



## The Big Picture - Floods & River Linking

After recording above normal rains between July 6 and July 11, monsoon appears to be slowing down, sparking concerns in the agriculture sector. Overall rainfall deficiency in the country till July 14 was 12.5% over the long period average. This is an improvement from 33% deficiency recorded in the month of June, which was the highest in last four years.

The sluggish monsoon has impacted the sowing of summer crops. But in northeastern India, floods have caused widespread damage, with several lives being lost as a result of flooding.

At present, on the one hand, there are **certain parts** of the country which are **flooded**, on the other hand, there are **other certain parts** of the country which are facing major [water shortage](#) problem.

### Is River Linking a Solution?

- The idea that somehow [river linking](#) would allow the country to cope up with floods in the northeast and shortage of water in the Deccan can be a **misleading** one.
  - The fact is that the floods come at a time when in most parts of the country do not face shortage of water.
  - This excess water needs to be conserved somewhere, if it is to be used in a dry season in other parts of the country.
  - The amount of water flowing in a very short period of time in the river Brahmaputra and some other rivers joining Ganga is so huge that it is impractical to impound that for using it later.
- The **large amount of money** that would be required to connect various river interlinking projects is an issue. Also, whether the government can afford it on its own or any international source of funding is there, is another issue, considering the country's other priorities like tackling [malnutrition in the country](#).
- **Denudation and submergence** of various areas along with the **loss of biodiversity** are some of the challenges of river interlinking.
- **Interconnection of states:** There is a concern that whether there could be a conflict between the affected states regarding water sharing and other issues.
- **Procedural problems:** River-linking projects need to go through a **long process** involving various clearances from the environment ministry, tribal affairs ministry etc.
- **Technical challenge:** In some cases there would be a need to lift water up to 160-200 mtrs, that itself is a challenge.
- **River linking under smaller scale** between rivers which are close by is a **different concept** and that should be looked at on a case to case basis.

### Arguments in Favour of River Linking

- **The system of river linking in the country is operated by the National Water Development Agency (NWDA)**, under the Minister of Water Resources. It has taken into consideration several aspects related to the river linking.
  - Under the **National Perspective Plan (NPP)**, the NWDA has identified 30 links (16 under the Peninsular Component and 14 under the Himalayan Component) for the preparation of feasibility reports (FRs).

- The NPP for transferring water from water-surplus basins to water-deficit basins was prepared in August 1980.
- The interlinking of the rivers in the south as well as other parts of the country has been undertaken in the past also. These are going on well.
- India has **mechanism as well as economic resources** to go about implementing it.
  - India has a history of establishing hydro dams for large number of countries around the globe including neighbouring nations and that has not only **produced electricity** but has also **helped in the reduction of floods** which takes place because of them.
  - India's former President APJ Abdul Kalam was of the view that some of the river basins could be merged to benefit the agriculture.
- The idea is very good and even some of the **environmental concerns can be addressed through some mitigation measures** like **afforestation**.
- **China has interlinked its rivers** and thus has shown the way. India can go for it as well, however, there is a **need to mobilize resources, efforts and technology effectively**.

## Way Forward

- In some cases, where the cost is not so much and there are minimal procedural requirements, some **two-three project can be tested on a pilot basis** and thus an analysis can be done on how the projects are impacting in terms of flood control, drought mitigation etc.
  - Interlinking of some local rivers like Gandak, Kosi can be considered.
- An **integrated water management system** is required. In areas of low rainfall, one needs to have **water conservation and watershed development schemes** whereas in high rainfall areas like Bihar, Assam and some parts of West Bengal and Odisha, it is more important to have **water management**. Also, **more number of reservoirs** in the country are required to store water.
- **Water table** is a very good mechanism to look at and see whether a region is going to have floods or droughts coming forth.
- **Israel**, which has very little drinking water has developed very economical means for conserving water. **India** can adopt some of its **low cost technology** to go about recycling the water.
  - The water which has been utilised for washing or bathing is cleaned and drained into a pipe which is then used for agriculture. It is possible both at the national level as well as the micro level.
  - **Recycling water for integrated use** has been experimented internally at several places and is working well but this technology have to be propagated further and people need to be made aware regarding the same.
- India needs a **coherent view of land and water** and also the land is to be looked at in the totality of all its uses i.e. for habitation, agriculture, forests etc.
- There is a need to identify the demands at the local level and it needs to be seen from where such demands could be met from. Also, until and unless one tries to resolve the supply base situation, one cannot meet the demand. (localised solutions)
- Because rivers run through so many states, **getting the states together** on a coherent river valley plan is something which India has not yet done. There is a need to bring together people of such local areas which are already connected in a river basin.
  - **River basin management plans** are very much under the active consideration of present government in which the government is seeing each river basin very holistically and comprehensively.
- There is a need to start **factoring in rainfall variability** in water management plans. India always had a variable rainfall patterns and it will become more variable with **climate change**.
- Due to **deindustrialisation**, in last 15-20 years, water tables in London have been rising a meter per year. India needs to go back again to forestation and create an appropriate balance of industries and human life so that the country can have appropriate distribution of people that does not allow water table to go down to that level which can create problems.
- India currently receives the largest **FDI** in the world, six billion dollars every month, a **large amount is yet to come** specifically for water drain and ecological system surveys especially from international agencies.
- **Environment is an issue in itself**. Everybody in the country should be concerned about that.

*The best way forward is to look at water as a strategic resource for sustainable development. There is a*

*need to get water usage and drainage right at a local level. This will, in turn, make other things right including land use, settlement patterns and social equity. On water management, India needs to proceed very scientifically taking into consideration all related aspects.*

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