China’s New Dam on Brahmaputra

Why in News

Recently, Chinese authorities have given the go ahead for a **Chinese hydropower company** to construct the **first downstream hydropower project** on the lower reaches of the river **Brahmaputra** (known as **Yarlung Zangbo in Tibet**).

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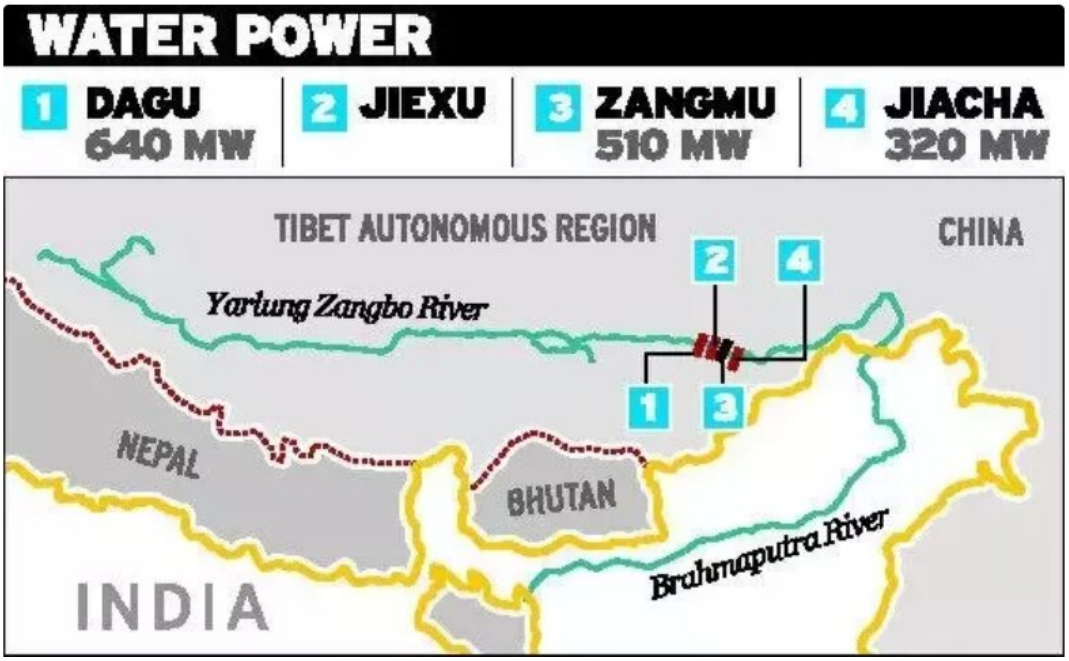
Key Points

- **Brahmaputra:**
    - It 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:** Dibang, Lohit, Siang, Burhi Dihing, Tista, and Dhansari.
    - It is a **perennial river** and has **several peculiar characteristics due to its geography and prevailing climatic conditions.**
    - It is **flooded twice annually.** One flood is caused by the **melting of the Himalayan snow in summer** and the **other due to the monsoon flows.**
        - The **frequency** of these floods have increased and are devastating due to climate change and its impact on high and low flows.
        - These **pose a concern for the population and food security in the lower**

riparian states of India and Bangladesh.

- The river is in itself **dynamic as frequent landslides and geological activity force it to change course** very often.

- **About the Project:**
  - The **state-owned** hydropower company **POWERCHINA** signed a strategic cooperation agreement with the **Tibet Autonomous Region** (TAR) **government** to implement hydropower exploitation in the downstream of the Yarlung Zangbo river as part of the new **Five Year Plan** (2021-2025).
    - This will be the **first time the downstream sections of the river will be tapped.** However, the **location** of the planned project **has not been mentioned anywhere.**
  - The **Great Bend of the Brahmaputra** and the **Yarlung Zangbo Grand Canyon in Medog county,** where the river turns sharply to flow across the border into f **Arunachal Pradesh could be the potential spot** for the project.
    - This **50 km section** alone offers a potential of developing **70 million kilowatt hours** (Kwh).
- **China's Previous Projects:**
  - In **2015,** China operationalised its **first hydropower project at** Zangmu in Tibet**,** while three other dams at **Dagu, Jiexu and Jiacha** are being developed, all on the upper and middle reaches of the river.



- **Importance of the Project for China:**
  - The **60 million kWh hydropower** exploitation could **provide 300 billion kWh of clean, renewable and zero-carbon electricity annually.**
  - The project will play a significant role in realising China's goal of reaching a **carbon emissions peak before 2030 and carbon neutrality till 2060.**
- **Concerns for India:**
  - India has been expressing concerns on Brahmaputra **since 2015** when China operationalised its **project at Zangmu.**
  - A dam at the **Great Bend,** if approved, would raise fresh concerns considering its **location downstream and just across the border** from Arunachal Pradesh.

        - For India, **quantity of water is not an issue** because these are run of the river dams and will not impact the Brahmaputra flow. More importantly, Brahmaputra is not entirely dependent on upstream flows and an estimated **35% of its basin is in India.**
    - However, India is concerned about the **Chinese activities affecting the quality of water, ecological balance and the flood management.**
    - **India and China** do not have a water sharing agreement. Both nations share hydrological data so it becomes important to share genuine data and have continuous dialogue on issues like warning of droughts, floods and **high water discharges.**

Way Forward

- India is required to go beyond the exchange of hydrological data and ask China for information on the topographic condition of the whole basin.
- 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 secure a water-sharing treaty that serves the interests of both the countries.

Source:TH