Shahpurkandi Dam Project

Why in news?

As the Shahpurkandi barrage on the river Ravi in the Indian state of Punjab nears completion, there are fears in downstream Pakistan regarding the restriction of water flow.

River Ravi
• **Location** - Ravi is a *trans-border river* that flows through India and Pakistan. • It is one of the *5 tributaries of the Indus River* that gives the Punjab region its name and identity. • **Origin** - In the Himalayas within Himachal Pradesh • **Length** – Has a total length of 720 km, of which 320 km are in India and 400 km are in Pakistan. • **Other names** - Iravati, Hydraotes, Parushani, The river of Lahore (since Lahore is situated on its eastern bank). • **Tributaries** - Seul, Saiwa, Nai, Ujh, Budhil, etc. • **Dams and barrages built on Ravi** - Ranjit Sagar Dam, Chamera Dam, Madhopur Headworks, Sidhnai Barrage and Shahpur Kandi barrage • **Historical significance** - The *Battle of the Ten Kings* was fought on the banks of the Ravi River, which was then called Parushani. • **Religious significance** - Guru Nanak, the founder of Sikhism, was believed to be born on its banks in the village of Rai Bhoi di Talwandi, now known as *Nankana Sahib.* • The Hindus believe that it as one of the *Sapta Sindhu,* or the seven holy rivers of India.

What is the project about?

- **Location** - It is a 55.5-metre-high dam constructed on the ***river Ravi***.
- It is located downstream of *Ranjit Sagar dam* and upstream of *Madhopur barrage* in Punjab, India.
- **Project** - It is a part of the Rs 3,300 crore Shahpurkandi multipurpose river valley project, which also comprises two hydropower plants with an installed capacity of 206 MW.
- **Year** - 1st ideated in 1979 between Punjab and Jammu and Kashmir and was declared a national project in 2008.
- **Implemented by** – Punjab
- **Objective** – To minimise some of the water of Ravi that is currently going waste through the Madhopur barrage downstream to Pakistan.

How significant is Shahpurakandi Dam Project to India?

- **Irrigation** - It will facilitate irrigation of 5,000 hectares in Punjab and over 32,000 hectares in Jammu and Kashmir.

- **Power -** J&K will get 20% share of power and Punjab will get 80%.
- **Full utilization of river** - It will also check uncontrolled flow of water (approximately 2 MAF) to Pakistan.
- **Boosts defence potential** - Regulated water supply in canals will also bolster defence potential of the vulnerable ***Kathua-Samba corridor.***
- **Ensures water supply** - Balancing the reservoir will also optimise water supply to ***Upper Bari Doab Canal*****,** which was erratic and dictated by power generation considerations.
- The earlier, tedious method of lifting water into ***Tawi Lift Canal*** will get simplified with gravity feed.

India, with the lowest per-capita freshwater availability, has barely 4% freshwater reserves for 17% of the world's population.

How is the usage of Ravi river water regulated?

- ***Indus Waters Treaty (IWT)*** administers how river Indus and its tributaries that flow in India and Pakistan will be utilised.
- The IWT is one of only two major transboundary water treaties in South Asia (the other being the 1996 Ganges treaty).
- Signed in ***1960*** between between India and Pakistan.
- It was brokered by the ***World Bank.***

Rights of water usage		
River segment	**India's rights**	**Pakistan's rights**
Eastern Rivers - Sutlej, Beas and Ravi	Unrestricted use over the Eastern Rivers	-
Western rivers - Indus, Chenab and Jhelum	Obligation to let flow the western rivers unrestricted. However, since Indus flows from India, it is allowed to use 20% of its water for • Irrigation • Power generation • Transport purposes	Unrestricted use of the Western rivers.

- **Rights of water usage** - Both India and Pakistan have the ***right to non-consumptive use*** and rights of drainage issues and river conservation aspects.
- Pakistan also has the right to object to the design of the Indian projects.
- India is currently utilising around 94-95% of its share of water in the eastern rivers through a network of dams, including the ***Bhakra*** on Sutlej, ***Ranjit Sagar*** on Ravi, and ***Pong and Pandoh*** on Beas.

Shahpur Kandi dam project, a proposed multipurpose project on the Ujh river in J&K and the 2nd Sutlej-Beas link project in Punjab are the 3 key projects of India to utilise the water guaranteed under the IWT.

What is the issue over water sharing?

- Since signing the treaty, one of India's biggest grievances has been that does not allow it to build storage systems on the western rivers.
- According to the treaty, such systems can be built under exceptional circumstances but India complains that any such attempts are blocked by Pakistan.
- In 2023, India had issued a notice to Pakistan for the modification of the Indus Waters Treaty (IWT).

China is building Yarlung-Zangbo dam on Tsangpo (Brahmaputra) with plans to build a 1,100-km long channel to Takaltaman desert.

References

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2. Firstpost | Why India has stopped flow of Ravi water to Pakistan?
3. The Print | Shahpurkandi dam complete after 3 decades

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