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High Water Discharge From China Threatens Arunachal, Assam

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State of Arunachal Pradesh and Assam have been put on high alert after Government received a report from China of high water discharge in Siang river (tributary of Brahmaputra) due to heavy rainfall in Tibet.

Background

- India is a low riparian state in case of rivers originating from Tibetan Plateau. China has been building dams on the river e.g. Zangmu Dam and Dagu Dam on the Yarlung Tsangpo (the Brahmaputra in China) or diverting the river water for its populated northern region. India's north-east states are dependent on these rivers for their water need for agriculture and drinking.
- These rivers are also responsible for floods which occur in this region every year. Thus, any change in the amount of water flowing in these rivers directly impacts the lives of millions of Indians living downstream.

Mechanism between India and China related to trans-boundary river

- China and India signed the first Memorandum Of Understanding (MoU) on sharing the Hydrological Information on the Brahmaputra River and Sutlej River during the flood seasons. China started sharing data in 2018 after it was stopped briefly during the Doklam Standoff in 2017.
- An Expert level mechanism (ELM) was established in 2006 to discuss various issues related to trans-border rivers. The 11th round of meeting took place in March 2018.

Trans-boundary River issue between India and China

- For constructing dams on trans-boundary rivers, China laid its claims through the principle of 'Absolute Territorial Sovereignty' and in the Harmon Doctrine. **Harmon Doctrine** states that an upstream nation can freely utilize a river's flow within its boundaries without considering the effect on a downstream state.

- The lower riparian states, like India and Bangladesh, lay their claims on 'absolute territorial integrity' which argues that upper riparian actions should not affect the water flowing downstream.
- China is aggressively working for its priority rights and is actively building dams on Yarlung Tsangpo (Brahmaputra), to claim it's right under Principle of Prior Appropriation.
- India too decided to commence construction of hydropower projects in Arunachal Pradesh, most of which were located lower down on the Brahmaputra. This might be viewed as India's effort to establish its 'lower riparian right' to counter China's first use priority rights.
- **The Principle of Prior Appropriation:** The principle of prior appropriation, favors neither the upstream nor the downstream State but the one that puts the water to first use, thereby protecting the right to first use of water as in the past.
- With respect to data, India has asked for data for non-monsoonal flows of the river, because there are suspicions in India that China is diverting water from the Brahmaputra

Impact of Dams by China on India

- By building dams on Brahmaputra river, China could gain leverage over the Indian state of Arunachal Pradesh.
- There is suspicion in India that Chinese hydropower projects could convert the Brahmaputra into a seasonal river implying water scarcity in India.
- Another risk is the release of flood waters during the monsoon season, which could lead to floods in Brahmaputra river basin in Assam.
- There is much apprehension that the Brahmaputra may lose the silt, which makes the plains in its basin fertile, because of sediment trapping in the dams.
- There are concerns in India that, China can also use these dams in case of conflict to harm India's interests. Like releasing excess water can lead to floods in the North-east.
- Construction of Dams is causing pollution in the river. The quality of the water flowing downstream has also deteriorated.
- The disruption of the natural flow of water could impact the ecosystem of the river downstream and has economic consequences on the lives of people. In November 2017, the water of Siang and Brahmaputra turned black in color which China said was due to 'Earthquake'.
- Most hydro-power projects by China are in the highly volatile seismic zone, where Indian Plate collides with the Eurasian Plate, making them extremely earthquake-prone. It raises serious concerns about risks posed by big dams built in such seismically sensitive areas.

China stand on India's concern

- The Brahmaputra gets mightier as it flows downstream because of the flow contribution of tributaries such as Dibang, Lohit, and Subansiri.
- Despite China having 50 percent spatial share of this 3,000 km-long water system, low precipitation and desert conditions mean that Tibet generates only 25 percent of its total basin discharge, while India, with 34 percent of the basin, contributes to 39 percent of the total discharge.
- China, on its part, insists that the dams are and will continue to be run-of-river projects, wherein water will be returned to the river after use. As such there ought to be no fears of diversion, hoarding, and release of water later.

Way forward

- Any forward movement on ensuring hydro-security in the Brahmaputra basin would require a long-term understanding between the two countries. It is necessary for India to engage China in a sustained dialogue and securing a water-sharing treaty that serves the interests of both the countries.
- India is required to go beyond the exchange of hydrological data and ask China for information on the topographic condition of the whole basin.

Rivers between India and China

1. **The Brahmaputra:** The Brahmaputra originates, under the name of Siang or Dihang, from the Chemayungdung glacier of the Kailash range near the Mansarovar lake. It enters India west of Sadiya town in Arunachal Pradesh. **Tributaries of Brahmaputra:** Dibang, Lohit, Siang, Burhi Dihing, Tista, and Dhansari.
2. **The Sutlej:** The Satluj rises from the Mansarovar-Rakas Lakes in western Tibet. It enters India near Shipki La on the Tibet-Himachal Pradesh boundary.
3. **The Indus:** Indus river originates from Tibetan Plateau from north of Mansarovar Lake. It enters India from Ladakh region in Jammu and Kashmir. **Tributaries of Indus:** Gilgit, Dras, Hunza, Shyok, Panjad.

International Agreements For Trans-Boundary River System

- UN Convention on the Law of the Non-navigational Uses of International Watercourses, 1997
 - Article 11 of this UN Convention mentions the need for states to share information regarding the use of international watercourses.
 - Both China and India are not signatory to the convention. India too has not ratified it because the Convention has no force over non-party countries such as China.

- Helsinki Rules, 1966
 - In 1966, a codification of the principles of international law relating to transboundary water resources was completed through the International Law Association (ILA) Helsinki Rules on the Uses of the Waters of International Rivers.
 - The principles of Helsinki rules can be briefly summed up as reasonable usage and an obligation to do no harm. However, the enforceability of the Helsinki Rules is undermined by the ILA's status as an unofficial organization.