



# Jal Jeevan Mission: Growth Harbinger for Water Infrastructure.

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## How do you view the water infrastructure developments in India?

Water is an important natural resource, essential for the survival of human, all other living beings as well as for the businesses. The consumption pattern has become unsustainable while its quality and quantity is declining. Ensuring water security is a high priority for the Government of India and it is taking specific measures to address the situation.

Over the past few years, the water sector in India has witnessed some key trends and developments with dedicated schemes and budget allocations. There has been an increase in the access to water supply in urban India that has increased from only 48% in 1990 to almost 96% in 2021. Private sector participation has increased in areas such as 24x7 water supply, setting up STPs, water treatment plants and recycling facilities, Ganga cleaning etc. Government of India has been instrumental in the growth of water sector over the past few years as it has introduced a number of programmes and schemes, namely Jal Jeevan Mission (JJM), Namami Gange, Smart Cities Mission, AMRUT, irrigation projects and others aimed at improving the water supply and sewerage infrastructure in the country. The promising flagship programme, Jal Jeevan Mission aims to provide safe and adequate drinking water through individual household tap connections by 2024 to all households in rural India.

## How is Jal Jeevan Mission leading the water pipeline infrastructure across the country?

The progress of Jal Jeevan Mission is quite impressive and it is being implemented on a mission mode across the country. The budgetary allocation for the scheme has enhanced to Rs 60,000 crore in 2022-23 from Rs 50,000 crore in 2021-22, which shows the priority

being accorded by the Government of India to provide safe drinking water to rural households. With this massive allocation, states/UTs will have to make huge efforts to improve the pace of implementation for provision of tap water supply for effective utilisation of funds.

Piped water supply, on one hand, has made life more comfortable for the citizens while on other hand, it has helped pipe manufacturers in the country with robust business opportunities as every village water supply system requires a few kilometres of water pipeline to be laid and connected it with individual households. The Union Minister of Jal Shakti is taking passionate interest and he has held a meeting with pipe manufacturers for expeditious implementation of JJM to ensure the completion of 'Har Ghar Jal' in time. To address the issues and demand-supply gap, several steps have been taken including setting up of a multi-stakeholder committee for standardisation and adoption of new materials, increase in capacity of pipe testing, coordination with relevant ministries for intervention, amendment of certain bid conditions that posed a challenge to the manufacturers and impacted pricing etc. These steps will help in better execution of every project under the scheme and the required quantity of specific pipeline will be available for the timely implementation of the scheme across the country.

## What are the recent developments from SPML Infra in water and wastewater solutions?

SPML Infra is present in Indian water market for a very long time. As a brand, it is very strong and continues to enhance its presence in new areas. It has executed more than 650 water supply, wastewater and energy transmission & distribution projects in a rich legacy of 41 years and going strong with a number of projects

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under execution for urban and rural water supply and management, wastewater treatment, and sewerage network. With several executed projects in different states, SPML Infra is providing clean drinking water facilities to over 50 million people in the country.

We have recently received a large value order for building sustainable infrastructure to create a large water network under Jal Jeevan Mission in Rajasthan to provide clean drinking water facility to 2.5 million rural and urban populations spread across 1,256 villages and 6 towns in Dausa and Sawai Madhopur districts. Apart from this project, SPML Infra is executing four different projects in Rajasthan to provide functional tap water connection to over one million populations in several hundred villages in Bhilwara, Nagaur, Jhalawar, Bisalpur and Tonk districts.

We are also executing a large water supply project under the Jal Jeevan Mission in Uttar Pradesh where we are developing water infrastructure to provide functional tap water connections to over 1.6 million people of 915 villages in Moradabad, Amroha, Rampur, and Sambhal districts.

In the area of sustainable water management, SPML Infra is currently engaged in Phase III of the Saurashtra-Narmada Avtaran Irrigation Project (SAUNI Yojana), the ambitious large water supply and irrigation project that envisage to provide drinking water facilities to around 39 million people across 132 towns and 11,456 villages while also providing irrigation facilities for 1.8 million hectare of land in Saurashtra, Kutch and north Gujarat region benefiting millions of farmers.

The company is also working on urban water supply projects, including one aimed at improving the water distribution network in Delhi apart from six cities in Karnataka that would serve almost 2 million people. The water supply augmentation project in Bengaluru to reduce non-revenue water has helped in significantly reducing water losses from 56% to 23%, thus saving about 50 million litres' potable water per day. SPML Infra is also executing a number of rural water supply projects under the Jal Jeevan Mission in Manipur and other states of the country.

In the wastewater segment, SPML Infra has executed sewage treatment plant and sewerage network project in Kanpur city that has helped in Clean Ganga Mission. It has also executed several sewage treatment and industrial effluent treatment projects in several states including a decentralised sewage treatment plants and sewerage network in Mira Bhayandar, the satellite city of Mumbai.

Considering the extraordinary growth that it has achieved in just 40 years, it's no wonder that SPML Infra counts among the World's Top



50 Private Water Companies, as per a report published by Global Water Intelligence, London. In its chosen area of business, SPML Infra has its stamp on numerous completed and on-going projects for sustainable water management.

### What kind of opportunities do you visualise for contractors in India from Jal Jeevan Mission and similar programs?

The opportunities in water sector especially from Jal Jeevan Mission for the next few years or even beyond are indeed promising. Government of India is investing comprehensively into water related projects including urban and rural water supply schemes under JJM (urban & rural), water resource management programs, groundwater augmentation, watershed development, and irrigation projects.

The dedicated schemes like Jal Jeevan Mission Rural and Urban and Namami Gange programme are some of the flagships programmes that will continue for a longer period. There are other schemes like Pradhan Mantri Krishi Sinchayee Yojana - Har Khetko Pani, Dam Rehabilitation and Improvement Project (DRIP) Phase 2 & 3, National River Linking Project, Atal Mission for Rejuvenation and Urban Transformation (AMRUT 2.0), National Hydrology Programme, and Atal Bhujal Yojana are the important government schemes that promise a better prospect for water infrastructure development companies and contractors for the next few years' time.

### What are the major challenges in the current water distribution systems? What are the steps needed for a better system in place?

Population growth in urban areas, water scarcity, climate change effect, water supply

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risk, inadequate regulatory framework and aging infrastructure will remain some of the main challenges to be faced by the water industry. The industry must also consider how it will address the escalating energy costs, environmental risk, infrastructure security, restructuring of institutions, distressed groundwater situation, and equitable supply amidst increased demand. Then there are financial issues related to operation and maintenance of the massive water network in the country.

Water reuse can reduce the need for fresh water withdrawals, while decreasing the volume of effluents discharged into water bodies. But in India, only about 30% of the total generated wastewater is treated and reuse facilities are almost negligible except a few examples. The agriculture sector that uses 80% of fresh water mostly extracted from groundwater sources could be provided reclaimed water to reduce their dependence on freshwater sources.

We need to consider an integrated approach to water supply and wastewater management in the country with reliability and financial sustainability. Water industry should be supported for taking up projects for water loss reduction, improvement in non-revenue-water and groundwater recharge projects. Government should encourage private participation in water sector and provide adequate financial resources for building better water and wastewater infrastructure. Capacity building programs and improving water governance system based on stakeholders' participation will benefit in the long run. Water industry has to embrace technological innovation like other industries to endure the present and emerging challenges. Other industries have adopted the information and digital technologies much earlier reaping the benefits. There is a growing momentum to address the issues of water industry through innovation that can be deployed in the water sector and nations across the globe are experimenting with modern technology.

#### How is recycling of wastewater and its reuse evolving in the country?

The urban India is generating nearly 72.36 billion litres of sewage per day whereas only 28% of it is being treated leaving a big gap of 72% sewage not receiving any form of treatment and being released into water bodies. The treated wastewater reuse is still in its nascent stage with minimal reclaimed water. One good example is Chennai that implemented a conservation and augmentation plan with water harvesting and wastewater reclamation and reuse facilities. After the city faced severe water shortage in 2019, it has begun to recycle wastewater at scale to meet the water needs of its industries.


Two tertiary treatment reverse osmosis (TTRO) plants launched in late 2019 are the first of its kind facilities in India with treatment capacities of each plant is 45 million litres per day (MLD). This initiative has helped Chennai to recycle about 20% of generated sewage to reuse, enabling the city to reduce its consumption of fresh water.

The reuse of treated sewage is an issue which hasn't assumed much importance in the policy planning of the government. Indian cities administration must locally plan for implementing pilot projects to scale up for treated sewage reuse for horticulture, washing activities (road, vehicles and trains), fire-fighting, industrial cooling, toilet flushing and gardening and at large scale to provide it to farmers for agriculture purposes. The reuse of treated sewage can decrease the water demand from surface sources like rivers, ponds, lakes and as well as groundwater sources.

#### How important is water sustainability in the country in the coming years? What kind of projects will help in sustainable use of water?

India, with relatively good rainfall is able to store only relatively small quantities of rain water. Whereas arid rich countries (such as the US and Australia) have built over 5,000 cum of water storage per capita, China can store about 1,000 cum per capita, India's dams can store only 200 cum per person. Moreover, India can store only about 30 days of rainfall, compared to 900 days in major river basins in arid areas of developed countries.

It is not just huge water storage infrastructure that is needed; in many parts of the country there are also substantial returns from investments in smaller-scale, community-level water storage infrastructure such as tanks, check dams and local water recharge systems. And there are massive needs for investment in water supply systems for growing cities and for underserved rural populations. India's cities and industries also need to use water more effectively, and there will have to be massive investments in sewers and wastewater treatment plants.

Considering the increased thrust given to improving the water sustainability, the use of technology for various aspects of water supply and wastewater management is expected to increase significantly in the coming years. Besides, new initiatives need to be taken to attract private investment in the sector. In addition, there is a need to provide monetary stimulus to the sector through attracting funds and grants from the multilateral agencies and extending sovereign guaranteed funds to build large water storage capacities to fulfill the growing demands of fresh water. 

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