



E-flows in River Ganga

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Why in News

- According to the **Central Water Commission (CWC)**, **4 of the 11 hydro power projects** on the upper reaches of the river Ganga's tributaries are **violating Ganga ecological flow (e-flow) norms**.
- The **non-compliant** ones are:
 - Vishnuprayag Hydroelectric project - Alaknanda
 - Srinagar Hydroelectric project - Alaknanda
 - Maneri Bhali Phase 2 - Bhagirathi
 - Pashulok - Ganga Mainstream
- Violating the e-flow norms **can mean closure of the project or a hefty fine**.

Ecological- Flow Norms

- The Central Government under the **Environment (Protection) Act, 1986** has notified the minimum environmental flows for the River Ganga that has to be maintained at various locations on the river.
- This is **to ensure that the river has at least the minimum required environmental flow of water even after the river flow gets diverted by projects and structures for purposes like irrigation, hydropower, domestic and industrial use etc**. This is an important step taken towards maintaining the uninterrupted or *Aviral Dhara* of the river.
- Environmental flows are the acceptable flow regimes that are required to maintain a river in the desired environmental state or predetermined state.
- The **Central Water Commission is the designated authority** and will be responsible for supervision, monitoring, regulation of flows and reporting of necessary information to the appropriate authority as and when required and also take emergent decisions about the water storage norms in case of any emergency.

Power Companies and E-flow Norms

- The Centre's e-flow notification came into effect in October 2018 and gave companies three years to modify their design plans, if required, to ensure that a minimum amount of water flowed during all seasons. Power producers generally hoard water to create reserves to increase power production.
- In September 2019, the government advanced this deadline, from October 2021 to December 2019. This was after the CWC undertook field visits to hydropower sites and reported that most of the power projects could begin implementing the norms right away and didn't need three years.

Central Water Commission

- CWC is a premier technical organization of India in the field of water resources and is presently functioning as an attached office of the **Ministry of Jal Shakti**. It was formed in **1974-1975** via a notification.
- The Commission is entrusted with the general responsibilities of initiating, coordinating and furthering in consultation of the State Governments concerned, schemes for control, conservation and utilization of water resources throughout the country, for the purpose of flood control, irrigation, navigation, drinking water supply and water power development.

The Ganga River System

- The headwaters of the Ganga called the 'Bhagirathi' is fed by the Gangotri Glacier and joined by the Alaknanda at Devprayag in Uttarakhand.
- At Haridwar, Ganga emerges from the mountains to the plains.
- The Ganga is joined by many tributaries from the Himalayas, a few of them being major rivers such as the Yamuna, the Ghaghara, the Gandak and the Kosi.

Source: TH