Geography · GS - I

The interlinking of revivers can provide viable solutions to the multi-dimensional inter-related problems of droughts, floods and interrupted navigation. Critically examine.

EXAM YEAR	PAPER	SUBJECT
2020	GS - I	Geography

MARKS	WORD LIMIT
15	~250 words

Answer Hint

River interlinking; surplus and deficit basins; drought mitigation; flood management; inland navigation; irrigation and hydropower; ecological impacts; displacement; interstate disputes; alternatives and safeguards

Model Answer

Introduction

River interlinking proposes transferring water from relatively water-surplus basins to water-deficit regions through canals, reservoirs and associated infrastructure. It is presented as a possible response to India's interconnected water-management challenges.

Potential benefits

- **Drought mitigation:** Transfers may supplement irrigation and drinking-water supplies in water-stressed regions.
- **Flood management:** Carefully designed reservoirs and transfers could moderate some flood peaks where hydrological conditions permit.
- **Agricultural productivity:** More reliable irrigation may support crop diversification and reduce dependence on erratic rainfall.

- **Inland navigation:** Integrated waterways and improved storage may facilitate navigation in suitable stretches, supporting freight movement.
- **Hydropower and employment:** Associated infrastructure may generate electricity, construction employment and regional economic opportunities.

Critical concerns

- **Ecological disruption:** Altering river flows can affect wetlands, fisheries, sediment transport, estuaries and aquatic biodiversity.
- **Uncertain water surplus:** Climate change and seasonal variability may reduce the reliability of projected surplus water.
- **Displacement and costs:** Large dams and canals can require land acquisition, displace communities and create substantial financial liabilities.
- **Interstate disputes:** States may disagree over allocations, especially during drought years.
- **Limited flood-control capacity:** Transfers cannot eliminate floods caused by extreme rainfall, urban encroachment or inadequate drainage.
- **Navigation constraints:** Seasonal water levels, sedimentation and insufficient last-mile infrastructure can limit the benefits to navigation.

Way forward

Prioritise basin-level assessment, environmental impact studies, transparent water accounting and consultation with affected communities. Watershed restoration, rainwater harvesting, groundwater recharge, wetland protection and efficient irrigation should complement any interlinking project.

Conclusion

River interlinking may provide selective benefits, but it is not a universal solution to droughts, floods and navigation problems. Its viability depends on ecological sustainability, hydrological evidence and cooperative federal governance.