India-Nepal Flood Management

What is the issue?

- Despite the efforts made on the ground, people continue to suffer from perennial flooding in north Bihar (the Mithilanchal region).
- Here is a look into the evolution of the crisis, and the approach to be adopted.

What is the long-felt problem of floods in Bihar?

- Historically, Bihar has been known to be **India's most flood-prone State**.
- Around 73% of the total land area in Bihar is flood affected.
- 76% of the population in North Bihar faces the recurring threat of floods.
- A large part of North Bihar, adjoining Nepal, is drained by a number of rivers having their catchments in the steep and geologically nascent Himalayas. [Kosi, Gandak, Burhi Gandak, Bagmati, Kamla Balan, Mahananda and Adhwara Group of rivers]
- Originating in Nepal, the high discharge and sediment load in these rivers wreak havoc in the plains of Nepal's Tarai and Bihar.
- The plains of North Bihar have recorded the highest number of floods in the last 30-years.
- The total area affected by floods has also increased over the years.
- The Floods of 2004 affected a vast area causing the loss of about 800 lives.
- The chronic issue of floods is making over 5 crore people of the North Bihar and Tarai in Nepal so vulnerable.

How has the past water cooperation changed?

- The history of cooperation between India and Nepal for embankments started in the 1950s.
- Work on the Kosi embankments started in 1955.
- A group of retired Nepali soldiers came over voluntarily to join hands with Indian volunteers and start the work.
- However, in recent years, Kathmandu shows indifference to matters of floods and water management.
- Consequently, not much has happened, except the use of water resources for hydroelectric generation.

What are the flaws in the water management approach?

- In 1930s, there was a transition from the traditional method of flood control to the embankment-based British system.
- Infrastructural interventions such as building embankments and re-routing streams have disturbed the conventional pattern of slow water flow.
- Earlier, without so many artificial barriers, the flow of water used to aid farming in the region.
- The Kosi Treaty of 1954, under which the embankments in Nepal were established and maintained, was not futuristic.
- It lacked sensitization of climatic imbalances and sustainable development.
- It did not make enough provisions for the maintenance of embankments and the rivers changing their course.
- The deposition of stones, sand, silt and sediment has led to river beds rising, changing course and causing unimaginable losses.
- Between the mid-18th and mid-20th centuries, the Kosi is said to have shifted over 100 kilometres westward, resulting in large-scale human displacements.
- Ironically, the same flood-affected regions also face the issue of drought and a sinking water table.

What are the notable measures by Bihar?

- As Bihar's CM (2005-2010), Nitish Kumar made the concept of 'disaster management popular among the masses and made a few structural changes.
- There was a renewed approach in infrastructure augmentation for dams and reservoirs, detention basins, embankments and channel improvement.
- Non-structural measures like floodplain management, flood forecasting and warning, flood insurance and financial compensation werelater implemented.

What should be done?

- Greater attention is to be given to the annual calamity of floods.
- Revisiting the old plans and arrangements between India and Nepal and establishing a long-term strategy of water management cooperation is essential.
- A dedicated intergovernmental panel should be formed through a bilateral mechanism.

Source: The Hindu



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