

Nodi Baithak
Muhuri River, Tripura, India
23 September, 2021

Muhuri River is one of the prominent transboundary rivers of Tripura located in the southern part of the state. It originates from the Deotamura hill range, crosses the undulating plains of Southern District of Tripura and then enters into Bangladesh. The length of the river within the Indian Territory is 59 kms with a basin area of 652 km². However, the frequently changing course of the river prevented the two nations from demarcating the boundary, with India insisting on the 1974 Accord with Bangladesh that calls for demarcation "along the mid-stream of the course of Muhuri river "while Bangladesh insisting on an 1893 map that results in the nation gaining an extra 44 acres from India¹.

Around 200 families (12 – 14 villages) dwell on either banks of Muhuri, where the ‘*Baithak*’ was conducted. Livelihood options for these villagers are not many, since these locations are far from the district headquarters with very little market access and external footfalls. Main livelihood options include seasonal paddy cultivations (twice a year) during the summer and winter seasons. Vegetables are also majorly grown in this region owing to higher land fertility caused by heavy siltation. The other alternate means of livelihood includes lifting stones and sands from the river bed throughout the year.

Key Issues and Challenges:

✓ **Obstruction in the nature flow of Muhuri:**

Muhuri is one of the major sources of drinking water in Muhuripur and allied areas. With a gradual decrease in rainfall and difficulties in extracting ground water, dependency on river for drinking purposes has increased in recent years. Several treatment plants are operating along the banks of Muhuri for means of water purification. Owing to this, the natural flow of river is obstructed by placing loads of cement bags to store water near the treatment plants, affecting the downstream characteristics of the river.



- ✓ **A shift in the nature of river Muhuri:** Grassroot interactions reveal that earlier, the river was narrow (a maximum of 30 fts. from the surface) and deep. With time, it has now become broader (even greater 250 fts.), with sharp reduction in the river depth, owing to siltation. Banks of Muhuri has eventually expanded, with no proper strategies of embankment from the Government. As a result, people has lost their lands and become homeless with no direct support from the Government, either state or central.

¹ <http://www.frontlineonnet.com/fl1810/18100270.htm>

- ✓ **Adverse effects of construction works within the river and across its banks:** Human impact on the river morphology is displayed by the building of bridges. Although bridges are built up on the river for connecting two different places, increasing transport facilities and overall socioeconomic development of those local areas; it has serious negative implications on the natural flow of river. For Muhuri, the bridge and barrage near Belonia, South Tripura plays a significantly important role in distorting the river environment and morphological features.

Government has taken over various constructional works for establishing railway lines in Tripura with one of the most important constructional works going on across the Muhuri River in Manurmukh, Belonia since the last two years. Kachha roads, being constructed from the left to the right bank of the river are disturbing the normal flow. As a result, the channel width of the river at the construction site has been vastly reduced to 9 metres from around 36 metres. Due to such a narrow passage, huge volume of water remains stagnant in the immediate upstream of the site, resulting in an abnormal increase of depth, discharges and wetted perimeter. Moreover, waste and cement materials used for construction purposes are dumped across the channel, gradually decreasing the depth of the river.

- ✓ **Creation of alternative livelihoods, distorting ecology:** Other than people who manage to secure Government jobs or MNREGA works (of 100 days' a year) which are limited, people migrate out in search of livelihood. People have now started creating alternative opportunities in the likes of sand mining from the river beds in particular identified areas of the river (mostly in steep turns of the river course, where sediments and sands are deposited in comparatively greater volumes), taking necessary permissions from local forest department officials. This has negatively impacted the river health and distorted the overall ecology in the area. Sand mining has been a regular occurrence in areas such as Jholaibari, South Muhuripur and Majumderpara.



- ✓ **Impact of Barrage:** Barrages are constructed across the river to provide irrigational facilities in the agricultural fields, especially in dry seasons. Besides, it plays vital role to control flood during high discharge. But barrages have negative impact on character of the river. This impact is quiet significant in upstream and downstream segment of the barrage located in the Muhuri River.
- ✓ **Irrigation and Scopes of Fishing:** As part of the *Muhuri Irrigation Project*, a 40-vent regulator across the river at Sonagazi retains water in the post-monsoon season for irrigation with water being pumped to the paddy fields through low-lift pumps in the

upstream parts of India. Almost all villages in South Tripura, adjacent to Muhuri, source river water for the winter paddy cultivation. Although fishing in river water is not a regular practice in Muhuri owing to massive reduction in both quantity and varieties, the same is being regularly practiced in the immediate upstream and downstream areas of the barrage throughout the course of the year.

Key Entry Points towards Sustainability:

✚ **Embankments across the banks of river Muhuri** - Growing concerns of local communities regarding construction and necessary supervision of concrete dams on either side of the river stream has been duly noted. River embankments are required in large parts of the river, particularly in North Muhuripur, to avoid loss of agricultural and residential lands – it has been narrated by the locals that no concrete embankments have been installed post 2008. In such conditions, villagers are compelled to construct temporary embankments made of bamboo structures on a yearly basis, all of which gets flushed out in the monsoon floods.



✚ **Renovation of pumping stations meant for drawing river water to agriculture fields** – Pump sets, which are installed in parts of the river banks for the purpose of winter crop irrigation are not in usable states, everywhere. The primary reason is lack of regular running of these pump sets along the year. Efforts should be made from the local administration level to maintain these equipments on a regular basis and look after the wear and tears. Although, a person is deputed for running each of these pump sets with a monthly wage of around INR 5,000, complaints regarding non-utilisation of these equipments in winter needs to be addressed.

✚ **Leveraging palpable community level concerns regarding river health, natural resources and related ecosystem** – Proper maintenance of the already existing dams could prevent the river from subsequent bank erosions; the same being not properly maintained after repetitive complaints from the villagers. Although mining and stone-lifting is essentially unsustainable in maintaining the river ecology in the long run; given the ongoing practices, lesser usage of machine excavators in sand and stone mining would have manifold benefits in favour of the community and the larger society.

✚ **Practicing Community-based ecological restoration strategies** like restoration of fish and replant eroding river banks with native trees to stabilise the soil and improve the quality of river as a whole.

- ✚ **Strengthening, hand-holding and building capacity of ground level institutions and women self-help groups** might help in changing the discourse around rivers, water and natural resources. Women groups are noted to be more entrepreneurial as compared to men, as most of them works as daily wage earners with greater scope and exposure. Given a chance, they are ready to expand their horizon by participating in bamboo cane handicrafts and hand embroidery works.

