Challenges of River Interlinking

This editorial is based on the article 'Waterman finds gaping holes in Ken-Betwa promise', that appeared in Times of India on May 3rd, 2019.

Why in News?

Water conservationist Rajendra Singh firmly believes that the much-touted Ken-Betwa river interlinking project will not solve the crisis in the state's parched Bundelkhand region in even half a century. In this context, it is necessary to understand the intricacies of river interlinking in India.

What is River Inter-interlinking?

The National River Linking Project (NRLP) formally known as the National Perspective Plan, envisages the transfer of water from water 'surplus' basins where there is flooding, to water 'deficit' basins where there is drought/scarcity, through inter-basin water transfer projects.

What's the Definitional Problem?

- 'Surplus' means that it is the extra water available in a river after it meets the humans' requirement of irrigation, domestic consumption and industries thereby underestimating the need of the water for the river itself.
- The term 'deficit' has also been viewed in terms of humans only and not from the river's perspective, which includes many other factors.

History Behind River Interlinking

- In October 2002, the Supreme Court ordered the Central Government to initiate work on inter-linking the major rivers of the country.
- In the same year, a task force was appointed and a deadline of 2016 was set to complete the entire project that would link 37 rivers.

Scope of the Project

The National River Interlinking Project will comprise of 30 links to connect 37 rivers across the nation through a network of nearly 3000 storage dams to form a gigantic **South Asian Water Grid**. It includes two components:

- **Himalayan Rivers Development Component:**
  - This component aims to construct storage reservoirs on the Ganga and Brahmaputra rivers, as well as their tributaries in India and Nepal.
  - The aim is to conserve monsoon flows for irrigation and hydropower generation, along with flood control.
  - The linkage will transfer surplus flows of the Kosi, Gandak and Ghagra to the west. A link between the Ganga and Yamuna is also proposed to transfer the surplus water to drought-prone areas of Haryana, Rajasthan and Gujarat.
- **Southern Water Grid:** It includes 16 links that propose to connect the rivers of South India. It envisages linking the Mahanadi and Godavari to feed the Krishna, Pennar, Cauvery, and Vaigai rivers. This linkage will require several large dams and major canals to be constructed. Besides this, the Ken river will also be linked to the Betwa, Parbati, Kalisindh, and Chambal rivers.

Proposed Benefits of the Project

- Hydropower generation
- Irrigation benefits
- Round the year navigation
- Employment generation
- Resolution of problem of droughts and floods
- Ecological benefits as dried up forests and lands will be replenished

The Opposition

> Concerned scholars questioned the merits of inter-link projects citing **lack of holistic assessment of social-ecological impacts** like water-logging, salinisation and the resulting desertification.

An Environmental Hazard

Ken-Betwa river link entails a 231-kilometre (144 mile) canal between the two rivers in the states of Madhya Pradesh and Uttar Pradesh, along with two dams and reservoirs; the felling of more than 1.8 million trees; and the usage of 6,017 hectares (23 sq miles) of forest land, including the Panna Tiger Reserve, with special mention of endangered wildlife species

that will be impacted. The project is also expected to consume nearly 6,000 hectares of non-forest land, with approximately 5,000 homes being submerged as per the National Water Development Authority feasibility report.

- The concerns about **sediment management,** especially on the Himalayan system loom large. When the idea is to transfer water from the 'surplus' Himalayan river systems to 'deficit' basins of the southern part of India, the differential sediment regime defining the flow regimes need to be plugged into the equation. This will entail changes in ecosystem structures in both parts.
- Damming India's east-coast rivers to take their water westwards will **curtail downstream flooding** and thereby, the supply of sediment—a natural nutrient—destroying fragile coastal ecosystems and causing coastal and delta erosion
- The **spirit of federalism is ignored** in the river interlinking project. There is dissent on the part of the state governments (Kerala)
    The top-down model presumes of near-unanimity of every state.
- A new analysis of rainfall data reveals that monsoon shortages are growing in river basins with surplus water and falling in those with scarcities.

This raises questions about India's Rs. 11 lakh crore ($165 billion) plan to transfer water from "surplus" to "deficit" basins.

A Snowy Forecast

India's experiment of river interlinking must take lesson from failure of Australia's Snowy River Scheme, a 145-km network of tunnels and 80 km of aqueducts transferring 1.1 cu km of water annually from the basin of the Snowy—a river flowing through mostly uninhabited mountainous region in eastern Australia into the Tasman Sea—to the basin of the Murray-Darling—an inland river developed for irrigation and water supply; construction began in 1949.

As the Snowy passed through one of the largest of its 16 dams, its flow was cut by 99%, as its water was sent to towns and villages downstream, a design that completely ignored—and ended up destroying—the river's wetland habitat in its lower reaches, according to a 2007 WWF report.

Efforts to restore the flow of the Snowy have cost Rs 2,381 crore ($358 million), 57% of the project's Rs 4,191 crore ($630 million) c

Way Forward

- Local solutions (like better irrigation practice) and watershed management, should be focused on.
- The government should alternatively consider the National Waterways Project (NWP)

which “eliminates” friction between states over the sharing of river waters since it uses only the excess flood water that goes into the sea unutilized
- The necessity and feasibility of river-interlinking should be seen on case to case basis, with adequate emphasis on easing out federal issues.

Drishti Input:

Development for the sake of development is the ideology of cancer. In this context, highlight the challenges for river interlinking in India.
