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# Changing Role of the State in Rural Drinking Water Governance in India

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## Abstract

This paper examines the major interventions in post-independent India's rural drinking water sector—in the context of the ongoing Jal Jeevan Mission—to assess the progress made in the provision of the service as well as discern the challenges that continue to persist. Recognizing the preeminent role played by global financial institutions and intergovernmental organisations in the evolution of the sector, the paper traces the conceptual contours of major service provision models that were promoted globally over the last four decades. Subsequently, it highlights the specific programmatic elements—across different programs—through which these models substantively manifested in the Indian context. The sector witnessed a steady shift away from the traditional state led top-down approach from 1980s, first witnessed in the community management approach and subsequently through demand-responsive approach that became the mainstay following initiation of sectoral reforms. The push to universalize service provision by 2024 marks the return to the earlier supply-driven approach led by the state and by the emphasis on community participation it appears to be a prolongation of the dominant blueprint of the past three decades of experience. The failure to clearly define the role of the state is contributing to absence of focus on state-capacity at different levels to ensure sustainable service provision. This is partially a consequence of the superficial consolidation of elements from former models of service provision in Jal Jeevan Mission. The paper calls for recognising the responsibility of the state-level institutions in supporting local governments in ensuring sustainability of the schemes through adopting a more measured approach to planning, operations, and overall management of the rural drinking water infrastructure.

**Keywords:** *Rural Drinking Water Reforms, Sustainability, Community Participation, Water Governance, Jal Jeevan Mission*

## Introduction

The endeavour to provide rural areas with a protected drinking water supply continues to be a work in progress in India. The Indian state has proactively implemented several drinking water programs over the last seven decades towards this purpose. It is currently in the middle of executing one of India's largest and perhaps the most ambitious drinking water programs in its history—The Jal Jeevan Mission (JJM).

Inaugurated in 2019, it resolves to provide a functional household tap connection (FHTC) to all rural households in the country by 2024. The program, in a larger sense, seeks to safeguard rural India's drinking water security by tackling the critical issues faced by the sector which encompass technical, institutional, social, financial, and environmental challenges.<sup>1</sup> However, expansion in service provision has not been commensurate to the resources invested in the sector. It is estimated that about 30% of annual investments in the sector do not give the expected returns due to ineffective operations and management<sup>2</sup>.

In this context, it is appropriate to retrospectively review the major interventions in the sector over the years. This will provide a background to understanding the progress made in the provision of the resource as well as discern the challenges that continue to persist in the sector. This paper reviews the various models that have come to inform governance in this sector. It recognises the pivotal role of global financial institutions, as well as initiatives by intergovernmental organisations like the United Nations, in the evolution of this sector. Models of service provision espoused (implicitly and explicitly) by multilateral and bilateral organisations over the years have been shaped by the prevailing dominant consensus on the best way to organise the economy (and consequently the society) in North America and Western Europe. In substantive terms, this boiled down to what ought to be the role of the state in drinking water governance that then fundamentally defined the role of the two remaining spheres: market and civil society. In the context of the provision of services like drinking water in developing countries, the role of communities has come to be seen as equally central. This paper critically evaluates the contextual manifestation of major rural drinking water models in India.

This paper is structured around the following questions: a) what are the major models of service provision that have been promoted by the global multilateral and bilateral institutions?, b) what were the key underlying factors that shaped these models?, c) what are the specific programmatic elements in rural drinking water initiatives, through which these models substantively manifested in the Indian context?, and d) how is the Indian rural drinking water sector placed to ensure sustainable provision of this service?

This paper is based on a review of academic literature, policy documents, reports by the bilateral and multilateral institutions on rural drinking water supply (RDWS). Peer-reviewed journal articles, reports and briefs published by international organisations like the United Nations and World Bank helped in understanding the evolution of the rural drinking water globally. The paper relied on case studies, annual reports and evaluation reports published by the Government of India to map the trajectory of the sector in India. State publications like five-year plan documents and Comptroller and Auditor General (CAG) reports offered a glimpse of how the government system

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<sup>1</sup> Failure of sources, poor operation and maintenance of physical infrastructure, ineffective institutional arrangements resulting in sub-standard planning and execution, lack of ownership and poor financial sustainability, and inadequate capital investment required for extending universal service provision.

<sup>2</sup> Rural water supply costs and service levels in Andhra Pradesh. Briefing Note by WASHCost India and IRC International Water and Sanitation Centre. September 2011. [https://www.ircwash.org/sites/default/files/briefing\\_note\\_water\\_wc\\_india\\_september\\_2011\\_final.pdf](https://www.ircwash.org/sites/default/files/briefing_note_water_wc_india_september_2011_final.pdf). Accessed on 11 Dec 2022.

assessed the experience in the sector. Data obtained from the integrated management information system (IMIS), maintained by the Ministry of Jal Shakti (MoJS), Public Health Engineering Departments (PHED) and the World Bank, helped to quantitatively assess the changes in the sector.

This paper is structured as follows: Section 2 traces the evolution of the sector at a global level. It identifies the underlying factors that shaped the emergence of major models in the sector. The successes and limitations of each of these models is captured in this section. Subsequently, the paper documents the manifestation of these models in the Indian context. It examines all the previous RDWS programs in India to understand their specific objectives and the strategies for achieving the same. This section identifies the key gaps in each of these programs that affected the outcomes. In the light of these insights, the paper examines the ongoing Jal Jeevan Mission to identify the key persisting challenges that need to be addressed to achieve sustainable water service delivery in rural India.

### **Rural Drinking Water Sector: The Global Evolution**

A historical understanding of the approach to drinking water supply within the development sector over the latter half of the twentieth century is required to illustrate the influence of global water policy paradigms on India's domestic strategy. This section details the emergence of the major models for rural water supply provision that came to be advocated at the global level by global financial institutions and intergovernmental initiatives.

### **Post-War 'Big Push': The Preeminent Role of the State**

The developmentalism of the 1950s and 60s converged on economic growth as the overriding priority. This was to be specifically achieved through industrialisation, urbanisation, and intensification of agriculture. The dominant school of thought in development policy in that era was that 'developing' countries could achieve rapid rates of economic growth by emulating the economic path taken by the Western powers by following a linear pattern of growth. Here, modernisation and industrialisation could be achieved by investing in selected areas which were held to be critical for the 'big push' to stimulate production. The idea of centralised planning fostered by development planning in the 1950s, necessitated the state to play the lead role in mobilising resources for required inputs for industrialisation (Ward, 1997). The physical infrastructure for the 'big-push' were built using state finance and were often supported by the post war push for 'development'<sup>3</sup>.

In line with the developmentalism of the 1960s, the focus of the development sector during the immediate years after the second world war was on big dams as they were seen to trigger macroeconomic growth by triggering agricultural intensification and consequently creating the conditions for industrialisation. Dams, regulated rivers and

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<sup>3</sup> In the urban realm, it manifested in the form of the state's obligation to provide protected drinking water supply to urban residents. The reformers of the twentieth century welfare state believed that the notion of citizenship was incomplete when not accompanied by the supply of water to the citizens by the state. Reformers' advocacy of universal provision by governments was based on the argument that access to water and disposal of waste was not only for preventing disease, but a way where the government could ensure a minimum level of dignity to which all citizens have a right.

constructed reservoirs could provide secure and continuous supply of water towards this end, which was predicated upon the assumption of inexhaustible availability of water and a narrow supply driven focus. The notion of water supply being part of the portfolios of multilateral and bilateral funding agencies is considered routine today (Bakker, 2010). But it was not on their agenda during the immediate post-war period. This started to change in the 1960s as the World Health Organisation and other institutions started highlighting the link between water and public health. In this period, it came to be recognised that the drive towards greater industrialisation did not automatically address poverty related concerns. From the late 1950s, water supply became the central concern for the development agenda and a new set of poverty-focused development institutions started emerging during this period of time (Kapur et al., 1997).

The World Bank's position (the Bank hereafter) on lending for drinking water projects during this time is instructive in this regard. It is the largest of the multilateral lenders in the global water supply sector in the world. For developing countries, the Bank has been the largest source of poverty-alleviation linked finance for decades. The bank's lending for water supply and sanitation during the 1960s was not without hesitation and it took it up only tentatively. The reasons were that the Bank's policy restrained it from lending to 'non-self-liquidating ventures'—projects with low rate of return that were unlikely to generate enough revenue to repay the loan (Kapur et al., 1997). For reasons related to financial viability, the Bank's dominant strategy during the 1960s was focused on infrastructure which was the catalyst for the development of other sections of the economy. Infrastructure was 'relatively less attractive to private capital' and investment in infrastructure would lead to technological progress, increased capital investment and trade, and thereby increased production and income in developing countries. This was the route conceived to alleviate poverty. The post war period saw the Bank lending predominantly for large dams rather than water supply.

The Bank became more receptive to lending to water supply projects in the latter half of 1960s. This was fuelled by the Bank's need to find bankable projects in the developing countries as the Bank's avenues had literally closed in Europe as the European countries recovered and the Marshall plan effectively side lined the Bank's role in Europe. The World Health Organisations' argument about water supply and public health also played a role. A section of the Bank though was not in support of lending for water supply projects because they saw problems with bankability (concerns of revenue generation rather than public health issues) and also believed that it will not directly lead to increased economic growth (Kapur et al., 1997). Between 1961 and 1970, the Bank funded two water supply projects. There was heavy emphasis on revenue generation and not broader health concerns. This led to funding of only urban water projects where the economic outlook was better than rural projects (because of economies of scale). An internal review in the Bank in 1971 presciently warned that economic and financial sustainability was difficult to achieve in this sector. A lack of ability to pay in developing countries would either mean a loss-making enterprise or exclusion of large segments of the population (Bakker, 2013).

The Bank's position changed when Robert McNamara became its president. The new focus was on poverty alleviation, that translated in an increase in Bank's water supply lending from \$27 million per year during the period 1968-70 to \$180 million per year during the period 1971-73 (Mason & Asher, 1973). By 1988, the drinking water supply

project loans averaged 10 percent of the Bank's total liability. The first loan sanctioned by the Bank for rural water supply was in 1977 (Bakker, 2010)<sup>4</sup>. The increased international lending in water was also a consequence of pressure from developing countries to make loans available for water supply and sanitation services (Bakker, 2013; Mason & Asher, 1973). The opportunity for linking capital-intensive hydraulic works projects to lucrative projects for local construction and consulting companies was also an important 'pull' for bilateral agencies whose funds came 'tied'. All of the funds which went towards water supply and sanitation, irrespective of the source (bilateral, multilateral, public, private etc.) were routed through government owned institutions. In developing countries, the central government developed water resources which were accomplished either directly or via a parastatal (a government owned autonomous entity). This conformed with state-led supply-driven paradigm which had the following characteristics; water was subsidised, a clear focus on supply side management, largely operated on capital intensive, large scale hydraulic infrastructure (Coutard, 2002; Saurí & del Moral, 2001). While the 1970s witnessed a spurt in investments in the rural drinking water sector, it was not accompanied by any coherent global blueprint for extending the service provision in developing countries. The declaration of the United Nations International Water and Sanitation Decade in 1977 paved the way for rural water supply provision becoming a critical policy priority at the global level.

### **The Neo Liberal Turn: Culmination in Sectoral Reforms**

The post-second world war era in North America and Western Europe witnessed the consolidation of democratic form of organising the society where governments played a proactive role in regulation, economic distribution and more generally intervening in the economy as well as the society. This era saw expansion of the political sphere of society, with the state playing a central role in the emergence of social democracy (Maier, 1987). However, the early 1970s witnessed a rapid transformation of the welfare state that emerged after the second world war in a short period of time. In 1980s, with Western economies reeling from simultaneous onslaught of inflation and economic stagnation, conservative regimes, in the UK and US respectively, saw the welfare state as the critical bottleneck in the performance of their economies. Governments and especially public sector organisations came to be seen as "*rigid and bureaucratic, expensive and inefficient*" (Pierre & Peters, 2000). The trend of increasing disillusionment with the Weberian bureaucratic state with its opaque processes and lack of avenues for citizen engagement, combined with foregrounding of individual freedom (as against collectivist strategies of failing Socialist regimes) challenged established ways of decision-making processes. Across both sides of the Atlantic, economic (and political) reforms were launched through privatisation, deregulation, cut-backs in public spending, tax cuts, monetarist economic policies and the introduction of distinctly market-based institutions in public service production and delivery (Hood, 1991; Pierre & Peters, 2000).

### **Emergence of the Community Management Model**

As discussed, a steady decline in the state of capital-intensive hydraulic infrastructure that came with considerable neglect of maintenance, governance issues

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<sup>4</sup> The loan was approved on December 15, 1977 and was the first loan entirely for rural water supply and waste disposal (loan 1502 Rural Water Supply Project in Paraguay).

with little attention to environmental impacts owing to supply side focus were the features that characterised public water delivery for three decades from 1960s to 1980s in developing countries (Bakker, 2013). The decade from 1981-90, called the UN Drinking water Supply and Sanitation Decade, led to a push to expand rural water and sanitation coverage in developing countries. The 1980s saw the emergence of the community management model as an alternative to the then extant supply-driven model. The community management model was an experiment to achieve more efficient and sustainable rural drinking water systems by overcoming the deficiencies associated with the conventional government-managed systems. While the global development apparatus' shift to directly address poverty (as against fostering economic growth) contributed to the focus on rural drinking water provision, it was also down to the broader ideological shift towards a preeminent role for the market (along with the civil society) in the organisation of the economy. The community management approach, promoted by multilateral and bilateral donors, also had its roots in the NGOs critique of large-scale hydraulic infrastructure for its negative environmental and social externalities. They also highlighted the lack of transparency and accountability in large water-supply projects funded by global financial agencies in the South.

The community management models in drinking water provision were promoted by multilateral and bilateral donors in developing countries through a project-approach. The salient features of this model included a) the participation of the community in the planning and development of water-supply systems, b) community ownership of the system (as against the state), and c) willingness of the community to operate and maintain the system (Briscoe & Ferranti, 1988; Churchill, 1987; Moriarty et al., 2013). The external agencies provided the infrastructure to the communities and NGOs as project implementing agencies (PIA) facilitated the creation of local institutions, for fostering ownership of the infrastructure among the community. The community management approach appealed to the donors and recipient governments for different reasons. For the latter, the assistance from global donors in improving rural drinking water and sanitation access was seen to ease the pressure on already overstretched government resources and more importantly absolve them of their responsibility irrespective of the quantum of the assistance. For the former, a project approach meant that the global donor agencies could move away from the field after handing over the infrastructure to local communities, absolving them of any further responsibility (Harvey & Reed, 2007). While the model was not experimented widely, it paved the way for a significant shift in the imagination of how rural drinking water provision ought to be organised in developing countries. While the project-based approach has been criticised for idealising communities in low-income countries as well as exonerating the state of its responsibility in the provision of a basic need, the emergence of the model remains a major event in the evolution of the sector.

### **Towards Sectoral Reform: State as Facilitator from Provider**

By the end of the decade beginning 1980, despite significant spending, more than a billion people across the globe remained without adequate water supply (UNESCO-WWAP, 2003, 2006). Even before the 1990s, attention had been turned to systematic problems with water supply delivery using the adopted municipal hydraulic paradigm in developing countries. Water supply utilities in developing countries faced a glut of interconnected issues which was called the 'vicious cycle'; low investment, low

performance, very low-cost recovery limiting further investment (Easter et al., 1993). By 1994, it was estimated that urban water utilities recovered only 30% of the costs on an average. Poor performance and lack of attention to collection of charges were not the only reasons behind this very low recovery percentage. To some degree, this was due to the fact that direct government support to urban water utilities was a norm in many developing countries. Here, government's affordability was the primary goal and not economic efficiency. The other reasons that made the list of criticism of conventional state-run urban water utility included interfering political interests, skewed incentive structure in the state-run utilities and low quality of service provision (World Bank, 1992a). While these pointers emerge from the urban drinking water sector, the diagnosis of the ills plaguing rural drinking water sector followed the same argumentative structure—foregrounded in economic efficiency—in the milieu of neoliberal triumphalism of the 1990s.

The World Bank commissioned a review to evaluate the performance of the water and sanitation portfolio between 1967 and 1989, in the face of mounting evidence of failure to achieve the desired objectives in the sector. The Buky Report—released in 1992—was highly critical of the Bank's performance (World Bank, 1992b). It suggested that the Bank failed in all of its four stated objectives which were institution building, financial viability, availability of minimum supply of safe water to the poor and long-term sustainability through effective operation and maintenance (World Bank, 1992b). According to the report, only 2 out of 129 projects in the drinking water sector could be classified as successes financially (World Bank, 1992a). The Buky report concurred with NGO critiques of the bank's bias towards large scale centralised development projects and the associated negative impacts on marginalised and disadvantaged groups. However, it did not endorse other suggestions like prioritising demand management, water conservation over new projects, supporting rain-fed agriculture, and a renewed policy focus on waste water management and pollution.

Consequently, the Bank adopted a new strategy on water resources in 1993. Moving away from previous policies (especially support to parastatals), the Bank set out to prioritise broader sectoral reform and called for integrated water resource development (Easter et al., 1993). Decentralisation and privatisation were now the central tenets of the reform agenda. Emphasis was shifted to encouraging private sector participation and greater use of market mechanisms. Prior to this move, the Bank had adopted the Dublin principles in 1992, which called for water to be an economic good and advocated a participatory approach in water development and management. These policy moves set the stage for the elimination of parastatals and began the process of reforming rural drinking water institutions around the economic dimensions of service provision.

The set of principles that came to underpin the new paradigm, to be achieved through the sectoral reform program, were the following: a) treatment of water as an economic good, b) full-cost pricing tariffs, c) elimination of cross-subsidy depending on the context, d) introduction of water rights and e) a change in the role of the state to a facilitator (Gustafson et al., 1989). In the rural drinking water sector, community management complemented by the world bank backed demand-responsive approach (DRA) emerged as the default approach in the developing world. This approach was essentially a retooling of the community management model by integrating it with fundamental tenets of neoliberalism. Projects were to be planned and executed based on demand from communities which included their informed participation in choosing

technology, contribution to capital and operational expenditure, and devolving responsibility (from the state) for managing the newly created infrastructure. The notion of demand was predominantly predicted on the economic dimension of service provision, which followed from the diagnosis that it was the Achilles heel of the sector (World Bank, 1998). Community management and participation, in this approach, strengthened the economic base of service provision. The bank and its affiliates made sectoral reforms a precondition for the disbursement of additional loans in the sector (Bakker, 2010).

## **Towards Service-delivery Mechanism**

Over the last three decades, a combination of community management and demand responsive approach has led to substantial progress in rural drinking water access globally. According to the Joint Monitoring Program of World Health Organisation/United Nations Children's Fund (WHO/UNICEF), the percentage of rural people (globally) having access to an improved water resource increased from 62% in 1990 to 81% in 2010 (WHO/UNICEF Joint Monitoring Programme for Water Supply and Sanitation, 2012). Similarly, the percentage of rural people (globally) receiving service provision within their household premises expanded from 17% to 28% between 1990 and 2010 (Moriarty et al., 2013). While these macro improvements undoubtedly represent progress over the last three decades, there is broad consensus that a substantial proportion of newly constructed schemes fail too soon. Non-functionality of rural water supply schemes is as much a reality as improved access to the service provision globally. For instance, the Rural Water Supply Network (RWSN) found that 30-40% of handpumps do not work properly at any point of time (RWSN Executive Steering Committee, 2010). Going back three decades, Evans suggested that 30-40% of rural water supply schemes in developing countries were non-functional (Evans, 1992). While the issue of non-functionality of schemes has been an issue of debate in the global policy debates in the sector for decades, the existing assessments of the state of rural water infrastructure do not capture the substantive issues affecting their performance. Along with completely defunct schemes, the proportion of systems with poor reliability is not established. There are two major reasons behind this phenomenon. The first is that major global assessments in the sector have narrowly relied on access from a set of technologies to establish improved coverage. For instance, the WHO/UNICEF study quoted above relies on such a methodology. The quality (reliability) or quantity (level of service) of improved coverage is not captured<sup>5</sup>. The second is an unintended consequence of a macro phenomenon. The global push to improve rural drinking water access through Millennium Development Goals (MDG) or more recently Sustainable Development Goals (SDG) has meant that the focus has largely been on extending service provision. The race to comply with quasi-legal safeguards like human right to water has also led to prioritisation of physical infrastructure over institution building.

Rather than being contradictory, it has been argued that this represents the limit of the dominant approach in the rural drinking water sector over the last three decades. A

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<sup>5</sup> These can include the following: a) How much water is received (per capita) from improved sources?, b) How often do systems break-down?, c) What is the quality of water being supplied?, d) How far is the point of access from the household?, e) What is the average duration for addressing breakdowns and repairs?, f) What proportion of the O&M expenditure comes from the state and the community?

combination of urbanisation, reduction in absolute poverty levels, and concomitant increase in standard of living has led to citizens demanding improved levels of service provision from the state. Governments around the world have begun responding to this shift by moving towards service provision through pipes (phasing out other technologies like hand pumps). It is becoming apparent that a strategy predominantly reliant on voluntarism and informality cannot sustain the progress in the sector (Lockwood & Smits, 2011).

The service delivery approach shifts the focus to substantive operative elements (quantity, quality, and reliability) from de-facto focus on infrastructure for first-time use (Lockwood & Smits, 2011). Thus, it highlights the importance of the entire service chain in ensuring reliable and sustainable water supply. The idea was conceptualised by IRC to provide a framework for universal access to safe drinking water in the developing world considering the limitations of the previous approaches in the sector. In this approach, it is argued to move beyond the community management model via adopted models (James, 2011). The need for evolving context-specific models emerges from the recognition that demand for drinking water provision is essentially non-uniform in character. Sustainability of rural water supply systems is fundamentally connected to the level of service when genuine-demand responsiveness determines the substantive operational details of the system put in place. These include quantity, quality, and the overall reliability of the service provided. Demand does not often neatly coincide with service provision on par with ‘global’ standards. Similarly, households might not be satisfied with the minimum level of service that gets provided in lieu of complying with intergovernmental resolutions like human right to water. Therefore, the proponents of this model argue that the journey towards sustainability involves evolving context-specific norms and terms of service through genuine-demand responsiveness.

### **Tracing the Evolution of RDWS Programs in India**

India’s drinking water sector has undergone many policy changes since independence. Water, being a state subject since 1950, did not get a major focus at the central level except for building dams for irrigation and hydropower. The government paid attention to the drinking water supply in rural areas through the Environment Hygiene Committee (Bhore Committee), 1949, which recommended to cover 90% India’s population with safe drinking water within 40 years (Planning Commission, 2011). But the first drinking water program was initiated under the National Health Program in 1954 (James, 2011) which continued till the 3rd five-year plan (FYP) as a component of the community development plan (Government of India, 2019). A National Drinking Water Supply Program, the first of such kind, was launched with the help of UNICEF in 1969 (Planning Commission, 2011). The major focus remained on traditional sources, specially dug wells for drinking water supply. With changes in the central regime of the country, the development agenda also changed viz, the Nehruvian era, poverty alleviation, appropriate technology for development, LPG reforms, decentralisation, and inclusive and sustainable development. On similar lines, RDWS programs also evolved from merely a state-run welfare-based paradigm to the involvement of civil society organisations (CSOs), reforms proposed by IFIs, and participation by the community themselves.

RDWS programs in India were also reshaped and redesigned over this period. It witnessed many institutional shifts starting under the Ministry of Health and moving to the Ministry of Rural Development. Its advancement and upscaling led to the creation of a separate Department of Drinking Water and Sanitation in 1999 which was later transformed into the Ministry of Drinking Water and Sanitation in 2011. In this backdrop, this section delves into the various RDWS programs in India and unveils the changing role of the state in this context.

### **ARWSP: Supply-Side Drinking Water Provision**

ARWSP was launched by the Government of India (GoI) in 1972-73 to supplement the efforts of the State Governments in providing access to safe drinking water to all rural habitations of the country. Rural habitations were classified into three categories to demarcate focus areas: fully covered (FC)—having access to 40 lpcd), partially covered (PC)—having access to 10-40 lpcd), and non-covered habitations (NC)—with access to less than 10 lpcd), based on the water supply norm, water quality standards (although no special focus) and distance of drinking water source from the households (Cullet, 2009, 2011; James, 2011). This definition of coverage provided foundation for the design and implementation of schemes. In the Fifth FYP, ARWSP was replaced by the Minimum Needs Program (it was introduced in the backdrop of global debate, but its unsatisfactory progress led to the revival of ARWSP guidelines in 1977 (Asthana, 2009; James, 2011). Subsequently, the National Drinking Water Mission (NDWM) was launched in 1986 for scientific inputs and cost-effective technologies and was later renamed as Rajiv Gandhi (RG)NDWM with a special focus on SC/ST communities (James, 2011). During this entire program, handpump remained as a choice of technology for water supply.

Welfare principles based on a supply-led approach, assuming water as a social good to be provided by the government for free, helped to provide access to safe drinking water to the vast rural population (Sangameswaran, 2009; World Bank, 2008). This approach was criticised for the large expenditure with no cost recovery, especially for operation and maintenance (O&M) (Cullet, 2009). Although more than Rs 660 billion had been allocated for RDWS since the first FYP, a large portion remained underutilised or implemented with poor planning (CAG, 2008). The program had higher capital expenditure but poor coverage, due to poor planning, delay in execution, and lack of community participation (World Bank, 2008). The Comptroller and Auditor General (CAG) reports also found problems like re-emergence of problem habitations, poor planning in the implementation of schemes, lack of adequate monitoring of the quality of water, inadequate community participation, poor fund management, lack of or no plans for sustainability, no Annual Action Plan (AAP) for water security by the state governments, fund underutilisation, fund diversion and inefficient program monitoring in ARWSP (CAG, 2008, 2018).

The supply-led approach adopted in the ARWSP was being debated and challenged globally also since its inception. The formal acceptance of the Delhi Declaration and Dublin principles followed by decentralisation in 1993 paved the path for reforms in this sector (Singh, 2014). The first set of reforms happened through the Sectoral Reforms Pilot Project (SRPP), assisted by World Bank, where 67 districts in 26 states were selected on a pilot basis for providing water supply based on a demand-responsive approach

(DRA). SRPP was further scaled up to Swajaldhara with a loan conditionality that the state government would have to minimise its role in the overall process and act only as the facilitator (Sampat, 2007).

## Indian Manifestation of Global Reforms

The community-led approach model was not new in the water sector in India. In most of the arid and semi-arid areas, several NGOs/ CSOs championed mobilising the community for participation and self-provision during the 1970s, inspired by the alternative development paradigm (Narayanan et al., 2018). It was a response to the failure of the welfare state to ensure water security because of the top-down technocratic approach adopted by the bureaucracy (Sangameswaran, 2010). Successful models of watershed development like Sukhomajri and Pani Panchayats coupled with their economic growth provided a legitimate ground for community participation and management model to scale up across the country.

The beginning of the 1990s witnessed the biggest-ever reform in India through LPG reforms that were extended to the drinking water sector as well resulting in neo-liberal shift with the assertion of a global discourse towards state withdrawal and community participation (Asthana, 2009). The Dublin principles also became a vantage point for such reform arguments. These global concerns were reflected in the Indian policy documents for the first time in the Eighth Five-Year Plan (1992-97), where the role of the community and move towards a demand-driven approach was justified (Narayanan et al., 2018). It adopted the idea of water supply to be based on effective demand, cost recovery and managed by private local organizations (James, 2004; Sampat, 2007). Similarly, the ninth plan (1997-2002) also admitted to the need to incorporate these changes in planning and design and further highlighted the importance of people's participation and streamlining of the O&M charge collection (Kulkarni, 2011). SRPP was launched as a 'project' in a limited set of villages, but its reform ideas had huge policy implications. It led to the paradigm shift from the 'Government-oriented supply-driven approach' to the 'People-oriented demand-driven approach' involving charging for the service and community participation to develop a sense of ownership of the infrastructure created (Cullet, 2009). The policy influence became more explicit with the reflection of these reforms in the X<sup>th</sup> FYP document and the National Water Policy 2002 (Srivastava, 2012) making the global water agenda of international financial institutions turned into formal policies in the country.

SRPP later got scaled up into the Swajaldhara program in 2002 and launched in 8 states through 882 projects<sup>6</sup> aiming to create a sense of ownership among end users through community participation with at least 10% contribution in initial cost and full tariffs for O&M. It was expected that it would enhance performance, bring empowerment, accountability, and transparency with more equitable distribution of water in villages. Thus, the government assumed that community participation, training, and awareness, no institutional support from the government, and tariff collection for O&M can lead to developing a sense of ownership (Cullet, 2009; James,

<sup>6</sup> Press Information Bureau. Government of India  
<https://archive.pib.gov.in/archive/releases98/lyr2002/rdec2002/24122002/r241220023.html#:~:text=The%20launching%20of%20Swajaldhara%20won,West%20Bengal%20and%20Uttar%20Pradesh.> Accessed on 12 Dec 2022.

2004; Srivastava, 2012). The entry-level activities, planning, and implementation were completely projectized with the project period for each scheme predefined and categorised (Government of India, 2005).<sup>7</sup> A shift towards piped water supply (PWS) also happened during this program with some focus on maintaining the quality and sustainability of water sources (James, 2011).

The outcome of Swajaldhara was highly uneven across the country. Though 89.4% of the schemes were completed and 87.4% handed over to the community, there was poor project planning, delay, and poor quality of work leading to dissatisfaction among the community (Government of India, 2005). The idea of community participation was important in creating a sense of ownership but not everyone was skilled in operating and maintaining the new technology, mainly the PWS (Hutchings et al., 2017). Further, ability to pay determined the level of water supply people received (Cullet, 2009). The reforms created “users” (by paying the initial charges), but failed to capacitate stakeholders directly associated with the projects (Sampat, 2007). The citizen who could assert the right to drinking water in the earlier phases was turned into a ‘beneficiary’ demanding and paying for service. However, the O&M charges paid by the community could provide only short-term financial viability, but not sustainability or community ownership (Nayar & James, 2010) due to the lack of regulated user charges and poor awareness and training within the community (Sangameswaran, 2010). Similarly, women emerged only as rubber stamps because their participation was driven by their male counterparts or relatives (Kulkarni, 2011).

It has been found that community participation leads to better outcomes in the RDWS sector (Asthana, 2009; Nisha, 2013). Capacity building and technical support from experts can result in better utilisation of indigenous knowledge, empowerment of the community, inclusion, and awareness which eventually result in better decision-making (Jiménez et al., 2019; Nisha, 2013). Community participation in water management includes the demography, historical and cultural beliefs, opportunities for participation, inclusiveness in decision making and the information being shared about the intervention (Jiménez et al., 2019). But the consideration of community as a group of people with a common demand for water supply, while executing RDWS programs in developing countries, ignored social stratification, historical marginalisation, and local power dynamics (Harvey & Reed, 2007). In India also, the assumption of a homogeneous society without socio-political influence in villages resulted in patronage and elitism in water supply connections (Cullet, 2011; Rout, 2014; Sampat, 2007; Srivastava, 2012). Instead of community participation, the focus had been given to community management, which starts in the post-implementation phase after handing over of the schemes. The handing over of the schemes to the community happened only on paper without developing a sense of ownership, which led to questionable accountability and the absence of social audits (James, 2011; Parsai & Rokade, 2016; Rout, 2014; Srivastava, 2012). Community participation through Village Water and Sanitation Committees (VWSC) was successful in some states like Gujarat, Kerala, Maharashtra, and Karnataka, which depended on various factors like support from the government, NGOs, bilateral and multilateral funding agencies, and their understanding of the local conditions

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<sup>7</sup> The schemes were categorised into institutionalisation (3 months), sensitization and identification (12 months), scheme/ system planning (9 months) and implementation, commissioning and handing over to the community (12 months) (Government of India, 2005).

(Hutchings et al., 2017). CAG 2008 report further highlighted problems of poor fund utilisation, lack of contribution from the community, and in many cases, delayed or no execution of schemes. States also kept reporting higher number of slipped back habitations to get additional funds from the GoI. (James, 2011). Thus, the model, while helped increase coverage, created new sets of post-implementation challenges. Considering these issues and recommendations by the 11th FYP, ARWSP and Swajaldhara were restructured into NRDWP in 2009.

### **NRDWP: Bringing Local Governance to DRA**

While SRRP was in full swing in the country from 1999, ARWSP the supply side paradigm of the Government of India was continuing as a parallel stream from the 1970s. ARWSP was then modified into NRDWP in 2009 with an emphasis on the sustainability of schemes while making a major governance shift through incorporating decentralisation by involving Panchayati Raj Institutions (PRIs) and community organisations in the planning and implementation (Government of India, 2013). It also strived to take on board the learnings from the previous programs and included principles such as water as a public good, community participation, and decentralisation. Gram Panchayat (GP) was considered as the smallest unit to represent community via the VWSC which had to look for planning, implementation, monitoring, and O&M of their schemes. Taking a cue from Swajaldhara experience, it was also proposed to provide technical assistance to VWSCs through NGOs and/or CSOs.

NRDWP also made a shift from the habitation level to the household level for water supply (Government of India 2013) and stressed on certain sustainability parameters—source, system, financial, social, and environmental (Cullet, 2009; Parsai & Rokade, 2016). With the revision of guidelines in 2013 and based on the 12<sup>th</sup> FYP recommendations to achieve its targets, it brought the following ambitious changes: (1) focus on PWS, (2) increasing service level from 40 lpcd to 55 lpcd, (3) greater thrust on water quality affected areas, (4) cover at least 50% population with PWS with access to 55 lpcd and (5) at least 30% tap connection to households (Government of India 2013). The aim was to operationalize the program at the household level instead of the hitherto habitation level for better service delivery by developing infrastructure (James, 2011). The institutional setup for NRDWP was kept similar to Swajaldhara with an addition of a sub-district or Block-level Resource Centre to link GPs/VWSC and the district water and sanitation mission (Government of India 2013). The major objective of NRDWP was to facilitate access to safe and adequate drinking water by 2030 became the foundation of the current Jal Jeevan Mission (Government of India, 2019).

Another focus in NRDWP was sustainability that was the concern across all programs. NRDWP mentioned four components of sustainability: source, system, financial, and social and environmental sustainability “to ensure that such schemes do not slip back from universal access of safe drinking water to the community throughout the design period of the schemes” (Government of India 2013; p44). The reasons for slip back were identified as drying up and quality deterioration of source, systems working below capacity due to poor O&M, increase in population resulting in lower per capita availability, and the emergence of new habitations (CAG, 2018; Makino, 2006). Despite the focus on slip-back, 4.76 lakh habitations slipped back between 2012-2017 (CAG, 2018). It was reasoned that most of the schemes face the problem of source

sustainability (James, 2011; Parsai & Rokade, 2016) which was observed both in the case of handpumps and PWS schemes because of implementation without detailed geophysical investigations and scientific surveys leading to a lack of synchronisation between the construction of different components of water supply infrastructures (Parsai & Rokade, 2016). Sustainability plans were either not prepared or not included in the annual reports in 14 states (CAG, 2018). Eventually, before the beginning of JJM, the RDWS sector was facing the following challenges: (i) a higher rate of slip-back, (ii) poor or no sustainability plans, (iii) financial mismanagement and underutilisation of funds, (iv) target-oriented approach, (v) poor community participation and (vi) slow pace of coverage.

### **Jal Jeevan Mission: Tap Water to All**

An umbrella scheme called the Jal Jeevan Mission (JJM) was launched in 2019 with the ambitious mission of providing FHTC to all households in India by 2024. It has been allocated the highest-ever fund to RDWS sector of Rs 60000 crore in the budget of 2022-23. While JJM has primarily merged all previous approaches in the RDWS sector, its approach, especially addressing issues of sustainability is similar to that of NRDWP. The highlight is the adoption of a 'utility approach' of engineering departments to focus on sustainable service delivery instead of merely creating infrastructures. During NRDWP, the coverage increased from 13% in 2013 to 18% in 2018 (i.e., 1% increment per year) but it has jumped to 55% in October 2022<sup>8</sup>. With such higher rates of jump in coverage due to impetus on infrastructure creation, there is the danger of persistence of post-implementation issues witnessed in previous programs.

The institutional framework in JJM reflects that of Swajaldhara with a mission mode of structure at the national, state, district, and village levels to provide overall support for implementation. Although annual action plans (AAP) are mandatory at district and state levels for water security and CAG highlighting the absence of this (CAG, 2018), there is no change or operational plan for this in JJM guidelines. Such gaps in planning gets reflected in the differential performance of states in terms of physical coverage. For instance, while states like Bihar, Telangana, Himachal Pradesh, Uttarakhand, and many of the North-eastern states have made remarkable progress since 2019, states like Chhattisgarh, Jharkhand, Rajasthan, Uttar Pradesh, and West Bengal are still among the lowest in terms ranking<sup>9</sup>. These lower-performing states have poorly utilised the funds released by the centre.

The JJM has further adopted 'functionality' of taps as the only evaluation criterion, a clear shift from earlier usage of 'slipping back'. In earlier studies functionality and slipping back are used as proxy indicators for indicating the sustainability of RWDS systems (Lockwood & Smits, 2011). Functionality has been widely used across Sub-Saharan Africa as an indicator for measuring sustainability of handpumps and it might not be suitable for complex systems like PWS (Lockwood & Smits, 2011; Whaley & Cleaver, 2017). Functionality primarily gives a snapshot of sustainability at a given time but fails to incorporate the socio-political dimensions like inherent hierarchies within the users,

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<sup>8</sup> JJM IMIS: [https://ejalshakti.gov.in/JJM/JJMReports/Physical/JJMReport\\_StateWiseTapConnection.aspx](https://ejalshakti.gov.in/JJM/JJMReports/Physical/JJMReport_StateWiseTapConnection.aspx). Accessed on 22 Nov 2022

<sup>9</sup> <https://ejalshakti.gov.in/jjmreport/JJMIndia.aspx>. Accessed on Nov 22 2022

the local power dynamics, and the capabilities of water committees (Lockwood & Smits, 2011; Moriarty et al., 2013; Whaley & Cleaver, 2017). Therefore, the use of functionality might be conscious to subvert attention away from the larger and persisting issue of slipping back that reflects the post implementation challenges in India.

The emergence of the major RDWS programmes in India and the influence of global trends on these were traced in this study. The recurring themes are the role and capacity of state agencies, central thrust on community management, and the pertinent issues of sustainability. With JJM, the state has reinstated its responsibility to provide water supply to all and thus to a major shift back to a welfare-based approach after two decades of neoliberal reforms in RDWS. However, in approach, JJM is an amalgamation of all past practices including those of community management and thus has to be scrutinised for its efficacy. One of the most important shifts is the burden on state governments to implement the program in a target driven mode without any comprehensive planning, monitoring, and evaluation. There is a need to address these issues failing which JJM would emerge as yet another Sisyphean program.

### **Discussion on the Evolution of RDWS Governance**

Rural drinking water governance has been, to a great degree, shaped by two major factors in the Indian context: i) the emergence and spread of RDWS models globally and (ii) India's thrust for decentralisation that conferred constitutional status to panchayats. Three distinct governance paradigms emerged in India over the last five decades with an ad-hoc agglomeration of elements from supply-driven, community management, demand responsiveness, and service delivery approaches. ARWSP reflected the supply-driven paradigm that could be called the kernel of post-colonial India's water bureaucracy. The role of the state in this paradigm involved the development and management of drinking water services through a predominantly top-down, technocratic strategy. Since ARWSP's introduction pre-dated the 73rd and 74th constitutional amendments, central and state governments were the key actors through schemes supported by 100% grant-in-aid from the central government. State governments planned, executed, and operated the schemes through PHEDs and subsequently through parastatal agencies like state water boards. However, even after the emergence of the 73rd and 74th constitutional amendments, GPs did not have any substantial role in the planning, implementation and O&M of schemes. The technical, financial and institutional aspects continued to remain under the control of the state-level nodal authority of PHED/water boards.

With Swajaldhara, the RDWS governance underwent a fundamental transformation. While the previous model completely revolved around state institutions (especially state public water utilities), Swajaldhara devolved responsibilities to recipient communities in the planning, execution and management of schemes. The state's role as facilitator was reflected in the formation of parastatal bodies which oversaw the planning and implementation of schemes under Swajaldhara. These parastatal bodies were different from the state-level water boards and were formed at the insistence of global funding agencies. They were envisaged to fold up once the planning and implementation were completed. NGOs and private sector organisations were envisaged to play a central role as project implementation agencies and involved in choosing technology, building the schemes, handing over and

facilitating institution building for operation and maintenance. While the central and state absorbed 90% of the capital cost, 10% of the capital was expected to be mobilized from the community. The community was also expected to bear the full responsibility of O&M.

While ARWSP helped identify the problem habitations and improve the coverage of the population with improved sources of water, it remained afflicted with top-down governance that was reflected in the higher levels of slip backs amid increasing state expenditure.<sup>10</sup> Swajaldhara, based on reform principles, was expected to increase coverage, and bring inclusivity through participation (particularly women). The community was entrusted to play a central role in the planning, execution, and management of schemes. The experiment was limited by the socio-cultural heterogeneity prevalent in India. The notion of community was supposed to be anchored in a group of water users or beneficiaries, but in reality, it was fundamentally shaped by the existing socio-political identities. It had a major impact on the capacity of communities to participate effectively: ensuring effective demand responsiveness, operating and maintaining their infrastructure, and addressing access-related disputes within the community. Swajaldhara was also supposed to address post-implementation challenges (slip backs and improve sustainability by building robust institutions and capacitating the local community in O&M). But after the exit of implementing agencies and supporting partners, communities could not manage the schemes effectively on their own. Along with cultural heterogeneity, the peripheral role of local bodies in RDWS governance majorly contributed to the capacity deficit in the sector. These manifested in sub-standard planning in the sector. CAG (2018) Government reports have highlighted the absence of action plans for ensuring water security which should have been put in place at the district and state-level planning levels for long-term sustainability.

After reviewing the performance of Swajaldhara, the NRDWP was introduced in 2009. In this program, the GPs were entrusted with the responsibility in planning, implementation and management of schemes. The Swajaldhara experiment with the almost complete withdrawal of the state could not achieve the desired results owing to chronic capacity deficit that included financial, institutional and technical dimensions. Bringing the state back in was also to ensure that responsibility and accountability was in the hands of a constitutional authority.

The JJM has brought all the previous approaches together, in mission mode. Although the JJM mission guidelines do not explicitly envisage the state reclaiming its traditional role as service provider, the mission's singular focus on universalisation of service provision by 2024 is unwittingly leading to this eventuality. JJM tries to simplistically integrate all the previous approaches leading to an internally inconsistent framework. For instance, provision of FHTC to all households by 2024 contradicts the DRA approach where service has to be provided based on effective demand. Simultaneously, the DRA finds a place in the program's framework in the form of beneficiaries absorbing O&M expenditure in full and a portion of the capital expenditure. JJM largely expects to achieve better results with the previous mode of governance. With the central government issuing guidelines, the state government has been made

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<sup>10</sup> Before the commencement of Swajaldhara, the government had already spent Rs 16855.17 crore till the previous eight FYPs.

responsible for planning and implementation (to be done by technical experts—PHED/parastatals) but the scheme’s operation and maintenance is envisaged to be managed by the local governments.

### **Conclusion: Challenges that Lie Ahead**

Reviewing the experience with different models for organizing service provision in the sector, the paper identifies the following critical challenges in the sector:

#### **Need for Candid Reflection on the Role of the State**

Sectoral reforms in rural drinking water (from the 1990s) fundamentally evolved from the idea of ‘state failure’. Consequently, the models (community management and demand responsive approach) promoted through the reforms forbade any direct role for the state in service provision. The state’s role was restricted to facilitation in planning and implementation as well. While building the physical infrastructure for service provision was tenable without the direct involvement of the state, ensuring the overall sustainability of services has proved a more complicated task. Slip-backs (as well as low-reliability) have been attributed to operations (O&M) and institutional failings (poor financial management and inability of the community to manage the operational expenses) at the community level. At the global level, solutions to these short-comings have included professionalisation of community management along with the provision of direct support to community service providers, the adoption of a wider range of service delivery models, and addressing the sustainable financing of infrastructure maintenance expenditure. While these are reasonable fixes to improve sustainability, how are they going to be operationalised?

While policy pronouncements in the sector (especially from global agencies) have continued to identify the gaps in the demand-responsive approach, the most critical missing link is the role of the state. Can state be more than a facilitator (and regulator) in bringing more formality and professionalisation in the management of rural water supply schemes? These can include support to local governments and community-based service providers, as well as the state creating reasonable conditions for sustainable self-supply by communities. While the role and capacity of communities have continuously been debated, a serious reflection on the role of the state in sustaining rural water supply schemes has been conspicuously absent. One of the reasons for this myopia is the persistence of the strong aversion of the global financial (and policy) orthodoxy towards the state as a critical actor in drinking water provision. For context, the Jal Jeevan Mission has a 4-tier institutional structure for planning and implementation. While the central, state, and local governments have specific roles, the central elements of the program’s institutional design are drawn extensively from Swajaldhara which did not envisage the state as a service provider despite the 73rd and 74th constitutional amendments. The JJM institutional framework would be more unambiguous if it explicitly acknowledges local governments’ responsibility as service providers. It is also pertinent to highlight that the PRIs do not have the required autonomy and institutional capacity to effectively manage service provision on the ground. Capacitating PRIs and creating an effective governance ecosystem at the state level is critical to achieving improved outcomes in the sector.

## **Comprehensive Planning for Long-term Sustainability**

Sustainability of RDWS programs has been perhaps the biggest challenge for decades. Different approaches have been developed for this purpose. DRA and community management were two models that were promoted for the last three decades but their limitations have led to the discussion around long-term service delivery. Therefore, merely creating infrastructures (be it handpump or pipe water systems) and changing approaches would not be sufficient to ensure sustainability. Before adopting a particular approach for a particular region, the meaning of sustainability has to be understood. Several studies on sustainability have been carried out across developing nations but the first comprehensive understanding of sustainability in Indian policy document came through the 12th FYP recommendations and later through the NRDWP guidelines. Despite these, there is a gap in the understanding of sustainability among various scholars. The JJM guidelines also has a huge deviation on the meaning of sustainability vis-à-vis its predecessor, NRDWP. It has limited the meaning of sustainability to that of functionality and source conservation. Therefore, comprehensive planning at state to panchayat level including a framework on the sustainability components of RDWS is needed to ensure better outcomes.

## **Assess Capacities at the State Level for Enhancing Sectoral Outcomes**

While the Jal Jeevan Mission does provide for multiple possibilities for organizing the service provision, there is a need for reviewing the roles of the state (at different levels) to evolve an appropriate framework—which is legally enforceable—that enables the local government to fulfil its constitutional mandate. The ongoing JJM provides an opportune moment to take up a comprehensive assessment of state capacity for the successful completion of the program. This would also enable the state governments to immediately introduce course-correction to ensure sustainability of rural drinking water services in the long run. In this regard, disbursement of central funds needs to be tied to the state's overall performance. Holding local governments singularly responsible for failure/slip-backs without providing them the required technical and administrative resources along with institutional autonomy would not lead to progress in the sector. Therefore, fixing accountability at the state level would dissuade the creation of perverse incentives for the states where greater failure has led to increased central fund allocation in previous schemes. This would nudge state governments to evolve a detailed roadmap (planning, implementation and operations related strategies)—immediate, medium and long-term—for ensuring drinking water security. There is a need for evolving an independent long-term monitoring mechanism for continuously tracking the performance of states. This requires taking a broader view of the state's performance in the sector, rather than assessing success or failure through the currently prevalent target-based approach of number of service connections provided or capital expended.

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