

Systematic Exclusion of the Teesta River's Fishing Communities

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Deficient water flows turn major part of the river into a massive char (sand bar), leaving pockets of water body, displacing fishing activities. (Photo: M.S.K. Chandan, 2019).

This chapter depicts how uncontrolled taming of a transboundary river has affected the livelihood of Bangladeshi fishers, who once upon a time led a prosperous life thanks to the river's bounty, but have recently become destitute, landless people. Teesta is one of the 54 transboundary rivers shared by Bangladesh and India. To tap the water resource with its huge hydropower potential, at least 15 hydro-electric power plants are currently being built, and the two largest projects of this kind are already in operation. This damming of the river, coupled with the glacier retreat in the Himalayas, leads to diminishing river flow, resulting in the most disastrous consequences in downstream Bangladesh. The consequences are both the environmental devastation and the livelihoods being put in peril, in particular those of fishing people. Lack of the river water during the main breeding season led to extinction of many species. The release of water from the upstream barrages during monsoons causes a massive deluge in downstream areas where millions of people lose their houses and other properties. Poor catch and lack of arable land are driving the displacement of fishers and is also forcing them to shift to other lower-paying occupation. This study puts forward some recommendations towards sustainable livelihoods for fishing people in the Teesta River basin.

Introduction

Teesta is one of the 54 transboundary rivers shared by Bangladesh and India. The river originates in Himalayas and flows through the Indian state of Sikkim and West Bengal into Bangladesh. The Teesta River basin in Bangladesh spans over 2,037 square kilometers, covering five districts, i.e., Rangpur, Kurigram, Lalmonirhat, Nilphamari and Gaibandha (Rahaman & Al-Mamun, 2020). In these districts, the river impacts 9,667 square kilometers of agricultural land. According to the last census in 2011, nearly 10 million people live in this region, with a population density of 700 per square kilometer. Around 20-21 million people directly or indirectly depend on the Teesta River for their livelihood (The Asia Foundation, 2013).

However, taming the river upstream has severely affected its flow, which

ultimately impacted people's livelihood downstream. The upstream of the river is fast-flowing and has huge hydropower potential. To tap this resource, at least 15 hydro-electric power plants are currently being built currently, and the two largest projects of this kind are already in operation (Rahaman & Al-Mamun, 2020). Although most of these hydro-electric power plants are 'run-of-the-river' projects, which means they are not supposed to hold back water, this dam cannot release water on time due to poor electricity distribution networks in Sikkim and West Bengal (Basu 2017a, 2017b). The diminishing flow of the river is also driven by climate change impacts, as manifested by the glacier retreat in the Himalayas. In 1990, 34 glaciers used to cover an area of 305 square kilometers; in 2004 the glacial cover on the Teesta basin was reduced to only four square kilometers. Consequently, the volume of water flowing down the Teesta has been consistently declining (Basu 2017a, 2017b). This resulted in severe water shortages in downstream regions.

For the Bangladeshi segment of the river, the most disastrous consequence came from the construction of Gajoldoba Barrage in West Bengal. Constructing a barrage on Teesta to facilitate irrigation was conceived as early as 1945 during the British rule. Later, the government of West Bengal planned the Teesta Barrage project at Gajoldoba in 1975/76 as a way to irrigate agricultural lands to supply drinking water in six districts of West Bengal, including Cooch Behar, Jalpaiguri, Darjeeling, North Dinajpur, South Dinajpur, and Malda. The Gajoldoba barrage will also produce 67.50 MW of electricity. Furthermore, India has put in place an inter-basin, water-sharing project linking Teesta, Ganga, and Brahmaputra together, which has diverted most of the water from this river. For these purposes, India keeps the gates of the Gajoldoba barrage closed during the dry season and opens the gates during the monsoon, releasing a massive amount of water at high velocity. Such practice has a devastating impact for the Bangladeshi part of the river, creating bone dry conditions during the dry season and flash floods during the monsoons.

The barrage was constructed without formulating any formal water-sharing treaty between Bangladesh and India. According to an ad-hoc water-

sharing agreement made in 1983, Bangladesh should receive 36 percent and India 39 percent of the Teesta water. The remaining 25 percent remained unallocated. In 2011, another water sharing agreement was made between Indian and Bangladesh, with Bangladesh receiving 37.5 percent of the water and India retaining 42.5 percent. However, the agreement could not be turned into a formal treaty due to opposition from Mamata Banerjee, chief minister of West Bengal (Khasru, 2017; Basu, 2017a, 2017b). The government of Bangladesh also constructed a Teesta Barrage barrage at Nilphamari to support agriculture in six northern districts during the dry season. According to the plan, the Teesta barrage project was supposed to be completed in three phases. The first phase of the barrage was supposed to irrigate 50,000 hectares of land during the dry season, and the total command area of the barrage would be 111,406 hectares. Under the second construction phase, the barrage was supposed to irrigate 448,774 hectares of cropland; finally, after the third phase the entire Rangpur, Nilphamari, Lalmonirhat, Dinajpur, Bogura, Joypurhat, and Gaibandha districts would be under its command area (Khasru, 2017).

However, due to acute water scarcity resulting from water diversion by the Gajoldoba barrage, the second phase construction project could not be completed. Even the existing barrage is deemed to be useless due to the water shortage on the Teesta River. According to Bangladesh Water Development Board engineers, the Teesta Barrage requires 40,000 cubic feet per second (cusec) waters to irrigate the croplands thoroughly. However, during winter (December and January), only 5,000 cusec water is released by Gajoldoba barrage, and in February and March, the barrage releases only around 1,000 cusec water (Sarker, 2010; Khasru, 2017). As a result, the Bangladesh side of the river has almost dried up, causing a catastrophic impact on the ecosystem and local agricultural and fishing communities.

Environmental devastation

The dams and barrages upstream of the river led to catastrophic consequences in downstream Bangladesh, where millions of farmers and fishers depend on the river for their livelihoods. The river ecosystem has also changed drastically due to deficient water flow during the dry season and devastating floods during the monsoon. Due to water diversion by the Gajoldoba barrage, the Teesta River in Bangladesh turns into massive *char* (tract of land formed by siltation) during every dry season. These chars are so dry and sandy that almost nothing can be cultivated in these barren lands. The fine grains of sands, carried by the wind, cover the nearby agricultural land, are destroying crops and ruining the fertility of the land (Bari & Haque, 2016). As the Teesta River is drying up, many canals and marshes, which used to be fed by the river, have also disappeared from the region. According to local fishers, these marshes and canals were breeding grounds for many fish species, particularly carps and snakeheads. Now, according to fishers, these fish are no longer found in Teesta. They can only catch some minnows and barbs in the shallow pools in the dried-up riverbed.

The drying of the Teesta River has impacted majority of the hundreds of hereditary fishers who have been living in the river basin for years. The fishers observed that fish breeding mainly occurs during November to December; for this to happen, there needs to be enough water available during this period. However, these days water comes into the river in May-June when the breeding season is already over. This causes serious impacts on the fish population in the river. According to some other account, the Teesta River previously had an abundant fish population for more than six months in a year. But now, fish are available only during the monsoon season. The river used to be a large source of freshwater fish in the region. A study in 2013 recorded 7 species of carps, 9 species of catfish, 4 species of snakeheads, 3 species of eels, 7 species of barbs and minnows, 4 species of perch and 8 miscellaneous species in the river (Khan et al, 2013). The irregular and diminishing flow of water to the Teesta River has severely impacted not only the diversity of the fish, but also the lives of the people who have been

dependent on the river for sustenance from time immemorial (Xinhua, 2015). Many well-known species of the river are now on the brink of extinction, as brood can no longer breed due to the lack of water.

When water is released from Gajoldoba barrage during the monsoon season, the dried-up Teesta turns into a ferocious river that destroys everything on its path. Resisted by the silted riverbed, the furious current overflows its banks, destroys cropland, and washes away fish farms. Due to such chronic deluge, large tracts of lands get eroded by the river current, making hundreds of thousands of people homeless and landless every year. Like human beings, livestock also becomes the victim of this annual flood. Due to lack of high grounds and cattle fodder, a large number of livestock perish or become highly sick (Bari & Haque, 2016). Again, during the deluge, the river becomes so furious during the rainy season that, fishing become almost impossible in these parts, according to local fishers and farmers. In 2020, just in Lalmonirhat districts 572 fish farms, 277 hectares of seedbed, 8 hectares of corn, and 10 hectares of peanuts and vegetables had been washed away by the flood (Daily Bangladesh, 2020). Such massive destruction of infrastructure and agriculture severely affects the economic condition of the region. 65-70 percent of the rural population of the Teesta basin districts do not own any cultivable land. A study conducted in 2013 in Lalmonirhat and Kurigram districts revealed that farmers and fishers in these districts are frequently affected by famine and crop loss due to devastating floods and waterless dry seasons. Losing livelihood, these farmers, fishers, and agricultural workers abandon their ancestral homes, sell off their productive assets, and migrate to Dhaka and other cities (Bangladesh Pratidin, 2020; Daily Bangladesh, 2020).

Fishing livelihoods in peril

The field visit from Nilphamari to Lalmonirhat downstream of the Teesta River reveals how hundreds of fishers lost their livelihood due to the withdrawal of water from the river. Fishers in South Kharibari village under Dimla Upazila of Nilphamari district said that nowadays they can hardly catch any fish in the river. However, the elderly fishers in this village can still

remember the golden days of Teesta's prosperous fishing community. They talk about a *beel* (large lake-like wetland) called Shutungar Beel adjacent to the river, famous for catching gigantic carp and catfish. Fish like snakeheads, mud eels, and minnows were so abundant that those were mostly used as dog feed. Fishers used to catch only fish of considerable size to sell in the town's market. However, these are stories from the distant past. Today, when the released water floods the river, it brings destruction for these fishers. When the water is released from the Gajoldoba barrage, the homes of the fishers, who mostly live along the riverbanks, are the firsts to be washed away by the deluge. One of the elderly fishers of South Kharibari village reported that he had to move his home 11 times in the last 15 years. According to the village elder around 300 fisher families in South Kharibari and Tapa Kharibari villages depended on the bounty of the Teesta River and Shutungar Beel for their livelihood. As the large wetland fed by Teesta dried up completely, with the river now virtually unsuitable for cultivation and fishing, most of these fishers have migrated to other cities. Some of them have been living on occasional farming and doing menial labor in the urban areas during monsoons.

A different scenario can be found in Doane village located in Hatibandha Upazila of Lalmonirhat district, some 20 kilometers down the Teesta River and on the immediate downstream of Teesta barrage. A narrow stream of the once-mighty Teesta was flowing through the mostly locked sluice gates of the barrage and forming shallow, pond-like stagnant water bodies in the immediate downstream areas of the river. Hundreds of people with boats and fishing nets were busy catching fish in the murky waters of those unclaimed ponds, which are some of the sorry remnants of the mighty Teesta. Some had even set up tents to stay overnight to catch fish: a picture quite the opposite to the one described by the fishers of South Kharibari village who claimed that most of the fishers had already left the area. The many boats anchored along the chars surrounding the shallow water bodies from all sides proved that these fishers had been coming to fish in this area for many days.

In one of the tents, the fisher was found repairing their nets for some night-time fishing. Based on their accounts, all the men catching fish near the

barrage were farmers. Due to extensive damming and water diversion, the Teesta River has significantly changed its course in the last ten years. Massive chars have formed on the riverbed, and their expanding sands have engulfed the croplands along the former riverbed. As a result, farmers have abandoned their original profession and are struggling to earn a livelihood by catching small fish in these stagnant pools. According to these farmers turned fishers, the original fishers of these areas belonged to lower caste Hindu communities who left this area a long time ago.

One of them said that he alone lost 35 bighas of cropland to the growing chars of Teesta. These farmers said that only the farmers on the upstream side of the Teesta barrage can benefit from a small amount of water retained by the barrage. These people are also aware of how Gajaldoba barrage has affected the river and the livelihood on the other side of the border.

Based on the accounts of one of these fishers, some 20 years ago, Teesta used to flow at least 30-35 miles eastwards and take a meandering course in reaching the barrage. All along the river were fertile croplands and waters teeming with fish. Due to water diversion from the Gajaldoba barrage and consequent siltation, the course of the river has changed, and wetlands and croplands have disappeared. Once prosperous farming villages along the downstream of the Teesta River have now turned into poor fishing villages. These poor subsistence fishers are catching Mud Eel, barbs, Bengal loach, Gangetic Mystus, Spotted snakehead etc. They sell a portion of their catch at the local market and keep some of it for their consumption. They also receive occasional charity from local NGOs and welfare organizations. Some of them tried their luck in the cities but had to return to the village empty-handed as cities like Dhaka could not offer them a better job and better accommodation in congested slums. According to these fishers, the original fishers of the Teesta River had moved further downstream. In Lalmonirhat district's Teesta Upazila, the recently built Daspara and Modiram villages are two villages where 200 Hindu fisher families settled recently after shifting their homes from the villages of the upstream side of the Teesta barrage. They had also formed an association of fishers to help each other.

Some 60 kilometers downstream from the Teesta barrage near Diaspora

village, Teesta's riverbed becomes a massive char dotted with shallow waterholes. After walking for several hours through the char, a once narrow stream has become the main course of the river. There, a couple of men were found still fishing on the river with boats and nets. One of them, a sexagenarian fisher from Diaspora village, shared his story of struggle. He has moved houses eight times so far — sometimes due to river erosion and sometimes due to unavailability of fish caused by the changing course of the river. Many of his neighbors have moved a lot more than him. When asked why they have settled here, he said that as there is no more fish in the river, they settle in places where there are private fish culture ponds on the river. Through their association, they get a contract to harvest the ponds. However, the number of ponds is also shrinking due to the drying up of the river, and most of the fishers are not lucky enough to get such contracts due to brutal competition. Local influential people often threaten them not to bid for the contracts. By convincing local politicians, they take the contracts. Many a day these fishers cannot catch anything. In those days, they and their family members are starving. According to them, they don't get any help from the government. If the river does not favor these people in the monsoon, they shift their house again in search of private fishing ponds. They don't know what will happen to them with things getting progressively worse. With the demise of the Teesta River, all means of their survival are vanishing day by day.

Due to the intensifying scarcity of water, the number of destitute fishers is increasing. Destitute farmers — victims of river erosion — are also becoming dependent on fishing, adding to the pressure on the poor fishers and their shrinking supply of fish. When they can no longer withstand the suffering, they have to move in search of a better place for fishing. As a result, a once busy, thriving fishing community is now being forced to lead a semi-nomadic life. One of these fishers said that due to a shortage of fish, he and some of his neighbors had migrated to Chattogram to try their luck in deep-sea fishing. However, after spending seven years doing that and earning around Tk 50,000, he decided to return home as he felt that deep-sea fishing was too risky for him.

Conclusion and recommendations

Diverting the water from Teesta by constructing barrages and dams has severely affected millions of people's livelihood in Bangladesh. Severe water shortage and a long spell of the extremely dry conditions have created a desert-like environment along the Bangladeshi part of the river. On the other hand, chronic deluge during monsoon due to the release of water from upstream barrages destroys a huge amount of agricultural assets and infrastructure in Bangladesh. The fishing peoples are the worst affected as the river remains dry throughout the fish-breeding season, leading to extinction of many fish species. The situation is forcing many fishers to shift to farming, through there is a considerable lack of arable land in this semi-desert landscape. Many fishers don't have skills and experience for alternative occupations. In conclusion, the researcher would like to put forward some recommendations to sustainably solve the issue of increasing poverty in Teesta's adjacent areas:

1. Unenforced Teesta water-sharing agreement must be formulated into a bilateral water-sharing treaty between India and Bangladesh and the treaty must be respected by both parties;
2. Subsistence fishers and farmers affected by the drying up of the Teesta River should be brought under the Bangladesh government's social security programs;
3. The government should provide an accurate forecast of the monsoons to these fishers and farmers;
4. There should be an information-sharing platform between the Bangladesh government and the Indian government so that the Bangladesh government can inform local people about the accurate timing of the release of water from the upstream barrages;
5. The government must ensure that farmers and fishers living in remote areas access agricultural information and weather forecasting;
6. For this purpose, cell phone-based SMS services can be utilized. With the help of NGOs, the government can train farmers and fishers on using cell phones to get agricultural and weather-related information;

7. Gradually, through such training programs, these farmers and fishers can have accessibility to the internet and smartphones. Furthermore, the government and NGOs can provide interest-free small loans to these farmers, besides training to make smartphones and the internet available;

8. Education is of paramount importance to reduce poverty. Unfortunately, a large number of school buildings get destroyed or severely damaged by river erosion during the deluge. Schools can be set up in portable or easily transferable buildings so that the entire structure can be shifted during monsoon deluge;

9. Children of affected fishers and farmers should be provided with stipend and scholarships to avoid drop-out; and

10. A large number of affected people migrate to different cities where children of these families may not have access to education. A comprehensive database of the affected population should be prepared so that these people can be tracked even after migration and these children are enrolled in the educational institutions with support from the government.

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SMALL IN SCALE, BIG IN CONTRIBUTIONS

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