

# Community Managed Drinking Water Project under NRDWP: A Study in Kadapa District of Andhra Pradesh, India

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**Abstract:** As per Census of India, 2011, piped water supply scheme under NRDWP reached 63% of rural households (presently at nearly 80%), while the remaining used hand pumps, etc. The programme was also held in Andhra Pradesh with Central and State government finances. Considering the above, a study was conducted with the objective - to analyze community management in NRDWP. Four villages from Proddatur and Kamalapuram blocks of Kadapa district, Andhra Pradesh were selected with 400 sample employing random sampling, interview schedules and FGDs. The study found that water meters were fixed to household taps. Utilization of more than 40 lpcd was chargeable. Almost all households practiced hygienic storage like using steel or earthen vessels and handling drinking water. The paper delineates that distance for fetching drinking water reduced to a quarter kilometer, many stand posts were located at street corners and perennial supply of water was present. FGDs involving government doctors revealed that water borne diseases like diarrhea, malaria, etc. reduced along with improvement in water quality. The paper summarizes - innovative components of NRDWP like community participation, social mobilization, environmental awareness generation and O&M can be replicated in other uncovered problem villages/districts within and outside the state.

**Index Terms - community, management, sustainability, availability, accessibility**

## I. INTRODUCTION

A direct relationship exists between drinking water, health and overall well-being. Consumption of contaminated drinking water along with lack of personal hygiene and improper disposal of waste has been the major causes of many diseases in rural areas of India. High rates of infant mortality, severe wasting and stunting among children, high rates of morbidity among the populace and overall low life expectancy can be largely attributed to unsafe drinking water. In the early years of independence, people relied largely on traditional wells, rivers, hand pumps, etc for their daily drinking water needs. There is significant improvement in water availability in the present times due to National Rural Drinking Water Programme (NRDWP) when compared to the Accelerated Rural Water Supply Programme (ARWSP) started in 1972. This is mainly due to the focus of NRDWP shifting towards providing piped water supply, a change brought in by the 12<sup>th</sup> Five Year Plan.

It was in this context that the NRDWP was launched in 2009 with the aim to provide every rural person with adequate safe water for drinking, cooking and other basic needs on a sustainable basis, with water quality standards, which should be conveniently accessible at all times and in all situations. The NRDWP emphasises on community contributions and Community Management for providing safe drinking water at grassroots level. Keeping in view of the above, an attempt was made to study the Community Management in drinking water projects under NRDWP in Kadapa District of Andhra Pradesh, India

## II. HIGHLIGHTS

- Availability of quality drinking water at the doorstep of village households
- Usage of technology such as water meters to measure water usage
- Hygienic water storing practices improved overall health conditions
- Lesser incidences of water borne diseases due to access to NRDWP facilities
- Community management led to ownership feeling on project

## III. RESEARCH METHODOLOGY

NRDWP has been implemented in Andhra Pradesh with Community Management. The sample district, blocks and villages were randomly selected for the purpose of study. Further rain shadow area prevails over Kadapa district which necessitated a study on drinking water in the district. Two blocks in the district, namely, Proddatur and Kamalapuram were been chosen due to personal

convenience. The villages of Kamanur and Dorasanipalle from the former and Peddachepalle and Chinnachepalle from the latter block were seen as ideal as NRDWP showed significant presence there.

Random sampling method was employed for the selection of respondents. In total, 400 sample was taken with 100 from each of the 4 villages. For the purpose of gathering data, structured interview schedules were administered and focus group discussions (FGDs) were conducted.

General information such as accessibility to water, caste background, etc was gathered from the respondents. Medical doctors of the Primary Health Centres (PHCs) and private clinics were approached for domain specific and detailed information. Focus group discussions (FGD) were employed here to know the level of success of NRDWP and its impact on various health indicators in the district.

#### IV. RESULTS

1. Out of the 400 respondents from four villages, 82.5% who turned up for interviews were females.
2. Almost all the connections of piped water supply had water meters fixed to them by the government officials
3. While usage of upto 40 litres per capita per day (lpcd) remained free, over usage was made chargeable.
4. Everyone in totality accepted to practicing hygienic storage techniques like using steel or earthen vessels.
5. O&M was being done by the Village Water and Sanitation Committees (VWSC)
6. It was found that all the respondents have paid water usage charges as they used more than 40lpcd
7. 17% of the total respondents i.e. in the age bracket of 19-25, said that they don't fall sick as frequently as they used to, compared to a decade ago
8. The age bracket 26-65 years, constituting the largest portion of the respondents, said that the average distant needed to travel to fetch water reduced from 2km a decade ago to about 1/4 km in the present year.
9. The saved time was being used for income generating activities and improving economic status
10. It was found that female child enrolment rates increased in the schools
11. Aged people ie above the age of 65 also point out to reduced incidences of knee pains to the improving better piped water supply in their villages.
12. All Women with children below the age of 5 pointed at fewer cases of diarrhoea, dysentery and mainly Japanese encephalitis in recent years. This fact also resonated in the discussions with medical doctors
13. 72% of the respondents said that they were availing the benefit of supply of drinking water either from stand posts at street corners or piped supply installed as part of NRDWP
14. 45% of the respondents who still relied on traditional sources for drinking water were of the scheduled castes.

#### Tables and Figures

Table 1: Distribution of respondents by sex

S.no.	Sex	Name of the Village				Total
		Kamanur	Dorasanipalle	Peddachepalle	Chinnachepalle	
1	Male	8	25	18	19	70 (17.25%)
2	Female	92	75	82	81	330 (82.5%)
	Total	100	100	100	100	400 (100%)

Source: Primary data

Figure 1: Spike graph of distribution of respondents by sex

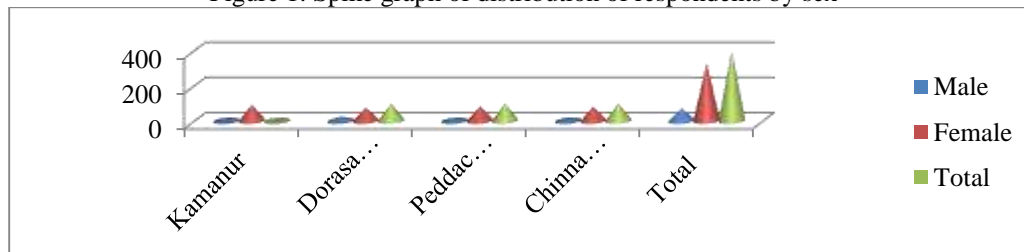


Table 2: Distribution of respondents according to age group

S.no.	Age group	Name of the Village				Total
		Kamanur	Dorasanipalle	Peddachepalle	Chinnachepalle	
1	19-25	9	13	4	10	36 (9%)
2	26-35	16	27	27	15	85 (21.25%)
3	36-45	29	25	10	27	91 (22.75%)
4	46-55	25	9	13	31	78 (19.5%)
5	56-65	14	3	18	3	38 (9.5%)
6	Above 65	7	23	28	14	72 (18%)
	Total	100	100	100	100	400

Source: Primary data

Figure 2: Spike graph of distribution of respondents according to age group

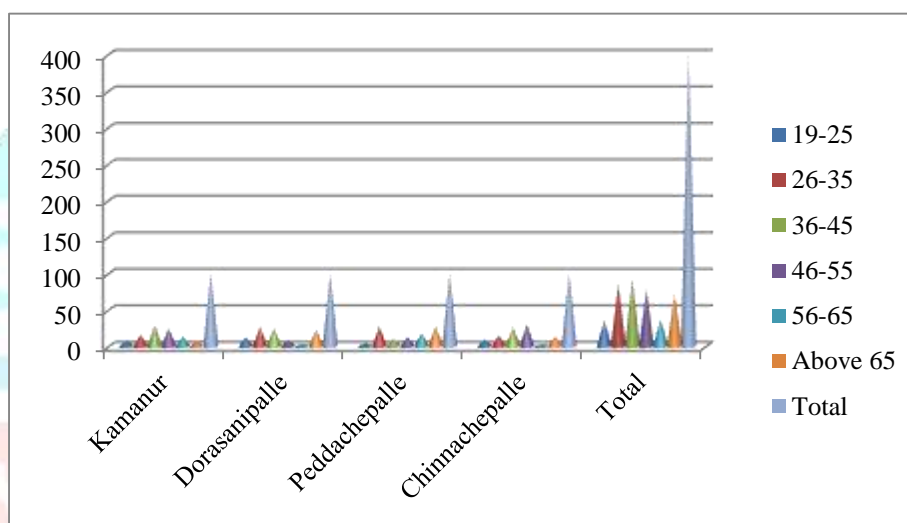


Table 3: Respondents benefitted from NRDWP

Sno	Benefit	Name of the Village				Total
		Kamanur	Dorasanipalle	Peddachepalle	Chinnachepalle	
1.	Yes	71	74	69	74	288 (72%)
2.	No	29	26	31	26	112 (28%)
	Total	100	100	100	100	400 (100%)

Source: Primary data

Table 4: Caste grouping of respondents who didn't benefit from NRDWP

Sno	Caste	Name of the Village				Total
		Kamanur	Dorasanipalle	Peddachepalle	Chinnachepalle	
1	Other Caste	3	2	4	2	11 (9.8%)
2	Backward Caste	14	15	9	12	50 (44.6%)
3	Scheduled caste	12	9	18	12	51 (45.5%)
4	Scheduled tribe	N/a	N/a	N/a	N/a	N/a
	Total	29	26	31	26	112

## V. CONCLUSIONS

1. This is a model in Community Management in drinking water projects which can be replicated in other parts of the state, within the country and also in other South Asian nations
2. Declining trend in water-borne diseases in children is mainly because of perennial supply of piped drinking water. This also resulted in decrease of child morbidity, stunting, wasting, etc.
3. There is also growing awareness to other aspects of healthy life such as sanitation, maintaining a clean and green sustainable environment.
4. Thus, community management NRDWP is a major step towards achieving the Sustainable Development Goal 6 of providing universal and equitable access to safe and affordable drinking water for all by 2030

## REFERENCES

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- [3] Renowned English and Telugu newspaper clippings
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- [5] Official records of Primary Health Centres of the sample villages and blocks

