Seven rivers, three interlinking proposals: where, why and how

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IT IS an idea that has been in circulation for nearly four decades: can India build from scratch a national water grid, which will help transfer water from water-rich to water-deficit regions? This has led to proposals for water transfer from one river basin to another. The Special Committee for Inter-Linking of Rivers has submitted its progress report for the work done from July 2016 to March 2018, and the Union Cabinet chaired by the Prime Minister was updated on the report recently. A look at what interlinking seeks to achieve, and what was covered in the latest report:

The big picture

The Inter-Linking of Rivers programme aims to connect various surplus rivers with deficient rivers. The idea is to divert excess water from surplus regions to deficient regions to help improve irrigation, increase water for drinking and industrial use, and mitigate drought and floods to an extent.

The special committee was set up following a Supreme Court direction on a 2012 writ petition on ‘Networking of Rivers’. The SC directed the Centre to set up a special committee that would then constitute sub-committees. It directed the committee to submit a bi-annual report to the Cabinet on status and progress, and directed the Cabinet to take appropriate decisions.

The status reports are meant to be in accordance with the National Perspective Plan. This plan was formulated in 1980 by the Ministry of Irrigation (now Water Resources) to look into inter-basin transfers. The plan comprises two components: peninsular rivers development and Himalayan rivers development.
India also has a National Water Development Agency (NWDA), which was set up in 1982, to conduct surveys and see how feasible proposals for interlinking river projects are.

**Three reports before Cabinet**

The status report of three priority links was shared with the Cabinet. These were Ken-Betwa, Damanganga-Pinjal and Par-Tapi-Narmada. The Water Resources Ministry had drawn up detailed project reports for all three projects in 2015. The committee report also goes into the status of other Himalayan and peninsular links identified under the National Perspective Plan.

**KEN-BATWA:** The project aims to link the rivers Ken (in the Bundelkhand region) and Betwa, both flowing through Uttar Pradesh and Madhya Pradesh. It proposes to “divert the surplus waters of river Ken through the Ken-Betwa link canal to river Betwa for meeting water requirements in the water-deficit Betwa basin”. Dams will be built across the Ken for storing and transferring water through the link canal.

According to the initial DPR, it will provide annual irrigation benefits of 6.35 lakh hectares (Phase I) in both states and a further 0.99 lakh hectares (Phase II) in MP. Initial cost estimates were Rs 18,000 crore for the first phase and Rs 8,000 crore for the second; these have escalated with the Ministry planning to integrate both phases upon MP’s request.

**DAMANGANGA-PINJAL:** The project aims to divert excess water from rivers in western India to meet the domestic and industrial water requirements of Greater Mumbai. It proposes to move available water at the proposed Bhugad reservoir across the Damanganga and at the proposed Khargihill reservoir across the Vagh, a tributary of the Damanganga. These two reservoirs, proposed by the NWDA, will be linked to the Pinjal reservoir (proposed by Maharashtra) through pressure tunnels.

The detailed project report was completed in March 2014 and submitted to the governments of Maharashtra and Gujarat. It suggested Greater Mumbai region would benefit by 895 million cubic metres water.

**PAR-TAPI-NARMADA:** The project proposes to transfer water from the Western Ghats to water-deficit regions of Saurashtra and Kutch via seven reservoirs proposed in northern Maharashtra and southern Gujarat. It is an attempt to save water at the Sardar Sarovar project by using feeder canals to service a part of the command area of the dam, officials say.

The link envisages construction of these seven dams, three diversion weirs, two tunnels (5 km & 0.5 km), a 395-km canal (205 km in the Par-Tapi stretch including the length of feeder canals, and 190 km in Tapi-Narmada), 6 power houses and a number of cross-drainage works, documents state.
Many experts and activists have questioned the idea of inter-basin transfer, for various reasons. The ecology of every river being unique, experts have stressed that letting the waters of two rivers mix may affect biodiversity. Because the programme proposes the construction of a massive network of canals and dams, it would lead to large-scale displacement of people and changes in agricultural patterns, and affect livelihoods.

Experts have also objected to interlinking for financial reasons. In 2001, the total cost for linking the Himalayan and peninsular rivers was estimated at Rs 5,60,000 crore, excluding the costs of relief and rehabilitation, and other expenses such as measures to deal with submergence in some areas. Two years ago, a committee of the Ministry suggested that this cost was likely to be substantially higher now and the cost-benefit ratio might no longer be favourable.

Another objection raised is that rainfall patterns are changing due to climate change, so the basins now supposed to be surplus, might cease to be so in a few years.