Int. j. adv. multidisc. res. stud. 2026; 6(5):1714-1716

Received: 04-09-2026
Accepted: 14-10-2026

International Journal of Advanced Multidisciplinary Research and Studies

ISSN: 2583-049X

Water Crisis in India: Analysing the Role of the Jal Jeevan Mission in Achieving Water Security in Rural India

Dr. Divya Pal
Assistant Professor, Department of Economics, Nari Shiksha Niketan P.G. College, Lucknow, India

DOI: https://doi.org/10.62225/2583049X.2026.6.5.7071
Corresponding Author: **Dr. Divya Pal**

Abstract
Water is basic necessity for survival of human being and without it life is not possible on earth. It is associated with economy activities. Agriculture activity can't imagine without water. Increasing urbanisation and rapid growth of population, ground water depletion, and climate change worsen the problem of water crisis in India. Currently, most of states of India are facing the problem of water crisis. India holds 16% world population and it has only 4% of the world's freshwater sources. There is need to focus on 4R Reduce, Reuse, Recycle and Recharge. Community awareness and participation is in water conservation. Jal Jeevan Mission was started in 2019 and its objective is to provide safe and adequate drinking water to every rural household through tap connection by 2024. This scheme will help in achieving Sustainable Development Goal 6 which is related to safe drinking water, water quality; sanitation etc.This paper examines the water crisis problem in India and the role of Jal Jeevan Mission in providing water security to rural households, challenges, policy suggestions and its achievement.

Keywords: Water Crisis, Jal Jeevan Mission, Sustainable Development

Introduction
Life on earth is not possible without water. It is must for human being and their economic activities as well as environment sustainability. India receives water from different sources such as rivers, groundwater and precipitation (Rainfall and waterfall). Most of states of India is facing severe water crisis because of overuse of groundwater, many urban water bodies in India, including lakes, ponds, wetlands were disappeared due to rapid urbanization, population growth, encroachments, pollution etc. As result of it groundwater recharge decreased and problem of urban flood increased. Water scarcity is increasing day by day in India. According to NITI Aayog Report (2018) India is facing the worst water shortage problem in history where approximately 60 crore people are facing high to extreme water crisis and around 2 lakh people dying every year because of inadequate accessibility to safe water. This Report discussed that 6% loss to GDP by 2030 due to water shortage in India. It has been estimated that 406 billion cubic metres of groundwater can be extracted annually in India. The Average groundwater extraction was 61% in 2025 while this figure was 32% in 1995(www.prsindia.com). Central Water Commission estimated that 59% of districts (out of 727) are facing water scarcity in 2025 and 3% are facing absolute scarcity. In 2050, 57% of districts are expected to face water scarcity, and 7% to face absolute scarcity (www.prsindia.org).

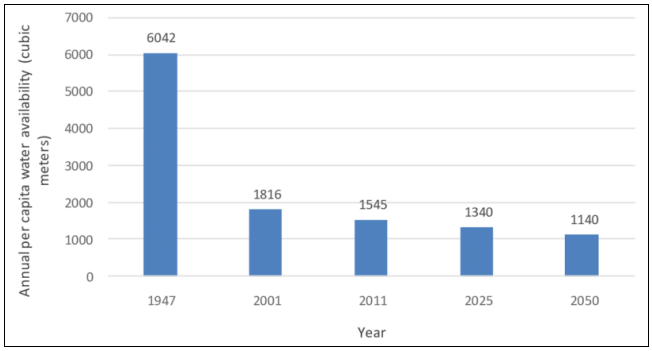
Agriculture Sector
Agriculture Sector is crucial sector for Indian economy and its contributes around 16% to GDP and nearly 46% population of India is depend on this sector for livelihood. India has wide range for irrigation includes wells, reservoirs, canals, tanks, and multipurpose river projects etc. Agriculture sector contributes around 78% of India's total water demand and this share will decline to 68% by 2050.Large dams are major source of irrigation before 1980s but later groundwater extraction from wells and tubules has become dominant sector for irrigation in India and it is supplying more than 68% of agriculture water demand.

Industrial Sector
Water demand is enhancing steadily in Industrial sector. Energy sector and iron and steel industries have larger share in total demand of water of industrial sector. It is expected that water demand of industrial sector will increase from 8% in 2010 to 13% by 2050. Surface water is the major source of water for the industrial activities/sector and its contribution is around 41%

followed by groundwater 35% and municipal water 24%. It is clear that that majority of industries is depend for water on surface water if its availability will decline Industrial sector will hit badly because of this (https://ficci.in).

Domestic Sector

Domestic sector's water demand is increasing day by day because of the rapid growth in population and urbanisation in India. It is expected that water demand will increase by 158% between 2010 and 2050. Water is used for different purposes such as drinking, cooking, sanitation, bathing and livestock etc. in domestic sector. The average water consumption reached 195 litres per capita per day in urban area which is higher than the global average of 135 litres per capita per day whereas, rural area reported lower average consumption which is only 50 litres per capita per day. It shows the water disparity in water accessibility and uses between urban and rural communities. Total domestic water demand in India is estimated to reach 111(BCM) by 2050 and Uttar Pradesh is alone major contributor which is 18.3 BCM after Maharastra, Bihar and West Bengal. While Kerala and Tamilnadu are water rich states and their water demand is 3.8 and 7.3 BCM respectively (Souryabrata Mohapatra and Sanjib Pohit 2025) [3].



Source: https://www.researchgate.net/figure/Annual-per-capita-water-availability-decrease-pattern-in-India-from-1947-2050_fig1_321759200

The above graph evidently shows that annual per capita water availability declined from 6042 cubic meters per person per year in 1947 to 1340 cubic meters per person per year in 2025 and it is projected to decline to 1140 cubic meters per person per year by 2050. It is alarming situation and declining trend depicts increasing pressure on India's water resources due to rapid population growth, urbanization, industrialization and over-exploitation of groundwater. There is need for efficient water management and conservation, sustainable water-uses policies and ground water recharge.

Literature Review

Kuldeep Kumar *et al* (2026) [1] concluded in their study that Jal Jeevan Mission has positive impact on the life of rural people of Himachal Pradesh. This scheme has performed well but few districts left out because of geographical constraint, limited water resources, lack of infrastructure. If the awareness level among rural people will increase regarding scheme they will enable to get more social and economic benefit.

Singh (2025) [9] pointed out in his study that it is very important model that gives clean and safe drinking water in rural India. The success of this scheme will depend on community participation, water management and sustainable environmental Management.

Dr. Patel (2026) [6] analyzed in her study regarding progress of Jal Jeevan Mission and found that this scheme has remarkable success in providing tap connection. The coverage of tap water connection increased from 17% to 80%. The community participation and water management is must for effective implementation of scheme.

Pushpraj Singh *et al* (2026) [7] stated in their study that Anjani village of Chhattisgarh predominantly tribal settlement and people were depend on tradition water sources such as pond, well, hand pump etc for drinking and other domestic purposes. They were faced many difficulties such as distance, time etc. The most burdens were on women and children. After implementation of this scheme positive impact was found on health, education, and women empowerment. But challenges are still remain such as pipeline leakages, inadequate cleaning of water tank etc.

About Jal Jeevan Mission

Accessibility to clean and safe water is fundamental human right. Jal Jeevan Mission Scheme was launched on 2019 under the Ministry of Jal Shakti. Its aim is to provide safe drinking water to all rural households through taps connection by 2024. The focus was also given on water management such as recharge and reuse through grey water management, water conservation, rain water harvesting under this scheme. It emphasized on community participation. It will help in achieving Sustainable Development Goal 6 as well as ensures water security in rural India. Tap water connection was distant dream for rural India but this scheme converting their dream into reality. Jal Jeevan Mission has potential to generate an average of 5.99 million people per years of direct 22.25 million person years of indirect employment during the contraction phase (Gopal Naik *et al* 2024) [5]. This scheme is not only transforming rural India but also empowers women. The availability of tap water at the household's level decreases the time spent by girls and women in fetching water (Mridul Dutta *et al* 2025). Investment in any public infrastructure has positive impact on direct and indirect employment. The direct impact includes the employment generated during the construction, operation and Maintenance. For example, Under JJM, the creation of infrastructure such as functional household tap, water storage tank, and treatment plant gives employment opportunity in laying pipes and other construction activities needs skilled persons as well as operation and maintenance level of the schemes require several skilled workers such as waterman, pump and valve operator, supervisor etc (Gopal Naik *et al* 2023) [4].

Impact of Jal Jeevan Mission

This scheme has significant impact on the life of rural area. As per World Health Organization (WHO) estimates that Jal Jeevan Mission will save over 5.5 Crore hours daily especially for women otherwise they spent time in collecting water. It could prevent nearly 400000 deaths from diarrheal diseases. Nobel laureate Prof. Michael Kermes's research suggests that safe drinking water coverage will reduce mortality among children under 5 by approximately 30% and it will save around 1, 36000 lives annually.JJM will open 59.9 lakh person years of direct and 2.2 Crore person-years of indirect employment during its capital expenditure

according to The Indian Institute of Management Bangalore in the partnership with the International Labour Organization (pib.gov.in). According to this scheme total 19, 35, 43,470 households exist in India. Around 32362828 households connected with tap water till 15th August 2019. Around 16, 11, 80,632 households were deprived from tap water connection.

Table 1: Households Provided with Tap Water Supply (2019-20 to 2025-26)

Years	HHs Provided with Tap Connections (Lakh)
2019-20	8262187
2020-21	32261522
2021-22	20133683
2022-23	23275312
2023-24	29926447
2024-25	9440763
2025-26	2706758

Source: ejalshakti.gov.in

The above table shows the households numbers that was connected with tap water in rural India from 2091-20 to 2025-26.

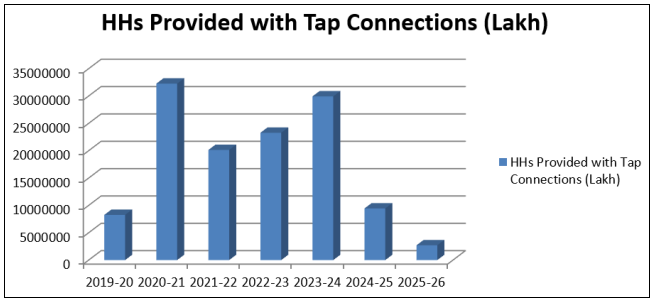


Table 2: Funds drawn by States/UTs (Central Share Drawn (Crore)

Years	Amount (₹ Crore)	Percentage Change PC= Current Year Amount- Previous Year/Previous Year Amount*100
2019-20	9,951	-
2020-21	10,916	9.70%
2021-22	40,010	266.53%
2022-23	54,744	36.83%
2023-24	69,886	27.66%
2024-25	22,541	-67.75
2025-26	15,62	-93.07

Source: ejalshakti.gov.in

The above table shows that that Jal Jeevan Mission was getting more funds during 2021-22 to 2023-24, followed by a sharp decline in the subsequent two years (2024-25 and 2025-26). It is evident that initially government has given more emphasis on providing potable drinking water to rural households and development of infrastructure of rural drinking water. Later, the trend of decline was seen after 2023-24 may need further investigation, especially to decide whether it shows changes in budgetary allocation, revised allocation, expenditure patterns, reporting periods etc.

Conclusion

It can be concluded that India is facing severe water crises. There is urgent need for efficient water management, rain water harvesting, and to promote sustainable water use policy. Jal Jeevan Mission is providing safe, potable drinking water to all rural households. At the beginning of this scheme around 17% households were connected with tap water but now nearly 82 % rural households connected with tap water. It shows substantial progress towards universal rural drinking water access.

References

1. Kumar Kuldeep, *et al*. Socio- Economic Impact of Jal Jeevan Mission on Rural Households of Himachal Pradesh. International Journal of Creative Research Thoughts, 2026. ISSN: 2320-2882
2. Ilangovan K, *et al*. Systematic review of rural drinking water interventions under Jal Jeevan Mission, Discover Environment, 2026. Doi: https://doi.org/10.1007/s44274-026-00676-6
3. Mohapatra Souryabrata, *et al*. The Water Paradox in India: Manging Abundance Amid Growing Water Scarcity, National Council of Applied Economic Research, 2025.
4. Naik Gopal, *et al*. Assessment of Employment Generation Potentials of Jal Jeevan Mission, Working paper No:687, 2023. www.iimb.ac.in
5. Naik Gopal, *et al*. Employment Generation Potentials in the Implementation of a Rural Drinking Water Supply Program: Evidence from India's Jal Jeevan Mission, 2024. https://iwaponline.com/wp/article/26/7/671/103342/Employment-generation-potentials-in-the
6. Patel Ranjana. Progress and Impact of the Jal Jeevan Mission: A Comprehensive Study. International Journal of Advanced Research in Science, Communication and Technology, 2026. ISSN: 2581-9429
7. Singh Pushpraj, *et al*. Impact of Jal Jeevan Mission on Rural Livelihoods and Women Empowerment: A Case Study of Anjani Village, GPM District, Chhattisgarh, 2026. Doi: 10.64823/ijter.2604029
8. Sarkar Chandan. Water Crisis of India. Journal of Advance and Future Research, 2025. | ISSN: 2984-889X
9. Singh Ambuj. Jeevan Mission and Rural Drinking Water: Merging Policy, Equity, Engineering, & Health Perspectives, 2025. Doi: https://doi.org/10.13140/RG.2.2.14333.47849
10. Singh Abhishrk, Naik Gopal. Rural Drinking Water Supply Program and Societal Development: Evidence from the Early Implementation Phase of India's Jal Jeevan Mission, 2024. Doi: https://doi.org/10.1371/journal.pone.0312144
11. Shah Dheeraj. Jal Jeevan Mission: A Game Changer of India. Indian Journal of Public Health. 2023. Doi: https://doi.org/ 10.4103/ijph.ijph_1371_23
12. Vincent J Clyder, *et al*. Efficient Wastewater Management for Sustainable Development: Challenges and Prospects an Indian Scenario. International Journal of Health Science and Research. ISSN: 2249-9571
13. https://link.springer.com/article/10.1007/s44274-026-00676-6
14. https://jaljeevanmission.gov.in/impact-studies
15. www.pib.gov.in
16. www.prs.com