



Water on Tap

Coverage and progress under the Jal Jeevan Mission

Based on an interaction with Subhash Sethi, Chairman, SPML Infra Limited



Ensuring water security and availability is a high priority for India. With 17.65 per cent of the world population and only about 4 per cent of the world's freshwater reserves, India is facing a severe water crisis. With increasing population and water scarcity, more people are facing high to extreme water stress. The central and state governments are taking steps to address the situation and tackle the crisis.

Progress under the Jal Jeevan Mission

In terms of progress in the water sector, the Government of India has taken significant initiatives under the flagship scheme, Jal Jeevan Mission (JJM). As per the latest updates, there has been substantial progress in the past one year. Almost 26.5 million new functional tap connections (FHTCs) have been provided to rural households in the country. The JJM scheme was launched just two years ago and since then, 51.3 million rural households have received FHTCs. The coverage of tap water connections on a pan-Indian basis has increased to 43.52 per cent (as of October 21, 2021) from

just 16.83 per cent in 2019.

In a major development, six states and union territory (UTs) in the country (Telangana, Goa, Haryana, Puducherry, Daman & Diu, Andamans) have achieved 100 per cent FHTC coverage and another five states (Bihar, Gujarat, Punjab, Himachal Pradesh and Sikkim) have achieved 78-89 per cent coverage. The central government has earmarked funds worth Rs 3.60 trillion for the JJM programme for a five-year period. The Jal Shakti Ministry allocated funds of around Rs 500.11 billion in 2021-22. Further, Rs 269.40 billion has been allocated to states as per the recommendations of the 15th Finance Commission in the form of tied grants for water and sanitation to rural local bodies and Panchayati Raj institutions.

With a view to ensure safe tap water for children in schools, ashramshalas and anganwadi centres, a special campaign was launched on October 2, 2020. So far, 729,000 schools (78.35 per cent) and 791,051 (70.57 per cent of total) anganwadi centres across the country have been provided

with potable tap water supply in adequate quantities for drinking and cooking mid-day meals, hand washing and use in toilets.

Out of the Rs 3.60 trillion estimated outlay of JJM, 2 per cent is earmarked for water quality monitoring. There are 2,015 testing laboratories at the subdivision/block level, which test water sources under their jurisdiction for at least 13 basic water quality parameters. Meanwhile, under the wastewater management segment, greywater management is an integral component of JJM. The Karnataka Rural Drinking Water and Sanitation Department has released Rs 2.05 billion to 4,464 gram panchayats for grey water management. Other states and UTs are also taking concrete steps towards greywater collection, treatment, management and reuse in kitchen gardens and agriculture fields, thereby reducing the fresh water demand.

Key government initiatives

With the active participation of the states and UTs under the JJM, about 51.3 million (26.7 per cent) new tap water connections have been provided

since the announcement of the mission. Every rural household in over 119,135 villages and 81 districts are getting assured tap water supply. The National Water Policy (2012) advocates rainwater harvesting and conservation of water and water bodies, and highlights the need for augmenting the availability of water through direct use of rainfall. It also enables community participation. Other schemes such as the Pradhan Mantri Krishi Sinchai Yojana (PMKSY) and the National Hydrology Project (NHP) with a budget outlay of Rs 36.80 billion are also progressing well. Since the initiation of NHP, 12,273 surface water stations have been mapped in the water resources information system and 70,525 groundwater stations have also started sharing data.

Meanwhile, the Master Plan for Artificial Recharge to Groundwater, 2020 has been taken up. It envisages the construction of about 14.2 million rain water harvesting and artificial recharge structures to harness 185 billion cubic metres of monsoon rainfall. The Atal Bhujal Yojana (ABHY) is being implemented in 8,353 water-stressed gram panchayats of Haryana, Gujarat, Karnataka, Madhya Pradesh, Maharashtra, Rajasthan and Uttar Pradesh. The allocation for the year 2021-22 is Rs 15.25 billion as against an actual spending of Rs 220.2 million in the past fiscal. Further, the National Mission for Clean Ganga has been progressing and 162 projects have been completed under the scheme while 150 projects are under different stages of execution.

Technological initiatives

On the technological front, under JJM, a sensor-based IoT solution is being piloted for measuring and monitoring water supply with respect to quantity, quality and regularity of water in villages on a real-time basis. So far, 11 such projects in five states have been initiated and results are being monitored. Every water supply asset created is also being geo-tagged with photographs for regular monitoring.

Further, to mitigate the impact of Covid-19, SPML

Infra Limited initiated the use of modern technology to execute projects. The company incorporated innovative digital interventions in business operations for remotely monitoring projects and troubleshooting any issues before they disrupt the execution. The current crisis has also accelerated resource efficiency measures and implementation of drones, closed-circuit interconnected cameras, advanced people management systems, modern equipment and machines, and connected devices for efficient project execution and monitoring. Advanced analytics and machine learning have also helped in capturing both structured and unstructured data to optimise decision-making including workloads, staffing solutions and strategies for minimising inefficiencies.

Impact of Covid-19

The outbreak of the novel coronavirus disrupted lives globally. India too suffered badly, with infection counts going into millions and casualties over 400,000. There was no direct impact on water services in the country due to stay-at-home orders, lockdowns and curfew challenges, but the infrastructure development work in the sector did face major setbacks. The significant challenges that disturbed the business environment included the escalating cost of raw materials, a reduced workforce, working capital issues, falling cost margins/profitability, cost burdens of the deployed workforce including wages and salaries during the lockdown, repayment of loans, cost of capital and cost of compliances. It also resulted in projects getting delayed, financing costs rising exponentially and the projects being unable to generate the planned revenue. Further, they were unable to deliver the social promise that was envisaged.

Pain points

Aging infrastructure is amongst the key challenges that remain unaddressed despite some revamping and retrofitting activities. The ever increasing population, higher economic and industrial activities, rising customer demands, incorporation of advanced technologies, water

supply thefts, high level of non-revenue water (50 per cent of the supplied water) are some other challenges.

The government should consider steps to reduce water usage in irrigation with smart techniques along with an integrated approach to water supply and wastewater management in the country with reliability and financial sustainability. Adopting a systematic approach towards wastewater treatment and resource recovery with a complete reuse facility should be made obligatory if we are to make drinking water available in the coming years.

The road ahead

The water sector outlook in India for the next one to two years or even beyond is indeed promising. With the government's increased focus on the sector, there has been heavy investment in water-related projects, be it in the rural water supply scheme under JJM, water resource management, watershed development or agriculture and irrigation projects. The sector is bound to grow with dedicated schemes like JJM Rural, with an allocated budget of Rs 3.60 trillion till 2024, JJM Urban with an exclusive budget of Rs 2.87 trillion for the duration of 2021-2026, and the Namami Gange programme with an investment of Rs 200 billion. Other schemes including PMKSY (Rs 90.50 billion), Dam Rehabilitation and Improvement Project Phase II and III (Rs 102 billion) for the period 2020-2031, National River Linking Project (Rs 224.95 billion), Atal Mission for Rejuvenation and Urban Transformation with Rs 73 billion for 2021-22, and the National Hydrology Programme (Rs 36.80 billion) up to 2024 will also offer huge opportunities. Meanwhile, the PMKSY-AIBP scheme with exclusive budget allocation of Rs 115.88 billion for the period of 2021-22, the National Watershed Project (Rs 26.11 billion) up to 2022, and ABHY (Rs 60 billion) up to 2025 are other important government schemes that promise better prospects for the water sector in the times to come. ■