



INTERLINKING OF RIVERS - GS I AND III MAINS

Q. India's river linking project is the need of the hour which can solve the dual problem of droughts and floods. Explain the statement in the light of recent climate vagaries. (15 marks, 250 words)

News: *Why Is Madhya Pradesh's Ken-Betwa Dam Under Scanner*

What's in the news?

- A major dam project in Madhya Pradesh, part of the ambitious river interlinking project, has been found to be in violation of environmental clearances by a central government's expert committee, according to a report.

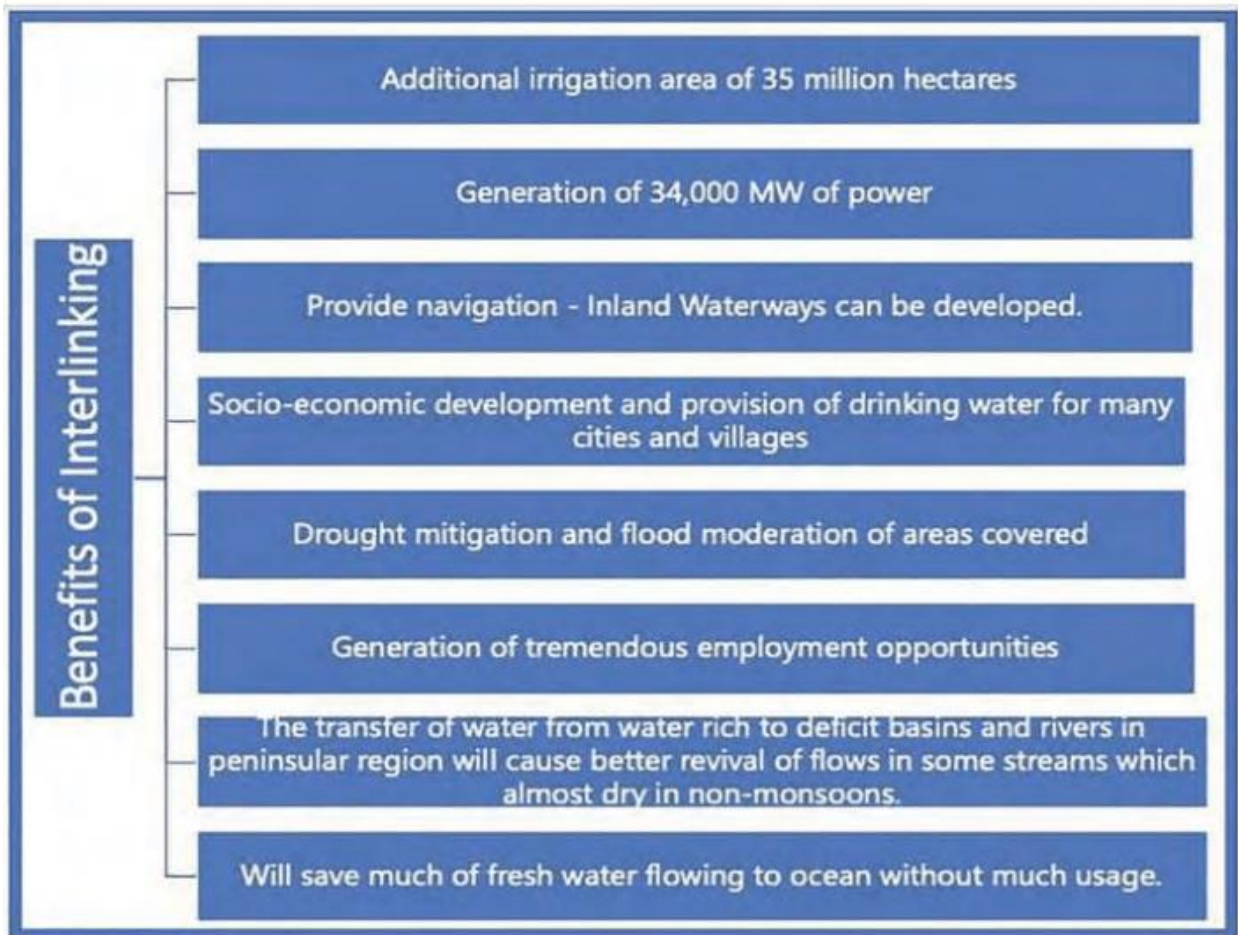
Key takeaways:

- After it came to light that a dam part of the Ken-Betwa interlinking project in Madhya Pradesh has been built to near-completion without clearances, a series of orders were issued to rectify the situation, which are currently under being challenged before the Supreme Court, according to a report.

Significance of River Linking:

1. Agricultural Crisis:

- Linking of rivers will reduce dependence of farmers on uncertain monsoon rains. It will provide irrigation to many areas.
- The land under irrigation will increase by about 15%. It will lead to additional irrigation of 35 million hectares in the water-scarce western and peninsular regions.



2. Socio-economic Benefits:

- By creating a network of canals, flood and drought problems will be resolved by channelling excess water to scarce areas.
- This will help in saving lives and will reduce economic loss that occurs due to floods and droughts.

3. Energy security:

- With creation of new dams and canals to link and store water, it will lead to generation of hydroelectricity that will help in providing energy security.
- The river interlinking project will generate power of about 34,000 MW (34 GW).

4. Transport:

- Newly created network of canals will open up new routes and ways of water for navigation which is generally more efficient and cheaper compared to road transport. 15,000 km of river and 10,000 km of navigation will be developed. Thereby reducing the transportation cost.

5. Water security:

- It will provide drinking water to many. By interlinking rivers scarce areas will get more water that is usually wasted in oceans. It will also lead to ground water recharging.



6. Inclusive Economic growth:

- Interlinking of rivers will provide employment opportunities. It will help in flourishing agriculture and thereby create livelihood.
- It would also create aquatic ecosystems which will support the fishery sector. It is expected to generate opportunities in the manufacturing sector, transportation and tourism through development of regions around the region.

7. Environmental benefits:

- Large scale afforestation around the renewed rivers and newly drained areas will make the environment more green.
- It will help in boosting biodiversity around the rivers.

Challenges to River Linking Program:

1. Interstate challenges:

- Lack of consensus on implementation of the project among the co-basin states.

2. International Relations:

- International Issues involved, such as concerns of neighbouring countries regarding sharing of transboundary rivers, resettlement and rehabilitation of the project affected people.
- Example: Ganga, Brahmaputra and Teesta River issues between India and Bangladesh, Indus and Jhelum River issues between India and Pakistan.

3. Financial Burden:

- High project funding cost. It is estimated that the project will be involved.

4. Infrastructural challenges:

- Construction of big dams.
- Arresting flow of fresh water can harm mangroves.
- Resettlement of large population.

5. Environmental Challenges:

- **Low flow of fresh water to Bay of Bengal** can reduce freshwater layer over Bay of Bengal. This can have a regressive impact over monsoons.
- **Regime change of rivers** and consequential changes in physical and chemical composition of sediment, river morphology and shape of delta.
- **Submergence of land** leading to deforestation and soil erosion.
- Adverse **impact on coastal ecosystems and deltas** on the East Coast of India.
- Dams result in diversion of forest areas, increased methane emissions from reservoirs, reservoir induced seismicity.
- Adverse **effect on groundwater recharge** and diversion of forest areas for dam building.
- Increased **saline groundwater intrusion**.
- Risk for delicate wetland and estuarine ecology which is not only aquatic habitats and fisheries.
- Chances of increased waterlogging and desertification.



WAY FORWARD:

- In interlinking proposals, a provision of the **minimum lean season flow** should be safeguarded to maintain the ecology and the river regime.
- **Cumulative impact assessment** for the entire project should be done and not on component-by-component basis.
- Rehabilitation and Resettlement should be done prior to undertaking the projects.
- Emphasis should be placed on **local solutions** such as improved irrigation practices and watershed management.
- The necessity and feasibility of river interlinking should be assessed on a **case-by-case basis**, with a focus on resolving federal issues and concerns of all stakeholders.

India's river linking project is the need of the hour which can solve the dual problem of droughts and floods. Formation of River Basin Authority for coordinated action and subsequent building up of consensus among concerned States is needed. Rehabilitation and appropriate afforestation is important to make this project successful at low social and environmental cost.

