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**TOPIC**

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**DEBATE OVER RIVER INTERLINKING  
IN INDIA**

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## DEBATE OVER RIVER INTERLINKING IN INDIA

### Context

- The ambitious project of river interlinking in India, aimed at connecting surplus rivers with those facing water deficits, has been touted as a solution to the country's water woes.
  - ◆ However, this grandiose idea, which has been in the making for decades, is fundamentally flawed and poses significant environmental risks.

### Historical Context

- The **concept of interlinking rivers** dates back to the 19th century, with **Sir Arthur Cotton's** designs for **irrigation dams in the Godavari and Krishna river valleys**.
- Over the years, this idea evolved, with notable contributions from engineers like M. Visvesvaraya, K.L. Rao, and Captain Dinshaw J. Dastur.
- The modern iteration of this concept, known as the **National Water Grid, re-emerged as the River-Interlinking Project (ILR)** under the Ministry of Water Resources.

### Current Initiatives

- In 2002, the **Supreme Court of India** ordered the Union Government to complete the river interlinking project within the next 12–15 years.
  - ◆ In response to this order, the Government of India appointed a Task Force and scientists, engineers, ecologists and others for the project related works.
- Currently, River Interlinking in India is managed by the **National Water Development Agency (NWDA)**, established in 1982, and is part of the **National Perspective Plan (NPP)** formulated in 1980.

### Do You Know?

- **Hashim Commission Report (2004-05):** It highlighted which rivers and at which locations water surpluses could be transferred and to which rivers, and at what factors in these rivers the transfer water could be taken.
- **National Water Policy (NWP) 2012** considered **water as economic goods** for promoting its conservation and efficient use.
  - ◆ It was formulated to govern the planning and development of water resources and their optimum utilization.

### Components of the NPP

- **Himalayan Rivers Development Component:** It involves **14 link projects** aimed at transferring water from the Himalayan rivers to the northern and eastern parts of India.
- **Peninsular Rivers Development Component:** It includes 16 link projects designed to connect rivers in the southern part of India, transferring surplus water from the Mahanadi and Godavari rivers to the Krishna, Pennar, and Cauvery rivers.

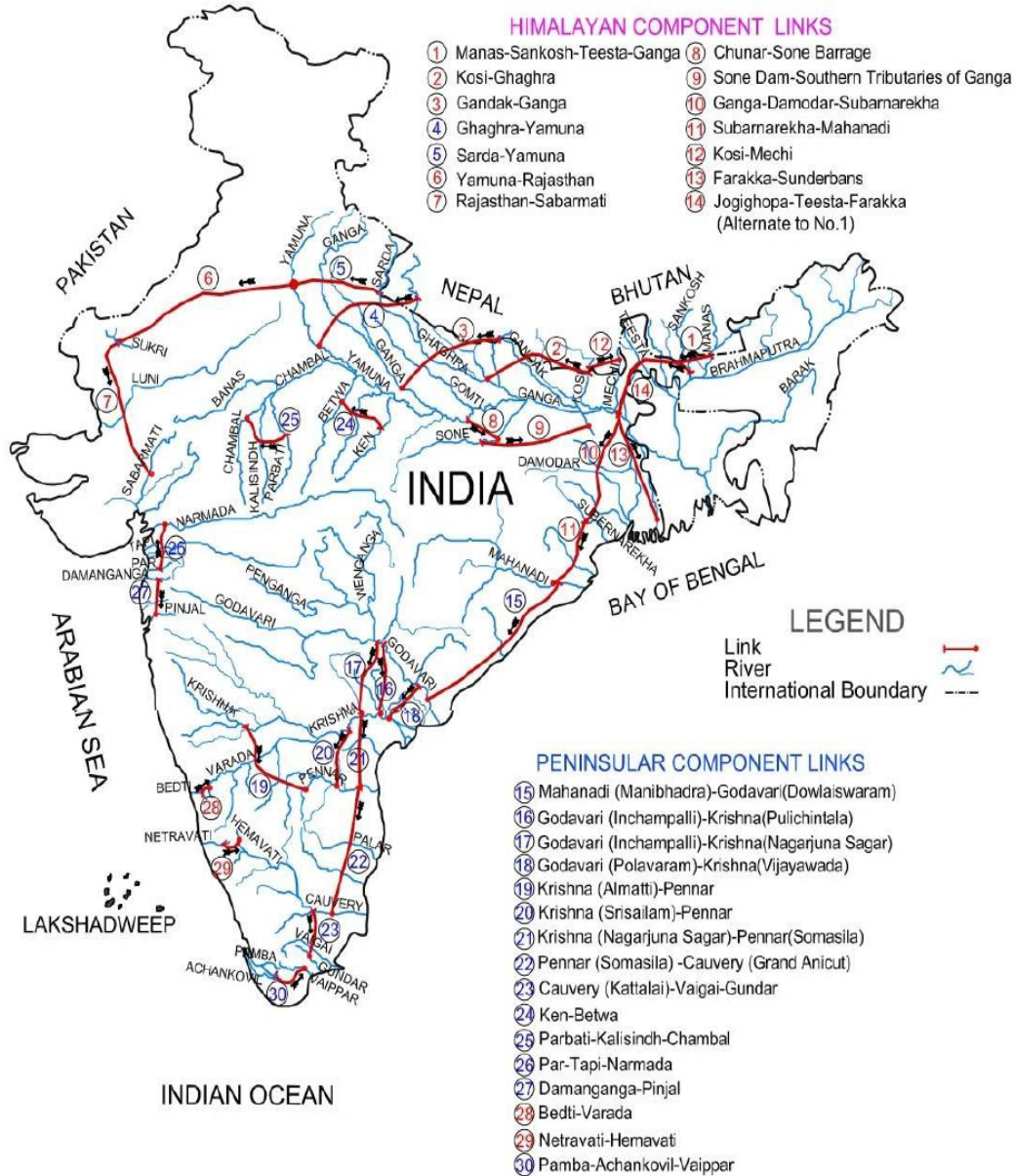
### Key Projects and Their Status

- Out of the 30 identified link projects under the NPP, significant progress has been made:
  - ◆ **Pre-Feasibility Reports (PFRs):** Completed for all 30 links.
  - ◆ **Feasibility Reports (FRs):** Completed for 24 links.
  - ◆ **Detailed Project Reports (DPRs):** Completed for 8 links.

### Key Projects

- The **Ken-Betwa Link Project (KBLP)** is the first project under the NPP to be implemented. It aims to benefit the drought-prone Bundelkhand region of Madhya Pradesh and Uttar Pradesh.
  - ◆ It also aims to provide annual irrigation to 10.62 lakh hectares, drinking water to 62 lakh people, and generate 130 MW of power.

- **Priority Projects:** Besides the **Ken-Betwa Link Project (KBLP)**, other priority projects include the **Modified Parbati-Kalisindh-Chambal (PKC) Link** and the **Godavari-Cauvery Link**.



**Need for Inter Basin Water Transfers (IBWT)**

- It is necessarily required to overcome the water scarcity situations in the regions/basins and to enhance water utility and reduce water wastage of water surplus areas in the following manner:
  - ◆ **Large variation in rainfall** and available water resources in space and time;
  - ◆ **Diversions of water** from water surplus basins to water deficit basins/regions;
  - ◆ Use of the surplus water which is otherwise flowing into the sea unutilized;
  - ◆ To mitigate likely adverse impact of climate change, short term and long term;

**Benefits of River Interlinking**

- **Water Availability:** Ensures equitable distribution of water across regions, addressing both drought and flood issues.
- **Agricultural Productivity:** Enhances irrigation facilities, leading to increased agricultural output.

- **Drinking Water Supply:** Provides reliable drinking water to millions of people.
- **Hydropower Generation:** Contributes to renewable energy production through hydropower projects.

### Challenges and Concerns

- **Ecological Imbalance:** Interlinking rivers can disrupt the natural flow of rivers, affecting aquatic ecosystems and biodiversity. The alteration of river courses can lead to the loss of habitats for various species.
  - ♦ The **Ken-Betwa River Link Project**, for instance, involves constructing a dam within the **Panna Tiger Reserve**, raising concerns about submergence and loss of biodiversity.
- **Financial Viability:** High costs associated with the implementation and maintenance of the projects.
  - ♦ The **Ken-Betwa River Link Project**, estimated to cost around 45,000 crore, has faced objections from experts and circumvented strict legal terms for hydroelectric power projects.
- **Inter-State Disputes:** States have the power to use water in *supplies, irrigation, canals, drainage, embankments, water storage, and water power* within their respective territories.
  - ♦ **Water** is listed in **List II of the Seventh Schedule** of the Indian Constitution, which is the **State List**.
  - ♦ However, the **Central Government** has the power to regulate and develop **inter-state rivers** and river valleys **List I of the Seventh Schedule**.
- **Socio-Economic Impacts:** The estimated cost of 5.5 lakh crore does not account for the social, environmental, and operational expenses, which will ultimately burden taxpayers.
  - ♦ The displacement of communities, loss of livelihoods, and destruction of cultural heritage sites are significant issues that need to be addressed.
- **Displacement of Communities:** Large-scale projects often require the displacement of local communities, leading to social and economic challenges.
  - ♦ The resettlement process can be complex and may not always be fair or adequate.
- **Climate Change Impact:** The alteration of river systems can exacerbate the impacts of climate change, such as increased frequency and intensity of floods and droughts.
  - ♦ It can further strain the already vulnerable regions.
- **Deforestation and Habitat Loss:** The construction of canals and reservoirs requires large-scale deforestation, leading to habitat loss for wildlife.
  - ♦ It can also contribute to soil erosion and degradation.
- **Water Quality Issues:** The mixing of waters from different rivers can lead to changes in water quality, affecting both human and animal populations.
  - ♦ Pollutants from one river can contaminate another, leading to health hazards.

### Climate Blindspot

- A study in **Nature Communications** reveals that river interlinking projects may inadvertently exacerbate water stress rather than alleviate it.
- By altering natural water flows and disrupting hydro-meteorological systems, river interlinking can lead to unintended consequences such as changes in monsoon patterns.
- These changes can, in turn, worsen the very water scarcity issues the projects aim to solve.

### Conclusion and Way Forward

- While the idea of interlinking rivers to solve water scarcity is appealing, it overlooks the profound environmental and socio-economic costs.
- A more holistic approach to watershed management, focusing on sustainable and localized solutions, is essential to address India's water challenges without causing irreversible damage to its natural and human landscapes.
- Instead of relying solely on large-scale infrastructural projects, there is a need to consider sustainable alternatives that take into account the complex interplay between climate, water resources, and ecosystems.

Source: TH



### Mains Practice Question

Critically examine the potential environmental consequences of river interlinking projects in India, considering the ecological, social, and economic implications.