

Empowered Community – Secured Water Supply in Dhar

Madhya Pradesh

COMMUNITY MANAGEMENT OF RURAL WATER SUPPLY Community Water ^{plus}

Four interesting arrangements in this case

- Providing facility for water quality management at sub-division level
- Handholding assistance to DWSCs in piped water supply villages by WSSO team of PHED and NGO to make DWSC as a self-managed unit
- Redressal mechanism adopted for Handpump maintenance is unique and can be emulated
- Source sustainability measures have to be planned along with the infrastructure creation due to topographic and hydrogeological limitations

Community Water Plus, a research project, has investigated twenty case studies of successful community managed rural water supply programmes across 17 states in India. Through these case studies, the research has gained insight into the type and amount of support to community organisations that is needed, and the resources implications of this ‘plus’ – in terms of money, staffing, and other factors. This note presents the approach of the NGO, Vasudha Vikas Sansthan, in Madhya Pradesh in partnership with the State’s Public Health Engineering Department (PHED) water in selected fluoride- affected villages of Dhar, a tribal dominant district of Madhya Pradesh (MP).

They do this by reviving traditional open dug wells, having lower fluoride levels and linking them to piped water supply systems. The PHED manages hand pumps but piped water supplies are handed over to Gram Panchayats after construction. The case study describes the way drinking water supply is organised in villages with PHED-managed hand pumps and piped water supplies managed by community-based DWSCs with direct support from VVS and the PHED. It classifies the institutional set-up as ‘community-managed with direct support’. Though water is supplied that is free from dangerous fluoride levels, this is only a first crucial step on the service level ladder.

Key data on the Madhya Pradesh

All India data for reference in
parenthesis

Water supply coverage: 98% (96%)

GDP per capita: \$2,955 (\$4,243)

HDI: 0.375(0.467)

Devolution Index rank: 4 out of 24



The enabling support environment

The PHED and VVS jointly operate as external support entities. The social mobilization teams of VVS and the Water Supply and Support Organisation team from the PHED form and train DWSC in operation and maintenance of piped water supplies, and handhold and support the DWSC.

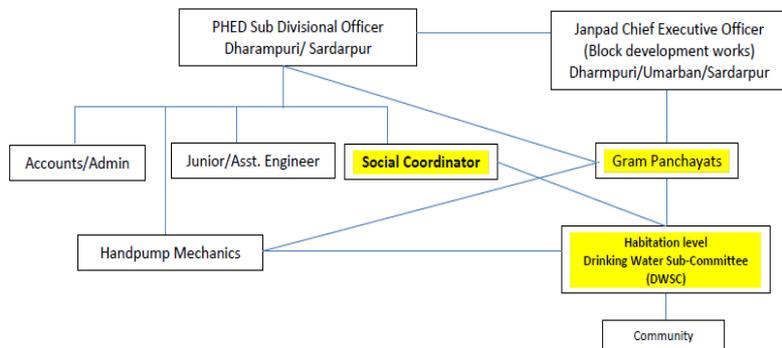


Figure 1 Institutional set-up at the Community level

software

Both PHED and VVS adopted specific tools and processes for community mobilization and activities.

- PHED's exclusive District Social Development Team and Block Coordinator and training of engineers played a crucial role in motivating and empowering the DWSCs.
- Software and monitoring are strong components in VVS-supported villages. Its social mobilizers are its strength that provides required software support. VVS empowered DWSC in fixing user charges, collecting tariffs, spending money and hiring maintenance staff from their own village.
- VVS works closely with community and government institutions – PHED, Janpad Panchayat and Gram Panchayats.
- Technical support by People Science Institute, Dehradun and sponsorship by WaterAid, has enabled VVS in creating a management and support structure that enables DWSC to manage the water supply.
- There is support in water quality testing, chlorination and hand pump maintenance by PHED.

Taken together, these points imply that there is strong support after project completion. It contrasts starkly with neighbouring villages, where water supplies are managed by a DWSC, without support. In those cases, the support is only limited to the infrastructure-creation phase.

Community service provider

DWSCs are the service providers in the piped supply systems. Key factors contributing the successful water supply across villages worth noting are -

- Diligent work and commitment of the waterman and DWSC. The waterman takes on the maintenance responsibility and collects tariff. DWSC meets only when there is a crisis, and normally the waterman takes care of the problem.
- Balanced DWSC composition of wise and enthusiastic youth, constant support and awareness programme. In one village the success was the result of a committed DWSC, an enthusiastic Block Level Coordinator of PHED supported by a district social development unit.
- The redressal system for hand pump maintenance, which is worth emulating as PHED hand pump mechanics respond and visit habitation even on verbal complaints received from DWSC if they are not working.
- Both PHED and VVS have trained the DWSC in operation and maintenance and chlorination process. DWSC could leverage private and community open wells and bore wells to ensure water supply. Trained DWSCs ensured surplus tariff leading to regular water supply.

Service received by households

Piped water supply service levels are basic in terms of quantity, but above that for other factors. This represents a forward moving step in the service ladder since they provide a supply free from dangerous levels of fluoride.

Table 1: Service levels for best practice villages (n=90)

Service levels	Quality	Quantity	Continuity	Accessibility	Reliability
High	100%	33 %	89%	89%	89%
Improved	0%	0 %	11%	11%	11%
Basic	0%	67%	0%	0%	0%
Sub-standard	0%	0%	0%	0%	0%
No service	0%	0%	0%	0%	0%

Water quality in all the study villages is good. The shallow groundwater zone in three villages is being tapped that gets replenished with every monsoon. Regular chlorination is done to address bacteriological contamination. In one village the source is deep bore well that has good yield and no contamination exists beyond the permissible limits.

In terms of quantity levels the control village scored highest due to the household storage found there. In all the best performing villages, the storage capacity of the households is lower, but this gets offset by continuity and reliability of water supply that served the community needs. Besides, the existing hand pumps serve their purposes other than drinking and cooking. Continuity and reliability of the services were good in all the villages but in the best performing villages the reliability scored better.

The costs

Capital costs - of a total of 2909 INR/person - are largely done by the external support entities in the study area. The state water supply agency (PHED) cover around 64%, whereas the NGOs (Vasudha Vikas Sansthan) cover the remaining 36%. Community contributions to the initial implementation costs are not there. Of all the capital costs, around 1% is for software support towards costs of social mobilization teams.

With respect to recurrent costs, communities cover almost all of the 171 INR/person/year, communities pay around 97%. These are roughly the costs of operation and maintenance costs, like costs incurred on labour, chemicals, day-to-day materials/repairs, salaries of pump operators, valve men and support staff and electricity charges. The PHED only contributes to the costs of major break-downs, but these so far are only 2% of all recurrent costs.

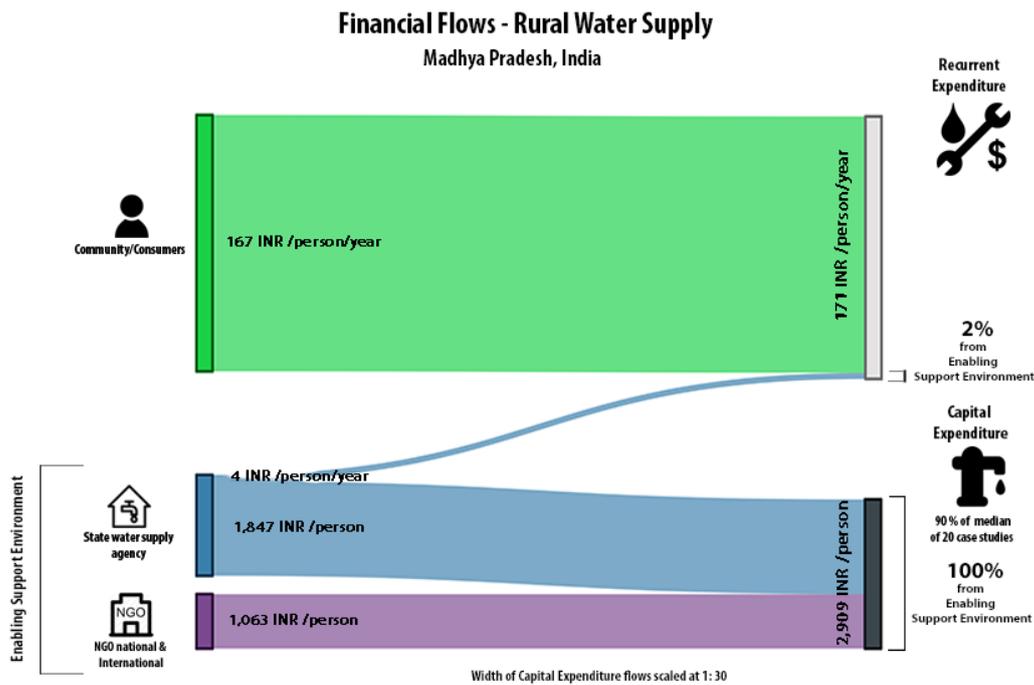


Figure 2: Financial flows for capital and recurrent costs

Conclusion

The institutional set-up for piped supplies in this case study is classified as “community management with direct support” provided by both the VVS and PHED. Efforts of VVS and PHED’s Social Mobilization Team promoted high levels of community participation and management of the drinking water supply system that made a marked difference in its functioning, which is evident in high proportion of household connections and regular payment of water tariffs.

Professionalization level of the community management is basic as DWSC is only able to take on minor operation, maintenance and administrative activities. This is reflected in the service levels that they provide which are basic when compared to the comprehensive government norms. However, they do provide a supply free from dangerous levels of fluoride and in this way represents a crucial step in the service level ladder. DWSC training in record keeping and account maintenance, improving service levels and advanced activities like undertaking water security and quality assessment measures and water metering are areas that need strengthening.

About this note

This is a summary of a full case study as part of the Community Water Plus project. The original case study was written by Dr. M.S. Rama Mohan Rao & Mr. M.S. Raviprakash. The full case study can be downloaded <http://www.ircwash.org/projects/india-community-water-plus-project>



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