

Assessing the “Plus” of successful community-managed water supply programs in India

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KEYWORDS

Community management, post construction support, service levels, rural water supply, Community service provider

ABSTRACT

In India, community management of rural water supply has a long history, with several well-documented success cases. However, there is also widespread recognition that communities need support from government and other entities, in order to deliver sustainable services. The “Community Water Plus” project attempts to analyse the support mechanisms to community in 20 rural water programmes across India that are acclaimed to have been successful, and seeks to assess the resources incurred in that. This paper presents the research framework used, and the findings of the first four case studies: the World Bank supported rural water supply and sanitation programme in Punjab, the Janani programme in Kerala, WASMO in Gujarat and the TWAD Board “change management” experience in Tamil Nadu. The salient findings indicate that State governments (supported by external funding programmes), have developed specifically designed units (like in Punjab, Kerala and Tamil Nadu) or even dedicated organizations (such as WASMO in Gujarat) with the formal capacity and professional skills to support the communities on mobilization, institutional building and capacity building at all levels. The support was intense during capital investment phase, demand creation, needs assessment, creation of management capacity with sufficient resources allocated and spent for this purpose. There has been reasonable to high levels of professional performance with clear division of roles and responsibilities exhibited both by communities and support organisations. The type of partnering includes high levels of empowerment (community contracting), strong organisational structure and procedures for hiring adequate human resources. However, during the service delivery phase, the support becomes less intensive. In fact, Gram Panchayats (GP) become first line of support to communities, taking that over from State government during this phase. But often this results in blurred lines between Village Water and Sanitation Committees (VWSCs) and Gram Panchayats, as to who carries out the service delivery role, and who provides support and oversight. A more proactive monitoring and support by State government is rarely observed. State governments’ role becomes stronger again during the phases of capital replacement, when again intensive support is provided both technically and financially. Based on these first four case studies we conclude that successful community management happens where State governments duly empower community organisations during the project planning and implementation phase. But that in turn happens only where State governments have a strong community focus and organisational culture focused on that. The communities are able to meet the regular operational and maintenance costs through water tariffs and community contributions, and it is evident that communities do pay for regular services. Transparency in account management and informing decisions through Gramasabha acted as critical inputs to the successful community management. We also conclude that during service delivery, a form of management is occurring which takes a mix of what can be labelled as “community management with direct support” and “direct provision by public bodies”, as we see that GPs take over many of the actual management tasks of VWSCs.

INTRODUCTION:

Community-management remains the predominant approach for rural water supply services delivery in low-income countries. It originated in response to the perceived limitations of the 'public works department' phase whereby central government failed to manage the many small rural systems it built. The approach has evolved over time and builds, on the insights around appropriate technology, community participation, demand-response approaches, amongst others. . Though this has undoubtedly brought benefits and is often the most appropriate service delivery model, various studies indicate that the community management approach is necessary but not sufficient for sustainable services (Harvey and Reed, 2006, RWSN, 2010, Lockwood and Smits, 2011). All these studies point to the need for ongoing support to community organisations in their service delivery tasks.

Also in India, community management of rural water supply has a long history, with several well-documented success cases (James, 2004; 2011). However, there is by now also widespread recognition that communities need support from government and other entities, in order to deliver sustainable services (Harvey and Reed, 2006; RWSN, 2010; Lockwood and Smits, 2011; Moriarty et al, 2013). Communities may need easy access to maintenance staff from government to renew their management structures or to outsource certain tasks to specialised individuals or enterprises for effective service delivery. James (2011) has elaborated on several programmes to support communities in their management tasks in India, showing their relative success. In spite of these success stories, mechanisms for support to community-managed rural water supply services have not yet been scaled-up in policies and strategies in India. Moreover, the necessary support comes at a price and sometimes, it is believed, a significant one (Smits et al., 2011). But in the Indian context, no insights exists as of yet of the magnitude of these support costs.

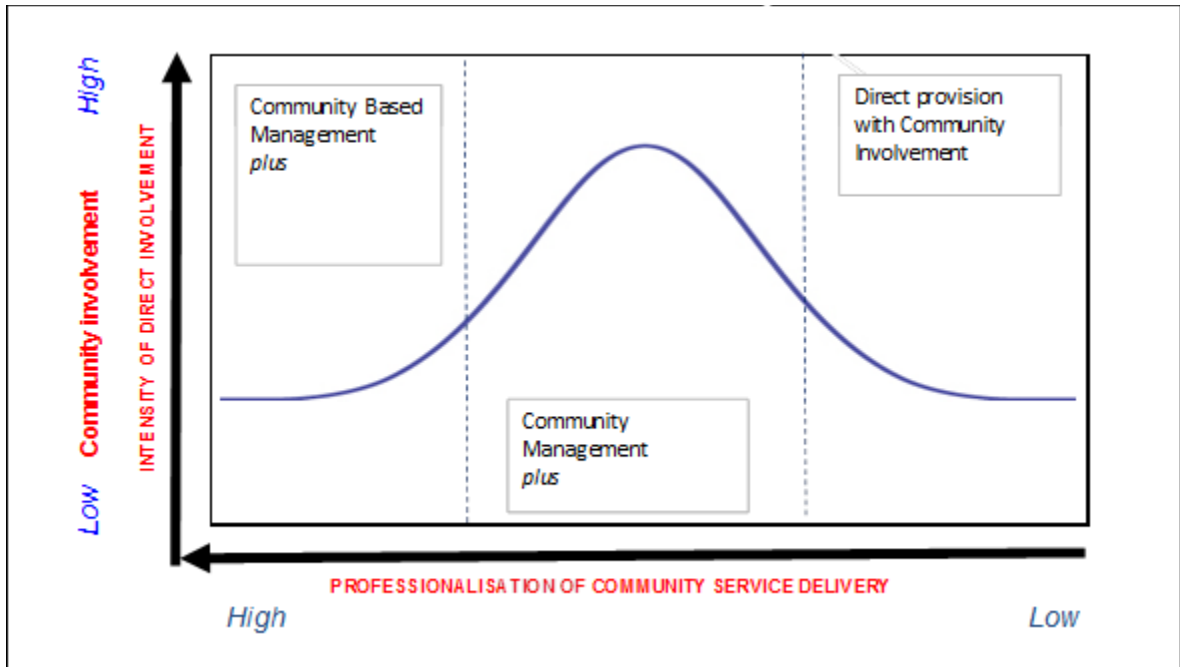
Community Water Plus (Community management of rural water supply systems) is a research project which aims to gain further insights into the type and amount of support that have been needed for community management to be successful, as well as into the resources implications of that, across a range of technologies and conditions in India. Specifically, the project focuses on the following main research question: *What type, extent and style of supporting organisations are apparent in sustainable community managed water service delivery relative to varying technical modes of supply?*

This paper presents the research framework used, and the findings of the first four case studies: the World Bank supported rural water supply and sanitation programme in Punjab, the Jalanidhi programme in Kerala, WASMO in Gujarat and the TWAD Board experience in Tamil Nadu.

RESEARCH FRAMEWORK:

The research starts from the hypothesis that sustainable services delivery requires a combination of community engagement and community management of appropriate technology with the necessary government institutional support (potentially including a level of out-sourcing to the private sector). We see that there is the need to professionalise the support elements of community-management in order to provide on-going support. The needs and possibilities for this differ widely, most likely according to the type of water supply technology, the socio economic status of the community and the capacity of the enabling environment to provide the support. This working hypothesis is elaborated in Fig 1. This figure indicates that in the model of community management with direct support, the intensity of community engagement is highest, as the community does the bulk of the executive tasks. In the other two forms of direct provision and professionalised community management, the communities have mainly an oversight and decision-making role, though not an executive one.

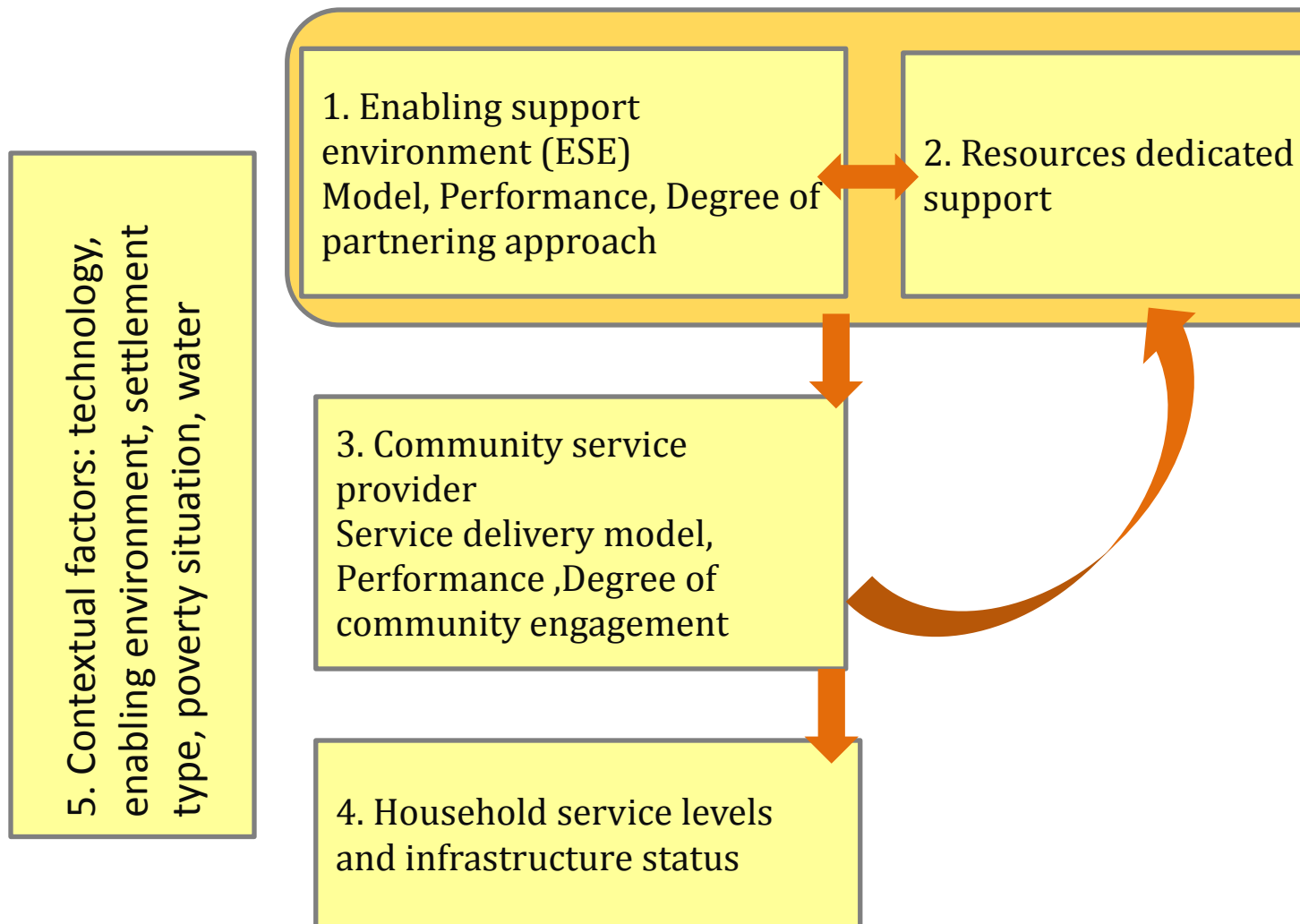
Figure 1; Anticipated level of community participation for different forms of community management



Source: Smits Etal 2014

As of now there is no evidence if one model is better than another, In fact, often the choice for one model or the other is not made explicitly, based on these considerations. Rather, they are the results of preferences at the time services were developed. And the models evolve over time. So what starts as a form of community management with support may evolve over time into professionalised community management, or into direct public provision. With this conceptual model in mind we have developed the following research framework (figure 2):

Fig 2: Community water plus Project research framework (Smits, etal 2014)



1. **Enabling support environment(ESE).** To assess the degree of success in support, we look into the following elements at the ESE level
 - **Enabling support environment model**, by defining which type of entity (or entities) fulfil these roles, and the relationships between them.
 - **Performance of the enabling support environment.** This refers to the degree to which the support entities are fulfilling their roles adequately, against a set of performance indicators, looking for example at the types of support they provide and the quality of that support.
 - **Institutional performance.** This entails the internal institutional process such as leadership, organisational culture and community orientation that allow the external performance to happen.
 - **Degree of partnering.** This is a description of the type of partnering between the enabling support entity and community service providers
2. **Resources dedicated to support.** It is to be expected that the degree of success in enabling support and monitoring depends to a large extent on the resources dedicated to these functions. This refers both to the monetary costs (as per the cost categories) as well as non-monetary ones, such as presence of skilled staff and political capital.
3. **Community service provider.** To assess the degree of success of the service provider three elements are included
 - **Service delivery model:** This refers to description of the entity that carries out day-to-day operations & maintenance and administration. This may be a water committee, a *Gram Panchayat*, a

- CBO or other entity. In this, the degree to which the entity may have professionalised certain tasks, e.g. to a paid-for caretaker or mechanic, and its scope and scale of operations.
- **Performance:** This refers to the extent to which the service provider is fulfilling its roles in operation, maintenance and administration adequately, as defined by formal regulations or general good business practices.
 - **Degree of community engagement in service provision:** We believe that community engagement in service provision is a good thing per se, as it empowers users to take appropriate levels of responsibility and oversight over their water services.
4. **Household service levels and infrastructure status.** Whether a water service can be considered successful is eventually measured by the characteristics of the water supply that users eventually receive, i.e. the service level in terms of water quantity, quality and accessibility.
 5. **Contextual factors.** We recognise that what might be required to be successful in one case may not be adequate to be successful in another. For example, the management of a more complex multi-village scheme may require a higher degree of professionalization and support than a simpler handpump system. In order to understand the type and extent of support that is needed to achieve successful service delivery, one needs to relate them to contextual factors such as type of technology, the socio-economic and poverty status of the community, the spatial dimensions of the type of settlement, the water resources situation etc.
 6. **Trajectories.** The organisational partnerships between communities, service providers and support agents have a particular history and trajectory of development that is often not replicable to another situation. Still, insights in the various trajectories of development of these *plus* partnerships may help identify common elements to take into account when promoting such partnerships elsewhere.

The research elements mentioned above will be assessed in 20 case studies across India. These were selected on their acclaimed degree of success, as this research requires to focus on supposedly successful cases, in order to see what resource deployment is really needed.

The selection of the cases started with the scanning of community-managed water supply programmes which reported success across India. This initial scanning process found 161 'successful' cases. Following database cleaning and the removal of duplicates or overlaps, 92 potential cases remained. These 92 cases represent 35,661 villages. From these 20 cases were selected to ensure a mix of States, technologies, and environmental conditions. This paper focuses on the first four case studies where the research was completed. They include World Bank assisted Punjab Rural Water Supply and Sanitation (PRWSS), Jalanidhi in Kerala, WASMO in Gujarat and Change Management initiative of TWAD- CEC in Tamilnadu.

FINDINGS:

This section presents the findings of the study, starting with the description of the historical development of the 4 cases and their institutional set-up. After this, through a series of comparative tables, we highlight the key findings from across the 4 cases, focusing above all on the institutional level of the external support entities (ESE).

Case 1: WASMO: Gujarat: The Water and Sanitation Management Organization (WASMO) was established as a Special Purpose Vehicle (SPV) in the year 2002 to facilitate the community in development of water supply facilities in rural areas of Gujarat. WASMO is a facilitating organization working towards drinking water security and habitat improvement by empowering communities to manage their local water sources and village drinking water supply system and services.

WASMOs main strategies include

- Creating institutions at the village level and strengthening them through continuous capacity building;
- Focus on Information, Education and Communication (IEC) and software activities before taking up development of infrastructure for water supply;
- Putting entire programme in public domain for seeking strong citizens' engagement;
- Social process based demand driven programme implementation for achieving stakeholder engagement, gaining public confidence, strong community leadership, accountability and efficient service delivery;
- Building strong partnerships based on transparency and trust with community, community institutions and NGOs.

WASMO's project Schemes are implemented in two cycles, followed by a third cycle of continued post-implementation support. The first cycle lasts from three to six months and involves community mobilization. The second stage lasting twelve months involves physical execution and completion of the project. Third cycle is also of 12 months for providing post-implementation support. Introduction of the programme in a village is done through workshop/ village meetings. It is in these meetings, the community is introduced about the norms of the programme including community participation and partial sharing of cost by the users (normally 10% cost of the scheme; Government contributes the rest 90%). One of the key feature of WASMO is the establishment of *Pani Samitis* (Village Water and Sanitation Committees) to manage the water service delivery. Pani Samitis evolved through Gramsabha and is a standing committee of the Gram Panchayat which is a legal entity. It is empowered through a Government Resolution (GR), issued by the Panchayat Raj Department in the year 2002. The Pani Samiti maintains a separate bank account in nationalized bank for funds flow. The Pani Samiti is responsible for planning, designing and implement the in-village water supply schemes. It is also responsible for O&M of the village water supply and fix and arrange collection of water tariff.

There are 18478 villages in Gujarat and so far 13540 Village Action Plans have been approved. Out of this, 9707 schemes have been completed and 3349 are ongoing. WASMO has also introduced awards for best performing villages which are providing safe water supply on a continuous basis. These awards are promoting competitiveness among the villages to improve the service delivery. The Pani Samitis are able to manage the operation and maintenance of water supply systems with cost recoveries by collecting user charges from the households and also with funding support from Panchayats and Rural Water Supply Department. Most of the villages are providing the water through household pipe connections and public stand posts. Some of the villages have also achieved 24X7 water supply. WASMO has a facility to provide ongoing support to Pani Samitis in the operation maintenance and capital maintenance support tasks: However, this support is largely on-demand, i.e. Pani Samitis request support whenever they need and try to source that from WASMO. This means however that WASMO cannot attend all communities and thereby anticipate problems. This is reflected in the resource deployment, with only 4-8% of the resources going to post-construction support. This findings also brings back the question " can communities sustain if the "on demand / request services" are withdrawn. It is very imperative that the communities does require professional service indicating the community management with direct support as depicted in Fig 1.

Case 2: Punjab Rural Water Supply and Sanitation Project (with world Bank Assistance)

The Government of Punjab's vision and long term strategy aims at covering all Punjab villages with 100 % water supply coverage ensuring higher service standards and private service connections to most households. In 2006, the Punjab government launched a program under the World Bank-supported Punjab Rural Water Supply and Sanitation Project (2006-2013) (PRWSS). It aimed to provide all the state's 3161 villages with **70 litres per capita per day**(lpcd) of safe drinking water by Dec 2013. The project sought to make rural communities responsible for construction and management of their own water supply systems and to make the systems financially sustainable, with consumers paying for operations and maintenance on an ongoing basis. Main strategies of the program are

- Rural local governments with user groups are responsible for up gradation and management of all intra- village RWSS facilities and services;

- DWSS to be responsible for managing complex multi-village water supply schemes, but with improved fiscal and operational performance, and for providing capacity support to rural local governments;
- Introducing partial capital cost sharing by users as an expression of their demand
- Financing of recurrent O&M costs by user communities.

The main focus of the program is “Community Development” through Support Organizations (SOs) for their services to the DWSS, Gram Panchayats (GPs). Another important focus was on “Infrastructure Building” with civil works contracts for improving drinking water schemes in 3,000 villages and upgradation of the existing water supply schemes in 1,600 villages. Further defluoridization and reverse osmosis plants and potable water treatment units were also installed on pilot basis. Institution building promoted at various levels and a special procurement unit is set up to institutionalize transparent procurement processes for programme implementation.

1240 villages have been covered up to February 28, 2014 against the coverage target of 1,200 villages under the PRWSS project. Villages being covered have a high percentage of private connections. 100% houses have been covered with water supply connections in 295 villages, 70-99% connections have been provided in 541 villages and in 404 villages where number of individual water connections is less than 70%, IEC and HRD Specialists posted in DPMCs are making efforts to increase the number of water connections by creating awareness and conducting capacity building trainings of GPWSCs. Due to high number of private connections, O&M in most of the schemes have become financially sustainable. The state has made substantial progress in installation of reverse osmosis plants for drinking water from their own funds by installing them in 1811 villages (upto February 2014)(<http://www.mdws.gov.in/ExternallyAidedProjects>). Community sanitation scheme implementation has commenced in 98 villages against the target of 100 villages. Training sessions are being conducted in groups for the members of the GPWSCs in procurement, financial management, operation and maintenance. O&M manuals have been provided.(PRWSS website 2014). A major milestone was achieved through Introduction of “Shikayat Nivaran Kendra” (Complaint Redressal Unit) by the department which is operated on 24x7 basis for online registration of complaints. A toll free number 1800-180-2468 obtained from BSNL having six telephone hunting lines was installed in SNK. The Rural Water Supply consumers register their complaints as well as retrieve the latest status of complaints registered by them through unique complaint number provided to them. An Advanced Interactive Voice Response (IVR) system activated at SNK also helps the customers to easily lodge complaints at the call center. This unit is helping resolving the operational and maintenance issues easily and support the communities in post construction period.

Case 3: Jalanidhi: Kerala: Kerala Rural Water Supply Board (KRWSB) had taken up the Jalanidhi project “to demonstrate the viability of the cost recovery and institutional reforms by developing, testing and implementing the new decentralized service delivery model on a pilot basis initially. Further another of its objectives is to build the State’s capacity in improved sector management. The main components of the Project include institutional building, community development, infrastructure building, state wide sector development and natural resources development.

Institutional building and project support: The Project Management Unit was established to support and monitor the project with technical, social and finance experts. Further District Project Monitoring Units were also established to involve and support implementation of the project progress on a day-to-day basis. All efforts at maintaining the maximum freedom of decision-making at the appropriate lowest level were ensured. Innovation, leading, learning by doing were encouraged and there were 9 DPMUs to cater the project implementation in 112 GPs. Adequate support and guidance for successful completion of project was provided to GPs to implement the project. The Supporting organizations (51 NGOs) were encouraged to specialize in Water and sanitation issues to work under this project. Among the 112 GPs where there has been prolonged SO/ Grama Panchayat Action Teams (GPAT) involvement, more than 2000 young professionals were working who had practical exposure on water and sanitation to train the GPs. Consolidated on a need basis the Beneficiary Groups were registered as legal entities (Ayalkkootams) and have formed a democratic governance point for water and sanitation issues at the lowest level. The empowerment, participation and awareness brought in by the support institutions

Implementing the project in phases: The project followed four phases “Pre planning”, “Planning”, “implementation” and “post implementation” phase. The main activities during pre planning phase are GP selection, pre-qualification of Support Organisations and signing of a planning phase tripartite agreement between the Kerala Rural Water Supply Agency(KRSWA), Gram Panchayat (GP) and Support Organisations. Main activities under planning phase were orientation & capacity building of GPs and SOs, BG registration, formation of beneficiary committees, resource mapping and pre- feasibility studies within a period of 4 months. Subsequent activities include technology selection, preparation of engineering designs and community empowerment plans and finally a GP level Implementation Phase Proposal. The Gram Panchayat and Beneficiary Groups’(BGs) focused on capacity building, sanitation & hygiene promotion and women's development programs. The planning phase concludes with the signing of the Implementation Phase Quadrilateral Agreement (IPQA) between the KRWSA, GP, BG and the SO. There is one IPQA per Beneficiary Group. A separate Implementation Phase Tripartite agreement (IPTA) is signed between the KRWSA, GP and the SO for managing SO contracts. The main activities under implementation phase are procurement of materials, construction of schemes as per agreed plans and procedures and management of project funds. Post-Implementation phase include providing advisory support to the GPs and BG communities in efficient operation and maintenance of services, collection of water tariff and book- keeping. The signing of the ICRs in public gathering by KRWSA, GP and BCs mark the formal exit of KRWSA from a project GP.

Main strategies include:

- **Demand driven approach** –project is sanctioned to only interested groups of people who show their willingness to participate in the project and abide by the conditions of cost- sharing and cost recovery. They will be made part of source selection, technology selection, purchase, contracting and implementation with technical help from Support Organizations.
- **Cost sharing** -, 15% of the capital cost is borne by the beneficiary community. Of the remaining, the Gram Panchayat bear 10% and 75% is the share of the Government.
- **Cost Recovery** - The Beneficiary Groups themselves meet 100% of the recurring costs of operations and maintenance. .
- **Pro-Poor Approach** -. The project has been so designed to incorporate the beneficiary contribution of 15% of capital costs either through cash or in kind, as labour. Intra-group subsidization and even inter- group subsidisation.
- **Community Contracting** - The users themselves are 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 will be done at the user level itself for which adequate training will be provided and guidelines made available.
- **Decentralised planning** - This project operationalised through the Gram Panchayats and the beneficiary groups, there by acknowledging and strengthening the efforts of decentralised planning in Kerala.

Case 4: Change Management Initiative of CEC-TWAD Board: Tamilnadu: “Democratization of Water Management “ a transformation exercise evolved after a series of internal workshops with TWAD engineers, facilitated by a UNICEF supported consultant designing the overarching conceptual framework. The strategy adopted for this process was attitudinal change among individuals, the organisation as a whole and among key stakeholders. The Change Management workshops resulted in a vision, encapsulated in the Maramalai Nagar Declaration, which was endorsed slowly by administrative heads, policy makers and other opinion makers. As per the Declaration the engineers pledged “*We, the TWAD Engineers, after extensive deliberations, unanimously declare that: Before taking up any scheme, we will first (1) evaluate and rehabilitate existing schemes to the maximum extent; (2) Ensure their optimal utilisation and improve service delivery and (3) We will revive traditional sources and (4) We will also aim at 10% increase in coverage within the same budget.*”

To evolve consensus around and implement the Maraimalai Nagar Declaration, a Change Management Group (CMG), comprising engineers who volunteered to pioneer the change process, was formed at State

and district levels committing themselves to spreading the vision and practice of the Change Management Initiative. They took this up as a voluntary exercise in addition to their normal work load and without using any extra budgetary resources for Implementation: The vision was implemented in 5 pilot villages in each of 29 districts of the state. These 145 villages were seen as the experimental workspace within which to test and implement the concepts learnt through the consultative process of the change management initiative. Four major thrust areas focussed while implementing were 1. Community involvement in planning and implementation 2. Targeting of poor villages 3. Sustainable and cost-effective investment solutions 4. Conservation and recharge of water

In these pilot villages, TWAD engineers worked with the community on

- Improved systems and system management for better service delivery
- Protecting and improving the sustainability of the source
- Reviving all traditional water bodies for better groundwater recharge and to fulfil domestic water
- Ensuring equitable water supply, especially to weaker sections of society
- Creating a clean environment in the village
- Regular disinfecting and periodical water quality testing
- Better operation and maintenance practices to reduce user costs
- Judicious use of scarce water through conservation measures, waste-water reuse & recycling
- Increasing the awareness of the community, and especially children, on water issues

Reported outcomes: Without any investment by the government, and with public participation, the following outcomes have been reported (1) Formation of Village Water Supply Committees for self-management of water supply in all 145 villages (2) Roof rain water harvesting in 90% of all households with public participation and contribution (3) Equitable and regular water supply in 116 villages (4) Reduction in O&M expenditure by 10 - 30% by reducing pumping hours and supply hours to match actual requirement so Revival of around 140 traditional water bodies(5) Segregation of solid waste into degradable and non-degradable wastes and disposal into common compost yards or at household level in about 80 villages (6) Construction of household soak pits in about 50 villages (7) Tree planting in schools, backyards and along streets by the community (especially children) in 110 villages (James, 2006).

Though this initiative is limited to the 145 pilot villages but the lessons learnt from these initiatives have been dovetailed into many of its programs by CEC which is registered as a society in 2009. Currently CEC dovetailed this concept in the world bank Assisted “ water security pilots” which is about managing the water resources for competing demands. However it was clear from this case that once the top management shifts, entire program focus shifts leading to slippage in success. Though CEC is trying to promote the Change Management across various states and within the state envisaged success is not perceived indicating the need for special push from beaurocratic and political levels.

Having seen the basic features of the four cases, we present below the commonalities and key differences between the four cases.

Enabling support environment model: State governments (supported by external funding programmes), have established specifically designed units like Project Monitoring Units (PMUs) in Punjab ,Kerala and Tamil Nadu or even dedicated organizations such as WASMO in Gujarat with the formal capacity and professional skills to support the communities on mobilization, institutional building and capacity building at all levels in all these programmes. The staff have been either deputed specifically to these units or hired from open market with competitive pay packages to attract and retain the talented professionals who can serve the communities with commitment and dedication. In all the four cases there is a clearly articulated vision and mission statements and the strategies towards achieving them are clearly laid out. The roles and responsibilities for these units are defined and there was a clear division of roles for each institutional level to support the communities both on demand basis and also by design or on request on a regular basis. In the case of Punjab a special unit for procurement and technical support is created and this unit

provides the technical guidance for procuring the material and helps the communities to supervise and quality control during scheme execution. In the case of Kerala the community contracting is promoted where the users are involved right from the beginning to the completion of the program and then onto operation and maintenance of the scheme. In all the four cases there was both political and administrative willingness to introduce the reforms in the rural drinking water sector, while in Punjab and Kerala the World Bank supported the State Governments financially . The support organizations were self sufficient interms of personnel, finance and other logistics which are very crucial for delivery of the efficient service. Incase of Kerala, Gujarat and Tamilnadu the local NGOs were used for community mobilization and orientation while in Punjab and in some places of Gujarat the trained development professionals were employed to undertake this task.

Performance of the enabling support environment.; Several parameters were considered to assess the performance of the enabling environment and the consolidated responses for each of the case study are provided below in table 1:

Table 1: Comparative performance of the enabling support environment

Indicator / Definition	WASMO	PRWSS	Jalnidhi	TWAD-CEC
Degree of professionalization in the ESE				
Formality of the mandate for support	WASMO is a special drive vehicle created for the RWSS with necessary policy mandate..	A clear tripartite agreement exists between Government t of India, Government t of Punjab and World Bank on the proposed reforms with necessary policy support	World bank and KRWSA started with a pilot and scaled later with cost sharing and cost recovery principles. Policies at the state, regional and GP level are established	CEC has a clearly articulated vision, mission and/or objectives for its support function, which is also supported by a policy mandate
Use of standard tools and instruments for support applied in a structured manner	Adopt professionalized tools and instruments and communities are empowered and trained to manage their services	Usage of tools and instruments exist	From the start the communities are trained and they do use standard tools and instruments	TWAD & CEC has tools and methods applied in a systematic manner (eg. water budgeting), but there is lot of adhoc support to the communities
Existence & use of structured mechanisms for tracking information	Well defined monitoring tools are used for tracking the information exchange but there is still space to improve the system	Information is exchanged on a regular basis with adoption of new technologies eg: metering to check the water usage and loses	Information exchange between KRWSA and Shreyas is good and both of them reach the communities effectively	CEC and TWAD tracks the performance of the service provider through monthly meetings and surveys, and uses that to monitor its own impact
Existence of structured mechanisms for communication with the service providers	There are established channels of communication and staff are available on time but there are still lot of gaps which could easily be sorted out.	Communication channels to reach the communities are good and latest technologies are adopted	Shyreyas the NGO is using Kudumbashree units (SHGs) to pass information to the beneficiaries. The Communication between KRWSA and community is not effective after the intensive capital phase	The ESE has a number of communication channels, but of which only some are easily accessible and well-used
Performance of the ESE				
Variety of support services being provided	All the variety of functions are supported such as technical assistance,	All the variety of functions are supported	All the variety of functions are supported such as technical assistance, monitoring ,	technical assistance, monitoring , monitoring, WQM, technical assistance

	monitoring , monitoring, WQM, technical assistance (i.e. zoning), and fund mobilization		and fund mobilization	(i.e. zoning), WRM (i.e. water budgeting), investment needs assessment and fund mobilization -
Response time between a request for support and the support being provided	Communities are empowered to do it but whenever there is support available from WASMO district level offices	Problems are sorted out within 24 hours and the pump operators are trained to handle most of the issues	.Shreyas and KRSWA does support the BG and GPs sort out on their own.	24 to 48 hour – employed an operator at the Panchayat level but when additional support is needed a supervisor and additional staff can be called on at TWAD

It can be concluded that a successful community managed water supply program need to have specially designed support structures with necessary policy mandate and established communication and information management systems. Capacity building and training from the inception of the program improves the community ownership and over a period of time helps in evolving into community management graduating to community empowerment. Further standard procedures and working methods with continuous professional support to the communities on all the operations such as accounting, budgeting, Information management, monitoring, technical guidance and record keeping will result in improving community capacities, however this can also pose a challenge when reaching to maximum number of villages or it can become a major hurdle in upscaling the innovation. Interactions with ESE reveals that having a specialised units with autonomy does contribute to support the community management.

Institutional performance. This entails the internal institutional process such as leadership, organisational culture and community orientation that allow the external performance to happen. The performance of all the cases is reflected in table 2

Table 2: Comparative Institutional performance of the enabling support environment

Parameters	WASMO	PRWSS	Jalnidhi	TWAD-CEC
Leadership	Amicable atmosphere and the officials work in harmony due to good leadership	Strong administrative leadership	Strong leadership who can communicate ideas effectively to the respective communities	Beaurocratic leadership to push CMI concept in TWAD.
Management and Administration	Human Resource Cell assures each official is aware of his/her roles and responsibilities. However, employees fear of job security.	Project management Unit takes care of execution of all the functions	Administrative systems for accounting and budgeting, personnel, and Information and are regularly being monitored	Systems of management and administration exist but lot of insecurity among the temporary employees,
Community Orientation	WASMO's core competency is established by building strong relationships with the community. Tools and methods are employed to interact and have a two-sided interaction with the communities.	PRWSS has specially employed professionals for community orientation	Specially trained staff demonstrate a high sense of morale while serving a particular community.	CEC being an NGO is closely associated with the community .With the small but highly motivated team able to mobilize the community, while TWAD scores very low on this parameter
Technical Capability	Access to all the technical expertise and sub-	Special procurement and	Technical assistance is restricted to 27 months.	TWAD scores highly on its technical

	contracts consultancy services for specialised areas such as ground water geology, etc.	technical units established	However there is no practical research or experiments to improve the uses of technology	capability and ability to influence external institutions. However CEC has limited technical expertise
Developing and Maintaining Staff	clear process for determining skills and the training programmes are designed on need-basis.	Role clarity among the staff but given the Govt systems no incentives or efforts to maintain staff	officers being transferred within/between government agencies and scope for growth is limited hence demotivated	The temporary nature of the programme creates a sense of job insecurity for the younger members of the team who aspire to develop in this sector.
Organizational Culture	Existence of a team spirit among the members. Employees have a sense of ownership and feels proud to work for WASMO.	Employees are committed and show enthusiasm	Staff since inception express a sense of ownership and pride. Though the staff turn is high, the organizational culture is continued as objectives remain the same.	There is a huge change in TWAD with change management.
Organisational Autonomy	Every year the team sets internal goals and works towards achieving them. The team secures sufficient funds from appropriate sources to meet organisational goals.	Limited Organisational autonomy, need to work within the broad framework	Limited Organizational autonomy was observed.	Limited autonomy within TWAD
Interactions with Key External Institutions	Top management stays well informed about external policy, financial, and regulatory issues and actions. The management also maintains good contact and relations with all the key individuals related to a respective project	PRWSS maintains interactions with external Institutions and individuals as there more opportunities due to the presence of World Bank	ESE interacts with key external institutions through an established bureaucratic setup and ensures that its objectives are conveyed and necessary agreements obtained before initiating any work.	Much needed interactions with key external institutions is absent

It can be seen from the table above that, in all the four case studies there is strong leadership observed at both political and administrative fronts. Except for Gujarat, the community orientation of the Government departments is very low, however they bring in NGOs and specially hired staff to perform the functions related to community orientation. Technical capabilities are strong with the department and was very low with the NGOs hence in three case studies there was close interaction with technical and social divisions and both the divisions executed the work hand in hand in a coordinated way to guide and empower the community in scheme implementation. In all the four cases the teams were working in good spirit and they are all motivated to work towards achieving the common goal, however in case of TWAD-CEC and Jananidhi cases the same tempo was not maintained as the staff got transferred and the same rapport with the new staff was not materialised. Further the temporary staff in time bound projects did have job insecurity. Organisational autonomy was not observed at the department level however the NGOs and special organisations designed (WASMO) did have an autonomy and could able to make decisions and execute the required actions in time which was crucial for the success of the program. In all the four cases the top management had maintained good interactions with key external Institutions and they were up to date with policy changes and the other latest developments at the national and state levels. The CEOs/ Directors of the programs were invited to the national and regional workshops to share their experience for replication in other States.

Degree of partnering:

It is very important to assess the partnerships among the ESE and Village Water and Sanitation Committees(VWSCs) as they enable greater efficiency of work, integrations of skills, expertise, finance and

other resources to accomplish both individual and jointly agreed outcomes. In this research, it was critical to understand the relationships between various stakeholders and how they have contributed to the processes for successful WASH services, and how that has changed over the four phases of the service delivery cycle. We use the partnering continuum (Stef et al 2014) as explained in the concept note for CWS.

- In the **“strategic planning”** phase the partnership is **“collaborative”** where in authorities and communities share responsibility and engage in joint decision-making with regard to developing policies or strategies. **“consultative”** partnership was observed for systematically obtaining relevant inputs from external agencies and communities. In all the four cases there was an intense awareness generation and orientation program to prepare the communities for WASH planning. In Punjab approximately 8-9% of the total outlay of Rs 1200 Crores spent on IEC + HRD while in WASMO Project, Cycle 1 is dedicated for IEC. In Jananidhi, Sheyas the NGO along with KRSWA undertook the IEC activities and in the CEC case the engineers themselves started motivating the community. This step indicates that the communities does need to be prepared sufficiently before undertaking the actual implantation of the scheme.
- **In the “Capital Investment” (implementation) phase**, the type of partnering includes interesting examples of high levels of empowerment (community contracting in Jananidhi, Kerala) and strong organisational structure and procedures for hiring adequate human resources (WASMO). However, during this phase the relationship is collaborative when government and communities share responsibility for decisions regarding hardware (e.g. infrastructure) and software (e.g. capacity building) development. In case of WASMO they come together with communities for preparation of a Village Action Plan (VAP) while in Kerala a feasibility study was conducted by KRSWA to arrive at the action plan and in Tamilnadu it was jointly done by engineers and community. The relationship is contributory during the sharing of implementation costs. Both government and communities pool financial resources to meet the costs of capital investment in hardware. In case of WASMO, it contributes 90% of the costs and CSP contributes 10 % of the costs. The 10% is collected from the households, and in some cases, part of the 10% also includes Non Resident Indian (NRI) donations while in Jananidhi the cost sharing pattern is 75% from the World Bank, 15 % from the beneficiaries of the scheme, and 10 % from the Gram Panchayat. In Punjab households contributed Rs 400-800 as the 10% contribution was becoming a hurdle to launch the scheme. ESE and CSP work together contributing labour and/or resources to deliver hardware and software provision during implementation making it as an ‘Operational’ partnership with authorities and Communities share the work. The partnership is transactional with support-sharing to pool resources in the initial phase when ESE and CSP initially negotiate an implementation plan with the community and ESE sanctions the budget after community deposits their contributions. The bureaucracy type of partnership is evident when ESE provides CSP with a standardised model of hardware and software provision during implementation.
- During the **service delivery phase**, the support becomes less intensive. In fact, Gram Panchayats (GP) become first line of support to communities, taking that over from State government during this phase. But often this results in blurred lines between Village Water and Sanitation Committees(VWSCs) and Gram Panchayats, as to who carries out the service delivery role, and who provides support and oversight. During this phase both VWSC and GPs, communities can still draw on the tiered structure of the State government, but this follows a more demand-based approach, where government only provides support on request. The CSP consults only when they need some specific technical service. The operational maintenance costs are met by collecting the user charges from the households and from Panchayats funds.
- The role of ESE is minimal during the “phases, more proactive monitoring and support by State government is rarely observed. State governments’ role becomes stronger again during the phases of capital replacement, when again intensive support is provided both technically and financially. In WASMO and CEC- TWAD case the communities will again revert back to the ESE for both technical and as well as financial support while in case of Jananidhi and PRWSS the communities manage on their own hiring the professional agencies for replace the motors or for extending the pipe line etc. However the ESE role here become very nominal at this stage however the VWSCs do “consult “ for technical guidance. As seen from the findings that the communities does need support of the external agencies to fulfil all the functions, however given the number and scale of villages would it be

possible for the ESEs to support GPs/VWSCs and in the absence of “on demand/request support” will the communities able to ensure water supply become a big challenge. However as demonstrated in Kerala the community contracting is one of the direction to move forward.

The partnerships are very dynamic and at various stages, communities do require different support and similarly the partnership. It is important to note that the partnership continuum ranges from consultative, contributory, operational and transactional and the bureaucratic partnership is not observed at all except for some technical designs. Communities does depend on ESEs for most of the operations and lack of vision from the ESEs is quite evident. As reported by Nayar and James(2004) structural measures of community participation (such as imposition of user charges, forming Village Water Committees and handing over responsibility to communities) do not work on their own, and need to be actively supplemented by ‘non-structural’ measures such as community mobilization, participation (especially by women) and capacity building, in order to build community ownership and responsibility for water service delivery. Based on the findings it can be concluded that the community management with direct support model(Fig 1) was followed in all the three case studies while in Kerala community management with professional support is exhibited.

CONCLUSIONS:

The first four case studies reveal that the State governments (supported by external funding programmes), have developed specifically designed units (like in Punjab and Tamil Nadu) or even dedicated organisations(such as WASMO in Gujarat) with the formal capacity and professional skills to support the communities on mobilization, institutional building and capacity building at all levels In all these programmes, the support was intense during capital investment phase. Demand creation, needs assessment, creation of management capacity were addressed very well and there were sufficient resources allocated and spent for this purpose. Support Organisations and NGOs played a critical role in building the community capacities from the inception of the project. There has been reasonable to high levels of professional performance with clear division of roles and responsibilities among all these agencies. The type of partnering includes interesting examples of high levels of empowerment (community contracting), strong organisational structure and procedures adequate human resources. However, during the service delivery phase, the support becomes less intensive. In fact, Gram Panchayats become first line of support to communities, taking that over from State government. But often this results in blurred lines between Village Panchayat and Water and Sanitation Committees, as to who carries out the service delivery role, and who provides support and oversight. During this phase both VWSC and GPs, communities can still draw on the tiered structure of the State government, but this follows a more demand-based approach, where government only provides support on request. A more proactive monitoring and support by State government is rarely observed. State governments’ role becomes stronger again during the phases of capital replacement, when again intensive support is provided. Based on these first four case studies we conclude that successful community management happens where State governments duly empower community organisations during the project implementation phase. But that in turn happens only where State governments have a strong community focus and organisational culture focused on that. We also conclude that during service delivery, a form of management is occurring which takes a mix of what can be labelled as “community management with direct support” and “direct provision by public bodies”, as we see that GPs take over many of the actual management tasks of VWSCs. Infact this move is a clear indication for necessary policy change that the Rural Water Supply Departments need to engage or out source the function of community orientation to NGOs or to professionals and should not insist engineers to take these roles. Based on these first four case studies we conclude that successful community management happens where State governments duly empower community organisations during the project implementation phase and the partnerships need to be evolved based on the need, there cannot be one type of partnership that can be recommended however the collaborative and consultative partnerships does contribute to successful community management.

Acknowledgements:

This document is an output from a project funded by the Department of Foreign Affairs and Trade of the Australian Government as part of the Development Awards Research Scheme under an award given to Cranfield University titled “Community Management of Rural Water Supply Systems” in India. The views expressed in this paper are those of the authors and not necessarily those of the

Commonwealth of Australia. Authors would like to thank all the research partners of the project i.e International Resource Centre(IRC), the Netherlands, Administrative Staff College of India, Malavya National Institute of Technology, Xaviers Institute of Social Service and Centre of Excellence for Change(CEC). Authors would also like to thank all the respondents who have shared their valuable experiences and provided important data for analysis.

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