A Summary - Policy Dialogue on Operation & Maintenance of Jal Jeevan Mission (JJM)

Event Overview:

Date: June 5, 2025

Time: 10:00 AM – 1:30 PM IST

Venue: Classroom N201, IIM Bangalore

This fourth high-level Policy Dialogue, organized by IIM Bangalore and anchored by Prof. Gopal Naik, brought together national and state-level leaders, experts, and practitioners to deliberate on the evolving challenges in sustaining the Jal Jeevan Mission (JJM). Over 90 participants joined in person and virtually, representing institutions such as World Bank, UNICEF, Arghyam, Government of Karnataka, and leading academic and policy organizations.

Core Themes from Prof. Gopal Naik Presentation

Key Issues and Challenges in O&M:

Prof. Gopal Naik opened the dialogue with a presentation summarizing multistate empirical research on JJM implementation, particularly focusing on Operation and Maintenance (O&M). His key insights included:

- Inadequate sequencing of implementation activities
- Weak community ownership due to poor stakeholder engagement
- Subpar construction quality resulting in high maintenance costs
- Insufficient training for VWSCs, pump operators, and local leaders
- Lack of clarity in cost structures and flawed tariff designs
- Fragmented documentation and absence of structured handover protocols
- Limited water quality surveillance and user feedback mechanisms
- Undefined roles and responsibilities postconstruction, leading to ambiguity in governance

Overview:

1. ***Sequencing of Activities:*** Many states begin infrastructure work without preparing the community, resulting in poor handover. He stressed demand orientation, community contribution, and early VWSC formation as critical enablers.

2. ***Community Ownership:*** Ownership is built not only by awareness campaigns but also by involving communities in DPR preparation, training, and transparent cost sharing.
3. ***Quality of Construction:*** Substandard taps and fittings were common due to poor oversight. Prof. Naik emphasized involving VWSCs in inspection, as community vigilance deters cost-cutting.
4. ***Training Deficit:*** From water quality testing to financial record-keeping, key actors like VWSCs and pump operators lacked basic training. He recommended ongoing, decentralized training frameworks.
5. ***Clarity in Roles:*** After handover, communities are unclear about their responsibilities versus the government's. Lack of formalized protocols causes hesitation.
6. ***Monitoring and Evaluation:*** Prof. Naik recommended granular indicators like cost/kL, user satisfaction, nonrevenue water (NRW), and compliance with BIS standards. He also emphasized the need for action-oriented data reporting.

Community Engagement and Ownership

Discussions emphasized the importance of community demand orientation, contribution collection, and clarity in roles of Gram Panchayats (GPs), Village Water & Sanitation Committees (VWSCs), and households. VWSCs often existed only on paper, and members were unaware of their roles. Creating ownership through awareness campaigns, contribution-based participation, and transparency was seen as essential.

Operational Models and Karnataka's Leadership

Karnataka Model – A Case Study

The Chief Engineer from Karnataka shared a grounded account of the state's implementation challenges and innovations. His remarks covered:

- Development of a state specific O&M policy with Cabinet approval
- Realtime water quality monitoring using a geotagged mobile app
- Flow control valves and functional meters
- Formation and regularization of VWSCs in over 26,000 villages
- Mandatory digital recordkeeping via Panchatantra portal
- Capacity building from field level staff to district CEOs

Challenges faced included poor construction quality due to scale, resistance to meters by users, and financial sustainability issues due to inadequate tariff collection. Karnataka committed to

transitioning to volumetric tariffs where possible and identified digital tools and training as key to future improvements.

1. ***Tagging Errors:*** Early tagging of tap connections as functional (FHTCs) created mismatches between actual service levels and reported data.
2. ***Engineering Bias:*** Projects were engineer driven with minimal community involvement, creating resistance during handovers.
3. ***Meter Vandalism:*** Communities feared volumetric billing and resisted metering.
4. ***Policy Reforms:*** Karnataka approved a formal O&M policy, clarified responsibilities, and mandated VWSC meetings and digital record uploads.
5. ***Tech Interventions:*** Mobile based water quality apps and real time monitoring dashboards were launched to enhance transparency.
6. ***Financial Sustainability:*** In many Gram Panchayats, the cost recovery gap was over ₹1 lakh/month. Volumetric tariffs were piloted in developed districts like Bagalkot.
7. ***Capacity Building:*** Feedback Foundation was engaged for grassroots level training, and VWSCs in over 26,000 villages were activated.

Best Practices and Tools:

- Flow-Control Valves to ensure equitable distribution
- Water Quality Testing Kits (FTKs) and mobile apps for public access to lab results
- Service Level Benchmarking (SLB) adopted at the village level
- 24/7 Water Supply Villages declared based on sustained performance

Recommendations for National Replication:

- Prioritize stakeholder capacity building from the planning phase
- Define and enforce clarity in roles and responsibilities at all levels
- Use digital technology for real-time monitoring, billing, and transparency
- Transition towards volumetric user charges to incentivize conservation
- Ensure regular water quality testing, especially microbial, with public reporting
- Promote behaviour change for water conservation through IEC efforts
- Address NRW by investing in infrastructure and community vigilance

Reflections from Experts

Mr. Parameswaran Iyer (World Bank)

Mr. Iyer, World Bank Executive Director and former CEO of NITI Aayog, praised the rigor of the analysis and noted its relevance not only nationally but globally. He underscored the importance of:

- Achieving the right balance in planning duration (neither too short nor too prolonged)
- Incentivizing community oversight during construction
- Reducing dependency on voluntary efforts by compensating VWSC members
- Recognizing NRW as a fiscal leak and integrating it into FHTC indicators
- Integrating JJM indicators in the national census and household surveys
- Leveraging India's success for cross-learning with African nations
- Acknowledged the quality of research and emphasized its national and global relevance
- Called for sequencing with flexibility to reflect ground realities
- Recommended compensated community supervision during construction
- Highlighted NRW as a silent fiscal burden (₹9,000–10,000 crore loss per 10% NRW rise)
- Advocated for digital tools and household-level M&E
- Emphasized training as a cornerstone of post-construction sustainability

Voices from the Ground

- Arghyam field reports highlighted under-utilization of digital meters, lack of microbial testing, and insufficient operator support
- IHS insights emphasized the need for continuity in capacity-building and recognition of VWSC efforts
- Challenges noted in billing, NRW management, unauthorized connections, and behavioural issues such as water wastage

Insights from Other States and Institutions

Participants from Rajasthan, UNICEF, and IHS highlighted:

- The power of women-led VWSCs in driving sustainability (e.g., Kothari village)
- Need for continuous and targeted capacity building
- Integration of water safety planning and microbial testing into mainstream practice
- Field evidence showing pump operators struggling without digital logs or incentives

- ❖ Desire for national-scale knowledge sharing using IIMB’s findings and tools

Conclusion and Way Forward

The dialogue concluded that the future of JJM hinges on three pillars:

1. ***Institutional Clarity*** – Clearly demarcated responsibilities between State, VWSC, and Panchayat
2. ***Community Ownership*** – Engaged, trained, and informed local stakeholders
3. ***Digital Transparency*** – Real-time data access and smart monitoring tools

Participants urged the Government of India to mainstream the dialogue's findings via national workshops and inter-state exchanges. Experts emphasized the need to share Karnataka’s model and IIMB’s research globally, especially in water-insecure regions like Sub-Saharan Africa.