

Kinnaur Hydroelectric Project

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In news

The proposed 804 mega watt Jangi Thopan Powari hydroelectricity project over the Satluj in Kinnaur district of Himachal Pradesh is being opposed by the residents of the valley

About the Hydroelectric Project

- The run-of-the-river (ROR) project envisages **construction of a concrete gravity dam of ±88 metre high above the deepest foundation level across river Satluj near Jangi village, and underground powerhouse on the right bank upstream of Tehsil boundary (Kashang Nallah).**
- The diversion of water will involve construction of a **12-km-long tunnel.**
- The tentative land requirement for the project is 295.93 hectares, out of which 270.43 ha is forest land and 25.5 ha is private.
- The length of the reservoir will be 10.6 km.
- Kinnaur district is mainly marked by its cold desert, tribal population, fragile topography, rich and diverse culture, apple orchards, off-season vegetables and the Satluj river.
- The river has been dammed at multiple places along the valley to create an additional feature to Kinnaur's identity as Himachal's hydropower hub, which locals believe is a malediction.

Major concerns of the project

- The Satluj has taken the biggest load of state hydropower ambition since the early 90s. Out of the total installed capacity, 56 per cent (5720MW) is done in the Satluj basin

- Around 92 per cent of the river will either be flowing through tunnels or will be part of reservoirs. Such a cumulative scale of disturbance with the river's natural state drastically impacted the life, livelihood and ecology in the Satluj basin.
- Construction of the dam will result in the **submergence of about 156.2917 ha of land**, out of which 143.2093 ha is forest land and 13.0824 ha is private.
- The process of tunnelling disturbs the hydrogeology of the region significantly and thus **impacts the springs drastically**
- Agriculture in the cold desert is not feasible without irrigation. The major source of irrigation for highly valued horticulture and off-season vegetables are derived from these springs and the absence of the same will drastically **impact the life and livelihood of this region**
- According to the cumulative environmental impact assessment for the Satluj river basin, 58 per cent respondents (project-affected people) cited **reduced water availability** as a major concern of hydropower projects.
- Due to the geological fragility of the Himalayas, they are **highly prone to landslides**. The blasting and tunnelling have a high potential for triggering and / or accelerating the landslides in these regions.
- The **other major impact of HEP is connected to the forest of Chilgoza pine**, which has a patchy distribution across arid mountain valleys in Afghanistan, Pakistan and India.

Chilgoza pine is well-known for its edible seeds and is rich in carbohydrates, proteins, and other medicinal values. It is classified as an endangered and rare tree species. Kinnaur has the largest Chilgoza forests, covering an area of around 2,000 hectares.

- HEP will have implications on water resources, climate

and biodiversity; it is strongly argued that the forest of Chilgoza will be impacted

- The CAGs report on Environmental Clearance and Post Clearance Monitoring revealed that 32 per cent of projects have **procedural violations** in following the norms for environmental impact assessment studies and the non-compliance was maximum in the case of the river valley and hydroelectric projects.

Benefits of the hydropower projects

- Hydropower projects are an engineering marvel and generate clean, reliable electricity.
- They also add a high value to the electricity grid by its ability to meet peak demand and to balance supply to the grid.
- Hydroelectric power will improve the economic health of the state by bringing in additional revenue.
- HEP is the only possible way to generate higher electricity with minimum cost and minimum environmental negative impacts.
- Even as the installed capacity of HEP in Himachal Pradesh rose from around 7,913 MW to 10,547 MW in the last decade, the annual revenue from the sector has fallen from Rs 1,146 crores to around Rs 906 crores in the same period