



Rethinking Water-Climate Cooperation in South Asia

GARETH PRICE

ABSTRACT Water is a finite resource but demand for it is not. As water supply dwindles to its limit, potential conflicts are brewing between countries that share transboundary freshwater resources. Is the world equipped with the means to prevent the eruption of such conflicts? In South Asia, transboundary water management systems have remained weak, leaving co-riparians extremely vulnerable to conflict. A sound management system has now become imperative, as the very real threats of climatic changes further exacerbate the problem of dwindling water supply. South Asian co-riparians must reimagine their water relations, encourage cross-boundary cooperation, and aim to mitigate the ill impacts of what has historically been a haphazard water management system.

INTRODUCTION

Water management across South Asia, in theory at least, is top-down and bureaucratic and as such, highly prone to weaknesses. These shortcomings become clear in the manner in which, for instance, cross-border relations are dealt with almost haphazardly, with agreements amongst co-riparians being few and far between; those that exist are hardly implemented. For example, the Indus Waters Treaty divides six rivers between India and Pakistan. The Ganges Water Treaty,

meanwhile, between India and Bangladesh, stipulates a minimum flow of water into Bangladesh. Besides these, there are no agreements over other shared rivers, and while neighbours, India and Nepal have three agreements, none of these have been successfully implemented. In the case of Afghanistan and Pakistan, there is scarcely any discussion, let alone a negotiated agreement, on transboundary waters.

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A sound transboundary water management system has become an imperative, especially as climate change is likely to exacerbate regional tensions over water resources. While there are some discussions on the need to improve cooperation in relation to disasters, overall, given the low level of cooperation on existing challenges, it is unsurprising that there is even less dialogue on future threats.

Access to water is dependent on rainfall, glacial melting, and on the actions of upstream countries. Downstream Bangladesh, for instance, complains of rivers running dry. Many in Nepal also argue that the country has been unable to develop its hydropower potential because India does not want to jeopardise its own water supply. In a similar vein, floods and droughts in Pakistan are blamed by some sectors on actions taken by upstream India. India rejects these claims, of course, and maintains that in relation to Nepal, for example, political instability was the primary explanation for the country's undeveloped hydropower. However, data-sharing is also limited, and this lack of data limits the country's ability to rebut criticisms.

Until recently – particularly in the case of India and Pakistan – water was seen as one of the more positive aspects of the overall bilateral relationship. The durability of the Indus Waters Treaty contrasted with the overall relationship which involved several conflicts. But over the past decade, water has become an increasingly divisive issue. This reflects several factors, foremost of which is the stress exerted by burgeoning populations and increasing demand for water. Further, continued industrialisation and urbanisation has led to changing demand for water. There is also the undeniably increasing prevalence of floods and droughts in many parts of the globe reflecting, in many cases, the impact of the encroachment of human populations onto flood plains (as a result of population growth), or the apparent impact of changing weather patterns. Within Pakistan, for example, it is widely believed that India has been responsible for a series of major floods there in recent

years—a view that has done nothing to help rebuild the former's trust.

Urban experts predict that these trends are likely to continue. As things stand, water—a basic resource that is amongst the most vital for human survival—has become a source of mistrust, both within and amongst countries. Without a thorough reimagining of water management systems, temporal and regional shortages of water will only continue to exacerbate regional instability.

INTERNATIONAL AGREEMENTS AND MECHANISMS

Existing international arrangements for managing shared rivers sit in either one of three categories: navigation; water quality; and non-navigational aspects. Agreements on navigation are generally conducted on a river-by-river basis, and so far, the introduction of non-navigational uses has been slow. There is substantial opportunity to learn from international best practises and indeed some institutions in South Asia have tried to derive lessons about governance approaches on transboundary rivers such as the Mekong. However, in general, there often seems to be reluctance – particularly on India's part– to learn from non-South Asian experiences; this resistance is grounded on arguments about India's 'exceptionalism'.

At the 1992 Rio Earth Summit, participants agreed to the “Dublin Principles”, namely:

- Fresh water is a finite and vulnerable resource, essential to sustain life, development and the environment.
- Water development and management should be based on a participatory approach, involving users, planners and policymakers at all levels.
- Women play a central part in the provision, management and safeguarding of water.
- Water has an economic value in all its competing uses and should be recognised as an economic good.

The UN Convention on the Law of Non-Navigational Uses of International Watercourses, while adopted in 1997, has been ratified so far by only 36 countries. The convention applies to the uses of international watercourses and their waters for reasons other than navigation, as well as to measures of protection, preservation and management related to these watercourses. It includes the principle of equitable utilisation as well as the obligation to not cause significant harm to other states.

The UN Economic Commission for Europe Convention on the Protection and Uses of Trans-Boundary Watercourses and International Lakes is intended to protect and ensure the quantity, quality and sustainability of transboundary waters by facilitating cooperative management. It entered into force in 1996 and, in 2003, was amended to allow countries from beyond the region to accede. The convention includes the following four key provisions:

- An obligation to take all appropriate measures to prevent, control and reduce any transboundary impact and to use transboundary groundwater in an equitable and reasonable manner, taking into account all relevant factors.
- An obligation to use transboundary groundwater in a sustainable manner.
- An obligation of cooperation in the common identification, delineation and characterisation of their transboundary groundwater and programmes for the joint monitoring and assessment of quantity and quality of transboundary groundwater.
- Integrated management of transboundary groundwater and surface waters.

While each of these agreements offers a pathway towards a more harmonious approach to transboundary rivers in South Asia, at the heart of these is the political decision over whether to cooperate or compete in relation to water. And if the principles enshrined in other treaties were to be adopted, the countries of South Asia would

first need to recognise that shared waters can in fact be a source of mutual benefit.

DEVELOPING INSTITUTIONS

The Indo-Bangladesh Joint Rivers Commission (JRC), established in 1972, was intended to allow the two countries to work together to harness their shared rivers for the benefit of their peoples. Aside from the Indus Waters Treaty, it probably offers, at present, the most favourable existing institution for development. The commission has several stated functions:

“To maintain liaison between the participating countries in order to ensure the most effective joint efforts in maximising the benefits from common river systems to both the countries; to formulate flood control works and to recommend implementation of joint projects; to formulate detailed proposals on advance flood warnings, flood forecasting and cyclone warnings; to study flood control and irrigation projects so that the water resources of the region can be utilised on an equitable basis for the mutual benefit of the peoples of the two countries; to formulate proposals for carrying out coordinated research on problem of flood control affecting both the countries. The Commission shall also perform such other functions as the two Governments may, by mutual agreement, direct it to do.”

In recent years, some signals of a changing political approach, at least between India and Bangladesh, have emerged. Joint communiques and agreements have stressed the need to work together on water issues, and India, for example, has agreed that its actions will not create a negative impact on Bangladesh. India and Bangladesh have also agreed to explore possibilities of common basin management and to cooperate in flood forecasting and control, climate change adaptation, and ecosystem protection. However, the Ganges remains the only shared river on which the two countries have an agreement.

SUPPLY-SIDE COOPERATION

Historically, the approach to water management in South Asia has been to focus on the supply of water in rivers, either guaranteeing a minimum flow to a downstream country, dividing river water volume from a particular location or, in the case of the Indus Waters Treaty, allocating three rivers each to the co-riparians, India and Pakistan. This is, in effect, a zero-sum approach. Water is allocated, for example, to Nepal or India or Bangladesh. Clearly there is potential for further agreements along these lines. Agreements on other rivers between India and Bangladesh would certainly help to reassure the downstream riparian. But any agreement implies that one country could be worse off than under the status quo.

Forging such agreements has already proven difficult in the past, when there was even less pressure on water resources. It seems foolhardy to make the case that it will become easier now and in the future. The difficulties are exacerbated by India's federal system, under which decisions such as those related to river management have to be made by both the involved states and the central government, in agreement. Indeed, under India's previous NDA-led government, these state-centre tensions undermined a proposed treaty on the Teesta River.

For downstream riparians who, to begin with, face greater risks than their upstream counterparts, prolonged negotiations which fail further exacerbate their distrust. This risk, however, must be balanced by the fact that any potential agreement which guarantees a minimum flow or share of water would offer some reassurance to downstream riparians.

But beyond the focus on river volumes, there are a number of additional themes relating to the supply of water which offer space for enhanced regional engagement and dialogue and, potentially, the coming to fruition of normal agreements.

The challenge of falling groundwater levels has become more acute across South Asia in

recent years; the consequences can be dire across borders. The causes of groundwater depletion are similar across the region, and domestic politics—for example, in Indian states such as Punjab and Haryana—make it difficult to implement policy shifts. There is, nonetheless, clear opportunity for shared learning given divergent experiences in rainwater harvesting, small dams, and ponds. Similar shared challenges could include salinisation in coastal regions and approaches towards climate change and climate variability.

Moreover, floods present a significant challenge across the region. Increased cross-border data sharing could help provide a better response. Some local initiatives are underway but were governments to prioritise flood mitigation – rather than merely response – the potential cross-border benefits could be significant. Given that currently some voices in Pakistan put the blame on India for the increasing frequency of floodings in many parts of their country, the provision of warning data would serve to improve bilateral relations.

Most approaches at present are, in fact, bilateral, and multilateral approaches have proved more difficult. In part this reflects the size discrepancy between India and its neighbours. India has generally preferred bilateral negotiations, though has also shown some willingness for trilateral meetings (with Nepal and Bangladesh and with Bhutan and Bangladesh, for instance). However, more high-level approaches – imagining the best use of a river in the absence of borders – have proved less successful in part because of lack of political trust in South Asia. Nonetheless, adopting a shared learning approach could be extended regionally.

DEMAND-SIDE COOPERATION

Official cross-border cooperation, as it is, focuses on the supply of water. While the demand for water is seen as a domestic matter, if water is to be a source of cooperation then the uses of water will need to become part of the equation. And if,

through dialogue and engagement, less intensive uses of water could ease overall demand. In particular, given that four-fifths of water is consumed in agriculture, by adopting less water-intensive agricultural practices the over-arching water narrative could shift away from competition.

A number of issues offer scope whereby cooperation, discussions and policy alignment could work to provide mutual benefits, though “joint management” is likely to be a step too far given concerns over infringements of sovereignty. But sharing best practise is a worthwhile exercise in a range of fields, for instance:

- Irrigation
- Hydro-power generation and distribution
- Navigation
- Fisheries management
- Water quality and pollution
- Industrial water usage
- Erosion control on shared rivers
- Urban water management
- Eco-system, watershed and forest management

Problematically, even among officials, there is often an acceptance that water is a difficult issue. This is combined with a lack of awareness of success and a belief that examples of success are geographically or culturally specific and not necessarily replicable. Nonetheless, even as the specifics differ, there are successful examples of processes – for instance, on engaging with communities which could be replicated even if the outcomes may differ in different contexts. Given that the overwhelming majority of water is used in agriculture, reducing pressure on water resources will require a shift towards less water-intensive production. While there are debates over the extent to which practices from other topographies are pertinent in the South Asian context.

The development of hydro-power offers an alternative avenue for cooperation. Bhutan's

economy has been transformed by the development of hydro-power, most of which is exported to India. Nepal offers similar opportunities, yet progress has been slow. Industrialisation and urbanisation, again, present ongoing regional challenges both of which offer opportunities for the sharing of best practice. There are many challenges hindering a shift from supply to demand. Given concerns over sovereignty, whether demand-side consultation could take place at the level of governments is a moot point. Certainly it is difficult to envision any binding agreements being made on the use of water.

Already, numerous organisations are taking steps to share best practises, but scaling up initiatives is difficult in part because the processes by which this is done is often disconnected from the realm of policymaking. A more conducive environment for demand-side negotiations could be enabled were successes better publicised. In the mainstream media, however, stories about water as a source of crisis are more common than those about the successes that have been reaped due to various efforts. Nonetheless, there has been a shift in broader development thinking within India in recent years both to find and replicate examples of “what works”, coupled with a recognition that there is no one size that fits all. In the case of water – in some cases where farmers have been charged for water but have a guaranteed supply, they have used water more efficiently. In other cases, the guaranteed supply has enabled the cultivation of more water-intensive cash crops leading to greater water consumption.


Low expectations across the region are part of the problem. If better water management was demanded, those providing water would be put under greater strain to strive for best practise. In the case of urban water provision, India's smart cities initiative may develop some solutions that could be replicable both in India and in other cities in South Asia.

RETHINKING CROSS-BORDER COOPERATION

The challenge for improving water management in South Asia is more political rather than institutional. If the politics are those of enmity between countries, super-imposing a world-leading institution onto this will not produce an optimal outcome. If the focus of South Asian countries is to maximise the volume of water available to them at the expense of upstream or downstream countries, water will remain a source of tension. Climate change could exacerbate this tension.

Given these risks, it is imperative that a framework is developed to approach water through a lens of cooperation and mutual benefit. There is widespread agreement that effective management of transboundary water resources would involve basin-wide planning and management. This in turn would ensure a minimum environmental flow and joint management of water storage structures. It may well involve the creation of third-party dispute resolution mechanisms. But it would seem that the

countries of South Asia, at present, are unwilling to countenance the institutional arrangements for water management this would require. Rather than focusing simply on volumes of water, cross-border discussions – and subsequent institutions – need to focus on the uses of water. Whether in the joint development of hydropower production or navigation, or through the protection of ecosystems, focusing on the benefits of water provides upper and lower riparians to see water as a source of benefit rather than conflict.

Aspirations for joint management have struggled because of fears that these somehow impinge on one country's sovereignty. But policy alignment – if it is clear that one country has devised a workable approach to the challenge – is a feasible aspiration. It may well be that there is no one-size fits all approach and that bilateral arrangements may continue. But were India to develop hydro-power (with Nepal); navigation (with Bangladesh) and flood warnings (with Nepal, Bangladesh and Pakistan) the benefits of cooperation may start to create a new narrative where cooperation on water brings benefits rather than exacts costs. 

ABOUT THE AUTHOR

Gareth Price is a Senior Research Fellow at Chatham House, leading research on South Asia. He was previously an analyst at the Economist Intelligence Unit focusing on India, Pakistan and Afghanistan, and before that the South Asia analyst at Control Risks Group. His current research interests include India's foreign policy, regional relations within South Asia, and the politics of water.



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20, Rouse Avenue Institutional Area,
New Delhi - 110 002, INDIA
Ph. : +91-11-43520020, 30220020.
Fax : +91-11-43520003, 23210773
E-mail: contactus@orfonline.org
Website: www.orfonline.org



Embassy
of the Federal Republic of Germany
New Delhi

Embassy of the Federal Republic of Germany

Economic and Commercial Department
N° 6/50 G Shanti Path, Chanakyapuri, New Delhi 110021
Tel.: + 91-11-44 199 155
Fax: +91-11-26 877 706
E-mail: wi-10@newd.diplo.de
Website: www.india.diplo.de