Research Paper Economics

Study of regional rural water supply scheme-Kutch

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ABSTRACT

Water wastage and system losses: Losses in any pipeline depends on length of pipeline, but they considered common 10% for all schemes.Individual water supply scheme: If there is a potential source available than that villages should be encouraged for IWSS. Walking distance to the stand post: Average walking distance is 200m and takes 3-5 minutes of walking.Water Use: Major usage of water is for drinking and cooking. Water availability for animals found inadequate.Tapping: Addition of villages under present RWSS under various programmes is called tapping. It needs to address seriously because it affects performance of RWSS to a great extent.Lineman efficiency: Linemen are considered as lifeline of RWSS from villagers' point of view. Unhygienic condition created because of their inefficiency.System up gradation: Minor repairs and replacement are not made. Most of the taps are leaking and or broken. This creates muddy and unhygienic surrounding with mosquitoes breading place. Women and children need to stand for 9-10 minutes for filling the buckets and are more likely to get Malaria and related diseases.The cistern/HGLR/tank, which are once constructed, remains unattended by department for cleaning, which is actually the responsibility of panisamitee as well as department. Intermittent power supply: Pumping requirements for Khengarpar RRWSS is 20-22hours per day and for Javaharnagar is16-18 hours per day while the power availability is only for 12-18 hours. Power supply most of the time is intermittent. Cutoff also occurs without notice 10-12 days per month and happens frequently in summer.Cost recovery: The financial viability of the scheme is completely dependent on the ability of the State Government to avail the major part of the necessary funds for operation and maintenance and replacement investment.Willingness to pay: The willingness of consumers is not ascertained, as people have taken for granted that it is duty of government to supply it free. Panisamitee formation: Due to political interference and lack of awareness (about duties and rights) among villagers, panisamitee are seen on paper only.

Keywords :

INTRODUCTION

A safe, convenient water supply system is one of the highest priorities for the rural poor. Combined with safe sanitation and better hygiene, improved water services can revolutionize rural public health even in the least advantaged location leading to Socio-economic Development, Communal harmony and Peace in the society.

Access to safe and sufficient water is human right under international law & provision of water. Supply and sanitation to the communities is an important function of welfare state. But still facts say that only 81% of urban population and 54% of rural population have excess to safe and regular drinking water. In India supply of safe drinking water has been given highest priority in National water policy. After fourth five-year plan large investments have been made for providing and sustaining drinking water supply for villages under various programmes. Piped water (regional rural water supply scheme) has been considered as most reliable mode of supplying safe and regular water to rural areas where there is no access to safe drinking water. Amongst 18,000 revenue villages of Gujarat state this regional are functioning at various levels.

This supply mechanism recommends an integrated and multi-disciplinary approach to planning, formulation and implementation of projects in such a way as to be able to meet the demands of water. The issues become more challenging when the similar planned scheme achieves different level of success on field.

NEED OF THE STUDY

This study is an effort to take a look at how supply systems work in one of the water scarce area (Kutch) of Gujarat. This study also tries to look into various approaches used by different institution to provide safe and secure water supply in the region.

WHAT IS RWSS?

When the number of villages served by a common source, operated and maintained by state government, i.e. Gujarat Water Supply and Sewerage Board (GWSSB) itis called Regional Water Supply Scheme (RWSS).

RWSS- AT VARIOUS STAGES

Policy makers

Government of India and National WaterResources Council is concerned with formulationof policy to manage water resources in whichsupply of drinking water has been given highestpriority.

To supply safe drinking water, Ministry of ruraldevelopment has initiated various programmes followingpolicies. For this funds are allocated by GOI, state govt. or funding agencies like the World Bank, Netherlands Govt. aid, ADB etc.

Implementing agents

The policies and programme put forth byGovernment and foreign agency is forwarded toconcerned departments of state that may be PHD, GWRDC, Irrigation Department, GIDB, GWSSB,etc.

These agents with technical knowledge carryout various studies and prepare a feasible work plan of the project. With flow of funds the same is implemented in various phases.

Users

The users are not the one where programme comesto an end, but their feedback will further indicateany changes/

modification required in suchprogramme. Thus accessing the changes takenplace at users end will tell the success or failure ofthe system.

But since we are talking about RURAL SUPPLYSYSTEM it is but obvious that they are not at astage to give a feedback due to lack of knowledgeand present-day understanding of health andhygiene.

Thus, will the role of NGO be seen as a backbone in rural community that can make them aware of their basic of health and hygiene, making them capable of using techniques of water conservation and helping them to take maximum advantage of piped water supply system?

AIM:
To study and understand performance of regional rural water supply schemes, of selected RWSS of Kutch.

OBJECTIVE:
1. Review plans, strategies and policies followed for drinking water supply system

2. Study the present status of drinking water supply in Bhuj-Kutch

3. Study the various approaches used by different institutions like GWSSB and NGO in rural water supply sector

4. Identify current problems regarding regional rural water supply schemes

SCOPE OF STUDY:
This study is limited to Kutch of Gujarat. It is also limited to domestic/drinking water supply. The major focus of study is on approaches of institutions of providing water and reliability of system. It is limited to study of medium and small sized RWSS (containing 2-15 villages). Sanitation is out of focus of study.

SELECTION OF STUDY AREA:
There are total 492 RWSS in Gujarat out of which 127 RWSS are in Kutch itself. Kutch is one of the water scarceregions of Gujarat. RWSS are considered as a unique feature, which provide safe and regular water with minimum transmission and evaporation losses. Huge finance and efforts are put to provide secured water supply but it has not been as successful as expected.

Khengarpar RRWSS and Javaharnagar RRWSS have been selected as case study schemes.

INFERENCES FROM STUDY
General comments
1. In spite of detailed hydro geological survey the sources are not providing expected yield and failed before their expected life. Over pumping and improper handling are major causes of failure at sources.

2. The hydro geological surveys carried out to locate and develop most suitable source are very detailed and scientific, but they are carried out with a presumption of developing only one well field suitable for the entire study area. No provision made for stand by source in other well field. Khengarpar RRWSS is exceptional in case of having stood by source (they were constructed as part of charity).

3. Each scheme has its own characteristics, which are unique and place specific. Technical features affect non-technical aspects and vice versa. Problems in each RRWSS should be tackled differently at grass root level. For example in Khengarpar RRWSS the tail end village is at distance of 28km from the source, having different problems (fault in laying village level pipe) than that in Lotia village (high consumption by dominating village) just 11 km away from the source.

4. Tapping is another major problem in Kutch (no of villages keep on adding in an implemented RRWSS-by political efforts, as scarcity measures or for temporary emergency), causing de functioning of scheme. Khengarpar RRWSS was originally designed for two village and a hamlet but presently serving eight villages.

5. Root of Gandobaval: fine, thin, strand like roots of Baval, found amply in Kutch enter the pipeline from smallest gaps that occur during leakage, repairs or by Maldhari. This roots grow in at an alarming rate and up to continuous length of 1 to 1.2 km. it grows within the pipe and takes shape of pipe, this cause choking and sometimes blasting of pipe.

6. Financial viability in sheer terms of money (cost-recovery mechanism) is irrelevant and impractical due to over subsidized water charges. Only cost benefit analysis in terms of social benefit found viable.

7. Cost recovery mechanism is extremely poor

8. Awareness about water as scares resource or need of water for drinking, irrigation uses or importance of conservation of their traditional resources is absent among villagers. Health education, importance of hygiene, income generation activity and panisamitee activities are lacking. After earthquake such activities have started by various NGOs and getting good response from villagers.

9. Main agenda for most of the NGOs working on water issues remain up to development / construction of rain water harvesting structure at household level, awareness programme on dry irrigation, basic sanitation, health precaution measures, etc. (source development not addressed).

10. The board does not address drinking water issue during scarcity while emphasis is on check dam and water harvesting structure in scarcity plan.

11. As per norms after the commencing of the supply system, the sample is to be taken from the source to ensure quality of water supplied. The sampling is to be taken once in every three months. While in actual practice, the samples are taken when the villagers or user complains about the water quality.

CONCLUSION
Since independence every year crores of rupees spent by state as well as central government for providing safe and secured water to rural area. But expected results are not achieved yet. This is not because of absence of policies or lack of money and manpower, but due to local level problems are not understood and not solved.

From the study of two schemes that were stared 20 years ago with the aim to provide safe drinking water to the remote rural villagers. In recent years the scheme has undergone tremendous changes and is suffering from technical, management and financial problems.

The study shows that the schemes were planned as per the requirements of the region, but failed to understand the changes that can hamper the performance in case of failure of any component of the system. One of the case in the scheme was the failure of the source in onevillage will pressurize the department to connect them to the nearby system without knowing whether it is feasible or not. Due to lack of any immediate support the department can only rely on the above solution. The problem is not the failure of source but the nearby supply system, which is made, has to add this village and thus the originally suffering villages again face the same earlier problem. Hence the problems are not solved to

its requirements but the capital is wasted in operating and maintaining of the supply system.

Over a period of time the system once implemented is rarely attended for repairs but is rather left on to villagers to use as it is. Thus programme started with the main focus of providing SAFE and SCECURE water fails.

Similarly there are various problems which by itself can be solved by applying present day understanding of the problems faced allover the world. Like the contribution of the NGO's in making rural community to make them sensitization of their role in making the system sustainable by teaching them techniques of the water conservation and thus less dependent on the pipeline supply system and creating awareness about the benefits of health and hygiene of their health and surrounding.

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