Hydropower Projects in The Himalayas

What is the issue?

- The Union Environment ministry has recommended the completion of 7 hydropower projects in upper Ganga in Uttarakhand.
- These projects were put on hold by the Supreme Court after the Kedarnath tragedy in 2013.

Seven projectsapproved

1. VishnugadPipalkoti (444 MW) on Alaknanda river
2. TapovanVishnugad (520 MW) on Dhauliganga river
3. SingoliBhatwari (99 MW) on Mandakini river
4. Phata-Buyong (76 MW) on Mandakini river
5. Tehri Stage II (1000 MW) on Bhagirathi river
6. Madhyamaheshwar (15 MW) on Madhmaheshwar Ganga
7. Kaliganga II (4.5 MW) on Kaliganga river

What happened in the aftermath of Kedarnath floods?

- The Kedarnath floods of 2013 killed at least 5,000 people in the region.
- After this, the SC had halted the development of hydroelectric projects in Uttarakhand.
- Meanwhile, a review by the Environment Ministry on the role such projects had played in amplifying the disaster was pending.
- A 17-member expert committee, led by environmentalist Ravi Chopra, was set up by the Ministry.
- This was to examine the role of 24 such proposed hydroelectric projects in the Alaknanda and Bhagirathi basin, which contains the Ganga and several tributaries.
- The **Chopra committee** concluded that 23 projects would have an "irreversible impact" on the ecology of the region.
- Following this, 6 private developers whose projects had already been cleared challenged this.
- The SC directed a new committee to be set up to examine their case.
- This **committee led by Vinod Tare** also concluded that these projects could have a significant environmental impact.
- The Environment Ministry in 2015 set up yet another committee, led by **B.P.**

Das which cleared all 6 projects with design modifications.
- This gives scope to the Environment Ministry's current stance.
- The Centre says that it was not too keen on new hydropower projects and was only permitting those that are at least 50% complete to go ahead.

What favours hydropower projects in the Himalayas?

India is 5thin the world in terms of hydroelectric power potential. But hydropower currently accounts for only 12% of India's total energy production.

Geography

- Steep terrain of the mountains
- Nature of the Himalayan rivers

- Renewable source of power.
- Hydropower projects are submitted as emission-reduction projects by countries to earn carbon credits.

Government's Push

- Uttarakhand government pays over Rs.1,000 crore annually to purchase electricity.
- So, if the projects are cancelled, it is harder for it to meet the development obligations.
- But allegedly, the proposed projects being built by private companies allot only a limited percentage of their produced power for the.
- Thus, the State, on its own, takes on massive environmental risk without being adequately compensated for it.

What are the risks and concerns?

- Building dams is a **construction-intensive activity**, involving blasting, excavation, debris dumping, movement of heavy machinery, diversion of forests and rivers. This can cumulatively impact Himalayan ecology.
- Glacier retreat and permafrost thaw are projected to **decrease the stability** of mountain slopes and increase the number and area of glacier lakes.
    1. The Himalayan belt has over 2,300 glacial lakes that are melting due to global warming.
    2. The **thermal profile of ice is increasing** i.e., the temperature of ice that used to range from -6 to -20 °C, is now -2°C, making it more susceptible to melting.

- Climate change has also driven erratic weather patterns like increased snowfall and rainfall.
- These changing climate phenomena make infrastructure projects in the Himalayan regions risky.
- Moreover, with increased instances of cloudbursts, and intense spells of rainfall and avalanches, residents of the region are at increased risk.
- Also, **cleanliness of the Ganga** is premised on minimum levels of water flow in all seasons and the proposed projects could hinder this.

What is to be ensured?

- Experts suggest that there should be no hydropower development beyond an elevation of 2,200 metre in the Himalayan region.
- Adopting an ecologically-sensitive model of development, within the environmental, ecological, topographical limitations of the region.

Source: The Hindu