



A Decade of WASH

“आपोहिष्ठामयोभुवस्थानऊर्जेदधातना। महेरणायचक्षसे॥

योवःशिवतमोरसस्तस्यभाजयतेहनः। उशतीरिवमातरः॥”

Water is the source of happiness, energy, health and piety, and is life giving as a mother.

“शौचम्स्वास्थ्यस्यआदरः, सौख्यस्यमूलं, सर्वारोग्यस्यसारम्, जीवनस्यप्राणः,
आत्मनःशुद्धिः, लोकस्यसुस्थितिः, समृद्ध्यात्मकविकासः, धर्मस्यमूलां”

Cleanliness is a mark of respect for health, the root of well-being, the essence of complete wellness, the breath of life, the purity of the self, the foundation of societal stability, a catalyst for prosperous development, and the root of righteousness.

In the archives of India's developmental journey, the past decade stands out for a silent yet powerful revolution, one that has changed the face of rural India by restoring dignity, ease of living, health, and hope. This revolution is encapsulated in the twin flagship missions of Government of India: *Swachh Bharat Mission-Gramin* (SBM-G) and *Jal Jeevan Mission* (JJM). Together, these missions have redefined the Water, Sanitation, and Hygiene (WASH) landscape by embedding technology in governance and placing rural communities, and *Gram Panchayats* at the heart of planning and execution. WASH initiatives have been pivotal in transforming the landscape of life standard, economy, social inclusivity and public health in India.

Over the past decade, the country has witnessed significant strides in improving access to clean water, sanitation facilities, and hygiene practices. In the past ten years, the grassroots democracy has harmoniously interacted with innovation and technology to usher in a new era of sustainable and inclusive development.

India has long grappled with issues related to water scarcity, inadequate sanitation facilities, and poor hygiene practices. The need for robust WASH initiatives became increasingly evident as these issues contributed

to high rates of waterborne diseases, malnutrition, and mortality. The government's commitment to addressing these challenges led to the launch of several ambitious programs aimed at improving WASH infrastructure and practices across the country.

However, India's engagement with water and sanitation is not new. The Indus Valley Civilisation (c. 2500 BCE) showcased some of the earliest examples of advanced urban planning, complete with covered drainage systems and household toilets. However, over time, particularly during colonial rule and post-independence, sanitation slipped from being a public priority. This historical neglect was compounded by caste-based roles and social hierarchies that stigmatised sanitation, leading to entrenched habits like open defecation in rural areas.

After independence, India began incorporating health, water and sanitation into its national planning efforts. In 1951, the first Five Year Plan was launched and since then, in some way or the other, health and sanitation found mention in almost every plan. The Central Rural Sanitation Programme (CRSP) was launched in 1986 as the first nationwide, centrally sponsored initiative focused exclusively on sanitation.

*The author is Secretary, Department of Drinking Water and Sanitation, Ministry of Jal Shakti, Government of India.
Email: secydws@nic.in*

Its goals were to improve rural living conditions and provide dignity to women through toilet access. CRSP was largely supply-driven, and due to limited community involvement, the results were modest in raising sanitation coverage.

In 1999, India introduced the Total Sanitation Campaign (TSC) with a shift in approach, moving from infrastructure to awareness and demand generation. It focused on Information, Education and Communication (IEC) strategies, capacity building, and involvement of *Panchayati Raj* Institutions (PRIs). While TSC made headway in building toilets and promoting sanitation as a 'felt need,' its implementation varied across states, and the health impacts remained limited.

Building on TSC, the *Nirmal Bharat Abhiyan* (NBA) was launched in 2009 to provide subsidies for toilet construction for Below Poverty Line (BPL) families and promote community-led total sanitation. It brought sanitation to the forefront of public policy and enabled states to frame sanitation specific policies. In 2014, TSC was restructured to *Swachh Bharat Mission* in response to the urgent need for comprehensive sanitation coverage.

India's tryst with rural water supply is not new. The foundation of this effort dates to the first Five-Year Plan (1951-56), where the Environmental Hygiene Committee's recommendations led to the inception of the National Water Supply Programme in 1954. The rural water supply was integrated into the Community Development Programme and was supported by the Ministry of Health through the National Water Supply and Sanitation Programme until the Third Five-Year Plan (1961-66). A major shift occurred with the Accelerated Rural Water Supply Programme (ARWSP) in 1972-73, designed to address acute water scarcity and waterborne diseases. This initiative gained momentum under the Minimum Needs Programme during the Fifth Five-Year Plan (1974-79).

The National Drinking Water Mission (NDWM), also known as the Technology Mission, launched in 1986, introduced scientific research and cost-effective technologies to address water scarcity challenges. The Eighth Five-Year Plan (1992-97) expanded the focus to address water quality issues, particularly contamination from arsenic, fluoride, iron, and salinity. The late 1990s marked a shift toward decentralised, demand-driven, and community-managed sector reforms, with *Gram Panchayats* and local communities taking on active roles in planning, implementing, and

managing drinking water schemes. This approach was scaled up under the *Swajaldhara* programme in 2002. In the Eleventh Five-Year Plan (2007-12), ARWSP was integrated into the *Bharat Nirman* project, aiming for full habitation coverage by 2008-09. The programme was later restructured into the National Rural Drinking Water Programme (NRDWP) in 2009-10, emphasising sustainable water availability.

Further refinements were introduced in 2013 and 2017, with an increased focus on piped water supply, service levels, water quality, and maintenance of existing schemes. The National Water Quality Sub-Mission (NWQSM), launched in February 2017, aimed to provide safe drinking water to habitations affected by arsenic and fluoride contamination by March 2021.

Despite these efforts, for access to safe sanitation and water supply, progress remained fragmented and infrastructure-driven, with insufficient emphasis on behaviour change, community engagement, and long-term sustainability.

Turning Point

It was in 2014, the Prime Minister of India gave a clarion call to make India Open Defecation Free (ODF). *Swachh Bharat Mission* has since been a revolution which mobilised a force of over a billion people, making it the world's largest sanitation drive that led to the construction of over 10 crore individual household toilets in rural India over a five-year period, taking sanitation coverage from 39% in 2014 to 100% in 2019. Having achieved ODF status, SBM-G Phase II was launched with the objective of achieving *Sampoorna Swachhata*, i.e., sustaining the ODF status and managing solid and liquid waste by transforming all the villages from ODF to ODF Plus Model.



A woman marks her newly built toilet with the words "Izzat Ghar" (House of Dignity)

Impact of SBM

Saved lives

- 3 lakh diarrhoeal deaths avoided in 2019 compared to 2014 - WHO 2018

Improved nutrition and productivity

- 58% higher cases of wasting among children in non-ODF areas - BMGF 2017

Safety and dignity of women

- 93% women feel safer after getting a toilet at home - UNICEF 2017

Better economics

- Rs 50,000 saved every year on average by a household in an ODF village due to health costs avoided - UNICEF 2017

Protects environment

- 2.70 times less likelihood of groundwater contamination traceable to humans in ODF villages - UNICEF 2019

Child health

- 60,000-70,000 child deaths averted annually - Nature magazine 2024

In 2019, the Union Government approved the restructuring and subsuming of NRDWP into *Jal Jeevan Mission (JJM)* – ‘*Har Ghar Jal*’, aiming to provide Functional Household Tap Connections (FHTCs) to every rural household. On 15 August 2019, Prime Minister Narendra Modi launched *Jal Jeevan Mission* in his Independence Day speech from the rampart of Red Fort.

Jal Jeevan Mission is a paradigm shift, a revolution to ensure access to safe drinking water. The mission visioned that every rural household has drinking water supply in adequate quantity (at least 55 lpcd), of prescribed quality (BIS: 10500 standard), on a regular and long-term basis at affordable service delivery charges leading to improvement in living standards of rural communities.

These two missions have not merely addressed infrastructure gaps but have transformed the WASH sector into a people-centric, participatory movement backed by robust policy frameworks, political willing, funding, technological convergence and capacity-building mechanisms.

Community Led Transformation

A distinctive feature of both SBM-G and JJM is the centrality of *Gram Panchayats* (GPs) and community in driving change. As constitutionally empowered

institutions under the 73rd Amendment, *Panchayats* have been entrusted with the planning, execution, and monitoring of village-level WASH interventions.

Under JJM, every village prepares a Village Action Plan (VAP) encompassing drinking water sources, supply infrastructure, greywater management, and water quality monitoring. These plans are developed and implemented by Village Water and Sanitation Committees (VWSCs)/*Pani Samities*, subcommittees of GPs with at least 50% women members and representation from marginalised class. Till date in 5.85 lakh villages over 5.2 lakh VWSCs has formed and VAPs prepared with community involvement.

Similarly, in SBM-G Phase II, GPs are leading the efforts to sustain Open Defecation Free (ODF) status by implementing Solid and Liquid Waste Management (SLWM) systems, retrofitting toilets, and fostering behaviour change. More than 4.61 lakh villages have achieved ODF Plus Model status, with GPs playing an instrumental role in resource mobilisation, awareness generation, and convergence.

Technology & Innovation

India's WASH journey has been bolstered by strategic technological interventions that have made service delivery more reliable, cost-effective, and inclusive.



Women are trained in testing water quality using Field Test Kits (FTK)

- **Twin Pit Toilet Technology:** SBM-G popularised the use of twin pit toilets, which are affordable, easy to maintain, and environmentally safe. The composted waste becomes a rich source of manure, completing the cycle of ecological sanitation.
- Under SBM-G Phase II, plastic waste management has been strengthened through the establishment of Plastic Waste Management Units at block levels with provisions for shredding and recycling. Women's SHGs have been actively engaged in waste collection, segregation, and awareness activities. These efforts have improved rural sanitation outcomes while promoting environmental sustainability.
- **Insulated Water Pipes in Ladakh:** In cold desert regions like Ladakh, where sub-zero temperatures often burst pipelines, insulated water pipes have been introduced, ensuring year-round access to piped water—a technological marvel adapted to extreme climates.
- **Solar-Powered Water Supply Systems:** In alignment with India's renewable energy goals, several states have implemented solar-powered in-village water supply schemes reducing dependency of grid electricity.
- **Floating Water Supply Schemes:** In regions with challenging terrain or limited land availability, Gujarat has introduced floating water supply systems, an innovation that ensures resilience during monsoon flooding and provides flexibility in deployment.
- **Internet of Things (IoT) & Real-Time Monitoring:** JJM has adopted IoT technologies to enable real-time monitoring of water supply. Flow meters, chlorine analysers, and pressure sensors transmit live data to dashboards used for preventive maintenance, quality assurance, and grievance redressal.

Safe water is a non-negotiable right. Ensuring the chemical and microbial safety of drinking water has been a core pillar of JJM. India has developed an extensive water testing network comprising 2,183 laboratories. These laboratories are testing water samples on a regular basis and Public Health Engineering Department (PHED) is taking corrective measures to ensure quality potable water supply. These water testing laboratories are now open for common public to check their water quality bearing minimal testing cost.

Mobile water testing vans in Haryana, a pro-people intervention, bring services to the remotest corners.

The Water Quality Management Information System (WQMIS) enables citizens to view test results online and lodge grievances.

Citizen-centric governance is incomplete without effective grievance redressal systems. SBM-G and JJM have adopted several tools to improve accountability and transparency: States like Odisha, Karnataka, Maharashtra, Gujarat, Tamil Nadu have integrated call centres, helplines, and mobile apps to address complaints related to water supply or sanitation. Social audits, *Jan Sunwais*, and Wall Paintings in villages serve as information and monitoring tools. Digital dashboards, such as the SBM and JJM IMIS (Integrated Management Information System) provide real-time progress tracking at village level.

Bihar's innovative 'Toilet Clinic' initiative, launched under SBM-G with UNICEF's support, functions as a one-stop solution centre at the block level, offering affordable services for toilet retrofitting, maintenance, and cleaning. These clinics provide standardised materials, trained masons, and sanitation janitors, ensuring quality and accessibility in sanitation services. By engaging women's Self-Help Groups like *Jeevika*, the initiative not only enhances sanitation infrastructure but also promotes women's empowerment and community participation.

Behaviour Change & Citizen Engagement

Infrastructure alone cannot bring lasting change without sustained Information, Education, and Communication (IEC) efforts. Both missions have



Women from the community come together for a training session on water management and sanitation



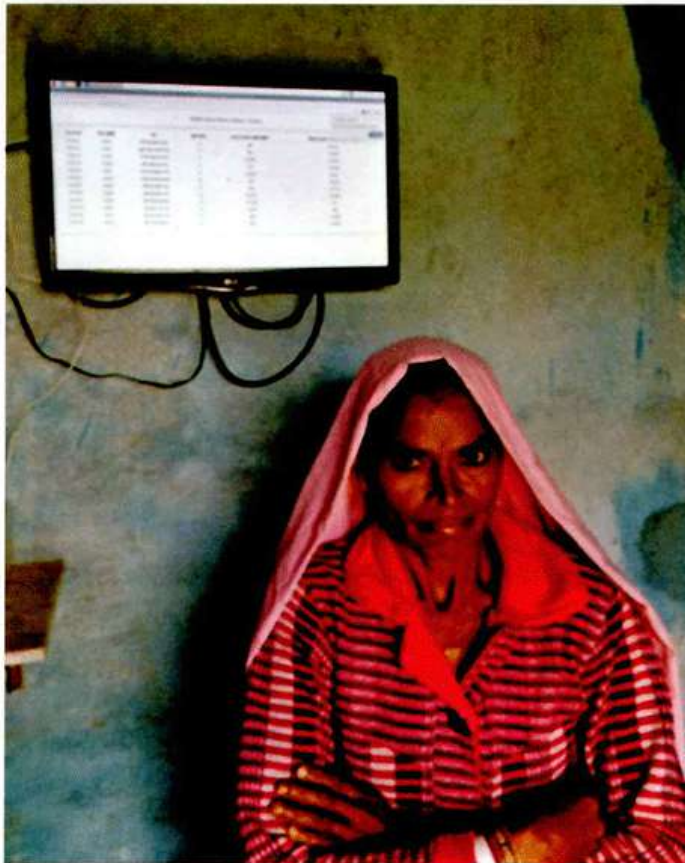
Community members participate in a participatory rural appraisal (PRA) activity, mapping their village to identify water and sanitation solutions together

employed robust Behaviour Change Communication (BCC) strategies through mass media, folk media, wall art, *nukkad nataks*, and school-based programs.

DDWS's *Darwaza Band*, *Swachhagrahi* movement, *Gandagi Se Mukt Bharat*, *Jal Utsav*, *Swachh Sujal Gaon*, *Azadi ki 75 Kahaniyan*, *PM Samvad*, *Swachh Sujal Shakti Samman*, are few names of few mass campaigns that has created mass awareness and community involvement. These special IEC campaigns have focused on women's leadership, menstrual hygiene, school WASH, and climate resilience.

Women, being the primary custodians of water and disproportionately affected by inadequate WASH facilities, are prioritised in these initiatives. In villages, five women/SHG members are trained to test water quality using Field Test Kits (FTK). Nationwide, over 24.8 lakh women have been empowered with this skill so far and they are regularly testing the quality of water at source and delivery points.

Women troops viz. *Jal Saheli* in parched Bundelkhand, *Jal Sakhi* of Madhya Pradesh, *Jal Sahiyas* of Jharkhand are pioneering



Empowered and aware – A village woman stands before a digital display tracking water supply data

water conservation efforts, fixing leakages, collecting user charges, working as plumbers, pump operators etc. Women are trained on Community-Led Total Sanitation (CLTS) methodology and joined as *Swachhagrahis* to trigger the behaviour of community towards safe sanitation.

True to the spirit of *Jan Andolan*, the WASH movement has seen active participation from women, self-help groups, schoolchildren, retired defense personnel, and community-based organisations. In many villages, women SHGs have taken charge of greywater reuse and toilet maintenance. Communities have transitioned to solar-powered, self-managed water systems. Women have emerged themselves as WASH agents, reclaiming their rightful place in decision-making and public life.

WASH outcomes have been strengthened by converging with allied schemes and departments:

- MGNREGS has been used to create soak pits, community toilets, and water recharge structures.
- National Health Mission (NHM) supports WASH in health centres and monitors waterborne diseases.
- *Samagra Shiksha Abhiyan* has improved WASH facilities in schools.

The integration of SBM and JJM in planning at the GP level has enabled better resource utilisation and local innovation. Importantly, WASH is now integral to the aspirational districts program, SDG localisation efforts, and climate change adaptation plans.

The Road Ahead

As India progresses toward a *Viksit Bharat@2047*, the next phase of WASH will focus on:

- Sustaining ODF Plus Model status through institutionalised SLWM systems, with a dedicated focus on enabling the creation of *Swachh Sujal Gaons*—villages that are both ODF Plus Model verified under *Swachh Bharat Mission (Grameen)* and *Har Ghar Jal* certified under *Jal Jeevan Mission*, symbolising convergence of safe sanitation and assured water supply at the grassroots.
- Universal and equitable access to safe water for all, especially marginalised communities and aspirational blocks.
- Digital transformation, with Smart Mobile phones, IoT, AI, and GIS tools integrated into asset tracking, water budgeting, and climate-smart infrastructure.
- Capacity building at scale, including certified training for rural engineers, Village Water and Sanitation Committee (VWSC), and barefoot technicians.
- Strengthening GPs and its sub-committees as public utilities.
- Strengthening inter-departmental collaboration and Panchayat capacities to become effective local service providers.

In just ten years, India has moved from sanitation deprivation to sanitation dignity, from water scarcity to water security, and from top-down implementation to community-driven development.

The journey of SBM and JJM is not merely about numbers, it is about restoring dignity to rural women, preventing disease, creating livelihoods, and making governance participatory. It is about how a democracy, through its *Panchayats* and its people, empowered by technology, can truly transform the everyday lives of its citizens. The WASH revolution is evidence to what India can achieve when policy, people, and progress converge with purpose. As we enter the *Amrit Kaal*, the mission continues with renewed vigour, inclusive intent, and a shared commitment to leaving no one behind. □