



THE IMPACT OF GRAMA PANCHAYAT SERVICES FOR DRINKING WATER AND SANITATION

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Abstract:

Water is one of the essential resources as it develops the quality of human life and pivotal resource for health. Moreover the human body has 60% of water whereas the earth comprises 3/4 of its resources, i.e.0.75.The Sanitation determines the quality of human life and each individual's personal hygiene affects the society. So the purpose of this paper is to examine the government schemes regarding the implementation of drinking water and sanitation in rural development in the taluk areas of H.D Kote. Descriptive method has been used to collect both primary and secondary data with the tools of questionnaire and interview. For this 26 gram panchayats of the H.D Kote taluk are selected. As a part of Descriptive method interview technique was used to collect data from the respondents, Grama panchayat officers and beneficiaries. Among them 197 (63%) has drinking water connection. 97.1. of pipeline connection has been given to drinking water at homes. H.D Kote literacy rate is 64.11% where 63.29% are male 50.46% are female as per the census India 2011. This geographical area's groundwater availability is 81.65% and groundwater extraction is 47.93% out of which 261 are open wells and 10,411 are bore well. In addition to this Kabini, Taraka and Hebbala dams are also part of this area. With reference to this, the ratio of covered drinking water at homes is 163.5(96.5%) and the village clean drinking water units is 175 (85%). To maintain sanitation in villages covered dustbin facility is provided by 78%. Moreover, much

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priority is given to sanitation in the gram Panchayat as it includes 73% of toilets in its premises. But the remaining 27% are excluded from this and depended upon open defecation.

Keywords: Grama Panchayath, Drinking Water, Sanitation,

Introduction:

Water is one of the most important basic human needs; water is an abundant resource for our daily needs like drinking, cooking, domestic work, agriculture and industries. Water is the basis for the survival of all organisms. 70% of Earth's total area is covered by water. Of this, 97.2 percent is in the ocean, 25.15 percent is ice, 0.6 percent is groundwater and 0.5 percent is on land surface. Of the total, 0.3 percent is useful for human consumption and only 0.1 percent is potable.

Accordingly, the maximum ground water availability in the land area of HD Kote taluk is 81.65 percent and the ground water extraction is 47.93 percent. It includes 261 open wells and 10411 tube wells. Literacy level of family members living in land area of HD Kote taluk is 64.11% of which males are 63.29% and females are 50.46% (as per the census India 2011). Globally 3900 children are dying every day due to water and unsanitary diseases.(WHO2014) So governments are implementing many programs on water supply and sanitation through various schemes. As far as drinking water is concerned, in rural areas they used to meet their water needs by having open wells in the central part of the village and in the house yard. Poor families depended on public open wells.

After facing severe famine in the 70s, international organizations like UNICEF and DANIDA emerged as an alternative source of groundwater as technology emerged. In the implementation of various government programmes, review of schemes and policies adopted, inadequate progress can be seen in providing adequate drinking water to all family members. (Rajasekhar and Veerashekarappa-2002). British troops in India suffered from severe unsanitary problems in 1935 (Ramasubban, 1982). After decentralization, Gram Panchayat Act 73 mandated that every organism identify and supply water, demand and qualitative story. Accordingly,

O.A. In the big villages of H D Kote taluk, the water supply system has been established in the settlements with 1000 and more people.

Then, by installing an electric pump in the borewell, 50,000 to 100,000 liter capacity tanks will be built according to the population of the village and water will be supplied from house to house and will play an important role in maintaining the health of the rural people. In addition, the village panchayat collects revenue, thereby increasing local resources. (District Glance book 2023.)

Literature review :

Water resource systems have benefited both people and their economies for many centuries. However, in many regions of the world, basic drinking water and sanitation needs is still not achieved. Nor do many of the water resource systems support and sustain a resilient biodiverse ecosystem (Lane et al. 2017:13). In this study, we show how multiple urban variables jointly affect several water quality variables in urban streams in a large-scale study. Accordingly, this Literature review was conducted to look at water quality and water impact at the grama panchayat level. As shown here, providing people with basic sanitation networks still seems to be an effective measure to protect urban stream water quality. (Teixeira de Mello, F., Sierra, P., Moi, D. et al. 2024:185), Demonstrated that gender and education of household head, household wealth, place of residence, geopolitical zone, access to water collection time, and number of rooms in the house are positively significant predictors of access to drinking water. Several studies have highlighted the determinants of households' choice of drinking water and sanitation. (Abubakar et. at., 2019), Simultaneously, it also attempts to assess various policies and strategies taken up by the local self-government in managing the solid waste generated from households. Generation of waste and disposal in rural areas has not been the prime focus for deliberation, unlike the urban areas where it is regarded as a crucial issue that demands immediate attention and solution (Indira, K. et. at., 2024), In some communities, even the concept of shared toilets is often considered impure (Dwipayanti et al., 2019). Similarly, a regional study conducted by (Tiwari & Nayak., et. al., 2013) in India discovered that factors like caste, household income,

education level, and location significantly affected access to improved water and sanitation. They discovered significant disparities based on income and caste. Although studies have been conducted globally to identify the determinants, studies exclusively focused on India are limited. Furthermore, existing studies focus separately on urban or rural areas, necessitating a nationwide study. Many of them have used smaller sample sizes collected from the primary survey.

Background of the study:

Rural water source is one of many major issues that's been resolved by the government and efforts created towards tackling the disaster in providing safe and adequate water to the rural people, currently the problem has become particularly significant in rural areas. A review of the government's attempts in applying various programmes, guidelines, followed shows limited development in providing ample level of portable water to any or all people. Several factors like increases Rural Development ultimately causing negligence of traditional water sources, not enough water administration, resource depletion as a result of over exploitation of existing resources, limited institutional setup in addressing the problem have led to the intensity of the problem within the years. Various proportions of the issues have already been resolved for the efficient implementation of rural water source schemes. This is dependent on several factors social, specialized, economic legitimate, and political. It is very important to understand the existing condition & the complexities in order to address

Generation of waste and disposal in rural areas has not been the prime focus for deliberation, unlike the urban areas where it is regarded as a crucial issue that demands immediate attention and solution. Until recently, managing solid waste was not considered an issue in rural areas of Sikkim. However, with the proliferation of solid waste in recent years due to increasing population, the growth of tourism industry and changing consumption patterns have prompted the government of Sikkim to decentralise the responsibility of managing solid waste in compliance with the guidelines of Swachh Bharat Mission (Gramin). Based on primary data collected from the two Gram Panchayats, namely Mellidara Paiyong and Lungchok Kamarey in South Sikkim district, the paper attempts to comprehend the various types of waste

generated, and critically evaluate the common conventional methods and practices adopted by the villagers for disposal of their household waste. Simultaneously, it also attempts to assess various policies and strategies taken up by the local self-government in managing the solid waste generated from households.

The problem in the situation of task design & implementation, factors affecting sustainability of rural water source programmes. In the new year's we are able to also start to see the source and need connection as a result of economic growth followed by population increases, over exploitation and skip administration of organic resources and Rural Development are resulting in decreasing method of getting clean water and other environment goods. Several issues are being seriously resolved such as for instance water administration areas decentralization in water allocation, suitable utilization of water, water pricing, specialized solution and awareness generation, conserving water and utilizing it judiciously has come about just with raising lack and limbs in weather problems causing disparity in water availability. Water is vital to all living beings, ed mankind has considered water as life water, 80% of diseases in rural areas are spread by unsanitary drinking water and unsanitary environment. 20 crore people in the world are deprived of access to clean drinking water. 4.5 crore people are affected by water pollution. It is an alarming fact that 5 lakh children die every year before the age of 5 due to water pollution in India. (WHO 2014). To improve such situation, empowerment of Village Water Supply and Sanitation Committees is essential to ensure that rural communities have access to sustainable clean drinking water and good sanitation facilities.

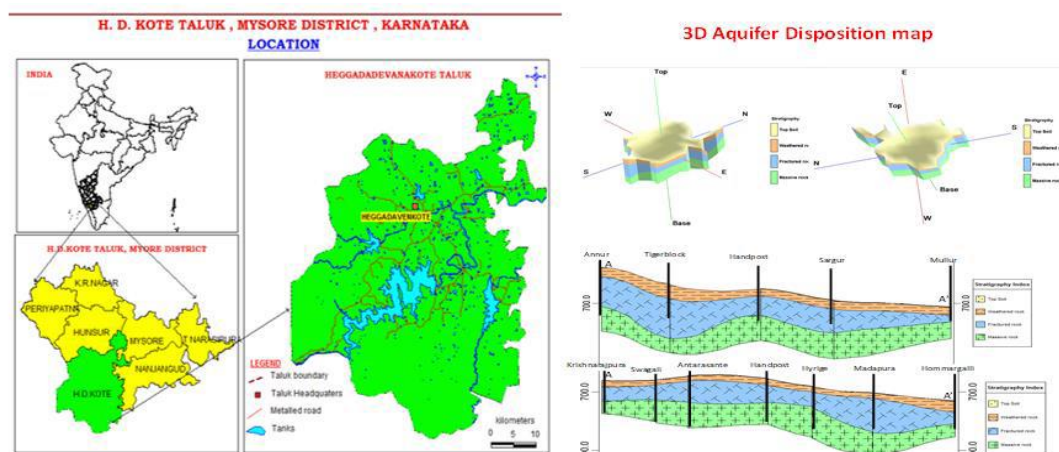
Objectives:

- The study was to assess the Socio demographic Profile.
- To check the knowledge about water and sanitation among the people living under HD Kote 26 Gram Panchayat.
- To Effectiveness evaluation of government programs on rural drinking water and sanitation.

Methods:

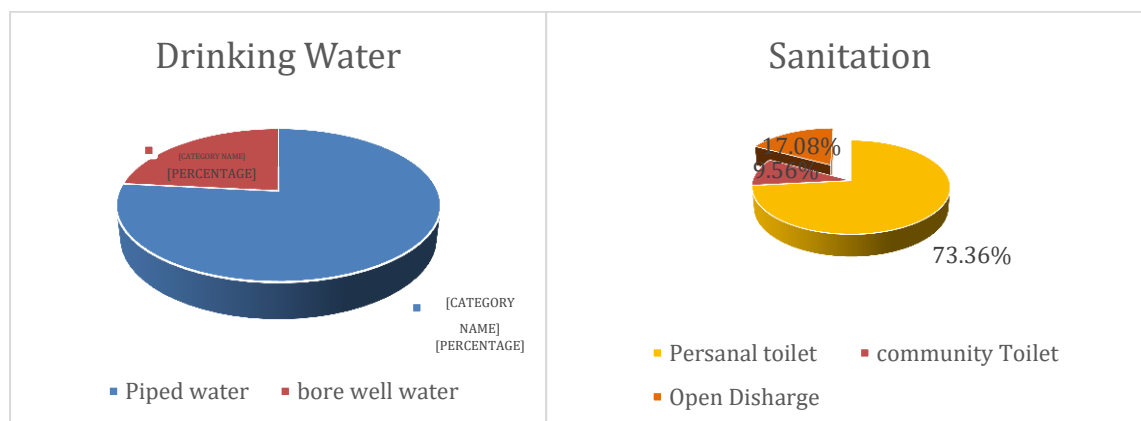
Descriptive method has been used to collect both primary and secondary data with the tools of questionnaire and interview. For this 26 gram panchayats of the H.D Kote taluk are selected. As a part of Descriptive method interview technique was used to collect data from the respondents, Grama panchayat officers and beneficiaries. 10 households’ representatives from each gram Panchayat, 26 Panchayat development officers and every administrative officers of H.D Kote taluk were selected from interviews. 260 families were selected for the study which comprises 10 houses from each gram Panchayat. Inclusion and Exclusion criteria: The unit of study was household and the study population consisted of all the households in the study setting. Households found locked at the time of visit were excluded from the study.

Fig-1: Ground water map of Heggadadevanakote taluk of Mysore district



(Source: Central Ground Water Board annual report)

Fig-2. Percentage of Active Drinking Water and Sanitation in H D kote rural areas.



(Sources: Compiled by Author from Primary Survey)

Table No.01 - Sources of Drinking Water in Heggadadevanakote Thaluk, Mysore District.

Types of water source	Rural Numbers of Water	Percentage (%)
Hand pump	6701	12.16
Borehole/Tube well	6778	12.3
Spring	13	0.02
River/canal	1632	2.96
Tank	168	0.3
Other sources	339	0.62

Main sources of Drinking water, 2011. (Sources: District Glance book-2022-23).

Table no. 02 -Socio demographic Profile

Total Population	263706
Male	132748
Female	130958
%Share of the district Population	8.79
Rural Population	237968
Urban Population	25738
Decadal change in Population	7.22
Decadal change in rural Population	1.74
Decadal change in urban Population	113.68

(Source: District at a glance 2022-23, Govt. of Karnataka)

Discussion:

The above named projects/programmes have played a vital role in the human race, Out of which projects like Jaljeevan Mission and Bharat Abhiyan are most effective in all the villages of Heggadevankote.

The present study, Gram Panchayat plays an important role in drinking water system by constructing tanks and supplying drinking water to every household through pipeline. Majority i.e. 198 (76.58%) households have drinking water connection through pipe as directed by Gram Panchayat. 62(23.42%) households do not have piped system and get drinking water from neighborhood shelters, with the help of public hand pump. A majority of 120 (45.54%) households out of 76.58% collect water only 2-3 times a week. Out of which 11(5.43%) families get piped water every day. About 67 (25.61%) households have some type of purifier/filter in their homes.

In this study 188 (73.36%) households have individual latrines, out of which 139 (47.56%) use their individual latrines, 48 (25.8%) are addicted to open defecation despite having latrines. 26(9.56%) households use community toilets. And 46 (17.08%) rest of the family members do not have access to toilet facilities and practice open defecation. Out of total households, 102 (39.02%) households have stagnant/sewage or drain water collection near the house and 88 (33.90%) have solid waste piles behind the house. (Aomthiteja bthi Pdimchidithi Jachinachi). Majority i.e. 221 (85.12%) of the families do not put the solid waste of A in the village panchayat's solid waste carrying vehicle but build a waste unit from their own house or outside the town and use it as organic manure for years and use it in their agriculture. 14.88% of the households are going to maintain sanitation by placing the solid waste in the vehicle of Gram Panchayat A. Rural people do not use toilets and the number of people who wash their hands for hygiene can be seen as only 12% while still 88% of the families are living without the knowledge of it.

The key to human health is largely in the surrounding environment. Most of the illnesses in developing countries like India are caused by poor quality water and proper toilet use, solid waste disposal practices. The present study was conducted among 260 randomly selected households in the village panchayat community of Heggadevankote, Mysore city. As stated in Eig-2 and Table-01, the primary source of drinking water is ground water in majority i.e. 199 (76.58%) households, this land area has maximum ground water availability of 81.65%. Groundwater extraction is 47.93%. Extracted water is stored in elevated tanks and supplied through pipelines through a self-watering scheme called Ganga to House (Anushtana April 2004).

(United Nations 2003). A total of 261 open wells, 10411 tube wells are covered in 26 Gram Panchayats. Although this land area mainly has 3 reservoirs (Kabini, Taraka and Hebbalu), there is no use for this area. However, these reservoirs also provide water to Nanjangud and the huge city of Bangalore.

Karnataka state provides water supply system through pipeline as per the findings of other studies conducted by Patel S A et al. using Central Ground Water Board and OSU data in India. There are many survey reports in Heggadevankote, Mysore district of Karnataka, and more awareness is needed about its use, including 73% toilets under the scheme of Swachh Bharat Mission. Also, in a study conducted under the self-watering scheme, each family was contacted through the village panchayat and 55 liters per person. Ranted is an important project to provide drinking water connection to all members of the family. Measuring meters have been installed at each connection for the proper utilization of this scheme, which are yet to be put into circulation.

Important schemes of the government related to drinking water and sanitation:

- In 1951-56, studies and committees on drinking water and sanitation recommended to the government to supply clean drinking water to every village. Accordingly, in 1954, the National Water Supply Program was started under the Health Sector.
- In 1972-73, the Accelerated Rural Water Supply Program (ARWSP) was launched, with the main objective of addressing epidemics caused by severe water scarcity.
- The Special Needs Program was implemented through the Fifth Five Year Plan in 1974-79. National drinking water campaign- NDWM -1986 is a program that came up with the concept of drinking water for all. As the United Nations has declared 2003 as the Year of Clean Drinking Water, India aims to provide water to all rural households by April 2004.
- The National Rural Drinking Water Programme- NRDWP came into being in the 11th Five Year Plan and the Department of Rural Drinking Water and Sanitation came into force on 4th March 2014. Out of which Swachh Bharat

Mission (Gramin) (SBM/G) and Jal Jeevan Mission (JJM) (House to House Ganga) were important programs that reached every family member.

- Central Rural Sanitation Programme-1986. The program gave high priority to toilets. Especially providing privacy and dignity of women.
- Complete Sanitation Campaign-1999 (Total Sanitation Campaign) gave great importance to education and communication to increase awareness about sanitation among the people.
- Human Resource Development (HRD) – Financial incentives were given to BPL allotted for construction of toilets with emphasis on capacity building activities.
- Nirmal Bharat Abhiyaan-The program started from 1.4.2014 emerged as a program involving MGNREGA.
- Mission-2014 was to achieve the goal of a clean India by 2019. The main objective was to make open defecation free in the Gram Panchayat area.

Conclusion:

Ensuring clean water and sanitation for all was one of the 17 SDGs. For this to become a reality, a fundamental requirement is enhancing the participation of local communities in improving water and sanitation management. The 73rd Constitutional Amendment Act prescribed that the powers and responsibilities of rural water supply be delegated to the lowest appropriate body close to the rural community. Significant progress has been made in providing drinking water in rural areas since independence, but water scarcity and quality are yet to be fully addressed. quality of drinking water is two important factors that have affected various Gram Panchayats differently depending upon various factors such as population, location of Gram Panchayats or different habitations with the GPs, seasons, monsoons, etc. (Pal B. et al., 2019). Rivers and reservoirs in this region also depend on groundwater for drinking water as revealed in the present study. Drinking water and sanitation are satisfactory, with a substantial number of households having access to safe water and adequate sanitation facilities. As the literacy rate is low, the gram panchayat needs to do more to create awareness about central and state government schemes. Especially about water

treatment, use of sanitary toilets, proper disposal of solid and liquid waste, and hand hygiene practices are still to be improved. Appropriate infrastructure improvement, financial planning, and behavior change communication strategies can be done.

The present study aims to create awareness programs among members of rural households about water usage and cleanliness. A significant nexus can be seen between indiscriminate solid waste piles in their premises, efforts for its adequate and timely disposal should be channeled through the gram sabha, and a proper solid waste unit should be opened and maintained by the panchayat itself. A purified drinking water plant should be constructed in every village and its maintenance should be done by the Gama Panchayat. Individual health and cleanliness is largely reliant on adequate availability of drinking water and proper sanitation in regular life. Therefore, there is a direct relationship between water, sanitation and health. Consumption of unsafe drinking water, improper disposal of human excreta, improper environmental sanitation, and lack of personal hygiene have been major causes of many diseases. Although the government has taken many measures to protect the individual's health, more schemes should be devised and awareness should be created. (Rajendran, S., Sekaran, et al., 2014).

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