

Interlinking of Rivers - UPSC Notes

Interlinking of rivers is an important topic that features in the UPSC environment section. It is also a part of the Geography segment of the [UPSC Syllabus](#). In this article, you can read all about the interlinking of rivers in India, its issues and challenges, and also about the National River Linking Project (NRLP) for the [IAS exam](#).

Interlinking of Rivers - Brief Background

The idea of interlinking rivers was first mooted by the Chief Engineer of the Madras Presidency in 1919, Sir Arthur Cotton.

- This idea was revisited in 1960 by the then Minister of State for Energy and Irrigation, KL Rao, who proposed to link rivers Ganga and Cauvery.
- The National Water Development Agency was established by the former Prime Minister Indira Gandhi in 1982.
- In 2002, the Supreme Court asked the government to finalise a plan for interlinking rivers by 2003 and execute it by 2016.
- A task force was formed by the government for the same in 2003.
- In 2012, the SC again asked the government to start the project.
- In 2014, the [Ken-Betwa River Linking Project](#) got Cabinet approval. However, the project is yet to take off because of opposition faced by the government chiefly from environmentalists.



What is Inter-linking of Rivers (ILR)?

The idea behind the interlinking of rivers is that many parts of the country face problems of drought while many others face the problem of flooding every year.

- The Indo-Gangetic rivers are perennial since they are fed by rains as well as the glaciers from the Himalayas.
- The peninsular rivers in India are however, not seasonal because they are rain-fed mainly from the south-west Monsoons.
- Due to this, the Indo-Gangetic plains suffer from floods and the peninsular states suffer from droughts.
- If this excess water can be diverted from the Plains to the Peninsula, the problem of floods and droughts can be solved to a large extent.
- Hence, the interlinking of rivers will bring about an equitable distribution of river waters in India.

National River Linking Project (NRLP)

This project envisages the transfer of water from water-excess basin to water-deficient basin by interlinking 37 rivers of India by a network of almost 3000 storage dams. This will form a gigantic south Asian water grid.

There are two components to this project:

1. Himalayan Component
2. Peninsular Component

Himalayan Component of NRLP

Under the Himalayan component of the NRLP, there are 14 projects in the pipeline.

- Storage dams will be constructed on the rivers Ganga and Brahmaputra, and also their tributaries.
- The linking of the Ganga and the Yamuna is also proposed.
- Apart from controlling flooding in the Ganga - Brahmaputra river system, it will also benefit the drought-prone areas of Rajasthan, Haryana and Gujarat.
- This component has two sub-components:
 - Connecting the Ganga and Brahmaputra basins to the Mahanadi basin.
 - Connecting the Eastern tributaries of the Ganga with the Sabarmati and Chambal river systems.

Peninsular Component of NRLP

This component of the NRLP envisages the linking of the 16 rivers of southern India.

- Surplus water from the Mahanadi and the Godavari will be transferred to the Krishna, Cauvery, Pennar and the Vaigai rivers.
- Under this component, there are four sub-component linkages:
 - Linking Mahanadi and Godavari river basins to Cauvery, Krishna and Vaigai river systems.
 - Ken to Betwa river, and Parbati & Kalisindh rivers to Chambal river.
 - West-flowing rivers to the south of Tapi to the north of Bombay.
 - Linking some west-flowing rivers to east-flowing rivers.

Benefits of River Interlinking

There are many benefits that the proposed interlinking projects will bring about. They are discussed below:

- Interlinking rivers is a way to transfer excess water from the regions which receive a lot of rainfall to the areas that are drought-prone. This way, it can control both floods and droughts.
- This will also help solve the water crisis in many parts of the country.
- The project will also help in hydropower generation. This project envisages the building of many dams and reservoirs. This can generate about 34000 MW of electricity, if the whole project is executed.
- The project will help in dry weather flow augmentation. That is, when there is a dry season, surplus water stored in the reservoirs can be released. This will enable a minimum amount of water flow in the rivers. This will greatly help in the control of pollution, in navigation, forests, fisheries, wildlife protection, etc.
- Indian agriculture is primarily monsoon-dependent. This leads to problems in agricultural output when the monsoons behave unexpectedly. This can be solved when irrigation facilities improve. The project will provide irrigation facilities in water-deficient places.
- The project will also help commercially because of the betterment of the inland waterways transport system. Moreover, the rural areas will have an alternate source of income in the form of fish farming, etc.

- The project will also augment the defence and security of the country through the additional waterline defence.

Challenges in River Interlinking

Despite the many benefits that are associated with the river interlinking project, the project is yet to take off because of the many hurdles it is facing. Some of the challenges in this regard are as follows:

- **Project feasibility:** The project is estimated to cost around Rs.5.6 lakh crores. Additionally, there is also the requirement of huge structures. All this requires a great engineering capacity. So, the cost and manpower requirement is immense.
- **Environmental impact:** The huge project will alter entire ecosystems. The wildlife, flora and fauna of the river systems will suffer because of such displacements and modifications. Many national parks and sanctuaries fall within the river systems. All these considerations will have to be taken care of while implementing the project. The project can reduce the flow of freshwater into the sea, thus affecting marine aquatic life.
- **Impact on society:** Building dams and reservoirs will cause the displacement of a lot of people. This will cause a lot of agony for a lot of people. They will have to be rehabilitated and adequately compensated.
- **Controlling floods:** Some people express doubts as to the capability of this project to control floods. Although theoretically it is possible, India's experience has been different. There have been instances where big dams like Hirakud Dam, Damodar Dam, etc. have brought flooding to Odisha, West Bengal, etc.
- **Inter-state disputes:** Many states like Kerala, Sikkim, Andhra Pradesh, etc. have opposed the river interlinking project. Read more on [interstate river disputes in India](#) at the linked article.
- **International disputes:** In the Himalayan component of the project, the effect of building dams and interlinking rivers will have an effect on the neighbouring countries. This will have to be factored in while implementing the project. Bangladesh has opposed the transfer of water from the Brahmaputra to the Ganga.

UPSC Questions related to Interlinking of Rivers

Is interlinking of rivers necessary?

There are benefits and concerns associated with the project.

How many rivers are interlinked in India?

The proposed project envisages the linking of India's rivers, 37 major rivers.

