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Bundelkhand's Drought Crisis: Is Inter-Linking of Rivers a Feasible Solution?

A Case Study

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Introduction

The Bundelkhand region, comprising 13 districts across the states of Uttar Pradesh and Madhya Pradesh, is a historically enriched region in Central India. Seven districts of the region— Jhansi, Jalaun, Lalitpur, Hamirpur, Mahoba, Banda and Chitrakut come under the state of Uttar Pradesh and six districts—Datia, Tikamgarh, Chattarpur, Damoh, Sagar and Panna come under Madhya Pradesh. Additionally, these 13 districts taken together constitute one of the poorest regions in India and belong to the list of the country's "200 most backward districts".¹

The problem of water scarcity is not new in the Bundelkhand region and has been dealt with by the region since the time of independence, the situation however has taken a turn for the worse in the recent decades. Water insecurity has seen a constant rise with the problems of growing population, deforestation along with sand mining has made droughts even more frequent. The two important rivers that run through the Bundelkhand region are the Ken and the Betwa. While Ken river's water capacity varies from 8000 cusecs in winter months to 300 cusecs in the summer, the Betwa rivers capacity is much lower.²

During the 20th century, Bundelkhand only faced droughts once in every 16 years. Now, however, studies conclude that drought frequencies have increased to once every 8 years in Bundelkhand. Around 10 districts fell under the moderate to severe category of drought in 2013. Many districts of Bundelkhand are perpetually faced with one of the three kinds of droughts—hydrological, meteorological and agricultural.³

These facts clearly indicate the level of water crisis that the region faces. Bundelkhand, being a drought prone area has not only been robbed of the access to basic amenities but has also suffered several other socio-economic and ecological issues. The government of India, has

¹ Gupta, Anil. 30 November. Bundelkhand: Drought, miseries and hope. *Down to Earth*
<https://www.downtoearth.org.in/blog/bundelkhand-drought-miseries-and-hope-44680>

² Singh, R., & Joshi, S. (2020). *Managing the water crisis in Bundelkhand, India: a governance approach* (Doctoral dissertation, Massachusetts Institute of Technology).

³ Ravandale, Seema. N.C. Narayanan et al. 2020. 1 July. A reflection on multi-faceted droughts in Bundelkhand region. *India Water Portal*
<https://www.indiawaterportal.org/articles/reflection-multi-faceted-drought-bundelkhand-region>

recently given a nod to its ambitious project of interlinking of rivers to solve the Bundelkhand water crisis. It aims to link the 'surplus' Ken river with the deficit 'Betwa' river so that the districts deprived of water have access to it. In contrast to the aims of the project to help Bundelkhand survive its water crisis through interlinking, various scholars are of the view that the project is both an ecological and a sociological disaster and the creation of this link might not solve the problem but worsen it further.

Thus, this case study aims to track the entire issue that Bundelkhand faces and analyze the solution proposed by the government in the form of interlinking of rivers. The study intends to highlight the pros and cons of the decision in detail by taking into account all the conflicting arguments, with emphasis on the project's ecological impacts.

Bundelkhand's Water Crisis: Result of Unsustainable Ecological Practices

As mentioned above, Bundelkhand has had a long history of droughts and famines. Due to unsustainable practices in recent times the problem has aggravated. Below Average Rainfall (or frequently changing rainfall patterns) has hurt farmers' livelihoods along with making it difficult to access drinking water in the region. As per the findings of a 2014 report that analyzed drought patterns in the region, Bundelkhand's acute water crisis cannot be blamed on nature alone.⁴ It is more of a man-made problem due to faulty policies in place, lack of awareness and ignorance of traditional water conservation mechanisms that did wonders for the region in the past such as rain-water harvesting, building and maintenance of tanks and so on. The water in wells and reservoirs has thus depleted. (Gupta, Anil Kumar. Nair, Sreeja S. et al. 2014. Bundelkhand Drought - Retrospective Analysis and Way Ahead. *National Institute of Disaster Management*)

Unsustainable Farming Practices in Bundelkhand have wreaked havoc. Growing water-intensive crops in a water starved area has not only impacted the soil structure but has also impacted the

⁴ Gupta, Anil Kumar. Nair, Sreeja S. et al. 2014. Bundelkhand Drought - Retrospective Analysis and Way Ahead. *National Institute of Disaster Management*

laborers' livelihood along with depleting water resources of the region. Furthermore, illegal sand mining in the region has depleted the Ken and Yamuna rivers in Banda and Chattarpur districts⁵. Series of these ecologically disastrous activities have aided the present form of Bundelkhand which is looming under a severe water crisis. Before coming to the present policy decision of linking rivers, several other solutions have been undertaken which also require an analysis.

Policy Solutions

To overcome the water deficiency in the region, governments, in present as well as in the past, have tried to bring up several policy solutions. Following is a summarization of a few notable policies:

Swajal (1996) and Swajaldhara (2002): It was initiated in Bundelkhand and the then-undivided Uttar Pradesh hill districts to help with integrated service delivery, such as drinking water, sanitation, hygiene promotion, and facilitate long-term sustainability. Whereas, Swajaldhara aimed to increase the pace of reform in the rural drinking water sector.⁶

Bundelkhand Package: Based on the Central Team's report, in 2007, the Central Cabinet approved a package for implementing drought mitigation strategies in the Bundelkhand region at a cost of Rs. 7266 crore. The majority of the funds were used to alleviate the region's water scarcity challenges. The implementation of irrigation projects, construction of new dug wells, the deepening or recharge of existing dug wells, the maintenance of tanks and ponds, the installation of tube wells, the construction of check dams, and other water conservation projects were covered by this intervention. A forest project proposed during 2009-2012 aimed at soil and water

⁵ Lahariya, Khabar. 2018, April 22. In Bundelkhand's Illegal Sand mining ecosystem journalists (and others) are paid for their silence. *Scroll.in*.
<https://scroll.in/article/876156/in-bundelkhands-illegal-sand-mining-ecosystem-journalists-and-others-are-paid-for-their-silence>

⁶ Cullet, P. 2009. New Policy for Rural Drinking Water Supply: Swajaldhara Guidelines. *Cprindia.org*
<http://cprindia.org/sites/default/files/articles/epw%20swajaldhara.pdf>

conservation. This package also focused on regeneration of forests and restoring ecological balances.⁷

Apart from these two policies, the Indian government has come up with several other policies that directly or indirectly cater to the Bundelkhand crisis such as the National Watershed Development Project (1990-91), National Water Policy, 2002, Drought Prone Area Programme the National Land use Policy, and so on for recharging the natural water resources in the area, building water, soil, forest conservation plans and plans to recover from droughts.

These policies were definitely a start in the right direction but they have largely failed to help Bundelkhand recover from the crisis that it still faces. Continuing its efforts, the government recently launched the Ken-Betwa Link Project (KBLP henceforth) aiming to link the river with surplus water, i.e. Ken to the one in deficit, i.e. Betwa.

Conceptualizing the KBLP

The concept of interlinking dates back to the pre-independence period. In fact, in the late 19th Century, Arthur Cotton drew up a plan to improve inland navigation in Peninsular India. Post-independence in 1972, K.L.Rao, engineer and former Irrigation Minister resurrected the idea of forming a National Water Grid. In 1980, the National perspective plan was formulated by the Ministry of Irrigation for Water development and in 1995, the National Water Development Agency (NWDA henceforth), set up to study the feasibility of linking surplus and deficit basins found the possibility of the Ken-Betwa link project. Though NWDA formulated a detailed project report by 2008 but the project was not approved by the then government because it seemed to be dangerous for the environment as well as the inhabitants. With the change in government,

⁷ Mishra,Dheeraj. 2021. 25 Oct. Dried Wlls, Broken Dams, Distressed Villagers Define UP's Multicore 'Bundelkhand Package'. *The Wire*
<https://thewire.in/rights/uttar-pradesh-agriculture-bundelkhand-package-irrigation-adityanath>

in 2014, the KBLP was fast tracked and a special committee was formed in 2014 on Interlinking of Rivers Program (ILP)⁸.

The interlinking of Ken and Betwa is the first project to be adopted as a national strategy to allow water excess places to alleviate scarcity in drought-prone areas. A Daudhan dam and a Canal connecting the two rivers, the Lower Orr Project, Kotha Barrage and the Bina Complex Multipurpose project is to be built to transfer the water in two phases.⁹

How Feasible is the KBLP?

The Indian Government, strongly believes that the Ken-Betwa Link Project (KBLP henceforth) will improve the condition of Bundelkhand by - providing 49 Million cubic meters drinking water to approximately 1.4 million people in the two states of Uttarpradesh and Madhya pradesh, irrigating around 6,35,661 hectares of land, generating 78 MW of hydropower, increasing agricultural productivity by about 18-42% and providing jobs to people in various sectors.¹⁰

While on one hand the government is supportive of the ambitious KBLP, on the other hand several scholars, field experts and environmentalists have voiced their concern regarding the project. Several problems have been highlighted by them which are imperative to understand to be able to analyze the efficacy of the proposed project better.

One of the most important criticisms comes from the Central Empowered Committee, appointed by the Supreme Court, which states that the project would not benefit the people of Bundelkhand

⁸ (Sanghera, Tish. 2020. 4 July. Pipe Dreams: Why interlinking Ken-Betwa will not solve Bundelkhand's water crisis. *India Spend*.

<https://www.indiaspend.com/pipe-dreams-why-interlinking-ken-betwa-will-not-solve-bundelkhands-water-crisis/>

⁹ Mohanty, Kenneth. 2021. 10 December. Explained: As Ken-Betwa Project Gets Cabinet Nod, Why Modi Govt is Pushing For Interlinking of Rivers. *News18.com*

<https://www.news18.com/news/explainers/explained-as-ken-betwa-project-gets-cabinet-nod-why-modi-govt-is-pushing-for-interlinking-of-rivers-4539740.html>

¹⁰ Sanghera, Tish. 2020. 4 July. Pipe Dreams: Why interlinking Ken-Betwa will not solve Bundelkhand's water crisis. *India Spend*.

<https://www.indiaspend.com/pipe-dreams-why-interlinking-ken-betwa-will-not-solve-bundelkhands-water-crisis/>

and instead will prove very dangerous for the ecology. The damage done by the project will be irreversible and the water problem will also remain unresolved. In its report it has stated the ecological destruction that might be caused due to the construction of the daudhan dam which will not only restrict the wildlife corridor in the Panna Tiger reserve for the movement of animals but will make it impossible to recover the loss of the unique ecosystem of gorges, rocky cliffs and riverine flora and fauna on the banks of river ken. It further states that the construction of the dam will prove dangerous for the Ken Gharial Sanctuary downstream for which the silt coming through the river upstream is essential for survival. It will also be an impossible task to recover from the biological loss that will be induced by cutting 23 lakh trees in the process¹¹.

The construction of KBLP will also lead to the submergence of 5,803 hectares of the Panna Tiger reserve severely impacting the flora and fauna including endangered species such as vultures, gharials and tigers. According to S.K. Khanduri, the Inspector General of Forests, KBLP will lead to “alienation of large areas of CTH (critical tiger habitat)” along with “50% loss of existing unique habitat of highly endangered vulture.” Thus this development not only violates the Wildlife Protection Act 1972, that bars any project development in the protected area but also is against the St Petersburg Declaration on Tiger Conservation (to which India is a signatory) which says that no economic, commercial infrastructure development or other adverse activities should be carried out in critical tiger breeding habitats.¹²

Furthermore, experts have pointed out that the entire basis of the KBLP rests on faulty claims. In an interview with our team, Mr. Raju, from Vidhya Dham Samiti, an NGO that works in Bundelkhand, told our team that the Ken river does not have excess water and frequently experiences dry spells. Moreover, it is being asserted that the Ken and Betwa rivers belong to

¹¹ (Aggarwal, Mayank. 2019. 18 September, Ken-Betwa interlinking project may be economically unviable, says Supreme Court’s Committee, *Mongabay Series: Environment and Elections*, <https://india.mongabay.com/2019/09/ken-betwa-river-linking-project-may-be-economically-unviable-says-supreme-courts-committee/>)

¹² (Sanghera, Tish. 2020. 4 July. Pipe Dreams: Why interlinking Ken-Betwa will not solve Bundelkhand’s water crisis. *India Spend*. <https://www.indiaspend.com/pipe-dreams-why-interlinking-ken-betwa-will-not-solve-bundelkhands-water-crisis/>)

similar basins so when the Ken river dries up even the Betwa rivers get dry and thus there is no use of making a link.

Thus, it can be said that though the government sees merit in the project, several environmentalists are against the project that intends to use a large amount of public money to ultimately harm the environment and make the problem even worse for Bundelkhand.

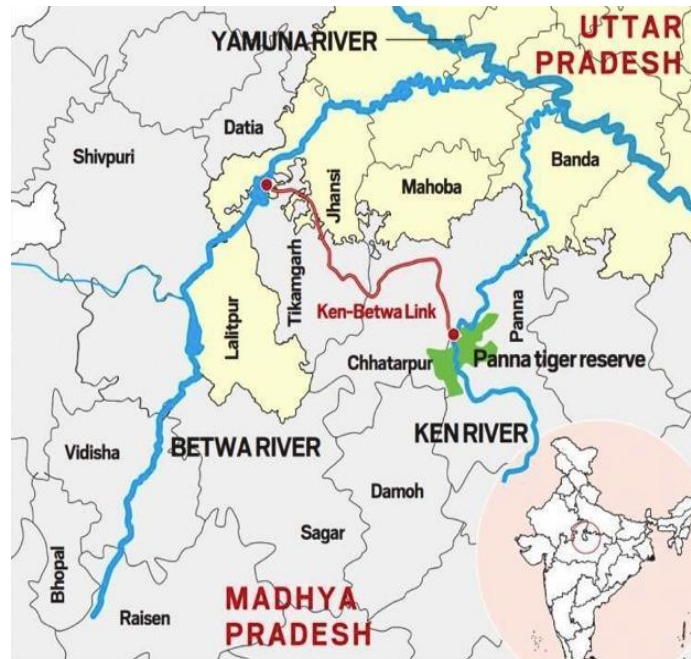
Epilogue

The KBLP project, formed in over a decade, has invited more brickbats than bouquets. Despite opposition from the environmentalists, the government has prepared an implementation plan for the project. It has received most of the important clearances such as the techno-economic clearance, environment and wildlife clearance and first stage forest clearance as well. Though these developments have been controversial and the wildlife clearance has even been challenged in the Supreme Court, the hearing on the CEC report is still to be made and thus the matter is sub-judice but the Union Cabinet had recently announced the funding and implementation of KBLP for a total cost of Rs 44,605 crores.

The interlinking of rivers has a good intent but anything that aims to change the natural flow of rivers, hampers the habitat and ecosystem around leading to irreparable ecological as well as socio-economic losses. These considerations are thus necessary for the government to make.

Exhibit

1. Map showing Ken-Betwa Interlink (Source: The Indian Express, Accessed on 15th January, 2022)



2. People protesting against the Ken-Betwa project (Source: News click, Accessed on 17th January, 2022)



3. People suffering due to lack of availability of water as handpumps go dry (Source: The new Indian Express, Accessed on 17th January, 2022)



4. Map of Bundelkhand showing increase in droughts (Source: International Water Management Institute, Accessed on 17th January, 2020)

