Water Crisis in Delhi

Why in news?

Recently, the Supreme Court directed Himachal Pradesh to release water to alleviate Delhi's water shortage during a heatwave.

Delhi's water source
• **Water dependency-** Delhi depends on neighboring states to meet around 50 per cent of drinking water demand of its residents. • **Semi-arid zone**- The city, being located in a semi-arid zone, depends to a great extent on raw waters from the Ganga basin, Yamuna sub-basin, Indus-basin, in addition to its own internal aquifers and its groundwater resources. • **Major rivers**- Delhi gets most of its water from the ***Yamuna, Ravi-Beas, and Ganga*** rivers. • **Ganga-** Through Upper Ganga Canal in UP, Delhi receives 470 cusecs (roughly 254 MGD) of water. • **River channels-** Two channels entering Delhi from Haryana the ***Carrier Lined Channel (CLC) and the Delhi Sub Branch (DSB)*** supply Delhi with water from the Yamuna and Ravi-Beas rivers. • **Water capacity**- Delhi receives 719 cusecs of water through CLC, a lined channel meant to reduce seepage- induced water loss, and 330 cusecs through the DSB. • **Delhi Jal Board**- It takes water directly from Yamuna to try and meet demand. - It supplements its river- water supply with ground water around 135 MGD of which are drawn from Delhi's tubewells and ranney wells. • ***Delhi is not allotted*** any specific amount of water it can draw directly from the river.

What triggered Delhi's water shortage?

- **Under performance-**The water treatment plant (WTP) in ***North Delhi's Wazirabad*** was functioning ***below its capacity***.
    - It is the ***third largest*** of DJB's nine WTPs in terms of capacity, and primarily ***depends on water from the CLC and DSB***.
- **High temperature-** Delhi experienced record high temperatures, and thus, a steep surge in demand for water.
- **Electricity issues**- Some water treatment plants also dealt with ***short power failures***.
- **Lesser capability**- DJB is ***not capable*** of meeting the city's requirement of 1290 MGD during peak summers as estimated by the Economic Survey for 2023-24.
- **Rainfall deficits**: Across the states of ***Himachal Pradesh, Punjab, Haryana, and Delhi*** recorded large rainfall deficits according to the India Meteorological Department (IMD).
    - Scant rainfall meant that the ***Yamuna simply did not have enough water for the DJB*** to draw from the Wazirabad reservoir.

- **Transit losses**- **Water** can be lost during transit due to seepage, evaporation, or other factors. These losses contribute to a decrease in the overall availability of water for distribution.
- **Infrastructure deficit**- The infrastructure for water treatment, storage, and distribution in Delhi may face challenges such as leaks, inefficiencies, or insufficient capacity, further exacerbating water shortages during periods of high demand.
- **Inter-State dispute**- Delhi accuses Haryana of inadequate water supply, while Haryana officials attribute the shortfall to higher evaporation due to severe heat.

Water allocation from Yamuna

- *A water sharing agreement on the surface flow of the Yamuna* among Haryana, Uttar Pradesh, Rajasthan, Himachal Pradesh and Delhi in 1994, specified that Delhi is to get 0.076 billion cubic metres of water from March to June.
- The annual allocation for Delhi is 0.724 BCM. This amounts to roughly *435 MGD*.
- This allocation is regulated by the ***Upper Yamuna River Board***, with the *1994 agreement due for revision in 2025*.
- *In 1996*, the Supreme Court ordered that Delhi must receive sufficient water from Haryana via the Yamuna River to keep the Wazirabad and ***Hyderpur reservoirs*** full for domestic use.

What lies ahead?

- The Delhi government has implemented measures such as ***operating tube wells round the clock*** and ***deploying water tankers*** to cater to the affected regions grappling with water scarcity.
- ***A blanket ban on the use of potable water at construction sites*** has been enforced to conserve this precious resource.
- ***A central water tanker control room*** is made and the deployment of quick response teams across all 11 Delhi Jal Board zones to tackle ***water-related emergencies*** effectively.
- But the ***daily rush to collect water***, especially amid the ongoing heatwave, is ***not a peaceful process*** and ***fights*** among residents are common.

References

1. Indian Express | Heatwave, water shortage in the national capital
2. Delhi.gov| Water supply

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