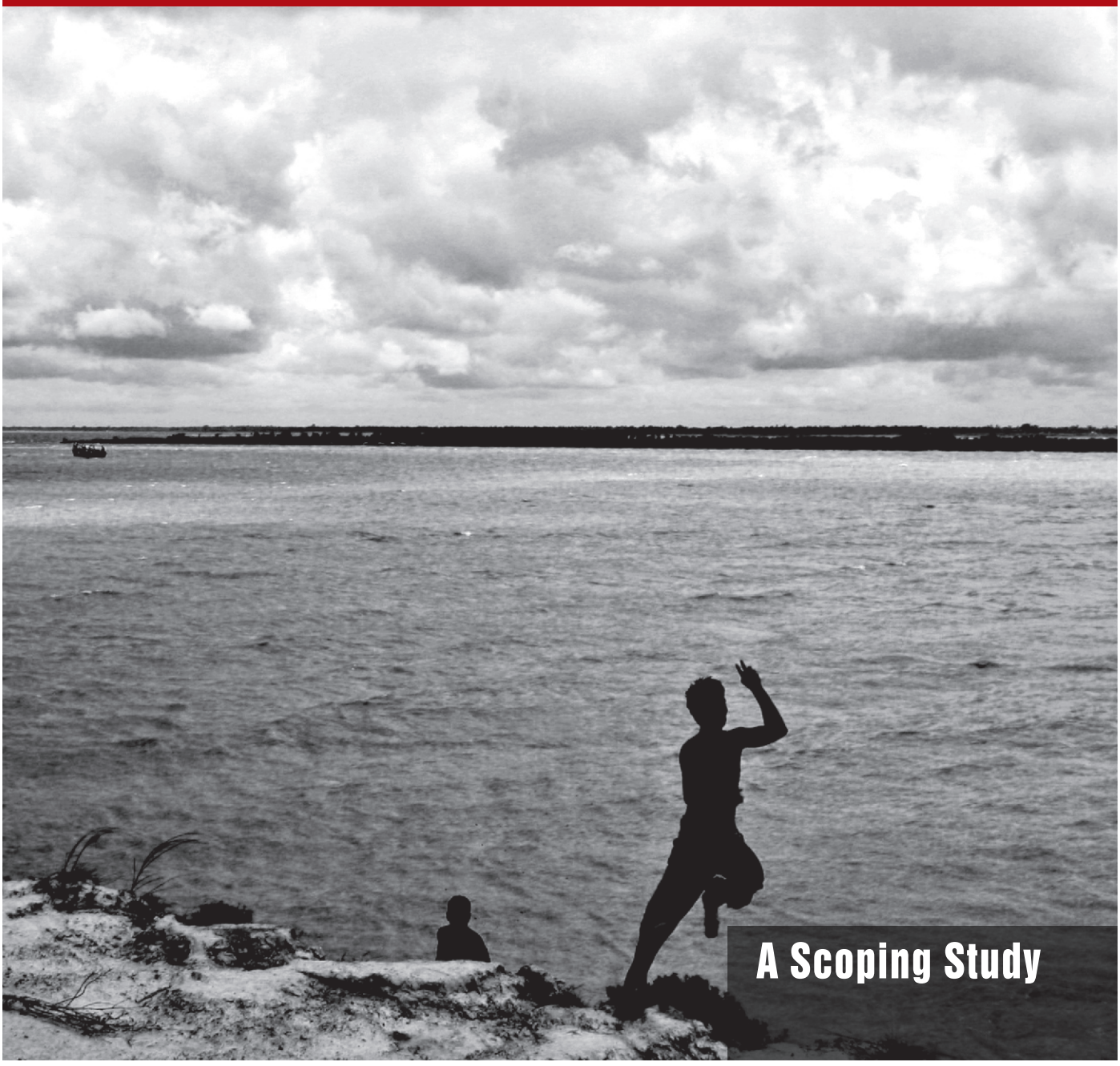
Trans-Boundary Water Politics and Conflicts In South Asia: Towards 'Water for Peace'



A Scoping Study

Trans-boundary Water Politics and Conflicts in South Asia: Towards 'Water for Peace'

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Contents

Introduction

1. Locating the Study

In 2003, UN Secretary General Kofi Annan stated in a report on prevention of armed conflict that "….in addressing the root causes of armed conflict, the United Nation system will need to devote greater attention to the potential threats posed by environmental problem."In doing so, he was articulating a globally felt need of linking 'security' and the so called 'soft threats' such as environmental degradation and poverty. However, in much of South Asia, the debate on 'security' continues to revolve around national security and high politics. While such a state led discourse has been challenged by feminists and peace activists, a gap remains when it comes to 'environment–security' linkages with much of the debate largely focusing on land issues. The question of 'water conflicts' is an arena that still awaits more attention.

However, 'water' is crucial to life and survival, and concerns of sharing and managing this finite element in South Asia has been generating a lot of heat. At one level, are issues that are directly linked to the fact that there is a 'water crisis' looming over the region. It is a reality that usage of water resources has reached or far exceeded the limits of sustainability in most of the countries in South Asia. Rapid growth of population, urbanisation and mega cities, industries, mining, intensive irrigation and agriculture has combined with inefficient use of water, to insure that water is fast becoming a scarce resource—both in terms of quantity and quality. This has fuelled conflicts between different uses and users of water, between states within countries, and across countries. With the possibility of devastating impact of climate change, and the severe shortage of freshwater as projected by the Inter-governmental Panel on Climate Change, the situation is likely to take a catastrophic turn. In India alone, gross per capita water availability is stated to decline from around 1,820 cubic meters a year to as low as around 1,140 cubic meters a year in 2050 (IPCC, 4th Assessment Report).

At another level, water tensions can be seen embedded in South Asia's turbulent history. The region has witnessed wars, and is an area where protracted violent conflicts and border disputes abound. It is argued that many of these conflicts between South Asian countries are also taking environmental forms. Simultaneously, various environmental issues are getting regionalised and politicised. There is thus an 'environmentalisation' of certain conflicts and politicisation of the environment in this region. Against this broad backdrop, the study attempts to map out the links that underlie water (environment), conflict and peace in South Asia.

2. Why the Study?

To begin with, it must be stated that the purpose of the study is not to give credence to the 'water war' thesis. Indeed wars continue to be fought over oil and not water. The study is located in the understanding that peace is not simply the absence of war but a value grounded in issues of human security and collective well being of the region. From such a perspective, there have been several reasons as to why this study was undertaken at this juncture in South Asia.

[1] Kofi Annan, Interim Report of the Secretary-General on Prevention of Armed Conflict, September, 2003

[2] Of late, there have been some studies which highlight the environment–conflict link in South Asia, such as C. Gupta and M. Sharma, Contested Coastlines: Fisherfolk, Nations and Borders in South-Asia.

[3] Ibid. p. 5.

- Water insecurity is all pervasive in the region, visible in conflicts and tensions erupting within and across countries. Hence the need to integrate water security as key component of human security is crucial.
- The questions of sharing, and management of trans-boundary water continues to be an irritant in any attempts to build peace and cooperation in the region. The fact that South Asia lacks a regional framework for ecological/water governance only magnifies these conflicts/tension points. As the case stands, the governance of trans-boundary rivers has been carried out through bilateral treaties signed by different countries and India—treaties that themselves have been sites of conflict.
- Of late, our respective governments have been talking about better regional cooperation, and 'peace.' And yet a closer look reveals that what is being imposed from above as regional 'peace' and 'cooperation,' are in reality attempts to hollow out both these values and give them minimalist content. At one level, (despite the rhetoric of peace) the dominant discourse in the region remains one of 'security' defined in narrow militarised term as 'national security,' and as a thing apart from human or resource security. At another level, regional cooperation/peace/integration in South Asia is increasingly getting defined in economic terms, dictated by neo-liberal market agenda. Consequently:

  a) There is a push to perceive water as an 'economic good,' a tradable commodity to be left to the market forces—an approach that then influences how water is to be utilised and shared in the region where India and Indian businesses dominate. Such approach threatens the recognition of water as a common pool resource, as a human right vital for survival, and as an environmental resource to be protected, and treated with the principles of sustainability;

  b) An ascendancy of market discourse has also meant an increased role of business groups (particularly Indian business groups) as legitimate players, and marginalisation of civil society actors at the regional level. Indeed, as the study revealed, South Asian civil society networking and initiatives on water (as well as a host of other issues) has been at an all time low in this phase. Clearly, the battle in much of South Asia to establish a framework for water governance that is fair, equitable, and environmentally sound is far from over.

These various factors form the rationale of this attempt to explore, from the perspective of the people and civil society, the possibility of bringing the question of fair and sustainable trans-boundary water governance right back to questions of peace and cooperation in South Asia. Indeed the case for South Asian water governance specifically, and ecological governance at large has never been as strong, nor as urgent as now with the growing impact of global warming. From the Himalayas, which feed water to a billion people, to the coastal areas of Bangladesh, South Asian countries must prepare for the effects of climate change, even as they work to combat its human causes.

3. South Asian Water Profile

South Asia is a region of both water abundance and scarcity. The Hindu Kush-Himalayan region (HKH) is one of the largest storehouses of fresh water in the world, and its mountains are the source of major river systems. The three Himalayan rivers, the Indus, the Ganga and the Brahmaputra arise within 300 km from each other in the Himalayan glaciers.[5] While the Ganga originates inside the Himalayas, the Indus and the Brahmaputra originate beyond, in the Trans-Himalayan Tibetan region—the Indus taking a westward course towards the Arabian Sea, and the Ganga and Brahmaputa making the journey towards the Bay of Bengal in the East of the subcontinent.

[4] This got a further fillip post September 11 and one finds an increasing tendency to 'securitising' environment.

[5] Bhim Subba, Himalayan Waters, (Kathmandu, Nepal: Panos South Asia), 2001, p. 49.

Individually, each of these main rivers is among the largest rivers in the world, and together they constitute the "Himalayan river system." While the Indus and the Ganga are each principal rivers of two separate river systems, this difference is over-ridden by the over all contiguity of the Indo-Gangetic plains. Together, these three rivers are estimated to carry an average of 1,200 cubic kilometers of water every year. When combined with the Meghna (Barak), a non Himalayan river which has an average annual flow of 100 cubic kilometer, the Ganga-Brahmaputra-Meghna becomes the world's third largest river system. These rivers not only provide water but are also a major focus of religious and cultural life in the region.

However, South Asia is inhabited by 1.4 billion people and home to 40 per cent of all those living in poverty worldwide. The IGB basin alone supports over half billion people (10 percent of the world's population), an area where poverty is endemic and agriculture forms the main basis of livelihood. Hence, though theoretically the availability of water is high, access to water remains one of the major challenges. In addition, water supply remains seasonal in nature. The IGBM river systems exhibit a remarkable variation in the temporal and spatial availability of water, and the hydrology of the rivers follows the rainfall pattern. About 80% of the total annual flow occurs between June to September, with the remaining 20% occurring during the rest of the months.[8] This results in an alternative cycle of excess and scarcity leading to conflicts over water-sharing. However, to a great extent the crises is precipitated because of the decreasing water quality and the inefficient and inequitable way the resource is governed and managed. This poses a threat both to water as an environmental resource as well as means of survival.

Socio-Economic Indicators and Projected Water Demand/Availability

Country	Population		Per Capital GDP in 2001 (US$)	Projected Water in BCM		
	Density Person Per Km2 (2001)	Growth Rate (%) (1990-2001)		Demand upto 2025	Availability	Surplus/ Deficit
Bangladesh	1025	1.8%	370	48	1181	(+) 1133
India	348	1.8%	460	1060	1086	(+) 26
Nepal	165	2.4%	250	40	232	(+) 192
Pakistan	183	2.5%	420	335	236	(–) 102

Source: World Bank (2003) and Reddy et al [9]

4. Contested Waters in South Asia

Ideally cooperation based on mutual trust, transparency and information sharing among riparian countries should ensure the best management and sharing of water. However, given the atmosphere of hostility, 'upstream-downstream' syndrome, 'unequal' partnerships, lack of definitive international laws, regional principles or enforceable global conventions, a number of conflicts has erupted in South Asia on trans-border water issues. To

[6] Ibid. p. 88.
[7] Ibid. p. 52.
[8] "Water Sharing Conflict among Countries and Approaches to Resolving Them," WASSA Project Report, Vol. 3, p. 20
[9] In Toufiq A. Siddiqi et al, p. 3.

understand this, one must begin with a certain geographical reality. India shares contiguous borders with all these South Asian countries, is both an upper and lower riparian, and is a giant in terms of its size (and economy) when compared to Pakistan, Nepal, and Bangladesh. Not surprisingly (and due to a host of other reasons) tensions have arisen between India and most of these countries on cross-border water issues. The atmosphere of mistrust among some of these countries, together with the fact that India is perceived as a 'hegemon' by its neighbours has not helped the situation. Water has been a serious tension point between India (upper riparian) and Pakistan (lower riparian); between India (upper riparian) and Bangladesh (lower riparian); and between India (lower riparian) and Nepal (upper riparian).

i) India and Pakistan have fought four wars over Kashmir. According to some, the major underlying issue is about water. There is a widespread perception in Pakistan (which heavily relies on the Indus water system) that the Indian control of the Indus water-head can be misused to block water to Pakistan and devastate its economy. India refutes these charges and pledges its commitment to the Indus Water Treaty (IWT). Indeed the IWT between the two has survived the ups and downs of Indo-Pak relations, but has lately come under strain with India's plans to construct eleven large hydroelectric projects, including the Baglihar and Kishenganga Hydro Electric projects.

ii) India and Bangladesh are the co-riparian states with fifty-four rivers crossing their borders, including two large Himalayan river systems, the Ganges and the Brahmaputra. The major issue of dispute between the two countries has been the Ganga, though the Brahmaputra and Teesta are also entering the shadow of conflict. In the past, tensions have peaked when Ganges water have reached extreme low levels in dry seasons causing crop losses in Bangladesh. In 1993, the then Bangladeshi Prime Minister Begum Khaleda Zia accused India's diversion of river water near the border as "a gross violation of human rights and justice." Controversy has raged over the Farrakka Barrage constructed by India on the Ganges near the border with Bangladesh. Attitudes have been rigid on both sides regarding the water dispute. The Indian establishment alleges Bangladesh of being unreasonable as the barrage was crucial to divert water to the Calcutta port, and of greatly over-stating its water needs. Bangladesh contends that such diversion has resulted in falling water tables and greater water salinity downstream for Bangladesh. It is perceived in Bangladesh as typically a case of a more powerful country disregarding the case of a smaller and weaker neighbour. India's proposal of building a number of dams in the North East, and its mega plan of linking its rivers (now under review) has become yet another bone of contention between the two countries.

iii) Between India and Nepal, water has often strained the relatively better relationship between the two countries. Nepal has enormous hydro-electric potential in the Himalayan rivers. The expectation is that a series of projects for the export of power will generate vast financial resources for the country. However Nepal lacks the capital and technology required for such large projects. Power deficit in northern India is around 9,500 MW, which is expected to rise to 20,000 MW by 2010. Thus, India sees its interest in the utilisation of the Nepal's rivers. This has been the basis of various water-resource development agreements between India and Nepal. All these treaties, including the Mahakali Treaty of 1996 have been criticised in Nepal. The Mahakali treaty faced popular unrest and remains stalled. The dominant feeling in Nepal has been that these treaties have not been equitable and Nepal has been "bulldozed" by India.

[10] Z.A Bhutto, (the then Prime Minister of Pakistan) while addressing the UN Security Council, 1965 stressed that the main hindrance in resolving Kashmir is water. Also see "India/Pakistan: Water War Warning as Tension Escalates," Daniel Nels, OneWorld.net, 21 May 2002, http://www.corpwatch.org/news/PND.jsp?articleid=2616h

[11] Address to the UN, 1993.

[12] Mallika Joseph, "Delhi round of Indo-Pak talks-II; Tulbul navigation project/Wular Barrage," www.ipcs.org/issues/ articles/162-ip-mallika.htm.

Methodology

This is a scoping study, and in that sense, it is aimed to achieve breadth rather than depth of coverage. It has evolved out of the recognition that there is a need to address the issue of politics of water, conflict and peace from a regional perspective, to enable i/. the development of effective civil society initiatives on the question of governance of trans-boundary water at this juncture in the region; ii/to inform and link the question of water security to the ongoing debates of regional peace and peace.

1. Objectives of the Study

The specific objective of this study is three fold:

1) To understand and bring to the fore issues that plague trans-boundary water disputes in South Asia,

2) To identify initiatives or lack of it with regard to water sharing and management from the perspective of peace building in South Asia,

3) To identify alternative approaches, and the possible action points for future intervention.

2. Research Method

Using the scoping study methodology, rather than specific and focused research questions, we began with some broad inquiry on the trans-boundary rivers from three vantage points: 1) common history, 2) ruptures, and 3) people's suffering. These were then used as the axis to probe through a body of literature, develop a more sharpened research design and conduct field work.

i) Literature review: As a starting point of research, information was collected and analysed using secondary and primary sources. Secondary data was collected from electronic database; using reference lists in libraries as well as manually sifting through key journals; and finally meeting and tapping existing networks, relevant organisations, and individuals who were working on water and conflict issues. This was further supplemented with primary material like government water policy documents, newspaper reports, published and unpublished documents and reports of local NGOs.

ii) Mapping the field: Field work was conducted in three South Asian countries— Nepal, Bangladesh, and India (Kashmir, North East, and Bihar). Aimed at covering a wide gamut of issues, the study used qualitative interview method with key stake holders such as relevant government officials, NGOs and CBOs, activists, academics working in the field, and media persons. A comprehensive interview guide/probe was prepared, and the questions were kept open ended. Though Pakistan has been part of the study, given the unstable political situation in the country we were unable to conduct field work. The dismissal of chief justice Iftikar Chowdhury, followed by the imposition of emergency and later, the assassination of Benazir Bhutto became grounds for denying visas. The field work was first postponed and finally dropped. Hence in Pakistan's case, the report relies on secondary sources, media reports, and the internet. Two meetings—GCAP (Global Call to Action against Poverty) in Kathmandu, and another on “South Asian Perspective on Climate Change” in Dhaka—provided an opportunity to meet NGOs and civil society activists from Pakistan. Inputs from these discussions have also been used to supplement the sections on Pakistan.

3. Scope and Limitation of the Study

The study is preliminary in nature. Given the limited time and resources, and the wide range of issues that emerge at the interface of water and border politics, the study confines itself to its objective and to four South Asian countries—India, Pakistan, Nepal and Bangladesh. This was chosen keeping in mind various factors: i) History of these countries both in terms of commonality and differences; ii) History of water dispute/dispute settlement between these countries; iii) Politicisation of water within each country with cross boundary implications; iv) Civil society action within each country with regard to water; v) Accessibility to the region within this limited time and resource.

While we recognise that internally, water conflicts within each country are assuming serious proportion, and externally , the geo-politics of water spill far beyond these four countries to other regions (as in the case of reports concerning proposed diversion of water of the Brahmaputra by China), these concerns though extremely important, remain beyond the limited scope of this work.

4. Problems during the Study

As a South Asian traveling across the region, we make dual journeys. Ordinary people open their homes and hearts, and states and governments shut gates and borders. As faced by most South Asians, entry always remained the biggest problems and visas took days to be received. Nepal was an exception. The other problem we faced had to do with the unstable situation in the region. Each trip had to be meticulously planned weeks in advance only to be cancelled at the last moment. Eventually, field trips to Bangladesh did materialise despite the cyclone and local government instability, and to Nepal amidst the unsure situation and questions as whether the Maoists would pull out of the government and the uneasy peace be broken. Unfortunately, the Pakistan visit did not work out and had to be dropped.

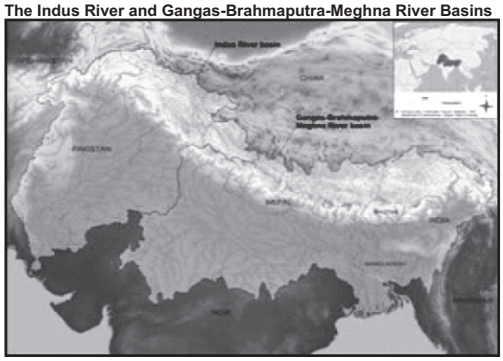
History, Ruptures and Water : Socio-Political Sites of Water Conflicts in South Asia

"The Earth is one but the world is not. We all depend on one biosphere for sustaining our lives. Yet each community, each country, strives for survival and prosperity with little regard for its impact on others."

(Brundtland Commission's Report, Our Common Future, 1987,)

1. "Rivers of Collective Belonging" [13]

The Indus River and Gangas-Brahmaputra-Meghna River Basins



Rivers, quite literally are life givers, carrying freshwater which is fundamental to life and the very basis of socio-economic wellbeing. In South Asia, rivers are also a deeply ingrained part of cultural and religious life. But rivers know no 'man-made' borders and flow freely across countries, cities, and villages, across fields and industrial belts. In terms of hydrography, one can argue that the states and societies of South Asia share a remarkable unity and its rivers bind the landscape into a composite whole. Nepal and India share the Mahakali-Ganga Basin, India and Pakistan share the Indus Basin, India and Bangladesh share the Ganaga-Brahmaputra-Meghna basin. If one looks at the overall riverscape of these trans-boundary waters, these river systems together cover the vast Indo Gangetic plains—or what constituted the ancient sapt-sindhu (seven rivers) valley and the Gangetic basin.

Not only have these rivers provided a geographical wholeness to South Asia, but they also epitomise a common socio-cultural confluence in the region, synergising varied cultural systems and ways of life, and cradling civilizations such as the ancient Harappa and Mohenjodaro civilization (around 2500 B.C) that grew on the banks of the river Indus and its five tributaries. Taking the example of the Ganga, Ajaya Dixit points out that:

"….for the present day Bangladeshi, Nepali, Sri Lankan, Pakistani, or Indian, the Ganga is a denominative absolute, be it the Burhi Ganga of Bangladesh, the Trisuli Ganga of Nepal, the Mahaweli Ganga of Sri Lanka, the Sindhu Ganga of Pakistan, or the Cauvery Ganga of peninsular India. The Trisuli Ganga hurtling past the gorge evokes in the Nepali villager the same sentiment as the Ganga entering from upstream to join the Bay of Bengal does in the Bangladeshi farmer."

Undoubtedly, there is broad "commonness" that untidily spills over the new, neat and not so neat borders that divide South Asia. It was not too long ago that Pakistan, India and Bangladesh were all part of British India with common political, economic, legal, and administrative structures. There are deep linguistic, cultural, migrational, religious and historical ties that people share across borders. Amidst this, the rivers have been a stream of "collective

[13] A phrase used by Ajaya Dixit during the interview on 24.9.2007, Kathmandu, and also the title of his article in Himal South Asian, August 2003.

[14] Ajaya Dixit, "Rivers of Collective Belonging," Himal South Asia, August 2003.

belonging"—sustaining ecosystems, communities and acting as a unifying force for South Asia's 'geo-economic and geo-cultural landscape.'

2. Turbulent Past and Present of Frontier Rivers: Partition, Communal Identity and Securitisation of Water.

However, these rivers are also embedded in the socio-political context of post colonial, post partition states of South Asia where a number of mental and physical borders are a reality today. Hence flowing water does not purely remain an ecological concern. It gets imbued with notions of security and insecurity; domestic stability and instability; purity and pollution; legitimacy and illegitimacy. Consequently, disputes over control and use of trans-boundary water send ripples across communities, people, and countries in the region. Who has the rights over rivers and their resources? Who can access water? Who can cast their nets into the sea? Competing claims have pitted citizens, communities, states, diverse interest groups against one another—within countries as well across countries in South Asia. Interwoven within these conflicts are other hierarchies of gender and caste which then further work to marginalise women and dalits in the use and management of water.

I) Partition, Nationalism and Water: The Partition of the sub-continent into India and Pakistan in 1947 was not just a partition of land and people, but also of its waterways. In the west, the line of partition (Radcliffe line) ran right through Punjab but in effect cut the Indus river system, disrupting its well integrated irrigation canals. Many of the canals were severed from their headworks. For instance, the existing canal headwork of Upper Bari Doab canal, and the Sutlej Valley canals fell in India, while the land being irrigated by their water fell in Pakistan, which led to water disputes immediately after partition. In addition, while the Indus was the main source of water for Pakistan's cultivable land, the source of the rivers of the Indus basin remained with India, adding another dimension of insecurity for Pakistan.

> "Partition is simple division, a separation but what happened in 1947 was much more than that....Not only were people separated overnight, homes became strange places, strange places now had to be claimed as home, a line was drawn to be a border, and boundaries began to find reflections in people's lives and minds."
>
> **Urvashi Butalia** [18]

Similarly, in the East, the Radcliffe line not only partitioned Bengal (into West Bengal and East Pakistan, later to declare independence as Bangladesh), but in effect it divided the delta region of the Ganga basin, severing river networks of the Ganga, Brahmaputra and Meghna, and severing ports (Calcutta and Chittagong) from their water sources. Hence East Pakistan as a lower riparian was left with little control over the fifty-four of its rivers, including the Ganga and the Brahmaputra. India was left with the only port in the east, the Calcutta port catering to a vast hinterland, and inundated by problems of heavy siltation that was affecting its navigability.[19] In addition, the

[15] Eva Saroch, "Hydro Borders in South Asia: Geopolitical Imagination and Contestations," in Berg, E., and Houtam, ed., Routing Borders between Territories, Discourses and Practices, (England: Ashgate Publishing Limited, 2003), p. 122.

[16] Ibid. p. 120.

[17] K. Warikoo, "Perspective of the Indus Water Treaty," in Samaddar, R and Reifeld, ed., Peace as Process: Reconciliation and Conflict in South Asia, (New Delhi: Manohar, 2001), p. 283.

[18] Urvashi Butalia, The Other Side of Silence: Voices from the Partition of India, (New Delhi: Viking-Penguin, 1998), p. 271.

[19] The Ganga bifurcated at Farakka into Bhagirathi-Hoogly, with the Calcutta port being fed by the Bhagirathi channel of the Ganga. Complications arose as the Bhagirathi shifted course, thereby creating problems for the Calcutta port.

partition line in Bengal had not factored in two distinct features of the rivers in this region—a) the fact that they tended to be extremely 'wayward' and frequently changed course, and b) they formed chars (strip of land rising from the river bed above water level). Both these factors then became sources of border disputes between the two nations. Many of these chars like the ones on river Padma are inhabited by people (char dwellers) who have since got caught in these border conflicts and faced untold suffering.[20] It would be worthwhile to mention that while much has of late been written on the partition and its impact on land and people, there is relatively less work done from the perspective of water. However, the fact remains that many of the water disputes between these countries today have their genesis in the divisions created herein.

The Partition not only created new borders and three countries out of one in the region, but the unfolding of partition also created mental borders, suspicion and mistrust which have since been reflected in the water politics of the region. This is evident in the way every water dispute between India–Pakistan (and now India–Bangladesh) takes the form of antagonistic nationalism with overtones of Hindu-Muslim communalised politics. An example of this has been the Sindhu (Indus) Darshan festival in Ladhak, or the Brahmaputra Darshan festival in the North East, organised by the BJP [21] as an assertion of claims on these frontier rivers.[22] In a similar vein, the VHP (Vishwa Hindu Parishad) protesting against the Tehri Dam on the Ganga, sought to collapse the Ganga with (Hindu) nationalism in statements like "Gangatva is Hindutva, Hindutva is Rashtratva" (Ganga = Hindu = Nationalism).[23] Similarly, protests against the Farakka dam originally rooted in the sufferings of people and the environmental degradation of Bangladesh, took a communal turn among many sections of the population in there.[24]

II) Securitisation of water : If one were to look at the conflict between India and Pakistan through watery frames, there is a view in the region that the dispute on Kashmir between India and Pakistan (over which the two neighbours have already waged four wars), is really about the control of the Indus water heads.[25] Z.A Bhutto, (the then Prime Minister of Pakistan) while addressing the UN Security Council in 1965 stressed that the main hindrance in resolving Kashmir is water. In March 2003, prime minister of Pakistan-occupied Kashmir Sikandar Hayat went to the extent of suggesting at a seminar that the "freedom fighters of Kashmir are in reality fighting for Pakistan's water security."[26] How far this is true or not is another matter, but what it does reflect is that there is serious insecurity in Pakistan about India's strategic control over the Indus water systems. At one level the apprehensions are over India withholding the water for an extended period, especially during the dry season. This carries disastrous implications for Pakistan. For one, the Mangla Dam on the River Jhelum, which is a source of irrigation and electricity for Punjab, would be adversely affected. At another, it is felt that control of water through storage and big barrages provide India with a strategic edge during a military confrontation. It would enable India to control the mobility and retreat of Pakistani troops and enhance the manoeuverability of Indian troops. Closing the Barrage gates would

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[20] See Joya Chatterjee, "The Fashioning of a Frontier: The Radcliffe Line and Bengal's Border Landscape, 1947–52," Modern Asian Studies 33:0101, p. 224.

[21] Bharatiya Janta Party, a Hindu right wing party.

[22] Eva Saroch, n. 10, p. 134.

[23] M. Sharma, "Nature and Nationalism,," Frontline, 16 February 2001, p. 17–45.

[24] Interview with Md. Hilal, Dhaka, 11 January 2008.

[25] There have been numerous discussions on this issue on news channels like NDTV. Also see Samuel Baid, "Not Kashmir but Kashmir's water is the core issue for Pakistan," Greater Kashmir, 28 March 2005. Deepak Gyawali also quotes former Foreign Secretary of India J.N. Dixit, in Gywali, "Pluralistic Politics under Monistic Design."

[26] See Ronojoy Sen, "And a river runs through it," The Times of India, 12 March 2005.

render the Pakistani canal system dry and easy to cross. India, it is argued is already in control of the Chenab River through the Salal Dam constructed in 1976, and many in Pakistan criticise the conceding of the Salal Dam to India.[27] Further in this direction came the Kishengunga and the Baglihar projects. Both the projects lie in the state of Jammu and Kashmir and are perceived as being guided more by India's geo–strategic concerns vis-a-vis Pakistan and by its larger geo-political manouvers in South Asia, rather than for the development of Jammu & Kashmir as stated by the Indian government.[28] According to A. Talib, the Tulbul Navigation Project (or Wullar Barrage Project) is a case in point. India has always maintained that the project was meant to improve water navigation on the Jhelum in North Kashmir but water navigation on Jhelum between Sopore and Baramullah or even Uri has never been an issue with the people of these areas.[29] India on its part totally refutes these charges as baseless and commits itself to the IWT.

The situation is similar between India and Bangladesh. A sentiment one often heard in Bangladesh was that the barrage at Farakka was built not so much to flush out the Calcutta port as stated by India, but to give India strategic security vis-à-vis what was then Pakistan, and Bangladesh now. As a respondent stated during the interview (name withheld), "Farakka was built for the purpose of India's security. If it was built to share water, there is very little water at Farakka in the lean season anyway."

Between India and Nepal, despite no overt conflict and a treaty of 'Peace and Friendship' between the two countries, India's "security" concerns have been an irritant in the relationship between the two countries. Problems have erupted over India's insistence to station its troop at Kalapani (a disputed territory) at the headwaters of Mahakali, and its control of the Kosi and Gandak barrages on common rivers in Nepal. In Nepal the feeling is that this compromises its sovereignty.[30] India on the other hand feels that this is a matter of its national security arising out of the use of Nepalese territory by ISI agents and other outfits manoeuvered by third countries—a fear that has been aggravated by the hijacking of India Airlines from Kathmandu to Kandhahar.[31]

Another aspect of securitisation of water resources and its management is the classification of hydrological data as "secret" information and its consequent removal from public domain. This is clearly evident in South Asia, and more so with India. In Nepal, in Bangladesh, and in Pakistan, a common complaint has been that India maintains utmost secrecy about any facts/figures/data regarding trans-boundary water. In all these countries, a striking feature was that any projects being built on trans-boundary water was known not by open sharing of information, but through news paper reports. More so, it is a fact that timely and adequate information are never easily or fully given or shared. For instance, this has been the complaint of Pakistan over the Baglihar and Kishengunga projects, or of Bangladesh over the Tipaimukh or over the now stalled Indian River Linking project. In Nepal, according to Mr. Surya Nath Upadhyay, former Secretary of Water Resources, Nepal and the chief negotiator on the Nepali side on the Mahakali Treaty:

"India treats Nepal as a small and poor country and acts unilaterally. When India was surveying for the Tanakpur barrage, Nepal raised its voice and asked what are you doing? They said no, we are looking at some possibilities of developing water projects and if there will be any possibilities we will certainly consult you. Later, they started to

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27 F. Noshab, N. Mushtaq, "Water Disputes in South Asia," see Webpage http://www.issi.org.pk/journal/2001_files/no_3/article/4a.htm, 12.10.2007.

28 Interview with A. Talib, Action Aid Office, Srinagar, Kashmir.

29 Ibid.

30 Deepak Gyawali and Ajaya Dixit, "How not to do a South Asian Treaty," in Himal South Asian, April 2001, webpage .11.2007.

31 Dinakar Shukla, "International Relations: India-Nepal Ties,"
see webpage http://pib.nic.in/feature/feyr2001/fsep2001/f0409200 11.html. Accessed 8.2.2008.

construct and Nepal again raised its voice and they said it is not your concern because it is being constructed on Indian territory and continued with the construction work of the Tanakpur barrage well into our territory, for which negotiations were carried out later. There is unrest in the Nepalese mind about the treatment that they are being meted out by India. I think its very unfortunate that this susceptibility has been not really taken into consideration."[32]

India on the other hand feels that it has acted well within the various water treaty provisions it has signed with its neighbours, and that there is little appreciation of the need and energy requirement of a vast country together with a tendency to obstruct any efforts it makes to utilise its 'own' water resources. There is also the feeling that given the disproportionate size and power of India as compared to the rest of the countries, there is a preconceived notion of India as a hegemon.

However, if one were to unpack the various articulations of disputes over trans-boundary water, the real concern seems to be over water scarcity and availability. Evidently there is a strong tendency in South Asia to turn water into an issue of national pride, and a propensity to place demands as if flowing waters is an exclusive property of that country alone, and belongs to no one else. This situation is likely to get worse before it gets better, particularly as water stress grows in the region (to be further discussed under section on climate change).

3. Reflecting Discrimination: Caste, Gender and Water.

Water is not simply a value – neutral physical element but something that percolates into all aspects of our lives, and mirrors the asymmetry of power as it exists in society. Given the widespread gender and caste based discrimination in South Asia, this is also reflected in the way water is perceived (with its accompanying notion of the sacred, purity and pollution), interacted with, accessed, controlled and managed. While of late there has been a growing body of literature on "gender and water," on the ground this has nor translated in women's participation in decision making. The aspect of caste and water remains an issue that is yet to be bought to the fore. In the meanwhile women and dalits/discriminated communities continue to be invisible, denied a voice or any say in the decision making or management of water. Even in the various initiatives led by the civil society, concerns regarding gender and caste are yet to be effectively registered in terms of action.

I) Gender and Water:

An archetypical representation of gender-water metaphor throughout South Asia is that of a poor women, carrying her water burden for miles, standing by a public tap for hours to collect water, struggling on a daily basis with her water chores. The water location are often feminine spaces and women have been imaged as the 'domestic collectors' of water, as 'domestic consumers', but they have no say in the public/productive role of water uses and participate in its decision making and governance, even as 'commodification' and 'privatisation' of water become the watch words.

Throughout South Asia (and elsewhere), gender is central to social and political power dynamics that shape the use of resources. Critically linked to this are issues of rights, of health and sanitation, of access, of women being 'bearers' of impacts, of women being excluded from the sustainability agenda, of living with decisions imposed from the top. Notably, women are not an undifferentiated category, and gender is often intersected by issues of class, caste, and region. Nevertheless, women and gender perspectives are totally invisible when it comes to water issues across the region, be it over treaties, flood, irrigation projects, dams and displacements . This is all the more stark when it

[32] Interview with Mr. Surya Nath Upadhyay, Kathmandu, now associated Jalsrot Vikas Sanstha and Global Water Partnership, South Asia, 29.09.07.

comes to trans-boundary water which is dominated by strategists, bureaucrats, engineers, and is absolutely a male bastion. Women tend to be severely underrepresented in public institutions, at the political and the techno-bureaucratic level, in the various corporations, though they are among those who are doubly vulnerable when it comes to suffering the impacts. What is required here is the integration of gender concerns and the participatory mechanism of decision making at a local, national and regional, international level, and among the various stake holders.

II) Caste, Discrimination and Water :

The question of caste, discrimination and water suffers from double invisibility. Except in India and Nepal where Dalit assertion has bought the issue to the fore, caste or other forms of descent based discriminations that exists underneath the surface of equality often goes unacknowledged even by the civil society at large.

In Pakistan, DAMAN, a development organisation, has highlighted the plight of the indigenous minorities of the Indus basin, such as the Kihals, Musali, and Ode, many of whom have suffered a direct blow to their livelihoods due to water conflict between India and Pakistan, and development activities by the Pakistani state. Allotment of lands to immigrants, development of irrigation systems i.e. canal and dams, clearing of forests and the shift to inorganic farming has deprived these indigenous minorities of the Indus their rights and access to water. The fact that many, like the Kihal men and women, do not even have the right to vote and voice their opinion, further adds to their invisibility.[33]

> The Kihals introduce themselves as Sheikhs. Instead of following one single religion in strict, the Kihals kept to a flexible system of believes. Due to their increasing dependence on neighboring Muslim population however, Kihals are fast converting to Islam and adapting Islamic life styles and traditions. ***"We are confirmed Muslims just like you and recite the same Qalma. If you (Sarkar, the government) provide us education, we will recite and understand the Quran. Please provide our women and children with education, and also please don't pollute the river with the city effluent and shift the effluent drains to somewhere else,"*** said Sona Kihal during the first ever meeting of Kihals with the concerned councilor. **30.4.2005, Rose Hotel, D.I. Khan (Source: DAMAN Development Organisation, Pakistan).**

In Nepal, Shanta Bahadur Pun, a water activist, pointed out that such discrimination was not practised in all communities, and was not something he had come across within his own community. However, historically in Nepal there is practised discrimination between "the caste whose water is pure (pani calynā jat)" and "the caste whose water is defiled (pani nacalynā jat)." As reported by the Human Rights Watch, segregation in neighbourhoods and water wells is a common practice in Nepal.[34] In India, conflicts and discrimination along caste lines over traditional water bodies like tanks and ponds are widely prevalent. In both India and Nepal, water is treated as a marker of purity, and lower caste groups are often not allowed to touch the water before their high-caste counterparts. The question of access, allocation, right to water becomes extremely important here, and increasingly a simmering issue, loaded with tensions. What do these communities on the margins of society and at border-margins of the nation-state lose or gain, what are their needs and suffering, how are their customary water law being changed or wiped out by what is being imposed from above, are other areas on which there has been little documentation.

[33] See http://www.civicus.org/new/media/BriefonIndigenousMinoritiesofIndus.doc.

[34] See "Discrimination of Dalits in Nepal," Human Rights Watch, website: http://www.hrw.org/english/docs/2004/02/09/nepal7322.htm.

Dams, Barrages, Diversions as Sites of Conflict in South Asia

The subject of mega projects and dams is one of the better publicised and documented issues in the region, and there is a lot of material existing on it. This is not surprising given the high financial, ecological and human costs these mega projects have entailed, and have been among the most intensely contested sites of conflict within each country and across borders—between dam affected and drought/flood affected areas, between communities and states, between an approach which regard 'dams' as secular 'temples' of modernity, and the other which sees them as giant symbols of destructive development. These studies have highlighted the suffering of displaced marginal communities, the ills effects of mega projects on the ecology, the limitation of mega projects in addressing droughts or floods in South Asia.

However, "dam building" seems to have got a new lease of life in the region in the present decade. If in the late '80s/early '90 s various environmental movements in the region had cast doubts on the viability of big dams and barrages, in the present contexts, these projects have acquired a new legitimacy among certain sections of economic–political elite, and are on their way back in India, and in Pakistan and with every likelihood of returning to the other countries too.[35] Between India and Pakistan there is almost a scramble to dam the common rivers, which then has been fuelling discord. Take the case of the Kishenganga or the Neelam in Paksitan. India has started building (330-megawatt) on the river, which Pakistan fears would impact its hydro scheme, a 969-MW plant located downriver, directly across the Line of Control in the Neelam Valley. Other cases of tension arising from the daming of frontier or shared rivers are the Indian River Linking Project (IRLP), the Kosi High Dam and Barrage , the Tipaimukh Dam which are among the numerous projects planned or being constructed and which are taking on the form of conflict, not only between the state and communities of people opposed to or affected by them, but also between countries.

Why Dams Now?

The question that becomes relevant here is what is fuelling this 'dam-race' in South Asia at a time when dams are being indicted[36] or decommissioned globally. Prof M. Maniruzzaman Miah feels this has to do with the fact that India is in a hurry for quick 'development' to compete in the world economy, has a huge energy requirement and does not really care about its neighbours.[37] Others point out that in the last decade, across South Asia there has been a growing control of water resources by giant transnational water companies, and that mega projects and dams are paving the way for the 'merchandising' of water. It is notable that many of these projects today involve high spending, huge loans and involvement of funding consortiums. For instance, the Kishenganga Dam project (KHEP) is to be built at an estimated $500 million, mostly through international funding by the Swedish Consortium

[35] In Pakistan, President Musharraf while announcing an ambitious plan to troops posted in the mountain region, also announced that "all big water reservoirs including the Bhasha Dam at Diamir would be built by 2016." In India, a number of new dams have been announced or are being constructed in the North East and other "newer" areas.

[36] World Commission on Dams Report 2000.

[37] Interview with Prof. M. Maniruzzaman Miah, TWEDS, Chairman, 11.01.07.

Skanska International. Similarly the Baglihar project is estimated to cost $1 billion. In effect, the cost of electricity will go up substantially for people in the violent affected Kashmir valley who are unable even to pay the Rs. 2 being charged currently.[38]

Mapping Large Dams/Projects and Conflict: Who controls flowing water?

Some of the most contested, old and new mega projects which have troubled hydro relation in South Asia are given below. This is by no means a comprehensive list, but a just few cases among many.

I. Trouble over Dams and Barrages: The case of India and Bangladesh.

i) Farakka Barrage:

The Farakka Barrage and its impact remains a dominant metaphor of devastation/injustice and is synonymous with anti-India sentiment in all the conversations in Bangladesh, cutting across academics, politicians, NGO persons, and activists. Built to divert water from the Ganga to its tributary Bhaghirathi–Hoogly and to the Calcutta port, it has some how come to embody all that is wrong in water relationship between Bangladesh and India. As people begin talking about the water problem with India, they start with Farakka, about how it totally disregarded Bangladesh's ecology, water needs and the survival of its people. The barrage is therefore seen as an unfair treatment meted out and the disregard shown to a smaller country by a "boro bhai" (big brother).

There exists a large body of work on the impact of the Farakka project on Eastern India, and on Bangladesh. Some like the SANDRP Report, point out that the interception of the Ganga in its high meandering belt has seriously affected the ecology, agriculture and people's livelihood in West Bengal and Bangladesh. Huge Siltation problem in upstream Malda and downstream Murshidabad has increased flood intensity, limited functioning of the barrage gates and has led to concentrated flow that has caused heavy erosion in these areas.[40] As the river with lower depth meanders, erodes, deposits silt, border disputes have come to the fore, particularly where the river also formed the boundary line between the two counties. Such is the case of border rivers like the Kushiara, Muhuri, Feni, Ichamati and Gumti.[41] In many of the Gangetic districts of West Bengal, water is affected by arsenic toxicity due to lowering of water table.

Due to silt clogging up rivers, many women have had to give up their traditional roles and take up unwanted ones.

Take the case of Sufia, 35. Sufia use to travel with her family on a boat that they owned, selling pink pearls and medicinal herbs. Sufia's family has had to sell the boat and find a new source of livelihood. Today she smuggles wood and rice into India for survival and brings back saris to sell. *"I often cry for the old gypsy days but the river has got laden with silt and it is impossible now to operate our boats,"* **says Sufia. On the other hand, sources in the frontier towns point out that large scale smuggling of firewood was causing rapid deforestation.[39]**

[38] Dams, Rivers & People, May–June 2005, p. 7

[39] Tahmina Ahmad, in Rivers of Life, Bangladesh: Journalists take a Critical look at the Flood Action Plan.

[40] Manisha Banerjee, "A Report on the Impact of the Farakka Barrage on the Human Fabric: A Study on the Upstream and Down Stream areas of Farakka Barrage," South Asia Network on Dam, Rivers and People, New Delhi, 1999. Webpage http://www.sandrp.in/dams/impct_frka_wcd.pdf., Accessed 15.12.2007. Also see Dispute over the Ganga, (Kathmandu: Panos Institute, South Asia, 2004).

[41] Narottam Gaan, Environmental Degradation and Conflict, p. 71.

The Farakka Barrage, according to environmentalists in Bangladesh, has reduced river flows, and led to the problem of saline water intrusion, particularly during the dry months. This has been damaging the Sunderbans, the world's largest Mangrove forest shared by India and Bangladesh, and affected agricultural and fishery. The consequence has been large-scale migration of affected communities within India (from Murshidabad and Malda to places like Gujarat and Maharashtra) and from Bangladesh to India. Ashok Swain makes a link between the diversion of water at Farakka by India and forced migration of Bangladeshi citizens to other parts of the region, including India. These trans-border human-inflicted environmental changes have resulted in the loss of sources of livelihood for a large population in the south-western part of Bangladesh. Absence of alternatives in the other parts of the country has left no other option for these displaced communities but to migrate to India. As his study determines, environmental destruction not only creates resource scarcity conflicts, but these forced migrations further lead to native–migrant conflicts.[42] This can be seen in the way migration from Bangladesh has become a flashpoint in the North East and other parts of India.

ii) "Fifty-four rivers enter Bangladesh from India. So we have fifty-four problems[43]"

The above statement by Mohammad Hilal captures various small and big conflicts that are brewing on trans-boundary rivers. Though the barrage at Farakka has been the most visible site of conflict, a number of other "development" projects being built in India are also becoming new flashpoints. One such prominent case is the Indian River Linking Project (IRLP)—a massive development project consisting of networks of channels, reservoirs and dams to link all the major rivers in India. On the eastern side, it envisages large-scale transfer of water from the Brahmaputra and Ganga basin to western and southern rivers in India. The IRLP has met with wide-scale criticism by environmentalists and protests not just within India, but also between India and Nepal, and India and Bangladesh. However, the project stands forestalled for the time being but a number of other water disputes persist. And such a simmering dispute is over the Tipaimukh Dam. "The Tipaimukh dam will be another Farakka for Eastern Bangladesh," says Mohammad Hilal.[44] The Tipaimukh Dam is being built on the river Barak in the North Eastern state of Manipur, and has been yet another site for anti-dam movement within India. People in Manipur are up in arms against what they see as the destruction of their ecology, livelihoods and possible displacement. On 30/31st December,2005 an international conference on the Tipaimukh Dam and its fall-outs was organised in Dhaka with large number of participants from Manipur and Assam. However, sustained coordination between these groups has been difficult.

Explaining the way projects across the border impact people's lives, and in turn Indo-Bangladesh relations, Mohammad Matim, (General Secretary, Bangladesh Poribesh Andolan) stated:

"Bangladesh is a riverine country and we say the river is the mother of this land. The river has created this deltaic region, and nourishes the land, the plants, the ecology including fish and livestock. In one sentence Bangladeshi people's total life depends on the river because agriculture is a major component. Fifty-four rivers come from India before they end at the Bay of Bengal. Unfortunately all the rivers have got one or more than one intervention project in India. India has put a dam, a barrage or diverted the water for irrigation purpose, or for power generation or for

[42] Ashok Swain, "Displacing the Conflict: Environmental Destruction in Bangladesh and Ethnic Conflict in India," Journal of Peace Research, Sage, Vol. 33, No. 2. (May, 1996), pp. 189–204, http://links.jstor.org/sici?sici=00223433%28199605%2933%3A2%3C189%3ADTCEDI%3E2.0.CO%3B2-R

[43] Hilal, 11 January 2008.

[44] Hilal, 11 January 2008.

making a reservoir. All the fifty-four rivers are affected by the Indian government and these have harmed agriculture, livestock, greenery, fishes and ultimately the total lifestyle of the people of Bangladesh."

According to Mustafa Kamal Mazumdar, *"There is the diversion of the river Teesta which despite endless talks between the two countries has yielded little result. During dry season, there is little water for people here from the Teesta. Water is also being diverted from the Mahananda. There are structures on the Gomti and on the western side of Bangladesh. There is yet another structure on the Borai river, the third largest river in Bangladesh which enters through the Sylhet region. "*[45]

Much of the apprehension in Bangladesh is about water withdrawal/scarcity and the impact it could have on the lives, livelihood and ecology of Bangladeshis. Environmentalists in Bangladesh express deep reservations and point out that despite the fact that these are shared rivers, there is no environmental assessment in Bangladesh before these projects are sanctioned in India.[46]

II. India–Pakistan: The case of Baghlihar

India–Pakistan relations have been the tensest in the subcontinent, marked by four wars. However, dispute on the rivers of the Indus has a longer history. Even prior to partition, every major intervention on the rivers of the Indus Basin had been a source of trouble. Under colonial rule, as the British expanded the gigantic irrigation system in this region, dispute broke out between the two provinces of Punjab and Sindh over the construction of canals on the river Sutlej (1930s).[47] Soon after partition, conflict emerged between West Punjab (Pakistan) and East Punjab (India) over the Dipalpur and Upper Bari Doab Canal[48] which further escalated to the extent of East Punjab arbitrarily shutting off water supply to the irrigation channels of West Punjab. This became the cause of a lot of damage to the predominantly agricultural economy across the border. A number of squabbles, such as over Pakistan's diversion work on the Sutlej, or India's contraction work on the Bhakra-Nangal continued to mar India–Pakistan's already conflict ridden relationship. Finally in 1960, the Indus Water Treaty (IWT) was signed, and to some extent worked well till 1980. Thereafter, differences between the two countries on the question of water surfaced once again in the context of several projects, like the Wullar Barrage/Tulbul Navigation project on the Jhelum, Swalakote Hydroelectrical project(HEP), Dal husti HEP on the Chenab. More recently, controversy has emerged over the Baghlihar HEP on the Chenab and the Kishenganga HEP on the Kishenganga/Neelam river, a sort of hiccup in the cautious peace process the two countries have undertaken since 2004.

Baglihar Project (BHEP):

Located on the Chenab, the BHEP (with power capacity of 450 MW during phase I and 900 MW during phase II) became a point of contention between India and Pakistan.[49] The issue is further complicated by the fact the BHEP is a venture of the state government of J&K—located in a state which is at one level a disputed territory between the two countries, and at another, a state which has vehemently opposed the IWT as violating its water rights.

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[45] Interview with Mustafa Kamal Mazumdar, Executive Editor, New Nation, Dhaka, 8.01.08. He writes extensively on rivers, mega projects and environmental issues.

[46] Ibid.

[47] In late 19th century, the British undertook large scale engineering experimentation in the form irrigation projects and canal networks. For details see, Undala Z. Alam, Water Rationality: Mediating the Indus Water Treaty, Ph.D thesis, Geography Department, University of Durham, 1998, p. 38 webpage:http://www.transboundarywaters.orst.edu/publications/related_research/Alam1998.pdf, Accessed, 30.12. 07

[48] Ibid.

[49] Rajesh Sinha, "Two Neighbours and a Treaty: Baglihar Project in Hot Waters," Economic and Political Weekly, 18 February 2006.

- **Pakistan Government's view:** Pakistan has raised six objections relating to project configuration, free board, spillway, firm power, pond age, level of intake, inspection during plugging of low level intake, and whether the structure is meant to be low weir or a dam. Based on these objections, Pakistan asked India to stop all work until all issues were resolved and invoked the arbitration clause of the IWT. Subsequently, matters were taken to a Neutral Expert, Professor Raymond Lafitte of Switzerland.
- **Indian Government's View:** India claims BHEP is a fully legal scheme. It involves no water storage, and therefore does not violate the IWT. India is allowed by the IWT to build power generation projects on any of the three western rivers of the Indus river system, as long as they benefit the local people.[50] India accused Pakistan of trying to prevent it from removing the grievances of people of J&K.
- **Dominant view in J&K;** BHEP is a project for/by Jammu and Kashmir, a state that had not been taken into account by the IWT, and is in dire need of power. They believe Pakistan wants to deny Jammu and Kashmir the right to use its own rivers, citing the situation in Pakistan occupied Kashmir where they believe people have no rights over Mangla Dam on the Jhelum, built to meet the power and water needs of Punjab and other parts of Pakistan.[51]

Finally on 12 February 2007 Professor Lafitte, the Neutral Expert, gave his 'determination', suggesting slight changes[52] in the design of the project but allowing the project to proceed.

> *"We used to shift along/across the river Indus, and the Thal desert, but the dams, barrages and canals have locked us in little pockets (areas). Now we can not shift a great deal; instead we usually remain in union council, tehsil council and district council boundaries,"* **said Ghulam Haider Kihals, as *Kihal men and women are deprived of their rights in Pakistan.***
>
> **Thala Baloo Ram, D I Khan (Source: DAMAN Development Organisation, Pakistan**

While a number of reports have focused on whether the project violates or does not violate the IWT treaty, a gap remains within the larger debate about the environmental aspects of the dam and its impact on people. On visiting the dam site in Baglihar, one soon discovered why. The dam site had been declared as a "security sensitive zone" and not open to visitors. As an officer at the BHEP (name withheld) told us, "This dam is being targeted by our enemy country and it is high security zone." Any information was difficult to get. Talking to people in the nearby town of Chandrakot (Doda, J&K), we gathered that people/families living where the dam site is being constructed had been moved to Jammu, and about 150 families were still waiting to be rehabilitated. We were told by government officials who did not want to be named, that "more than 'adequate' compensation was given." According to Arijimand Talib, *"The Chenab river is known to be a heavy silt laden river."*[53] Heavy landslides in the region and the fact that there are already a number of projects existing/being constructed on the same river (like the Salal, Dulhasti and Swalkote) has made the silt situation worse.[54] In addition, the region is in a high seismic zone. The Baglihar clearly leaves many questions unanswered.

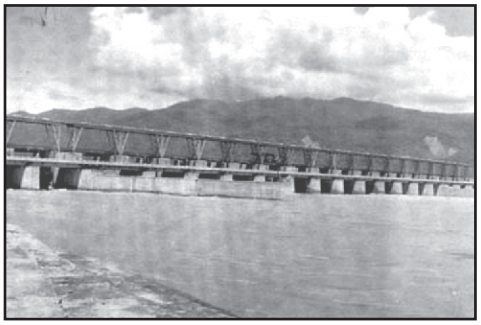
[50] Rajesh Sinha, p. 606-607.
[51] Ibid. p. 607.
[52] For details of suggested changes, see Ramaswamy Iyer, Towards Water Wisdom: Limits, Justice, Harmony, (Sage: New Delhi, 2007), p. 85.
[53] A. Talib, Action Aid, Srinanagar.
[54] Dams, Rivers and People, Vol. 3, Issue. 4–5, May 2005, Webpage http://www.narmada.org/sandrp/MayJune2005.pdf, Accessed 17.7.07

III. India–Nepal: Conflict over embankments, barrages and dams

Nepal has three categories of rivers flowing into India: the first, are those originating from the Himalayas such as the Koshi, Gandaki, Karnali and Mahakali, which are perennial with a substantial water flow. Mega projects and dams on these rivers have often been at the centre of water tension between India and Nepal. The second set of rivers originates from the Mahabharat, and the third from the Chure range. These rivers have less or no flow in the dry season, but during the monsoons, particularly rivers from the Chure range can become turbulent, capable of bringing about massive destructions. Embankments on some of these rivers have been yet another point of dispute.

i) Barrages and Projects on the Himalayan rivers:

Large dams and projects on some of the Himalayan rivers have been the most visible and troublesome aspects Indo-Nepal water dispute. The case of Tanakpur Barrage on the Mahakali river is but one such example.



Problems began at the outset when India began a technical survey for a 120 MW HEP on the Mahakali river near Tanakpur in Uttar Pradesh (now Uttaranchal), 18 Km upstream of the Sarada Barrage. Nepal raised objections on grounds that this would affect its Mahakali Irrigation Project. India agreed to redesign its project but continued with construction despite Nepalese discomfort. Indian position throughout was that the barrage was totally on Indian territory and not a matter of Nepal's concern. Problems came to the fore when the project was completed in 1988, but the left afflux bund required to be tied on the high ground on left bank of Mahakali, i.e., on Nepalese side of the river. India requested Nepal for 577m of Nepali land for this purpose, which in effect would also submerge 2.9 ha of land in Nepal. However, given India's unilateral approach earlier, together with the fact that Indo-Nepal relations in general had taken a turn for the worse in those years, nothing materialised till 1991. Finally with a new (democratic) government in place, Nepal agreed to provide the land under an "understanding," that soon became a highly contentious issue in Nepal. The "understanding" was overtaken by the Mahakali Integrated Treaty—a treaty which (discussed in a later section) by itself came under a lot of suspicion and contention.

ii) "Choking the outlets of the water along the border[55] ": Embankments on India– Nepal border.

According to Mr. Ishwar Raj Onta, while large dams and projects often catch media glare, what really escapes policy makers and public attention is a number of smaller barrages and embankments along the Uttar Pradesh and Bihar borders, and the Tarai region of Nepal, which have been causing havoc in the lives of people living there.

"Almost 236 rivers cross India-Nepal border. And in all major and medium rivers, India already has barrages, constructed without consulting Nepal. In addition, there are several barrages built by India along the border. Nepal has been losing a lot of land by way of inundation behind these barrages, especially in the monsoons. This has been a problem for the Tarai region of Nepal. At the same time in UP and Bihar, floods have also become a severe problem and very politicised. Much of this could be avoided if there is a proper dialogue. There needs to be a certain give and take in the region."[56]

[55] Mr. Surya Nath Upadhayay of JVS, Kathmandu, 29.09.07.

[56] Interview with Mr. Ishwar Raj Onta, Chairperson, Jal Vikas Shrot (JVS), Nepal, 29.09.07.

Explaining these further, Ajaya Dixit states that Tarai is an extension of the Gangetic plains and the region is criss-crossed by several smaller rivers[57] which originate in the southern slopes of the Churia hills and flow southwards into India. All rivers flowing from Nepal join the Ganga or its tributaries in Uttar Pradesh, Bihar and West Bengal. Many of these rivers in the Tarai region have low flow, or are dry during the winters, but with the commencement of the monsoons the flow increases or a dry river becomes active and acquires a trans-boundary character. The fact that the Churia hills receive some of the heaviest and most intense rainfall in the country makes these rivers fearsome during the monsoons. This region is also densely populated and millions here depend on agriculture based livelihood which has led to the construction of a large number of irrigation canals, roads, railway lines, flood control embankments and urbanisaton—all of which have further constrained drainage and exacerbated the impact of flooding.

How exactly these border obstructions and embankments along the border have affected relations across border communities, there is little research to show. A study by Dinesh Kumar Mishra and Satendra Kumar on one such river, the Bhutahi Balan (tributary of the Kosi) points out that building of embankments on this river has led to conflicts among various hamlets of the same village because of their locations. This conflict was further deepened as it got politicised by different political parties for votes.[58] Another study by Ram Niwas Pandey provides some idea about the pressure felt by border communities in Nepal because of floods and large-scale migration of the people from the hill-districts, compelling the landless of the Tarai, particularly the Tharus, to leave their homes and to move into Indian territory for survival.[59] However, there is a gap in terms of research/inclusion of these communities in the larger discourse of people-ecology-border interface. This may have to do with the fact that unlike in the case of Bangladesh or Pakistan, Nepal and India share an open border. However, it is also a reality that there is growing tendency within the Indian bureaucratic and power circles to "securitise" the India-Nepal border.[60] Moreover, the question of these ephemeral trans-boundary rivers is often left out of the larger discourse of trans-boundary water governance between India and Nepal, and the plight of the communities is not too well documented. Among the few studies that do exist is one by Ajaya Dixit and Madhukar Upadhaya[61] which through the vantage point of floods highlight the vulnerability of some of these communities.

iii) Politics of Flood:

A familiar refrain while discussing hydro-politics between India and Nepal is that of floods. There is no doubt that the intensity of floods have increased over the years. This year in Bihar alone, some for 4,822 villages, and 14 million people were affected (as per UN estimates) in one of the worst floods in the last 15 years. With the intensity of floods have emerged shrill political voices for 'daming' rivers in Nepal. According to Dinesh Mishra who has been working with communities living in these flood prone areas, every monsoon the Kosi High Dam becomes the

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57 Dixit categorises these rivers into six blocks: the Dhangadhi group in the fare west, the Lumbini group, the Birganj group, the Janakput group, the Rajbiraj group and the Biratnagar group. See Ajaya Dixit, Madhukar Upadhaya, Anil Pokhrel, Kanchan Dixit, Deeb Raj Rai and Madhav Devkota, "Flood Disaster Impacts and Responses in Nepal's Tarai's Marginalised Basins," in Moench, Marcus and Ajaya Dixit, (ed.) Working With the Winds of Change: Towards Strategies for Responding to the Risks Associated with Climate Change and Other Hazards, Pro Vention Consortium, Institute for Social Science and Environmntal Transition, Kathmandu, 2007.

58 "Challenges of Flood Management in the Bhutahi Balan," Water Nepal, Vol. 11, No. 1, Aug 2002–Jan2004, p. 29.

59 Ram Niwas Pandey in India-Nepal: Border Relations, Hari Bansh Jha, Kathmandu, Centre for Economics and Technical Studies, 1995.

60 For instance, a national newspaper report stating that Indo-Nepal border in Bihar "has become a dangerous place to live in," or that "terrorists use Nepal to stage operations in India." See "Breakfast in Nepal, lunch in India, daily," by Manish Tiwari, Hindustan Times, 17 February 2008. See webpage: http://www.hindustantimes.com/storypage/storypage.aspx?id=a7da840f-9aac-4ba5-a725-1102736684cc.

61 Ajaya Dixit, Madhukar Upadhaya, et al, n. 54.

flavour of the season among politicians in Bihar. As the flood water rises, so does the demand for the Kosi High Dam at Barahkshetra in Nepal as the answer to floods.[62] However, a survey of the flood affected areas of Bihar quickly reveals that the government has done little to put in place an effective flood policy despite recurrent flood. As per the official website of the Eastern Resource ministry, a National Flood Commission was set up in 1976 to draw up a "coordinated" and "scientific" approach to the problem, but adds that "though the report was submitted in 1980 and accepted by government, not much progress has been made in the implementation of its recommendations."[63] However, in absence of an effective policy and faced with the annual monsoon public outcry, the issue of dams in Nepal becomes a scape-goat.

The usual strategy of the state governments in both the states of Bihar and Uttar Pradesh has been to blame Nepal for releasing water, and to tell people that even as the state is aware of its obligation, it can do little since the final solution to the flood problem, the construction of dams in Nepal, is an international matter and in the hands of the central government. The central government on its part insists that water, including floods, is a state subject and the sole responsibility of the state.[64]

"In the environmental debates in this region, there is a tendency to externalise the nature of the problem. Indian politicians and media put the blame for the floods on Nepal." Ajaya Dixit

However, in Nepal floods in the Tarai are also taking centre stage. The issue of floods has become a sort of a blame game between Nepal and India (states of UP and Bihar). Many environment activists feel that there is a false image being created in people's mind in India by politicians and the media blaming Nepal for floods in Bihar. However, as Mr. Shanta Bahadur Pun points out, *"A number of factors are responsible for flooding, and embankments are an important factor. For instance, the Kosi embankments have worsened the flood situation not just for us in Nepal but for the people in Bihar who are caught within these embankments."*[66] This is further supported by Mr. Dinesh Mishra who argues that one of the main causes for the present flooding and water logging in North Bihar is the inability of this water to enter the main river and drain away because of the embankments. A number of studies have highlighted this and have documented the plight of the people caught in between the Kosi embankments. However, the politics of flood remains shrill as ever and continue to sour Indo-Nepal relations.

[62] Dinesh Mishra, "Bihar: Flooded and Waterlogged," Disputes Over Ganga, p. 111.

[63] See Aman Trust's Report on Flood situation in Bihar, http://www.amanpanchayat.org/index.php?option=com_content&task=view&id=181.

[64] Mishra, n. 52.

[65] Interview with Dixit.

[66] Interview with Mr. Shanta Pun, IIDS, Kathmandu, 27.9.07.

Governance of Trans-boundary Water in South Asia: Disquiet over Treaties.

"There are three issues when it comes to water negotiations between India and Bangladesh. First, the Indian authorities lack basic democratic ideals in dealing with its neighbours. Second we are not skilled enough in dealing and negotiating with the authorities in India. So both these worsen the situation. We have lack of expertise in Bangladesh and they have lack of democratic approach. Third, water is a common source between us but we don't have water democracy"

Mohammad Hilal, Environmental Activist, Bangladesh.[67]

"We follow a monocentric path that is dominated by the bureaucracy, technicians and the nation state. This nation has not provided water security, to it citizens. The whole conflict over the Mahakali happened because of a unilateral decision-making, hierarchical mind-set based on control. What is required is a more holistic position rather than an anti-India or anti-Nepal approach. We have to critique the basic understanding regarding water."

Ajaya Dixit, Water Nepal, Nepal [68]

"What lies at the heart of water conflict is greed….Agreements, accords and treaties may temporarily bring peace, but conflict will erupt unless we learn to redefine 'development'."

Ramaswaymy Iyer, India.[69]

Conflicts on trans-boundary water have been widespread all over the world, plagued by claims and counter claims by different users and states. Part of the conflict, stems from the very nature of water, such as water being divisible and amenable to sharing; it is a common pool resource; one unit of water used by one is a unit denied to others; it has multiple uses and users and involves resultant trade-offs; the way water is used and managed causes externalities.[70] Others like Ramaswamy Iyer point out that at the water conflict are about gross mismanagement of water, and of what he terms as "water-greed" where nobody seems to have enough and there is an unlimited and ever growing demand for more and more water.[71] However, what makes the case particularly fragile in South Asia is not just the existence of these conflicts, but the lack of a democratic framework, or a regional mechanism that involves all the conflicting parties that is perceived to be fair and is rooted in an ecologically sustainable approach. The existing mode for trans-boundary water governance in South Asia is bi-lateral treaties, signed by Nepal, Bangladesh, Pakistan with India (which is an upper riparian in most cases, except with Nepal). Some of these treaties have worked, others have not, but each has been surrounded by controversy and misgivings at some point or other.

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67 Interview, Dhaka, 11.01.08.

68 Interviewed in Kathmandu, 24.09.07.

69 Ramaswamy Iyer, "Trans-boundary Water Conflicts: A Review" In Joy, Gujja, Paranjape, Gould and Vispute, ed., Water Conflicts in India: A Million Revolts in the Making, (Routledge: New Delhi, 2008), p. 375.

70 Joy, Gujja, Paranjape, Gould and Vispute, in "Million Revolts in the Making," Economic and Political Weekly, Vol. XLI, No. 7, February 2006, p. 570.

71 Iyer, n. 62.

1. India-Nepal Treaties: Since the beginning of the 20th century, a number of agreements have been signed between India and Nepal.

These include:

I. ***The Sarada Agreement (1920)*** on the Mahakali river, (now encompassed within the Mahakali Integrated Development Treaty). The Sarada Agreement stipulated the following:

- Formed the basis of the Sarada Barrage built to irrigate United Provinces (today's Uttar Pradesh)
- Transferred 4000 acres on the eastern bank of the Mahakali to India to build the Sarada Barrage in exchange for 4000 acres of forested land in areas further to the east as well as Rs. 50,000 compensation for Nepal.
- Out of the annual flow of approximately 650 cumecs (cubic meters per second) Nepal could withdraw 4.25) of water during dry season and 13 in the wet season, which could be further increased to 28.34 cumecs if water was available. No specification given regarding India's withdrawal amount. In effect, it was limited only by the scale of the technology it was able to employ.

After the treaty, both the left and the right bank of the river near the Sarada Barrage came under India's control.

II. ***The Koshi Project Agreement, (1954)***

- To build a barrage on the Kosi river to confine the river (which shifts course frequently), prevent floods in Bihar and divert water for irrigation.
- The 1.15 km barrage, completed in 1962, is wholly in Nepal, and the Eastern Main Canal is entirely in India.
- Nepal is allowed to withdraw water from Kosi and its tributaries for irrigation and other purpose;
- India has the right to regulate the 'balance' at the barrage site from time to time for irrigation and to generate hydro power from eastern main canal.
- With the "Kosi sell-out" furor in Nepal, the Kosi Agreement was revised in 1966.
- The Western Main Canal first passes through a 35 km stretch of Nepal territory. The Western main Canal, completed only in 1982, was designed to irrigate 356,000 hectares as far west as Darbhanga. Nepal was to receive water from the Western Canal to irrigate 11,000 hectares. The other major component of the project was the 220 km of embankment "jacketing" the Kosi on both banks.
- Recently, the two countries have agreed to jointly investigate the Kosi Multi purpose project which includes a high dam in upstream Nepal near Barakshetra, the details of which are to be prepared under the Indo-Nepal Mahakali Treaty.

III. ***The Gandak Irrigation and Power project Agreement or the Gandak Agreement, (1959).***

- This Agreement allowed India to construct a barrage on the Gandak (Narayani in Nepal) at its own cost at the India-Nepal border near Bhaisalotan village. The barrage was designed to irrigate 920,000 hectares in western Bihar and 37,000 hectares in western Nepal from the Eastern Main Canal, and 930,000 hectares in eastern UP and 20,000 hectares in Nepal from the Western Canal.
- Although the treaty specified Nepal's share of water, quantum of water that could be withdrawn by India was left unspecified. The treaty was subsequently amended in 1964.

IV. ***The Mahakali Integrated Treaty, (1996)***

Signed between India and Nepal in 1996, the Mahakali Integrated Treaty (referred to as Mahakali Treaty) looks at

the integrated development of the Mahakali River, including the Sarda barrage, Tanakpur barrage and Pancheshwar Project, and tries to develop a principle of sharing cost and benefits, and recognises (for the first time) Nepal's prior water right.

- The treaty recognises the Mahakali as a boundary river on major stretches between the two.
- Sarada Barrage: Nepal to have the right to supply of 1,000 cusecs of water from the Sarada Barrage in the wet season (May 15 to October 15), and 150 cusecs in the dry season (October 16 to May 14). India is required to maintain a flow of no less than 350 cusecs downstream of Sharda Barrage in the Mahakali River to maintain and preserve the river ecosystem.
- Tanakpur Barrage: Nepal to continue having sovereignty over the land (2.9 hectare) needed for building the eastern afflux bund, as well as a hectare of the pondage area. In exchange Nepal to have, free of cost, 1,000 cusecs of water in the wet season and 300 cusecs in the dry season, and 70 million Kwhrs of electricity (as against the earlier agreed figure of 20 million Kwhrs) from the Tanakpur power station, with transmission line to its border. Half the incremental power generated at Tanakpur after augmentation of river flows with the commissioning of the Pancheswar dam, to be supplied to Nepal at half the operational and any additional cost. India to also construct an all weather road connecting the Tanakpur barrage to Nepal's East-West Highway, including bridges en route. There is provision for the supply of 350 cusecs of water for the irrigation of Dodhara Chandni area.
- Pancheswar Project: A joint Indo-Nepal Hydroelectric project on Mahakali River on the basis of a 50:50 cost benefit split, which remains the most controversial part of the treaty.
- Setting up of Joint Indo-Nepal Mahakali River Commissi on

However, intricacies of the Mahakali Treaty have been steeped in mistrust and accusations, both in terms of India–Nepal relations, and within Nepal internal politics. A lot of heat has been generated over the interpretation of the treaty, the presence of Indian troops in disputed upstream territory of Kalapani, the issue of water rights, the selling price of electricity, the environmental impact of the infrastructure project and the displacement of as many as 65,000 people as a result of the project

The politics of treaties: In the beginning of last century, irrigation became high priority in the Gangetic plains of North India. Hence, both the Sarada and the Gandak agreements were guided by the irrigation requirement of North India. The Kosi agreement in contrast was guided by flood control. All the three agreements have been critiqued for totally disregarding Nepal and being India-

Of late, trouble has been brewing on the India–Nepal border points of Gadda Chauki and Brahmadev, in Uttaranchal.

The Young Communist League or the Nepalese Maoist youth group, carried out a Seema Nirakshan Abhiyan to survey the border area from Tanakpur to Banbasa, followed by a huge rally demanding 'return of Nepalese land encroached by India,' and 'scrapping of unfair treaties.' On the Indian side, there has been heavy deployment of Seema Suraksha Bal (SSB), the paramilitary force deployed along the Nepal–India border, fearing possible untoward incidents.

Frequent skirmishes in border towns between YCL and the Hindu Jagran Manch (Hindu right-wing group in India) is fast becoming common. Caught in its shadow are Nepalese families living for years in these border towns; wage workers who unmindfully cross-over; trade and friendly neighbourly relations across these very porous Indo-Nepal border.

centric. Critiquing the Sarada treaty, Ajaya Dixit and Gyawali point out that not only did the treaty under-valuate Sarada Barrage's left (Nepali) bank, there is no evidence of actual transfer of the 4000 acres of land which was meant to be given to Nepal. In fact each of these treaties evoked strong protests and unrest in Nepal and had to be subsequently amended, but resentment over the treaties, particularly over the Mahakali treaty persists in Nepal. Mr. Surya Nath Upadhya, points out that there is a popular perception in Nepal regarding all water treaties with India, that they are based on the idea where one country is the supplier of water and the other country is the main consumer of the water, and adequate attention is not given to Nepal's water needs.[72]

Finally, the Mahakali treaty which tried to bring within its fold other treaties and devise a principle of cost benefit sharing, became the most contested, overshadowed by the past, and unable to chalk out a future for equitable and ecologically sound principles of water governance. Nepal, with the aid of World Bank, began construction of the Mahakali Irrigation project, which became operational in 1975. This project enabled Nepal, for the first time to utilise its share of water specified in the Sarada Agreement way back in 1920. In 1977 both India and Nepal agreed to jointly investigate the possibility of harnessing the Mahakali water further. Problems began when India unilaterally went ahead and began construction of the Tanakpur barrage in 1983 on land that was transferred to India under the Sarada Agreement. Nepal feared that this would affect the Mahakali Irrigation project, as well as its land and people living across the border river. Some changes were made in the design of the barrage, but (as discussed earlier under mega Projects), the Tanakpur barrage became a point of confrontation between India and Nepal, particularly over the issue of the eastern afflux bund that needed to be tied on Nepalese territory.

In 1990, the political situation changed with the restoration of democracy and a new government led by Girija Prasad Koirala. India approached Nepal to overcome the Tanakpur stalemate, and a MOU was signed, but referred by the Nepalese side as an "understanding" subject to parliamentary ratification. However, the MOU was opposed by opposition parties amidst widespread protests in Nepal and accusation against the government for having sold out to India. The Supreme Court of Nepal intervened to say that understanding did require parliamentary ratification without specifying the type of majority required to sanction the treaty. In the meanwhile, India agreed that it would double the supply the hydroelectric energy to Nepal from 10 million KWh to 20 million KWh. This did not help matters as there was a growing demand in Nepal then for principles of equitable sharing of water resources, and India's move was perceived as ad hoc benefit sharing arrangement. Subsequently, the Mahakali treaty became a rallying point of anti-India sentiment, caught in Nepal's domestic as well as Indo-Nepal imbroglio. Finally the treaty was signed in February 1995, but remains at an impasse.

Opinions: India–Nepal treaties

In Nepal, there are varying shades of opinion on the Mahakali treaty. According to Ajaya Dixit and Deepak Gyawali from Water Nepal, the treaty and the manner in which it was signed represent all that is wrong with water treaties in South Asia, of unilateralism and domination by a big neighbour, of failure of senior bureaucrats and politicians within Nepal to stand up vis-à-vis India, of a hierarchical and monistic mindset which dominates water sector in both the countries.[73] For others like Mr. Upadhyaya, who had been the chief negotiator of the Mahakali treaty from Nepal's side, *"The Mahakali Treaty was an improvement from the past treaty. The problems have been in the way the treaty is now being interpreted by India to make demands on issues like Pancheshwar project and about things that*

[72] Mr. Surya Nath Upadhyay, Kathmandu, 29.09.07.

[73] Gyawali and Dixit, "How not to do a South Asian Treaty... ," n. 32.

were never discussed."[74] This is not surprising given that one of the biggest problems, and an important cause fueling the long-standing water dispute between India and Nepal has been the lack of specificity in the provisions of the Mahakali treaty (as with other treaties). This has left room for ambiguity and controversy in the interpretation and enforcement of the provisions of the water-sharing agreement. In the case of the Mahakali river, the problems of catchment area ratios, land area development ratios, investment ratios and riparian rights are further complicated and intensified because the river also serves as an international border between the two countries in major stretches.[75]

Adding to the roadblock are issues of lack of information sharing, secrecy and closed approach. *"I have been negotiating with the Indian authorities in my capacity as a permanent secretary of Nepal on water resources for many years and I have the feeling that they have got certain kind of mental barrier which doesn't allow them to come out in a more open way. Take the example of Tanakpur barrage, there is too much secrecy,"* says Mr. Upadhayay.[76]

In India, the dominant view is that the treaty is the outcome of convergence of interests between the two States. Nepal has enormous hydro-electric potential in the Himalayan rivers, which it would like to 'trade,' (many see "water as equivalent to oil for Nepal") and water can be harnessed by the two countries for mutual benefit.[77] For this, it is argued, the Mahakali treaty provides a comprehensive framework, and offers a fair deal to Nepal. It is stated that the geographical reality is that India has a larger irrigable area and much more water use while Nepal's mountain landscape has limited its irrigable area. Hence contention at that level of India using more water, which flows down to it anyway, is 'misplaced.' There is an agreement that the past treaties were not too fair, and hence amendments were made to suit Nepal. The Mahakali treaty is based on just principles of cost and benefit sharing but politics in Nepal has allowed past mistrusts to overshadow matters. Issues like Kalapani are separate border disputes, to be dealt separately. The problem over the Pancheshwar project has to do with the site for Nepal's re-regulating dam below Pancheswar being technically unviable, which then is being used to delay the project.[78]

Either way, the fact remains that the issue of water sharing has been volatile, inter-layered with concerns of sovereignty, nationalism, lack of trust and ideological contestation. It has also been pointed out that despite the "much hyped" Mahakali Treaty and substantial investments in building physical infrastructure to provide drinking water, irrigation, and hydropower, citizens in both the countries have not automatically benefited from access to these services—the reason being that institutional questions and issues of governance have been largely neglected.[79] Environmental and human concerns have also been neglected by the treaty. According to Govinda Rajbhandari, *"Nothing is said in the Treaty about the eco-system in and around either the proposed dam or any provision made about relocating more than a thousand families to be displaced. What seems to have been ignored here is that any project to be built should be environmentally safe, economically feasible and acceptable to the people on both sides of the border."*[80]

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74 Upadhyay, n. 70.

75 Salman M. A. Salman and Kishor Uprety "Hydro-Politics in South Asia: A Comparative Analysis of the Mahakali and Ganges Treaties," Natural Resources Journal, The University of New Mexico School of Law.

76 Upadhyay, n. 70.

77 See in Ramaswamy Iyer, "Delay and drift on the Mahakali," Himal South Asian, webpage file:///C:/Documents%20and%20Settings/Administrator/My%20Documents/water/Himal%20water-200!-ri.htm, Accessed, 7.10.07.

78 Sidiqqi, Toufiq A. and Shirin Tahir-Kheli, ed., WASSA Project Report, Vol. 3, p. 49.

79 Ajaya Dixit, Pradeep Adhikari and Rakshya Rajyashwori Thapa, "Nepal: Ground Realities for Himalayan Water Management," in Disputes over the Ganga, (Kathmandu: Panos, October 2004).

80 Govinda Rajbhandari "Some Remarks on Mahakali Treaty," The Kathmandu Post, 3 October 1996.

2. Pakistan, India and the Indus Water Treaty:

Given the history of conflict and wars between the two countries, it is not surprising that the Indus Water Treaty (IWT) is often hailed as a success and a model of water governance in South Asia's vexed trans-boundary rivers. Assisted by the World Bank, India and Pakistan signed the IWT in September 1960, after more than eight years of negotiation to resolve the dispute over the usage for irrigation and hydel power of the Indus water system.[81] Undoubtedly, the treaty has survived four wars between the two neighbours. However, the IWT is a typical case which shows that absence of war (over water in this case) is not equivalent to an efficient and equitable solution. The IWT water governance mechanism is based on partition of the Indus River Basin wherein three eastern rivers—the Sutlej, the Beas and the Ravi have been allotted to India; and the three western rivers—Indus, Jhelum and Chenab is allotted to Pakistan. The Indus water head remains in the Indian part of the state of Jammu and Kashmir, and according to some, underlies the conflict over Kashmir. Of late, a series of problems have emerged with regard to water-sharing between the two countries. They include Pakistan's opposition to India's Salal Hydro electrical Project, Tulbul navigation project, Baglihar Hydroelectric project, Sawalkot HEP and Kishanganga HEP, all in the state of Jammu and Kashmir.

Main features of the Treaty are:

- India to have unrestricted use of all the waters of the eastern rivers (the Ravi, Beas and Sutlej).
- Pakistan to have unrestricted use of the western rivers (Indus, Chenab, Jhelum). India to let flow all the waters of the western rivers, and shall not permit any interference with these waters. However, India is allowed, under severe restriction, limited use of the western rivers for purposes such as domestic use; non-consumptive use; agricultural use as set out in Annexure C; and generation of hydroelectric power as set out in Annexure D.[82]
- Pakistan may also withdraw water from the Basantsar tributary of the Ravi, as may be available and necessary for irrigation to a maximum limit of 100 acres annually. Pakistan is also allowed to withdraw water from other specified tributaries of the Ravi, under restriction as clearly set out in IWT.
- India to get 33 MAF (million acre feet) of annual flow from the eastern rivers and Pakistan to get 165 MAF from the western rivers.
- Mandates a permanent Indus Commission consisting of a commissioner each from India and Pakistan, and periodical meetings and exchange visits.
- In case of any 'questions' that may arise, it is to be resolved within the commission; if an agreement is not reached, the matter is to be referred to the two governments; if still unresolved, the question would become a difference and be referred to a Neutral Expert (NE), whose finding would be binding. If the NE considered the matter to be a dispute, it would have to go to Court of Arbitration.
- Includes provisions of International financial assistance to Pakistan for developing Irrigation work for utilisation of water allocated to it. India also paid as per treaty requirement.

[81] K. Warikoo, "Perspectives of Indus Waters Treaty," in Samaddar, Ranabir and Helmut Reifeld, ed., Peace as Process: Reconciliation and Conflict Resolution in South Asia, (Delhi: Manohar, 2001), p. 281.

[82] Muhammed Siyad A. C., "Indus Waters Treaty and Baglihar Project," Economic and Political Weekly, 16 July 2005, p. 3145.

Opinions on the IWT

There are different opinions regarding the IWT. There is a dominant view that holds that the IWT has been a successful conflict solving mechanism—internationally as well as among some people in India and Pakistan. However, often what is not highlighted is the discontentment with the treaty.

One of the major problems with the IWT has been that it has led to regional disparity and discontent. In the state of Jammu and Kashmir (J& K), the IWT is widely perceived to be discriminatory. According to Arjimand Talib, the IWT was geared more towards safeguarding India's interest in Punjab and the Bhakra-Nangal project, and totally ignored the needs of Kashmiris.[83] Rather than looking at the whole basin, restriction placed on India's use of the western rivers made it virtually impossible for J&K to derive any benefits of irrigation, hydroelectric power, and navigation, from the waters of the Jhelum and Chenab rivers which flow through it. Many people point out that it is ironic that the state, despite being rich in its hydel resources, faces acute shortage of hydro-electric power, particularly during winter months. It is a reality that J&K accounts for only 0.9 per cent of the hydel power generated in the country. As Biswajeet Saikia states, the IWT made Punjab prosperous by using the three river waters for agriculture and power, but put Jammu and Kashmir behind.[84] On 3 April 2002, the Jammu and Kashmir Legislative Assembly, cutting across party affiliations, denounced the treaty, calling for its review.

Similarly in Pakistan, dispute has simmered between Sindh and Punjab. Matters came to a head in the 1980s, when the military government of General Zia-ul-Haq announced the inception of the Kalabagh dam on the Indus, the third large-scale storage and hydroelectric reservoir, after Mangla and Tarbela. The Kalabagh dam issue became immediately controversial, and led to large scale protests in Sindh, where it was seen as a further attempt by the Punjab-led military government at encroaching upon the lower riparian water entitlements. Water allocation remains a critical factor in inter-provincial politics in Pakistan.[85]

The treaty also totally neglects environmental concerns and issues of displacement.

Others, like Ramaswamy Iyer critique the surgical division, but argue that this was the best and most practical solution given the circumstances of Partition and the difficult relationship between the two newly formed countries.[86] However, as is becoming evident, the IWT is facing far more problems now over dams and water issues than in the past, leading some to call for new visions and possibilities to be explored regarding the IWT.

3. India-Bangladesh and the Ganga Treaty

The Ganga Treaty is the only "water sharing" treaty in South Asia signed on 12 December 1996. The Prime Minister of Bangladesh, Sheikh Hasina Wajed, and the Indian Prime Minister H. D. Deve Gowda signed a thirty year long treaty in New Delhi on the sharing of the Ganges water. The Treaty addresses the issue of water allocation between India–Bangladesh which post Farakka, had strained relations between the two countries. This had become particularly controversial given the sharp seasonal variation of the Ganga which has more than enough during the monsoon, and considerably less water in the dry seasons.

- The treaty guarantees Bangladesh a minimum of 35,000 cusecs in lean season.

[83] A. Talib, Srinagar.

[84] Biswajeet Saikia, "Indus Water Treaty: Economic Implication to the Jammu and Kashmir," Observer Research Foundation, Delhi.

[85] Haris Gazdar, p. 816.

[86] R. Iyer, "Was the Indus Treaty in Trouble?" Economic and Political Weekly, 22 June 2002, p. 2401.

- If the Ganga has more than 75,000 cusecs of water, India can divert 40,000 cusec into the Hoogly and allow the rest to flow to Bangladesh.
- If the Ganga flow is between 75,000 and 70,000, Bangladesh can withdraw 35,000 cusecs and the rest can be withdrawn by India. If there is 70,000 cusec and less, than the water will be shared equally by the two sides. However, the supply regulation has to ensure that each side gets alternatively 35,000 cusec for 10 days at a stretch from March 1 to May 10, the driest period. Incase of emergency situation, such as the flow at Farakka falling below 50,000 cusec, both sides are required to hold "immediate consultation."
- Both sides have also agreed to enter into Treaty/Agreement regarding other common rivers.
- Treaty to be implemented by a Joint Committee. Any dispute arising in this is to be referred to the JRC (Joint Rivers Commission). If dispute remains unresolved, it should be referred to the two governments which would meet immediately at appropriate level, to resolve issues through discussion.

The thirty year Ganga Treaty was the result of a long phase of turbulent negotiation. As stated earlier, problems over sharing of the Ganga began shortly after partition and took on a confrontational turn over the issue of the Farakka Barrage. With Bangladesh becoming an independent nation in 1971, the initial phase was the "honey-moon period between the two countries,"[87] says Dr. Ainun Nishat. Meanwhile Farakka was nearing completion and the two countries decided to share the water-flow in the lean season, recognizing each other's water shortage in dry season. Accordingly a friendship treaty was signed under which a Joint Rivers Commission (JRC) was set up to support the two governments. It was a statutory body that would come out with ideas, programs, proposal and projects where the common resources of the two countries could be used for the benefit of people in both the countries.[88] However, problems persisted, and with the operationalisation of the Farakka barrage and India's unilateral withdrawal, problems took a turn for the worse. Bangladesh took up the issue with the United Nations, which asked both sides to come to a settlement. In 1977, the first major short term agreement for sharing of dry season flow at Farakka was signed, for a period of five years. Two more short term MOU's were signed which lapsed by 1988. Between 1988–96, all efforts to reach an understanding failed, in the absence of which India continued to withdraw water. As many activists pointed out in Bangladesh, during the dry season, this meant a crisis in the Ganga Dependent Areas (GDA) of Bangladesh. In 1996, the Ganga Treaty was signed with a new government coming to power in Dhaka.

Opinions on the Ganga Treaty:

According to Prof. Q. K Ahmad,

"Except for a few problems, the 1996 Ganga Treaty has performed fairly well. The other rivers are the main problem. There has been a discussion for a long time on the Teesta but no agreement has been reached as yet. This is a bilateral problem that needs to be solved. Then there are regional problems. The Ganges treaty sates that both the government will try to augment the flow of the Ganges during the lean season. But that has not been done. It means that some barrages have to be constructed in Nepal to get water during lean season. But that has not been taken up at all. However Indian and Nepal have agreed for the Sapta Kosi barrage which is likely to produce 3500 MW energy but all discussion has remained bi-lateral. Bangladesh has proposed that all the three countries should work together. But Bangladesh has not been invited to participate."[89]

[87] Interview with Dr. Ainun Nishat, IUCN, 8.01.08.

[88] Ibid.

[89] Interview with Dr. Q. K Ahmad, Bangladesh Unayan Parishad (BUP), Dhaka, 8.01.08.

It is a fact that the Ganga has very little water during the dry season for both countries to share. "We are not getting water on the barrage point. So what shall we share?" asks Md. Hilal. Over the years the two countries have floated various proposals to increase the supply, such as the above mentioned dams in Nepal, or diverting the excessive "unused" water from the Brahmaputra, but these proposals have themselves been steeped in controversy. Mustafa Kamal Majumdar points out that the Treaty is not based on sound assumptions of sustainable planning:

"The Treaty cannot guarantee that certain quantity of water will be available to us. Nor can it guarantee the quality of water that is available. Rivers should be alive if its benefits are to be shared and water experts on the globe have come to the conclusion that there is a need for the river to have some kind of an ecological flow. In Europe, take the example of the Danube. It had become an extremely polluted river, but with shared responsibility by various stakeholders, it has been cleaned to tolerable limit. The Ganga Treaty does not address such ecological concerns."[90]
Notably, pollution of the Ganga from sewage and chemical discharge in India remains a serious problem despite the Ganga Action Plan initiated in 1985.

There is also a perception in Bangladesh that India secretly diverts a portion of the flow of the Ganges upstream during dry months, causing acute water stress and environmental damage in Bangladesh when the dry-season flow is low.[91] However, the Indian External Ministry states that it releases far more water than is the genuine requirement of Bangladesh. On the contrary, it is felt that Bangladesh exaggerates its needs, and a lot of water is not utilised and "unused" in the Bay of Bengal. Water at Farakka is far more essential to India than Bangladesh for its needs, and for the survival of the Calcutta port.[92] Others like B.G. Verghese argues that the ecological problem around the Khulna region is caused not so much by Farakka but due to the over all east and north shift of the Ganga river system.

What are the Problems with South Asian Water Treaties?

1. Problem with the dominant paradigm of water in the region: If one were to take an overview from the above discussion to sum up what really have been the problems with South Asian water treaties, a number of discords are evident. According to Ajaya Dixit, the problem with most treaties signed in South Asia is not about blaming one country or another. The fundamental problem is with the dominant paradigm of water in all these countries. Perception of water is guided by a militaristic or a hierarchical view and management of water. This has in practice meant a top-down approach and a preoccupation with seeing flowing as "waste" to justify intervention in its flow. "We follow a monocentric path that is dominated by the bureaucracy, technicians and the nation state. This nation has not provided water security to it citizens."

2. Lack of Trust: Given the turbulent history of the region, and of negotiations regarding water projects, there is lack of trust between the countries, particularly with regard to India. While some of it comes from the sheer geographical and economic facts, a lot of it comes from India playing a dominant role in the region. In Nepal and Bangladesh, it was pointed out that a positive step in building trust was made by the "Gujral Doctrine" which stated that with smaller neighbours like Bangladesh, Bhutan, Maldives, Nepal and Sri Lanka, India without asking for reciprocity, gives and accommodates what it can in good faith and trust—something that India had later abandoned. The need to have an open sharing of information with regard to water was a fact that was stressed in all the countries.

[90] Interview, Mustafa Kamal Majumdar.

[91] Arun P. Elhance, Hydro Politics in the Third World: Conflict and Cooperation in International River Basins, Institute of Peace, Washington, 1999, p. 180.

[92] Indian External Affairs Ministry document, "Sharing of River Water between India and Bangladesh: The Real Story," 1994.

3. Problem of Bilateralism: Most of these rivers are international rivers, crossing more than two countries. However, the treaties are bilateral. According to Shanta Pun, on the question of whether we should have bilateral or regional treaties, there is a problem. "India would like to be treated bilaterally whereas Nepal and Bangladesh would like a regional approach. That, I think, is the big issue. They think India is a big brother and India thinks that they are ganging up against it." A. N. feels that the "main problem with India is that they will not go for multilateral talks. For instance, if Nepal and Bangladesh have to sign an agreement to use Monglapur, it requires three agreements. Suppose Nepal and Bangladesh agree to certain proposals, before that Bangladesh and India must sign an agreement. And then India and Nepal must sign another agreement. Why can't these three countries sit down for an agreement together?

4. Lack of Clarity in the Treaties: The IWT is too technical a treaty, with dense Annexures and Appendices filled with engineering jargons, which then becomes a point of clash between engineers from the two sides over technical details that few understand. The Mahakali, on the other hand leaves a lot of room for ambiguity and controversies erupt in its interpretation and enforcement.

5. Invisibility of Gender and Environmental Concerns: As Eva Saroch points out, *"No women have ever been involved in treaty making. Yet they are affected by it."*[93] As in the case of most conflict and peace treaties, water treaties are dominated by men, and the language remains a masculinist domain of military-bureaucratic-engineers and male elites. Similarly environmental concerns, its impacts on people across borders and their needs, compensation etc has been totally sidelined by the treaties. The Mahakali Treaty has come under flak from environmentalists on grounds of non-viability of large-scale water infrastructure projects. The agreement has failed to address the associated social and environmental factors and has not involved ordinary people in the management of shared water resources, despite being the most affected party. Similarly under the IWT, the replacement works for diverting water from the western rivers, the resultant water logging and siltation of adjacent areas and its impact on large section of people who had to give up their traditional rights to water.

6. Nation-State Centric Treaties: Despite the fact that water use and management involve a plurality of players, water treaties remain an 'exclusive business' of nation states, totally dominated by state machineries. The only other players which seem to get 'legitimate' entry are big corporations and businesses. Civil society, voices of people and other parties living in the basin or affected by these treaties have no voice or space. Governance of water required a far more open and equal interplay between states, markets and civil society in the region.

To conclude, what really emerges is there has been limited cooperation, in real terms, between these South Asian countries on their rivers. The little progress that has been made has been marred by controversy and simmering resentment. According to some, for instance, Ajaya Dixit and Deepak Gyawali, the problems that have arisen in the course of framing of troubled treaties like the Mahakali Treaty, can be lessons in future efforts to jointly govern South Asian water resources.[94] The challenge then is to frame what should be the framework for governance of South Asian trans-boundary water from the point of fairness, and environmental sustainability.

[93] Eva Saroch, Second Civil Society Dialogue on Peace: A Report, 2002, website: http://www.mcrg.ac.in/civilsocietydialogue2.htm, Accessed 14.7.2007.

[94] Gyawali and Dixit , "How not to do a South Asian Treaty... ."

South Asian Rivers and Climate Change : Future Conflict or Cooperation.

"Muhammad Ali, a wiry 65-year-old, has never driven a car, run an air-conditioner or done much of anything that produces greenhouse gases. But on a warming planet, he is on the verge of becoming a climate refugee. In the past 10 years the farmer has had to tear down and move his tin-and-bamboo house five times to escape the encroaching waters of the huge Jamuna River, swollen by severe monsoons that scientists believe are caused by global warming and greater glacier melt in the Himalayas. Now that the last of his land is gone, Ali squats on a precarious piece of government-owned riverbank? the only ground available—knowing the river probably will take that as well once the monsoons start this month."

This story, reported by Laurie Goering (Chicago Tribune, 2 May 2007) is not a unique case nor is it about a calamity confined to a small village in Bangladesh. As the world gets warmer, the IPCC Report on Climate Change projection for South Asia states that the Himalayas are poised to melt, leading to increased flooding, rock avalanches from destabalised slopes, and affect water resources within the next two to three decades. This is expected to be followed by decreased river flows as the glaciers recede. According to ICIMOD (International Centre for Integrated Mountain Development) the temperature of the Himalayas has gone by up to 0.6 degrees Celsius in the past 30 years, and within the next 50 years, the Himalayan glaciers could disappear all together, having far-reaching implications for more than a billion people living in the region.

One can get a peek into the future when one looks at Dhaka, the capital of Bangladesh. The city is daily being flooded by a growing sea of landless rural migrants living in squalid conditions in places like the backwaters of the Turag River. "Climate migrants" are growing by the day and now account for at least a third or perhaps as many as two-thirds of rural dwellers coming to Dhaka. Many in Dhaka point out with alarm that if sea level rises by three feet by the turn of the century, as some scientists predict, a fifth of the country will disappear. Meanwhile, land erosion has also led to an escalation of land dispute and litigation in Bangladesh.

Thirty years old Nasima Begum is from Bhola Island and works in a brick kiln. Lying in the southern coast of Bangladesh, half the island has already been lost to the waters. There are many like Nasima Begum who have been forced to flee to the city and make ends meet by working at construction sites, brick kilns, or by pulling rickshaws. However work is becoming difficult to find. Meanwhile, India has started constructing a fence along the border, and within India, anti-Bangladeshi migrants voices are getting shriller. However, though the adverse impact of climate change is becoming visible in a low lying, delta country like Bangladesh, it is not a phenomenon limited to Bangladesh. A small island has already been gulped by the Hoogly River in India, the floods in Bihar, UP are getting worse, glacial lake outbursts are increasing in frequency and affecting thousands in Nepal and Bhutan. Soon the same devastation is likely to spread to other areas, like the coastal areas of India, Pakistan, the Gangetic plains, the Himalayan Hills.

As the IPCC projects, the impact of climate change is going to particularly affect developing countries given their low coping capacity, wide scale poverty, and high density of population. Fresh water shortage is going to be acute and all the progress made in the human development index stands threatened. With increased floods and droughts,

endemic morbidity and mortality due to diarrheal diseases primarily, is projected to increase. Rise in coastal water temperature is stated to exacerbate diseases like cholera in South Asia. Crop yields is projected go up to 20% in East and Southeast Asia while it could decrease up to 30% in Central and South Asia by the mid-21st century. Taken together and considering the influence of rapid population growth and urbanisation, the risk of hunger is projected to remain very high. In short, the future seems ugly unless the South Asian Countries begin to cooperate and do something about it. According to Rehman, the future looks bleak and means "Insufficient food, a destabilised government, internal strife that could spread past the country's borders, a massive exodus of climate refugees and more extremism." He further feels that *"A person victimised and displaced will not sit idle. There will be organised climate-displaced groups saying, 'Why should you hang onto your place when I've lost mine and you're the one who did this'. "*[96]

> "For every hundred thousand tons of carbon you emit, you have to take a Bangladeshi family."
>
> **Rehman, Dhaka**[95]

Clearly, South Asian cooperation is vital here. Besides coordinating with the UN and international climate regimes, South Asian countries must also establish a coordination that is lacking among them, as well as with neighbouring regions in order to handle the crisis more effectively. Collective monitoring of glaciers, and rivers, sharing and transparency of information is crucial here, along with closer collaboration between scientific, academic, civil society institutions working on the impact of changing climate in the region.

[95] http://www.chicagot ribune.com/ news/nationworld /chi-bangldsh070 502 , Accessed 8.05.07.
[96] Ibid.

Conflict of Approaches to Water

In trying to understand the various actors and their approaches on the issue of trans-boundary water, it is important to recognise at the outset that there are plurality of actors in the water sector—the state which includes governments, bureaucracy and the state machinery, who can also be termed the "managers"[97] and the market; civil society organisations, activist groups, environmental movements; donors and funding groups; water communities or water users; and knowledge institutions. Each group is characterised with its own strategies and approaches, and within each group there are differences and variations.

1. State/Strategic Approach: The state or the government departments have long been the major actor when it came to water issues. With regard to trans-boundary rivers, the state approach has been one of strategic and centralised control. In practice, this has meant high-handed approach and securitisation of water. This is quite evident in the way water is 'managed' and hydro politics played out between India-Pakistan, Bangladesh-India, and sometimes between Nepal-India and in the way some of the other conflicts, such as those existing between India and Pakistan, superimpose themselves over watery spaces. One can also draw comparisons of national security and other aspects of high politics getting linked to water management in parts of West Asia.

2. Market/Economic Good Approach: The market approach is based on the understanding that given the problems that nation states have had in sharing their water resources, the mechanisms for governance of water must be left to the market and economic instruments. It includes a wide range of actors who argue for water markets, privatisation of water, tradable water rights, accounting for the economic value of water, public–private partnership. It is supported by Institutions such as the World Bank, Asia Development Bank, UN; International 'Water' Institutions like World Water Council, Global Water Partnership; corporates, some governments; and some NGOs.

This has been facilitated by two trends in the 90's. 1) The growing acceptance of privatisation of public services as a way of dealing with inefficiency, poor delivery and fund shortage. 2) Institutional backing of World Bank (WB) and IMF for water privatisation. Within the governments in the region, given the growing scarcity and increasing demand for water, there are two mindsets. 1) To increase 'production' and bring in more water available in nature to the 'usable' category. 2) To then build water reservoirs and infrastructure to store water that is going "waste" into the environment. Hence water is seen as subject to laws of supply and demand. Such an approach then ties in well with the more blatant market approach propagated by institutions like WB and ADB. The argument here is that effective resource management requires that water is given an economic value. Hence water rights should be defined and water trading allowed. The underlying premise is that if markets are given a free play, private sector allowed in, the state only plays a facilitating role; the market will ensure that supply side meets the demand. Within this, Public-Private Partnership (PPP) is held as a model for improved services, better efficiency and better investment.

Given that water is fast becoming a scarce resource, there is also a growing trend to merchandise it for profit.[98] In its

[97] A term used by A. Dixit.

[98] In May 2000, Fortune magazine stated that water in the 21st century would be the best investment to ensure wealth of nations. The World Bank places the value of the current water market at close to $1 trillion. With corporations providing water for only 5 percent of the world's population the profit potential is seen as unlimited.

most blatant forms, giant corporations are rapidly acquiring control of water through the ownership of dams, waterways, water infrastructures, municipal corporations, development of new technologies such as water desalination and purification, among others.

There have also been attempts to give water, both an economic and social content. Significant here is the Integrated Water Resource Management (IRWM) approach which tries to combine the social, environmental and economic approach to water. This IRWM has its intellectual roots in the United Nations Conference on Environment and Development (UNCED) that was held in Mar del Plata in 1977. Important to the emerging discourse of IWRM has been the Dublin Principles which espoused interdependencies within natural systems, as well economic and social systems. However, IWRM has been critiqued for defining the unit of management as the river basin. It is argued that this is based solely on hydrological characteristics and takes no consideration of social, cultural, political or economic characteristics that shape water governance. Dissenting voices question the universal applicability of IWRM with leading water experts calling for a renewed analysis of the relevance of some of its core assumptions (Falkenmark, 1993; Gyawali et al., 2006).

3. Alternative Approach/ Water as social good and a basic human right: Proponents of this approach include social activists, academics, environmentalists and NGOs who vary widely but share a common position that water is a basic human right, a common pool resource and cannot be reduced to a tradable commodity. These groups have been critiquing the hierarchical approach and privatisation of water that ignores people and community based approaches to water. They argue that water and human rights are interlinked at several levels. Water is essential for life, livelihood and survival; the combination of safe drinking water and hygienic sanitation facilities is a precondition for health, to success in fight against poverty, hunger, child deaths and gender inequality; protection of the rights of the displaced people and their cultures that is caused by mega projects and dams; environmental and ecological concerns.

Organisations Working on Trans-boundary Waters in South Asia: A Selective List [99]

Given the fact that tensions on South Asian trans-boundary water has been so widespread, there have been concerns and initiatives by civil society groups, activists, academics and policy makers to address them. These initiatives are rooted in different perspectives or try to synthesise different approaches such as socio-economic approach, or environmental and people centred approaches. However, one can broadly identify certain trends to these initiatives.

i. The issue of mega-projects and dams is the most dominant, and initiatives on trans-boundary waters have sprung up in context of specific dams and projects. For instance, the Rivers Interlinking Project or the Tipaimukh Dam or the Pancheshwar among others have largely been the context and focal points for cross border networking on rivers. Here a number of organisations have made significant contribution.

ii. While the '90s saw a greater effort toward working across border on trans-boundary management, in the present decades, South Asian civil society solidarity at large and water related initiatives, more specifically have suffered. In many countries, internal instability and security issues have come to take a centre stage. For instance, in the democratic Nepal of the '90s, water issues and concerns had unleashed a lot of constructive energy but the massacre of the Royal family and the events that followed, the over all war-like situation far over took this space in the

[99] To begin with, it must be stated that this is not a comprehensive list of organisations and initiatives working on water. We have confined ourselves by our own objectives and focus as stated in the report.

following decade. The post September 11 South Asia also came to be dominated by concerns of militarism, war, and (national) security, where issues of ecology and environment took a back seat and movement of people within South Asia became difficult. For instance, a number of activists in Bangladesh mentioned that going to India in the '90s was not a problem, while in the past few years, getting a visa has become very difficult. There has also been an ascendancy of market, and a new legitimacy of dams. As Ajaya Dixit from Water Nepal pointed out, in the "1990s, it was possible for Deepak and myself (Water Nepal), to address and talk to the legislative assembly of Bihar on the issue of floods, but this has become a problem now."

iii. While water concerns in Nepal, Bangladesh, and Pakistan invariably involve India, the tendency in India is to remain more centred around internal water issues and conflicts. It was evident that civil society groups in India working on water paid far less attention to trans-boundary rivers, whereas in the other countries, particularly in Nepal and Bangladesh, there have been greater efforts to address these issues. This definitely needs to change, particularly in the context of global warming. According to some activists in Nepal and Bangladesh, in India some of the efforts that have been undertaken tend to be seen by the others as being within the frame of an "nationalist mindset" rather that a "South-Asian mindset."

Water Nepal Conservation Foundation, formed in 1990 has carried out interdisciplinary research on varied issues that affect the use and management of water, focusing on the Himalaya-Ganga region. NWCF is also involved in building knowledge, raising awareness and disseminating insights through innovative actions carried out in partnership with its field partners. **Panos South Asia focuses** on the Himalayan Ganga Region. It carried out a study on the River Ganga in the three countries of Nepal, Bangladesh and India and brought out a publication on Disputes over the Ganga. While the initial idea was to bring about a dialogue between technocrats, journalists and civil society, the study ultimately focused on the perspective of the civil society and activists. **Jalsrot Vikas Sanstha, Nepal** works as the regional arm of the global water partnership, and seeks to implement plans and programs on IRWM.

—**South Asia Network on Dams, Rivers & People (SANDRP), India,** formed in 1998. It is a loose network of people working on issues related to water. Their main focus is on large dams, mostly in India but also in other parts of South Asia, from the perspective of people, ecology and democracy. Significant writing and initiatives on South Asian water issues and dialogues have also been taken up by Ramaswamy Iyer, B.G Verhese and other scholars based at **Centre For Policy Research, Delhi,** or other Knowledge Institutions like **Centre for Development & Environment Policy,** IIM. An important new initiative has been **South Asia Consortium for Interdisciplinary Water Resources Studies (SACIWATER),** based in India that focuses on transforming water resources knowledge systems. Key ideas are an interdisciplinary approach to understanding water resources issues and collaboration at South Asia level. The longer term aim is to establish a South Asian 'virtual water university.'

—**Bangladesh Poribesh Andolan (BAPA)** has been active on the front against India's Rivers Interlinking Linking project. Their emphasis has been to link an internal environmental approach to external environment approach in management of trans-boundary water. Others like **IUCN Bangladesh, Bangladesh Unnayan Parishad (BUP)** focusing on the Ganga basin have sought to emphasise water as a socio-economic good for regional cooperation.

—A number of initiatives have emerged on the **border regions** in the context of dams/embankments/floods and have also sought to build solidarity. In Manipur, **Action Against Tipaimukh (ACTIP)** and the **Citizens' Concern for Dam and Development** have also taken up the issue of the proposed dams, and formed links with groups like in **Angikar Bangladesh Foundation.** An International Tipaimukh Dam Conference, (ITDC2005) held on 30–31 December, 2005 came up with the **Dhaka Declaration.** The **Barh Mukti Abhiyan** has also taken up issues of floods, embankments and people's suffering across the Indo-Napal Border. In Pakistan, the **DAMAN Development Organisation,** has been working among the marginalised water communities of the Indus which have been affected by dams and projects.

There is a gap when it comes to linking the various small community/border level initiatives on trans-boundary rivers to the larger dialogues that takes place even at the level of civil society. Baring a few, most initiatives have revolved around mega dams, while some initiatives have not really moved due to internal differences and misgivings. Another problem remains with the extreme polarisation that pervades the issue of water in South Asia. Hence, the challenge is to take a bottom up approach towards evolving a framework for water governance.

Looking Ahead: Framework for Water Governance as a Space of Inclusion

- There is an urgent need for a water governance framework in South Asia. This is important if there has to be a meaningful implementation of the SAARC social charter signed by all the South Asian countries, stating the need to "Fulfill the responsibility towards present and future generations by ensuring equity among generations, and protecting the integrity and sustainable use of the environment." This is also necessary if we have reach anywhere close to achieving the Millennium Development Goals or talk about peace, cooperation and well being of the region in a maximalist sense.
- Such a framework must emerge from the recognition that there are pluralities of stakeholders in the contested terrain of water, and among them the civil society is so far excluded when it comes to the issue of trans-boundary water.
- The process of water governance must shift from top-down water management to bottom-up water governance, and should be an open and transparent process. It should look to building decentralised partnerships with non state institutions. Governance implies open and equal interplay between state–market and civil society. As of now now, the civil society and local communities has been totally excluded from water management. This must change.
- Water security means people have secure rights to use water, including future generations. For poor people, this comes from fair and adequate representation in policy making process. Hence 'the bottom-up approach' must be integral to the process and the outcome. For instance, it should be designed through consultations with local communities which are affected, and build upon the strengths of customary laws that are often overlooked. There is a need to improve our understanding of the strengths of customary water arrangements (whilst recognising their weaknesses, such as gender/caste inequality).
- There is also need to include marginal river ecologies that remain neglected, such as the case of smaller border rivers between India and Nepal. Similarly the India-Pakistan conflict has cast a 'security' shadow over the Indus basin. While there are a number of studies from varied perspectives on the Ganga basin, most studies on the

In different parts of the world, joint Agreements on shared water resources are being put in place.

- **The South African Development Commission (SADC) has been able to successfully organise several river basins under the "Protocol of Shared Water Courses"—a joint document stating that the 14 DADC countries will collaborate together in managing their shared rivers.**
- **The Nile Basin Initiative provides another example of 10 countries (some of them with tense relations) forming a joint dialogue platform.**
- **In South East Asia, the Mekong River Commission is yet another example of basin wide regional collaboration.**

It is high time that South Asian countries began a collaborative effort for joint governance of the trans-boundary rivers.

Indus basin tend to be more from a strategic or nation state perspective. There is an urgent need to bring forth these varied voices, visions of people and communities of the Indus basin, across borders, to inform the debate on water governance.

- Women play a crucial role in sustainable development, resource governance, and in peace building. As of now, both at the level of government, policy makers as well as civil society, women actors and gender perspective are both missing. Similarly, the question of discrimination and proactive efforts for 'inclusion' of the voices and visions of dalits and other discriminated communities must also be taken into account.

  There is also a need to develop joint information infrastructures and services for river basins, and thereby reducing asymmetric access information among the countries concerned.

Centre for Democracy and Social Action (CDSA) is an initiative for substantive democracy, and a quest for new ways and imaginings to energise social action for achieving it. Registered as a Trust in 2006, its genesis lies in the understanding that amidst the changes unleashed in the last 15 years, civil society must invest energies to rethink social action, develop new methodologies, devises new institutional models, new collectives and forms of action for sustained participation and engagement of the common people, particularly the marginalized, in the power matrix of the society, polity and economy.

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