which cooperation may emerge. Some suggestions for how to do this are discussed below.

First and foremost, international organisations and foreign-aid donors may be better placed to support riparian states in influencing the conditions in which transboundary water cooperation may emerge if they collaborate more closely with stakeholders within the basin and address their concerns. Riddell recommends "[d]eepening knowledge of local contexts" and "[l]earning lessons – moving from rhetoric to reality". Similarly, Asthana and Shukla (2014: 273) advise that good water governance should be more than just rhetoric. "In most cases", they argue,

participation of stakeholders begins only when the decision is already announced, after which stakeholders engage in activist roles and resort to collective action rather than being part of the planning process. Policy-making needs to be more inclusive of other voices in the formation process, engaging civil society, and moving beyond the top-down exclusionary approach (Asthana and Shukla, 2014: 273).

This is part of the theory behind Track II dialogue and other deliberative governance processes – but the practice has not always been in line with the theory. In the Ganges-Brahmaputra problemshed, stakeholder views are not always incorporated into foreign-led initiatives.

Stakeholders within the Ganges-Brahmaputra problemshed would like to see approaches to transboundary water interactions that:

- address the political context and historical grievances
- build trust and address power asymmetry between riparian states
- strengthen water-sharing institutions
- create political will for cooperation
- de-securitise water
- take a problemshed view
- move beyond narratives of water scarcity and supply-side solutions.¹

Donors and international organisations may be able to address underlying historical grievances between riparians and thus, in the long term, build trust. Continuing to engage government and non-government actors in dialogue on issues of mutual importance is a step in the right direction. The international actor who is seen as a neutral third party may be able to bring together conflicting parties to resolve long-standing tensions. The World Bank, for example, is sometimes perceived as providing

¹ Summary of findings based on author's PhD fieldwork conducted in India, Nepal and Bangladesh in 2014.

the 'adult supervision' to the 'children' of South Asia and thus ensuring an order and procedural fairness on negotiations about shared waters (Ray, 2014).

International actors could also play a role in building and strengthening transboundary water governance institutions. As Earle et al. (2015: 41) argue,

There is now a strong need for setting up an institutional, systematic, and collaborative river water management mechanism in the basin. Basin-based institutions can help to reduce uncertainty surrounding Ganges-Brahmaputra riparian relations, which has been the bane of the region for a long time. If successful, these institutions can possibly shift the focus from disconnected and short-term interactions of the riparian countries into a continuous relationship that has scope for future routine gains.

Further challenges to the effectiveness of international actors in increasing transboundary water cooperation lie in the very nature of the system in which they operate. In the current system of foreign aid, programme and project descriptions, and funding rationale documents tend to be filled with broad objectives, but narrow and short-term indicators for evaluating progress. In other words, there are a lot of unrealistic expectations about what international actors, or specific methods, can achieve. For example, Track II dialogue is touted as a direct and effective way of increasing transboundary water cooperation. Riddell (2014: 40-42) has several recommendations for addressing some of the more general limitations of the system of foreign aid. One is "[e]nsuring short-term uses of aid are supportive of long-term development goals" while at the same time "[l]inking all aid more closely to overall developing country goals and processes".

Moreover, the mission of international actors must be clear: is the purpose to manage water disputes, or resolve them? Conflicts can be managed, or they can be resolved, and the latter way is considered the fairer approach by Zeitoun et al. (2014: 174). The idea that conflict management is not the same as and, indeed, inferior to, conflict resolution, echoes Islam and Susskind's (2013) main argument that dialogue, though important for relationship building, is not the same as problem-solving. In other words, dialogue between stakeholders to a water conflict may be the starting point for either the management or the resolution of that dispute, but the latter is preferable because it necessarily involves addressing water (in)justice. As Zeitoun et al. (2014: 184) point out, "the conflict management approach is at odds with the more principled approach of conflict resolution or conflict transformation" because in seeking the easiest arrangements over distribution and control of transboundary waters, alternatives are ignored or de-legitimised while arrangements created through asymmetries in power are reinforced.

Equitability is another requirement of conflict resolution. Equitability refers to "outcomes that may be considered balanced and fair, though not necessarily equal" (Zeitoun et al., 2014: 180). Equity, in contrast, is achieved when a person's rewards or outputs are perceived to be in proportion to that person's inputs or contributions. Needs are met when a person who has a greater need receives greater rewards or outputs, irrespective of their inputs or contributions. Equality occurs when everyone receives equal rewards or outputs regardless of their needs or contributions (Patrick, 2014: 64). But for Zeitoun et al. (2014: 180), equitability is "the spirit of justice; that is, the basis upon which we may use fact and thought to reason out what is 'just'". Therefore, for the international actor taking a water justice approach to resolving transboundary water conflict, ensuring equitability is a precondition for 'positive' cooperation and a sustainable outcome (Zeitoun et al., 2014: 187-188).

Lastly, there remains a role for foreign-aid donors and international organisations in shaping the international community that in turn affects and influences riparians in basins with low transboundary water cooperation. Zeitoun and Jägerskog (2009: 12-13) provide an example of why this is important. At the 2009 World Water Forum, steps to develop legal and fair water-sharing principles were resisted by powerful hydro-hegemony who instead pushed for enshrining in international law the principle of 'hydro sovereignty' (which, according to Zeitoun and Jägerskog (2009: 12-13), "appears to be a reversion to the discredited Harmon Doctrine that had been abandoned over a century ago".) The role

of international actors in promoting transboundary water cooperation, then, is not limited to basins characterised by negative or neutral transboundary water interactions. Instead, Zeitoun and Jägerskog urge that "[w]e must keep our eyes open to recognise and confront the reality of power asymmetry, basin bullies and coercion in order to achieve effective cooperation" at all levels and in all spheres. This, they argue, "makes the role of third-parties all the more crucial" (Zeitoun and Jägerskog, 2009: 12-13).

CONCLUSION: WATER INTERACTIONS ARE COMPLEX, AND CHANGE IS SLOW AND UNPREDICTABLE

Good water governance is complex. It cannot be readily quantified, and it is not predictable. Transboundary water cooperation, for example, cannot be measured by the number of international treaties or agreements. A treaty may, in fact, "sustain the conflict it was intended to transform" (Zeitoun and Mirumachi, 2008: 297) while disputes over water are not always undesirable: "Tensions may lead to resolution of conflict and thus be considered in a positive light" (Zeitoun and Mirumachi, 2008: 303). At the same time, a negotiated agreement is neither the beginning nor the end of water interactions. As Tiwary (2006: 1686-1687) points out, "[t]he politics (national or domestic) over water do not abruptly end with an international treaty; it just enters a new phase of inter- and intra-nation level scrutiny and criticisms". Similarly, an agreement over sharing the costs and benefits of a transboundary river are not necessarily a reflection of cooperation between riparian states. Zeitoun and Mirumachi (2008: 308) argue that benefit-sharing arrangements enshrined in treaties and international agreements are an example of neutral rather than of positive water interactions.

With so much ambiguity in transboundary water interactions, cooperation is complex and unpredictable. Jones (2015: 140) argues "real peace is made as a result of a complex and interlocking web of factors". Similarly, Pahl-Wostl (2015: 32) shows that "[g]iven the complex nature of governance systems, change can be expected to be a combination of purposeful collective action and emergent phenomena resulting from self-organising processes and the interactions among a range of actors". Interventions led by international organisations and aid donors are just one part of the slow, steady, and largely uncoordinated work of transboundary water governance (Prasai, 2014). As such, if they are to increase cooperation between riparian states, that can only happen in the long term.

System-wide change takes a long time. Long-term engagement is, according to Pohl et al. (2014: 35), the only appropriate approach to successfully building trust in a system of transboundary water interactions. But even in the long-term, cooperation cannot be guaranteed. There is no one path to cooperation, and no certainty for the external actors that they will resolve conflicts. Numerous factors play into the dynamics within dispute-resolution processes and the contexts in which they occur; culture, domestic politics, trust (or lack thereof) between parties, power asymmetries, issue power, the presence or absence of third parties, etc. While all these, and other, factors define the outcome of interactions, dialogues, and negotiations, they do not predetermine them.

What does that complexity mean for transboundary water cooperation in the Ganges-Brahmaputra problemshed? And what does it imply for international actors engaged here? As Hill (2015: 732) shows, in the past there have been many initiatives in the Ganges-Brahmaputra problemshed for resolution of water disputes, but changing the way riparian states think about shared water resources is difficult: "[g]iven how politically contentious many parts of the region already are, this will be a long and unenviably difficult process and there are no guarantees of any success in this regard". In other words, these are murky waters, and the presence of international actors adds to the complexity of the situation at the same time as it tries to clarify it.

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