

# Bharat's Rightful Claim to the Ravi

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*Explainer*

**Ravi river, expression of Bharat's identity**

## Introduction

Ravi River holds a significant place in the cultural fabric of Bharat (India). Esteemed ancient texts such as Vedas highlight its sanctity in Hindu and Sikh traditions. The riverbanks are adorned with numerous pilgrimage sites and historic towns. A pivotal decision on water allocation was marked with completion of Shahpur Kandi Barrage, located on Punjab and Jammu and Kashmir borders, on the Ravi River.

As of February 25, 2024, flow of water to Pakistan has been halted. This strategic move stems from an agreement signed in 1979 between the States of Punjab and Jammu and Kashmir. The agreement aimed at constructing the Ranjit Sagar Dam and Shahpur Kandi Barrage downstream to utilize the river's water resources effectively and restrict flow to Pakistan.

Foundation stone for the dam was laid in 1982, envisioning Bharat's utilisation of river's waters as per terms of 1960 Indus Waters Treaty. However, it is today, both Punjab and Union Territory of Jammu and Kashmir reap benefits of Ravi's waters, primarily for irrigation, thereby supporting farmers in Bharat in their agricultural endeavors.

## Background

The Ravi River Basin in Bharat spreads over two States (**Himachal Pradesh and Punjab**) and Union Territory of **Jammu & Kashmir**. The largest part of the Basin lies within Himachal Pradesh constituting 43.06 per cent of Ravi River Basin.

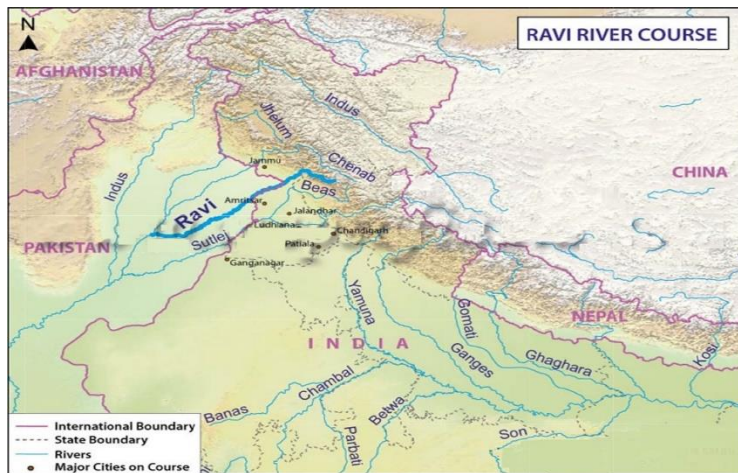
*Ecological makeup of Ravi River's River-scape area given below*

S. No	Ravi River	Area (km <sup>2</sup> )	Percentage	Coverage Area (States and UT)
1	Ravi River-scape	9173.61	78.36	Himachal Pradesh, Punjab & Jammu and Kashmir

2	Catchment beyond Ravi Riverscape	2532.8	21.64	Himachal Pradesh, Punjab & Jammu and Kashmir
	Total	11706.41	100	

*River-scape area of Ravi River*

**Indus Waters Treaty (1960)**, brokered by World Bank, governs water-sharing between India and Pakistan from the Indus River system. **Under this treaty, India has exclusive rights to water of the Ravi, Beas and Sutlej rivers** while Pakistan has control over the **Indus, Jhelum, and Chenab rivers**.



The Shahpur Kandi Barrage, located in Punjab, was planned in 1979 to utilize India's share of Ravi River water for irrigation and power generation. Due to several issues, the rights to Ravi River were not being

effectively utilised by farmers in Bharat as the large amount of water which belongs to Bharat (India) flowed unused to Pakistan from the old Lakhapur dam.

### **Historical Significance**

As per ancient history traced to Vedas, the river Ravi was known as Iravati or Parushani and Hydraotes to ancient Greeks. Maharishi Valmiki composed the Ramayana on the bank of river Ravi. The river holds significance in events like Battle of the Ten Kings was fought on its bank as mentioned in Rigveda. The river Ravi witnessed the last 17 years of Guru Nanak's life, also cleansed the body of fifth Sikh Guru Arjan Dev after he was tortured on orders of invader Jahangir, and it accepted the Guru in its embrace, providing him salvation from the Mughal forces. River Ravi has religious, cultural and historic values. Ravi river is scared place for both Hindus and Sikhs.

The river Ravi is located in northwestern India and northeastern Pakistan, one of the five rivers in Punjab region. The waters of the river Ravi drain into Arabian Sea (Indian Ocean) through the river Indus in Pakistan. The river Ravi originates in Himalayas in Kangra District of Himachal Pradesh state, Bharat. It flows northwest in a west-northwest direction, past Chamba and then turns southwest at the Jammu and Kashmir union territory boundary. It follows for more than 50 miles (80 km) before entering the province of Punjab in Pakistan. It travels around 450 miles (725 km) and passes through Lahore before turning west near Kamalia. Eventually, it joins the Chenab River south of Ahmadpur Sial. The length of Ravi River in India is 341 km and having catchment area of 11,706.41 km. Out of the total length of Ravi River, 168 km lies in Himachal Pradesh, 63 km in Jammu & Kashmir Union Territory (J&K UT) and 110 km in Punjab.

### Indus Waters Treaty (1960)

The Indus Waters Treaty, an agreement between India and Pakistan which was signed on September 19, 1960 brooked by World Bank on use of the water resources of the Indus River system.



*Here's a summary of the key points:*

- **Division of Rivers:** The Eastern Rivers (Sutlej, Beas, and Ravi) are for unrestricted use by Bharat, while Pakistan has unrestricted use of the waters of the Western Rivers (**Indus, Jhelum, and Chenab**) after allowing for specific uses by India (domestic, non-consumptive, and agricultural).

- **Transition Period:** Bharat provides financial aid to Pakistan to help them build replacement canals as they shift from dependence on Eastern Rivers to the Western Rivers during a 10-year transition period.
- **Data Exchange:** Both countries are obligated to share data on water flow, withdrawals, and other relevant information.
- **Future Cooperation:** The treaty encourages cooperation between the two countries for the development of the Indus River system, including joint projects and data sharing.
- **Dispute Resolution:** A Permanent Indus Commission is established to handle any differences or disputes arising from the interpretation or application of the Treaty.

### **Importance of River Ravi for Bharat**

The Ravi River, coursing through the Himalayas and weaving its way through State of Himachal Pradesh, Punjab & UT of Jammu and Kashmir, holds immense importance for Bharat, playing a vital role in the nation's history, culture, and development. Some points that show the significance of this life-giving waterway in present time.

- **Lifeline for Agriculture:** The Punjab region's agriculture has depended on the Ravi River for millennia. Large areas of land are nourished by its rich waters, which make it possible to grow crops like sugarcane, wheat, rice, and cotton. Millions of people now have food security thanks to the building of canals like the Upper Bari Doab Canal, which has further streamlined irrigation.
- **Hydropower Generation:** The Ravi River is an important source of renewable energy due to its strong flow. By utilising the energy of the river, hydropower plants provide clean electricity to meet the region's increasing need. This helps create a more environmentally friendly future by lowering reliance on fossil fuels
- **Ecological Diversity:** The environment of the Ravi River is home to a wide variety of plants and animals. Numerous plant and animal species, including endangered ones like the snow leopard

and dolphin of the Indus River, can be found on its rich floodplains. The river is also essential to preserving the area's natural equilibrium.

### **Shahpur Kandi Barrage**

The construction of Shahpur Kandi Dam is located on the Ravi River in Pathankot district, Punjab, downstream from the existing Ranjit Sagar Dam, a 55.5-meter-high dam with two Power Houses and a total installed capacity of 206 MW, is underway across the Ravi River. It is located 8 km upstream of Madhopur Head Works and 11 km downstream of the Ranjit Sagar Dam Project. The project will produce intensive irrigation in the UBDC System, regulated supply to Rajasthan, and irrigation potential of 37173 hectares (5000 in Punjab and 32173 in J&K). It will also serve as a balancing reservoir for the Ranjit Sagar Dam Project, as its existing releases are seriously interfering with the UBDC System due mostly to power-generation considerations. The project is a multipurpose, ongoing river valley project that involves power generating and irrigation in the states of Punjab and UT of J&K.

Indian Ministry of Water Resources designated the Shahpur Kandi Dam Project as a "National Project" in February 2008. The revised cost estimate of the project was approved in February 2010 with investment clearance of Rs. 2285.81 crore on April 2008 price level by the Planning Commission. The cost allocation between the irrigation and power components was approved at 28.61% and 71.39%, respectively, meaning that the irrigation component is worth Rs. 653.97 crore and the power component are worth Rs. 1631.83 crore. According to the National Project's rules, Punjab State will pay 10% of the irrigation component's cost while the Indian government would cover 90% of the total as central assistance.



## **Shahpur Kandi Dam Project (Shahpur Kandi Barrage) Highlights**

### ***RESERVOIR***

**Gross Storage Capacity:** 12071 Hec. m

**Max. Design flood level:** El.405.00 m

**Top Level of Dam:** El. 407.50 m

### ***CONCRETE DAM***

**Max. Height above foundation:** 55.50 m

**Height above river bed (El.373.0):** 34.5 m

**Width of Road:**12.0m

### ***SPILLWAY (OVERFLOW SECTION)***

**Clear Waterway 22 spans of 12 m each:** 22 x 12 = 264 m

**Gross Waterway:** 415 m

**Pier Width 21 Nos.:** 7.00 m each

**Crest elevation:** 380.00 m

**Type of Gates:** Radial gates.

**Size of Spillway Gates 22 No. Radial Gates of size:**12m x 7m

**Elevation of Cistern:** El. 359.00 m

After the 3 decades the Shahpur Kandi Barrage project is completed to addresses the long-standing issue of underutilised water rights. The project's primary purpose isn't to prevent water flow to Pakistan. But project represents a significant step towards addressing water resource management challenges in Bharat. This dam will allow storage of excess water for later use which goes excess during the rainy season from downstream catchment areas. This dam will act as a balancing

reservoir for the Ranjit Sagar Dam, ensuring a more consistent water supply for irrigation purposes. For which our framers were away from last 45 years. Besides UT of J&K, the dam will also benefit water availability in state of Punjab & Rajasthan and will fostering agricultural and economic growth in UT of Jammu and Kashmir and state of Punjab.

### **Benefits from Shahpur Kandi Barrage**

- 1. Enhanced Irrigation Potential:** One of the most significant benefits is the dam's ability to irrigate vast swathes of land. With an irrigation potential of 37,173 hectares, the project will provide a reliable water source for agriculture in both State of Punjab and UT of Jammu & Kashmir. (1150 cusecs of water will now irrigate 32,000 hectares of land in UT of Jammu & Kashmir's Kathua and Samba districts.) This translates to increased agricultural productivity, improved food security, and better livelihoods for farmers in the region.
- 2. Boost for Renewable Energy:** The project boasts two powerhouses with a total installed capacity of 206 MW. This will This translates to clean and sustainable hydropower generation, contributing to India's renewable energy goals and reducing dependence on fossil fuels. The Generate hydroelectricity from this will improve electricity supply of which 20% of the power generated will be allocated to UT of Jammu & Kashmir
- 3. Economic Growth:** The project's multifaceted benefits – improved irrigation, increased agricultural output, and hydropower generation – have a cascading effect on the regional economy. This translates to job creation, improved living standards, and overall economic growth for Punjab, Rajasthan Jammu & Kashmir. Promote tourism: The project, attract tourists due to its unique features & will help in economic growth of Punjab region

- 4. Infrastructure Development:** The construction and operation of the Shahpur Kandi Dam project itself has spurred infrastructure development in the region. This includes the creation of canals, power grids, and associated infrastructure, leading to improved connectivity and overall development.

## **Fears Abated: Shahpur Kandi Project Won't Affect Water Flow to Pakistan**

Experts have stressed that the project will not have a significant effect on the flow of water to Pakistan. The Ravi River will naturally carry surplus water downstream during monsoon season. The purpose of the dam is not to control this flow, but to store it for later use in drier seasons. This means that the water will be available for Bharat and downstream areas. It is important to note that the Ravi Dam, which is located upstream from the project, already controls water flow according to the Indus water Treaty, which is an international agreement for the allocation of water rights between the two countries. Since the project focuses on the storage of additional water captured in the downstream catchment area within Bharat, it does not impact the allocation of water under the treaty to Pakistan.

All in all, the fears that the project will have a significant impact on water flows to Pakistan are groundless. The project aims at improving water management within the Indian territories, compliance with international agreements, and responsible water use.

## **Future Potential**

The Ravi River has a lot more to offer in the future. With good governance and sustainable practices, it can continue to serve as a water source for irrigation, drinking water, and industrial applications. Technological developments could also open up further possibilities for exploiting the river's hydropower potential, as well as encouraging eco-tourism along its shores. The Ravi River is much more than a river; it is an essential part of Bharat's identity. Understanding its multifaceted

importance is essential for managing it sustainably and safeguarding its legacy for future generations.

## **Conclusion**

The completion of Shahpur Kandi barrage on the River Ravi presents a number of challenges and opportunities for Bharat. The Barrage aims to improve water resource management and water security within India's borders. However, it is essential for Bharat and Pakistan to work together to ensure sustainable water management practices and prioritize ecological health. The long-term survival of the river Ravi depends on India and Pakistan working together to ensure the river's sustainability while meeting the demands of their respective population and protecting the environment for generations to come.

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