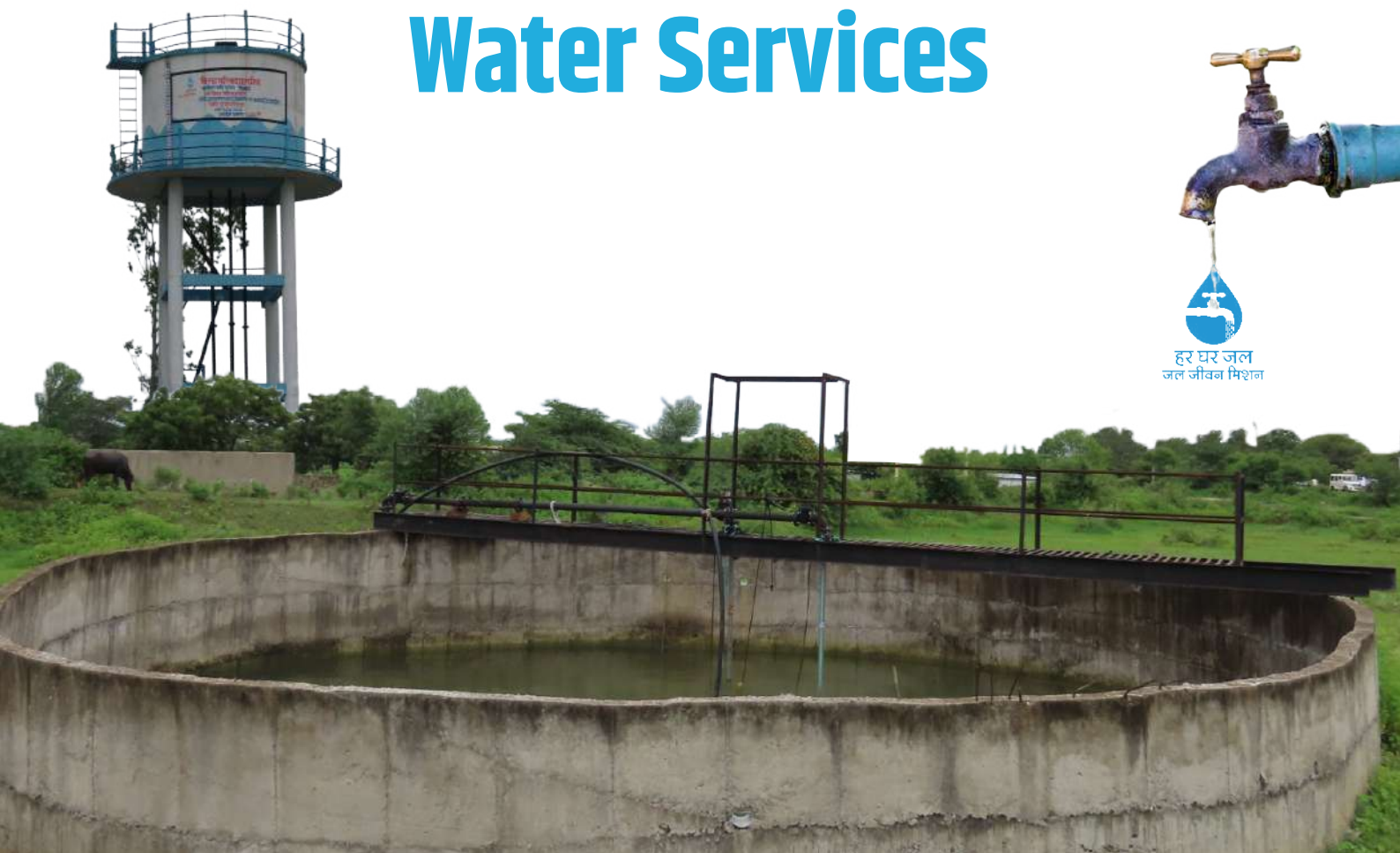




Jal-Suraksha: Securing Rural Drinking Water Services



Background:

Providing safe drinking water to every household has been a long-standing national goal of India since Independence and has been reflected in many Five-Year Plans. The National Water Supply Programme launched in 1954 marked the first major effort, followed by the Accelerated Rural Drinking Water Programme (ARDWP) in 1972–73, which later became part of the Minimum Needs Programme. In 1997, the World Bank Supported Jal-Swarajya project in Maharashtra led the example of community participation which became the guiding principle for the Swajaldhara Programme introduced in 2000 with active community participation and a demand-driven approach. The National Rural Drinking Water Programme (NRDWP), launched in 2009–10 as a modified ARDWP, emphasized sustainability, equitable water distribution, and the role of Panchayati Raj Institutions. Amendments in 2013 increased the service norm from 40 to 55 litres per capita per day (lpcd) and strengthened focus on piped water supply, water quality, and wastewater management.

NRDWP was restructured in 2017 to make it more outcome-oriented, with a target of universal household coverage by 2030, aligned with Sustainable Development Goal 6. In 2019, NRDWP was subsumed under the Jal Jeevan Mission (JJM), announced on 15 August 2019, which aims to provide functional tap water connections (Har Ghar Jal) to every rural household in India.

Despite the implementation of several ambitious drinking water programmes, their long-term sustainability—both in terms of infrastructure and service delivery—has remained a persistent challenge, even when short-term targets were achieved. Existing literature and field experiences consistently highlight key issues, including limited community participation and ownership, poor recovery of water user charges, frequent leakages at various levels, and weak systems for regular operation and maintenance (O&M). These factors critically determine the sustainability of drinking water schemes.

While all major programmes, including the Jal Jeevan Mission, incorporate O&M provisions at multiple levels in their design, these provisions have largely not translated into effective practice, resulting in outcomes falling short of the stated objectives.

2. Need for a framework to assess O&M performance

At present, a comprehensive O&M framework for rural drinking water schemes that encourages and incentivises Gram Panchayats (GPs) and Village Water Supply and Sanitation Committees (VWSCs) is largely missing. As a result, local institutions often lack motivation, clarity, and systematic support to effectively manage O&M. A simple yet robust framework for objective assessment of O&M performance at the village level—along with clear, actionable improvement plans—is not yet in place. These gaps are critical, especially as the Jal Jeevan Mission (JJM) has rapidly created extensive drinking water infrastructure across the country. Without a systematic and regular O&M system, assets such as sources, pumps, pipelines, storage tanks, and household connections deteriorate quickly, leading to frequent breakdowns and service disruptions. An effective O&M framework is necessary to safeguard the public investment, extend the life of infrastructure, and ensure functional tap water connections with adequate quantity, quality, and regularity.

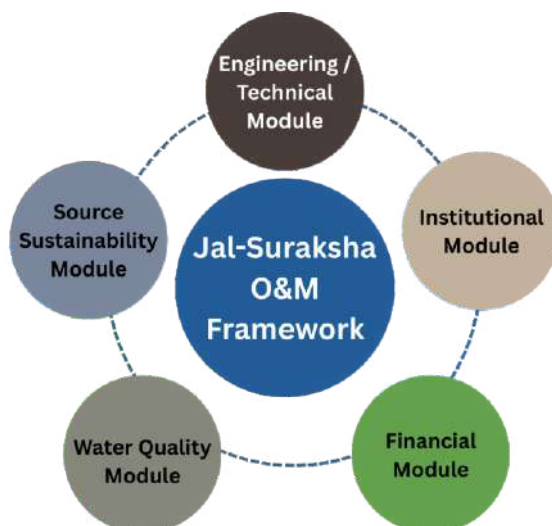
Since Gram Panchayats are central to drinking water service delivery, a clear O&M framework is essential to define roles, responsibilities, and decision-making authority of GPs, VWSCs, operators, and support agencies. This strengthens local ownership and accountability, reducing dependence on higher-level departments. Financial sustainability is equally critical; effective O&M requires regular funds for electricity, routine repairs, water quality monitoring, and operator wages. A robust framework is necessary to enable rational tariff setting, water charge collection, transparent accounting, and cost recovery.

While JJM guidelines include O&M provisions, implementation at the village level remains weak. A structured O&M framework is therefore necessary to translate policy intent into operational systems, standard procedures, capacity building, and performance monitoring. Without it, JJM risks remaining an infrastructure-focused programme rather than a service-delivery mission. A strong O&M framework is thus essential to transform “Har Ghar Jal” into a long term sustainable, equitable, and reliable rural drinking water service.

Development of the O&M Framework jointly with the WSSD

Water Supply and Sanitation Department of Maharashtra, which is a nodal agency for the JJM for the State, looking the urgency for developing the O&M framework for drinking water schemes, mutually agreed with the Watershed Organisation Trust (WOTR) and WOTR Centre for Resilience Studies (W-CReS) for developing the framework and a formal MoU was signed between WSSD and WOTR in October 2023 to jointly develop the O&M framework for the Maharashtra. With a number of consultations, testing in number of villages, and constant feedback from the department officials, WOTR and W-CReS developed the 'Jal-Suraksha: Securing Rural Drinking Water Services', a robust O&M framework for Jal Jeevan Mission at Gram Panchayat level.

Jal -Suraksha framework for Operation and Maintenance



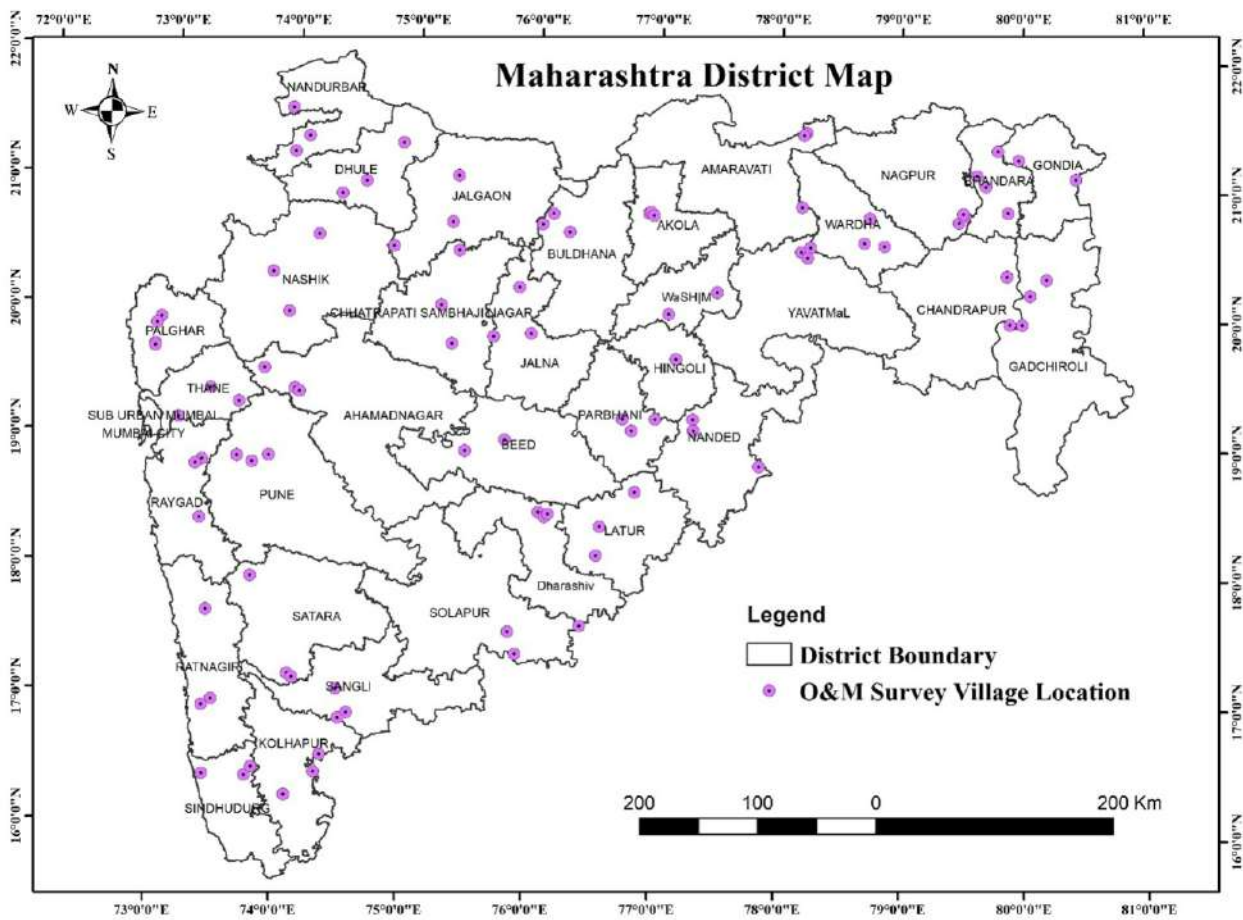
The objectives of the O&M framework developed is to evaluate and rate all villages/GPs based on their current status of O&M of water supply schemes, identify gaps in each village, and provide a clear an action plan for addressing those gaps. And through incentives and awards for better performing villages, encourage a competitive environment among villages to improve the O&M of water supply schemes. Thus, motivate and provide a data/evidence-based decision support system to district and state level officials, non-governmental organizations (NGOs), donors, and investors in the necessary capacities of drinking water sector at the village/GP level.

The Jal-Suraksha O&M Framework is a rating and certification methodology designed to incentivise and guide Village Water and Sanitation Committees (VWSCs), Gram Panchayats, and district- and state-level administrations in making informed decisions by systematically tracking the O&M performance of villages. The framework assesses how effectively VWSCs and Gram Panchayats manage drinking water schemes and service delivery, with the objective of ensuring safe, adequate, and quality drinking water for all households across the village. Based on their performance, villages are assigned an O&M score.

Implementation of the Jal-Suraksha O&M Framework in Maharashtra

The O&M framework was developed under the guidance of the Water Supply and Sanitation Department (WSSD) and was initially piloted in 10 villages—five each from Ahilyanagar and Dharashiv districts—in coordination with the respective Chief Executive Officers of Zilla Parshad of the districts and Executive Engineers of WSSD. Based on the findings from this first pilot phase, as well as inputs from the Principal Secretary, WSSD, and his team, necessary revisions were made to the framework.

For large-scale implementation in the second phase, WSSD directed all Zilla Parishads to conduct the assessment in three villages per district across Maharashtra. Nodal officers were appointed by WSSD for each district, and WOTR and W-CReS provided training on the framework, access to an online data collection application, and state-level support for data monitoring and processing. The nodal officers conducted surveys in 102 villages across 34 districts of Maharashtra using a mobile application developed by WOTR.



To capture field experiences, feedback, and suggestions from the nodal officers during the data collection, detailed online review meetings were subsequently held. Based on these discussions and inputs received at various stages, further refinements were made to strengthen the framework and enhance its suitability across different regional contexts. The framework was then finalised and formally submitted to WSSD and it is formally accepted by the department for the further adoption and the state level by following the administrative process.

Potential Opportunities of the Jal-Suraksha O&M Framework

1. Integration with State O&M Policy and Jal Jeevan Mission:

The framework can be integrated into Maharashtra's proposed O&M policy and the Jal Jeevan Mission at the national level to enable periodic assessment and rating of Gram Panchayats. Annual assessments across all JJM villages and a Database Management System (DMS) at the taluka, district, and state levels can support monitoring and evidence-based decision-making.

2. O&M Report Cards and Village Action Plans:

The five-module framework covers all key dimensions of O&M in drinking water schemes. Village-level O&M report cards generated from assessment scores clearly highlight strengths and gaps, enabling Gram Panchayats to prepare focused action plans for improvement.

3. Village Classification for Investment Prioritisation:

O&M scores can be used to classify villages and prioritise interventions at the taluka and district levels. Findings from 102 pilot villages show relatively good performance in engineering, finance, and water quality, but weaker performance in institutional capacity and source sustainability, indicating the need for VWSC strengthening and investments in watershed development and groundwater recharge.

4. Electricity Subsidies Linked to O&M Performance:

In line with the Government of Maharashtra's decision (GR dated 25 July 2024) to provide free electricity for agricultural pumps, electricity concessions or subsidies can be extended to drinking water supply schemes. Benefits may be linked to O&M certification levels (Bronze, Silver, Gold, and Platinum) to incentivise better performance.

5. Leveraging Funding for Villages and Gram Panchayats:

High-performing villages (Gold and Platinum) demonstrate strong community participation, transparent fund use, and effective coordination. O&M report cards can help them attract funding from government schemes, NGOs, and CSR initiatives, while low-performing villages can be prioritised for targeted support.

6. Institutionalising Awards and Recognition:

Institutionalising annual awards and recognition for high-performing villages can build local pride and strengthen community ownership. Successful initiatives such as the National Water Awards and the Sant Gadge Baba Swachhata Abhiyan demonstrate that recognition-based approaches can transform programmes into people's movements. Key elements of the Jal-Suraksha O&M framework should also be incorporated into the Majhi Vasundhara Abhiyan and its awards, a widely appreciated and popular initiative of the Government of Maharashtra.

WOTR team while Submitting Final Framework & guidelines to the Principal Secretary, WSSD & his Team



For the Jal-Suraksha O&M Framework, a modular approach has been adopted rating and certifying the villages and GPs. The five modules stated below (refer table) consider different aspects and dimensions of O&M at the village level. Each of the 5 modules consist of various 10 indicators and their scoring. Further these indicators are classified into the essential indicators which are very important and non-negotiable and desirable indicators

No.	Module name	Essential indicators and weightage	Desirable indicators & weightage	Total indicators	Total Score
1.	Engineering/ Technical Module	<ol style="list-style-type: none"> 1. Functionality of the scheme while handing over to the Gram Panchayat/Water Supply Committee. 2. Percentage of Household Tap Connections (FHTCs). 3. Percentage of FHTCs that actually receive water supply. 4. 55 liters per capita per day (LPCD) water supply for 365 days as per norms. 5. Water leakage in pipelines supplying water from sources to households. 6. Maintenance and repair of existing local water facilities. 7. Installation and usage of water meters at the main source. <p>(7 indicators with 11 marks)</p>	<ol style="list-style-type: none"> 8. Installation and use of water meters at household distribution points. 9. Schedule of household water supply. 10. Technical capacity of tap-water attendants/operators for operation and maintenance tasks. <p>(3 indicators with 4 marks)</p>	10	15
2.	Institutional Module	<ol style="list-style-type: none"> 1. Awareness among Gram Panchayat/Water Supply Committee members about their roles and responsibilities. 2. Level of participation of Gram Panchayat/Water Supply Committee in planning and implementation. 3. Contribution of villagers/locals to water supply schemes. 4. Number of meetings held by the Gram Panchayat/Water Supply Committee for operation and maintenance. 5. Preparation of annual action and financial plans by the Gram Panchayat/Water Supply Committee. 6. Awareness campaigns by Gram Panchayat/Water Supply Committee or block-level committees. 7. Water tariff (water charges) collection rate. <p>(7 indicators with 17 marks)</p>	<ol style="list-style-type: none"> 8. Quality of meetings conducted by the Gram Panchayat/Water Supply Committee regarding operation and maintenance. 9. Frequency and quality of audits of the drinking water system by the Gram Panchayat/Water Supply Committee. 10. Grievance redressal mechanism for O&M issues at village level. <p>(3 indicators with 8 marks)</p>	10	25
3.	Financial Module	<ol style="list-style-type: none"> 1. Collection/payment of water tariff to cover O&M costs such as management, electricity, repairs, and chemicals, with concession for vulnerable groups. 2. Timely payment of electricity bills. 3. Corpus fund or amount raised by the Gram Panchayat/Water Supply Committee through CSR, government sources, or social institutions. 4. Corpus fund or amount raised through local contributions, voluntary labor, interest from deposits, and other local means. 	<ol style="list-style-type: none"> 8. Status of disputes/conflicts regarding water tariff collection. 9. Differential water rates for household and commercial water use. 10. Use of solar energy for water pumping. <p>(3 indicators with 8 marks)</p>	10	25

		<ol style="list-style-type: none"> 5. Existence of a separate bank account for corpus fund/water tariff by the Gram Panchayat/Water Supply Committee. 6. Accountability and transparency of the Gram Panchayat/Water Supply Committee in financial matters. 7. Free water arrangements for schools, anganwadis, tanks, and other public needs. <p>(7 indicators with 17 marks)</p>			
4.	Water Quality Module	<ol style="list-style-type: none"> 1. Regular testing of water quality as per BIS standards. 2. Availability of water quality reports with Gram Panchayat/Water Supply Committee. 3. Discussion of water quality reports in the Gram Panchayat/Water Supply Committee. 4. Actions taken by Gram Panchayat/Water Supply Committee based on water quality reports. 5. Precautions taken by the Gram Panchayat/Water Supply Committee to ensure good water quality. 6. Number of waterborne disease cases in the village in the past year. <p>(6 indicators with 11 marks)</p>	<ol style="list-style-type: none"> 7. Water quality issues presented/discussed during awareness campaigns. 8. Status of greywater reuse processes in the village. 9. Status of the village's wastewater management. 10. Prevalence of open defecation <p>(4 indicators with 4 marks)</p>	10	15
5.	Source Sustainability Module	<ol style="list-style-type: none"> 1. Current condition of traditional/existing water infrastructure (like village tanks, stand posts, hand pumps, etc.). 2. Assessment of potential risks/supply status of all water sources in the village by the Gram Panchayat and drinking water planning accordingly. 3. Actions based on drinking water source planning. 4. Status of source protection measures within a 500-meter radius of the drinking water source (as per Maharashtra Groundwater Act, 2009). 5. Funds raised for source strengthening by increasing availability of surface water. 6. Water storage through government schemes and local contributions. 7. Funds received under other schemes for source strengthening via artificial groundwater recharge. <p>(7 indicators with 15 marks)</p>	<ol style="list-style-type: none"> 7. Water quality issues presented/discussed during awareness campaigns. 8. Status of greywater reuse processes in the village. 9. Status of the village's wastewater management. 10. Prevalence of open defecation <p>(3 indicators with 5 marks)</p>	10	20
	Total	34	16	50	100

On the basis of the water score the villages receive, they are rated at four levels: Bronze, Silver, Gold, and Platinum. By providing clear action plans based on assessment, linking progress in O&M status development.



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