

## COMMUNITY AND GOVERNMENT INITIATIVES - A CASE STUDY OF RURAL DRINKING WATER SUPPLY SCHEMES IN SELECTED VILLAGES OF ANANTHAPURAMU DISTRICT, ANDHRA PRADESH, INDIA

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### Abstract

Post-independence, initiatives of Governments and Communities gained momentum to provide safe drinking water with availability and accessibility at the doorstep of the rural people in the country by investing a large amount through programmes such as Accelerated Rural Water supply programme (ARWSP), Swajaldhara, National Rural Drinking Water Programme (NRDWP) and Jal Jeevan mission which subsumed National Rural Drinking Water Programme (NRDWP). Keeping in view of the above, a study was conducted in four sample villages, namely, Lepakshi, Kondur, Marthadu and Muntimadugu in Ananthapuramu district of Andhra Pradesh. The prime objective was to study availability and accessibility of potable drinking water, and personal hygiene practices in handling and storage of water. The random sampling technique was used for selection of respondents (375) in the sample villages. structured interview schedules and FGDs were used for primary data collection. The major finding is: More than 80 per cent of respondents felt that availability and accessibility of drinking water is at their door step. It is suggested that, there is need to provide intensive awareness among the people to stop the wastage of water. Moreover, the villagers need to be imparted knowledge on water budgeting to reduce cultivation of the high-water consumption crops like banana and paddy for sustainable agriculture in the sample villages.

**Key words:** Community, Government, Availability, Accessibility, Hygiene practices

### INTRODUCTION:

The ancient civilisation flourished along with banks of rivers where water was freely available. As population grew and human needs increase, they had to move away from rivers and for fulfilling their needs of water had to search for solutions like creating water sources, storage and transport for distribution to the people residing in various places.

Even Pre-Independence of India, the rural drinking water facilities were not up to the mark in the villages of the country. It is recorded that the rural people used to walk far distances to fetch a pot of drinking water spending long hours resulting losing the wages. It is known fact that the drinking water carriers are mostly women and girl children in the villages of India. Moreover, this drinking water was unsafe. Because of this, most of the rural people used to fall sick with water borne diseases like diarrhoea, cholera etc. In addition, it is documented that high rates of infant mortality, severe wasting and stunting among children, high rates of morbidity resulting low life expectancy among the rural populace. In addition, the people were not had proper knowledge and skills on personal hygiene and disposal of waste.

In the early years of post-independent India, rural people relied largely on traditional wells, rivers, hand pumps, etc for their daily drinking water needs. Further, over the period of time, initiatives of Governments and Communities had gained momentum to provide safe drinking water with availability and accessibility at the doorstep of the people. It is also documented that the distances have gradually come down as the Government of India and the State Governments had invested huge amounts through rural drinking water programmes such as Accelerated Rural Water supply programme (ARWSP), Swajaldhara, National Rural Drinking water Programme (NRDWP).

Further, there is a significant improvement in the context of availability and accessibility of drinking water in the present times due to Jal Jeevan mission which subsumed National Rural Drinking Water Programme (NRDWP). Jal Jeevan Mission is envisioned to provide safe and adequate drinking water through individual household tap connections by 2024 to all households in rural India. The programme will also implement source sustainability measures as mandatory elements, such as recharge and reuse through grey water management, water conservation, rain water harvesting. The Mission will be based on a community approach to water and will include extensive Information, Education and communication as a key component of the mission.

At present, according to the latest figures of Ministry of Jal Shakti, the total rural household tap connections provided were 5,90,97,482 (30.93 per cent), while the remaining supply are through hand pumps, etc. The flagship Jal Jeevan mission and other Government programmes are being implemented in all the states with the financial sharing of the Government of India and the State Governments.

Jal Jeevan mission and other Government programmes have been implemented in Andhra Pradesh with Community Management. Keeping in view of the above, an attempt was made to study the Community and Government initiatives in drinking water projects in Ananthapuramu District of Andhra Pradesh, India.

### OBJECTIVES:

- To study the community and government initiatives, specifically on the availability and accessibility of potable drinking water at the doorstep of village households
- To analyse the hygiene practices of personal as well as handling and storage of drinking water among the respondents
- To suggest suitable measures for improving drinking water service delivery

### METHODOLOGY:

The sample district, namely, *Ananthapuramu* is selected based on the following criteria – the district falls under the Desert Development Programme, which was categorized by the Ministry of Rural Development, Government of India; The district also comes under the category of rain shadow area and also low annual average rainfall and; drinking water scarcity is high in the villages, while compare with other districts in the State of Andhra Pradesh. In the sample district, NRDWP and Jal Jeevan Mission Programmes are under implementation with community management.

Further, two sample blocks (Mandal), namely, *Lepakshi and Garladinne* have randomly been selected for the purpose of study. From each block, two villages were selected. The four sample villages, namely, 1. *Lepakshi* 2. *Kondur* from *Lepakshi* block, 3. *Marthadu* and 4. *Muntimadugu* from *Garladinne* block have been selected for in-depth study.

Random sampling method was employed for the selection of respondents. In total, 375 sample was taken from 4 villages. For the purpose of gathering data, structured interview schedules were administered for collecting quantitative data and focus group discussions (FGDs) were used to gather the qualitative data.

### RESULTS AND DISCUSSIONS:

#### Respondents by sex:

Out of the 375 respondents from four villages, 64.53 per cent who turned up for interviews were females. The respondents were actively involved in sharing their idea in the survey. The details of respondents are shown in Table 1 and Graph

**Table 1: Distribution of respondents by sex**

S.no.	Sex	Name of the Village				Total
		Lepakshi	Kondur	Marthadu	Muntimadugu	
1	Male	32	47	31	23	133 (35.47)
2	Female	63	47	64	68	242 (64.53)
	Total	95	94	95	91	375 (100)

Source: Primary data, Parenthesis indicate percentages

#### Respondents by Age:

Majority of the respondents were belonged to the age group of 36-45 followed by 26-35 age group. Further, 9.6 per cent belonged to the age group of above 65 years followed by 19-25 age group (8.8 per cent). Only 6.93 per cent of the respondents were under the age group of 56-65. All the age groups gave their opinions and perspectives frankly without any bias in the interviews of structured schedule for quantitative data as well as in FGDs for qualitative data.

**Table 2: Distribution of Respondents according to age group**

Sl.no.	Age group	Name of the Village				Total
		Lepakshi	Kondur	Marthadu	Muntimadugu	
1	19-25	14	6	3	10	33 (8.8)
2	26-35	28	12	28	21	89 (23.73)
3	36-45	31	28	29	30	118 (31.47)
4	46-55	17	29	12	15	73 (19.47)
5	56-65	2	5	17	2	26 (6.93)
6	Above 65	3	14	6	13	36 (9.6)
	Total	95	94	95	91	375 (100)

Source: Primary data, Parenthesis indicate percentages

### Community Initiatives:

Community initiatives, participation and management are good old practices in supply of rural drinking water supply in the country including sample villages and district. The details of community initiatives are presented in Table: 3 and graph:3.

Community initiatives have been drawn from the respondents by using the five points of Likert Scale. Nearly 78 per cent of respondents have 'Strongly Agreed' that community initiatives have been there in planning, implementation, Monitoring and O&M followed by 'Agreed (19 per cent)' in rural drinking water supply in the sample villages. Only 3 per cent felt that they are in Neutral. A few respondents gave responses that they have 'Disagreed' (0.3 per cent) and 'Strongly Disagreed' (0.3 per cent). The inference is that community initiatives in rural drinking water supply are clearly visible in the sample villages, which is encouraging trend.

**Table:3 Responses on Community Initiatives in Rural Drinking Water Supply**

Sl. No	Name of Community Initiative	No.of Respondents					Total
		Strongly Agree (5)	Agree (4)	Neutral (3)	Disagree (2)	Strongly Disagree (1)	
1	Involvement in Planning	75	17	4	1	1	98 (26.1)
2	Involvement in Implementation	69	14	4	-	-	87 (23.2)
3	Involvement in Monitoring	70	17	1	-	-	88 (23.5)
4	Involvement in O&M	78	22	2	-	-	102 (27.2)
	Total	292 (77.9)	70 (18.7)	11 (2.9)	1 (0.3)	1 (0.3)	375 (100)

Source: Primary data, Parenthesis indicate percentages

### Government Initiatives:

As per the constitution of India, drinking water supply (both rural and urban) is the subject of State Governments and that is their responsibility to provide the drinking water supply to the people. However, since Independence, the Government of India have been allocating heavy financial resources to the State Governments to plan, implement, monitor and evaluate through flagship programmes at grassroots level. As per the records of Ministry of Jal Sakthi, Government of India that more than 30 per cent of households have been provided piped water supply in the villages of India including sample villages. The Government Initiatives are enormous in the

context of rural water supply. It is also proved in the study, which are presented in an analytical way by using Likert scale in table:4 and Graph:4.

More than 72 per cent of the respondents have given the responses on 'Strongly Agreed' that Government Initiatives are very high in providing safe drinking water facilities in the sample villages. Another 23 per cent of respondents have given the responses as 'Agreed'. Further, 4 per cent of them mentioned that they are in 'Neutral'. 0.5 per cent each of respondents felt to 'Disagree' and 'Strongly Disagree'. The inference is that without Government Initiatives with heavy investments, the present situation in the context of rural drinking water supply would have not been achieved to this stage.

**Table:4 Responses on Government Initiatives in Rural Drinking Water Supply**

Sl. No	Name of Government Initiative	Number of Respondents					Total
		Strongly Agree (5)	Agree (4)	Neutral (3)	Disagree (2)	Strongly Disagree (1)	
1	Planning	69	24	4	1	1	99 (26.4)
2	Implementation	71	25	4	1	1	102 (27.2)
3	Monitoring	66	20	3	-	-	89 (23.7)
4	Supervision in O&M	65	16	4	-	-	85 (22.7)
	<b>Total</b>	271 (72.3)	85 (22.7)	15 (4.0)	2 (0.5)	2 (0.5)	375 (100)

Source: Primary data, Parenthesis indicate percentages

#### Availability and Accessibility:

The Availability and Accessibility of Drinking Water at all seasons in sample villages is presented in table:4 and graph:4. More than 80 per cent of the respondents felt that the availability and accessibility of drinking water were at their door step in all seasons. The saved time was being used for income generating activities and improving economic status. It was also found that girl child enrolment rates increased in the schools as totally water fetching by girl children from the long distances was stopped due to availability of water at their door step. The FGDs revealed that this has happened because of Government and communities in the sample villages. Almost all the connections of piped water supply had water meters fixed to them by the Government. While usage of upto 40 litres per capita per day (lpcd) remained free, over usage was made chargeable. However, nearly 20 per cent of them opined that the drinking water is not available in all seasons.

**Table:4 Availability and Accessibility of Drinking Water at All seasons in sample villages**

Sl.No	Name of the sample village	Number of Respondents		Total
		Yes	No	
1	Lepakshi	75	19	94 (25.1)
2	Kondur	76	19	95 (25.3)
3	Marthadu	76	17	93 (24.8)
4	Muntimadugu	75	18	93 (24.8)
	<b>Total</b>	302 (80.5)	73 (19.5)	375 (100)

Source: Primary data, Parenthesis indicate percentages

### Hygiene practices: of personal as well as handling and storage

Under hygiene practices, storage of drinking water including handling play a vital role in health wellbeing of the rural people. Table no:5 shows the storage of drinking water in the households of respondents.

The analysis showed that 60 per cent of the respondents were storing their drinking water in steel vessels followed by earthen pots (28.5 per cent). Further, 10 per cent of them was keeping their water in filter fitted vessels. Only a few of them storing their drinking water in plastic vessels.

In FGDs, cent per cent of them mentioned that handling of the storage drinking water with all hygiene is being followed to maintain good health in their families. Children are avoided to take water from the vessels. It is also found all of them washing their hands with soap after open defecation. It is noticed that before entering into the house, the people are removing their chappals and they do wash their legs, hand and face, which is a good old tradition followed as part of hygiene and is still being followed in the sample villages.

**Table:5 Storage of Drinking Water**

Sl.No	Name of the sample village	Number of Respondents				Total
		Filter fitted vessels	Steel vessels	Earthen Pots	Plastic vessels	
1	Lepakshi	10	56	26	1	93
2	Kondur	9	54	28	2	93
3	Marthadu	9	58	24	1	92
4	Muntimadugu	10	57	29	1	97
	<b>Total</b>	38 (10.1)	225 (60.0)	107 (28.5)	5 (1.3)	375 (100)

Source: Primary data, Parenthesis indicate percentages

### Suggestions:

- Convergence need to be encouraged among Health department, PRIs and RWS department for maintaining clean and hygiene in the surrounding areas of overhead tanks, piped water supply connections to make water borne diseases nil in the sample villages.
- It is required one more overhead tank each to be constructed in the sample villages for drinking water security for all the seasons.
- There is need to provide awareness among the people to stop the wastage of water in the sample villages.
- The villagers need to be imparted knowledge on water budgeting to reduce cultivation of the high-water consumption crops like banana and paddy for sustainable agriculture.

### Limitation:

The study is confined to only sample villages as the survey had done with small sample.

### References

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