



Mains Practice Questions

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Q. As the severity of the water crisis in India increases every year, all stakeholders must use a variety of measures to tackle the water crisis. Comment. (250 Words)

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Approach

- Introduce with emphasising the severity of the water crisis, give an overview of the water crisis in India.
- Discuss various measures that can be taken to resolve the crisis.
- Conclude suitably.

Introduction

India constitutes 16% of the world's population, but the country has only 4% of the world's freshwater resources. With the changing weather patterns and recurring droughts, India is water stressed.

As many as 256 of 700 districts have reported '**critical**' or '**over-exploited**' **groundwater levels**, according to the latest data from the Central Ground Water Board (2017).

This means that fetching water in these districts has become harder as the water table has fallen.

Body

Water Crisis Overview in India:

- **Low Rate of Collection:** India receives 3,000 billion cubic metres of water every year through rainfall or other sources such as glaciers; of this, only 8% is collected.
- **Over-extraction & Over-reliance on Groundwater:** India fills groundwater aquifers at the rate of 458 bcm per year, while it extracts around 650 bcm of water from the earth.
 - 89% of India's water resources are used for agriculture, out of which 65% is withdrawn from under the ground.
 - Thus, one of India's biggest challenges is to conserve groundwater.
- **Water Stress:** As per a NITI Aayog report, currently nearly 820 million people in 12 major river basins of India face extreme water stress.
- **Qualitative Issue:** Adding to the issue of lack of water availability is the issue of water quality.
 - Groundwater in one-third of India's 600 districts is contaminated mainly through fluoride and arsenic.
 - Further, there has been a 136% increase in the number of grossly polluting industries between 2011- 2018, according to the State of India's Environment report, 2019.

Way Forward

- India has been consistently working towards improving access to water. The **Jal Jeevan Mission (JJM)** guidelines released in 2019 provide provision of tap water connections to households, which hold promise for the women in the country.
JJM stresses the need to involve women in leading the scheme's activities, especially at the village level.
- **Incentive based water conservation** in rural parts in the water stressed areas is another solution, for example, if a particular level of groundwater level is maintained, higher MSP can be provided to the farmers of that region.
- **Improving Water Use Efficiency:** Water-use efficiency in agriculture can be ensured by making farmers aware and by providing them, on the ground, technologies like the one related to water resistant crops.
In-situ water conservation techniques like rain water harvesting, check dams need to be continued.
- **Water Management:** For the time being, there is a need to design and develop around water management. Also, water management needs to be the central focus of efforts in the agriculture sector and the environment improvement. Right water management will lead to right land management, health management and education management.
- **Data and System Integration:** Various datasets including demography, socio-cultural, economic, and other parameters need to be integrated with spatial and non-spatial data related to water, like soil moisture, annual rainfall, rivers, aquifer, groundwater levels, water quality etc.
- **Sharing of Best Practices:** A lot of knowledge exists that can help stakeholders to leverage from and not reinvent the wheel.

A central repository of such a knowledge base, in the form of a Knowledge Portal can be created and maintained by the Ministry of Jal Shakti that includes case studies, best practices, tools, information on data sources etc.

Conclusion

The Government needs to holistically handle the supply as well as the demand side of water management and everybody in the society, i.e. the central government, the state governments (water, being the state subject), citizens, NGOs and companies need to come together to tackle the water crisis in the country.