

Interlinking Of Rivers In India - Connecting The North And South

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1. INTRODUCTION

The struggles to achieve and develop with intentions to help attain human security have always taken place at the expense of ecological protection. All human insecurities, aridity, thirst, water control, and political insecurities have always been intricately related. All the mentioned insecurities have a habit of amplifying mortal fear. Time and again, water has acted as the appropriate means to help with the consolidation of power to human society. By the beginning of the new millennium, water became a significant issue in Indian Politics. India's river system is known to be unique; the rivers have been flowing over the years through the most unquestionable routes possible. However, time and again, the country has been subject to extreme drought seasons. With the desire to bring a balanced natural system, the government proposed a project that would introduce "a controlled hydraulic system (PMishra et al., 2017)."

The project would help deal with drought and floods by diverting 174 billion cubic meters of water – or the so-called excess water – to the water shortage areas. The idea behind the project is to accommodate irrigation of more than 25% of the land with an unstable water supply in the country. Broadly, the water is to be diverted from the Ganga-Brahmaputra Basin (GBB). However, the water at this source (Ganga-Brahmaputra Basin) is less than the required national average, but the government has a plan to divert the waters for the sake of the drought-prone areas. The cost incurred in this project may ultimately be higher than the country's GDP (PMishra et al., 2017). This article is a critical examination of the project from both the ecological the economic point of view. In a way, the project may be the most exciting subject in human history.

Background

After spending a lot of money on irrigation, the production rate in India hardly shows any significant advancement. Instead of going high, the economic performance on surface irrigation has been declining. On the other hand, for the past few decades, groundwater has been used in irrigation to the point where it continues to go out of reach and unsustainable (Khalid, 2004). Due to such reasons, experts find it resourceful to plan for better means to eradicate the overexploitation of groundwater through recharge of groundwater aquifers utilizing rainwater harvesting. Statistics indicate that the use of groundwater irrigates two-thirds of farms in India. On paper, India can be said to have the most abundant water resources. When most needed, water is not always available, and neither is it evenly distributed throughout the country. Over the years, the government has planned various schemes to help shift water from the North-East to the Western parts of the country that happen to be dry most of the time. The Bharatiya Janata Party has been advocating for the construction of canals to help connect the country's various rivers since the 2000s (Khalid, 2004). However, due to intense political and high-cost projection, the realization of the scheme might not be possible.

Annually, India receives an equivalent of gigalitres of rain. The rainfall never falls evenly across the nation; neither does it fall consequently throughout the year. According to India's Water Resource Information System, about 85 percent of rainfall in the country falls in July and September; the institution also outlines that the significant parts of "Haryana, Maryana, Andra Pradesh, Maharashtra, Gujarat, Madhya Pradesh, and Tamil Nadu are not only prone to short rainfalls but large year-to-year water variations (Renwal & Uniyal, 2017)." In the past decades, Indian experts and engineers have attempted to move water from the areas of abundance to regions with limited water supply.

Project Realization

India's National River Interlinking Project comprises thirty links meant to connect thirty-seven rivers across the nation. The network to be utilized includes nearly 3000 storage dams, all originating from a considerable barrier found in south Asia. Over the years, approximately two-thirds of Indian Agriculture depends on groundwater. In some regions, the groundwater is being utilized at a high rate to the point where it surpasses the natural recharge of aquifers (Renwal & Uniyal, 2017). Through a modern version of the water grid concept, also regarded as the river linking project, the government aims at connecting the rivers. The project's perspective is to facilitate water resource development. In this regard, the government formed the National Water Development Agency to complete the series of feasibility studies for the proposed links. The Supreme Court of India, with the support of the Bharatiya Janata Party (BJP) (major ruling party at that point of time), issued an order directing the government to complete the project. A task force was formed to help link the rivers in a project that would supply 160 million hectares of land with water and produce 34 gigawatts in hydroelectricity (Khalid, 2004). Many termed the project as an attempt to play with nature. Interlinking of rivers would result in a limited basin value, and a large-scale would be a disaster.

The project would be comprised of two components:

- The Himalayan Rivers Development Component from which, 14links would be identified. The component aimed at constructing storage reservoirs which were to be established on Ganga and Brahmaputra rivers. This would also include the tributaries from India and Nepal (Renwal & Uniyal, 2017).

The aim of developing this component is to facilitate the transfer of the surplus flow of Kosi, Gandak, and that of Ghara to the West (Vyas et al., 2016). Besides, the platform enables creating a link between the Ganga and the Yamuna rivers that could aid in transferring surplus water to drought-prone areas such as Gujarat, Haryana, and Rajasthan.

- The Southern Water Grid is also referred to as the Peninsular Rivers Development Component. This phase comprises 16 links that propose to bring up a connection to the Southern India rivers. This phase envisages helping link the Mahanadi and Godavari rivers to feed the Krishna, Pennar, Cauvery, and Vaigai rivers (Renwal & Uniyal, 2017).

The project requires several large dams as well as canals to be constructed. Besides the channels and the two main links, the phase also facilitates the connection of the Ken River to the Betwa, Parbati, Kalisindh, and the Chamba rivers.

Benefits to be accrued from the project

The generation of hydroelectric power is a foremost benefit. The interlinking project aims at generating a total of 34,000MW. Out of the total amount of energy to be harnessed, 4,000MW is to be harnessed from the peninsular component while the rest 30,000MW is tie b harnessed from the Himalayan phase (PMishra et al., 2017). It's difficult to accept the truth that a project could produce 34,000MW, mainly when a single Tehri dam has a capacity of

1000MW. A large amount of hydropower is expected to help alleviate millions of people's drinking water woes and supply water to industries operating in water-scarce cities, particularly those in the Southern and Western parts of the country.

The other benefit is irrigation. Interlinking of rivers aims at providing an additional 35 million hectares of irrigation. The project is to be exercised in the Western and Peninsular regions. The regions include 25 m ha of surface irrigation and 10 m ha of groundwater (Suresh & Rani, 2019). Furthermore, the project will create employment and help boost crop output as it increases firm incomes. The project is also projected to generate navigation benefits and fisheries.

Cost

The total cost incurred in implementation is "Rs. 560,000 Crores with an annual outlay of Rs. 16,000 Crore for over 35 years (Swathi Lakshmi et al., 2014)." The total price is comprised of 3 components, which include Rs. 1, 06,000 Crore to be incurred on the core of peninsular, Rs. 1, 85,000 Crore to be incurred on the Himalayan piece, and Rs. 2, 69,000 Crore to be incurred on the hydroelectric component (PMishra et al., 2017). In terms of use, the two phase's agriculture and electricity projects are estimated at Rs. 1, 35,000 Crore for the power project and Rs. 4, 25,000 Crore for irrigation and water supply. Project cost is supposed to be increased and escalated due to the possible delay in its implementation.

Perceived Impact

When asked about the Project, Himanshu Thakkar and Shripal Dharmadhikary from Manthan (an NGO) termed it a "disaster." Also, experts refute the core basis of this project by terming the rivers surplus or deficit. The project has been termed as a waste of resources. According to a non-profit environmental organization, when rivers wind through forested and cultivated regions, they tend to carry silt along the way (Vyas et al., 2016). This enhances productivity in the surrounding lands as well as in the coastal waters. This may be the basis for rich agriculture plans for India and the eradication of fisheries from the coastal regions. The project may result in conflict both at the state and the international level. The change in the hydrological profile of the country may create leave the rivers at a deficit (Suresh & Rani, 2019). For instance, the amount of water flowing on the Himalayan Rivers depends on the glacial melt. Aside from the considerable cost to be incurred, the project is expected to bring about human displacements. Hypothetically, the project assumes that the regions with low water surplus shall continue to have abundant water. However, if the situation was to change and the rivers have no water, the basis of the whole project would be compromised.

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