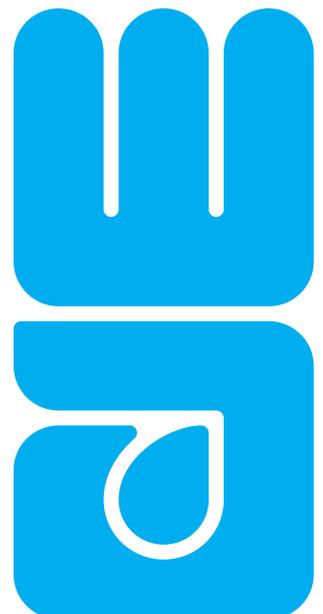
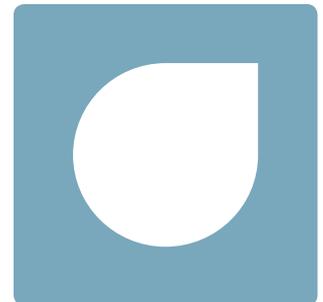




WaterAid/ Ashima Narain

Participation of community based institutions in piped drinking water supply

Analysis of select schemes and programs



WaterAid

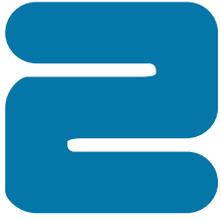


Purpose of the document and methodology

In 2019, WaterAid India conducted a study of five community-managed piped water supply schemes across India. Based on the findings from the study, a document was published on scaling up community ownership and management in piped water supply (PWS) in November 2019. Building further on its understanding of PWS schemes from the institutional aspect, WaterAid India, in this policy brief, has reviewed seven community-managed, rural water supply programmes across India.

This policy brief has the following objectives: First, to understand the role of community-based institutions in management, operations and maintenance of piped water supply schemes. Second, to provide the Jal Jeevan Mission and its Task Force with feedback on technical issues and key areas of community participation as well as strengthen the role of institutions in better management of the scheme.

The methodology has involved systematic literature review of both peer-reviewed and grey literature -- analysis of articles from popular media, government/donor agency documents, project reports prepared by the NGOs related to the seven cases. It has also involved interviews with different actors including NGO members, community members, government officials at various levels (state to block) and Gram Panchayat (GP) representatives.



Community participation and ownership in piped water supply in India

Governance reforms in the rural water sector have, in the last few decades, pushed for development of appropriate institutional structures and greater community involvement in water supply and distribution. This involved a shift from viewing communities as passive recipients of state-delivered water supply to becoming owners and providers of their own water supply infrastructure and services. Various demand-responsive approaches have been adopted by the state and civil society which have led to devolving greater responsibilities to community-based institutions and have strengthened their capacities, level of skills, quality of the leadership, and improved the willingness of community members to pay for water.

Adaptation of these community models under centrally sponsored schemes like National Rural Drinking Water Programme (NRDWP) and Swajal as well as under the state-wide projects since the 1990s like Swajal (Uttarakhand), WASMO (Gujarat), Jananidhi (Kerala) and Jal Nirmal (Karnataka) have been somewhat successful in developing piped water infrastructure in rural areas and improving coverage levels. Community management has been a guiding principle in most rural water supply projects and

many of these schemes have created “specifically designed units or even dedicated organizations with the formal capacity and professional skills to support the communities on mobilization, institutional building and capacity building at all levels.”¹

The recently announced Jal Jeevan Mission ensures universal access to piped drinking water supply in every household by 2024. The institutional mechanism under the Jal Jeevan Mission comprises of National Jal Jeevan Mission, State Water and Sanitation Mission (SWSM), District Water and Sanitation Mission (DWSM) and Pani Samiti or Village Water and Sanitation Committee (VWSC)/ User Group at the village/settlement level. In order to instil a sense of ownership among the community/ user groups for better implementation and long term operation and maintenance (O&M) of the scheme, VWSC/ Pani Samiti will plan, design, implement, operate and maintain the in-village water supply schemes with support from relevant departments at the district and state level. Communities will contribute towards 5-10 per cent of the capital cost in cash/kind/labour in all villages. Such decentralized planning will hold the key for long term sustainability and operation and maintenance of the system.²



Lessons from past programmes: A brief analysis

The focus of the brief is to use learnings from past schemes on piped water supply and community-level water conservation to improve future policies and practices.

3.1 WASMO, Gujarat

Gujarat's state-led Water and Sanitation Management Organization WASMO³ was set up as an autonomous organization under a Special Purpose Vehicle (SPV) in 2001 to facilitate community-managed rural water supply programme in all the 26 districts of the state. It helped create institutions - Pani Samitis at the village level to manage the water service delivery. The Pani Samitis were strengthened through continuous capacity building to take care of the planning, design, implementation of the community owned drinking water storage and distribution infrastructure. The programme⁴ initially provided treated safe water at one point of the village as well as one subsidised electric power connection for water supply. The community paid the water tariff. Subsequently, household water connectivity was built into the village action plan.

Pani Samitis are legal entities under a State Government Resolution issued by the Panchayat Raj Department in 2002. Carved out of the Gram Sabha, as a standing committee of the GP, they are equivalent of VWSCs, they are normally headed by Sarpanch of the GP or by a Panchayat member of the participating village (in case it is a group GP). If the Sarpanch is unwilling to head the Samiti, the Deputy

Sarpanch or a GP member can be also elected as its Chairperson. The Talati (Village Revenue Inspector) serves as the Secretary of the Samiti. It has 10-12 other members responsible for planning and implementing the programme. It is mandated that of these, one-third are women, one or two are from the SC/ST community, five are representatives from the GP and at least three represent locally registered NGOs, cooperatives, Mahila Mandal, farmer societies etc The Samiti maintains a separate bank account in nationalized bank for funds flow.

The Samiti is responsible for the operation and maintenance of the in-village water supply scheme and fixes water tariff for sustenance of system and services. It can use its discretion to exempt community contribution for poor/deprived people. It looks into fixation and collection of water tariff, including maintenance of tariff records, delivery of water in the villages (frequency, duration etc), testing of water quality, chlorination at village and household level, carrying out minor repairs, arranging for operation of the system, ensuring proper use of infrastructure, cleanliness near sources and regulating the use of different local sources and reserving drinking water to deal with scarcity conditions, when required.

SALIENT FEATURES

Role of WASMO- WASMO provided technical assistance and guidance, apart from extending the necessary financial support, by contributing

90 per cent of the funds. Further, it built the capacity of the community by conducting training and workshops. The internal human resource capacities of the Pani Samitis were especially bolstered as they were given training to construct, implement and operate the scheme.

Promotion of both single village and multi-village schemes- The state used a two-pronged strategy of supplying water to villages/regions through (a) transfer of bulk water to water scarce villages via regional schemes and in village distribution by Pani Samitis (b) development of local groundwater sources by digging a well or drilling a bore well/tube well to be managed by Pani Samitis. Local rainwater harvesting structures were also promoted to deal with source sustainability.

Development of Decentralised Institutions- The demand-responsive decentralized approach of this model had a strong component of community participation in planning, designing, site selection and implementation. This ensured social inclusion. Cost recovery through the collection of monthly user charges and funding support from Panchayats and Rural Water Supply Department ensured reliable and assured services.

Intensive Capacity Building of all Stakeholders in the Programme- Stakeholders were trained in construction, supervision, financial management, operation and maintenance of village water supply system and water quality surveillance. NGOs were involved as support organisations for planning, execution, awareness generation and capacity building initiatives (financial and technical training). While WASMO provided

funding support and technical assistance, block and district centers provided the handholding essential for the long term sustainability of these decentralised rural water supply systems.

Sufficient Management of Financial Resources for Maintenance and Repair of Facilities- The model ensured adequate quality drinking water supply at an affordable cost in all rural areas of Gujarat.

Phase-wise Implementation with a Relaxed Follow-up Period- The programme was implemented in three cycles:

- a. The first cycle (3-6 months) involved community mobilisation
- b. The second cycle (12 months) involved execution and completion of the project
- c. The third cycle (12 months) involved post-implementation and follow-up.

A wait, watch, and revisit strategy was adopted before undertaking the programme to ensure adequate, regular, and safe water to all, even to communities who showed less willingness.

Ongoing Support- WASMO provided ongoing support to Pani Samitis in the operation, maintenance and capital maintenance support tasks. However, this support was extended only when a Pani Samiti requested it.

Thrust on Source Sustainability- To deal with poor water quality due to severe salinity ingress in coastal areas, WASMO promoted roof rainwater harvesting systems at individual household level and in schools. 10,000 litres capacity tanks have been provided at household level in coastal, tribal or remote areas to tide over water scarcity during the few lean months thus ensuring year-long water security.

3.2 Jal Nirmal Project, Karnataka

World Bank-assisted Jal Nirmal⁵, a community-based rural water supply project by Karnataka Rural Water Supply and Sanitation Agency (KRWSSA) was implemented between 2001 and 2014. Its three key principles were capital cost sharing, integrated approach to water and sanitation and operation and maintenance by the community. The villages identified for this project were those which had drinking water scarcity, water quality problems and/or a large proportion of poor and socially disadvantaged people without access to safe drinking water. They received technical guidance as well as 'softer' support focused on empowering communities. Post 2014, a new department -- Rural Drinking Water Supply and Sanitation Department (RDWSSD), created by bifurcating the Panchayati Raj Engineering Department (PRED), has taken over these villages into its general programme and continues to provide support on demand. The implementation of Jal Nirmal scheme was through a 24 month cycle comprising of four phases:

- a. Pre-planning phase of three months
- b. Planning phase of six months
- c. Implementation phase of twelve 12 months
- d. Post Implementation phase of three months.

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Training and Capacity Building of VWSCs-

VWSCs were formed in the Gram Sabha and trained on various aspects of operation and maintenance of the project. To ensure this, a lot of software was developed to facilitate information, education and communication activities in the beneficiary community. VWSCs were set up through a facilitation by the Rural Drinking Water Supply and Sanitation Department (RDWSSD) and received training

workshops and technical support for operation, maintenance, and tariff collection.

In many villages, though there is a VWSC, water distribution responsibilities remain with the GP, as the VWSC has not been capacitated to the extent required as was done in Jal Nirmal villages.⁶

Active Role Played by the Joint Committee in Multi-Village Schemes-

While most of the projects were planned, built, and operated by individual villages, there were also some multi-village water supply schemes that cut across villages and GPs. In case of multi-village schemes, a Joint Committee was formed with due representation of all the habitations to oversee various activities for implementation and joint operation and maintenance issues. VWSCs and Joint Committees were trained on their roles and responsibilities at multiple stages and the scheme was handed over to the Joint Committee post completion.

Development of Capacity of Institutions-

Under the Jal Nirmal project, an exclusive Social Development Unit was established at the district and cluster level to build the capacities of the community and VWSCs on various aspects of planning, execution and maintenance of the water supply and infrastructure created under the project. Both the engineering and social development teams worked in close coordination under the District Project Manager. The community was well trained in record keeping and administrative duties, empowered to undertake operation and maintenance tasks and water quality testing.

Community Involvement- The VWSC was empowered to fix the user charges, collect tariffs, and spend the money autonomously. It was also empowered to hire maintenance staff locally. It was observed that the community

was able to bear the recurrent costs - labour, fuel, chemicals, other materials, minor maintenance, salaries of pump/bore operators, valve operators, and support staff through the water tariff collected, while the government covered the power charges involved in running the schemes. The system has been functioning efficiently and water meters have been installed in some cases to measure the volumetric consumption. The VWSCs have played a key role in decisions related to service delivery, asset renewal, and service expansion. The programme has been able to sensitize the village leaders and community members on their roles and responsibilities with regard to service provisioning and operation of the system.

A study⁷ by Community WaterPlus in 2015, indicated that the three successful single village schemes in Belagavi, Karnataka were those in which the community paid tariff regularly. This enabled VWSCs to cover the OpEx cost of rural water supply. Other factors contributing to the success of the projects in these villages include social intervention design and its implementation, software support to community, involvement of community for management, community capacity development and training, and evaluation/ performance assessment. The study also notes that wherever "good linkages were developed by the VWSCs with the relevant line departments like minor irrigation, groundwater department, electricity distribution companies, revenue and public works department, it would help the VWSC in identifying the proper sources, cost effective designs, energy savings and optimising the use of resources" (ibid.). Those villages which received much needed support from the government in terms of renovation, expansion and capacitation

of VWSC functionaries, were successful in maintaining the Rural Water Supply systems. The study suggests that "the access to piped water supply connection is more determined by geographical spread of the pipeline rather than social background of the people (ibid.)".

Introduction of Innovative Systems in Technology, Metering, Pricing, Rationing, Sustainability-

In some of the Jal Nirmal scheme villages, measures have been adopted for sustainability of the source and systems, often by way of technological innovations like solar energy utilisation, groundwater recharge to improve source sustainability, introducing metering systems for volumetric payments, issuing of monthly metered bills by the GP (where meters are installed), restricted service delivery during summers as decided by the community (once in two days) etc.

Challenges Faced in Decisions on Asset Renewal and Service Expansion in Multi-Village Schemes-

In multi-village schemes where the VWSC does not have direct ownership or direct control of the water supply infrastructure (as the scheme is shared across villages), often conflicting interests came into play even when reliable water supply could be assured. Multi-village schemes were also observed to face challenges while dealing with the private company/contractor engaged for a fee to pump water up to the overhead tank of the village. In such cases, the respective VWSCs undertook the responsibility of water distribution from the overhead tank. They also collected the water tariff on behalf of the Joint Committee, which has representatives from all the participating villages. However, the Joint Committee was often unable to provide clear information on water supply to users.

3.3 Jalanidhi, Kerala

Jalanidhi I was a World Bank-assisted Rural Water Supply and Environmental Sanitation Project implemented in Kerala between 1999 and 2008. The project was inspired by the success of the state's earlier decentralised community-managed rural drinking water supply projects, especially the case of Chekode in Malappuram district. The Kerala Government created an autonomous institution - the Kerala Rural Water Supply Authority (KRWSA) to implement Jalanidhi in 14 districts, based on principles such as demand responsiveness, community ownership and sustainability of investments through cost recovery and participatory operations and management. Earlier the thousands of PWS schemes by the Kerala Water Authority had fallen short in terms of sustainability, equity, user satisfaction, good governance and cost effectiveness.

Jalanidhi I and Jalanidhi II (2012-2018) tried to successfully integrate water supply with sanitation, health promotion, and ground water recharge measures. Jalanidhi II tried to demonstrate an equitable, inclusive, and decentralized delivery system benefiting the Scheduled Castes (SC), Scheduled Tribes (STs) and Below Poverty Line (BPL) categories. A wide variety of technology options ranging from surface open wells, bore wells, ponds, lakes, river-based sources, and rainwater harvesting were used in the project. The demand-driven project was sanctioned only to communities who showed their willingness to participate in the project and accepted the conditions of cost sharing and cost recovery. They were involved in source selection, technology selection, purchase, contracting and implementation with technical help from Support Organizations (SOs).

SALIENT FEATURES

Emphasis on Forging Collaboration with GPs, SOs and User Groups- For institution building and project support, a Project Management Unit was established to support and monitor the project with technical, social and finance experts. Further, District Project Management Units (DPMUs) were established to involve and support implementation of the project progress on a day-to-day basis. Adequate support and guidance for successful completion of project was provided to GPs to implement the project. The project was marked by prolonged involvement of SOs/Gram Panchayat Action Teams (GPATs). Thousands of young professionals with practical exposure on water and sanitation worked to train the GPs. Consolidated on a need basis, the Beneficiary Groups (BGs) were registered as legal entities (Ayalkkootams) and formed a democratic governance point for water and sanitation issues at the ground level.

Phase-wise implementation: The project had four phases – Pre-planning, Planning, Implementation, and Post-Implementation. The main activities during Pre-Planning phase were GP selection, pre-qualification of SOs, and signing of a planning phase tripartite agreement between the Kerala Rural Water Supply Agency (KRWSA), GPs, and SOs. Main activities under Planning phase were orientation and capacity building of GPs and SOs, formation and registration of the beneficiary groups, resource mapping, and pre-feasibility studies within a period of four months. Subsequent activities included technology selection, preparation of engineering designs and community empowerment plans and finally a GP-level Implementation Phase Proposal. The GP and

BGs focused on capacity building, sanitation and hygiene promotion and women's development programs. They were observed to demonstrate high levels of interest, ownership and capacity. The Planning phase concluded with the signing of the Implementation Phase Quadrilateral Agreement (IPQA) between the KRWSA, GP, each BG and the SO.

A separate Implementation Phase Tripartite Agreement (IPTA) was signed between the KRWSA, GP and the SO for managing SO contracts. The main activities under implementation phase were procurement of materials, construction of schemes as per agreed plans and procedures and management of project funds. The Post-Implementation phase included providing advisory support to the GPs and BG communities in efficient operation and maintenance of services, collection of water tariffs and book-keeping. The signing of the Implementation Completion Reports (ICRs) in public gatherings by KRWSA, GP and BCs marked the formal exit of KRWSA from a project GP. In the Post-Implementation phase, service delivery, service enhancement and asset renewal were dealt with by the BGs and the community.

Focus on Community Involvement- Users themselves were fully involved in all the activities right from identifying their sources, deciding on the technology to be utilised, community contracting, and implementation till the operations and maintenance aspects of the schemes. All contracting of goods, works, and services was done at the user level itself, for which adequate training was provided and guidelines made available.

Strengthening of the GPs- This project involved strengthening the effort of decentralised planning in Kerala and was operationalised through the GPs and the BGs. In the particular socio-economic environment in the state, the special emphasis on rural local governance played a pivotal role to demonstrate an equitable, inclusive, and decentralized rural water delivery system formed at the grassroots level and run by BGs.



WaterAid/ Dhiraj Singh

3.4 Har Ghar Nal Ka Jal, Bihar

Since 2016, all GPs in Bihar have been covered under the Har Ghar Nal Ka Jal programme which aims to provide piped water supply schemes to every household by 2020.

The Panchayati Raj Department (PRD) and the Public Health and Engineering Department (PHED) have been given targets to cover the whole state.

SALIENT FEATURES

Implementation of Single Village and Mini Water Supply Schemes- These have been developed using groundwater extracted through bore wells and submersible pumps and distributed through pipelines.

Financing through 14th Finance Commission and State Funds- The cost of water supply works will be met by convergence of funds available on the recommendation of the 14th Finance Commission, 5th State Finance Commission and the state plan fund. The state is trying to move towards decentralized service delivery arrangements with increased participation from Panchayati Raj Institutions (PRI) and the community, improved financial sustainability and enhanced accountability at all levels.

Primacy given to the Ward, Not Village-

Under the Scheme, the role of VWSC has been bypassed. An alternate structure with the Ward⁸ as the unit of implementation⁹, called the Ward Implementation and Management Committee (WIMC), has been created in its place. The seven-member WIMC is to be set up under the leadership of the Ward Sabha member as President and Gram Kachhari Panch as Vice President for a period of two years, following which it is reconstituted. The Committee must have at least three women members selected by the Ward Sabha (preference is given to Jeevika or SHG functionaries). In Wards with SC or ST households, at least one woman and a man from the SC/ST community are chosen as members of the seven-member Committee. The Secretary is chosen by the members of the Committee and he/she along with the President, are co-signatories of the Committee's bank account. The Secretary convenes the Committee meetings and prepares the minutes. If a Committee member is absent for three subsequent meetings, he/she loses membership and a new member is chosen by the Committee. Meetings are to be held bimonthly/weekly and the quorum is of at least four members. During prioritisation of Wards for the purpose of implementation, preference is given to those with higher population of SCs/STs. However, field observations at Gaya and discussions with officials indicate that all these institutional arrangements and rules are on paper generally throughout the state.

Special Focus on Water Quality- The key issues that are supposed to be addressed by Har Ghar Nal ka Jal scheme are - inadequate or disrupted water supply; bacteriological contamination of surface and groundwater;

presence of fluoride/arsenic/nitrate/iron concentrations exceeding the permissible levels in drinking water; lack of adequate sanitation facilities in some pockets; and lack of adequate waste (solid and liquid) disposal systems.

Recovery of Water Tariffs is a Challenge- The User Committee is supposed to ensure efficient service delivery (@ 70 lpcd) through regular operations and maintenance of the mini piped water supply systems. A maximum of three house connections are provided through a 25-foot distribution pipe connected to the main pipeline. The cost of pipeline over 25 feet has to be borne by the household. The scheme guidelines are silent about Capital Expenditure (CapEx) contribution either in cash or kind but stress on the need for water tariff collection to manage the cost of motor operator, electrician and other repair and maintenance costs. However, there is no clear pointer on the amount of Operational Expenditure (OpEx) contribution from the community. Discussions have revealed that there is a lack of functioning institutional arrangements on the ground for tariff collection. Consequently, although water tariff collection has been made mandatory, recovery is not done. The coverage of 70 lpcd is being ensured during design and implementation stage but source sustainability remains an area of concern.

Contractor-Driven Approach- This scheme has been implemented by the PRD. Ideally, it should have been undertaken by WIMCs. Instead, following the Bihar government's February 2019 guidelines on the scheme, the PHED has managed to carve out a larger role for itself and has adopted a contractor-driven approach. After a tendering process by PHED, the selected contractor installs the system and manages it for five years. The current schemes do not have to be transferred to GPs if they

Participation of community based institutions in piped drinking water supply

lack the requisite capabilities to handle the operations and maintenance of the project. Contractors have to furnish a ten percent bank guarantee which is repaid after they have operated and maintained the project for five years. This has limited the involvement of WIMC as well as GPs, be it in planning, implementation or in the operation and maintenance of the scheme.

Tussle between PHED and PRD Has

Undermined Programme- PHED and PRD have not worked smoothly in this project. PRD engineers have often needed – but not always received -- technical guidance for their work in non-quality affected habitations from the mechanical and civil wings of PHED. Consequently, PRD's technical cadre has been weak and there have been design and execution issues in their work. Eventually the government has had to roll back its former stand and curtail the role of PRD to avoid delay in project delivery and maintain construction quality. Consequently, the infrastructure created has been left for the community, mostly untrained, to manage. Capacities of PRIs to handle the programme are extremely limited and the work is being tendered out.

Neglect of Institutional Processes- The rush to achieve full coverage under Har Ghar Nal Ka Jal by 2020 is leading to neglect of institutional processes. Community support has not been sought, nor have the people come forward proactively, resulting in poor service delivery. Community contribution for CAPEX hardware is not being collected, but being borne by the PRD/PHED. PRD officials suggest that a decentralized approach to service delivery is needed like in the earlier World Bank-supported RWSS project in Bihar. In this project, GPs and VWSCs actively participated in the design and implementation of schemes and governance was kept distinct from operational responsibilities. The flaws in the present model indicate that PRIs need to be eased into an active role instead of simply handing over the schemes to them. Support organizations such as NGOs can be involved to provide adequate handholding and support to the GPs and WIMCs while the PRD can provide the necessary technical expertise, which could lead to substantial capacity building.

3.5 BASUDHA Scheme, Odisha

The Buxi Jagabandhu Assured Drinking Water to all Habitation (BASUDHA) scheme launched in November 2018 is a renewed version of the Government of Odisha's Odisha Rural Drinking Water Programme (ORDWP) launched in 2014-15 for universal access to drinking and domestic water to all rural people on a sustainable basis. Renamed as BASUDHA, the scheme ensures that all households should have access to safe and adequate drinking water within a reasonable distance, enables communities to monitor and keep surveillance on their drinking water sources, and ensures potability, reliability, sustainability, convenience, and equity. The government also launched the grievance helpline number 1916 for BASUDHA. This is similar to the concept of customer care centre under Swajal. The scheme aims to scale up habitations covered with tube-wells to pipe water and make optimal utilisation of ground water and surface water. It also plans to increase minimum supply level of water in piped water projects from 40 lpcd to at least 70 lpcd.

SALIENT FEATURES

State Government is Playing a Key Role in Financing of Rural PWS - The BASUDHA scheme was brought in to deal with the reduced outlay¹⁰ under NRDWP and allocates around Rs 10 crores for a GP and promises 'one village one tank' and PWS to households. The Panchayati Raj and Drinking Water Department of Odisha issued a government order on 28th February 2017 which made it mandatory to use 30 per cent of the funds from 14th Finance Commission and 4th State Finance Commission for rural water. A large part of this fund is being directed towards BASUDHA, indicating how state governments have begun to play a more

prominent role currently in public financing of water supply services in rural areas.

Odisha State Water and Sanitation Mission (OSWSM) is tasked with the responsibility of implementing BASUDHA while the District Water Plan is prepared by the District Water Sanitation Mission (DWSM). The District makes efforts to pool all resources at its level like SFC/CFC, Local Area Development (LAD), District Mineral Foundation (DMF), Western Odisha Development Council (WODC) for holistic planning at its level. The OSWSM also pools funds at the state level from other available resources like Odisha Mineral Bearing Areas Development Corporation (OMBADC), Special Area Development Funds for Koraput, Balangir and Kalahandi (popularly known as KBK districts). The detailed project report has to be made by the GP with the help of the RWSS department. The GP is supported by the VWSC, Sarpanch and GP Executive Officer in this. The 14th Finance Commission funds are used to cover the GP's share.

Planning for augmentation of existing PWS¹¹ will be done where yield of water source is adequate so that additional habitations can be covered with household tap connections without creating additional source.

Includes Both Single Village and Mega

PWS Schemes- The schemes being promoted include groundwater-based single village piped water schemes as well as a mega piped water scheme to provide adequate pipe water supply from the Rushikulya river to 147 villages of Puri and Ganjam districts, both coastal districts affected by salinity.

Schemes are Prioritised Systematically-

New PWS schemes are being taken up in the villages/habitations as per the following criteria:

- a. Villages in which production sources are existing and viable
- b. GP headquarter village or, if that is unsustainable, at least one village in each GP
- c. All remote habitations
- d. Water scarce and water quality-affected habitations
- e. Open defecation-free villages and
- f. Partially covered habitations.

Thrust on Renewable Energy- As a part of BASUDHA, PWS projects are being taken up in energy-scarce areas using renewable energy. Solar dual pump water supply schemes are being taken up in thinly populated (less than 500), isolated and energy starved habitations to ensure 24x7 water supply from existing hand pump/tube-well.

Lack of Clarity on Institutional Arrangements for Managing PWS at a Habitation/Village/Multi-Village Level-

The operational guidelines of BASUDHA do not outline the institutional arrangement for managing PWS at a habitation/village/multi-village level. Under the head 'community participation', they state that "sustainable source of water shall be constructed before the proposal of any new pipe water supply project." They call for consultation with the GP/ local community in order to ensure community participation and also to ensure that the choice of technology/system is appropriate and easy to operate and maintain.

The operational guidelines of BASUDHA do not provide clarity on the responsible authority for implementation of multi-village schemes. However, for capital intensive multi-village schemes or schemes with treatment plants (say fluoride), the cost of installation within the village boundary is reckoned as scheme cost to calculate community contribution. Even this is set at a lower rate on a case-to-case basis. The departmental institutional arrangement takes care of multi-village schemes (personal communication with OWSM official).

Guidelines Mention Clear Responsibilities for the Operation and Management of PWS-

The guidelines state that operations and management of Multi GP/Block PWS projects -- repair of head works, damaged distribution lines, leakages in distribution or rising main, repair of overhead tanks and meeting the maintenance costs of PWS projects that are beyond the period of five years -- will be the responsibility of BASUDHA. This cost is placed in the OSWSM to take forward the repair and maintenance activities.

BASUDHA guidelines state that the operation and maintenance of tube wells and water supply schemes- energy bills of the existing pipe water supply projects, honorarium of self-employed mechanics who take care of maintenance of 30-50 tube wells, running costs of mobile vans for preventive maintenance, maintenance cost of all tube wells including cost of spare parts, and maintenance of taps including replacement of the taps of existing PWS-- will be done by the GP from the CFC/SFC funds.

The fund for the maintenance of water points is from the 14th Finance Commission funds; this amount cannot be more than 10 per cent

of the fund received by the GP. Every GP has been allocated around Rs 25 lakhs from the 14th FC for various services including WATSAN. Out of this amount, the electricity bill amounts to Rs 5,000 per month, the SEM (Self Employed Mechanic) is paid Rs 1600 and around Rs 2,000 is spent on transport cost. If there is some disruption in water supply, Rs 5,000-10,000 is given for minor repairs by the RWSS. Spare parts of tube well, hiring of a water tanker, mobile van for Panchayat, maintenance of taps

including replacement of the taps of existing PWS are some of the heads under which expenditure could be made from the 14th FC funds.

However, it has been observed that villagers have often not been consulted in the design and planning of the scheme and sometimes schemes have not been able to provide adequate service levels to all.

There has been a shift away from the earlier model of community management that supported direct service provisioning and community involvement. Post 2015, there have been attempts towards centralisation of schemes in states such as Jharkhand, Bihar (Har Ghar Nal Ka Jal), Telangana (Mission Bhagiratha) and Odisha (BASUDHA) creating a greater role for state and central government wherein projects are being conceptualised in a linear straight-jacketed manner without taking into consideration the reviews and learnings from previous schemes.

Sustainability of schemes is doubtful: Thus far, both the centre and the states have not focussed on supporting and empowering communities beyond installing the piped water infrastructure. The GP and communities are left with the sole responsibility for managing the systems. However, in the absence of appropriate levels of support from government and other entities, many of the schemes are being unable to deliver sustainable services even for a year or two after implementation. Success stories of community management continue to be limited in these models and these large scale projects are marked with a lack of long term sustainability.

Cost sharing by community was an important component of all schemes barring in Bihar	
WASMO, Gujarat	<p>10 per cent of the CapEx before preparation of VAP</p> <p>Pani Samiti manages the programme funds transferred by WASMO at the village level as well as 100per cent of the OpEx sourced through water tariff collected from users in a separate bank account.</p> <p>WASMO also created a corpus fund (operations and maintenance incentive) at the village level by providing one time assistance as mandated under Swajaldhara guidelines¹² from the Government (10 per cent cost of scheme) to ensure financial sustainability.</p> <p>To this, the surplus of water tariff collection over expenditure and grant/donation gets added. Pani Samiti is advised to make use of this fund for major repair, addition of new systems and other unforeseen contingencies.</p>
Jal Nirmal, Karnataka	<p>Communities and GP had to share 10 per cent of the CapEx costs and cover 100 per cent of OpEx costs.</p>
Jalanidhi, Kerala	<p>5-10 per cent of CapEx (either through cash or in kind, as labour) borne by the beneficiary community and of the remaining, the GP bears 10-15 per cent and the state government bears 75 per cent of the share.</p>
Har Ghar Nal Ka Jal, Bihar	<p>Scheme guidelines are silent about CapEx contribution either in cash or kind, but stress on the need for water tariff collection to manage the cost of motor operator, bijli mistry (electrician) and other costs of repair. However, there is no clear pointer on the exact amount of OpEX contribution from the community.</p>
BASUDHA, Odisha	<p>CapEx (10 per cent of the total project cost or Rs 10 lakhs whichever is less) sought from GP to be deposited with the Executive Engineer RWS&S.</p> <p>OpEx cost to be borne by GP</p>

Learnings from the missing elements and gaps in each scheme

<p>WASMO, Gujarat</p>	<p>The Pani Samitis were involved in fixation of water tariff and its collection. Community management led to improved financial sustainability and wherever they were able to collect tariff and maintain its records, the problem related to delivery of water in the villages (frequency, duration etc) were minimal. However, cost recovery mechanisms need be more consistent so that the Pani Samitis have a surplus bank balance to manage repairs, if and when needed.</p>
<p>Jal Nirmal, Karnataka</p>	<p>The programme developed elaborate institutional arrangements with clarity on roles for each institution, but in absence of capacity and resources, they failed to perform the roles. The coordination mechanism amongst the organisations -- VWSCs with departments like minor irrigation, groundwater department, electricity distribution companies, revenue and public works department needs improvement.</p>
<p>Jalanidhi, Kerala</p>	<p>KRWSA guidelines specified that water was to be supplied in two shifts of two hours each. In spite of the good infrastructure created, the service was not always reliable in the want of periodic maintenance and monitoring of the schemes. The programme could have improved its effectiveness by organising intense community empowerment processes to carry out regular support activities with communities.</p> <p>Increasing access and coverage of PWS systems and sustaining this over time requires more coordinated planning and financing.</p>
<p>Har Ghar Nal Ka Jal, Bihar</p>	<p>Coordination between the PRD and PHED is inadequate. Human resource capacities are insufficient both in terms of the number of people employed, their knowledge and skills, and poor or no capacity building efforts. For PWS systems to function effectively, the line departments should have adequate number of staff, with clarity about their roles, responsibilities and sufficient capacities to perform the role.</p> <p>There is no formal mechanism through which Government, NGOs, and private stakeholders can work together for institution building to take care of water supply services and good maintenance of the built infrastructure.</p> <p>Systems are breaking down in the absence of regular maintenance. Also, long delays ensue between breakdowns and repairs. Recurrent costs need to be recovered from the community and the GPs should also focus on leveraging resources to support major repairs and replacement.</p> <p>The state, district and block capacity needs to be strengthened to provide high levels of post-construction support to user committees.</p>
<p>BASUDHA, Odisha</p>	<p>The operational guidelines of BASUDHA do not clearly outline the institutional arrangement for managing PWS at a habitation/village/multi-village level.</p> <p>BASUDHA tried to professionalise the technical support for PWS systems providing for locally-based technicians, pump/valve operators and self-employed mechanics skilled to respond to mechanical and electrical breakdown.</p> <p>There is a need to have greater community-managed aspects in the scheme through support organisations.</p>

4

Initiatives on community participation and management promoted by WaterAid India

4.1 Jalabandhu, Wateraid India, Odisha

Jalabandhu, 'friends of water', are individual cadres who are federated as community-based institutions at various levels – from village at the lowest level, to district at the highest level of representation. This model was initiated in 2013 by WaterAid India with the vision of improving community mobilisation on WASH-specific issues. While the government has provision of a similar institution at the village levels such as 'VWSC' or 'Gaon Kalyan Samiti' but it has not yet made any provision to approve such institutions at higher levels such as Panchayat, Block and District. Contrary to this, WaterAid's Jalabandhu model has been working well for the village and panchayat levels, though it needs better facilitation at the block and district levels.

At the village level, gram Jalabandhu comprises of two members from each water user group, a ward member, a self-employed mechanic (SEM), an ASHA and an anganwadi worker. While facilitating formation of committees, it has been observed that for large villages as well as for those that have more/ dispersed habitations, more than two Jalabandhus from the villages should be considered. Similarly, in villages with significant social diversity and exclusion, more than two representative groups should be present. The Panchayat-level committee comprises of two members from each village, the Sarpanch, SEM (Self Employed

Mechanic) and HEW (Health Extension Worker).

The Jalabandhu model involves engaging with community members of diverse groups and interests, frontline workers of government departments and senior officials at the district and state levels. Strengthening Jalabandhu requires a lot of handholding support at the beginning. The major initiatives undertaken by Jalabandhu model include –

- Community action such as maintenance of water sources, creation of new water sources through own contribution, improved hygiene through community participation, contribution fee to manage water systems, protection of ponds in some cases for exclusive use, improvement of school WASH, improved number of self-constructed individual household latrines under Swachh Bharat Mission(SBM), development of sanitary well, rooftop water harvesting structures, participation in government meetings and functions etc.
- Improved planning and pursuing of plans: Proper assessment, discussion and then preparation of drinking water plans are being carried out through integration of WASH indicators. Government flagship programmes like Mahatma Gandhi National Rural Employment Guarantee Act (MGNREGA) and SBM have already been successfully integrated to pursue such plans through the GPs.

- Assertion of rights through legal, peaceful and available means such as Right to Information Act, SANJOG, grievance mechanisms, communication with administration and people's representatives.
- Enhancing motivation and behaviour change
- Advocacy for fluorosis patient identification and rehabilitation
- Advocacy for water filters and surface water based pipe water supply provisioning
- Jalabandhu is recognised as a well-accepted community institution by government at various levels

Challenges in the Jalabandhu model

Jalabandhus are still in a formative and nascent stage, and require a lot of handholding support. Independent evolution of Jalabandhus and their functioning at the project withdrawal stage has not been properly strategised yet. A formal system of contribution has not been started in all Jalabandhu villages. In some instances, inclusion of various sections of the community did not work out as expected. While village and GP-level sustainability may not be a problem area, sustainability at block and district levels is a grey area. Continuous change in project strategy is posing some challenge to intensely engage with Jalabandhus. Local political interests continue to pose a challenge in some areas.

To strengthen the Jalabandhu network, a continuous fund flow and activity schedule for the Jalabandhus at village and GP levels is being institutionalised. WaterAid India is engaging with the government to develop space and recognition for Jalabandhus.



WaterAid/ Prashanth Vishwanathan

4.2 Jal Chaupal, WaterAid India, Uttar Pradesh

Jal Chaupal has been envisaged by WaterAid India and its partner organisations in north India as an inclusive and democratic platform to discuss and plan issues around water access and security. This model allows for wider participation and ownership of women and people from marginalized groups who are often left out of planning processes. Initiated in 2016 in Uttar Pradesh, it aims to provide a space for decentralised and open dialogue on water built around Panchayati Raj Institutions. Several government and non-government organisations have been involved in the processes.

Jal Chaupals have a well-defined format.

- First, the community participates in a water vulnerability assessment. This ensures a collective understanding of water-related

problems and insecurities in the area.

- This is followed by a discussion around gender issues around water and leads to an understanding of women’s woes for ensuring water access and availability. The aim here is to gradually create a gender balance on the issue of water collection.
- The third meeting is on water budgeting. This aims to develop a collective understanding of the levels of availability of water in the locality and the actual needs and the deficit (or surplus) in a long run. After this, the community engages in water security planning and discusses water conservation measures such as protection or rejuvenation of local water bodies, rain water harvesting etc.
- Finally, the community develops ‘Drinking Water Security Plans’. These include inter-sectoral efforts to improve access to

water and water supply system, source sustainability, water quality, operations and maintenance of water distribution systems and provisions for replacement and expansion.

- Resources from schemes like MGNREGS, local area development funds of the elected people's representatives at the Panchayat and Block-level are then pooled to fund various water-related activities.

The purpose of this initiative is to enable community engagement and ownership on water issues, while also building its capacity to address various water-related issues identified during the process. The outcomes of the corresponding discussions at the village levels are taken up during Jal Chaupal discussions held at the Block, District and State level, for further resolutions and support as required.

Building on this experience, a campaign on water conservation covering the scale of the entire district was launched in Banda district of Uttar Pradesh in February 2019. This state-civil society joint campaign was carried out with the objective of sensitising, mobilising and incentivising people in rural Banda covering 471 village panchayats towards treating ground water as a common property resource and to adopt participatory ground water management approach through simple recharge measures for rain water harvesting. A cascade model was followed for training of the trainers at the district, block and panchayat level. These processes culminated in construction of 2605 contour trenches around drinking water sources such as wells and hand pumps, towards increasing source sustainability around these sources.

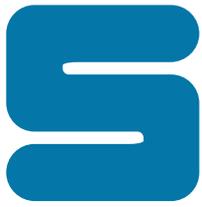
The salient features of the Banda district level Jal Chaupal initiatives included:

- i. The district administration led by the district collector taking full ownership and leadership in conceptualising and implementing of the campaign.
- ii. A core group of actors defined and formed comprising of Chief Development Officer, District Development Officer, District Panchayati Raj official, officials from Minor Irrigation Department, Jal Nigam and Land Development Department and development, supported by civil society organisations.
- iii. Development sector partners WaterAid India, People's Science Institute (PSI) and Akhil Bharatiya Samaj Seva Samiti (ABSSS) provided technical support throughout the processes.
- iv. A cascade model of training conducted at district, block and panchayat level for approximately 35,000 community members, with standardised training material prepared and used across district, preparing programme specific information, education and communication for the community through booklets, pamphlets and other communication materials
- v. Convergence with various departments and NGOs at the district, block and panchayat level.

Challenges in the Jal Chaupal model

The model requires an agency that is having a comprehensive understanding of water security related issues, equity and inclusion issues, community and administrative dynamics at different levels and ability to facilitate community processes in a scalable and sustainable manner. Ensuring reliable involvement and ownership of the state administration, people's representatives and the civil society, and setting up a joint process between these actors in order to facilitate community level resolutions is another challenge. Finally, the model has yet not established mechanism to monitor the success of various water conservation measures undertaken.

Similarly, while Jal Chaupal has processes established for water conservation and security measures, experimentation of this model in piped drinking water supply is yet to be undertaken.



Learnings on strengthening community-based institutions

Community management should not lead to abdication of state's long term responsibility for service provision. The community should be provided significant levels of external support (technical and managerial) to manage their own services. GPs should play an important part in leveraging resources to support major repairs and replacement even when recurrent costs are managed by the community. It should undertake capital replacement and provide intensive support (both technical and financial) to the community-based institutions. The technical agency of the government should provide close supervision as well as undertake inspection and audit of installations, replacement of spare parts and preventive maintenance.

Multiple models need to emerge based on the context. Creating different models for wards, villages and GPs, or those that nurture the leadership of women or SHGs could play an important role in ensuring the long-term sustainability of RWS.

Community management of rural water supply systems lead to better technical performance as local technicians, pump/valve operators and self-employed mechanics who have been provided necessary skills will be able to respond to breakdown more quickly and more frequently. Maintenance is done regularly and there will not be long delays in repairing breakdowns. The state, district and block capacity needs to be strengthened to provide high levels of post-construction support to

user committees. To make community-run projects more efficient and viable, government institutional support in the form of Block Resource Centres/Support NGOs/cadres of Community Resource Persons (CRPs) is needed.

For sustainable services delivery, a combination of community engagement and continued state support is required. Since, only a part of the operation and maintenance costs can be met through collection of tariff from users, some sort of deficit financing is required. For this, PRI institutions at block and district level are critical.

There is a need to create an enabling environment through dedicated organisations (such as WASMO, Gujarat) and specially designed units (like in Kerala) with the formal mandate to build institutions as well as develop professional capacities to manage them. A critical cadre of master trainers as resource persons is needed to scale up the capacity-building interventions in state-wide programmes on PWS. The state government agencies need to have a strong community focus and an organisational culture conducive for this. The VWSCs need to be formed on the ground and should be professionalised to take over the operation, administration and management of the systems. The operator should be trained or a cadre of self-employed mechanics developed in the area for minor repairs and the committee should be aware of the supply chain for spares/ services needed by the system to reduce the

downtime period for repair. Some amount of professionalization is needed in carrying out maintenance and repair by mechanics rather than the users themselves.

The byelaws of the community-based institutions should clearly outline its roles and responsibilities, role and responsibilities of the system operator and should have a clear protocol for timely action/mitigation measures and grievance redressal.

Transparency in financial management and better accountability by way of informing decisions through Gram Sabha can improve the functioning of the institutions. There should be a clear division of roles and responsibilities of community-based institutions and implementation support organisations. There is a need to address the ambiguities between VWSCs and GPs in the actual management role -- service delivery, support and oversight.

Community management will lead to improved financial sustainability through collecting and saving community contributions. Cost recovery mechanisms should be consistent and good financial management will improve the willingness of community to pay. Financial sustainability will not be elusive and community's contribution in part of the CapEx and entire OpEx cost will lead to more careful use of water. The amounts collected by management committees should be generally higher than that required so the committee has a surplus bank balance to manage repairs if a problem arises.

Local ownership and management of the PWS by an elected committee at the scheme/habitation level will lead to greater devolution of powers to users who have a direct interest in the continued functionality of the scheme. "Community-based institutions do not appear spontaneously, nor do they exist in a vacuum (Schouten and Moriarty, 2003:11¹³). Community institutions¹⁴ need long-term external handholding, technical and managerial support and oversight to ensure high levels of functionality and to be representative, inclusive and well structured. In the absence of these, mandated committees such as VWSCs under the GP have been seen to have remained on only on paper, with the political elite capturing them and no democratic process on ground in selection of members. Internal community characteristics are also important like initiative, strong leadership (especially of women) and institutional transparency.

Summary

Usefulness For JJM

1. These case studies provide key takeaways for the development of community ownership in piped drinking water supply programs, especially in aspects pertaining to community mobilisation, training models and Information, education and communication (IEC).
2. Additionally, they also provide an understanding of various cost sharing models which have been found to be critical for ensuring long term viability of such programs.
3. These underline the fact that support from government and other entities is of crucial importance for such programs to be successful, scalable and sustainable.
4. These learnings can help in planning the necessary processes for implementation of community-driven water supply schemes in rural India. They help further the understanding of what can be realistically achieved on the ground with continued support by the government and external agencies. Last, they will be useful in understanding how to deal with problems related to sustainability and scalability of such schemes.

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6. M S Rama Mohan Rao and M S Raviprakash, Understanding the resource implications of the 'plus' in community management of rural water supply systems in India: Belagavi District, Karnataka, Community Water Plus, Centre of Excellence for Change, Chennai, 2015
7. M S Rama Mohan Rao and M S Raviprakash, Understanding the resource implications of the 'plus' in community management of rural water supply systems in India: Belagavi District, Karnataka, Community Water Plus, Centre of Excellence for Change, Chennai, 2015.
8. On an average, a ward has a population of 1000.
9. <https://www.bvm.bihar.gov.in/Application/uploadDocuments/Docs/7percent20Nische.pdf>
10. Public outlay in rural water supply in Odisha is mainly through NRDWP, BASUDHA (funded from the 14th FC and 4th SFC grants for GPs), MPLAD / MLALAD funds, funds for Externally Aided Projects, Rural Infrastructure Development Fund (RIDF) under the NABARD grant.
11. Under BASUDHA, spot sources are being installed such as hand pumps, tube-wells or sanitary wells in isolated habitations, tribal concentrated habitations, partially covered habitations, remote habitations, schools, anganwadi centres and SC/ST hostels. Water quality testing, improvement of existing laboratory services, water purification measures in already existing water supply projects be it PWS or spot sources is being taken up in quality affected habitations. Convergence is being done with MGNREGA to undertake water conservation and groundwater recharging measures.
12. If they have completed the works satisfactorily, have an arrangement of water tariff and have arranged OandM of the village water supply system successfully for a period of one year, the OandM incentive is transferred in the form of 3-year FDR. The Pani Samiti can renew the FDR at the end of three years. Interest earned by the Pani Samiti on the FDR is utilized for OandM and regular maintenance and other exigencies. iii) Under emergent situations, the Pani Samiti, after obtaining consent in the Gram Sabha can liquefy the FDR and use fund or a part of this fund.
13. <https://pdfs.semanticscholar.org/f029/4f6798694356e907205a03b1d530da9d77eb.pdf> accessed on 22/11/2019
14. They need support in service authority and monitoring functions, such as planning, coordination, regulation, monitoring and oversight, and direct support functions, such as technical assistance



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Participation of community based institutions in piped drinking water supply

Analysis of select schemes and programs

June 2020

WaterAid India would like to thank Ms Amita Bhaduri (consultant) who helped compile this report.

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