

Drinking Water situation in Rural India

August 23, 2019

Source: *Kurukshetra Magazine*

Manifest Pedagogy:

Water issues have been a key issue in climate change, rural development, sustainable agriculture etc. UPSC tends to cover topics in news and topics with traverse dimensions of agriculture, economics and environment. Water issues in this regard are of particular importance for both prelims and mains.

In News: Water Mission

Static Dimensions: National Rural Drinking Water Programme & Policies and Processes

Current Dimensions: Policy Recommendations & Jal Shakti Abhiyaan

Supply of good quality water in sufficient and safe sanitation practices in rural area are interconnected with the health and economic well-being of the people. Water is not only required for drinking and cooking but also to maintain hygiene.

The Sustainable Development Goals 2015-2030, include Goal 6, which emphasizes upon the importance of ensuring availability and sustainable management of water and sanitation.

Rural regions in India, which primarily have agricultural and domestic water requirements, suffer from many challenges such as water pollution and decreasing ground water availability, ec. Arsenic and fluoride contamination is very high in some of the regions of the country.



Composite water management index and performance of the states



National Rural Drinking Water Programme

- NRDWP is a Centrally Sponsored Scheme launched in April, 2009 aimed at providing every person in rural India with adequate safe water for drinking, cooking & other domestic basic needs on a sustainable basis.
- A performance audit of NRDWP was conducted by the Comptroller & Auditor General (CAG) of India in 2018 to assess how far the objectives of the programme were achieved between 2012 to 2017 & examine various aspects of Programme such as planning, delivery mechanism, fund management, implementation including coverage of partially covered & quality affected habitations, water quality monitoring & surveillance.
- As per the audit report it was found that insufficient community involvement , lack of long term sustainability plan, over-reliance on depleting ground water resources and lack of focus on operation and maintenance of created infrastructure is not serving the purpose of building water secured rural India.
- Historically , communities in India managed water and had their unique mechanism of fighting climate extremes.
- Due to different topography & agro climatic conditions, various regions in India had different structures to utilize & conserve water. Broadly these practices could be classified into the following three **categories:**
 1. Obstructing/diverting flow of stream/river
 2. Storage in wells/step wells/below ground level storage structure

3. Collection & use of rainwater on surface (examples of such structures are nadis, kundis, talabs, jaldhar, farm ponds etc)
2. Annual cleaning of ponds, conservation of forests, distribution of resources etc. was observed as a regular practice across India without any Government /external support.

Drinking water situation in India Rural India



Drinking water treatment

Following are the basic water treatment technologies;

- **Slow sand filters:** if designed properly, it purifies the water efficiently by reducing turbidity and bacterial contamination.
- **Chlorination:** disinfection using chlorine has been a common practice in various water supply systems. Being strong oxidant, chlorine is used to remove taste and odour, as well as biological contamination.
- **Solar Disinfection:** This method utilizes solar energy for water disinfection at household level. A clean & transparent PET plastic bottle (preferably below 2 liters) is filled with water & kept in direct sunlight for 6 hours during noon on sunny days & two days if sky is more than 50 % clouded. It has no chemical and external energy requirements.



Policy Recommendations

Major policy recommendations in regard to rural water management are;

1. Better data
2. Basin/Sub-basin level water management.
3. Water source improvement
4. Integrated water & waste management.
5. Supply & access augmentation
6. Demand side management.
7. Capacity building
8. Institutional & legislative reforms
9. Revival of traditional wisdom
10. Preparedness for disasters

Water Quality Issues

- The Government of India data shows that the coverage of 80.6% (17.19 lakh) of rural habitations with drinking water, it indicates neither average actual supply of drinking water being supplied through installed capacities in rural areas.
- A study of quality affected habitations by category of contaminants shows that as many as 4.07 cr. Rural population are suffering from water contamination that varies from fluoride arsenic, iron, salinity, nitrate, heavy metals, etc.

Water Availability in Rural Areas

- In 1950 India had 3,000 – 4,000 cubic meters of water per person. Today, this has fallen to around 1,000 cubic meters, largely due to the population growth.
- According to the NSSO (2011 – 12), about 88.5 % households in rural India had improved source of drinking water & among these, 85.8 % had sufficient drinking water.

Access to Drinking Water in Rural India

- Ministry of Drinking water & Sanitation (MoDWS) under centrally sponsored National Rural Drinking Water Programme (NRDWP) provides financial & technical

assistance to the State Governments.

- NRDWP aims at providing every person in rural India with adequate safe water for drinking, cooking & other domestic basic needs on sustainable basis.
- **A strategic Plan for rural drinking water sector is prepared for the period 2011 – 2022, by the Government of India.** Plan aims to extend water supply to more households in rural areas.
- **A National Water Quality Sub-Mission** was also launched by MoDWS, in the year 2017, to **address the problem of Arsenic & Fluoride** affected habitations in country & mitigate concerns.

Government Initiatives

Supply of potable drinking water has been a top priority of Central and State governments. Following are the highlights of these initiatives;

- Constant efforts have been made in this direction starting from the **Bhore Committee in 1946** to **Accelerated Rural Water Supply Programme (1972)**, & **'Swajal Dhara' scheme (1999)** by empowering & involving local communities in tackling water and sanitation issues.
- In 1981 Government of India launched international **Water Supply & Sanitation Decade (81 – 90) Programme** with one of targets being **100 % coverage of Rural & urban population** with safe drinking water supply facilities.
- **'Bharat Nirman'** was a flagship programme of the Central Government which created the required infrastructure to provide good quality water to rural households. Rural drinking water was one of six components of Bharat Nirman.
- **National Rural Drinking Water Programme (NRDWP)** aims at assisting States in providing adequate & safe drinking water to rural population in the country. In 2018-19, the scheme was allocated Rs. 7,000 crore and the Ministry is aspiring to achieve **'Har Ghar Jal' by 2030**,

in line with **UN's Sustainable Development Goals**.

- Earlier, drinking water to rural population has been provided through hand pump, tube wells & piped water supply, but now the thrust area is preferably through a balanced mix of sustainable surface & groundwater based resources.
- **Piped Water Supply (PWS)** : Till 6 January 2019, 18 % of rural households had been provided with Piped Water Supply (PWS) household connections.
- Some States have provided piped water to more than half of rural households while others such as Uttar Pradesh & Bihar have minimal (Less than 5%) piped water coverage. The central government aims to **cover 90 percent of rural households with tap connections by 2022**.
- **A pilot project in the name of "Swajal"** that is designed as a **demand driven & community Centred programme** to provide sustainable access to drinking water to people in rural areas. Swajal was **originally launched in the year 2018** in six **States of Bihar, Maharashtra, Madhya Pradesh, Uttar Pradesh, Uttarakhand & Rajasthan**. Later it was extended to all the **112 aspirational districts identified by NITI Aayog**.
- **Atal Bhujal Yojana**: Central Government has come up with a Rs. 6,000 crore World Bank aided scheme with **community participation** to ensure sustained groundwater management. in overexploited & ground water stressed areas in seven states.
- In March 2017, the Ministry of Drinking Water and Sanitation started a **new sub-programme under NRDWP known as National Water Quality Sub-Mission (NWQSM)**. The Sub-programme **aims to address urgent need for providing clean drinking water in already identified 28,000 arsenic & fluoride affected habitations**.
- To further strengthen the community participation in the drinking water supply for the sustainability, **National Rural Drinking Water Quality Monitoring & Surveillance** has been launched in February, 2006 under which 5

persons in each Gram Panchayat are to be trained to carry out regular surveillance of drinking water sources for which 10 % financial assistance including water testing kits, are provided by Government.

Recent Central government programmes related to Water

Jal Shakti Abhiyan

- The Jal Shakti Abhiyan (JSA) is a **time-bound, mission-mode water conservation campaign**.
- The JSA will run in **two Phases**: Phase 1 from 1st July to 15th September 2019 for all States and Union Territories; and Phase 2 from 1st October to 30th November 2019 for States and UTs receiving the retreating monsoon (Andhra Pradesh, Karnataka, Puducherry and Tamil Nadu).
- During the campaign, officers, groundwater experts and scientists from the Government of India will work together with state and district officials in India's most water-stressed districts for water conservation and water resource management by focusing on accelerated implementation of five target intervention.
- **The JSA aims at making water conservation a Jan Andolan through asset creation and extensive communication.**