

Understanding Governance in WASH Sector in Andhra Pradesh, India

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December, 2011

WASHCost (India) Project



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Acknowledgements

Thanks are due to Dr. John Butterworth, Senior Programme Officer Global Team, IRC Netherlands and Dr. A. J. James, Environmental and Natural Resource Economist, New Delhi for their constructive comments on the earlier drafts of the paper. Also would like to acknowledge the support received from Dr. M. Snehalatha, Country Coordinator WASHCost (India) Project; Prof. V. Ratna Reddy Director, LNRMI, Hyderabad and Dr. Peter McIntyre Documentation specialist, WASHCost, Global Team, IRC, Netherlands. However the usual disclaimers apply.

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ABSTRACT

This paper attempts to bring out the influence of governance systems on the water and sanitation service levels in rural Andhra Pradesh, India. As part of WASHCost (India) Project survey was conducted in 107 villages using the participatory methodologies to elicit the information and perceptions of the different community groups on governance and service levels. Findings reveals that the WASH sector in rural Andhra Pradesh is marred by a low level of community participation, unaccountable institutions, functionaries and citizens, low levels of transparency in many of the decision making processes. Though the status of the NGP villages is marginally better in comparison to Non-NGP villages, nevertheless, the governance processes and systems need significant improvement even in NGP villages. Study suggests that the policy should focus on bringing transparency in operating systems, accountability of functionaries and citizens at various stages, and participation of local communities (particularly women and disadvantaged communities) in the villages play a crucial role in achieving and establishing better governance systems in place for better service delivery.

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I. Introduction

The water crisis is often said to be a crisis of governance. The Government of India policy emphasizes on promoting transparency, accountability and participation of local communities in WASH governance. Several instruments, arrangements and mechanisms are incorporated in the policy for this purpose (Refer Box No 1). *But questions such as “What do these policies mean in reality? What are the key elements of WASH governance? How is it operationalized at village level? What is the influence of governance on costs/ investment related decisions? Is there a relationship between governance and service levels? If yes, what factors influence this relationship? What are the good practices in WASH governance and WASH service delivery?” come to the forefront.*

This paper attempts to find answers to such questions by assessing the influence of governance on WASH service levels in rural Andhra Pradesh, India. As part of WASHCost (India) Project, which is exploring the life cycle costs of providing equitable and sustainable WASH services, a survey was conducted covering 107 habitations in 9 agro-climatic zones of rural Andhra Pradesh. This paper presents main findings from the field survey.

II. Methodology for Assessing Community Perceptions on WASH Governance and Service Levels

The survey primarily explored three dimensions of WASH governance – transparency, accountability and participation (Refer Box No 2 for functional definitions). About 420 groups in 107 villages in Andhra Pradesh were interviewed using the “Quantified Participatory Assessment” (QPA) methodology. As part of this, separate focus group discussions (FGDs) were conducted with: 1) Gram Panchayats (Local Self Governance Institutions); 2) members of women’s self help groups (SHGs); 3) youth groups and 4) groups of disadvantaged sections of the society, i.e., persons belonging to Scheduled Castes (SCs) or Scheduled Tribes (STs) in each village. A set of 19 indicators related to WASH governance was developed to assess WASH governance. (Refer Box 3) These

Box No 1

Key Policy Provisions for Transparency, Accountability and Participation in WASH Sector in India – Guidelines of Rajiv Gandhi National Drinking Water Mission (Apr 2010)

....To provide access to information through online reporting mechanism with information placed in public domain to bring in transparency, accountability and informed decision making; (Page No: 14).

....Community Based Monitoring should preferably fulfill the following objectives... It should provide regular and systematic information about community needs, which would guide related planning; It should provide feedback according to the locally developed yardsticks for monitoring as well as key indicators for measuring the consumer's satisfaction...

.....A social audit helps to narrow the gap between the perception of the line department's definition of services provided and the beneficiaries' level of satisfaction of the service provided. Social auditing also enhances the performance of the local self government, particularly for strengthening accountability and transparency in local bodies (Page 44).

Transparency: It is very critical that people are fully informed about the plan, schemes and investments proposed to be made in their areas. In fact, they should have a major role in deciding on the appropriate option. The village committee should display details of funds received and utilized at a prominent place in such a manner that people can see and understand it. This should be updated on a regular basis (Page 67).

"A Village Water and Sanitation Committee (VWSC) is to be set up as a standing committee in each Gram Panchayat for planning, monitoring, implementation and operation and maintenance of their Water Supply Scheme to ensure active participation of the villagers.... The membership of a VWSC may consist of about 6 to 12 persons, comprising elected members of the Panchayat, women with due representation to SCs, STs and poorer sections of the village..... The composition and functions of the VWSCs can be regulated by a set of by-laws under the State Panchayati Raj Act." (Page 20).

indicators were derived from the current policy/ guidelines of Government of India for providing safe drinking water. The same checklist of questions was used for each FGD. The responses from each of these groups were carefully documented and scores were given for each indicator on a scale of 0 to 100 points (0 indicates low performance and 100 indicates the best possible situation related to that particular indicator). These scores reflect the involvement and perceptions of each group on that particular indicator. Average scores of all these groups (for each indicator) would give a total picture of the village, for that particular indicator.

As an illustration, if water charges were regularly paid by the majority of families and the knowledge about the use of this fund was common across all villagers, then that

Box No 2

WASH Governance – Transparency, Accountability and Participation

Three aspects of WASH governance were assessed – Transparency, Accountability and Participation. The following functional definitions guided the research and the analysis.

What do we mean by participation?

Participation deals with the level to which community members are involved in decision making while planning and implementing WASH schemes. Functional institutions are necessary for this purpose.

What do we mean by accountability?

The term accountability within this report means, level of adherence to agreed roles, responsibilities, principles/ norms and tasks to be practiced by various actors/ institutions (Government, Gram Panchayats, citizens, etc.). An agreed set of principles and practices is necessary for assessing the level of accountability.

What do we mean by transparency?

Transparency here is the extent to which actors/ institutions provide open and clear access to information including details of the tasks performed and decisions taken.

Note: Sherry Arnstein (1969), A Ladder of Citizen Participation describes 8 stages of citizen participation, of which “decision making opportunities” are central. It is also argued that transparency is a necessary condition for participation, but not sufficient. The above functional definitions were evolved from such theoretical frameworks and also from the current policy of Government of India.

village would get a high score for this indicator (about 75 to 100 points). Each group in the village may have its own experiences, knowledge and perception on this issue and accordingly the responses would differ. Gram Panchayat may give a score of 80 as it believes that the payment of tariffs is high and regular. However, women groups in the same village may give a score of 30, if they think that the tariff payment is low and irregular by many families in the village.

Facilitators would ask relevant questions to each group (in separate focused group discussions) and document their response. The commonality and variations in these responses are indicated by the scores given by each group for each issue/ indicator. When there is high commonality and high level of common knowledge, the scores by each group would be within the same range. These scores and documented responses are used for assessing the level of transparency, accountability and participation in WASH sector in that particular village. Similarly, the survey also attempted to understand the perceptions of user communities on service levels (mainly – quantity, reliability/ predictability; quality and access) from 1496 water points (hand pumps, wells, public

Box No 3

Indicators for Assessing Transparency, Accountability and Participation in the WASH Sector in Andhra Pradesh

The field work, as part of this study, identified 19 indicators of WASH governance. These were classified into five broad groups. Each of these indicators has all three dimensions of governance - Transparency, Accountability and Participation. As an illustration, effective functioning of village water sanitation committee not only facilitates the participation of community in decision making, etc, but also develops systems for transparency and accountability. Similarly, regular payment of tariff by citizens indicates that they are accountable to a system, which empowers them to demand transparent ways of using the funds.

Institutional space and decision making related indicators:

1. Functioning of Village Water and Sanitation Committee (VWSC)
2. Functioning of the Gram Sabha on WASH Issues
3. Participation by women in community-level decision-making on water supply
4. Participation by SC/ ST in community-level decision-making on water supply

Involvement in planning of WASH Services related indicators:

5. Participation in the Feasibility Survey
6. Participation in the Technical Survey
7. Knowledge about Integrating with existing systems
8. Knowledge of Extension of System

Capacity building related indicators:

9. Effectiveness of Training
10. Effectiveness of Information, Education and Communication inputs

Operation & Maintenance Systems related indicators:

11. Operation and Maintenance: Piped Water Supply
12. Operation and Maintenance: Hand Pumps
13. Water Quality at Community Water Points (PSP and HP)
14. Solid Waste Situation in the village
15. Waste Water Situation in the village
16. Hygiene and Sanitation

Financial Management related indicators:

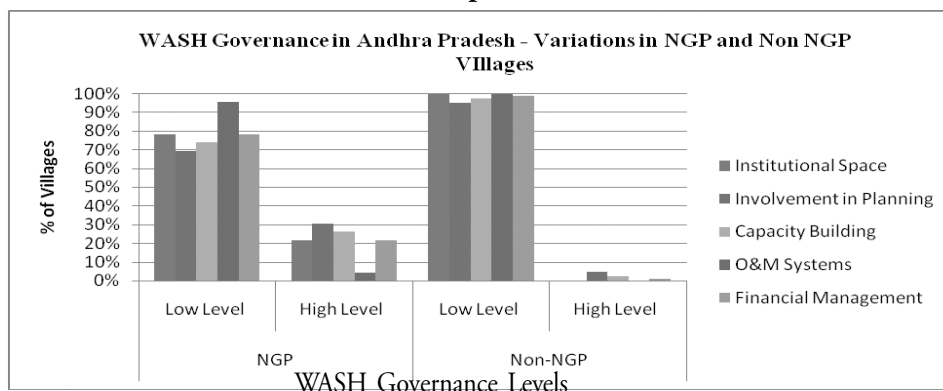
17. Water supply and sanitation records
18. Tariff or water user fee collection
19. Proactive disclosure of information

stand posts and different localities) in the 107 villages, using the QPA methodology. This methodology allows scoring the perceptions of user communities on a scale of 0 to 100 points. The scores in turn indicate the level of service of each water point –higher the score, higher the service level and vice versa (Refer Annexure No 2 for details on standards of service levels). A team of trained facilitators (about 4 to 6 persons) stayed in the sample villages for three to five days to conduct a variety of tasks, as part of the field survey. This included household surveys, data collection from Gram Panchayat; conducting focused group discussions with user groups of water points for assessing service levels; separate discussions with four different groups – Gram Panchayat; women self help groups; youth groups and members of SC/ST communities. However, the main emphasis of this paper is on understanding the WASH governance systems and its influence on service levels. The main findings of this survey are presented in the following sections of the note.

III Findings:

1. In general, the WASH sector in rural Andhra Pradesh is marred by a low level of community participation, unaccountable institutions, functionaries and citizens and low levels of transparency in a variety of processes. WASH governance is typically weak.
2. In a small number of villages where WASH governance is strongest, WASH services are also high. Here the governance systems could translate WASH costs (investments) into high levels of WASH services, irrespective of the volume of investments.
3. Villages that have received Nirmal Gram Purashkar awards (NGP Villages) for their ‘zero open defecation’ status have marginally better WASH governance arrangements in comparison to Non-NGP villages. Nevertheless, the governance processes and systems need significant improvement even in NGP villages (Refer Graph 1).

Graph - 1



a.) **Absence of functional institutions provides limited opportunities for decision making in WASH Sector...**

Functional VWSCs were minimal...

At the village level, active Village Water and Sanitation Committees (VWSC) is a litmus test for effective governance. These institutions are expected to provide the opportunity for all villagers to participate in decision making processes and ensure the transparency and accountability of various functionaries such as Gram Panchayat members, waterman, health workers, etc. However, only 21% of NGP villages were found to have effective institutional arrangements at village level that facilitate collective decision making on WASH issues. This is indicated by higher scores for the institutional space and decision making indicators. Not even a single Non-NGP village scored above 50 for this set of indicators.

Out of 420 groups interviewed in the 107 villages, 386 groups (about 92%) stated that there was no functional Village Water and Sanitation Committee in their village, as they never observed any results/ benefits from such an institution in their village. They also thought that these institutions may be existing “only on paper”.

No common platforms for decision making on WASH issues...

59% of the groups mentioned that all decision regarding WASH are taken outside the Gram Sabha/ village level general meetings and 30% mentioned that even when decisions regarding WASH are taken in the Gram Sabha their implementation is lacking.

Limited space for women participation in decision making processes on WASH issues...

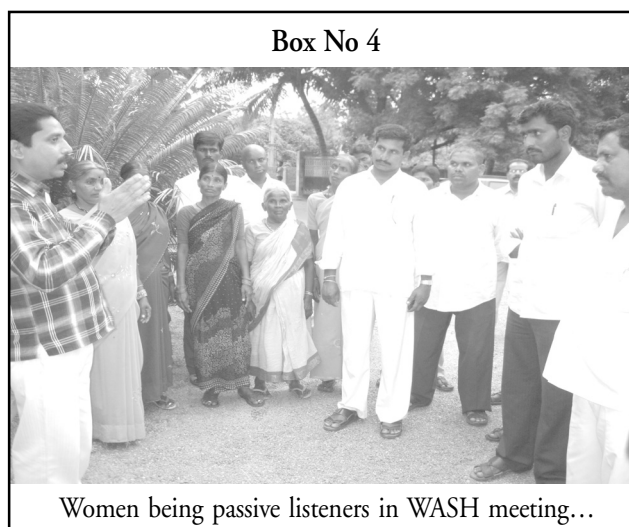
Participation by women in community-level decision making on WASH issues scored particularly low. 74% of the groups (67% of the Gram Panchayats; 78% of SC/ST groups; 79% of women SHGs and 71% of the youth groups) stated that few women participate or contribute towards decisions that are taken in the community gatherings. And 26% of focus groups revealed that women do not even participate in the Gram Sabha. Although Gram Sabha meetings, in theory, are open to all, women often do not come. All categories of focus groups said that that even if women do attend, the environment was not conducive to their participation since these meetings are dominated by men. In one village the frustrated women’s self help groups had even protested that women are not allowed to speak at community gatherings and even if they do speak up, no one listens. Several women groups also said that officials ignored them: “They only listen to our problems and go off.” This view is not universal; in some villages other focus groups believed that women have equal decision-making power.

In 12 villages, however, all the groups, including the women's groups, agree that things are better. Women go to the meetings and participate in the decision making. Notably, most of the concerns they raise and contributions they make are related to WASH issues. Indeed, 77% of the groups in these villages agreed that women occasionally discuss hygiene and sanitation within the SHG groups.

Marginalized participation of SC/ ST communities in decision making processes...

Results were marginally better for the scheduled castes and scheduled tribes than for women's groups, but it was still the case that almost two thirds of the SC/ ST groups

hardly participated or contributed towards decisions taken at community gatherings. 64% of the groups (54% of GPs, 68% SC/ ST, 74% SHG and 59% of Youth groups) stated that SC/ ST groups hardly participate/ contribute towards decisions that are taken within the community gatherings. They have at certain times voiced their



opinion regarding various issues. However, there has often been no action taken. Some said that their villages never held Gram Sabha/ village level general meetings and there was no functional Village Water and Sanitation Committee, so there was no platform at which to raise their concerns. However, there were 17 villages (16% of the sample villages) where all the groups agreed that the SC/ ST groups enjoyed equal status and decision making powers with everyone else. "There are no caste barriers in this village," was one heartening response.

Villagers have hardly any opportunity to contribute to planning processes for WASH sector...

Planning process in the WASH sector has several intricacies. Some key decisions with regards to water and drainage systems are taken after technical and feasibility surveys. Community members could participate more in these planning processes and contribute significantly to decision making in terms of choices related to extension of existing systems, etc. It was found that 31% of NGP villages provided better and higher level of opportunities to local communities for contributing to WASH planning, while only 5% of Non-NGP villages provided such opportunities.

75% of the groups mentioned that they were unaware of the findings of the feasibility survey and only the Gram Panchayats were privy to this information. Similarly, 80% of the groups mentioned that they are unaware of the findings of the technical survey, again only the Gram Panchayat has this information and it was not shared with the citizens of the village. The results of technical surveys for new schemes were found to be poorly communicated. Three quarters of the Gram Panchayats also agreed that they did not share the findings with the villagers.

Integration and extension of water systems within villages is required to avoid duplication of services and to ensure that all areas are covered. However, 55% of the groups said that there was no integration of old and new systems in their villages. 60% groups felt that extensions to village water schemes were done in an ad hoc manner; some groups claimed that as a result the water taps had run dry. This was the view of 67% of the GP's, 78% of SC/ ST groups, 90% of SHG's and 81% of the youth groups. Only about 33% of Gram Panchayats themselves tended to think that everything had been done properly and work was approved at a Gram Sabha, while other groups did not agree with the opinion of Gram Panchayat. There were only a few examples (five villages out of 107) of good practice where integration and extensions were discussed at the Gram Sabha and works were carried out according to the agreed and communicated plan. In these five villages, all the groups agreed that the quality and service delivery is almost same across all water points, as a result of systematic efforts to integrate existing systems with new ones.

Ineffective capacity building efforts do not result in behaviour change...

Capacity building inputs such as training programs and information sharing campaigns are important to empower village citizens in performing their roles in decision making. About 26% of the NGP villages indicated effective capacity building inputs, mainly in the form of Information, Education and Communication (IEC) campaigns. Only 2% of the Non-NGP villages were found to have benefited from useful capacity building inputs such as regular awareness generation events, exposure visits to role model villages, inspirational workshops at district level, etc. In general, the role of capacity building inputs was abysmally small in 70% of the sample villages. While there is an obvious knowledge gap at local level on the issue of capacity building agenda, the district level units/ missions also seem to be operating on ad-hoc basis on this issue and do not have relevant and village specific information.

Almost three quarters of the groups felt that no training had been carried out. Further, 16% of groups stated that training had not contributed to their skills or capacity. Where training did take place it was often provided by an NGO on hygiene, or was about how

to construct individual sanitary latrines. Majority of the groups (70% groups) felt the IEC programs to be rarely effective and had hardly contributed to sustained behavioural change.

Both villagers and Gram Panchayats neglect operation and maintenance of WASH systems and have got used to living in unhygienic surroundings...

Maintenance of environmental sanitation is an important function of Gram Panchayat and Village Water and Sanitation Committees. Citizens/ villagers are also responsible for following agreed norms for safe disposal of liquid and solid waste in villages. The maintenance of environmental quality requires considerable efforts such as regular maintenance of infrastructure, payment of tariffs, following norms, etc. Though NGP villages were found to be marginally better than Non-NGP villages, the situation of operation and maintenance of WASH facilities gives a dismal picture in rural Andhra Pradesh. Low quantum and unspecified funds at Gram Panchayat level, low/ poor collection of water tariffs at village level, delayed responses from Mandal/ district level systems for maintenance of water supply systems/ hand pumps seem to be the main reasons behind this low attention to operation and maintenance systems at village level.

About 87% of the groups opined that there are no agreed norms or practices for safe disposal of solid and liquid waste. 62% of the groups mentioned that there are hardly any drains in their village, or that the drains that exist are badly designed and either blocked or broken. Most villagers have apparently got used to living in unhygienic surroundings, though 77% of the groups indicated that the women occasionally discuss about hygiene and sanitation within the SHG groups. What is clear is that these discussions do not make much difference in behavioural change at personal, family and community levels.

Outbreaks of disease, such as cholera in some villages, have made people more conscious of the need for hygiene and sanitation. Many also mentioned that they gained such awareness by watching television programmes. However, this has not always lead to action and low participation was reported in dealing with solid waste and wastewater where more than 60% of the groups said that drains were missing or blocked.

The availability of information regarding the quality of water and results of water testing are important for deciding on alternative options. However, eight out of ten of the groups said that only the Gram Panchayat was aware of such results. In one village the Gram Panchayat said that the results of testing were shared at a Gram Sabha but none of the other groups were aware of this. Similarly there were wide gaps in the perception of what happened in other villages as well.

The survey found high levels of dissatisfaction with the maintenance of hand pumps and piped water systems in villages. A full 100% of the groups have mentioned that no one in their village was trained or capable of handling minor repairs of hand pumps. For any repair someone has to come from the mandal level. They also complained that there is hardly any maintenance support for hand pumps, which leads to their neglect.

Dysfunctional financial arrangements have crippled WASH delivery systems...

Availability of information related to finances, regularity in tariff collection, updated books/ records/ accounts is essential for ensuring

transparency in WASH governance. Both citizens and institutions are responsible for ensuring the financial integrity of WASH systems. The survey, here too, found that NGP villages in Andhra Pradesh are better in comparison to Non-NGP villages. About 22% of the NGP villages seem to be following sound systems for financial management and only 1% of Non-NGP villages focused on the issue.

In the survey, 88% of the groups were found to know what water tariff had been agreed but they said that the money was not collected regularly. Even in some well-organised villages, tariffs are collected only from 60-70% of the households. In the ten villages

Box No 5
Common and Uncommon Pictures - Telling stories of WASH Governance



Water points in a dirty pool of water,
 Not a rare picture ...



Clean Surroundings around a water point, an
 uncommon picture

that scored high for this indicator, a majority of respondents know the total amount collected and also know that the surplus is used for operation and maintenance. Some even have differential tariffs depending on the economic status of the household and penalties for late payment.

However, almost nine out of ten groups believe that the village record books for water and sanitation are not maintained properly or that only few members of the Gram Panchayat are aware of them. Similarly, 91% of villages also believed that there was little effort to disclose information proactively to villagers. Only one or two villages disclosed all information to citizens and introduced effective feedback mechanisms.

b.) A tale of four villages....

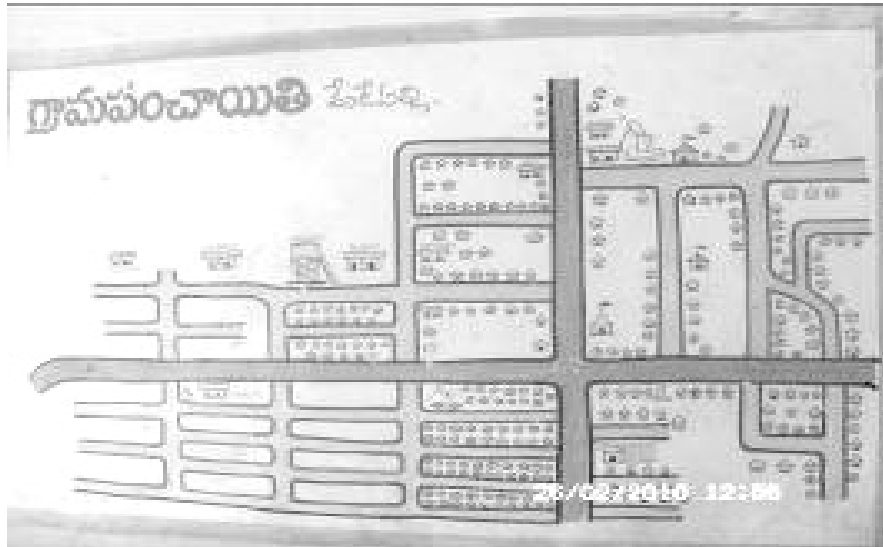
Where WASH Governance Systems could translate WASH costs into a high level of WASH services...

While the general trend projects a dismal picture of WASH governance, four villages out of the 107 sample villages were found to have exemplary governance systems that ensured effective WASH service delivery. These villages are Gangadevipally, Medipally, Boduvalasa and Jankampet. A brief profile of these villages is presented in Annexure 1. All these four villages are recipients of Nirmal Gram Purashkar awards. Only in these four villages, the contribution of the local committee towards promoting WASH was widely acknowledged by several other groups. Each village evolved its own form of local institution – village development committee, village water committee, etc. The governance arrangements in these villages offer a new direction and hope for the WASH sector in Andhra Pradesh.

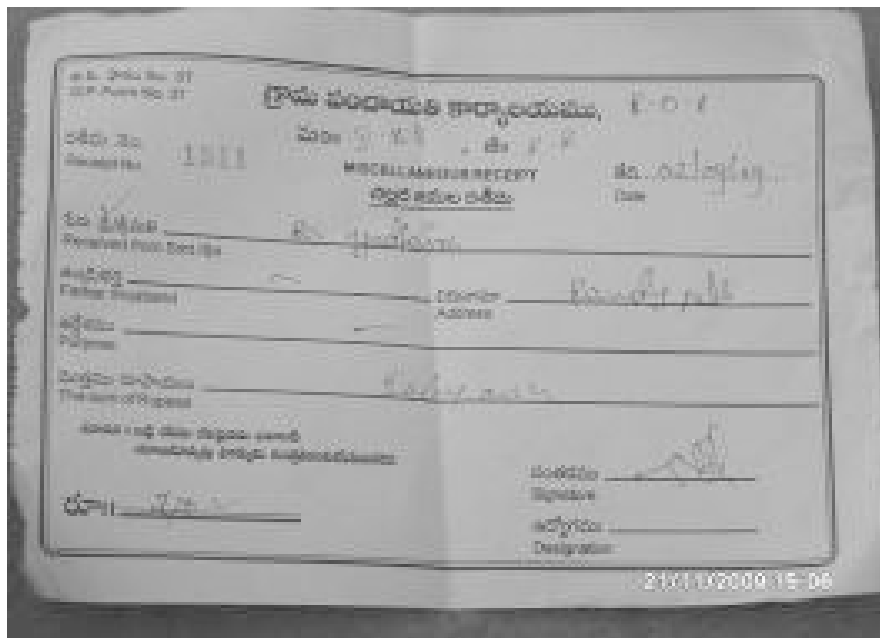
These villages also faced a severe crisis in drinking water (both quality and quantity related issues). This crisis has apparently motivated them to seek out alternative systems and make proper arrangements for effective use of water for drinking and domestic purposes. This experience took some time to get rooted in each village (about two years to four years). The effectiveness of governance (and subsequently WASH services) improved over a period of time. There was no instant success. NGOs helped in establishing systems for planning, collective decision-making and transparent financial management.

These four villages established reverse osmosis plants for supplying safe drinking water to their citizens at affordable rates. They mobilized funds from local NGOs/ donors. The villagers also shared the cost of establishing the plants, while Gram Panchayat gave land for the building. With the support of local NGOs/ company that supplied equipment, the local institutions are able to maintain the water treatment plants without much difficulty. Other good management practices of WASH facilities in these villages

Box No 6
Participating Transparency



Public display of WASH Facilities and Related details on a Village Map



Gram Panchayat Issues receipts on Villagers for the water tariff....

were extended to water treatment plants also, unlike other villages, which focused only on the water treatment plants.

Accessibility to water systems and quantity in these villages is fairly high. Predictability and reliability of supply was also high in these villages. The breakdown times were minimal and timings of water supply are common knowledge. The local committees have made serious efforts to overcome the limitations such as frequent power cuts by evolving appropriate systems and practices for water supply. As the groundwater source is not very reliable during summer seasons, hand pumps scored low scores for this indicator.

The opportunities for participating in decision-making institutions were found to be fairly high in these villages. The Committees that were formed for WASH governance meet regularly and perform their duties. They have also organized village level meetings for seeking inputs in planning, sharing information and redressing any complaints. Women and disadvantaged communities are represented in these committees. These groups mentioned that they were able to contribute to decision-making and planning processes. They also

Box No 7

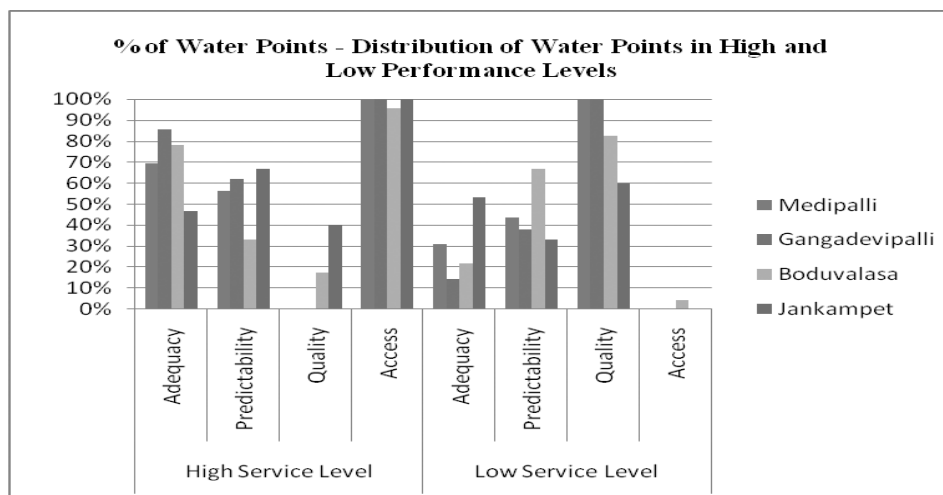
Why these villages are different?

While most villages remain like mute recipients of funds/ infrastructure from donors and state, these four villages could travel ahead. They made use of all government schemes/ projects and also accessed support from a variety of sources, including self-help. Some of the enabling factors behind the success of these villages are:

- Presence of strong local leader
- Leadership in local institutions such as women self help groups and other institutions that could eventually take considerable responsibilities on WASH governance
- Facilitation support received from local voluntary organization/ NGO
- Capacity building inputs to the villages by this local NGO (in the form of exposure visits/ orientation programs/ meetings/ awareness camps)
- Willingness of local communities to form institutions and make them functional
- Willingness of local communities to follow norms
- Willingness of local communities to contribute (in cash/ kind/ labour)
- Effective planning that ensured better convergence of existing schemes with new ones; Convergence of funds/ schemes of different government programs

Among the above, a local leader with a vision to push the local communities towards better governance arrangements is the most prominent enabling factor.

Graph - 2
Higher Share of Water Points under Higher Level of WASH Services in these four villages



thought that their voices were heard and their opinions were respected by others. Women self help groups adopted village streets and ensured that they are clean from garbage. Gram Panchayat/ local institution supported these self help groups by appointing staff and sending vehicles for safe disposal of solid waste.

The planning system for WASH facilities was participatory and several stakeholders contributed in this process, which included department staff, representatives of Gram Panchayat, village water sanitation committee, women self help groups, youth groups and also elders in the village. NGOs helped the villagers in conducting systematic analysis of existing infrastructure and in estimating future requirements. The feasibility surveys and technical surveys were conducted before taking decisions in common meetings. Occasionally, training programs were also organized by local NGOs on sanitation and related issues. However, these training programs targeted largely village leaders. Awareness camps were also organized by local committees to improve the participation of villagers in WASH affairs.

The villages have evolved a system for operation and maintenance of the WASH facilities. The waterman is an important part of this arrangement. Based on limited training he has received, this person is able to attend to minor repairs of water supply systems. However, there is a need for further capacity building inputs for this person. As local skills are not available readily, the repairs of hand pumps are delayed. Staff of Gram Panchayat and local committee is responsible for managing environmental sanitation

and safe disposal of liquid and solid waste in the villages. Use of rickshaws/ vehicles for collecting solid waste, common garbage bins/ pits, segregation of plastics and other wastes, developing composts are some of the practices that are observed in these villages.

Elaborate financial arrangements are made in these villages, which are built on principles of transparency. The collection of tariff and record keeping are regular. Village meetings are organized annually to share the details and information related to financial aspects of WASH governance. All citizens abide by the norms set by the local committees. Inventory of WASH facilities (list of families that have house hold tap connections, toilets, families that pay tariff, etc) was also maintained by the Gram Panchayat/ local committee, which is a rare practice in several villages.

Investments made on WASH sector in the four villages have significant variations. Both Gangadevipally and Medipally made higher capital investments for WASH infrastructure (Capital expenditure for infrastructure - CapExHard) than the average capital investments of all NGP villages. The capital expenditure for WASH infrastructure in the remaining two villages is less than the average investments. Similarly, there is a variation in investments on other types of costs/ investments also. While the process of analyzing cost data and its relationship with WASH governance and services levels is in progress, the initial inferences from these four villages suggest the following:

- Institutional space (in the form of functional local committees for water and sanitation) has a strong and positive influence on WASH service indicators such as predictability and accessibility (both summer and non-summer); quantity (in summer) in case of public stand posts. Strong institutions also influenced other governance indicators such as financial management; O&M systems, involvement in planning, etc. Better functioning institutions are also investing large funds on WASH services. This is indicated by higher value of coefficient of correlation (from 0.7 to 0.9) between these indicators and institutional space.
- Involvement of local communities in WASH planning has a strong and positive influence on costs/ investments made. This is indicated by very high value of coefficient of correlation between planning and cost indicators (above 0.95). Planning process also influenced other governance indicators such as institutional space, financial management/ transparency, etc. Proper planning helped in higher level of WASH services in terms of predictability and accessibility.
- Capacity building inputs can influence WASH service indicators, particularly predictability, accessibility and quantity of WASH services from public stand posts. Operation and maintenance related systems were also positively influenced

by capacity building inputs in these villages. Other governance indicators (institutional performance, planning, etc) and cost indicators (total costs) were also positive, strengthened by capacity building inputs.

- Operation and maintenance related indicators/ systems have strong and positive influence on predictability, accessibility and quantity of water supply systems. This is observed in case of both hand pumps and public stand posts.
- Financial management indicators (which include transparent systems of fund/ record management, tariff collection, etc) have strong influence on all WASH service indicators, except quality. A similar situation is observed in case of cost indicators also.
- Cost indicators, particularly total cost (Rs/Head/Year), are influenced positively by all indicators of governance. This means that better performing institutions tend to make higher and prudent investment choices on WASH facilities so that the service levels are high. It is observed by high level of predictability and accessibility of WASH services.
- Even strong institutions could not make much difference in the quality of water from hand pumps and public stand posts with contaminated drinking water sources. This quality issue was addressed by establishing community managed water purifying plants.

IV Conclusions:

This survey examined 107 villages and overall the results are bleak. Out of the 107 villages, only four villages could transform its investments into higher level WASH services. In these villages, there is a strong correlation between investments, service levels and governance arrangements. There is no such correlation between investments and WASH services in the remaining 103 villages. A maze of investments in Andhra Pradesh that produces low levels of WASH services could push any policy maker or development activist to despair. The weak governance systems are the underlying reason behind low services levels. But in the four villages in the state, where strong local institutions could make a difference, good governance has ensured that higher levels of WASH services are delivered to citizens. The transparency in operating systems, accountability of functionaries and citizens at various stages, and participation of local communities (particularly women and disadvantaged communities) in these villages could be worth emulating. Scaling up good governance practices from this admittedly small sample of model villages which still have their own problems would be worthwhile.

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Annexure No 1:

Parameter and Indicators - Understanding Correlation among WASH Services, WASH Governance and WASH Costs - Insights from Model Villages				
A. General Details				
Zone	Central Telangana Zone	Central Telangana Zone	North Coastal Zone	North Telangana Zone
Village	Gangadevipally	Medipally	Boduvalasa	Jankampet
Functionality of VWSC	Yes	Yes	Yes	Yes
NGP/NNGP	NGP	NGP	NGP	NGP
No of Functional PSP	6	6	15	13
No of Functional Hand pump	1	7	8	2
B. WASH Services - % of Water Points which provided higher level of services during summer				
Quantity	86%	69%	78%	47%
Predictability/ Reliability	62%	56%	33%	67%
Quality	0%	0%	17%	40%
Access	100%	100%	96%	100%
C. WASH Services - % of Water Points that provided lower level of services during summer				
Quantity	14%	31%	22%	53%
Predictability/ Reliability	38%	44%	67%	33%
Quality	100%	100%	83%	60%
Access	0%	0%	4%	0%
D. WASH Governance Indicators (Score out of 100)				
Institutional Space for decision making	76	71	47	64
Involvement in Planning	65	80	53	64
Capacity Building Inputs	88	91	49	54
Operation and maintenance systems	33	35	22	26
Financial Management	79	78	33	67
E. WASH Cost Indicators (Rs/ Head/ Year)				
Normative Costs - Rs/ Head/ Year (Costs that are supposed to be required as per norms of the department)	210	453	257	265
Actual Costs - Rs/ Head/ Year (Costs that were actually incurred in the village)	1096	1715	447	529
House Hold Level Expenditure - Rs/Head/ Year	747	522	669	1093
Total Costs - Rs/ Head/ Year	1843	2237	1116	1622

Annexure No 2:

Norms and Standards of Service Levels for Drinking Water in India

The norms in India have recently become less exact in terms of figures. There has been a shift towards making norms and guidelines broad based and allowing flexibility to community to plan water supply schemes based on their needs and to suit to local requirements. It is recommended that desirable service level should be decided in consultation with local community.

1. Access: Coverage of population is to be calculated on the following criterion: Percentage of people within habitation getting basic minimum quantity of potable water within a distance of 500 mts from household from either a public or a community source. Crowding: Less than 250 persons per hand pump/ stand post. No social exclusion.
2. Quantity: 40 litres per capita per day; 70 litres per capita per day (with high live-stock density)
3. Quality: Water is defined as safe it is free from biological contamination (guinea worm, cholera, typhoid, etc) and within permissible limits of chemical contamination (excess flouride, brackishness, iron, arsenic, nitrates, etc) as per IS-10500 of Bureau of Indian Standards
4. Reliability: The concept of security to access is used rather than reliability. Security is based on the premises that even in times of stress households should have access to at least some water. To ensure this and acknowledge that all systems breakdown sometimes, security is defined as having access to at least two separate systems. Supply of water at least once in a day

Understanding Service Levels:

For each of the above service level indicator, higher level of access indicates the best possible situation in given situation. As an illustration, if a water point gets 90 points for access during QPA (high level of service), it indicates that that water point is easily accessible without social barriers and there is no crowding. The distance between house and water point is also short. On the other hand, another water point may get low scores for access (say 23 points out of 100 – indicating low level of service) as this water point may be far away from residence; has several dependent users (higher level of crowding) and has several social restrictions (to access).

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