

RIVER BANK EROSION IN WEST BENGAL

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Abstract

River bank erosion is a common problem in deltaic region. It denotes the lateral erosion of river. But the impact is devastating, River bank erosion has negative impacts on human life. It displaces many people as it destroys the villages along the river. People becomes homeless, jobless, landless. It causes forced migration with socio- economic insecurity. It generates neo-refugee within the country, The paper highlights on the causes of river bank erosion, present scenario of west Bengal and impacts of bank erosion.

Keywords: *Forced migration, Displace, Neo-refugee, insecurity, River bank erosion, Impact, Devastating*



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Introduction: Rivers are dynamics in nature. Rivers always change their flow pattern. River bank holds the dynamic energy of river. Therefore, river bank erosion become a part of river dynamics. River bank erosion indicate lateral erosion of river which refers to the widening of a channel or valley. The river breaks its bank usually during the high tides and the floods.

River bank erosion is a natural hazard in India. Many people are forced to migrate other areas from their original place due to river bank erosion. In India, Assam faces the most severe the problem. India can be broadly divided into four regions related to erosion problems like

- a) North West Region(main rivers are Sutlej, Beas, Ravi, Chenab and Jhelum)
- b) Central and Decan Region (important rivers are Narmada, Tapti, Mahanadi, Godavari, Krishna and Cauvery)
- c) Bramhaputra Region (river Bramhaputra and Barah and their tributaries)
- d) Ganga Region (River ganga and its tributaries)

Bank erosion situation in West Bengal: In respect of river bank erosion, west Bengal lies in the Ganga region. The river Ganga enters the west Bengal near Rajmahal in Jharkhand state.

Then it flows in south eastern direction within west Bengal. In Malda district it divides into two branches. One branch as the name of Padma enters Bangladesh and the other branch, as Bhagirathi flows through West Bengal. The Bhagirathi is the main river in West Bengal. River bank erosion is common event in any deltaic tract. West Bengal is not expectational to this face. But it has some different issues regarding bank erosion. In West Bengal Malda and Murshidabad district face the problem most.

In Malda district Manikchalk, Kaliachalk I and II, Ratua I and II blocks are severely affected by bank erosion. The following CD blocks of Murshidabad district have to face the bank erosion problem year after year Farakka, Samsorganj, Suti I, Suti II, Raghunathganj II, Lalgola, Bhagawangola I and II, Raninagar I, Raninagar II and Jalangi.

Factors of Bank Erosion:

Role of Farakka barrage: It was built to divert an adequate quantity of Ganga waters to Bhagirathi Hooghly River for preservation and maintenance of Kolkata port. But now water storage capacity of the barrage has reduced. The barrage authority has to open lock gates during heavy rainfall. This unregulated water flow cause bank erosion and flood. Incidents of bank erosion has increased many times after the construction of Farakka barrage.

When rivers flow in a mature stage, its velocity decreases and tends to become meander or braid which cause river bank erosion.

Huge sedimentation is also responsible for this. The river bed is filled with sediments and during monsoon river can not hold the water and outflow it that causes bank erosion.

Alluvial soils are less resistant to the hydraulic forces of rivers. Moreover, sandy soils are also present in this area which are easily soluble with water and erode easily. It also causes bank erosion.

Accelerating factors of erosion:

- River wave action
- Poor soil drainage
- High intensity rainfall
- Excessiv3 sand extraction
- Deforestation
- Unplanned land use pattern
- Climate change

Effects of bank erosion

- Almost every monsoon a large no. of people is affected by bank erosion. It makes them landless.
- People lose their lives, property, domesticate animals in every bank erosion incident.
- The effects of bank erosion are slow steady and permanent in nature. The socio-economic structures break down in this area.
- Many people migrate to other places from their original residences. The young have migrated as far as Gujrat and Maharashtra in search of job.
- It generates neo-refugee with many social problems. Sometimes poverty leads to increase in crime.
- Frequent river bank erosion leads to poor infrastructure. Sometimes people go to Bangladesh for some services. This is frequently happened in some villages of Murshidabad district, here people go to Bangladesh mainly for treatment purpose.
- River bank erosion destroys many agricultural field, orchards and others farmland, in this way, people lose their original occupation.
- River bank erosion destroys the villages along its bank. It makes the people homeless and they are at the risk of poverty.
- Due to lose of sources of income they are unable to spend money in medical and education facilities. These increase poor health and illiteracy of their children.
- It also effects on handloom industry. For example, Shantipur is famous for handloom industry. But due to river bank erosion some of displaced people lost their handlooms and they had to reset their handlooms. In long term, their capitals were destroyed gradually as they had to shift several times.
- Women suffer most in this forced migration. It is seen that Malda district has a considerable proportion of displaced women population as they have to carry the whole household works. It becomes very difficult for them to works. It becomes very difficult for them to work daily activities in resettled odd place.

Conclusion: River bank erosion has depressing impacts on human life. It generates social, economic, educational and health problem. But the river bank areas are highly fertile, it helps in agriculture. Recently bank erosion increases due to physical and man-made cause. Therefore, river bank should be well maintained.

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