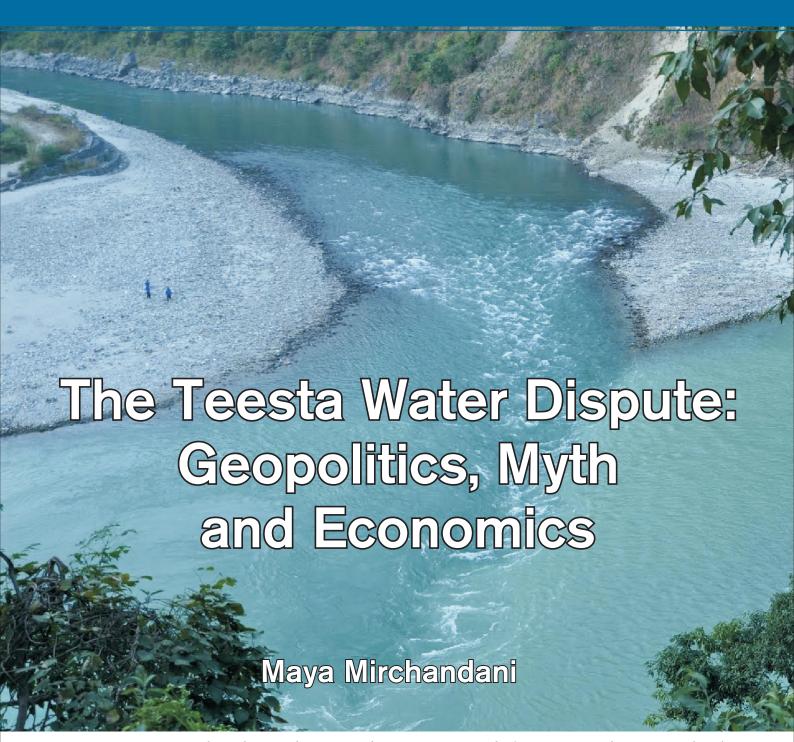
# **ORF SPECIAL REPORT**

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The confluence of the Rangeet and Teesta rivers, in Darjeeling's Teesta Bazaar. The Teesta is on the right.

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t the top of the Himalayas in Sikkim, from the waters of the Khangse and Zemu glaciers that feed the Tso Lhamo lake in a high plateau just north-east of the mighty Kanchenjunga, the Teesta springs to life. The river winds its way down, from the mountains gathering along its course streams, large and small; and its most significant tributary—the Rangeet river—at a sacred confluence in Darjeeling's Teesta Bazaar, before crossing an international border in Mekhligunj in north Bengal's Cooch Behar district, where it enters Bangladesh, meets the Brahmaputra, and flows into the Bay of Bengal. From source to mouth, the Teesta is approximately 414 kilometres, of which 150-odd are in Sikkim, 123 in West Bengal, and the remaining 140 or so, in Bangladesh. If India-Bangladesh ties in the 20th century were defined by conflict over sharing the waters of the Ganga, today the Teesta has become its powerful leitmotif.

Before 1787, when a deluge in Rangpur broke river banks and altered the river's course, the Teesta was the main river of the northern regions of present-day Bangladesh. Even today, it is the country's fourth largest transboundary river for irrigation and fishing activities. According to available data, the river's floodplain today covers an area of 2,750 square kilometres in Bangladesh. Its catchment area supports 8.5 percent of its population—roughly 10 million people—and 14 percent of crop production. Over one lakh hectares of land across five districts are severely impacted by upstream withdrawals of the Teesta's waters in India and face acute shortages during the dry season. Bangladesh wants 50 percent of the river's water supply, especially in the months between December and May annually, while India claims a share of 55 percent.

So far, only one agreement on sharing Ganga waters exists—signed in 1996—and that is up for renewal in 2026. India accepted the status of the Ganga as an international river only in 1970, and the Ganges Water Treaty was a product of 25 years of negotiations that finally recognised Bangladesh's rights as a lower riparian state and set up a procedure to manage Ganga waters to ensure Bangladesh got an equitable share during the dry season. But just as Bangladesh's farmers are held hostage by the vagaries of the monsoon, of flooding, drought and famine, so too the Teesta water-sharing agreement, waiting to be signed since 2011, has fallen prey to the unpredictabilities of central and state level politics in India.

Of the Teesta's catchment area, 83 percent lies in India; the remaining 17 percent is in Bangladesh. Negotiations have been on since 1983, when a preliminary arrangement had allocated 39 percent for India and 36 percent for Bangladesh. A lesser share for Bangladesh takes into account a groundwater recharge that takes place between the two barrages on the Teesta—at Gazaldoba in Jalpaiguri on the Indian side and at Dalia in Lalmonirhat in Bangladesh. The remaining 25 percent was left unallocated for a later decision. Especially because

the regular flow of a small quantity of water (in the case of the Teesta, 450 cu secs) is imperative for the life of a river.

Some would argue that with no mutually acceptable framework for a watersharing arrangement over 30 years later, negotiations cannot be said to be "ongoing', but are irrefutably stuck. In fact, talks continued for several decades in between, without much headway until 2011 when Delhi and Dhaka reached another agreement—an interim arrangement for 15 years—where India would get 42.5 percent and Bangladesh, 37.5 percent of the Teesta's waters during the dry season. The deal also included the setting up of a joint hydrological observation station to gather accurate data for the future. But vociferous opposition by the Trinamool Congress (TMC) in West Bengal ensured the arrangement was shelved when it was due to be signed later that year, when Chief Minister Mamata Banerjee was to accompany then Prime Minister Manmohan Singh to Dhaka, but canceled at the last minute. Given that the TMC was a key coalition partner of the central government at the time, and that water is a state issue, there was no way to ink the deal without the chief minister's stamp of approval. Her refusal to sign on then prompted Dipu Moni, Bangladesh's foreign minister at the time, to warn that bilateral relations would become complicated if India failed to deliver on the Teesta water-sharing agreement.

After the 2014 elections in India, Dhaka expressed renewed hope for an agreement, especially ahead of Prime Minister Narendra Modi's visit in June 2015. But the deal was not inked then, either, in spite of the Prime Minister's saying that "rivers should nurture the India-Bangladesh relationship and not become a source of discord."

Her opposition in 2011 notwithstanding, Mamata Banerjee has taken on a more conciliatory tone after winning a re-election herself in 2016. Reacting to her invitation to Prime Minister Sheikh Hasina to visit Kolkata, the Bangladesh High Commissioner to India, Syed Muazzem Ali was quoted in news reports as saying that Mamata Banerjee, on a previous visit to Bangladesh had told Dhaka to "have confidence in her on the Teesta issue."

Most of Bangladesh lies within the international river basins of the Ganges, the Brahmaputra (called the Jamuna in Bangladesh) and the Meghna rivers. Together, the waters—making up the third largest international river system in the world—drain into a catchment area of approximately 1.7 million square kilometres spread over India, Bangladesh, Bhutan and Nepal, of which only seven percent lies in Bangladesh. The Brahmaputra River enters Bangladesh from the north, the Ganges from the east, and the Meghna (called Barak in India and enters Bangladesh after traversing the hills of Assam, Tripura and Meghalaya) from the

south-east. At the farthest end of the river systems that originate in the Eastern Himalayas, Bangladesh is heavily dependent on India for a steady supply of river waters. Of Bangladesh's over 230 rivers, 57 are transboundary; 54 of those flow through India.



A fisherman in Mekhilgunj, Bengal with a net that can only be used in shallow waters, standing on the Teesta's dry river bed.

Water—the natural resource we take for granted, but should not—has become both a political, diplomatic and environmental weapon, as well as a battleground that challenges a critical bilateral relationship in the neighbourhood. This relationship is one that India can ill afford to complicate for several reasons. According to the Food and Agriculture Organization of the United Nations (FAO), the ratio of Bangladesh's external dependency for water is over 90 percent. A fair amount of that water comes through India.

International transboundary water disputes in South Asia have proven more damaging than inter-state ones. It is not just the Ganges or the Teesta with Bangladesh, but the Indus system with Pakistan and the Brahmaputra with China, that have become as important in diplomacy as trade and security – both economic and geostrategic. No shots have been fired, but let there be no doubt, these are water wars.





Iron poles mark the boundary between India and Bangladesh at Mekhligunj.

These are often submerged during monsoon.

o wires or fences, no walls or check-posts stop its journey. The confusing border between India and Bangladesh in Mekhligunj, where the Teesta crosses over, is marked by pillars on land and iron poles in the water—submerged during the monsoon, but visible when the river runs dry. If it was not for them, one would never know or believe that an international border has been crossed. So, why does a natural resource that recognises no borders or boundaries, no religion or national identity, evoke so much passion and possessiveness? A river in its course epitomises the very ideals humanity can only strive to abide by and yet, instead of recognising its power to bridge differences, it becomes the centre of conflict.

On the ground, far away from the machinations of realpolitik and diplomacy, the Teesta—at least on the Indian side—is to be revered. The river is an intimate part of everyday life for all who live along it. Locals believe the Teesta kills diseases, bestows blessings, and holds within it histories of their conquests and defeats as territories were lost and won by the Bhutanese, the Nepalese and the British. Legends about the river abound. There are stories about everything—from how the Teesta got its name to its role as a route for the Fakirs and Sanyasis during the rebellions of the late 18th century.

One theory says the name originates from the Sanskrit word 'Trisrota' or 'three streams'—the ancient rivers of the Karotoya, Atreyi and Punarbhava that joined to form the Teesta river as we know it. 'Teesta' is a corrupted form of 'Trisrota'. Another claim is that it comes from a Tibetan word that signifies the victory of the King of Sikkim over his enemies, seventeen times. Mythology says it is neither;

that the Teesta sprung from Goddess Parvati's breasts. Whatever legend may say, historians believe the first references to the Teesta are from the 13th century after the Delhi Sultanate decided to expand eastward. Indeed, the river is referenced several times in British gazettes of that period.

In fact, these historical accounts fired the imagination of one of Bengal's greatest writers, and it is from them that Bankim Chandra Chatterjee created his hero and heroine, Bhavani Thakur and Devi Chaudharani. A report on the district of Rangpur (in today's Bangladesh) in 1873, for example, refers to a woman dacoit who travelled in boats on the river Teesta. This became the inspiration for the story of Devi Chaudharani who was believed to be part of the Sanyasi Rebellion. Jalpaiguri is dotted with small nondescript temples honoring her.

Just as the Ganga is worshipped as an ethereal goddess and giver of life, the Teesta too encourages her own brand of devotion. 'Teestaburi' is a wise old woman who must be worshipped and pleased. Her idols and masks are terrifying, and starkly different from the beautiful, youthful Brahmannical iconography of the Ganga. Historians say that while the Ganga is considered benevolent, in the imaginations of the local people, the Teesta is not. And so, according to local custom, an idol of Teestaburi is placed in a basket and carried around villages during the month of Boishak every year, and then immersed in the water at the end of the month. Locals believe that if Teesta is displeased, the life-giving benevolence of the water could turn into something dark and malevolent like it did nearly 50 years ago when massive floods in 1968 in Bengal's Jalpaiguri district killed many who lived along the banks. The river turned into a drain of thick silt, and crop and livestock perished. The memory of that flood is now deeply embedded in local village lore. So, given their association with the Teesta's powers, and their dependence on the river, for local farmers and fishermen who live and work along the river banks in north Bengal, the idea of sharing water is an unspeakable one.

To add to the complexity of the situation, several families who live in the area were made to give up their lands and homes for the Teesta Barrage project, set up in 1975 in West Bengal, with the promise of proper irrigation and regular water supply. From the heights of Sikkim down to the plains of Jalpaiguri in Gazaldoba where the Teesta Barrage project is located, its catchment area up to the barrage site is 8,500 square kilometres and with water collected and stored at the barrage, the aim was to provide water to six districts in North Bengal. Today, it supplies water to only about 66,000 out of the 9 lakh-plus hectares of agricultural land it promised to irrigate. Villagers waiting for the fruits of their sacrifice, and politicians always seeking to win an election by promising they will be rewarded for their wait—they make the idea of sharing with Bangladesh even more complex.



Gazaldoba Barrage on the Teesta River. The water on the other side of the gates has been channeled into irrigation canals.

For example, for villagers in 18 Ghai Milanpally on the wastelands by the river bank in Jalpaiguri district, the Teesta is everything. It is a small community of potato and rice farmers who built this village from scratch in 1985, ten years after the West Bengal government promised regular water supply through a network of new canals. The inability to stick to its promise to locals here has been one significant reason for the stalling of a water-sharing agreement with Bangladesh, in spite of several attempts. Nonetheless, water sharing continues to be a major campaign issue in every state election, with political parties accusing each other of ineptitude and neglect. And four decades after the state government's promise, the rhetoric is loud, but the canals are still to be developed. While the Teesta is a perennial river, it experiences a lean season from November to April every year, or roughly about six months. The villagers pray for a regular supply of water, food and income. In the monsoon they fear floods; the rest of the year, they hope their ground water does not dry up. The output of their crops – of paddy in the *kharif* season, pulses in the *rabi* season, and vegetables like potatoes—vary with water supply in different seasons. The barrage was designed for several reasons, the primary one being the irrigation of nearby lands, but also to generate hydropower and regulate flood flows.

Hydropower on the Teesta is, however, another front for conflict, this time between the state government of Sikkim, where the river originates, and environmentalists. The river, dancing rapidly down and carving deep gorges in the mountainside, is Sikkim's lifeline, flowing through its entire length. At least 26 projects on the river mostly in Sikkim, aimed at producing some 50,000 Megawatts of electricity, are channeling water into tunnels that power electricity

generating turbines inside the mountains, damaging a careful ecological balance in a highly seismic area, and Sikkim's people, as well as environmentalists are up in arms. Not only could the construction of the dams increase pressure on an active fault, they say, it is also that in spite of assurances to the contrary, the river's course and supply is being affected. In August 2016, unrelenting rain triggered massive landslides in North Sikkim, blocking a tributary of the river and creating an artificial lake that threatened to burst given the huge volume of water trapped in it, and flood many parts of Sikkim and north Bengal.

For the Sikkimese, in the hills, *dharma* (belief, faith, and duty) and folklore go hand in hand with economics. The Sikkimese connect with nature in fundamental, intrinsic ways. Their relationship with water is simple and symbiotic. To them, it is a free public good, freely available. And they have an unshakeable belief that the massive earthquake in 2011 was a result of the various hydel projects on the Teesta river. The Lepchas of Sikkim sat on hunger strike for over 900 days against the construction of a hydel project at the Rathong Chu, which is a tributary of the Teesta in western Sikkim. For them the valley is blessed by the Buddhist Guru Padma Sambhava. Sacred treasures believed to be concealed in the soil mean that the Lepcha and Bhutia communities of the area do not dare interfere with nature for fear of a calamity. The water fills sacred vases in the monasteries dotting the mountainsides and is distributed to pilgrims on the 14th day of the first month of the Tibetan New Year.



Buddhist Monks in Sikkim, facing the Kanchenjunga in the distance.

Sitting far away, anyone can question how much of this is about belief and how much about knowledge, but the people of Sikkim are concerned not just about massive projects in a seismic zone that alter the flow of water but also about global

warming and melting glaciers. As concerned as they are, they are equally clear about shared responsibility, especially if people downstream, in Bengal and beyond, want the benefits of Teesta waters. Whether it is irrigation, or drinking water, or power generation—any agreement has to consider the needs of Sikkim, too, and must understand the trade-offs required between resource use, conservation needs, and sustainable development.

However, whether it is the concerns of Sikkim, or the sentiments of the people of north Bengal—all of whom live along the Teesta—their legends, histories and beliefs all create a crucible of public sentiment that becomes entangled with their specific needs for water, be it for farmland irrigation, drinking purposes, and maintaining the ecological longevity of their lands. The combination of sentiment and need, both critically tied to the river, therefore becomes impossible for politicians to ignore. All rivers have intrinsic relationships with cultures – which tend to develop inland because of navigational patterns – as food, language and legend all travel up and down their course. Political scientists and anthropologists argue that sharing a resource often challenges that very sense of identity and culture built over centuries. West Bengal's agreement to share Teesta waters was drafted under the state's successive CPM governments but locals claim they were never asked about their needs, and that they only found out about the deal in 2011, when the then Prime Minister Manmohan Singh was traveling to Dhaka to sign it. It was their protests that led to Mamata Banerjee's rejection of the deal. At the time, the CPM accused her of playing 'narrow politics' and not looking beyond state interests at a bigger picture of regional cooperation. Speaking to the farmers living near the Gazaldoba barrage who are thankful to her for holding off, however, it is crystal clear that locals are as concerned about protecting their faith and the Teesta, as they are angry at the prospect of sharing river waters with Bangladesh.





Rice and potato farmers tending to their fields in Village 18 Ghai Milanpally, Jalpaiguri Distt. West Bengal.

ifteen years after the Teesta Barrage project in Jalpaiguri, at a cost of 460 million dollars at the time, Bangladesh constructed its own on the river at Dalia in 1990 for irrigation purposes. The network of canals in Dalia is meant to irrigate fields for three crop seasons, but the arrangement can work only if India releases water from Gazaldoba. While the hydel projects in Sikkim do not have a severe impact on downstream flow, the barrage in Gazaldoba has become a major point of conflict when it comes to the India-Bangladesh relationship over water. Dhaka contends that the project has meant even less water than there may have been in the natural course of the river, and there simply is not enough for farmers to tend to their fields, or for fish to breed for a worthy catch. Even in the monsoon it is just a narrow, waist-deep stream in places. Millions of paddy farmers and fishermen in Bangladesh's Teesta Basin say their means of livelihood have dried up along with the water, forcing them to move to cultivating crops like tobacco and maize that need less water.

With growing populations, increasing urbanisation and food consumption, there has been a sharp increase in the demand for water across the region. Over 21 percent of the global population lives in Asia, but it is home to only a little over eight percent of the world's water resources. As consumption patterns change with a growing middle class, the shortage of water becomes more of a reason for insecurity, and in turn a growing security concern both domestically within India and internationally, within the region. Furthermore, almost all of Asia's major rivers originate in the Tibetan Plateau; it is a fact that cannot be ignored when it comes to regional security. Water sharing has been critical to India-Pakistan

relations since Partition and the Indus Waters Treaty of 1952 (better known than the Ganges treaty over four decades later) was a result of third-party mediation and allows for international arbitration in the case of disputes. On the eastern front, India is extremely concerned over China's attempts to dam the Brahmaputra and alter its course for its own internal consumption. In the case of both neighbours, water sharing is not just an environmental issue, but a major security concern as well.

The fight over water has constantly threatened inter-state relations across the world, most notably in the Middle East, and the concept of 'resource nationalism' has been key to regional politics in South Asia since 1947. According to a report by the Institute for Defence Studies and Analyses published in 2010, due to changing demographics, economies and environmental shifts, India is expected to become water-stressed by 2025 and water-scarce by 2050. A massive 80 percent of the subcontinent's annual rain—highly critical to ensure that rivers flourish—is from the annual monsoon. As both an upper riparian (with rivers that have their source in India and flow downstream) and a lower riparian (with rivers that begin elsewhere and flow into India), India is at the epicentre of transboundary river politics and diplomacy. It must acknowledge the necessity to strike workable agreements in order to prevent a major conflict over water. The world over, the only way to combat rising friction is to create and abide by mutually acceptable, binding frameworks with all neighbours, either bilaterally or multilaterally, keeping international law in mind. This is the only way to ensure transboundary river waters are regulated and shared.

UN Secretary General Ban Ki-moon called the Asia-Pacific region the most "troubling" as the planet faces a growing water crisis. Apart from population growth and high consumption patterns, exacerbating the crisis are pollution and poor management. Across the region, global warming, receding glaciers and erratic monsoons have led to more severe floods and longer, harsher droughts. The UN Convention on the Non-Navigational Uses of International Watercourses (1997) requires countries to participate in the use, development and protection of rivers in an equitable and reasonable manner. But individual nations are laying claims based solely on individual national interest and interpretation, making the endeavour to arrive at agreements both challenging and contradictory.

Many argue that even the unequal supply of water is a legacy of the Partition of 1947. Until the severe drought and famine just before it, the region between Bihar and present-day Bangladesh was the rice bowl of the subcontinent. Today, unlike Bangladesh, India is geographically more blessed. India's external water dependency ratio is at a much lower 33.5 percent. However, as population growth statistics for India are far higher, long-term projections of water stress and

scarcity for India are equally worrisome, and negotiations with Dhaka will necessarily need for India to take into account its own interests. One of the arguments for India's major river-linking scheme, in spite of concerns raised by water conservationists and environmentalists, is the creation of more canal networks for irrigation and more drinking water supply to urban areas, and overcoming water shortages for both purposes. In fact, there is a view that a river-linking project involving the Manas, the Teesta and the Ganga could improve north Bengal's agrarian supply and meet farmers' needs, as well as allow for a greater share downstream by arresting the water deficit. However, Bangladesh has raised serious concerns against the river-linking proposal, arguing that such a scheme would only result in even less water being available downstream.

While the Teesta is only one of several water disputes with Bangladesh that are in need of urgent resolution, it is the most significant one. There are also brewing disputes over the Feni River that originates in Tripura and crosses into Bangladesh after a journey of 90 kilometres, nearly all of which is a common border with one river bank in India and the other in Bangladesh. Both sides want to lift the waters for irrigation and a water-sharing pact on the Feni shares the same fate as the Teesta agreement. Bangladesh is also concerned over the building of the Tipaimukh dam on the Barak river in Tripura, arguing that the project will impact the water in the Meghna river downstream. While India can certainly argue its case for a greater share of river waters based on its own needs and political compulsions—and also make the point that it needs to protect its own water needs in the face of China's plans to build dams and divert waters of rivers (mainly the Brahmaputra, impacting downstream supply in Both north eastern India and Bangladesh)—there is no way out of equitable agreements on water sharing.

Delhi and Dhaka have the advantage of a Joint River Commission (JRC), set up in 1972 after Bangladesh won independence precisely for the purpose of water management. As a result of over two decades of negotiations under the auspices of the commission, they reached an agreement and signed the Ganges Water Treaty. The deal was as significant, if not more so, as the Indus Waters Treaty with Pakistan because it was an entirely bilateral effort and was a genuine pact to share water, unlike the Indus treaty which simply allocated rivers exclusively for India and Pakistan. The Ganges Water Treaty helped resolve an intense water conflict between the two countries over India's construction of the Farakka Barrage that was built on the Hooghly to ensure the Calcutta Harbour stayed silt-free and operational during the dry season; but it impacted the flow of Ganga waters downstream into Bangladesh.

While all water disputes are referred to the Commission for resolution, the domestic political climate in both countries is hostile to the idea of sharing, and

leader after leader has been put to the test attempting to create mechanisms of cooperation that will benefit both their own populations as well as the larger region. As a result of the lack of progress in resolving the issue of sharing Teesta waters, the JRC has not met since 2011.

Freshwater is a precious commodity, and a strategic one at that. Its role as a strategic asset or a national vulnerability (depending on demand and supply) cannot be underestimated. Various studies have indicated that the crisis facing Bangladesh is acute. As a low-lying nation with a large delta, it is vulnerable to rising seas, global warming and the inward advance of highly saline seawater threating its ground, freshwater supply, making the northern districts irrigated by the Teesta critical for the country's overall food security.



A fisherman casts his net on the Teesta River, Jalpaiguri.

India and Bangladesh share a history of friendship and cooperation, and there is plenty of precedent for the two South Asian nations to work through their differences. For one, the 1974 Land Boundary Agreement settling the confusing border and Indian and Bangladeshi exchanging enclaves in each other's territory was finally ratified by parliament in May 2015 and put into effect during Prime Minister Modi's visit a month later. In an effort to build goodwill with Dhaka and pursue the NDA government's "neighbourhood first" policy, India also agreed to opt for international arbitration to delineate the confusing, and sometimes controversial, maritime boundary between the two countries. Senior Bangladeshi officials say the Teesta agreement is the only major source of conflict between the two countries, and Delhi's inability to bring Kolkata on board to sign the agreement and ensure its implementation has led to disappointment.

Water remains singularly the most sensitive issue for Bangladesh. Without a doubt, water issues with Bangladesh have to be dealt with in the overall context of politics and security. Dhaka's action against Indian insurgents taking shelter in Bangladesh, its readiness to partner on infrastructure development bilaterally and regionally, and the overall geo-strategic partnership with Delhi serves to underline a permanent interdependency between the two nations on several fronts; and the reluctance to work out a lasting compromise must be overcome.

With the Teesta agreement in limbo, and a deal on sharing waters of the Feni river facing a similar fate, there are murmurs in Bangladesh over creating a multilateral forum for decisions on water sharing of transboundary rivers that include China, rather than enter bilateral negotiations. This is hardly a favourable scenario for India. The support for India across Bangladesh's political landscape after Prime Minister Modi's visit and the signing of key agreements was unanimous, raising expectations of taking cooperation further to settling river water disputes. In March 2016 during an India-Bangladesh dialogue, Foreign Minister A.H. Mahmood Ali said last year's settlement of the land boundary issue proved that anything is possible with political will.

As worshipped as the Teesta River may be, as evocative as its waters are to those who live by, and for the river—it is up to the politicians that get elected to convince the public that the right to water is universal and fundamental and that each population along the course of a river lays a legitimate claim to it. They must sell the idea of an equitable sharing arrangement without further delay in the interest of friendly ties with a crucial neighbour in an already vitiated subcontinent. Dhaka is clear that there can be no new negotiation on the Teesta agreement that failed to go through in 2011, and that the ball is in India's court to sign and implement it. But perhaps more importantly than just the Teesta deal, the need of the hour is to use the institutional mechanism at its disposal – the Joint Rivers Commission – to create a set of norms and guidelines to regulate the use of not just the Teesta but all transboundary rivers shared with Bangladesh; and to promote sustainable conservation, develop better ways to combat pollution, and manage existing water supply and resources better in order to manage this and future disputes. \*\*ORF\*\*

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Jeta Sankritayayan, Professor of Economics, University of North Bengal, Siliguri and former member, West Bengal State Planning Board.

Soumitra De, Professor of Political Science, University of North Bengal, Siliguri.

Tseten Tashi Bhutia, Convenor, Sikkim Bhutia Lepcha Apex Committee (SIBLAC).

Prof. Mahendra Lama, Vice Chancellor, University of Sikkim.

Kumar Pradhan (deceased), Historian and journalist, and founder of Nepali paper, Himalya Darpan.

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## **Photographs**

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