



## Depletion in Groundwater Levels

**For Prelims:** Central Ground Water Board (CGWB), Atal Bhujal Yojana (Atal Jal), Jal Shakti Abhiyan (JSA), Ground Water Depletion

**For Mains:** Ground Water Depletion, Government Policies and Interventions

### Why in News?

As per the recent analysis done by [Central Ground Water Board \(CGWB\)](#), Ground water levels in some parts of the Country are declining.

- The data collected by CGWB during November 2021 when compared with the decadal mean of November 2011 to Nov 2020 indicates that about 70% wells have registered rise in water level whereas, **about 30% of the wells monitored have registered decline in ground water level mostly in the range of 0-2 m.**

### What is the Present Status of Groundwater Depletion in India?

- **Status of Groundwater Depletion:**
  - According to the CGWB, with **230 billion metre cubes of groundwater drawn out each year** for irrigating agriculture lands in India, many parts of the country are experiencing rapid depletion of groundwater.
  - The total estimated groundwater depletion in India is in the range of 122-199 billion metre cubes.
  - **89% of ground water extracted** is used in the **irrigation sector**, making it the highest category user in the country.
    - This is followed by ground water for domestic use which is 9% of the extracted groundwater. Industrial use of ground water is 2%. **50% of urban water requirements** and **85% of rural domestic water requirements** are also fulfilled by ground water.
- **Causes:**
  - **Green Revolution: Green Revolution** enabled water intensive crops to be grown in drought prone/ water deficit regions, leading to over extraction of groundwater.
    - Frequent pumping of water from the ground without waiting for its replenishment leads to quick depletion.
    - Further, Subsidies on electricity and high **MSP (Minimum Support Price)** for water intensive crops.
  - **Industries Requirement:** Water contamination as in the case of pollution by landfills, septic tanks, leaky underground gas tanks, and from overuse of fertilizers and pesticides leading to damage and depletion of groundwater resources.
  - **Inadequate Regulation:** Inadequate regulation of groundwater encourages the exhaustion of groundwater resources without any penalty.
  - **Federal Issue:** Water being a **State subject**, initiatives on water management including water conservation and water harvesting and making available adequate drinkable water

to citizens in the Country is primarily States' responsibility.

## What is Central Ground Water Board?

- It is a subordinate office of the **Ministry of Water Resources and is the National Apex Agency** entrusted with the responsibilities of providing scientific inputs for management, exploration, monitoring, assessment, augmentation and regulation of groundwater resources of the country.
- It was established in 1970 by renaming the **Exploratory Tubewells Organization under the Ministry of Agriculture** and later on merged with the Groundwater Wing of the Geological Survey of India during 1972.
- It has its headquarters at Bhujal Bhawal, Faridabad, Haryana.
- Various activities related to regulation of ground water development in the country are being looked after by the **Central Ground Water Authority (CGWA), constituted under the Environmental (Protection) Act, 1986.**

## What are the Initiatives Taken by the Government?

- **Central Government:**
  - It is promoting the concept of **conjunctive use of surface and groundwater based on the village/gram panchayat level water security plan** prepared in a scientific manner through participation of communities/stakeholders.
  - **Atal Bhujal Yojana (Atal Jal):** It is a Rs. 6000 crore Central Sector Scheme with World Bank assistance, for **sustainable management of ground water resources** with community participation.
  - **Jal Shakti Abhiyan (JSA):** It was launched in 2019 in **256 water stressed districts in the country to improve water availability including ground water conditions in these areas.**
    - It has special emphasis on creation of recharge structures, rejuvenation of traditional water bodies, intensive afforestation etc.
  - **Aquifer Mapping and Management Programme:** The CGWB has taken up **Aquifer Mapping and Management Programme.**
    - The program is aimed to delineate aquifer disposition and their characterization for preparation of aquifer/ area specific groundwater management plans with community participation.
  - **Atal Mission for Rejuvenation and Urban Transformation (AMRUT):** The Mission focuses on development of basic urban infrastructure in the **AMRUT** cities, such as water supply, sewerage & septage management, storm water drainage, green spaces & parks, and non-motorized urban transport.
- **State Government:**
  - There are many states government initiative like,
    - Mukhyamantri Jal Swavlamban Abhiyan' in Rajasthan,
    - 'Jalyukt Shibir' in Maharashtra,
    - 'Sujalam Sufalam Abhiyan' in Gujarat,
    - 'Mission Kakatiya' in Telangana,
    - Neeru Chettu' in Andhra Pradesh,
    - Jal Jeevan Hariyali in Bihar,
    - 'Jal Hi Jeevan' in Haryana,
    - Kudimaramath scheme in Tamil Nadu.

## Way Forward

- **Artificial Recharge of Groundwater:** It is the process of spreading or impounding water on the land to increase the infiltration through the soil and percolation to the aquifer or of injecting water by wells directly into the aquifer.
- **Groundwater Management Plants:** Installing groundwater management plants at local levels

will help the people know the groundwater availability in their area, making them use it wisely.

## UPSC Civil Services Examination Previous Year Question (PYQ)

### Prelims

#### Q. Consider the following statements: (2014)

1. Animal Welfare Board of India is established under the Environment (Protection) Act, 1986.
2. National Tiger Conservation Authority is a statutory body.
3. National Ganga River Basin Authority is chaired by the Prime Minister.

#### Which of the statements given above is/are correct?

- (a) 1 only  
(b) 2 and 3 only  
(c) 2 only  
(d) 1, 2 and 3

Ans: (b)

Exp:

- The Animal Welfare Board of India was established in 1962 under Section 4 of the Prevention of Cruelty to Animals Act, 1960. Hence, statement 1 is not correct.
- The National Tiger Conservation Authority is a statutory body under the Ministry of Environment, Forests and Climate Change constituted under the Wildlife (Protection) Act, 1972. Hence, statement 2 is correct.
- National Ganga River Basin Authority (NGRBA) was established in 2009 under the Environment Protection Act, 1986, which declared Ganges as the “National River” of India. It is a financing, planning, implementing, monitoring and coordinating authority for the river Ganges. **It functions under the erstwhile Ministry of Water Resources, River Development and Ganga Rejuvenation (now Ministry of Jal Shakti). It is chaired by the Prime Minister of India. Hence, statement 3 is correct. Therefore, option (b) is the correct answer.**

### Mains

Q. What is water stress? How and why does it differ regionally in India? (2019)

Q. What are the salient features of the Jal Shakti Abhiyan launched by the Government of India for water conservation and water security? (2020)

Source: PIB