



Subansiri Lower Hydroelectric Project

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Why in News?

The [Subansiri Lower Hydroelectric Project](#), India's largest hydel project under construction, faced a setback when a [landslide blocked](#) the only functional diversion tunnel and stopped the flow of water downstream of the dam into the **Subansiri River, a major tributary of the Brahmaputra**.

- This resulted in the **river bed drying up and endangering aquatic life**. The incident also raised questions about the safety and viability of the project, which has faced multiple delays and opposition since its inception in 2005.

What is the Subansiri Lower Hydroelectric Project?

- The Subansiri Lower Hydroelectric Project is a **run-of-river scheme** that aims to **generate 2,000 MW of power** by harnessing the potential of the Subansiri River, which flows along the border of Arunachal Pradesh and Assam.
 - A run-of-river dam is one in which the **flow of water in the river downstream of the dam is the same as the flow of water upstream** of the dam.
- The project is being executed by the **National Hydroelectric Power Corporation (NHPC)**.
- The project involves the construction of a 116-metre-high **concrete gravity dam**, a 34.5-km-long reservoir, five diversion tunnels, eight spillways, and a powerhouse with eight 250-MW units.
 - **Gravity dam** is constructed from concrete or cement, it is designed to **hold back water by primarily utilizing the weight** of the material alone to resist the horizontal pressure of water pushing against it.
- The project is expected to generate around 7,500 million units of power annually in a 90% dependable year.
- The project is also expected to provide flood moderation, irrigation, and drinking water benefits to the downstream areas.
- NHPC Limited commenced construction work of Subansiri Lower Hydroelectric Project in January 2005.
 - However, **due to agitations and protests by local stakeholders**, the project construction work was stalled from December 2011 to October 2019. The project construction resumed from October 15, 2019, after the clearance by [National Green Tribunal](#).

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Subansiri River

- Subansiri, or “Gold River” is the largest tributary of the Upper Brahmaputra river.
- Emerging from the Tibetan Himalayas, the river flows into India through the **Miri Hills of Arunachal Pradesh**. The significant variation in its topography presents an opportunity for harnessing hydropower potential in the region.

UPSC Civil Services Examination Previous Year Questions (PYQs)

Prelims

Q. Consider the following rivers: (2014)

1. Barak
2. Lohit
3. Subansiri

Which of the above flows/flow through Arunachal Pradesh?

- (a) 1 only
(b) 2 and 3 only
(c) 1 and 3 only
(d) 1, 2 and 3

Ans: (b)

