Kalai-II Hydroelectric Project, Arunachal Pradesh

1. Latest News

- On 20th August 2025, the Arunachal Pradesh State Pollution Control Board (APSPCB) conducted an Environmental Public Hearing for the 1200 MW Kalai-II Hydroelectric Project in Anjaw district.
- The project is being developed by **THDC India Limited (Tehri Hydro Development Corporation Ltd.)**.
- Over 350 project-affected people from 33 villages participated, raising concerns about land compensation, employment opportunities, and local development.
- Majority supported the project, with Minister Dasanglu Pul urging acceptance, citing Tehri Dam as a successful model.
- Deputy Commissioner **Millo Kojin** assured that all concerns would be recorded and announced that **village representatives will visit Tehri Dam** to witness benefits.

2. About Kalai-II Hydroelectric Project

- **Location**: Lohit River (tributary of Brahmaputra), Anjaw District, Arunachal Pradesh.
- **Developer/Owner**: THDC India Limited.
- **Type**: Run-of-the-river with pondage project.
- Installed Capacity: 1200 MW (6 turbines × 190 MW each).
- **Dam Type**: Concrete gravity dam with upstream & downstream coffer dams.
- **Components**: Diversion tunnel, intake tunnel, pressure shafts, underground powerhouse, surge chamber, tailrace tunnel.
- Reservoir Capacity: 318.8 million cubic meters.
- Gross Head: 125 m.

3. Importance of the Project

- Energy Security: Boosts India's renewable energy mix.
- **Regional Development**: Employment, infrastructure, roads, schools, health centers.
- **Strategic Importance**: Hydropower potential in North-East is crucial for India's energy transition.

4. Concerns Raised

- Fair land compensation.
- Employment assurance for locals.
- Environmental impact on river ecology and biodiversity.
- Resettlement and rehabilitation of affected families.

5. Government & Developer's Assurances

- Concerns to be duly addressed under legal provisions.
- Exposure visit to **Tehri Dam** for local representatives.
- Commitment to **mitigation strategies** mentioned in CEIA report.

UPSC Relevance

Prelims

- Location: Lohit River, Anjaw District, Arunachal Pradesh.
- Type: Run-of-the-river with pondage.
- Capacity: 1200 MW (6 × 190 MW).
- Reservoir Capacity: 318.8 MCM.

Mains (GS-II & GS-III)

• **GS-II**: Role of **public hearings** in environmental governance and community participation.

- **GS-III**: Issues of **sustainable development**, **displacement**, **ecological impacts**, and balancing energy needs with environmental conservation.
- Essay Paper: "Hydropower projects: Development versus Displacement."

FAQs on Kalai-II Hydroelectric Project

Q1. On which river is the Kalai-II Hydroelectric Project planned?

Ans: On the **Lohit River**, a tributary of the Brahmaputra, in Anjaw district of Arunachal Pradesh.

Q2. What is the total installed capacity of Kalai-II?

Ans: **1200 MW** (6 turbines × 190 MW).

Q3. What type of project is Kalai-II?

Ans: A run-of-the-river with pondage hydroelectric project.

Q4. What is the gross head and reservoir capacity of the project?

Ans: Gross head - 125 m; Reservoir capacity - 318.8 million cubic meters.

Q5. Which PSU is developing the project?

Ans: THDC India Limited (Tehri Hydro Development Corporation Ltd.).

Summary for Aspirants: ■

The Kalai-II Project is a **significant hydropower initiative** in Arunachal Pradesh with potential benefits in energy and regional development. However, issues like **land compensation**, **employment**, **and ecological impact** need careful handling. For UPSC, focus on **location**, **features**, **environmental governance process**, **and development challenges**.

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