Environment & Ecology · GS - III

Not many years ago, river linking was a concept but it is becoming reality in the country. Discuss the advantages of river linking and its possible impact on the environment.

EXAM YEAR	PAPER	SUBJECT
2017	GS - III	Environment & Ecology

MARKS	WORD LIMIT
10	~150 words

Answer Hint

Inter-basin water transfer; irrigation; drought mitigation; flood management; ecological flows; displacement; river ecosystems

Model Answer

Introduction

River linking involves transferring water between river basins through canals, reservoirs and related infrastructure. It aims to address regional water imbalances, but its feasibility depends on hydrological, ecological and social considerations.

Potential Advantages

- **Irrigation:** Transfers may improve water availability in selected agricultural regions.
- **Drought mitigation:** Inter-basin transfers can provide supplementary supplies during water shortages where genuine surplus exists.
- **Flood management:** Carefully designed storage and transfers may reduce some flood risks.
- **Drinking water:** Projects may supplement supplies for water-stressed towns and villages.
- **Hydropower and navigation:** Certain infrastructure may support electricity generation and inland transport.
- **Regional development:** Improved water availability may support farming and economic activity.

Possible Environmental and Social Impacts

- **River ecology:** Altered flow regimes can affect aquatic habitats, sediment transport and fish migration.
- **Biodiversity loss:** Canals and reservoirs may fragment habitats and submerge forests.
- **Displacement:** Large projects may require relocation of communities and affect livelihoods.
- **Inter-State disputes:** Competing water demands can create political and legal conflicts.
- **Climate uncertainty:** Changing rainfall and river flows make assumptions about permanent water surplus risky.
- **Water quality and invasive species:** Transfers may spread pollutants or non-native organisms between basins.

Way Forward

Prioritise watershed restoration, efficient irrigation, groundwater recharge and demand management. Assess basin-level impacts, preserve environmental flows and ensure transparent consultation and rehabilitation.

Conclusion

River linking may provide benefits in carefully selected cases, but it is not a universal solution to water scarcity. Scientific assessment and ecological safeguards must guide every project.

BECOME IAS
AI POWERED UPSC PREP