China’s Dam on Brahmaputra and India’s Concerns

Mains: GS II – *India and its Neighbourhood- Relations*

Why in news?

Recently, China’s construction of a massive dam on the Brahmaputra River close to the border with Arunachal Pradesh has raised concerns in India and Bangladesh.

What is China's project on Brahmaputra river?

- **Announced in** – 2001
- **Also known as** – **Medong county project.**
- **Location** - The dam is being built on the Yarlung Zangbo (or Tsangpo), as the Brahmaputra is known in Tibet, is being built at the *Great Bend.*

Great bend is the place where the river makes a U-turn in Medog County before entering India at Gelling in Arunachal Pradesh.

- The river Brahmaputra is called **Siang** in Arunachal Pradesh.



- **Electricity generation** – It will have a generation capacity of *60,000 MW*.
- **Largest ever project** – The $167.8 billion hydropower project, which will be the world’s largest after completion.
- It is three times that of the Three Gorges Dam on the Yangtze, which is currently the world’s biggest hydropower station.

What are the concerns for India?

- **Existential threat** – This project is seen as a potential water bomb and an "*existential threat*" to tribal and their livelihoods.

> *An **existential threat** is a danger that endangers the very existence of something, whether it's a living being, a group, or an idea.*

- **Security threat** – It seems to be a far bigger issue than the military threat form china.
- **Risk of massive flooding** – Sudden release of water, the entire *Siang belt would be destroyed*.
- Risk due to the intentional or unintentional operation of reservoirs in Tibet.
- **Unforeseen hazards** – There are heavy chances for events such as dam failure, landslides, or earthquakes.
- **Chances of drought** – In the long run the Siang and Brahmaputra rivers could dry up considerably.
- **Seismically active region** – Tibet is located, where the Indian tectonic plate collides with the Eurasian plate, is a earthquake-prone and ecologically extremely fragile.
- **Challenges for Assam** – The Brahmaputra is the lifeline of Assam, fundamental to its economy, and central to its history, culture, and ecology.
    - Any significant disruption in the flow of the river in the state will have far - reaching consequences.
- **Future apprehensions** – China may seek to weaponise the dam project at some stage.
    - It may possibly build pressure on behalf of Pakistan after India suspended the Indus Waters Treaty against terror attack in Pahalgam.

How did India reacted to this project?

- **Continuous monitoring** – India is observing Chinese infrastructure interventions on the river.
- **Voiced the opinion** – As a lower riparian state with established user rights to the waters of the river, India have consistently expressed the views and concerns.
- **Stressing for dialogues** – The need for transparency and consultation with downstream countries were reiterated.
- **Protecting the overall Interest** – The China has been urged to ensure that the interests of downstream states of the Brahmaputra are not harmed by activities in upstream areas.
- **China's statement** – It claims that the dam project was fully within China's sovereignty.
    - **Cooperation** – It is engaged with downstream countries on sharing hydrological data, flood prevention and disaster reduction.
    - **Communication** – It has had the necessary communication with both India and Bangladesh.
- **Unintentional benefit for India** – In the unlikely event of China reducing water flow, it may actually help India mitigate the annual floods in Assam.

What are the recent developments in India – China Relations?

- **Agreement on patrolling** – This was made along the Line of Actual Control, leading to disengagement and a resolution of the issues that had arisen in these areas previously.
- **Strategic talks** – The two sides exchanged views on early resumption of cross-border cooperation and exchanges, including on trans-border Rivers.
- **Recommencing of Visa** – India would resume issuing tourist visas to Chinese nationals after a gap of five years.
- **Resuming of Yatra** – The annual Kailash Mansarovar Yatra, which had been on hold for the last five years, resumed.

What India should do?

- **Oppose vehemently –** India needed to raise its concerns with China forcefully.
- **Capacity building** – India may make scientific calculations about the Chinese dam project, and build its own capability and capacity to prevent any deliberate actions in the future.
- **Mitigation strategy** – India could plan storage on rivers of the Brahmaputra system to absorb potential variations in flows (periods of flooding and reduced flows).
- **The Upper Siang project** – In Arunachal Pradesh, the 300-metre-high dam, is seen as important not just for its formidable hydropower potential, but also as a strategic imperative in view of the Chinese projects in Tibet.
    - The dam's storage can serve as a buffer against variations in the flow of the river.
    - However, progress on the project has been slowed by local resistance against the potential adverse environmental impact of the dam.
- **Build more inland channels** – There is a need to build more inland channels to carry the flow of excess water in the future.

> *The **National Water Development Authority** has proposed two links to connect the Brahmaputra and its tributaries to the Ganga basin with the aim of transferring surplus water to water-scarce regions.*

What lies ahead?

- India could seek detailed hydrological and project-related data from China in order to assess downstream impacts on a continuous basis.
- India could also have conversations with other low riparian neighbours, Bhutan, Bangladesh and even Myanmar on developing a coordinated protocol for advance warning and disaster preparedness.

Quick facts

River Brahmaputra

• **Origin** – It rises in the Chemayungdung glacier in south-western Tibet.
• **Left bank tributaries –** Lhasa, yang ,Parlung, Zangbo ,Lohit ,Dhanashri ,Kolong.
• **The right bank tributaries –** Kameng ,Manas, Beki,Raidak,Jaldhaka,Teesta,Subansiri.
• **Multiple source of water** – Brahmaputra is a mighty river and it is not dependent on a single source.
• It gets most of its waters from Bhutan, Arunachal Pradesh, and the rainwater and other forms of water from Assam.
• The Brahmaputra develops into a mighty stream only in Assam, fed by numerous tributaries and bountiful monsoon rain.
• The Brahmaputra is not a river India depends on upstream and China contributes only ~30-35% of the Brahmaputra's total flow — mostly through glacial melt and limited Tibetan rainfall.

Reference

[The Hindu| China's Dam Construction on Brahmaputra]

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