# China’s Dam

## Why in News?

*China's plan to construct a massive hydroelectric dam on the lower Yarlung Zangbo River in Tibet and its potential impact on India and neighboring countries.*

## What is China’s Yarlung Zangbo Dam Project?

- **China’s planned hydropower project -** It is on the lower reaches of the Yarlung Zangbo River (Brahmaputra in India) has raised major concerns in India.
- The dam is part of China’s broader strategy to transition from coal-based power to renewable energy.
- However, it has serious implications for India and Bangladesh, particularly in terms of water security, environmental sustainability, and geopolitical tensions.

## What are the Geopolitical and Strategic Implications?

- **India’s Water Dependency on the Brahmaputra -** 30% of India’s total freshwater supply comes from rivers originating in Tibet.
- The Brahmaputra River is crucial for northeastern states (Arunachal Pradesh, Assam) and Bangladesh.
- Any reduction or control over its flow will directly impact agriculture, livelihoods, and water availability.

## Why China’s Uses Water as a Geopolitical Tool?

- **China has been using Transboundary Rivers** - as a strategic asset against its neighbors.
- In the past, China has restricted hydrological data to India, particularly during the 2017 Doklam standoff.
- Controlling Brahmaputra’s flow could be used to pressure India diplomatically.

## What are the Issues with Water Securitization?

- **Water** - is becoming a national security concern, similar to disputes over land and trade.
- China’s aggressive nationalism and unilateral approach increase the risk of weaponizing water resources.
- Future water disputes could lead to tensions, similar to the India-China border conflicts.

## What are the implications for India-Bangladesh Relations?

- **Bangladesh relies** - on the Brahmaputra for irrigation and drinking water.
- However, Bangladesh has not strongly opposed the dam, likely due to its growing economic ties with China.
- India may face diplomatic challenges in aligning Bangladesh's interests with its own.

## What are the Legal and Institutional Challenges?

- **Absence of a Strong International Legal Framework -** The UN Watercourses Convention (1997) mandates equitable and reasonable water use.
- China is not a signatory, allowing it to avoid legal commitments on transboundary river sharing.
- Lack of legal pressure limits India's ability to demand transparency and cooperation.
- **Expired India-China MoUs on Water Data Sharing-** India and China had MoUs for sharing hydrological data on the Brahmaputra and Sutlej rivers.
- These MoUs have expired, making it harder for India to track water levels and flood risks.
- There is a possibility of renewal, but negotiations remain uncertain.
- **Role of the Expert Level Mechanism (ELM) -** The ELM is the only functional dialogue mechanism between India and China for water-related issues.
- In the absence of a binding agreement, ELM discussions are limited in impact.

## What are the Environmental Risks and Concerns?

- **Seismic and Geological Risks -** The proposed dam is in one of the most earthquake-prone regions in the world.
- In 2025, an earthquake in Tibet killed over 120 people, raising concerns about dam safety.
- If an earthquake damages the dam, it could lead to catastrophic floods downstream in Arunachal Pradesh and Assam.
- **Disruption of the Brahmaputra's Natural Flow** - The dam may alter the river's flow, affecting monsoon patterns and groundwater recharge.
- India's agriculture and fisheries in the Northeast could suffer.
- **Loss of Biodiversity and Ecosystem Impact-** The construction may lead to habitat destruction for aquatic and terrestrial species.
- Riverbank erosion could worsen, leading to land loss and displacement of communities.

## What is South Asian Water Politics and Regional Challenges?

- **Lack of a Regional Water Governance Framework-** Unlike the Indus Water Treaty, there is no structured regional framework for Brahmaputra water management.
- South Asian nations have weak coordination, giving China a strategic advantage.
- **Challenges for Nepal, Bhutan, and Pakistan-** Other riparian countries (Nepal, Bhutan, and Pakistan) also depend on rivers originating in Tibet.
- China's unilateral projects on transboundary rivers could eventually affect them, leading to regional water disputes.
- **Political Uncertainty in Bangladesh-** India-Bangladesh water-sharing agreements are already sensitive (e.g., Teesta River dispute).

- If China gains influence over Bangladesh, India’s diplomatic position on water-sharing could weaken.

## How should India’s Possible Respond?

- **Strengthening Water Diplomacy with China**
- India must actively engage in diplomatic talks to renew the MoUs on water data sharing.
- Encouraging greater transparency through ELM discussions is crucial.
- **Enhancing Regional Coordination**
- India should work with Bangladesh, Nepal, and Bhutan to develop a South Asian Water Council.
- A unified regional stance can increase negotiation leverage with China.
- **Strengthening India’s Hydrological Surveillance**
- India must invest in remote sensing and satellite-based monitoring of Brahmaputra’s water flow.
- This will allow India to track changes in real time and respond proactively.
- **Developing Counter-Dams and Water Management Infrastructure**
- India should explore counter-dam projects in Arunachal Pradesh to maintain river balance.
- Improved irrigation and water storage infrastructure can reduce dependency on Brahmaputra flow.
- **Engaging in International Advocacy**
- India can highlight China's unilateral water policies in global forums (e.g., UN, ASEAN, G20).
- Creating global pressure can encourage China to cooperate on water-sharing mechanisms.

## What lies the ahead?

- India faces a significant threat from China's mega-dam project, affecting water security, ecology, and diplomatic interests.
- The issue reflects larger geopolitical tensions, and India must adopt a multi-dimensional strategy including diplomacy, regional coordination, water surveillance, and infrastructure development to safeguard its interests.

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**Reference-** The Hindu | China’s Dam

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