

Inventum Biologicum

Journal homepage: www.journals.worldbiologica.com/ib

gain greater community acceptability and ownership.

This research primarily aims to examine the community participation in drinking water

and sanitation programs in Banihal Tehsil as well as the role of the community in

managing water and sanitation. In this section, we make an effort to investigate

community involvement in water and sanitation management in the Banihal and

Chanchiloo blocks of Banihal Tehsil. The water supply system is unsatisfactory for 35.27 percent of the responders in the Chanchiloo block. Compared to 27.66% in Chanchiloo, only 4.12% of Banihal block families are happy with the water system. Co-designing and

co-producing WASH solutions with communities is an excellent way to include them and



Research paper

Community Participation in Drinking Water and Sanitation Programmes

Warsa Aalam^a*, Ajay Kumar Sharma^a

^a Department of Rural Development, Sunrise University, Alwar 301001, Rajasthan India

ARTICLE INFO ABSTRACT

Article history

Received 24 June 2024 Revised 09 July 2024 Accepted 14 July 2024 Published 16 July 2024

Keywords

Water quality Health Sanitation Social concern

1. Introduction

Experts in the field of water and sanitation came to a worldwide agreement on a novel strategy for rural water supply in the 1990s. At the International Conference on Water and the Environment in Dublin in 1992, the Nordic donor community accepted two principles that form the basis of the new strategy. Water need to be handled with the utmost care and respect, since it is both a social and economic asset. Water management ought to begin at the most basic level, including end users in both project development and execution. Paying close attention to customer demand, or the amount and quality of water that customers want at a certain price, is essential for mamanaging water as an economic product. Community water supply demand is a very localized need (O'Donovan et al., 2020). Consequently, in order to implement a demand-responsive strategy, it is essential that local management make choices on service levels, facility locations, cost recovery, and operations and maintenance. It is the responsibility of the central government to put in place institutional procedures and regulations that support such choices at the local level. Considering made the aforementioned and the significance of a demanddriven strategy, this section is dedicated to examining the level of community involvement in water and sanitation projects Wodon & Blackden 2006).



*Corresponding author: Warsa Aalam **E-mail:** aalamwarsa7@gmail.com

DOI 10.5281/invbio.24040305



Providing and sustaining sanitation services is a multi-stakeholder endeavour in the sanitation sector, which is defined by complex institutional contexts. Policies, regulatory systems, and the provision of services are all responsibilities of the government. Communities should actively participate in the design, development, and maintenance of sanitation systems at the local level since they are key stakeholders as end users and consumers (Oliver et al., 2017).

The conventional wisdom is that governments should prioritise the construction of new infrastructure above the maintenance and efficient use of the ones they already have. Planning, execution, recovery, 0&M, and cost asset ownership responsibilities are not well-communicated or specified. Although communities are often expected to contribute financially (mostly in the form of in-kind donations), the process for determining the amount of contribution and how it corresponds to demand is not always apparent (Crosby et al., 2020; Kariuki et al., 2012). Additionally, governments often fail to assist communities in developing the necessary skills or dedication to "manage" their facilities, instead relying on the assumption that communities would do it on their own (Velayati et al., 2007). At every level, from planning to implementation, operation and maintenance, and ownership, active community engagement is extremely desired. The only areas where the community was said to have been involved, according to FGD participants, were in the selection of stand post locations and the planning of water supply pipeline routes.

2. The level of engagement and the breadth of it

Length of participation" and "breadth of participation" are the two facets that make up community involvement. A household's breadth of engagement may be defined as the percentage of that household that reported having attended a meeting or participated in a construction activity. A person's level of involvement may be evaluated by looking at their financial or labour contributions, their attendance at pre-construction planning meetings, and their sway over decisions pertaining to water or sanitation (Adams Boateng,2018). & Some judgements are more managerial in nature, while others are more technical.

Selecting the appropriate pipe type, borehole drilling locations, and stand post placement were all examples of technical considerations. Choosing a tariff structure for their water service, determining the operation hours for the water point, and selecting members of the water committee are all issues that pertain to management (Bibri. 2019).

The current research operationalizes participation in the water industry along many dimensions.

- Households were asked to indicate if all water points were operational throughout the study.
- In the six months leading up to the interview, was the water service interrupted.
- They were asked to rate the quality of the water point's platform, including whether it was a hand pump or a stand post.

The proportion of homes that expressed contentment with the water service, the upkeep of their water point, or the water quality that was delivered. Quality of service and state of infrastructure. When we interviewed, several of the hand pumps were broken. In Table 5.5, It was difficult for the homeowners to operate and maintain their water points. For instance, for the last six months, the majority of Banihal block families have experienced a disruption in their water delivery. The investigator found significant deterioration in the condition of over 80% of the water sites in Chanchiloo. The extent to which respondents are satisfied with the water supply

3. Methodology

We made an inventory of everything related to water supply, including amount, quality, sufficiency, regularity, etc., so we could see how satisfied the respondents were with it. Respondents were asked to fill out a satisfaction inventory, with a score of 1 representing a good reaction and a score of 0 representing a negative one. The respondents were divided into three groups, low, medium, and high, according to the existing satisfaction score, which was calculated using the mean and standard deviation of the scores. Based on how satisfied they are with the provision of drinking water, the distribution of beneficiaries is shown in Table 1. The water service was not well-received by households in either of the study blocks.

4. Results and Discussion

The current water delivery system is unsatisfactory since the amount of water that the town receives is barely enough to fulfil all of its demands. The table indicates how well the people's needs for drinking water are addressed. Table 1 shows that while water is delivered every two weeks to the communities in Banihal block, about 62.02 percent of respondents are unhappy with this service.

Table 1 Satisfaction lev	el of the respondents about

water supply						
Particulars	Banihal	Chanchiloo	Total			
Fully catiofied	13	109	122			
rully satisfied	(4.12)	(27.66)	(17.18)			
Dartially catiofied	107	146	253			
Falually sauslieu	(33.86)	(37.05)	(35.64)			
Dissetiafied	196	139	335			
Dissaustieu	(62.02)	(35.27)	(47.18)			
Total	316	394	710			
IUldi	(100)	(100)	(100)			

The water supply system is unsatisfactory for 35.27 percent of the responders in the Chanchiloo block. Compared to 27.66% in Chanchiloo, only 4.12% of Banihal block families are happy with the water system. No one in the neighbourhood is happy with the water point management or preventative maintenance services. In Banihal, almost 40% of those who took the survey were unhappy with the panchayat water because of its pressure, colour, smell, taste, or safety.

Table 2 Awareness of the existence of any group

Awareness	Banihal	Chanchiloo	Total	
Health and sanitation	40	0	40	
committee	(12.66)	0	(5.63)	
VINSC	263	0	263	
V VV SC	(83.23)	0	(37.04)	
SHCs / gradit groups	316	197	512	
Silus / cieult groups	(100)	(50)	515	
Do not know	31	197	175	
DO HOU KHOW	(9.81)	(50)	(24.65)	
Total	316	394	710	

Every single home in the Banihal block is wellinformed on self-help groups (SHGs), their role in distributing loans and saving money, and their involvement in development-oriented activities. Additionally, 83.23% of the households were aware that VWSC existed. The Chanchiloo block, on the other hand, was completely unaware of the existence of the Health and Sanitation Committee or VWSC. The residents of Chanchiloo block were completely unaware of what SHG was and why it was important. One hundred and eighty-two percent of the homes in the Chanchiloo block replied no when asked if their hamlet had a committee.

According to the data in Table 3, Banihal block had functioning VWSCs; however, one panchayat, Chanchiloo, was inactive. There were no VWSCs in any of the ten panchayats examined in the Chanchiloo block. In the Banihal block, 100% of the population is aware of SHGs, but in the Chanchiloo block, 50% are aware.

Table 3	Gram	Panchay	vats ha	ving V	JWSC
I abie b	aram	i unena j	aco ma	· · · · · · · · · · · · · · · · · · ·	,

Block	Yes	No	Defunct	Total
Banihal	4	1	1	6
Chanchiloo	-	10	-	10
		(100)		
Total	4	11	1	16

Source: Field data

Table 4 House	holds willing	g to pay for	· 0&M
---------------	---------------	--------------	-------

Block	Willing to pay	%	Not willing to pay	%	Total	%
Banihal	152	48.1 0	164	51.90	316	100
Chanch iloo	84	21.3 2	310	78.68	394	100
Overall	236	33.2 4	474	66.76	710	100

Source: Field data

Compared to Chanchiloo block, 48.10 percent of households in Banihal were ready to pay for the operation and upkeep of the water supply system. For the reasons listed below, the vast majority of Chanchiloo families (78.68 percent) declined to pay (Table 4).

That the panchayat is responsible for O&M and the prevalent poverty in the community, according to the respondents. The effectiveness of sanitation projects, whether they aim to prevent open defecation, build and utilise individual family latrines, maintain communal sanitary complexes or women's sanitary complexes, or manage solid and liquid waste, depends on the cooperation of the people. Under the able direction of the Banihal Trust and the Panchayat President, the study's panchayats—Khari, Khari, and Banihal—saw high levels of participation in sanitation projects. In spite of the water shortage, the Khari panchayat in Banihal block was able to build a community sanitary complex, put an end to open defecation by using IHHL, and use 100% of the water that was available. All nineteen of Chanchiloo's panchayats failed miserably in implementing cleanliness projects, the failure was caused by the lack of engagement from both the people and the panchayats, who showed little interest in the matter. In Banihal block, 42.35% of respondents used either a kitchen garden or a soak pit structure, whereas in Chanchiloo block, 39% of respondents used the latter. Fair and accessible piped drinking water (through a

roster system of supply, tank cleaning, hand pump repair and installation, water stand construction, and operation and maintenance), participatory, low-cost sanitation (through household and institutional latrines), and hygiene promotion are all goals of the hardware access programme. In order to better equip the project staff and other stakeholders to carry out their responsibilities, the project has funded software components that aim to increase the knowledge and skills of water point committees, village pump mechanics, masons, school health committees, and teachers. The government of Jammu and Kashmir was behind this initiative, which aimed to restock groundwater and promote fair distribution of resources by involving local communities.

The establishment of public awareness / capacity building activities for different community categories, school students, Panchayat personnel, project workers is the key contribution of Banihal Trust. Rallies and street performances were the means of mass awareness campaigns. Gaining self-assurance and the ability to take charge of one's own learning led to shifts in perspective and action. The district administration has acknowledged the Trust's role as a resource agency in leveraging SBM activities, and the Trust's demand-driven revolving fund for resourcepoor households has expanded access to sanitation facilities, made individual household latrines more affordable, and become more inclusive. The goal of the Community Led Sanitation initiative in Banihal Tehsil is to promote "safe, sustainable water and sanitation for all" to eliminate open defecation in communities using a multi-stakeholder approach.

5. Conclusions

In order for community engagement and WASH projects to be successful, they must first be carried out purposefully and over an extended length of time. Understanding and taking into account the cultural context and values, as well as the community hierarchy, structure, and power dynamics, are necessary for effective community engagement. Teachers, religious leaders, and community leaders are examples of existing culturally ingrained leadership structures that should be used in WASH community engagement. Through capacity building and training programmes that put the new or shared knowledge into practice, it should seek to establish a clear connection between knowledge sharing and knowledge activation.

References

- Adams E. A. & Boateng G. O. 2018 Are urban informal communities capable of co-production? The influence of community-public partnerships on water access in Lilongwe, Malawi. Environment and Urbanization 30 (2), 461–480.
- Bibri E. 2019 On the sustainability of smart and smarter cities in the era of big data: an interdisciplinary and transdisciplinary literature review. Journal of Big Data 6 (1), 1–64.
- 3. Crosby S., Younie S., Williamson I. & Laird K. 2020 Evaluating approaches to designing effective Co-Created hand-hygiene interventions for children in India, Sierra Leone and the UK. PLoS ONE 15 (9), e0239234.
- Kariuki G., Magambo J., Njeruh F., Muchiri M., Nzioka M. & Kariuki S. 2012 Changing Mother's hygiene and sanitation practices in resource constrained communities: case study of Turkana District, Kenya. Journal of Community Health 37, 1185–1191.
- Montuori A. 2013 The complexity of transdisciplinary literature reviews. Complicity: An International Journal of Complexity and Education 10 (1/2), 45–55.
- 6. Nastar M., Abbas S., Aponte Rivero C., Jenkins S. & Kooy M. 2018 The emancipatory promise of participatory water governance for the urban poor: reflections on the transition management approach in the cities of Dodowa, Ghana and Arusha, Tanzania. African Studies 77 (4), 504–525.
- Nyam Y. S., Kotir J. H., Jordaan A. J., Ogundeji A. A. & Turton A. R. 2020 Drivers of change in sustainable water management and agricultural development in South Africa: a participatory approach. Sustainable Water Resources Management 6 (4), 1–20.
- O'Donovan J., Thompson A., Stiles C., Opintan J. A., Kabali K., Willis I., Mutimba M. E., Nalweyiso E., Mugabi H., Kateete D. P. & Ameniko M. 2020 Participatory approaches, local stakeholders and cultural relevance facilitate an impactful community-based project in Uganda. Health Promotion International 35 (6), 1353– 1368.
- Oliver S., Garner P., Heywood P., Jull J., Dickson K., Bangpan M., Ang L., Fourman M. & Garside R. 2017 Transdisciplinary working to shape systematic reviews and interpret the findings: commentary. Environmental Evidence 6 (1), 1–7.
- 10. Velayati A., Bakayev V., Bahadori M., Tabatabaei J., Alaei A., Farahbod A. & Masjedi R. 2007 Religious and cultural traits in HIV/AIDS epidemics in sub-Saharan Africa. Archives of Iranian Medicine 10 (4), 486–497.
- 11. Wodon Q. & Blackden M., (eds). 2006 Gender, Time Use, and Poverty in sub-Saharan Africa. The World Bank, Washington, DC.