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Erosion taking toll on millions

by Pinaki Roy on 12 August 2023

Rivers devour around 10,000 hectares of land annually



Hashem Ali Munshi, on the left, looks on as the Jamuna devours his village. The river has been aggressively eroding its bank in of Bhuapur of Tangail for the last few days.

Residents fear that their neighbourhood may go into the river any time. Photo: Star

Standing near the eroded edge of the mythical river in Matikata village of Tangail, 90-year-old Hashem Ali Munshi says the bank of the Jamuna is as shifting as ever. His vacant eyes belie the irrevocable damage the river has done to him.

Munshi, a farmer who once owned considerable land property, witnessed the river devour most of his arable land and his entire homestead.

"The river was around three kilometres away from our village 12 years ago. Now it has eaten up a big chunk of our village," he said. "Having lost their land, farmers have switched profession and have become day labourers or rickshaw-pullers."

In the past 12 years, the Jamuna has shifted its bank numerous times, ravaging through many villages in Bhuiyapur upazila.

Rivers in Bangladesh devour thousands of hectares of land every year, leaving people living along untamed rivers homeless and landless, and forcing them to move to nearby embankments and chars, or migrate to urban slum areas.

In the past 22 years, the Padma and the Jamuna alone have eroded 50,955 hectares of land, six times as big as the St Martin's Island. The Jamuna eroded 25,290 hectares and the Padma 25,665 hectares, according to the Centre for Environment and Geographic Information Service (CEGIS).

CEGIS says over half a million people became homeless due to erosion of the two rivers in the past 22 years.

Bangladesh is an active delta. Nearly five million of its population live in the active floodplains of the major rivers which are vulnerable to erosion. Of them, two million live on char lands, an Asian Development Bank report mentions, citing different studies.

Another ADB document titled "The Jamuna -Meghna River Erosion Mitigation Project" states an estimated 1,200 km of riverbank along the major rivers are prone to erosion, with more than 500 km having severe erosion problems in Bangladesh. It also says an estimated 10,000 hectares of land are lost to erosion annually, which affects over 100,000 people.

People from different parts of the country have been spending their days in fear as this year river erosion along the Padma, the Jamuna, the Meghna, the Teesta and the Arial Khan is wreaking havoc in Kurigram, Bogura, Jamalpur, Lalmonirhat, Sirajganj, Pabna, Tangail, Shariatpur and Madaripur, among other districts.

Yarunnesa Begum, 65, from the Saikka village in Gosairhat area of Shariatpur sits on the bank of the Jayanti river, a tributary of the Meghna. Losing most of her cropland and home to the river, she cannot wear a stolid expression as Munshi does. She looks thoroughly dejected.

"The river already devoured 26 decimals of my cropland last year. The river is eroding again and now all I have left is the yard of my home," said Yarunnesa, a widow and mother of five daughters.

Nasir Uddin Swapan, chairman of the local union parishad in Shariatpur, said his entire union is encircled by rivers, and that the Jayanti has already eroded over 202 hectares of land in his union.

Deputy Minister for Water Resources AKM Enamul Hoque Shameem, who happens to be a lawmaker from Shariatpur 2, along with BWDB officials, visited the erosion-prone areas in his district two years ago. Since then, BWDB has put some geo bags along the river during erosion.

However, Swapan said the geo bags had not been very effective in bringing about desired results.

As the government initiatives are not showing much hope for villagers, people like Yarunnesa do not have any option other than waiting to see their homes devoured by the rivers.

She said she might have to live on the street once her entire home was eroded away.

Shankar Kumar Baidya, a farmer from Shyamnagar upazila of Shatkhira, lost his homestead to the erosion of Kholpetua river a few years back. Now he, along with his wife, lives in a slum in the capital's Mirpur 11 and sells vegetables on a rickshaw van.

"After losing my homestead, I dismantled my house and moved to another village. I tried to settle there and tried my luck by cultivating shrimp on a piece of leased land. But I incurred loss due to a virus infection in my farm. So I had no option but to move to Dhaka," Shankar said.

Abdul Jalil from Hatia built his house on the newly emerged Caringchar in 2007 in Hatia upazila, around 15 km away from the Meghna river.

"But when the Meghna started eroding, I dismantled my house three times in 2010 , 2013 and 2018. Finally I left Caringchar in 2020 and moved to Hatia town," said Jalil.

According to the monitoring cell of Bangladesh Water Development Board (BWDB) under the ministry of water resources, river erosion regularly occurs every year in over 50 districts out of 64.

This year, a total of 231 km of river bank have been eroded in 1,053 places along different rivers across the country till August 11. However, the BWDB says it does not monitor all the erosion sites in the country.

"We do not monitor how much land has been eroded along the rivers but we monitor the length of the eroded banks. We make interventions in areas where interventions are necessary to control the erosion," said BWDB engineer Rashidul Kabir.

Currently, the BWDB is making interventions only in 246 places.

Contacted, Dr Enamur Rahman, state minister for Disaster Management and Relief, said it is a common problem in Bangladesh and every year thousands of people become homeless due to this problem.

"The government has a ready stock of corrugated tin sheets and dry food items. Once we find people affected by erosion, we provide them with dry food and corrugated tin sheets so that they can make makeshift houses immediately and live there," he said.

What Experts Say

Experts say no other country in the world faces river erosion the way Bangladesh does. The Jamuna is a braided river and often shifts its channel, causing river erosion.

"Rivers of Bangladesh have a unique character as those are coming down from the Himalayas bringing huge sediments with them, creating new char lands and causing erosions. No other country in the world has rivers with such unique characteristics," said Dr Maminul Haq Sarkar, a CEGIS adviser.

In some areas, we find the Jamuna has many channels and is 11-12 km wide on average, he said. It is not possible to stop river erosion until erosion-prone rivers are trained, he added.

AKM Saiful Islam, professor at the Institute of Water and Flood Management of Bangladesh University of Engineering and Technology (Buet), said climate change is causing higher annual rainfall in this region, and as a result, flooding and the velocity of river flow are increasing, leading to more river erosion.

"So far as I know, no government agency is keeping any record of river erosion across the country. We have over 400 rivers and it is really a very big task to keep track of erosions along all the rivers," he said.

Asked about inadequate initiatives to combat erosion in villages, Professor Ainun Nishat, eminent expert on water resource management, said the government conducts cost benefit analysis before making any interventions on riverbank erosion.

"Naturally, the town or city areas where the land is more valuable than cropland in a village get priority in government interventions," he said.

Also, rivers with high sediments are always erosion-prone and they can erode even after construction of embankments, he said.

Talking about a comprehensive national strategy about protecting people from erosion-prone areas, UNDP Programme Specialist Arif Abdullah Khan said, "Bangladesh needs a long-term strategy to manage the displaced population by

mainstreaming it through development investments and critical measures for risk reduction."

Discussion Questions:

How can farmland be protected against erosion?

What are the negative economic impacts associated with erosion?