ASHWAS

A Survey of Household Water And Sanitation

Karnataka — 2008-09

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ASHWAS is an Arghyam initiative.

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Inspiration and overall guidance for ASHWAS was provided by Rohini Nilekani, Chairperson and Sunita Nadhamuni, CEO, Arghyam.

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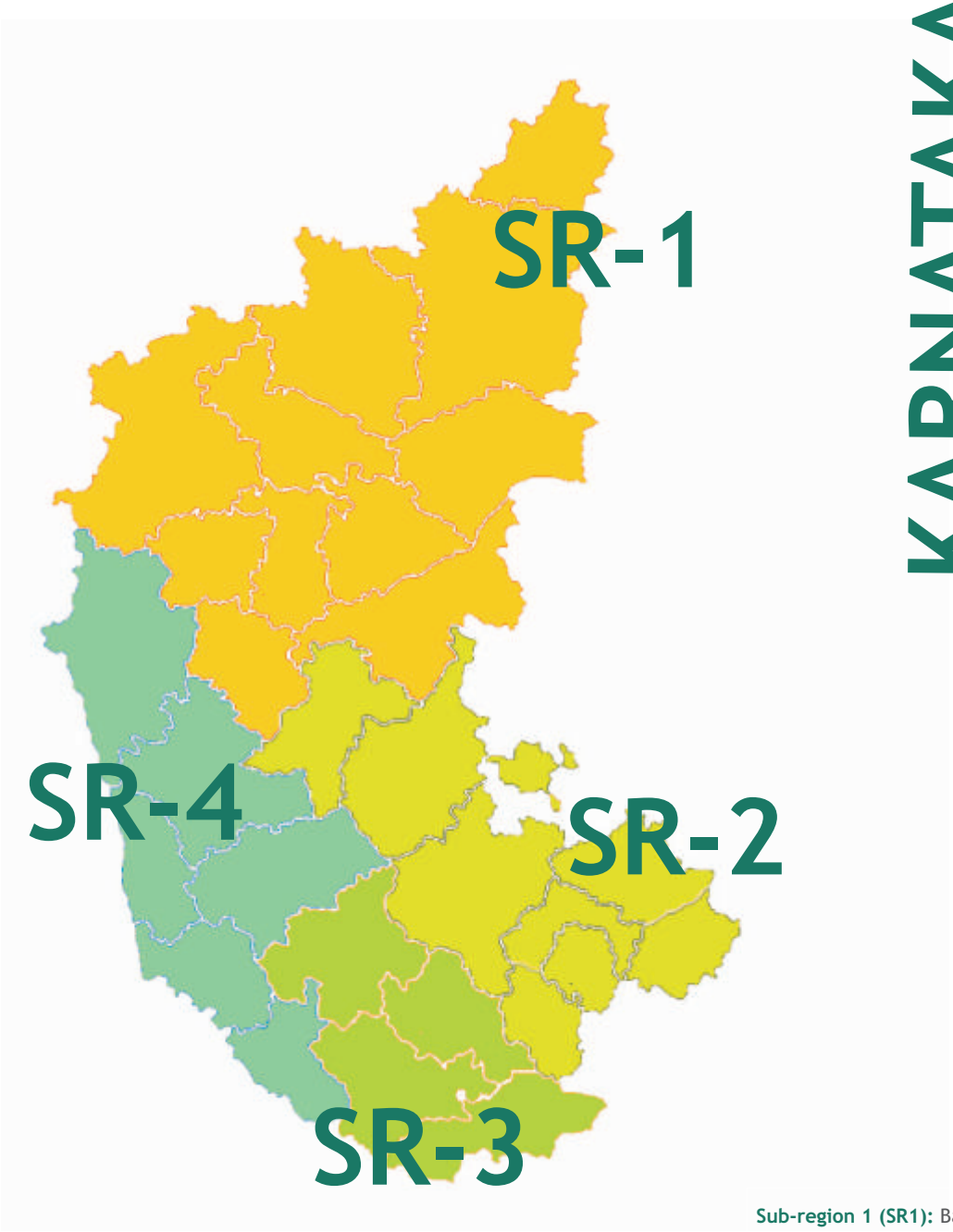
ABBREVIATIONS

ARWSP:	Accelerated Rural Water Supply Programme
ASER:	Annual Status of Education Report
ASHWAS:	A Survey of Household Water And Sanitation
BAIF:	Bharatiya Agro Industries Foundation
BIS:	Bureau of Indian Standards
DWS:	Department of Drinking Water Supply
CRSP:	Central Rural Sanitation Programme
GOI:	Government of India
GOK:	Government of Karnataka
GPs:	Gram Panchayats
HH:	Household
HPC:	High Power Committee
IAY:	Indira Awaas Yojana
ISEC:	Institute for Social and Economic Change
JSYS:	Jala Samvardhane Yojana Sangha
LPCD:	Litres Per Capita Per Day
MWS:	Mini Water Supply
NFHS:	National Family Health Survey
NGP:	Nirmal Gram Puraskar
NGY:	Nirmala Grama Yojana
NREGA:	National Rural Employment Guarantee Act
NRWSP:	National Rural Water Supply Programme
OD:	Open Defecation
PAC:	Public Affairs Centre
PAHELI:	People's Audit on Health, Education and Livelihood
PPM:	Parts Per Million
PPS:	Population Proportionate to Size
PRI:	Panchayat Raj Institution
PWS:	Piped Water Supply
RDPR:	Rural Development and Panchayat Raj Department
RGDWM:	Rajiv Gandhi Drinking Water Mission
RTI:	Right to Information Act
RWH:	Rain Water Harvesting
SGP:	Sajal Gram Puraskar
SGRY:	Sampoorna Grameena Rozgar Yojana
SGSY:	Swarna Jayanthi Gram Swarozgar Yojana
SGY:	Swachha Grama Yojane
SHG:	Self Help Groups
SQL:	Structural Query Language
TMC:	Thousand Million Cubic feet

KARNATAKA



Map not to scale

Sub-region 1 (SR1): Bagalkot, Belgaum, Bellary, Bijapur, Bidar, Dharwad, Gadag, Gulbarga, Haveri, Koppal, Raichur

Sub-region 2 (SR2): Bangalore Rural, Chikballapur, Chitradurga, Davanagere, Kolar, Ramanagram, Tumkur

Sub-region 3(SR3): Chamarajanagar, Mandya, Mysore, Hassan

Sub-region 4 (SR4): Chikkamaglur, Kodagu, Shimoga, Dakshina Kannada, Udupi, Uttara Kannada

ABOUT ASHWAS

ASHWAS (A Survey of Household Water And Sanitation) is a participatory survey conducted by Arghyam to ascertain the status of household water and sanitation in rural Karnataka from a citizen perspective. In addition to being an acronym, the name ASHWAS was chosen because it also means “reassurance”. In keeping with Arghyam's core philosophy of equity and sustainability, the survey takes a closer look at the factors that impact these two principles.

These are some of the objectives of the survey:

- To collect and analyze perceptions of the water and sanitation situation.
- To reflect back to the people the public understanding of the situation from the micro level at the household to the statewide picture.
- To catalyze a process of consultation at all levels.
- To deepen the discourse on what issues need to be addressed and how.
- To strengthen the capacity and skill of individuals and institutions to use a survey as a tool to enhance the understanding of a problem, and to help people to see themselves as part of a solution.
- To address the information needs of policy makers to enable a pro active response to emerging issues.

The themes for the questionnaire were informed by concerns that have evolved through the actual work of Arghyam and its many partner organisations who have decades of experience between them. ASHWAS was conducted by more than 300 people over 40 days, between December 2008 and January 2009. The survey covered 17,200 households in 172 gram panchayats across 28 districts of the state of Karnataka. On an average, 100 households were surveyed in each gram panchayat. In addition, separate information was collected from gram panchayat officials and village elders.

A scientific method of sampling and data collection was adopted and many checks and balances were created to ensure a high degree of reliability. The methodology is explained later in the report.

The ASHWAS survey comes at a time when civil society and policy makers are beginning to appreciate the positive impact of citizens' audits and assessments. It allows for a nuanced understanding of people's satisfaction levels about public services, their survival or coping strategies and the quality they can expect from public service providers. One special feature of this survey is that it was highly interactive. Villagers were encouraged to test the quality of the water being used from different sources. Water quality testing

kits were provided which quickly delivered an indicative result on parameters such as nitrates, fluoride and bacteriological contamination.

The output from ASHWAS provides quantitative feedback on user perceptions of services, information on status, quality, adequacy, reliability and efficiency of water and sanitation services. It also highlights key areas where the solutions are clearly indicated in the definition of the problem itself, such as the issue of open defecation.

The output of the survey includes:

1. Gram Panchayat Report custom made in Kannada for each sampled GP. The report card is designed for easy usage by both the gram panchayat officials and the village community. The report highlights issues specific to the GP and, where possible, suggests best practices and includes possible solutions.

2. A State Report inclusive of reports on 28 districts intended for the use of district- and state-level governments, research institutions, advocacy organizations, and citizens of Karnataka.

This complex year-long effort, the first such attempt by us has been a rich learning experience. Although surveys can achieve a limited amount, we hope that ASHWAS, if conducted on a regular basis with broad participation, will empower citizens, gram panchayats and the state-level administration to engage in a process of appropriate decision-making to enhance the access of safe, sustainable water and sanitation for all people across Karnataka.

EXECUTIVE SUMMARY

Introduction

The ASHWAS survey is a process of enquiry about the water, sanitation and hygiene situation in rural Karnataka. It has a number of unusual features which distinguish it from more conventional surveys.

- Firstly, it is a citizen's survey in that it places a high premium on the perceptions of the citizens of rural Karnataka.
- Secondly, an important objective of the survey is to go beyond mere extraction of information to the development of a layered analytical process to assess the water, sanitation and hygiene situation at gram panchayat (GP), district and state levels.
- Thirdly, it aims to make the information and findings from the survey available in the form of separate and targeted reports that can be useful to GPs in particular, but also to citizens and the government at district and state levels.
- Finally, far from claiming to be the last word on the subject, the objective of the survey and accompanying reports is to begin a wider process of engagement. In addition to GPs, the findings are to be made available to a larger audience — communities, service providers, policy makers and other stakeholders, to evolve a broad consultative process.

Arghyam sees itself as a catalyst in this deeper public discourse. It is hoped that the survey will go beyond assessments of pure coverage and lead to a greater appreciation of problems of exclusion of the poor and the vulnerable with a particular focus on gender issues.

Methodology

To ensure that the survey was comprehensive, it was conducted over 28 of the 29 districts (leaving out Bangalore urban) in Karnataka covering 17,200 households across 86 talukas in 172 GPs. The population proportionate to size (PPS) technique was used to select representative, sample households and to ensure that data could be extrapolated over the entire state. Partnerships with 15 NGOs located across the state, who then conducted the survey, made it a broadly participative exercise.

Several methods were used to capture different facets of the WATSAN situation. Questionnaires at household, Gram Panchayat and village levels; water quality tests conducted at 10-40 sources per GP; and photographs to capture visual images (and to serve as a quality monitoring mechanism) were the key tools. Survey teams also drew village maps for each GP, highlighting water sources, open defecation areas, and other potential sources of contamination such as wastewater flows close to the water source. A total of 300 members of field staff in 42 teams of one supervisor and four team members completed the survey in 40 days. Quality monitoring mechanisms included supervisors scrutinizing 100% of household questionnaires; survey coordinators randomly checking 20% of the questionnaires; random telephone calls to surveyors & GPs; field visits, back checks and photographs.

The outputs from the survey provide quantitative representation of user perceptions of services, information on status, quality, adequacy and efficiency of services, and likely solutions. They include a GP report especially created for each GP, a combined state and districts report intended for district- and state-level governments, research institutions, and advocacy organizations.

Findings

The findings of the survey have been presented below in four broad categories: water, sanitation, health & hygiene and governance with a special section to highlight issues of equity, vulnerability and gender.

Water

If reliability, access and quality are the issues of most concern to citizens then the survey presents a mixed picture with some aspects calling for concerted action.

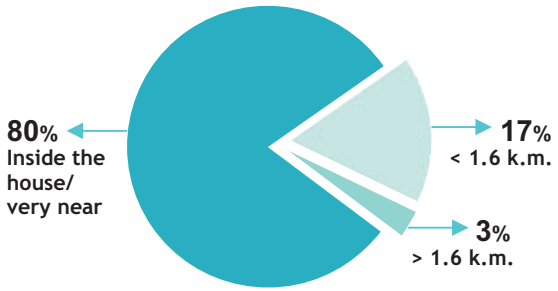
Reliability

Although overall 78% reported availability of drinking water throughout the year, a large proportion of the remainder procure water from unprotected sources during difficult periods. Of those reporting availability, a significant number depend on their own open wells (especially in the western sub-region of the state) or on two separate sources.

With 87% of households dependent on groundwater, erratic and infrequent supply especially in the summer months, has meant that families have to resort to extra storage of water. Twenty six percent of the population stores water for three days or more. A high proportion of families own stall-fed livestock. This leads to an extra demand for stored water.

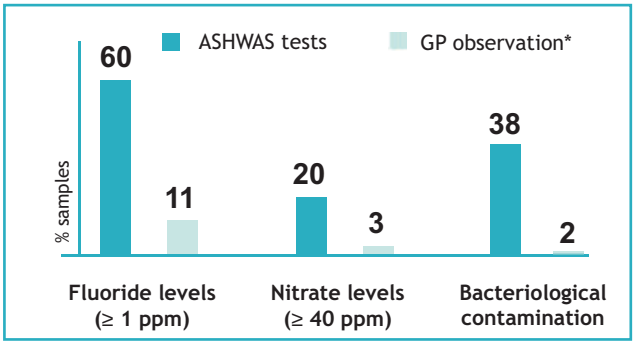
Access

While most people (80%) in the state use water sources inside or very close to their homes, there are significant regional variations. In terms of time taken to collect water, 41% of households take between 30 and 60 minutes per day.



Quality

Water quality in the state presents an alarming picture: 60% of sources tested exceeded 1ppm (the Bureau of Indian Standards norm on permissible fluoride), 20% of sources tested positive for nitrate contamination, while 38% had bacteriological contamination. Additionally, 36% of hand pumps tested had high nitrate levels. Clearly this is a situation which needs urgent and undivided attention.

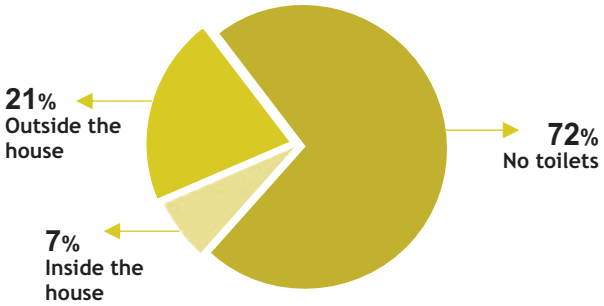


Sanitation

The sanitation situation in Karnataka is dismal on almost every count both in general and in facilities for children such as schools and anganwadis. Overall, village sanitation and wastewater disposal are issues of concern.

Toilets in households

In rural Karnataka, 72% of the people defecate in the open with the figure being as high as 98% in Raichur district. Many village maps show open defecation areas dangerously close to drinking water sources. That this practice is not one of choice can be inferred from the finding that 80% of those who practice open defecation say they find it inconvenient. Lack of finance is stated as the primary reason for not building toilets.



Toilets in schools and anganwadis

While a majority of schools had toilets (82% of GPs reported the presence of toilets in **all** schools), ASHWAS surveyors observed that most toilets are defunct. Only 50% of GPs reported the presence of toilets in all anganwadis

Domestic wastewater disposal

While perhaps not as alarming a problem as open defecation, the situation is bad enough. Only 42% of households have access to drains in front of their houses, and 50% of drains are not cleaned for 6 months or longer.

Health and Hygiene

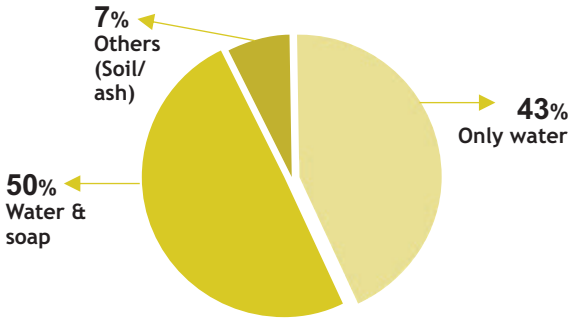
Reported incidence of diseases

The reported incidence of chikungunya at 20% is worrying and its prevalence in the coastal districts is a matter of concern as a serious public health issue.

Surprisingly, the reported incidence of diarrhea is lower at around 10%. A higher figure might have been expected given the sanitation situation. Both these merit further investigation.

Personal hygiene

Given the established link between hand washing and prevention of disease, it is disappointing that only 50% of respondents claim to use soap while washing their hands after defecation. Clearly both sanitation and hygiene would benefit from a more effective public health communication campaign.



Menstrual hygiene

Since 94% of women use cloth for protection, there is a high risk of fungal and other infections. Lack of awareness combined with the lack of affordable sanitary towels and the complete absence of any facilities for adolescent girls at schools call for remedial measures beginning with an acknowledgment of the seriousness of the issue.

Governance

While a high percentage of respondents (70%) reported that the GP solved their water problems, there are serious delays in repairing water facilities with 77% reporting that it took 3 days or more.

An equally serious situation is the lack of awareness and attention to water testing. The difference between GP perception of quality and actual results is unacceptably high.

Differences between GP claims of public toilet availability (30%) and the responses from individual households about their use (2%) is an indication of the lack of attention to sanitation issues at the GP level.

Equity, Vulnerability and Gender

The results of the survey consistently confirm that households with lower income have poorer access to safe water sources (eg 15% of low income households have access to piped water connections as against 33% among high income households). The situation with respect to sanitation is worse. For example, only 13% of low income households have access to toilets as against 56% of high income households.

The burden of poverty is also apparent in regional disparities, with open defection rates in Northern Karnataka approaching 90% against a state average of 72%.

Little attention has been paid to the needs of the disabled and the aged in terms of access especially with regard to sanitation facilities.

Apart from the almost complete absence of attention to menstrual hygiene, it is distressing that there seems to be little change in the burden of women collecting water, with 81% of water collectors being women and girls. Not much seems to have changed in the last couple of decades.

Advocacy and Communication

The survey findings will be presented to a diverse audience as well as to the media during the launch of the ASHWAS report. Subsequently, the findings will also be shared with all GPs in the ASHWAS sample through the GP reports to equip them with structured information about their specific issues.

Conclusion

ASHWAS, with its comprehensive sweep, based on people's perceptions and on direct observation, has led to some broad conclusions.

Some of these conclusions reinforce widely held beliefs. Others are new and more nuanced. The broader picture speaks of a water delivery system which has brought household water supply facilities close to a large percentage of the rural population.

Yet there is no room for complacence, especially when the water and sanitation space is being increasingly informed by a nationwide debate on the human rights perspective on water. Serious concerns remain regarding the reliability of supply, the sustainability of the primary water source and on the quality of water accessed by people. Importantly, the survey reaffirms the alarming sanitation and hygiene situation with its inevitable impacts on public health.

METHODOLOGY

Literature Review and Expert Opinion

To prepare for the ASHWAS study, the research team reviewed literature already available in the broader area of public services including water, sanitation, health and education. The team consulted senior research experts (including survey experts) and knowledgeable authorities in the area of water and sanitation and sought their advice on available resources as well as various aspects of the study. This helped the team design a survey that would build on previous efforts instead of re-inventing the wheel.

Literature review: The literature review involved studying past surveys in the sphere. Mainly been conducted by the government, various citizen groups and non-governmental organizations (NGOs), these have involved different goals and adopted a variety of approaches. *[See Annexure A: List of Surveys]*

For example, surveys conducted by non-profit organizations such as Pratham's *Annual Status of Education Report (ASER)*[1] and *People's Audit on Health, Education and Livelihood (PAHELI)* tend to be people-centric efforts with limited themes, simple tools and few questions. They usually adopt an activity-based approach and generate reports that do not rate or score based on parameters.

On the other hand, Public Affairs Centre (PAC) follows a more traditional, rigorous survey method, which includes household questionnaires, interviews with Gram Panchayat (GP) members and focused group discussions. They rate public services against benchmarks and have pioneered the 'report card' concept for public services by terming their outputs 'Citizen Report Cards'.

The government or other agencies like the World Bank have conducted surveys aimed at understanding practical realities such as 'willingness to pay' or the success rate of specific schemes. In these cases, research design was more detailed and covered many households (HH) as well as the local service providers. Most were not people-centric or activity-based.

Careful examination of a variety of such surveys helped the team to arrive at the research design and approach suitable to the specific goals of this study.

Expert opinion: The ASHWAS team consulted experts from government agencies like the Rajiv Gandhi Drinking Water Mission (RGDWM), the Total Sanitation Campaign (TSC), and the Rural Development and Panchayat Raj (RDPR) department of the government of Karnataka to gain a deeper understanding about water, sanitation and related issues. The team also consulted NGOs such as Pratham and Akshara Foundation to understand different survey methodologies.

[1] http://www.pratham.org
http://www.aksharafoundation.org

Arghyam partnered with 15 different NGOs and citizen groups across Karnataka to initiate a participatory survey.

The team also consulted market research groups like Feedback Consultants for their advice on sample selection procedure, questionnaire design, analysis structure and research tools.

Partnerships, Team Structure and Training

Arghyam was keen on a people-centric, activity-based survey so the research design was primarily based on the PAHELI and ASER studies. However, to arrive at more measurable outcomes, the team also adopted elements from the Public Affairs Centre (PAC) report card approach. Many issues that concern the Rajiv Gandhi Drinking Water Mission (RGDWM) and the Total Sanitation Campaign (TSC) were incorporated in the research design.

Partnerships: Arghyam partnered with PAC to benefit from their vast experience in conducting similar studies. Instead of outsourcing the study to a market research organization, Arghyam partnered with 15 different NGOs and citizen groups across Karnataka to initiate a participatory survey.

The partner organizations co-ordinated the survey at the local level. Each local partner covered one-three districts depending on their sphere of influence and developed a districtwise plan including team details, dates, logistics and budgets to help smoothen the process.

Team structure: One of Argyham's main objectives was to work with people at the grassroots. With the help of local partners, we engaged surveyors from self help groups (SHGs), village level institutions and local citizen groups.

Each survey team consisted of one-two coordinators/trainers from the partner organization who were responsible for managing and implementing the survey at their level, and two-four teams of field surveyors. Each of these smaller teams, in turn, comprised one supervisor and four surveyors, two of whom were mandatorily women.

The entire ASHWAS team comprised approximately 30 coordinators, 45 supervisors and 200 surveyors working across Karnataka and the entire team at Arghyam.

Training: An initial series of trainings for the coordinators/trainers was followed by eight regional training sessions across Karnataka. Each session consisted of four days of intense, residential training and focused on improving the team's understanding of Water and Sanitation issues (WATSAN).

Special training modules were developed in partnership with Outreach, a Bangalore-based resource and training organization. The sessions were jointly conducted by Arghyam, PAC and Outreach and included extensive discussions on questionnaires, village mapping and household sample selection, practical demonstrations on photography and water quality testing, role plays, and field visits.

Sample Size: Selection and Reliability

ASHWAS covered 17,200 households across 28 districts. It included 172 gram panchayats in 86 talukas of Karnataka

The ASHWAS survey covered 28 of the 29 districts in Karnataka, with the exception of Bangalore urban. Based on advice from experts and the required survey outputs (report cards at the GP and state level), it was decided that the survey would cover 17,200 households across 86 talukas in 172 GPs across Karnataka. The population proportionate to size (PPS) technique was used to select households that would make up the sample size.

- **Selection of talukas:** There are 172 talukas across 28 districts in Karnataka. Fifty percent of these (86 talukas) were selected for the survey using the systematic random sampling technique with a random start.

- **Selection of GPs:** In each selected taluka, two GPs were chosen, again using the systematic random sampling technique with a random start.

- **Selection of villages:** All villages (including hamlets) were selected in each GP.

- **Allocation of households per village:** The household sample size covered 100 households per GP, spread across all villages and hamlets in that GP. The PPS technique was again used to distribute households across villages based on the size of each village's population and how much it contributed to the total population of the GP.

- **Selection of households:** Households were selected by following the process of village transect[2] and making a map. This exercise helped list all households in a village based on locality. Households were then selected from all localities to ensure representation of all sections of society. The number of households per locality was proportional to the total number of households within the locality. The interval was determined on the basis of the number of households and the right hand rule was used to select individual houses. In case a selected household was unoccupied, the neighbouring household on either side was selected instead.

- **Sources of data:** All data for the sample was taken from the Rural Development and Panchayat Raj Department, Government of Karnataka (RDPR) website[3] for the financial year 2003-2004.

- **Reliability of estimates:** The sample size was determined by keeping the error margin of estimates at 5% and at 95% confidence level. The sample size is adequate at state, district and GP levels. Overall, the confidence level was at 95% dipping to 90% in rare cases. *[See Annexure 2: Sample Selection.]* The team was careful to ensure that the sample size was a good representation of the population and the data could be extrapolated for the entire state.

[2] Transect is a process in which the team walks around the village and draws the map while doing so.

[3] http://nitpu3.kar.nic.in/samanyamahiti/smenglish_0304/default.html

Research Design and Approach

The ASHWAS survey captured information through a combination of tools, instead of merely using the traditional household questionnaire. To generate comprehensive information and statistics, the survey used the following research tools:

- Questionnaires
  - Household questionnaire
  - GP questionnaire
  - Village information sheet
- Water quality tests
- Village transect and village map
- Observation sheet
- Photographs

Questionnaires: The questionnaires went through many iterations based on thorough research into areas most critical to people at the ground level. Preparatory research included focused group discussions, role plays and field trials of questions. This helped to create closed-ended queries with pre-coded response options. A few open-ended questions were also included to delve deeper into certain queries.

Three sets of questionnaires were developed keeping different respondents in mind.

a) The **household questionnaire** was designed to cover most aspects of water, sanitation, health, hygiene, finances and grievances including people's satisfaction with GP-level services.

b) The **GP questionnaire** consisted of two parts: the first part aimed at gathering information from official GP-level documents while the second part was a set of questions directed at GP members.

C) The **village information sheet** covered common village-level issues such as water sources or drainage. This information was gathered through group interviews.

Each questionnaire began with an introductory section on demographic details of the household, village or GP. Triangulation of different questionnaire types strengthened the findings with facts and testimonies that helped identify patterns and errors within data.

All interviews were conducted in Kannada and questionnaires were written in Kannada. *[See Annexure 3: Questionnaires.]*

Water quality tests: To make the survey people-centric and simultaneously create awareness about WATSAN issues, the team conducted water tests with field water quality test kits. Water was tested for fluoride / nitrate levels and

Bacterial contamination using methods approved by UNICEF and recommended by the National Rural Drinking Water Quality Surveillance and Monitoring Programme.

The water quality test kit for fluoride and nitrate gave immediate results based on change of colour. The results for bacteriological contamination used the H2S strip technique and yielded results after 24-36 hours. The tests were indicative and in case of contaminant detection, people were directed to go for further testing to a water quality laboratory. This survey tool proved hugely successful in generating enthusiasm among villagers and surveyors and helped collect data on the quality of water. *[See Annexure 4: Water Quality Tests.]*

Village transect and map, observation sheets and photographs: Survey teams along with local people participated in the construction of a village map after a transect. The purpose was two- fold:

a) Household listing was done via the transect to select houses for the survey and ensure that all localities were proportionally covered.

b) A rudimentary village map was created to mark various WATSAN-related infrastructure and locations of houses and roads. This helped the team map water against sanitation and identify problems related to contamination, poor drainage or hygiene issues.

During the process, the team also noted other important observations in their observation sheets and these went into the final report cards as additional inputs. Photographs were taken of different WATSAN-related infrastructure such as public stand posts and hand pumps across the villages. These supplemented the data with visual evidence and improved analysis.

Field Survey

The field survey took place between December 2008 and January 2009. Forty five supervisors and 200 surveyors spent 4 days per GP carrying out all survey activities.

Supervisors were responsible for allocating households to each surveyor based on the sampling procedure, interviewing GP members, participating in village mapping and conducting water quality tests. Surveyors were mainly responsible for conducting the household interviews. They also had to participate in village mapping and water quality testing.

The entire process was managed by our local NGO partners through their survey coordinators.

To make the survey people-centric and create awareness on WATSAN issues, survey teams conducted water tests with field water quality test kits. Water was tested for three parameters — fluoride, nitrate and bacterial contamination

The ASHWAS survey adopted rigorous quality monitoring mechanisms to ensure that data obtained was accurate and inclusive. At least 30% of the GPs undertaken by each partner NGO were monitored.

Quality Monitoring

The ASHWAS survey adopted rigorous quality monitoring mechanisms to ensure that data obtained was accurate and inclusive. These mechanisms aimed at ensuring that surveyors conducted surveys truthfully and without bias, all villages in assigned GPs were surveyed, the sampling process for household selection was followed strictly, and teams carried out all survey activities in each GP.

Quality monitoring helped keep survey teams alert and watchful about the quality of data they were collecting. At least 30% of the GPs undertaken by each partner NGO were monitored and all survey teams were checked using at least one of the quality mechanisms. This monitoring exercise was undertaken in three ways:

- Random telephone calls to supervisors and surveyors to check if they were adhering to the survey plan and following sample methodology.

- Field visits by Arghyam and PAC monitors to check questionnaires and talk to GP members. Skip questions and missing or wrong entries were specifically addressed.

- Back checks were conducted on 10% of GPs from the total sample by cross-checking responses with the individual householders. Apart from Arghyam and PAC's active participation in monitoring, the supervisors scrutinized 100% of the household questionnaires while survey coordinators randomly checked 20% of the questionnaires.

Data Entry and Error Tracking

Data entry: There were two main objectives with regard to gathering data for analysis: to modularize the data so that specific details could be extracted easily for analysis and to minimize errors during data entry.

Data included responses to questionnaires and results of water quality tests. Questionnaires were routed through a data entry vendor who returned raw data in spreadsheet format. All data entered could answer a certain query in isolation or different queries in combination.

To make sure that data entered in each section was accurate, column-level validations were established. Having anticipated a finite set of answers for a given question (and column), it was ensured that only data that matched certain criteria was entered. The process of setting validation for over 1000 columns helped immensely in reducing data entry errors.

Error tracking: Two techniques were used to track errors in data.

a) Error checking by using queries for all skip questions and a few compulsory questions, and by using codes. By running these queries, all mistakes were recorded according to questionnaire number.

b) Identifying the level at which errors had been committed. This was done by manually checking questionnaires and spreadsheets against the suspect data. If the error had taken place at the data entry operator's level, the soft copy in the spreadsheet was corrected before analysis. Such errors were minimal (less than 1%) so the vendor was not required to re-enter or correct the data at his end. If there was an error at the surveyor's level, then following the 5% margin of error, any data above that margin for the specific questions was discarded. Error levels were usually below the established 5% margin for each question.

Data was analyzed through the lens of equity to understand how economically deprived, physically disadvantaged and minority communities fare in terms of WATSAN facilities.

Framework for Analysis

Analysis was carried out at the state, district and GP levels. Estimates were recorded at the state level to arrive at an overview of WATSAN issues in Karnataka. At the district level, the analysis provided an overview of each district and compared districts in terms of performance. At the lowest level, estimations were boiled down to each GP to give a clear picture of specific water, sanitation, infrastructure and other problems at that level.

The analysis was divided into sections on water, sustainability, sanitation, health, hygiene, equity, finances, grievances and satisfaction levels including demands of citizens. Each section was broken down to a set of indicators. For example, indicators like access to water, frequency of supply, quality of supply and quantity of supply were included in the section on water. Sectioning questions during data entry helped streamline this process. All indicators gave a direct answer but to understand how they fared, each indicator was clubbed under the specific section and then rated accordingly.

Selective regional groupings of districts were analyzed to understand how different regions within Karnataka differ in terms of water and sanitation issues. Data was also analyzed through the lens of equity to shine a light on how economically deprived, physically disadvantaged and minority communities fare in terms of WATSAN facilities. In addition, a comparative analysis was carried out with other reports on sustainability, public health and infrastructure.

Templates for GP, district and state

The GP report covers water situation, sanitation & hygiene, governance, grievance & finances, citizen demands, water quality test results and village map (with an identifiable issue within the map). GPs are also rated against their neighbours within the sample.

State- and district-level report cards look at WATSAN from the perspective of public infrastructure, equity, sustainability, public health, WATSAN administrative infrastructure and finances. Levels of satisfaction and citizen’s demands are also covered.

Data Collation and Scoring

The data flowed through a series of processes before analysis.

Collation: Data was entered into spreadsheets. This raw data was processed using an SQL database and a querying ability was built on it. The first set of queries resulted in quantitative analysis which was used to infer qualitative aspects as well. Then, queries based on the indicators mentioned above were developed for GP, district- and state-level outputs.

Scoring: The next step in the analysis was to develop a score based on the indicators. The score was determined for each indicator using the sum of the sub-indicators. Due to the lack of a benchmark, sub-indicators were converted to a percentage. The sub-indicator was computed by classifying potential answers as 'favourable' or 'unfavourable'. Favourable responses for questions were weighted against the total number of responses and summed up. The purpose of the score was to provide a basis for indication and comparison rather than to provide any kind of ranking[4].

Outputs

After quantitative and qualitative analysis, all data resulted in three sets of outputs: GP report cards for all 172 sampled GPs *[See Annexure 5: The GP report card];* 28 district report cards; and a state report card. The state and district report cards have been compiled in this document while the individual GP report cards have been sent to members of each GP. This document also contains an additional section on specific important issues.

[4] For details on how the score has been derived, please visit www.ashwas.indiawaterportal.org

KARNATAKA: AN INTRODUCTION

It is important to put the findings of ASHWAS in the context of Karnataka. This chapter introduces Karnataka's geo-climatic and demographic characteristics and contains a brief on water resources, problems and WATSAN services.

Overview

Located on the western edge of the Deccan plateau, Karnataka is part of two agroclimatic zones: the southern plateau and hills (Zone X) and the west coast plains and ghats (Zone XII). These zones are defined on the basis of water deficit or surplus. Zone X is endowed with mountains, vegetation, and lots of rain while Zone XII is an arid region with low rainfall. The state experiences typical tropical climate comprising three distinct seasons: summer, monsoon and winter.

The total population of Karnataka is approximately five crore (52,850,562) of which 69% inhabit rural areas. One-fifth of the population belongs to the Scheduled Caste / Scheduled Tribe (SC/ST) category. Poverty is concentrated chiefly in the northern districts where 48 talukas are in an abject condition. The population below poverty line in a northern district like Bidar is high at 56.06% while in Dakshina Kannada, it is relatively much lower at 8.91%.

The state economy largely depends on agriculture with about 71% of the population engaged in farming. Karnataka has become a global economic player because of the proliferation of various industries, especially in the fields of electronics and software. Economic benefits and overall development is skewed in favour of urban areas and rural Karnataka is still under-developed in many ways. Based on indicators such as human development, health, income and governance, Karnataka is above the national average but there is a huge imbalance between different regions within the state.

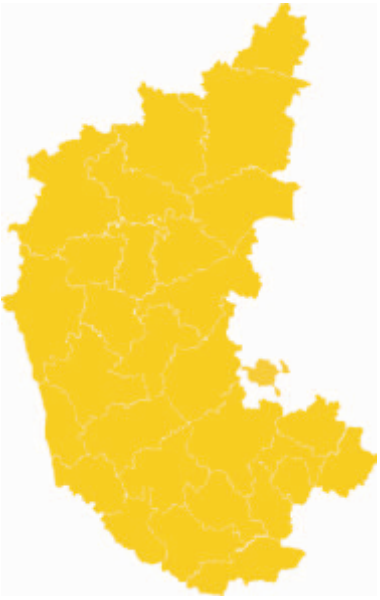
Karnataka at a glance

- Area: 1,91,791 square kilometers (sq.kms)
- Districts: 29
- Talukas: 172
- Population: 52,850,562
- Density: 235 persons per sq.km
- Literacy: 67%
- Population below poverty line: 20%
- Infant mortality rate: 58%
- Rank in Human Development Index: 7 within India
- Average annual rainfall: 1139 mm
- Water resources: 7663 thousand million cubic feet (TMC) per year in 7 river basins

Water: Sources and Demand

The annual average rainfall in Karnataka is 1139 millimeters (mm) and ranges from 562 mm to 4119 mm. In Bijapur, Raichur, Bellary and the southern half of Gulbarga, rainfall is lowest varying from 500 to 600 mm. It increases significantly in the western parts of the state and is at its highest in the coastal belt.

These rains replenish seven river basins in Karnataka with 7663 TMC of water. Despite adequate rainfall, distributional discrepancies have made water a scarce resource. Estimated available groundwater is 485 TMC but its distribution and use is not uniform. As a result, 90% of the water supply in rural areas is sourced from groundwater. It is projected that household water demand will grow by 58% by the year 2025.



Water is a scarce resource because of depletion and degradation. The quantity of water available is regularly depleting due to many causes including:

- Increasing cross-sectoral competition between agricultural, industrial and domestic requirements for a finite resource
- Poor quality of water i.e. high levels of fluoride, nitrate, iron or brackishness. *[See Table 1: Water Quality]*
- Failure of rainfall, catchment degradation and deterioration of traditional water sources

Table 1: Water Quality

Type of problem	No of habitations affected
Fluoride	5,838
Nitrate	4,077
Iron	6,633
Brackishness	4,460
Total	**21,008**

Source: RDPR Document, 2003

The Karnataka Water Policy 2002 emphasized the seriousness of water scarcity and the urgent need to address it. Water sources are not sustainable. Surface water is increasingly polluted and groundwater is depleted and contaminated. The Mines and Geology Department of Karnataka has identified 56 talukas in the state, where the rate of extraction is higher than the rate of recharge. Of these, 98% are in southern Karnataka. Forty three talukas fall in the grey-dark zone category, and even many of those in the white category have contamination issues which makes the water unfit for consumption.

There are problems of excess fluoride, iron, nitrate or brackishness in water. Household waste, open defecation, industrial and agricultural waste runoff is aggravating the problem.

WATSAN: The Current Situation

In rural Karnataka, water supply is more accessible than sanitation services. Potable drinking water in rural areas is usually handled by GPs or government departments and taken mostly from borewells fitted with hand pumps, mini water supply and piped water supply which the United Nations (UN) describe as 'improved sources'. Under some schemes, surface water like ponds and neighbouring rivers are also tapped. People also collect water themselves from private borewells or open wells, or fetch water from surface water bodies. The UN terms these 'unimproved sources'.

Karnataka is the only state to allocate 55 litres per capita per day (lpcd) for drinking and domestic use in rural areas. The prescribed norm by the Rajiv Gandhi Drinking Water Mission (RGDWM) is 40 lpcd.

The biggest challenge is the quality of water. The government has initiated the distribution of water quality test kits at the GP level but these remain under-used because many do not know how to use the kits. Too much dependency on groundwater is also a major challenge. The problem is more acute in drought-prone districts in northern and eastern Karnataka.

The sanitation situation is pitiable in Karnataka and a major part of the rural population practice open defecation. There are few community toilets and lack of drainage makes village streets slushy with wastewater. The situation is exacerbated during the monsoons with the increased risk of water-borne diseases. Careless disposal of garbage, compost pits built close to houses, and stagnant pools of wastewater provide ample breeding ground for mosquitoes. Karnataka suffered near epidemic levels of chikungunya during 2007-08.

WATSAN institutions and finances

There are several schemes in the state whose primary objective is to supply drinking water and/or build toilets. The Rural Development and Panchayat Raj Department (RDPR) located in Bangalore is responsible for driving most of these. At the local level, schemes are implemented and maintained by rural Panchayat Raj institutions such as the Zilla Panchayat, Taluka Panchayat and Gram Panchayat . *[See Table 2: Institutional roles for WATSAN]*

In 2007-08, the state spent approximately Rs 829 crore on WATSAN through various schemes. The spend on water was Rs 684 crore while Rs 145 crore was spent on improving sanitation facilities.

Major WATSAN Schemes in Karnataka

- Swachha Gram Yojana
- Nirmal Gram Puraskar
- Total Sanitation Campaign (TSC)
- Sachetena
- Suvarna Jala
- Swajaldhara
- Jal Nirmal
- ARWSP/National Rural Water Supply Programme (NRWSP)

Table 2: Institutional roles for WATSAN

Activity	Zilla Panchayat	Taluka Panchayat	Gram Panchayat
Develop water supply system	Formulate major water supply schemes Technically appraise and approve schemes proposed by taluka Panchayats (TPs) and GPs Award contracts for the execution of major schemes outside TP and GP plans Establish water testing laboratories for control of chemical and biogenic impurities	Formulate projects and seek approval for them from the Zilla Panchayat (ZP) Construct schemes within the prescribed cost limit for TPs	Identify schemes and locations, estimate cost and formulate projects through the involvement of Gram Sabhas Construct wells, tanks, toilets, drainage and village water supply schemes of its own or as assigned by the ZP or TP Periodically chlorinate open wells and treat water Ensure proper distribution of water to all households in its villages Collect water sample for testing
Monitor water supply and sanitation schemes	Monitor and supervise the progress and quality of works	Monitor and supervise progress and quality of works	Monitor implementation of schemes and report on progress
Maintain water supply and sanitation systems			Maintain drinking water and sanitation schemes, collect water charges and appoint operators

The following chapters present findings of the ASHWAS survey. They cover findings at the state level, sub-regional level and for each district. The last section — Conclusion — looks at certain key issues that need to be understood to improve WATSAN services in Karnataka, and across India.

ASHWAS FINDINGS

STATE FINDINGS

ASHWAS attempted to capture data and feedback on various aspects of WATSAN services in rural Karnataka. Besides information on different WATSAN components, ASHWAS findings include feedback on related matters like health, hygiene, awareness, and individual /household behavioral aspects.

Responses are based on questions asked at the household level unless indicated otherwise.

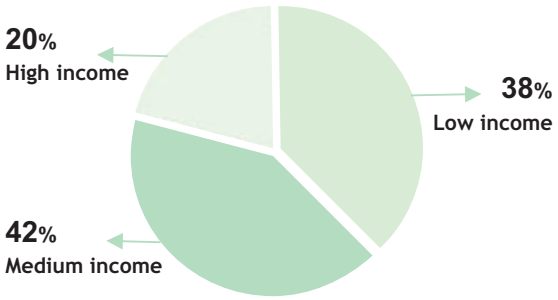
Coverage of key GP institutions in sampled GPs

in percentage

Anganwadi	100
Primary schools	100
Middle / High schools	93
Post Office	99
PHC / Sub - centre	74
Bank	55
Panchayat office	99
Industries	1

Economic classification* of respondents

Statewide



- Among the respondents, 54% have a TV, while only 19% have a radio
- 60 % of households own livestock

*Economic grouping is based on assets owned (type of house, source of cooking energy, livestock, vehicles and household electronic gadgets).

Survey sample demographics

Total population of surveyed GPs: 11,31,080

Total number of households: 2,54,712

Literacy rate: 60%

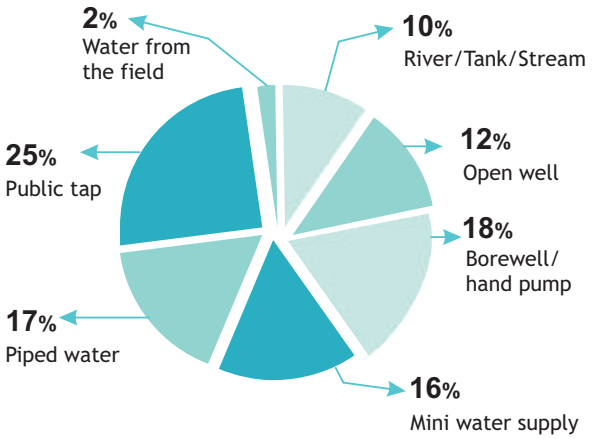
Water

Which is the main water source?

87%

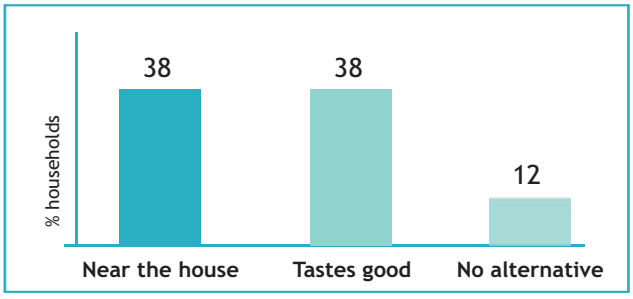
of households depend on groundwater. This dependence on groundwater is also noticeable at the regional level.

Where do people get their water from?

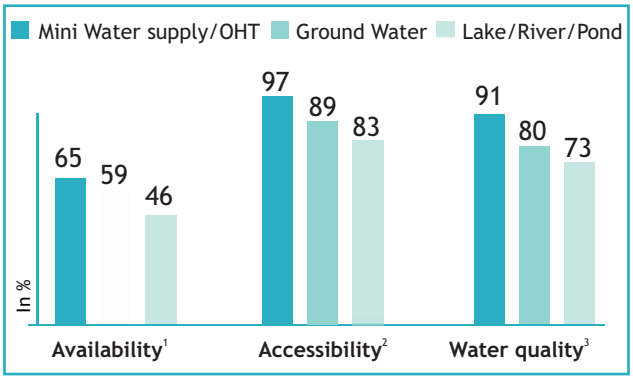


- 25% of respondents use public stand posts as their primary source of water
- Only 0.02 % of households use rainwater
- In SR4, there is a high dependence on private infrastructure in the form of open wells (38%)
- Use of open wells is highest in Udupi at 81%
- 6% of the households use water from rivers, streams or tanks for *drinking* purposes

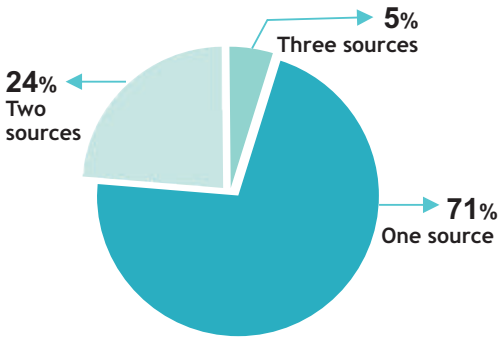
What are the reasons for people to choose this as their primary source?



Are the water sources/supply reliable?



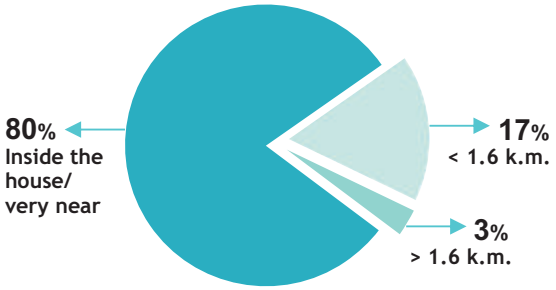
Do people have to rely on multiple water sources?



- Across the state, 24% depend on two separate sources. Often, the second source is not part of GP infrastructure
- 42 % people in Hassan depend on three sources

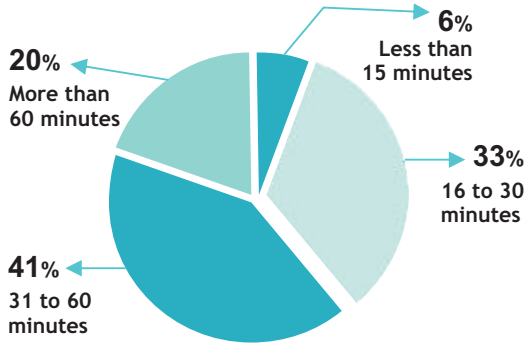
[1] Is the water availability from this source regular?
[2] Do all communities in the village use this source?
[3] Is the quality of water good?

How far do people travel to access water?



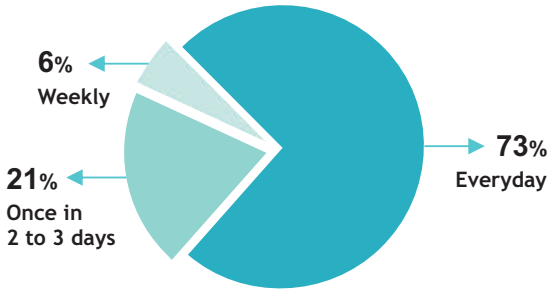
- 80% of the people access water “very near” their house
- In the northern SR1, 5% of the people still do not have access to water within prescribed norms
- In Koppal,14% have to travel more than 1.6 km to collect water

How much time do people take to collect water?



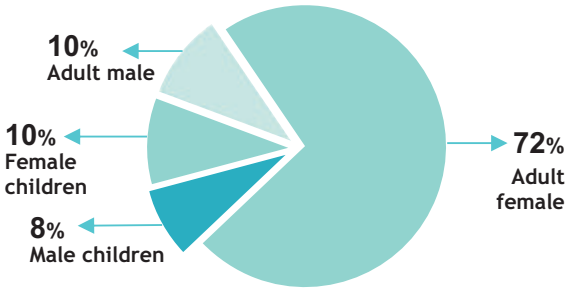
- 41% of the population takes about 30 to 60 minutes on an average to collect water

How often do people have to collect water?



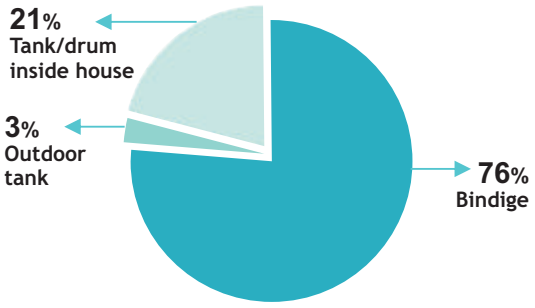
- Across the state, 73% of the people collect water every day while 6% collect water only once a week
- In SR3, 32 % collect water once in 2 to 3 days

Who collects water?



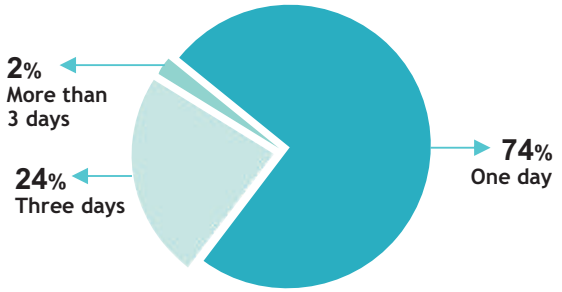
- 90% of the people collecting water are women and children

Where do people store their drinking water?



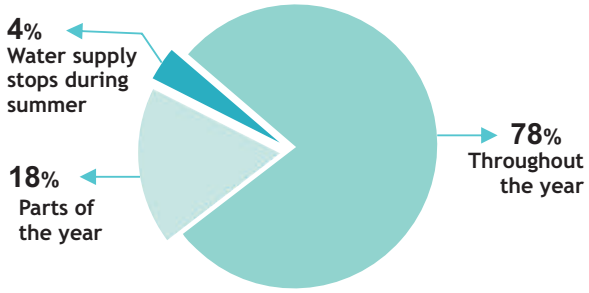
- 76% store drinking water in *bindige's* (vessels/pots) while 55% store water for non-drinking purposes in storage tanks
- 71% clean their drinking water vessels daily while 31% clean their non-drinking water vessels daily

How long do people store their drinking water?



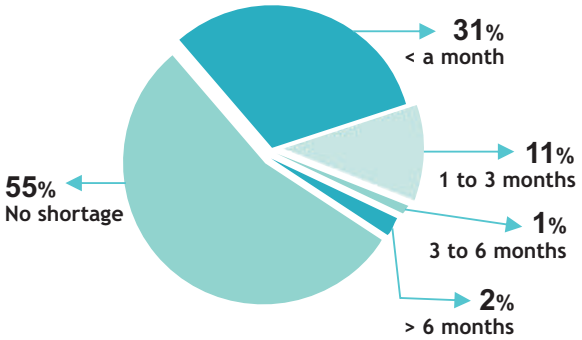
- Storage is high priority for most people with 82% of the people storing water for future use
- 37% store drinking water because of irregular water supply
- 56% in SR1 store water because the source is too far

What is the status of drinking water availability?



- 78% receive enough drinking water throughout the year while 70% receive enough water for other purposes

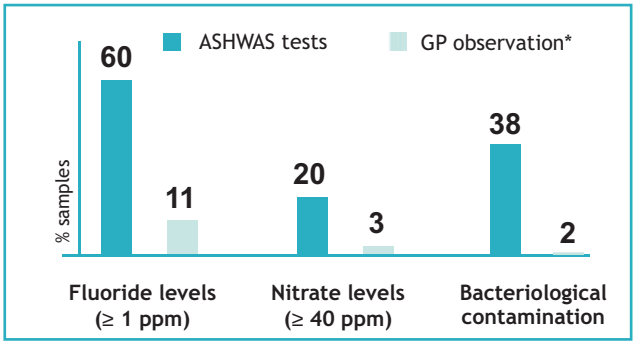
For how long did people experience water shortage during the year?



- 90% of households said they would collect from other sources in case of severe water scarcity
- 25% resort to unimproved or unprotected sources like streams, ponds and irrigation field channels

What is the quality of water in the state?

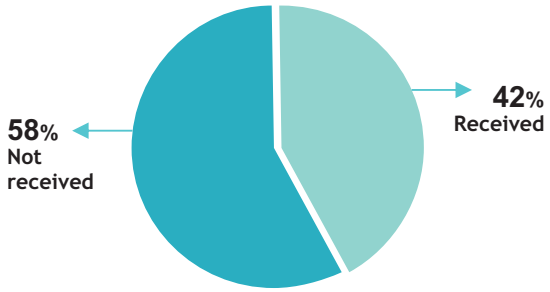
- 69% of GPs stated that the water in their GP was not contaminated
- However, water quality testing done in the survey indicated high levels of water contamination



- Even by the BIS's maximum permissible level of 1.5 ppm, 36% of sources are contaminated by fluoride
- 36% of hand pumps across the state had high nitrate levels beyond the permissible limits
- 47% of SR4 sources showed bacteriological contamination

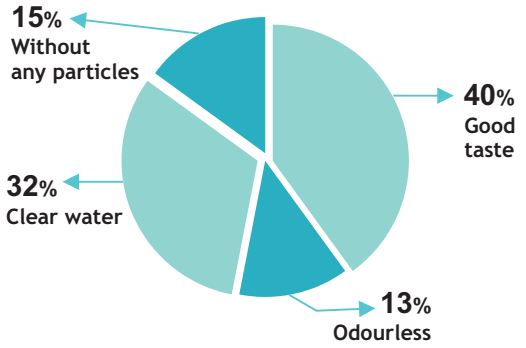
*GP observation: GPs were asked if they observed water quality problems in their water

What is the status of water quality kits distributed under the National Rural Water Quality Monitoring & Surveillance Programme (as of June 2009)?



- Only 49 % of the kits received were actually used
- Of the 35 GPs that used the water quality kits, 2 found the water to be contaminated. The samples were not sent to the district laboratory for further testing. However, the issue was discussed with the people.

What is people's perception about "good quality water"?



- 72% believe that potable water should be both clear and have a good taste but do not consider odour an important indicator
- In Kolar, water quality testing showed 96% fluoride contamination in their sampled sources. Yet, 95% of the households chose good taste as their primary indicator for water quality

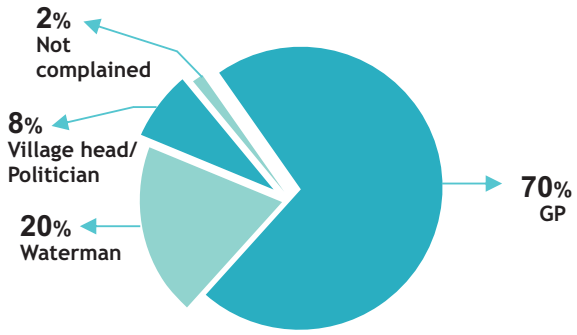
Have there been WATSAN related problems in the last one year?

34%

of the households suffered from drinking water problems.

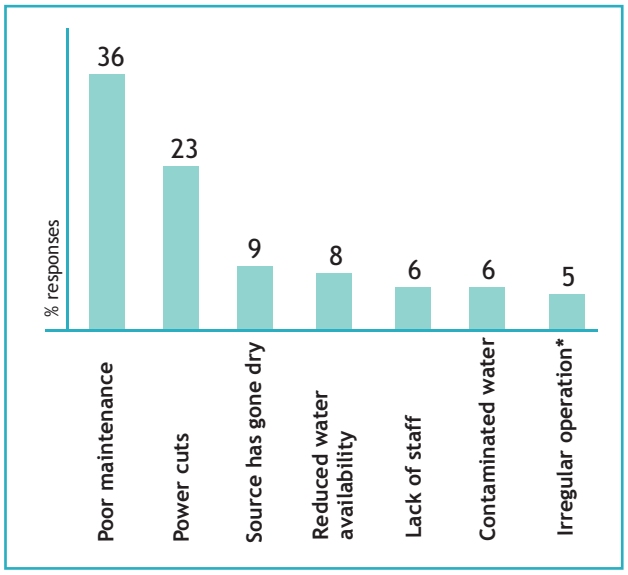
- 83% of these problems were ultimately resolved but only 23% were resolved in under 3 days

Who solves WATSAN-related problems?



- 15% of respondents did not know whom to approach for solving their water-related problems
- The waterman is sometimes approached directly by people with their grievances

What are the common causes cited by the people for their water supply disruption?

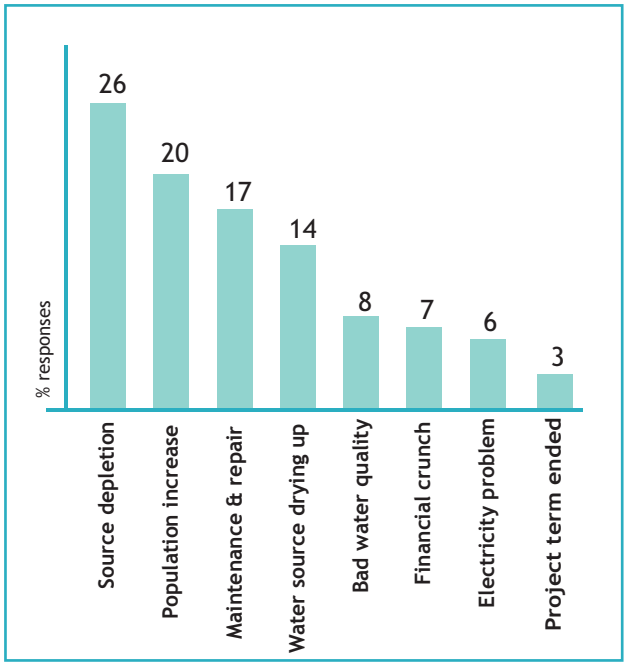


- 73% of the disruption problems were related to Operations & Maintenance (O&M)

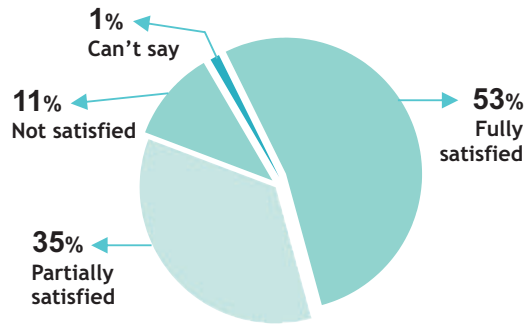
52%

of the GPs reported a water supply shortfall in their GP last year

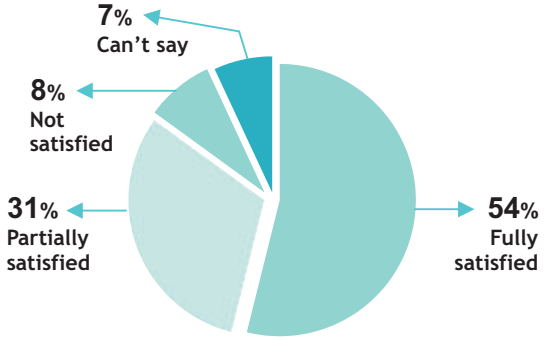
What were their reasons for the shortfall?



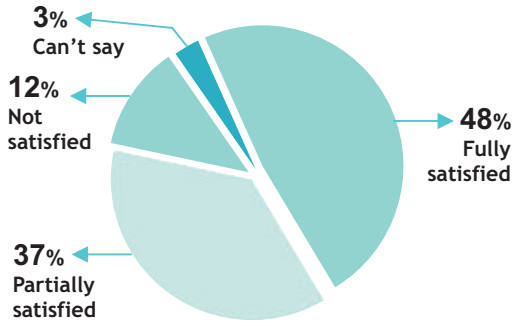
Are people satisfied with the *quantity* of water they are receiving?



Are people satisfied with the *quality* of water they are receiving?



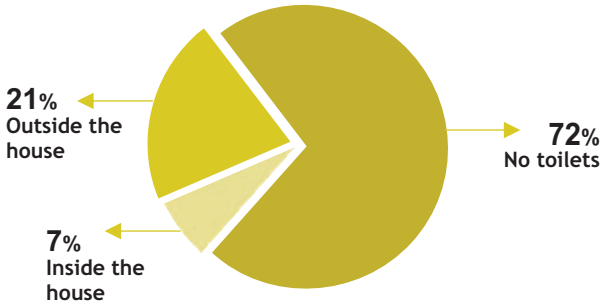
Are people satisfied with overall services and management?



*Power switch for water not switched on time

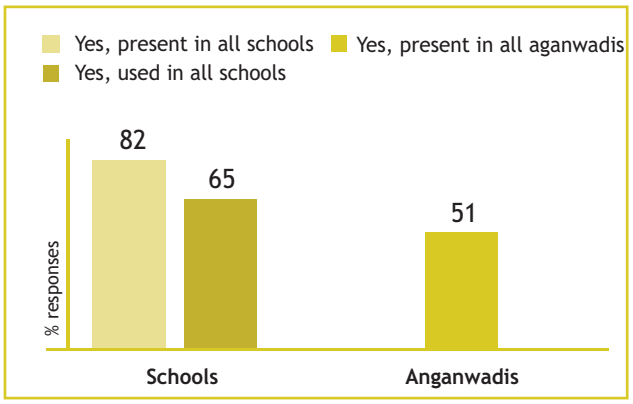
Sanitation

How many people have access to toilets?



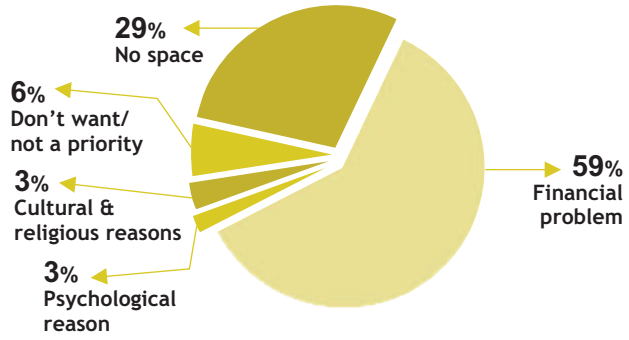
- 28% of the households have toilets
- 93% of toilet owners stated that their social esteem had improved
- Only about 5% of those with toilets are not using the toilets
- 2% use community toilets
- 96% of toilet owners have flush toilets and the toilet waste is discharged into single pits/soak pit
- 86% of households had a bathing area within their house

Does the GP have toilets in all its schools and anganwadis?



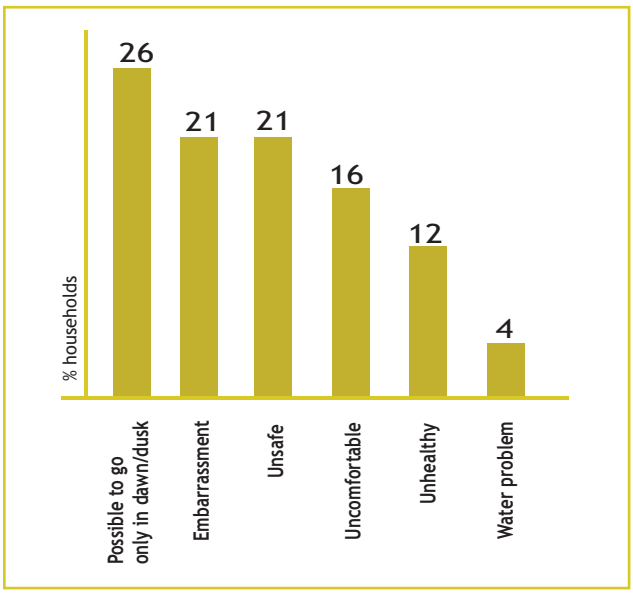
- According to GPs, 6% of school toilets are not in use and the main reason cited is lack of water. However, ASHWAS surveyors observed that many toilets appear to be in a state of disuse.

Why don't people build toilets?



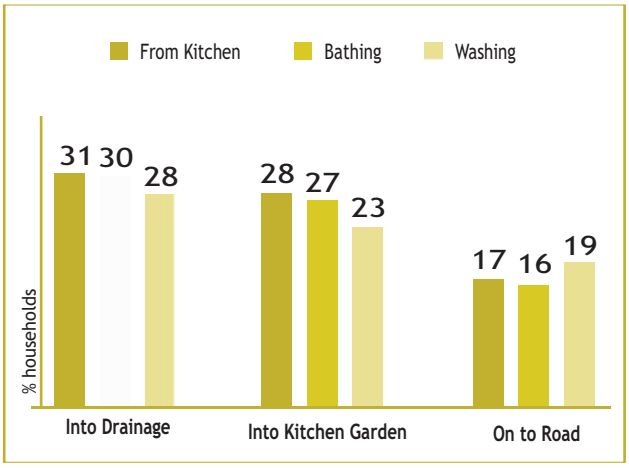
- 72% of respondents resort to Open Defecation (OD)
- In SR1, 89 % of households have no toilets
- Practice of OD is highest in Raichur at 98% and lowest in Dakshina Kannada at 15 %
- 71% of toilet owners reported using their own funds for constructing toilets

What problems do people face with OD?

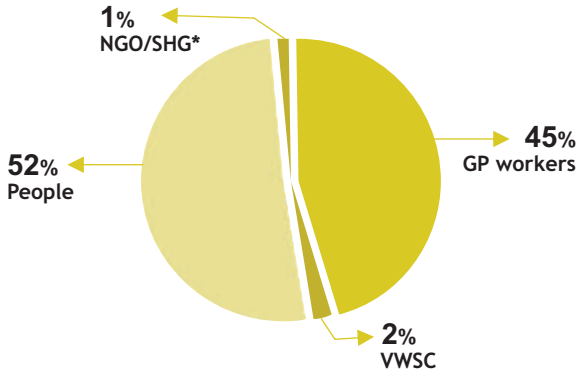


- 80% of the respondents who have to defecate in the open stated that they find it inconvenient
- A higher 91% of the *vulnerable population* who have to defecate in the open stated that they find it inconvenient

Where is the domestic wastewater discharged?



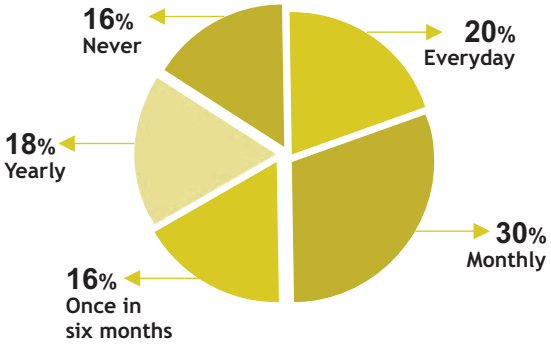
Who is responsible for cleaning the drains?



- 42% households have drains in front of their house
- GPs stated that they are responsible for getting the drains cleaned
- ASHWAS surveyors observed that in many cases, drains were clogged with plastic and other solid waste

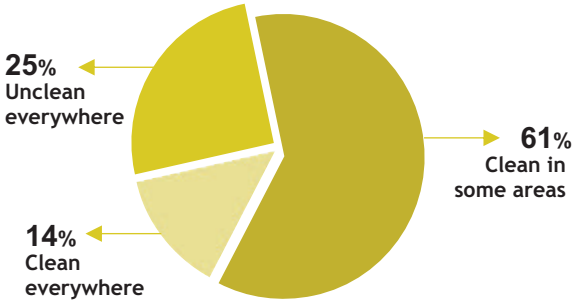
*Non Governmental Organization/ *Self Help Group
*Village Water & Sanitation Committee

How frequently are the drains cleaned?



- 29% of the GPs stated that the GP takes the initiative to get drains cleaned once in 6 months.
- 47% of the GPs reported that drains overflow during the monsoons.

How do people perceive the overall cleanliness of the village?



- At the regional level, 35% in SR4 perceived their GPs to be totally clean while in SR2, only 6% stated that their GPs are clean

What is the status of GPs awarded Nirmal Gram Puraskar (NGP)?

To be granted NGP status, a GP must satisfy the following conditions:

- All households in the village should use toilets for defecation
- Anganwadis and schools must have toilets which are being used
- GP and all its villages must be free of OD
- GP must have a clean environment

District	GP	Toilet access (%)	OD (%)	Access to drainage (%)	Clean everywhere (%)
Dakshina Kannada	Narikombu	86	14	18	49
Dakshina Kannada	Narimogru	83	17	18	64
Kodagu	Makkandur	82	14	14	52
Mysore	Hinkal	97	2	78	32
Uttara Kannada	Nandolli	75	27	22	90
Uttara Kannada	Isloor	80	27	41	63
Shimoga	Koluru	55	60	44	12
Shimoga	Gama	93	6	92	76
Shimoga	Narasapura	61	41	88	2
Shimoga	Hanagere	55	53	28	16
Shimoga	Saluru	59	45	40	19
Shimoga	Donabagatta	75	22	70	0
Chikkamagalur	Menase	67	33	22	7
Chikkamagalur	Chinniga	47	55	23	7

- All the above GPs have toilets in all schools and anganwadis
- It can be seen that none of the NGP GPs surveyed satisfy the conditions defined as per the norms

Health & hygiene

How many people reported incidence of chikungunya in the last one year?

20%

reported incidence of chikungunya

- 80 GPs out of the sampled 172 stated that their GPs had incidences of chikungunya in the last one year
- In Dakshina Kannada 87% of households reported incidence of chikungunya
- Gadikeshwar GP in Gulbarga and Khatak-Chincholi GP in Bidar reported more than 21 cases of death due to chikungunya
- The total amount people spent on treatment for chikungunya across the state (in the surveyed households) was Rs 97 lakhs
- Amongst affected households, average amount spent on treatment was Rs. 2809

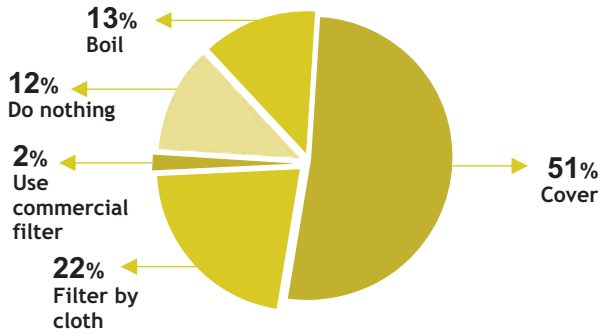
How many people reported incidence of diarrhoea in the last one year?

10%

reported incidence of diarrhoea

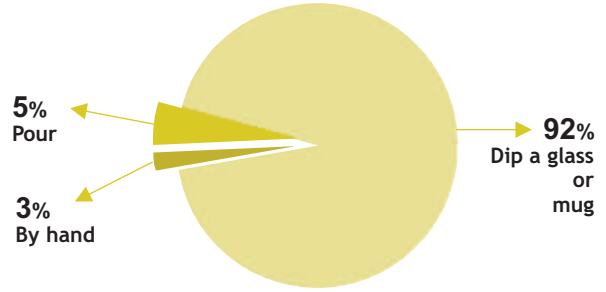
- At the district level, Raichur (17%), Koppal (16%) and Chikaballapura (14%) reported highest incidences of diarrhoea
- The total amount people spent on treatment for diarrhoea across the state (in the surveyed households) was Rs 17 lakhs
- Amongst affected households, average amount spent on treatment was Rs. 1122

How do people treat their water before drinking?



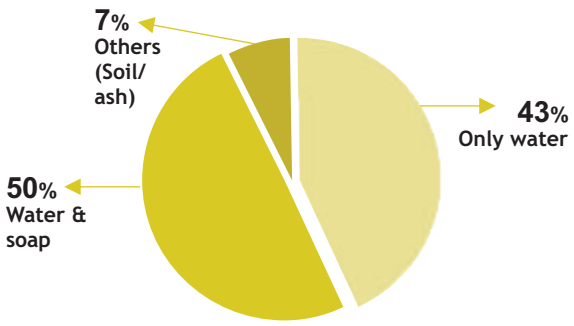
- 63% of the households do not treat their water before drinking; 51% of this just keep it covered

How do people take their water from the vessel for drinking?



- 71% wash their drinking water vessels daily

How do people wash their hands after defecation?



- 90 % of the people wash their hands with soap and water after handling pesticides but only 50% wash their hands with soap and water after their defecation

Governance

These findings are all from the questions put to the GPs

How useful are WATSAN schemes in the GP?

GP Schemes	Usefulness (%)	Main assets created
ARWSP	97	MWS & Public toilets
Total Sanitation Campaign	88	Domestic toilets
Jal Nirmal	80	MWS & Public toilets
Suvarna Jala	79	Rainwater harvesting
Swachha Grama Yojane	74	Toilets & drains
Suvarna Gramodaya	74	MWS & Public toilets
Swajaladara	76	MWS & Household tap connections
NREGA	77	Watershed development
Watershed Project	85	Watershed development
JSYS	69	Tank desiltation
Others	82	MWS & Public taps

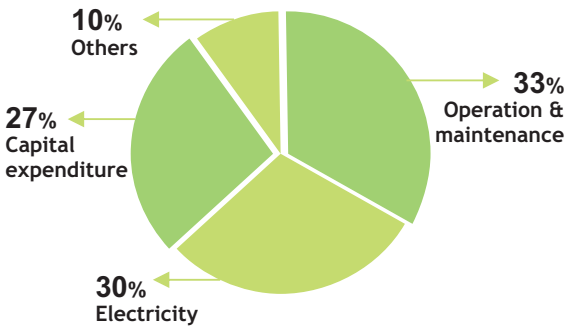
Who is responsible for repairs and maintenance?

98%

said that the GP was responsible

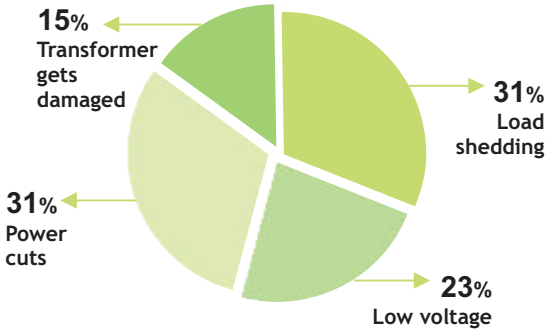
- 71% of the GPs stated that they have tools and equipment for repair and maintenance
- 84 % of the GPs stated that they have enough funds for O&M while 6 % said they could arrange funds if required

What was the breakup of WATSAN expenditure according to GPs for the period 2007-08?



- On an average, Rs 2.82 lakhs was spent per GP on water and sanitation services for the period 2007-08
- Each GP spent Rs 43 on a per capita basis
- Rs 0.94 lakhs on an average per GP was collected as water charges for the period 2007-08

What electricity related problems affect regular supply of water?



Is there an Non Governmental Organization (NGO) working in the GP?

30%

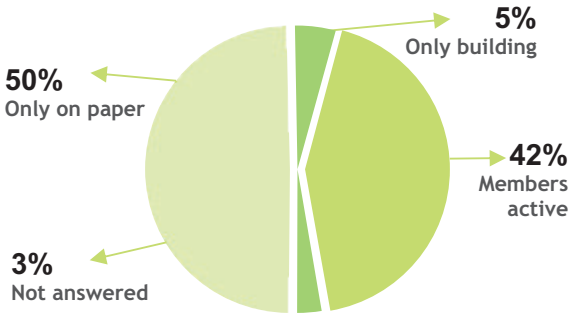
responded yes

Are there any committees in the villages?

75%

of the GPs had water, sanitation, health or hygiene committees. However, 16% committees were reported according to the village questionnaire

How are these committees functioning?



What do people want for the improvement of WATSAN situation in their GPs?

23% Drainage facility

20% Toilets

18% Better water supply facility

13% Clean village

9% Roads

6% Better garbage disposal

4% Public toilet

- The demand for drainage systems is consistent across all districts except Udupi where 26% want better water facilities.
- The demand for toilets is highest at Gadag (37%)

What do GPs want for improvement of the WATSAN situation in their GPs?

16% Closed/box type drainages

9% Toilets-household toilets, subsidy for poor

8% Water Conservation Structures-borewell recharge, checkdams, percolation tanks etc.

8% Improved infrastructure-more bore wells, overhead tank, pipes, distribution system, repairs etc.

8% Water quality treatment-fluoride treatment, chlorination

7% Public Toilets

6% Separate place for dumping waste outside the village

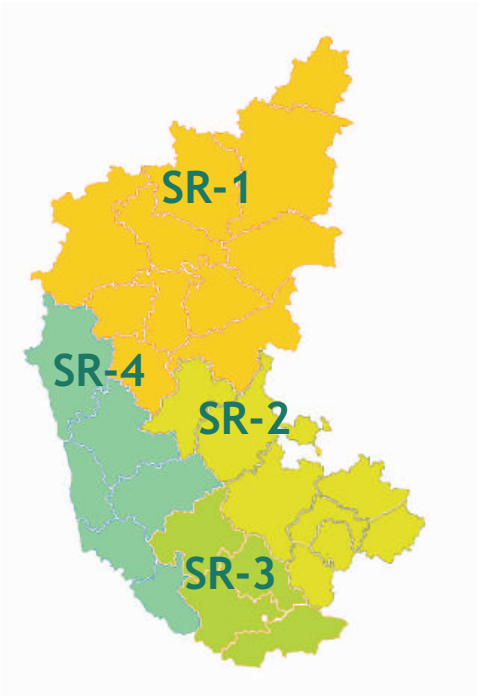
A Comparison

NFHS-III* and ASHWAS

Parameter	NFHS	ASHWAS
Source of drinking water		
Improved source	85	87
Piped water into dwelling / yard / plot	16	17
Public tap / Standpipe	32	41
Tube well or Deep Handpump	34	18
Other improved	3	12
Unimproved source	15	13
Time to obtain drinking water		
Water on premises	35	23
Less than 30 minutes	46	27
Thirty minutes or longer	18	46
Don't know / missing	0	4
Water Treatment		
Boil	12	13
Strain through cloth	21	22
Use ceramic, sand, or other water filter	3	2
Other forms of treatment	2	0
No treatment	65	63
Sanitation facility		
Improved	17	25
Improved pour flush	14	
Pit latrine with slab	3	
Other	1	
Unimproved	83	75
Facility shared with other households	3	
Unimproved pour flush	0	3
Pit latrine without slab / open pit	1	
Other unimproved facility	0	
No facility / open space / field	78	72

* National Family Health Survey 2008

REGIONAL FINDINGS



There are wide disparities in various aspects of development among the different sub-regions within Karnataka as has been pointed out by various studies like the Karnataka Development Report 2007 and the High Power Committee for Redressal of Regional Imbalances 2002. The report groups the 30 districts of Karnataka into 4 sub-regional clusters as shown in Table 1 below.

The following section presents ASHWAS findings at the sub-regional levels. This is followed by a section that shows where the 'most backward taluks' (identified by the High Power Committee for Redressal of Regional Imbalances) stand in the context of ASHWAS's findings.

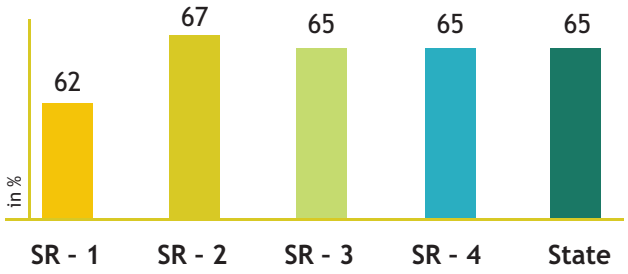
Table 1: Sub-Regions

Sub-Regions	Districts
SR-I	Bagalkot, Belgaum, Bellary, Bijapur, Bidar, Dharwad, Gadag, Gulbarga, Haveri, Koppal
SR-2	Bangalore Rural, Chickballarpur, Chitradurga, Davangere, Kolar, Ramnagaram, Tumkur
SR-3	Chamrajnagar, Mandya, Mysore, Hassan
SR-4	Chickmagalur, Kodagu, Shimoga, Dakshina Kannada, Udupi, Uttara Kannada

Source: High Power Committee, Government of Karnataka, 2002 (reworked for new districts formation)

Score*

Where do the sub-regions stand against the state average score for overall status of WATSAN?



- There is broad sub-regional equality in the overall WATSAN score which has been derived from 20 parameters.
- The significant difference is in the sanitation coverage as shown in the table below.

How do the sub-regions score against key WATSAN parameters?

Sub Region	Water	Sanitation	Health and hygiene	Grievance and redressal
SR-1	86	36	63	76
SR-2	80	56	61	82
SR-3	83	57	64	89
SR-4	79	60	66	58

- Amongst these, all regions fared better in the "water" parameter.
- Sanitation score for SR1 was the lowest at 36.

* The derivation of the scores is explained in the Methodology chapter on Page-24

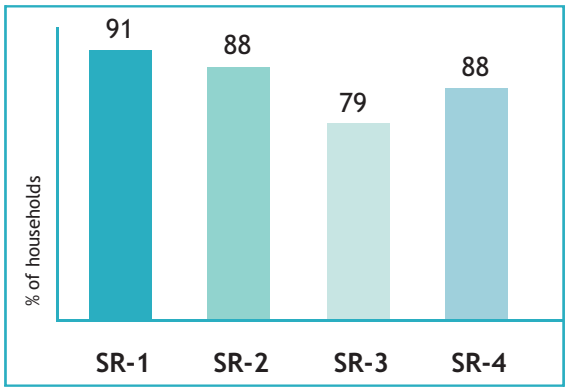
Water

Which sources and infrastructure do people depend on in the sub-regions?

Source Type	SR-1	SR-2	SR-3	SR-4
Rivers/Lakes	8	6	16	11
Open well	9	1	5	38
Hand pump	5	2	4	2
Bore well	15	14	21	6
MWS	10	29	16	11
Piped water	21	13	19	10
Public tap	32	29	15	21
Water from the field	0	6	5	0

- Open well dependency is highest in SR4.
- Public tap is the main infrastructure in SR1 and SR2.

What percentage of people depend on groundwater?



What percentage of people depend on multiple sources?

No. of sources	SR - 1	SR - 2	SR - 3	SR - 4
One	81	70	32	80
Two	18	25	41	20
Three	1	5	23	0
Four	0	0	4	0

- In SR3, 41% depend on two sources and 23% depend on three sources .

What is the status of access to water?

Distance	SR - 1	SR - 2	SR - 3	SR - 4
Very Near	73	83	81	87
< 1.6 k.m.	22	14	16	11
> 1.6 k.m.	5	3	3	2

- 5 % in SR1 have to travel more than 1.6 km to collect water.

How long do people take to collect water?

Duration	SR - 1	SR - 2	SR - 3	SR - 4
< 15 minutes	2	7	9	10
16 - 30 minutes	28	33	36	40
31 - 60 minutes	45	41	35	37
> 60 minutes	25	19	20	13

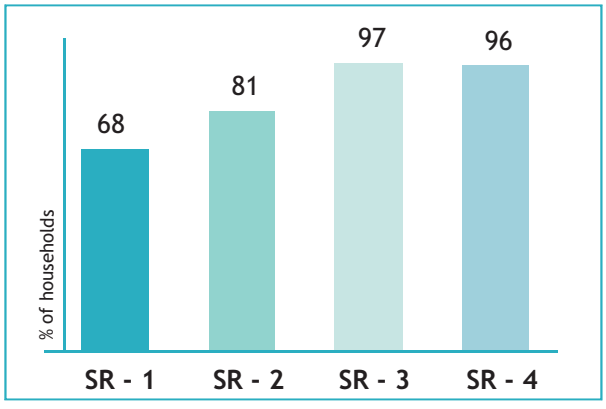
- Most people take between 30 to 60 minutes to collect water.

For how long do people store water?

Duration	SR - 1	SR - 2	SR - 3	SR - 4
< 1 day	74	66	61	91
1 - 3 days	23	32	36	8
> 3 days	3	2	4	1

- 91 % people in SR4 store water for one day.

What percentage of people store water for drinking?



Why do people store water?

Reason	SR - 1	SR - 2	SR - 3	SR - 4
Source is far	19	11	3	7
Irregular supply	31	53	57	17
It is easy	50	34	40	76

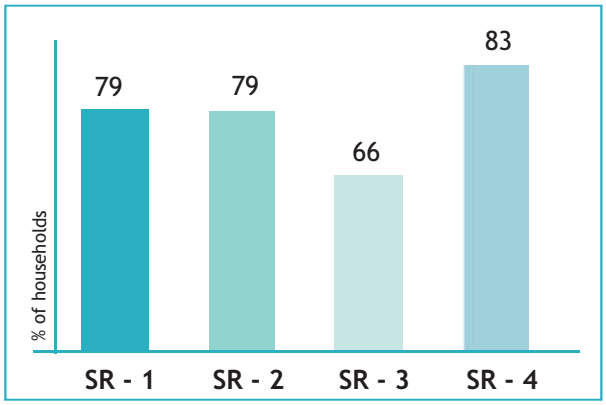
- More than half the people store water due to irregular supply.

How many days did people face water shortage?

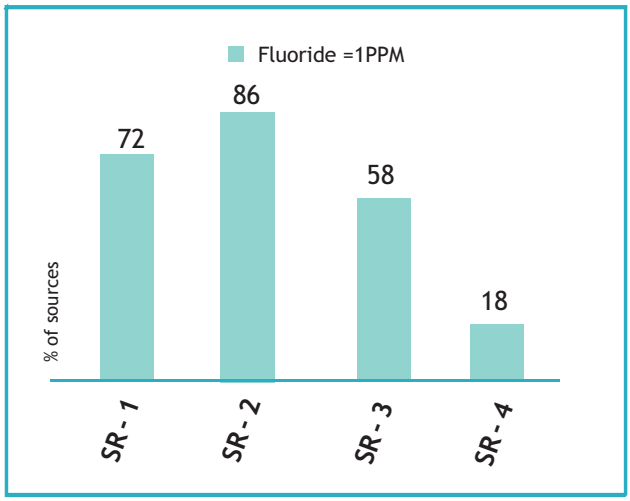
Duration	SR - 1	SR - 2	SR - 3	SR - 4
< 1 month	25	45	50	16
1 - 3 months	8	17	8	12
3 - 6 months	0	1	1	2
> 6 months	2	2	1	2
No shortage	65	35	40	68

- In all regions, most people faced water shortage for less than a month, or no shortage at all.

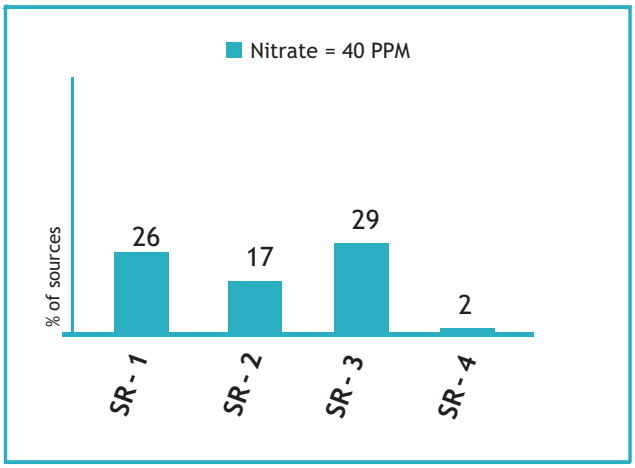
How many people have water available throughout the year?



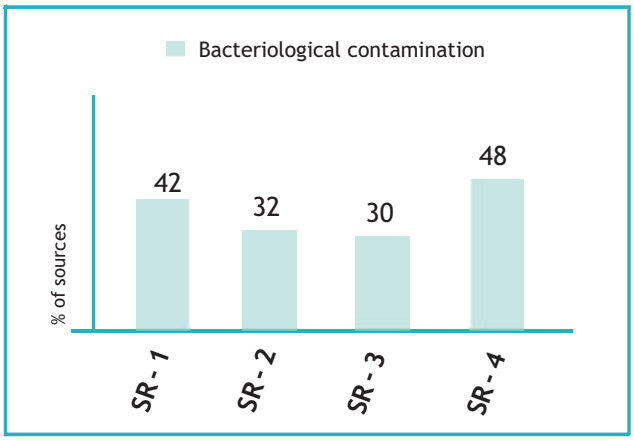
What is the status of fluoride contamination in the sub-regions?



What is the status of nitrate contamination in the sub-regions?



What is the status of bacteriological contamination in the sub-regions?



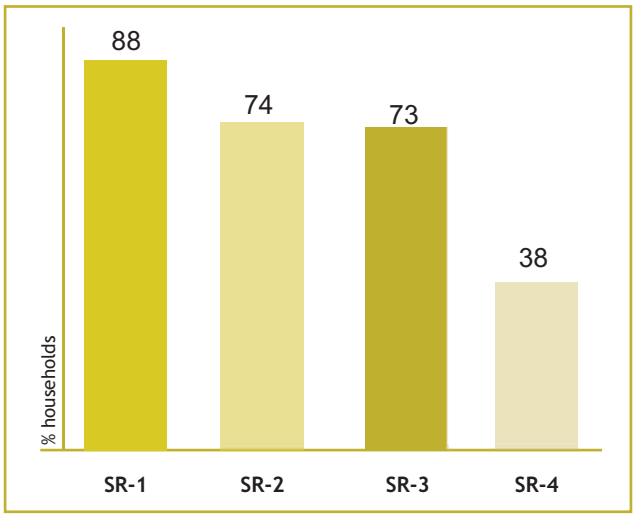
How satisfied are people at a sub-regional level with their water services?

Region	Satisfied	Partially Satisfied	Not Satisfied	Can't Say
SR -1	50	35	12	3
SR -2	48	38	12	2
SR -3	30	51	15	3
SR -4	59	26	8	7
State	48	37	12	3

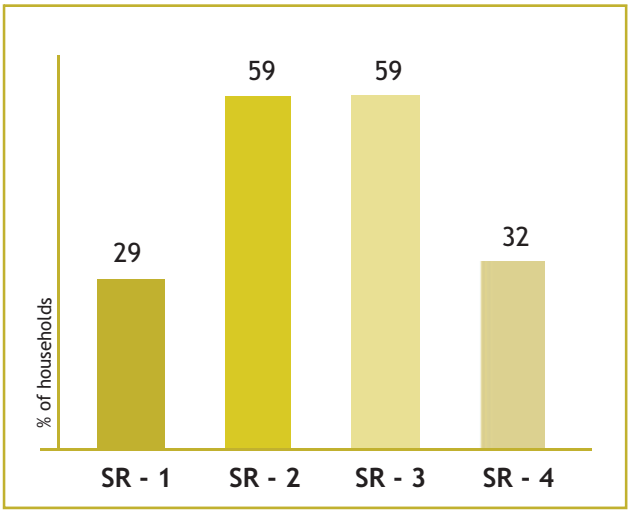
- Only 30 %, the least among all sub-regional groups, are fully satisfied in SR3.

Sanitation

How many people practice OD?



What is the status of access to drainage across sub-regions?



What is the overall sanitation status within sub-regions?

Status	SR - 1	SR - 2	SR - 3	SR - 4
Generally unclean	31	30	33	4
Clean in some areas	61	64	57	61
Clean everywhere	8	6	10	35

- Most respondents across regions perceive their villages to be partially clean.

Backward talukas—A comparison

In June 2002, the Government of Karnataka formed a High Powered Committee (HPC) under D M Nanjundappa to study the functionality of infrastructure facilities in important selected sectors in Karnataka. The most backward talukas identified by this committee have been compared with other talukas for some parameters using ASHWAS data. Within ASHWAS sample, there are 14 talukas* out of 39 in the HPC which fall in the 'most backward category'.

Primary water sources

Source type	Most backward talukas	Other talukas
Public Tap	22	26
Mini water Supply	17	16
Handpump/Borewell	17	14
Piped water	14	17

Distance to water source

Distance	Most backward talukas	Other talukas
Very Near	71	81
< 1.6 K.M	22	16
> 1.6 K.M	7	3

Water quality status

Quality parameters	Most backward talukas	Other talukas
Fluoride ≥ 1 ppm	82	55
Nitrate ≥ 40 ppm	33	17
Bacteriologically contaminated	43	37

Overall satisfaction - water services

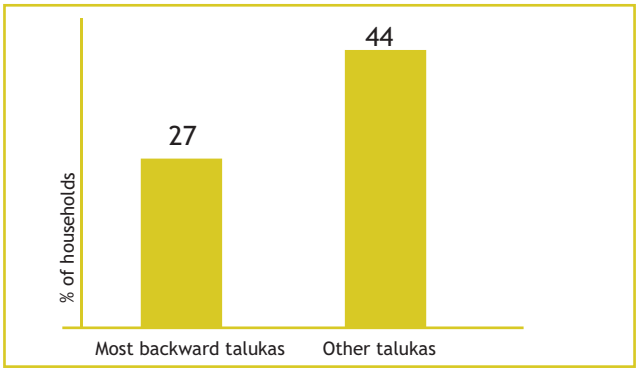
Satisfaction levels	Most backward talukas	Other talukas
Satisfied	36	51
Partially satisfied	42	35
Not satisfied	20	10
Can't say	2	4

All values in percentage

Status of toilets

Toilet Status	Most backward talukas	Other talukas
Inside the house	3	8
Outside the house	6	24
No toilets (OD)	91	68

Access to drainage



Incidence of diseases

Disease incidence	Most backward talukas	Other talukas
Diarrhea	8	5
Chikungunya	24	20

Overall cleanliness

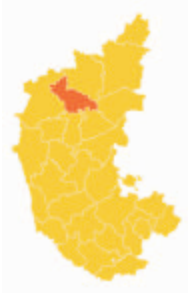
Levels of cleanliness	Most backward talukas	Other talukas
Generally unclean	50	21
Clean in some areas	46	63
Generally clean	4	16

*Backward talukas

Gulbarga: Afzalpur, Chincholi, Shorapur, Yadgir
Bidar: Bidar
Chitradurga: Hosadurga
Koppal: Kushtagi
Bellary: Sandur
Bijapur: Sindgi, Muddebihal
Raichur: Sindhanur
Tumkur: Sira, Madugiri, Kunigal

DISTRICT FINDINGS

Bagalkot



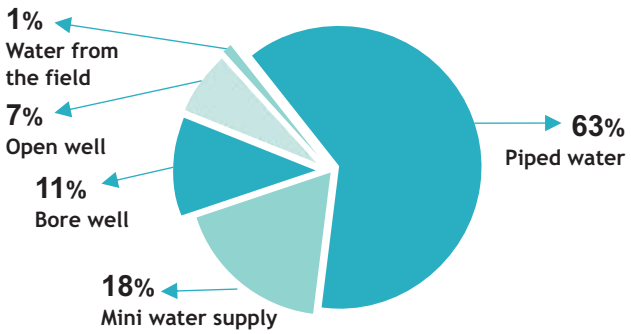
- Population: 16,51,892
- Agro-Climatic Zone: Northern Dry Zone
- Average Rainfall: 562 mm
- Groundwater Status: Drought prone area with problems of fluoride and salinity
- Literacy Rate: 58%
- Talukas: 6
- Number of GPs: 164
- Number of GPs covered in ASHWAS: 6

WATSAN score (on a scale of 100)

	District	State
Water supply infrastructure	92	75
Piped water is the main source of water		
Sanitation	28	49
Financial & space constraints are cited for not having toilets		
Health Indicator	92	86
Incidences of diarrhea and chikungunya reported are low		
Governance	43	76
Village elders play a crucial role to address water problems		
Satisfaction level	84	49
Most people are satisfied with water services and management		

Water

What are the primary water sources?



Multiple source dependency: 8% depend on two sources

82%

access water 'very near' to their house. Most people take 15 to 30 minutes to collect water

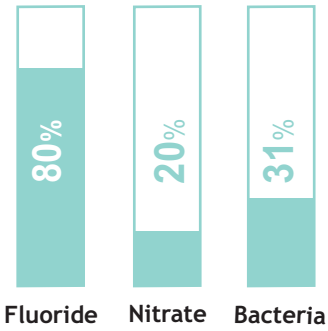
Village Water & Sanitation Committees

3%

of the villages have a VWSC; but none of them are functioning

Water Quality

17% of the GPs in the district have water testing kits distributed by the government. But none of the kits have been used



This chart indicates the percentage of sources over the desirable limits as per the standards. For fluoride, the standard limit is 1.0 ppm and for nitrates, it is 45 ppm

Who solves the drinking water problems?

75%

report that village elders helped solve the problem. Average time taken to solve problems is more than a month

Sustainability

99%

have access to water throughout the year

Groundwater dependency in district

100%

depend on groundwater for their domestic needs

Satisfaction levels

83%

are fully satisfied with water services & management while 16% are partially satisfied & 1% are not satisfied

Reliability

7%

reported drinking water problems in the last one year

Storage

11%

store water because of irregular supply, while 87% store water because it is 'easier'

Reasons cited for water supply disruption

(by the villagers)

Power cut	43%
Pipe/taps damage	32%
Natural calamity	7%
Source dried up	6%

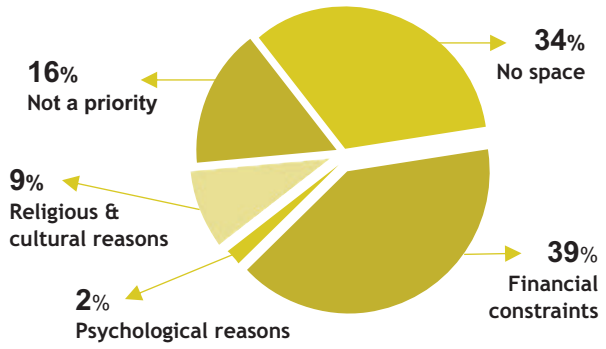
Sanitation, health & hygiene

Access to toilets

8%

have access to toilets. Most of them use pour flush toilets

Why don't people build toilets?

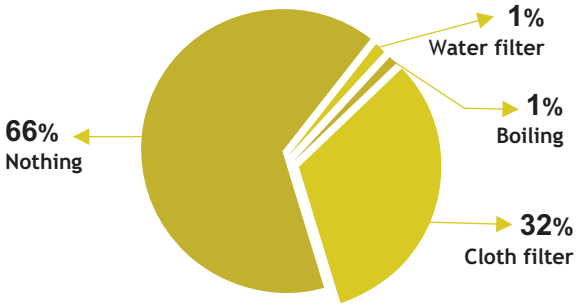


Drainage

6%

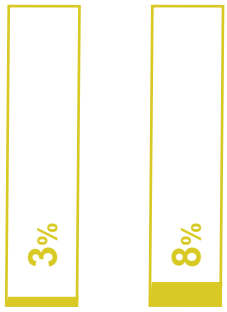
have drains outside the home

How do people treat their water?



Most people keep their water covered

Health & hygiene



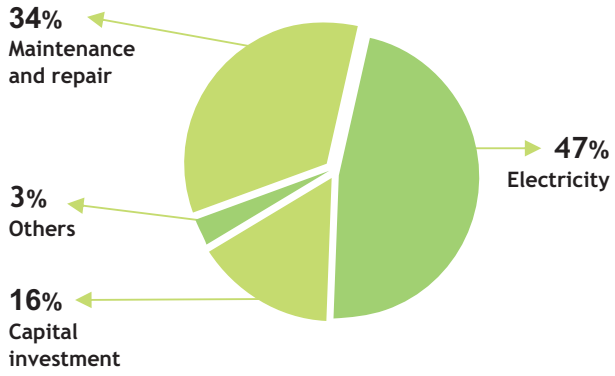
out of 6 GPs surveyed, incidences of diarrhea were reported in 4 GPs and incidences of chikungunya were reported in 4 GPs

Schemes & Finances

Ongoing schemes in our gram panchayat

☑ ARWSP	☑ TSC
☐ Jal Nirmal	☐ Sachethana
☐ Suvarna Jal	☐ Swachha Grama Yojana
☐ Swajaladhara	☑ Suvarna Gramodaya
☑ NREGA	☑ Watershed Project
☐ JSYS	☐ Others

Breakup of WATSAN spending



People's main demands

- Toilets
- Drainage facility
- Better water supply facility
- Roads
- Clean Village

Finances for 2007-08

Rs. 2,98,868/-
is the average amount spent by each GP on WATSAN services

Rs. 41/-
is the average amount spent per capita by the GPs on WATSAN

Rs. 71,155/-
is the average amount of user charges collected per GP

Equity

Derived category	Having household connection	Storing water in bindiges*	Not paying user charges	Having access to toilets	Incidence of diarrhea	Incidence of chikungunya
Low income	26%	43%	29%	0%	6%	5%
Middle income	41%	43%	19%	4%	8%	6%
High income	59%	31%	19%	26%	13%	8%

Refers to percentage of households

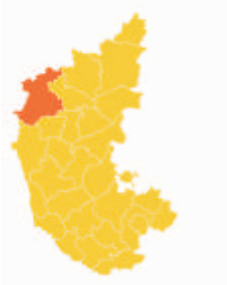
* Those storing water for domestic use in bindiges may not be able to consume 55 lpcd due to insufficient storage capacity

In general, low income groups had fewer household connections, had lower access to toilets & paid lesser user charges when compared to the high income groups

Highlights from surveyed GPs

- According to ASHWAS water quality tests, water is 100% potable In Kadapatti GP
- In Kadampur and Yadahalli GPs, access to toilets is low with Kadampur GP having 0% access
- In Vajarmatti GP, there is very low drainage coverage and the incidence of diseases are high

Belgaum



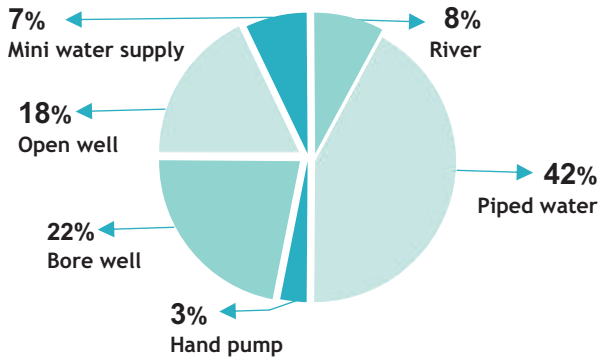
- Population: 42,14,505
- Agro-Climatic Zone: Falls under 3 climatic zones - Northern transition zone, Northern dry zone & Hilly zone
- Average Rainfall: 808 mm
- Groundwater Status: Over exploited; presence of high fluoride
- Literacy Rate: 78%
- Talukas: 10
- Number of GPs: 485
- Number of GPs covered in ASHWAS: 10

WATSAN score (on a scale of 100)

	District	State
Water supply infrastructure	75	75
Piped water is the main source of water		
Sanitation	43	49
Financial constraint is the reason cited for not having toilets		
Health Indicator	87	86
incidences of chikungunya reported are high		
Governance	92	76
Gram panchayat plays a crucial role to address water problems		
Satisfaction level	66	49
People are not satisfied with quantity of water		

Water

What are the primary water sources?



Multiple source dependency : 23% depend on two sources

70%

access water 'very near' to their house. Most people take 45 to 60 minutes to collect water

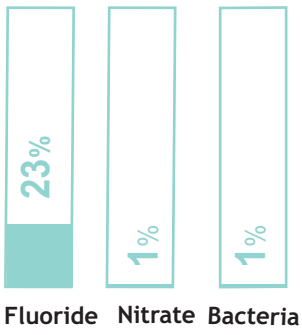
Village Water & Sanitation Committees

61%

of the villages have a VWSC; but only some of them are functioning

Water Quality

10% of the GPs in the district have water testing kits distributed by the government. But none of the kits have been used



This chart indicates the percentage of sources over the desirable limits as per the standards. For fluoride, the standard limit is 1.0 ppm and for nitrates, it is 45 ppm

Who solves the drinking water problems?

69%

report that the gram panchayat solves the problem in 1 to 2 weeks

Sustainability

89%

have access to water throughout the year

Groundwater dependency in district

92%

depend on groundwater for their domestic needs

Satisfaction levels

65%

are fully satisfied with water services & management while 30% are partially satisfied, 5% are not satisfied

Reliability

22%

reported drinking water problems in the last one year

Storage

37%

store water because of irregular supply, while 32% store water because the source is 'too far'

Reasons cited for water supply disruption

(by the villagers)

Pipe/taps damage	25%
Power cut	24%
Financial reason	16%
Motor damage	13%

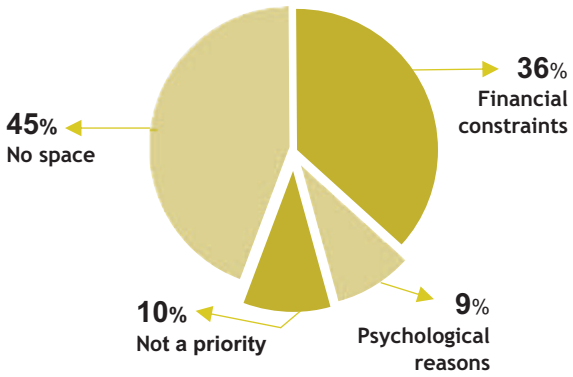
Sanitation, health & hygiene

Access to toilets

18%

have access to toilets. Most of them use pour flush toilets

Why don't people build toilets?

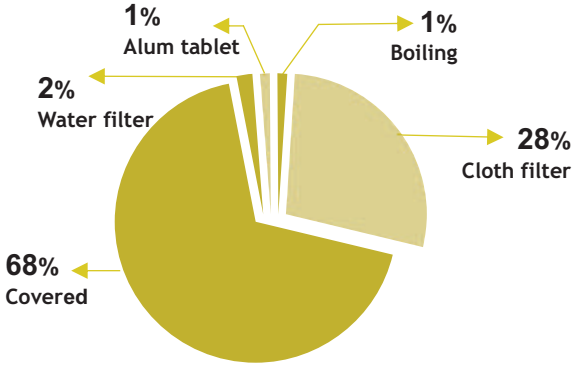


Drainage

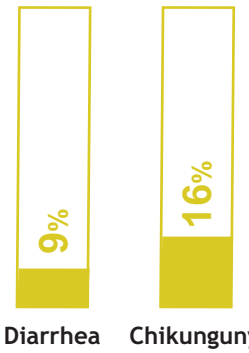
37%

have drains outside the home

How do people treat their water?



Health & hygiene



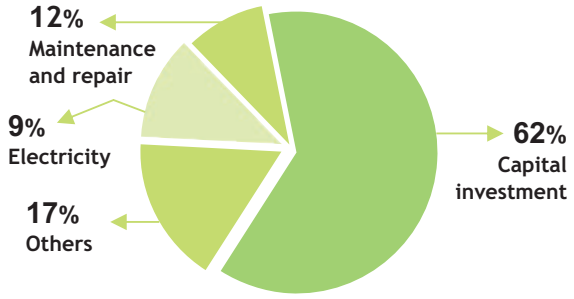
out of 10 GPs surveyed, 100% reported incidences of diarrhea and chikungunya

Schemes & Finances

Ongoing schemes in our gram panchayat

☐ ARWSP	☑ TSC
☐ Jal Nirmal	☐ Sachethana
☑ Suvarna Jal	☐ Swachha Grama Yojana
☐ Swajaladhara	☑ Suvarna Gramodaya
☑ NREGA	☐ Watershed Project
☑ JSYS	☐ Others

Breakup of WATSAN spending



People's main demands

- Toilets
- Drainage facility
- Roads
- Better water supply facility

Finances for 2007-08

Rs. 1,80,992/-
is the average amount spent by each GP on WATSAN services

Rs. 30/-
is the average amount spent per capita by the GPs on WATSAN

Rs. 64,274/-
is the average amount of user charges collected per GP

Equity

Derived category	Having household connection	Storing water in bindiges*	Not paying user charges	Having access to toilets	Incidence of diarrhea	Incidence of chikungunya
Low income	13%	11%	9%	5%	11%	19%
Middle income	23%	4%	4%	17%	12%	16%
High income	38%	2%	5%	37%	8%	14%

Refers to percentage of households

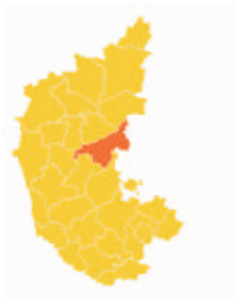
* Those storing water for domestic use in bindiges may not be able to consume 55 lpcd due to insufficient storage capacity

In general, low income groups had fewer household connections, had lower access to toilets, paid lesser user charges & had a higher incidence of disease when compared to the high income groups

Highlights from surveyed GPs

- Though the distance to water source is near, most of the people take 45-60 minutes to collect water
- Only 1% of the respondents do a basic treatment of their water before drinking in all GPs
- In Kodani & U Khanapur GPs more than 55% are depending on multiple sources whereas in other GPs only 10-30% are depending on multiple sources

Bellary



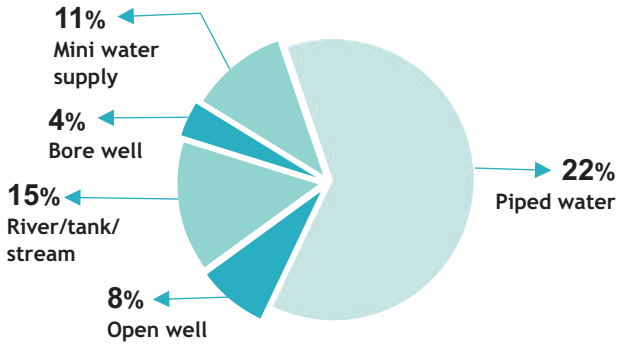
- Population: 20,27,140
- Agro-Climatic Zone: Northern Dry Zone
- Average Rainfall: 636 mm
- Groundwater Status: Increased depletion; high fluoride & bacterial contamination
- Literacy Rate: 65%
- Talukas: 7
- Number of GPs: 222
- Number of GPs covered in ASHWAS: 6

WATSAN score (on a scale of 100)

	District	State
Water supply infrastructure	79	75
Piped water is the main source of water		
Sanitation	33	49
Financial constraints are the reason cited for not having toilets		
Health Indicator	79	86
incidences of chikungunya reported are high		
Governance	89	76
Gram panchayat plays a crucial role to address water problems		
Satisfaction level	65	49
People are satisfied with water quality & services and management		

Water

What are the primary water sources?



Multiple source dependency : 17% depend on two sources

92%

access water 'very near' to their house. Most people take 45 to 60 minutes to collect water

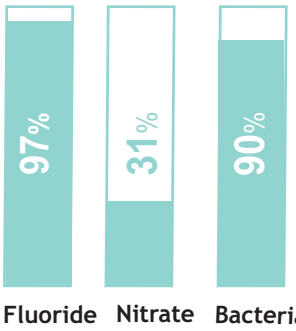
Village Water & Sanitation Committees

58%

of the villages have a VWSC; but none of them are functioning

Water Quality

33% of the GPs in the district have and use water testing kits distributed by the government



This chart indicates the percentage of sources over the desirable limits as per the standards. For fluoride, the standard limit is 1.0 ppm and for nitrates, it is 45 ppm

Who solves the drinking water problems?

79%

report that the gram panchayat solves the problem in 1 to 5 days

Sustainability

96%

have access to water throughout the year

Groundwater dependency in district

85%

depend on groundwater for their domestic needs

Satisfaction levels

60%

are fully satisfied with water services & management while 18% are partially satisfied, 17% are not satisfied & 5% have not answered

Reliability

26%

reported drinking water problems in the last one year

Storage

31%

store water because of irregular supply, while 50% store water because the source is 'too far'

Reasons cited for water supply disruption

(by the villagers)

Lack of staff	19%
Power cut	16%
Pipe/taps damage	15%
Motor damage	14%

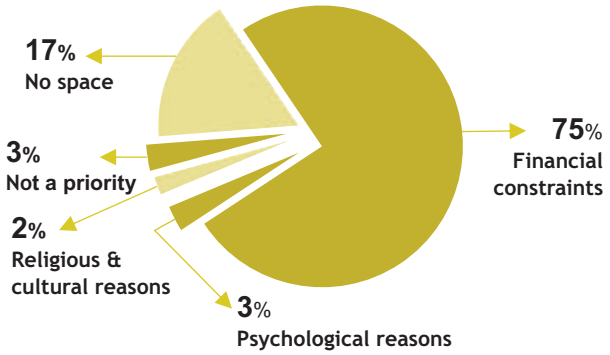
Sanitation, health & hygiene

Access to toilets

13%

have access to toilets. Most of them use pour flush toilets

Why don't people build toilets?

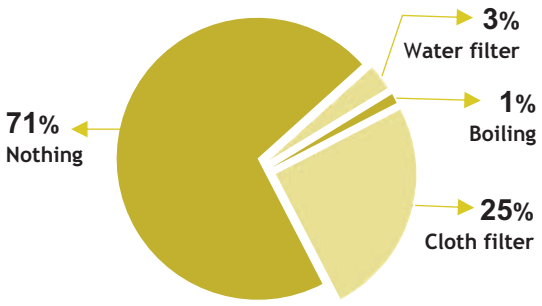


Drainage

32%

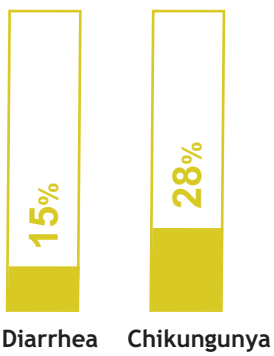
have drains outside the home

How do people treat their water?



Most people keep their water covered

Health & hygiene



out of 6 GPs surveyed, 100% reported incidences of diarrhea and chikungunya

Schemes & Finances

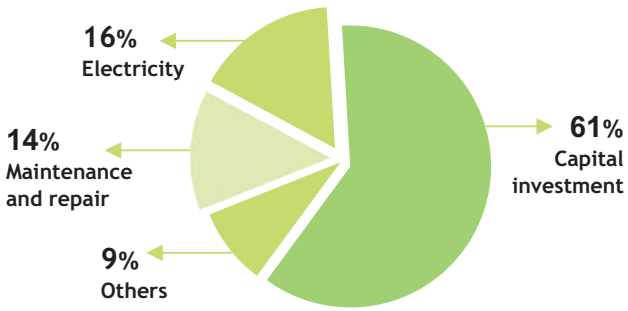
Ongoing schemes in our gram panchayat

- [x] ARWSP
- [x] Jal Nirmal
- [x] Suvarna Jal
- [x] Swajaladhara
- [x] NREGA
- [x] JSYS
- [x] TSC
- [x] Sachethana
- [x] Swachha Grama Yojana
- [x] Suvarna Gramodaya
- [x] Watershed Project
- [ ] Others

People's main demands

- Toilets
- Drainage facility
- Better water supply facility

Breakup of WATSAN spending



Finances for 2007-08

Rs. 1,13,902/-
is the average amount spent by each GP on WATSAN services

Rs. 15/-
is the average amount spent per capita by the GPs on WATSAN

Rs. 52,127/-
is the average amount of user charges collected per GP

Equity

Derived category	Having household connection	Storing water in bindiges*	Not paying user charges	Having access to toilets	Incidence of diarrhea	Incidence of chikungunya
Low income	16%	41%	79%	3%	13%	30%
Middle income	26%	24%	76%	7%	18%	25%
High income	51%	5%	58%	43%	12%	28%

Refers to percentage of households

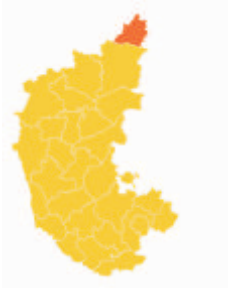
* Those storing water for domestic use in bindiges may not be able to consume 55 lpcd due to insufficient storage capacity

In general, low income groups had fewer household connections, had lower access to toilets, paid lesser user charges & had a higher incidence of disease when compared to the high income groups

Highlights from surveyed Gp's

- Sonna & Gollalingamanahalli GPs have high nitrate concentration
- Except Hagaribammanahalli GP, coverage of toilets is less than 10% in all GPs
- In Uttanur, Gollalingamanahalli and Vaddu GPs all sources have fluoride levels of 2.0 ppm or greater

Bidar



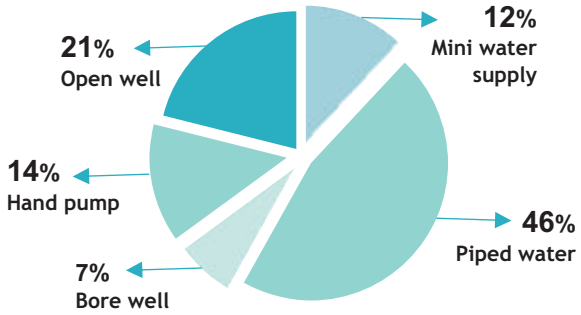
- Population: 15,02,373
- Agro-Climatic Zone: North Eastern transition zone
- Average Rainfall: 847 mm
- Groundwater Status: Safe zone; high nitrate & fluoride in some areas
- Literacy Rate: 69%
- Talukas: 5
- Number of GPs: 175
- Number of GPs covered in ASHWAS: 4

WATSAN score (on a scale of 100)

	District	State
Water supply infrastructure	79	75
Piped water is the main source of water		
Sanitation	34	49
Financial constraint is the reason cited for not having toilets		
Health Indicator	82	86
incidences of chikungunya reported are high		
Governance	81	76
Gram panchayat plays a crucial role to address water problems		
Satisfaction level	17	49
People are not satisfied with water services and management		

Water

What are the primary water sources?



Multiple source dependency : 15% depend on two sources

89%

access water 'very near' to their house. Most people take 45 to 60 minutes to collect water

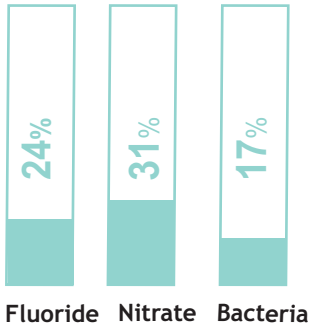
Village Water & Sanitation Committees

0%

of the villages have a VWSC

Water Quality

none of the GPs in the district have water testing kits distributed by the Government



This chart indicates the percentage of sources over the desirable limits as per the standards. For fluoride, the standard limit is 1.0 ppm and for nitrates, it is 45 ppm

Who solves the drinking water problems?

85%

report that the gram-panchayat solves the problem in 1 day to 1 week

Sustainability

97%

have access to water throughout the year

Groundwater dependency in district

100%

depend on groundwater for their domestic needs

Satisfaction levels

10%

are fully satisfied with water services & management while 40% are partially satisfied, 41% are not satisfied & 9% have not answered

Reliability

12%

reported drinking water problems in the last one year

Storage

72%

store water because of irregular supply, while 28% store water because the source is 'too far'

Reasons cited for water supply disruption

(by the villagers)

Motor damage	25%
Power cut	23%
Pipe/taps damage	21%
Irregular operation	16%

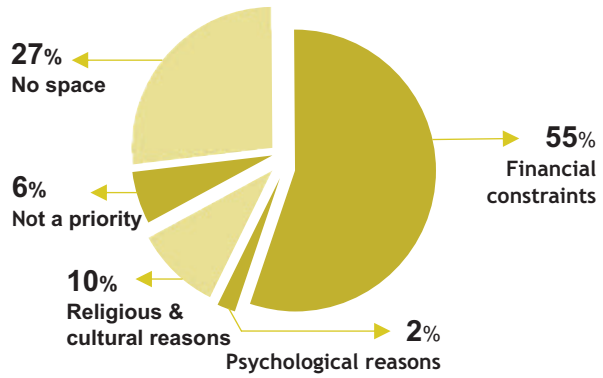
Sanitation, health & hygiene

Access to toilets

4%

have access to toilets. Most of them use pour flush toilets

Why don't people build toilets?

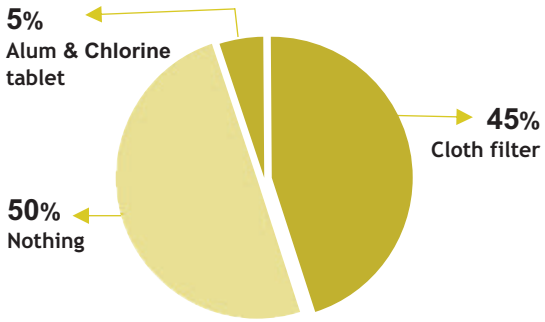


Drainage

23%

have drains outside the home

How do people treat their water?



Most people keep their water covered

Health & hygiene

out of 4 GPs surveyed, 100% reported incidences of diarrhea and chikungunya

Schemes & Finances

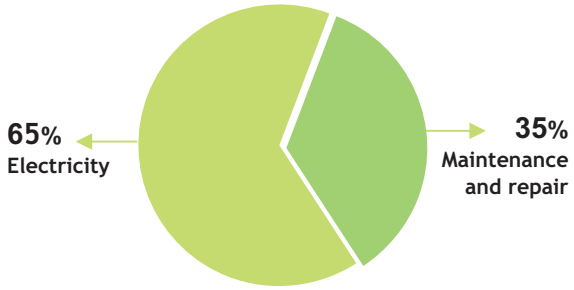
Ongoing schemes in our gram panchayat

☑ ARWSP	☐ TSC
☐ Jal Nirmal	☐ Sachethana
☐ Suvarna Jal	☑ Swachha Grama Yojana
☐ Swajaladhara	☐ Suvarna Gramodaya
☑ NREGA	☑ Watershed Project
☐ JSYS	☐ Others

People's main demands

- Toilets
- Drainage facility
- Clean village
- Better water supply

Breakup of WATSAN spending



Finances for 2007-08

Rs. 3,40,400/-
is the average amount spent by each GP on WATSAN services

Rs. 52/-
is the average amount spent per capita by the GPs on WATSAN

Data not Available
average amount of user charges collected per GP

Equity

Derived category	Having household connection	Storing water in bindiges*	Not paying user charges	Having access to toilets	Incidence of diarrhea	Incidence of chikungunya
Low income	14%	5%	83%	1%	3%	37%
Middle income	25%	No Data	77%	4%	2%	32%
High income	56%	No Data	48%	24%	0%	18%

Refers to percentage of households

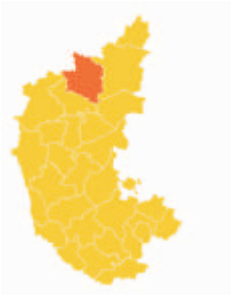
* Those storing water for domestic use in bindiges may not be able to consume 55 lpcd due to insufficient storage capacity

In general, low income groups had fewer household connections, had lower access to toilets, paid lesser user charges & had a higher incidence of disease when compared to the high income groups

Highlights from surveyed GPs

- Majority of the respondents in all GPs indicated that they paid nothing as water charge. However, the amount of charges collected is unusually high
- Toilet coverage in all GPs is very low. In Sangolgi GP, 100% of the respondents practice open defecation
- Awareness on simple water treatment techniques, such as boiling is very low

Bijapur



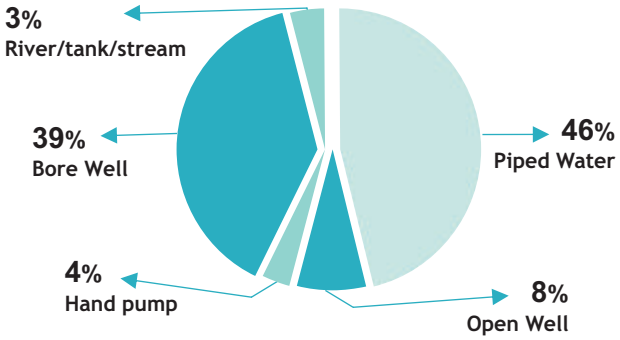
- Population: 18,06,918
- Agro-Climatic Zone: Northern Dry Zone
- Average Rainfall: 578 mm
- Groundwater Status: Over exploited; presence of high fluoride
- Literacy Rate: 56%
- Talukas: 5
- Number of GPs: 199
- Number of GPs covered in ASHWAS: 6

WATSAN score (on a scale of 100)

	District	State
Water supply infrastructure	93	75
Piped water is the main source of water		
Sanitation	64	49
Financial & space constraints are cited for not having toilets		
Health Indicator	74	86
Incidence of chikungunya reported are high		
Governance	95	76
Gram panchayat plays a crucial role to address water problems		
Satisfaction level	43	49
People are partially satisfied with quality & quantity of water		

Water

What are the primary water sources?



Multiple source dependency : 12% depend on two sources

95%

access water 'very near' to their house. Most people take 45 to 60 minutes to collect water

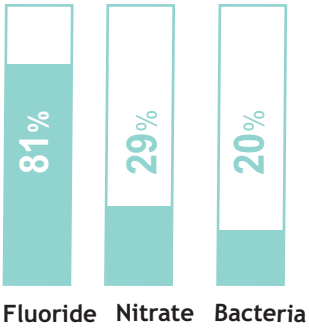
Village Water & Sanitation Committees

50%

of the villages have a VWSC; but none of them are functioning

Water Quality

33% of the GPs in the district have water testing kits distributed by the government. But none of the kits have been used



This chart indicates the percentage of sources over the desirable limits as per the standards. For fluoride, the standard limit is 1.0 ppm and for nitrates, it is 45 ppm

Who solves the drinking water problems?

77%

report that the gram panchayat solves the problem in 1 to 5 days

Sustainability

52%

have access to water throughout the year

Groundwater dependency in district

97%

depend on groundwater for their domestic needs

Satisfaction levels

41%

are fully satisfied with water services & management while 39% are partially satisfied, 16% are not satisfied & 4% have not answered

Reliability

59%

reported drinking water problems in the last one year

Storage

45%

store water because of irregular supply, while 30% store water because it is 'easier'

Reasons cited for water supply disruption

(by the villagers)

Motor damage	25%
Power cut	22%
Lack of staff	14%
Water contamination	12%

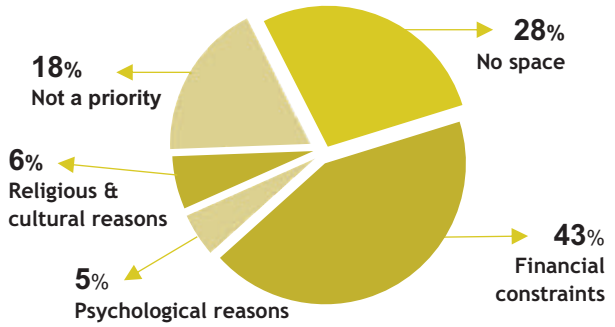
Sanitation, health & hygiene

Access to toilets

5%

have access to toilets. Most of them use pour flush toilets

Why don't people build toilets?

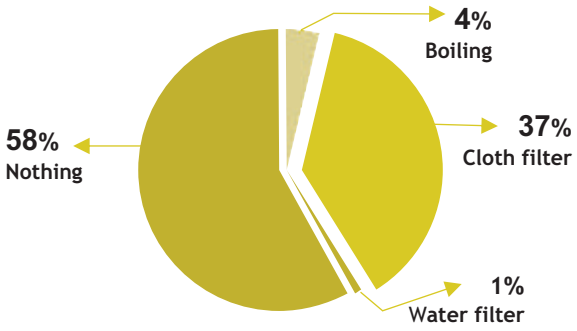


Drainage

11%

have drains outside the home

How do people treat their water?



Most people keep their water covered

Health & hygiene

out of 6 GPs surveyed 100% reported incidences of diarrhea and chikungunya

Schemes & Finances

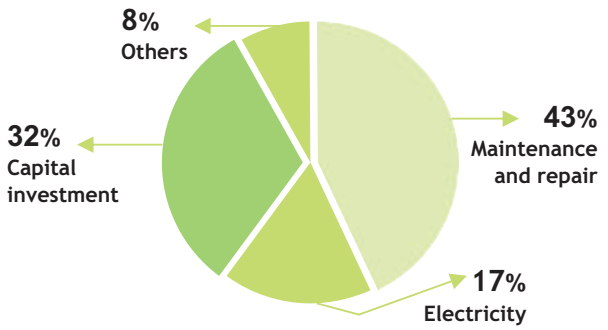
Ongoing schemes in our gram panchayat

☑ ARWSP	☑ TSC
☑ Jal Nirmal	☐ Sachethana
☑ Suvarna Jal	☑ Swachha Grama Yojana
☑ Swajaladhara	☐ Suvarna Gramodaya
☑ NREGA	☑ Watershed Project
☐ JSYS	☐ Others

People's main demands

- Public toilets
- Individual toilets
- Drainage facility
- Better water supply facility
- Roads

Breakup of WATSAN spending



Finances for 2007-08

Rs. 2,01,914/-
is the average amount spent by each GP on WATSAN services

Rs. 29/-
is the average amount spent per capita by the GPs on WATSAN

Rs. 66,326/-
is the average amount of user charges collected per GP

Equity

Derived category	Having household connection	Storing water in bindiges*	Not paying user charges	Having access to toilets	Incidence of diarrhea	Incidence of chikungunya
Low income	11%	43%	38%	0%	9%	14%
Middle income	17%	35%	31%	3%	7%	14%
High income	21%	23%	17%	16%	8%	9%

Refers to percentage of households

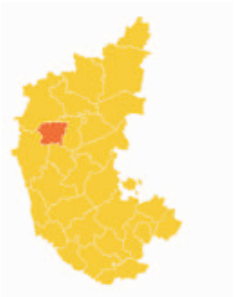
* Those storing water for domestic use in bindiges may not be able to consume 55 lpcd due to insufficient storage capacity

In general, low income groups had fewer household connections, had lower access to toilets, paid lesser user charges & had a higher incidence of disease when compared to the high income groups

Highlights from surveyed GPs

- GPs appear to be very active in solving drinking water problem
- Coverage of household toilets is less than 10% in all GPs
- Coverage of drainages is less than 10% for all GPs expect Tikota GP which has 48% coverage
- Respondent in Kannoli GP is not satisfied with the water quality

Dharwad



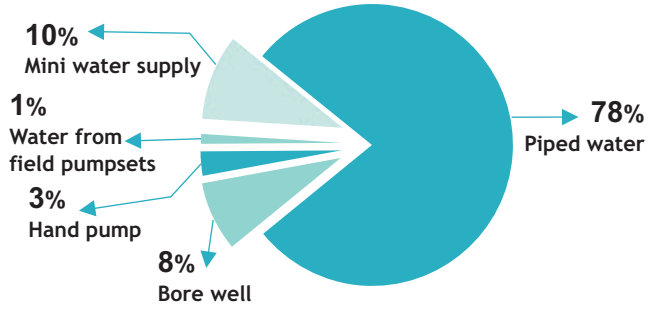
- Population: 16,04,253
- Agro-Climatic Zone: Northern transition Zone
- Average Rainfall: 772 mm
- Groundwater Status: Safe zone; high nitrate & fluoride in some areas
- Literacy Rate: Data not available
- Talukas: 6
- Number of GPs: 127
- Number of GPs covered in ASHWAS: 5

WATSAN score (on a scale of 100)

	District	State
Water supply infrastructure	99	75
Piped water is the main source of water		
Sanitation	41	49
Financial & space constraints are cited for not having toilets		
Health Indicator	85	86
Incidence of chikungunya reported are high		
Governance	84	76
Gram panchayat plays a crucial role to address water problems		
Satisfaction level	80	49
People are fairly satisfied with water services & management		

Water

What are the primary water sources?



Multiple source dependency : 11% depend on two sources

83%

access water 'very near' to their house. Most people take 45 to 60 minutes to collect water

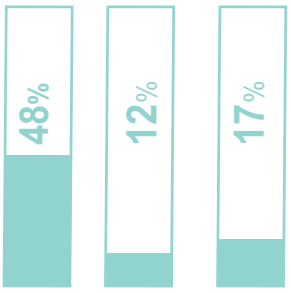
Village Water & Sanitation Committees

38%

of the villages have a VWSC; but none of them are functioning

Water Quality

33% of the GPs in the district have and use water testing kits distributed by the government



This chart indicates the percentage of sources over the desirable limits as per the standards. For fluoride, the standard limit is 1.0 ppm and for nitrates, it is 45 ppm

Who solves the drinking water problems?

82%

report that the gram panchayat solves the problem in 1 to 5 days

Sustainability

99%
have access to water throughout the year

Groundwater dependency in district

100%
depend on groundwater for their domestic needs

Satisfaction levels

79%
are fully satisfied with water services & management while 20% are partially satisfied & 1% are not satisfied

Reliability

12%
reported drinking water problems in the last one year

Storage

23%
store water because of irregular supply, while 74% store water because it is 'easier'

Reasons cited for water supply disruption
(by the villagers)

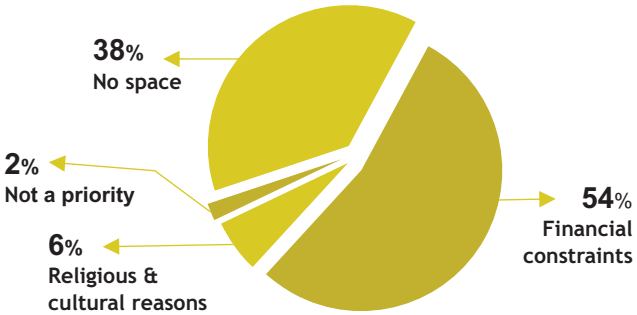
Pipe/taps damage	42%
Power cut	38%
Natural calamity	6%
Source dried up	4%

Sanitation, health & hygiene

Access to toilets

22%
have access to toilets. Most of them use pour flush toilets

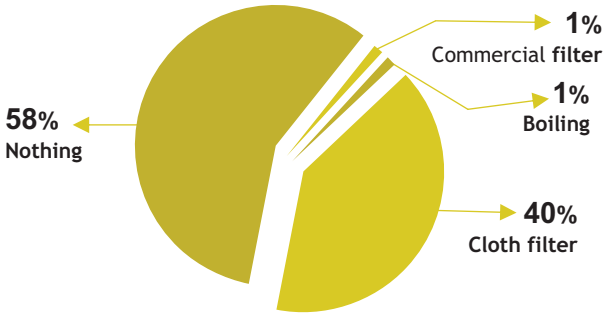
Why don't people build toilets?



Drainage

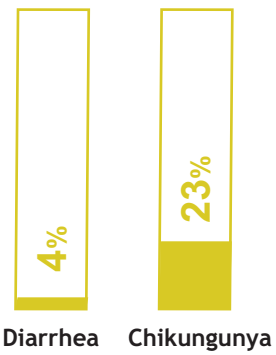
48%
have drains outside the home

How do people treat their water?



Most people keep their water covered

Health & hygiene



Out of 6 GPs surveyed, incidences of diarrhea were reported from 5 GPs and incidence of chikungunya were reported from 6 GPs

Schemes & Finances

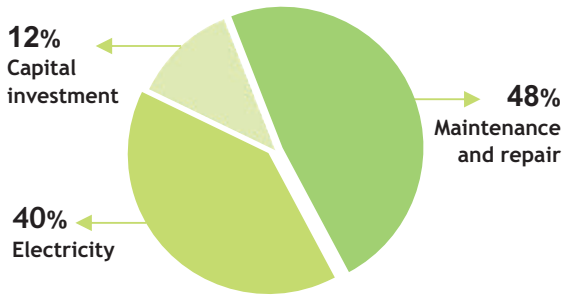
Ongoing schemes in our gram panchayat

☐ ARWSP	☑ TSC
☑ Jal Nirmal	☐ Sachethana
☐ Suvarna Jal	☑ Swachha Grama Yojana
☐ Swajaladhara	☑ Suvarna Gramodaya
☑ NREGA	☑ Watershed Project
☐ JSYS	☐ Others

People's main demands

- Toilets
- Drainage facility
- Better water supply facility

Breakup of WATSAN spending



Finances for 2007-08

Rs. 2,90,500/-
is the average amount spent by each GP on WATSAN services

Rs. 39/-
is the average amount spent per capita by the GPs on WATSAN

Rs. 25,716/-
is the average amount of user charges collected per GP

Equity

Derived category	Having household connection	Storing water in bindiges*	Not paying user charges	Having access to toilets	Incidence of diarrhea	Incidence of chikungunya
Low income	22%	47%	27%	8%	7%	20%
Middle income	36%	34%	21%	27%	13%	23%
High income	50%	40%	19%	51%	1%	9%

Refers to percentage of households

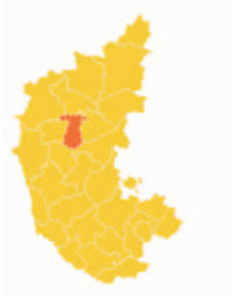
* Those storing water for domestic use in bindiges may not be able to consume 55 lpcd due to insufficient storage capacity

In general, low income groups had fewer household connections, had lower access to toilets, paid lesser user charges & had a higher incidence of disease when compared to the high income groups

Highlights from surveyed GPs

- Belur GP has the highest dependency on multiple sources at 48%
- Adaragunchi and Katnur of Hubli taluka have a 0% dependency on multiple sources
- Adaragunchi has the highest per capita spending on WATSAN at Rs. 101, while Harlapur has the lowest at Rs. 8/-

Gadag



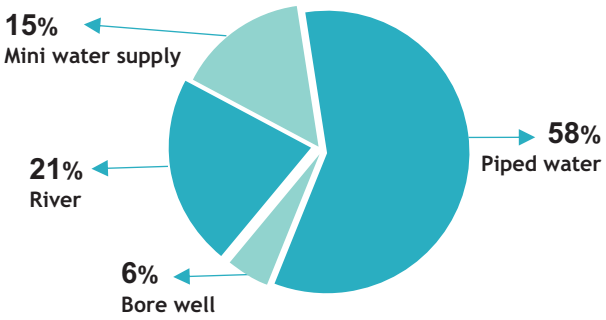
- Population: 9,71,835
- Agro-Climatic Zone: Northern Dry Zone
- Average Rainfall: 612 mm
- Groundwater Status: Over exploited; presence of high fluoride and nitrate
- Literacy Rate: 66.27 %
- Talukas: 5
- Number of GPs: 106
- Number of GPs covered in ASHWAS: 4

WATSAN score (on a scale of 100)

	District	State
Water supply infrastructure	53	75
Piped water is the main source of water		
Sanitation	40	49
Financial & space constraints are cited for not having toilets		
Health Indicator	75	86
Incidences of diarrhea & Incidence of chikungunya are reported		
Governance	72	76
Gram panchayat plays a crucial role to address water problems		
Satisfaction level	27	49
People are partially satisfied with water quality		

Water

What are the primary water sources?



Multiple source dependency : 25% depend on two sources

79%

access water 'very near' to their house. Most people take 45 to 60 minutes to collect water

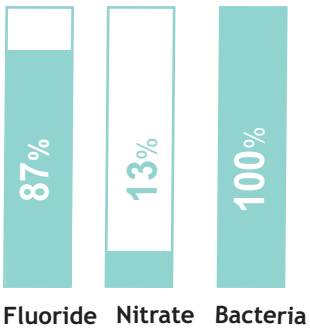
Village Water & Sanitation Committees

54%

of the villages have a VWSC; but none of them are functioning

Water Quality

None of the GPs in the district have water testing kits distributed by the government



This chart indicates the percentage of sources over the desirable limits as per the standards. For fluoride, the standard limit is 1.0 ppm and for nitrates, it is 45 ppm

Who solves the drinking water problems?

76%

report that the gram panchayat solves the problem in 2 weeks

Sustainability

93%

have access to water throughout the year

Groundwater dependency in district

79%

depend on groundwater for their domestic needs

Satisfaction levels

61%

Are fully satisfied with water services & management while 29% are partially satisfied & 10% are not satisfied

Reliability

5%

reported drinking water problems in the last one year

Storage

22%

store water because of irregular supply. while 77% store water because it is 'easier'

Reasons cited for water supply disruption

(by the villagers)

Natural calamity	32%
Power cut	21%
Water contamination	17%
Reduced water yield	9%

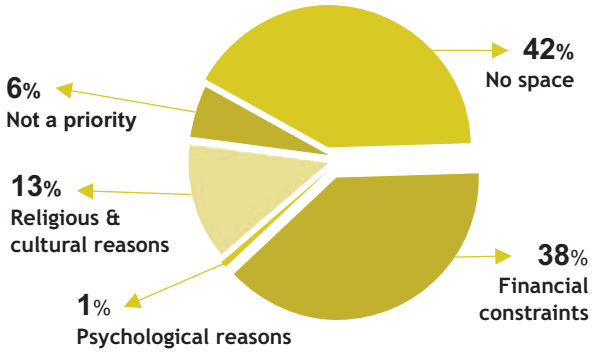
Sanitation, health & hygiene

Access to toilets

4%

have access to toilets. Most of them use pour flush toilets

Why don't people build toilets?

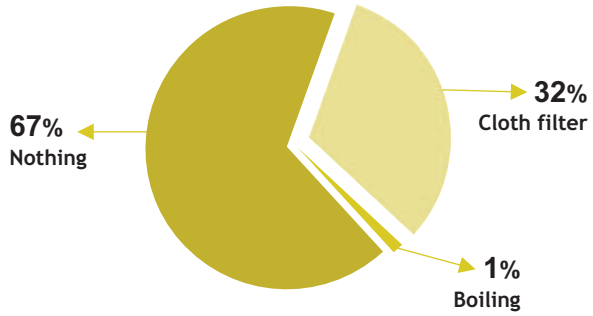


Drainage

26%

have drains outside the home

How do people treat their water?



Most people keep their water covered

Health & hygiene

out of 4 GPs surveyed 100% reported incidences of diarrhea and chikungunya

Schemes & Finances

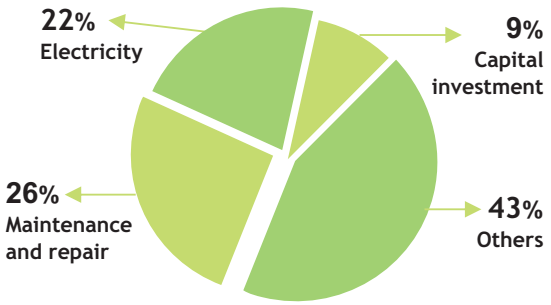
Ongoing schemes in our gram panchayat

☑ ARWSP	☑ TSC
☑ Jal Nirmal	☐ Sachethana
☐ Suvarna Jal	☑ Swachha Grama Yojana
☐ Swajaladhara	☑ Suvarna Gramodaya
☑ NREGA	☑ Watershed Project
☐ JSYS	☐ Others

People's main demands

- Toilets
- Drainage facility
- Better water supply facility

Breakup of WATSAN spending



Finances for 2007-08

Rs. 3,78,420/-
is the average amount spent by each GP on WATSAN services

Rs. 91/-
is the average amount spent per capita by the GPs on WATSAN

Rs. 32,915/-
is the average amount of user charges collected per GP

Equity

Derived category	Having household connection	Storing water in bindiges*	Not paying user charges	Having access to toilets	Incidence of diarrhea	Incidence of chikungunya
Low income	41%	64%	11%	0%	10%	7%
Middle income	56%	63%	7%	4%	7%	8%
High income	86%	14%	4%	17%	12%	14%

Refers to percentage of households

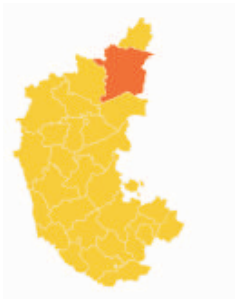
* Those storing water for domestic use in bindiges may not be able to consume 55 lpcd due to insufficient storage capacity

In general, low income groups had fewer household connections, had lower access to toilets, paid lesser user charges when compared to the high income groups

Highlights from surveyed GPs

- In Hollemanur GP, 81 % depend on multiple sources
- In Holemannur, only 45% collect water everyday as the source is too far away
- Holemannur is the only GP in the sample that depends primarily on river water

Gulbarga



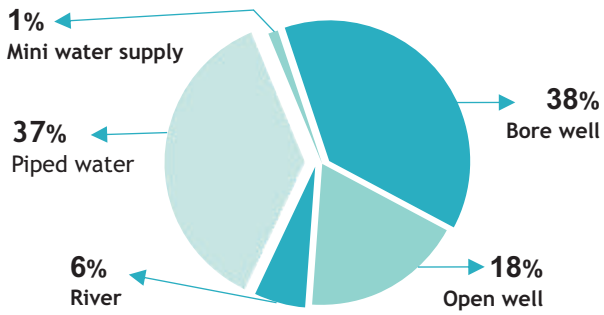
- Population: 31,30,922
- Agro-Climatic Zone: Northeastern Dry Zone
- Average Rainfall: 777 mm
- Groundwater Status: Over exploited; presence of fluoride & nitrate
- Literacy Rate: 51%
- Talukas: 10
- Number of GPs: 337
- Number of GPs covered in ASHWAS: 10

WATSAN score (on a scale of 100)

	District	State
Water supply infrastructure	77	75
Piped water and Borewell are the main sources of water		
Sanitation	33	49
Financial & space constraints are cited for not having toilets		
Health Indicator	77	86
Incidence of chikungunya reported are high		
Governance	84	76
Village elders play a crucial role to address water problems		
Satisfaction level	28	49
People are not satisfied with quality, service & management of water		

Water

What are the primary water sources?



Multiple source dependency : 12% depend on two sources

58%

access water very near to their house. While 32% travel less than 1.6 km. Most people take 30 to 60 minutes to collect water

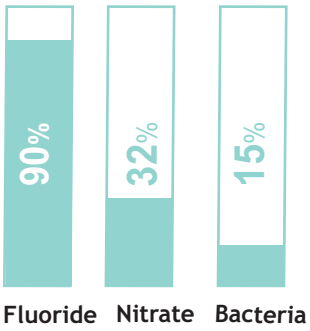
Village Water & Sanitation Committees

13%

of the villages have a VWSC; but only some of them are actively functioning

Water Quality

10% of the GPs in the district have and use water testing kits distributed by the government



This chart indicates the percentage of sources over the desirable limits as per the standards. For fluoride, the standard limit is 1.0 ppm and for nitrates, it is 45 ppm

Who solves the drinking water problems?

76%

report that village elders helped solve the problem in 2 weeks to 1 month

Sustainability

99%
have access to water throughout the year

Groundwater dependency in district

94%
depend on groundwater for their domestic needs

Satisfaction levels

23%
are fully satisfied with water services & management while 49% are partially satisfied, 26% are not satisfied & 2% have not answered

Reliability

22%
reported drinking water problems in the last one year

Storage

20%
store water because of irregular supply, while 45% store water because it is 'easier'

Reasons cited for water supply disruption
(by the villagers)

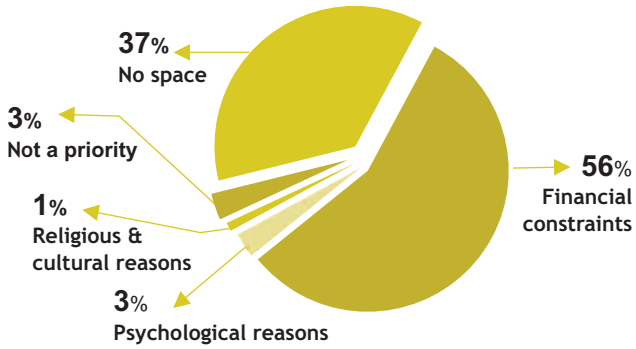
Pipe/taps damage	33%
Power cut	25%
Motor damage	10%
Irregular operation	6%

Sanitation, health & hygiene

Access to toilets

7%
have access to toilets. Most of them use pour flush toilets

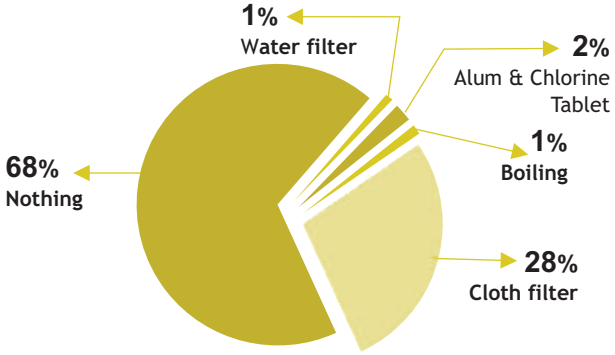
Why don't people build toilets?



Drainage

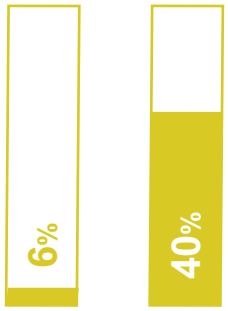
15%
have drains outside the home

How do people treat their water?



Most people keep their water covered

Health & hygiene



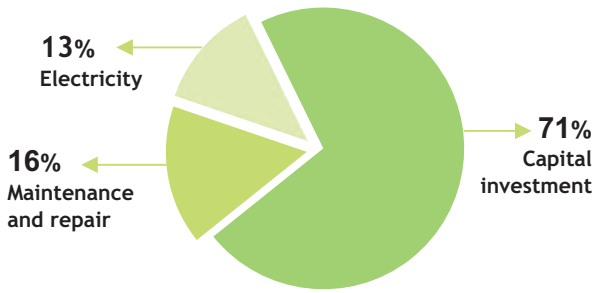
out of 10 GPs surveyed, 100% reported incidences of diarrhea and chikungunya

Schemes & Finances

Ongoing schemes in our gram panchayat

☑ ARWSP	☑ TSC
☑ Jal Nirmal	☐ Sachethana
☐ Suvarna Jal	☑ Swachha Grama Yojana
☑ Swajaladhara	☑ Suvarna Gramodaya
☑ NREGA	☑ Watershed Project
☐ JSYS	☐ Others

Breakup of WATSAN spending



People's main demands

- Drainage facility
- Better water supply facility
- Toilets
- Clean village
- Roads

Finances for 2007-08

Rs. 5,18,270/-
is the average amount spent by each GP on WATSAN services

Rs. 65/-
is the average amount spent per capita by the GPs on WATSAN

Rs. 1,44,775/-
is the average amount of user charges collected per GP

Equity

Derived category	Having household connection	Storing water in bindiges*	Not paying user charges	Having access to toilets	Incidence of diarrhea	Incidence of chikungunya
Low income	12%	20%	43%	0%	6%	42%
Middle income	21%	19%	49%	5%	8%	38%
High income	33%	7%	22%	22%	12%	37%

Refers to percentage of households

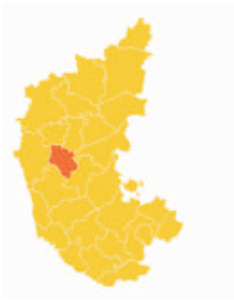
* Those storing water for domestic use in bindiges may not be able to consume 55 lpcd due to insufficient storage capacity

In general, low income groups had fewer household connections, had lower access to toilets & paid lesser user charges when compared to the high income groups

Highlights from surveyed GPs

- Kadechur and Yalsatti GPs of Yadgir taluk have 100% water availability
- In Hebbal GP, 100% water sources are potable
- Overall the drainage coverage in the surveyed GPs is low

Haveri



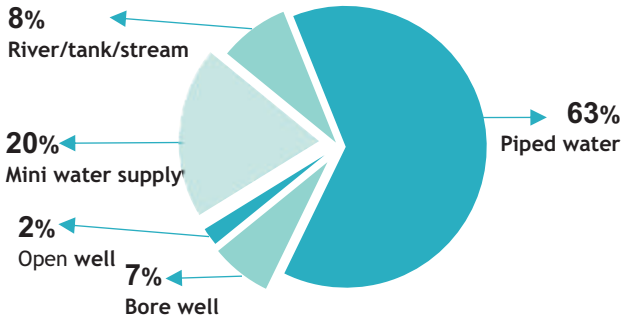
- Population: 14,39,116
- Agro-Climatic Zone: Northern transition zone
- Average Rainfall: 753 mm
- Groundwater Status: Over exploited; high nitrate & fluoride in some areas
- Literacy Rate: 66.06%
- Talukas: 7
- Number of GPs: 208
- Number of GPs covered in ASHWAS: 8

WATSAN score (on a scale of 100)

	District	State
Water supply infrastructure	91	75
Piped water is the main source of water		
Sanitation	50	49
Financial & space constraints are cited for not having toilets		
Health Indicator	83	86
Incidence of chikungunya & one death from diarrhea was reported		
Governance	92	76
Gram panchayat plays a crucial role to address water problems		
Satisfaction level	42	49
People are not satisfied with quality & management of water		

Water

What are the primary water sources?



Multiple source dependency : 22% depend on two sources

76%

access water 'very near' to their house. Most people take 45 to 60 minutes to collect water

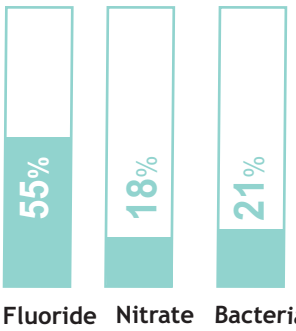
Village Water & Sanitation Committees

27%

of the villages have a VWSC; most of them are functioning

Water Quality

50% of the GPs in the district have water testing kits distributed by the government, of which 25% have been used



This chart indicates the percentage of sources over the desirable limits as per the standards. For fluoride, the standard limit is 1.0 ppm and for nitrates, it is 45 ppm

Who solves the drinking water problems?

91%

report that the gram panchayat solves the problem in 1 to 2 weeks

Sustainability

93%

have access to water throughout the year

Groundwater dependency in district

92%

depend on groundwater for their domestic needs

Satisfaction levels

41%

are fully satisfied with water services & management while 48% are partially satisfied, 9% are not satisfied & 2% have not answered

Reliability

60%

reported drinking water problems in the last one year

Storage

75%

store water because of irregular supply, while 20% store water because it is 'easier'

Reasons cited for water supply disruption

(by the villagers)

Power cut	33%
Motor damage	23%
Pipe/taps damage	14%
Water contamination	9%

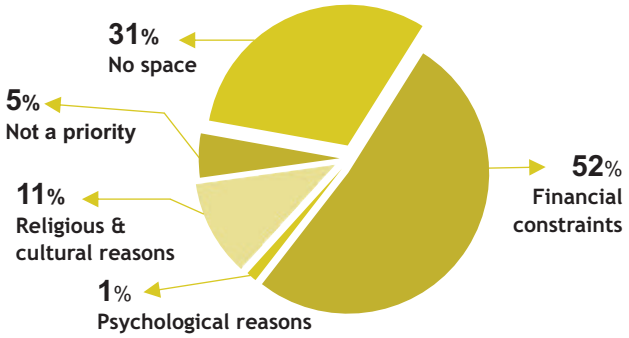
Sanitation, health & hygiene

Access to toilets

16%

have access to toilets. Most of them use pour flush toilets

Why don't people build toilets?

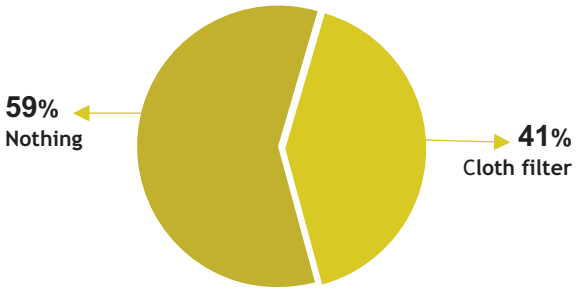


Drainage

56%

have drains outside the home

How do people treat their water?



Most people keep their water covered

Health & hygiene

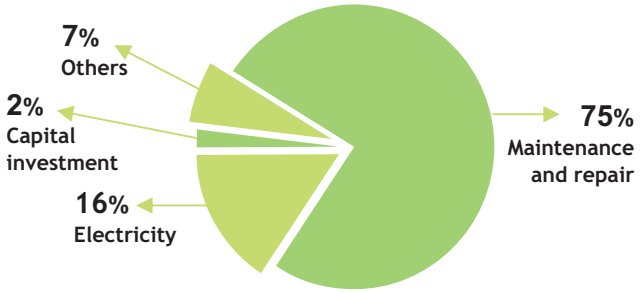
out of 8 GPs surveyed, 100% reported incidences of diarrhea and chikungunya

Schemes & Finances

Ongoing schemes in our gram panchayat

☑ ARWSP	☑ TSC
☐ Jal Nirmal	☐ Sachethana
☐ Suvarna Jal	☑ Swachha Grama Yojana
☐ Swajaladhara	☑ Suvarna Gramodaya
☑ NREGA	☑ Watershed Project
☑ JSYS	☐ Others

Breakup of WATSAN spending



People's main demands

- Toilets
- Drainage facility
- Better water supply facility

Finances for 2007-08

Rs. 1,00,321/-
is the average amount spent by each GP on WATSAN services

Rs. 16/-
is the average amount spent per capita by the GPs on WATSAN

Rs. 51,925/-
is the average amount of user charges collected per GP

Equity

Derived category	Having household connection	Storing water in bindiges*	Not paying user charges	Having access to toilets	Incidence of diarrhea	Incidence of chikungunya
Low income	10%	47%	6%	7%	17%	24%
Middle income	16%	33%	4%	20%	17%	23%
High income	35%	20%	0%	49%	18%	22%

Refers to percentage of households

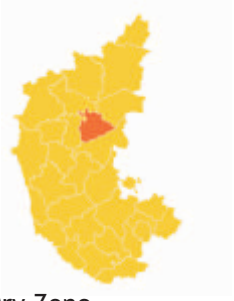
* Those storing water for domestic use in bindiges may not be able to consume 55 lpcd due to insufficient storage capacity

In general, low income groups had fewer household connections, had lower access to toilets & paid lesser user charges when compared to the high income groups

Highlights from surveyed GPs

- Vanahalli GP has high levels of nitrate contamination
- The primary source of water is piped water. However, operation and maintenance of the water supply systems is an issue in all GPs surveyed
- Respondents in Gundenahalli & Gondi GPs report high Incidence of chikungunya

Koppal



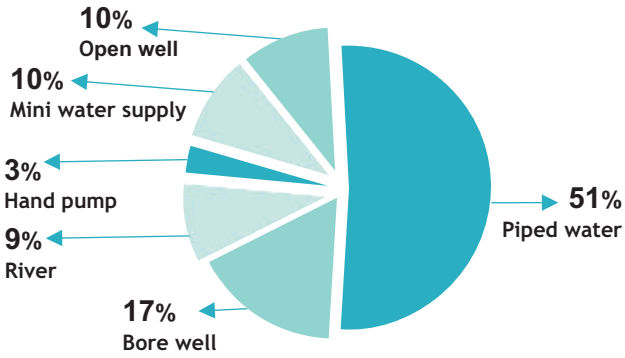
- Population: 11,96,089
- Agro-Climatic Zone: Northern Dry Zone
- Average Rainfall: 572 mm
- Groundwater Status: Over exploited; high fluoride & nitrate in some areas
- Literacy Rate: 62.39%
- Talukas: 4
- Number of GPs: 134
- Number of GPs covered in ASHWAS: 4

WATSAN score (on a scale of 100)

	District	State
Water supply infrastructure	81	75
Piped water is the main source of water		
Sanitation	37	49
Financial & space constraints are cited for not having toilets		
Health Indicator	86	86
Incidences of diarrhea reported are high		
Governance	37	76
Gram panchayat plays a crucial role to address water problems		
Satisfaction level	48	49
People are not satisfied with quality & management of water		

Water

What are the primary water sources?



Multiple source dependency : 35% depend on two sources; 8% on three sources

60%

access water 'very near' to their house. 15% travel more than 1.6 km to access water. Most people take 45 to 60 minutes to collect water

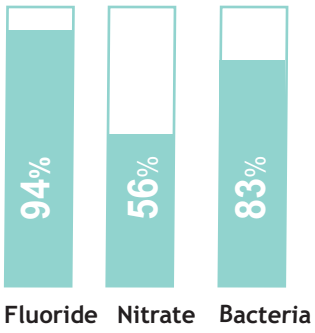
Village Water & Sanitation Committees

24%

of the villages have a VWSC; all of them are functioning

Water Quality

25% of the GPs in the district have and use water testing kits distributed by the government



This chart indicates the percentage of sources over the desirable limits as per the standards. For fluoride, the standard limit is 1.0 ppm and for nitrates, it is 45 ppm

Who solves the drinking water problems?

97%

report that the gram panchayat solves the problem in 1 to 5 days

Sustainability

79%

have access to water throughout the year

Groundwater dependency in district

91%

depend on groundwater for their domestic needs

Satisfaction levels

47%

are fully satisfied with water services & management while 39% are partially satisfied, 1% are not satisfied & 13% have not answered

Reliability

42%

reported drinking water problems in the last one year

Storage

58%

store water because of irregular supply, while 30% store water because it is 'easier'

Reasons cited for water supply disruption

(by the villagers)

Motor damage	38%
Power cut	32%
Pipe/taps damage	21%
Reduced water yield	4%

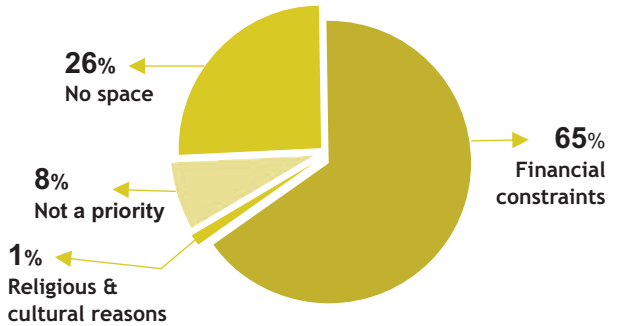
Sanitation, health & hygiene

Access to toilets

4%

have access to toilets. Most of them use pour flush toilets

Why don't people build toilets?

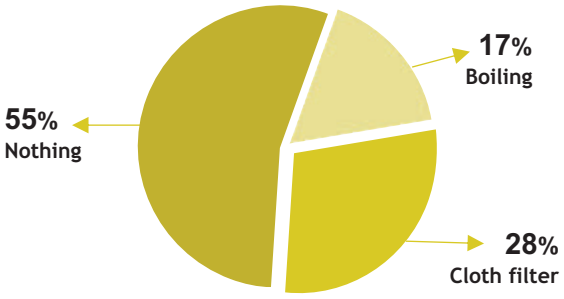


Drainage

14%

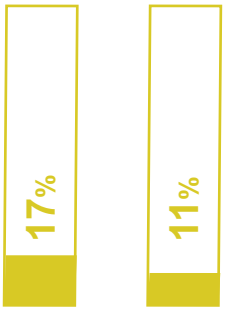
have drains outside the home

How do people treat their water?



Most people keep their water covered

Health & hygiene



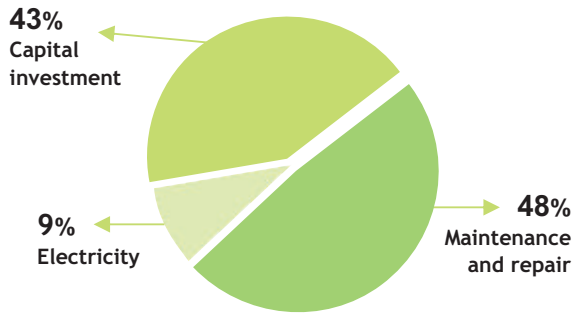
out of 4 GPs surveyed, 100% reported incidences of diarrhea and chikungunya

Schemes & Finances

Ongoing schemes in our gram panchayat

☐ ARWSP	☑ TSC
☐ Jal Nirmal	☐ Sachethana
☐ Suvarna Jal	☐ Swachha Grama Yojana
☐ Swajaladhara	☐ Suvarna Gramodaya
☑ NREGA	☑ Watershed Project
☐ JSYS	☐ Others

Breakup of WATSAN spending



People's main demands

- Drainage facility
- Clean village
- Better water supply

Finances for 2007-08

Rs. 1,63,905/-
is the average amount spent by each GP on WATSAN services

Rs. 24/-
is the average amount spent per capita by the GPs on WATSAN

Rs. 23,852/-
is the average amount of user charges collected per GP

Equity

Derived category	Having household connection	Storing water in bindiges*	Not paying user charges	Having access to toilets	Incidence of diarrhea	Incidence of chikungunya
Low income	12%	88%	91%	1%	12%	7%
Middle income	22%	69%	72%	2%	22%	12%
High income	55%	47%	37%	7%	26%	21%

Refers to percentage of households

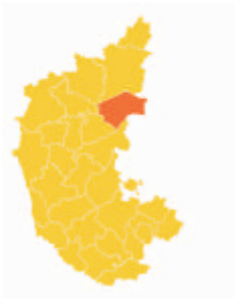
* Those storing water for domestic use in bindiges may not be able to consume 55 lpcd due to insufficient storage capacity

In general, low income groups had fewer household connections, had lower access to toilets & paid lesser user charges when compared to the high income groups

Highlights from surveyed GPs

- There is high dependence on multiple sources in Koppal Taluka
- In Katharaki Gudlanur 20% of the residents stated that their water source is greater than 1.6 km away
- The same GP had the highest WATSAN spending per capita at Rs. 127. However satisfaction levels were at 34%
- On the other hand, Bijakal had the lowest spending per capita - Rs.8 - and yet reported 100% satisfaction levels

Raichur



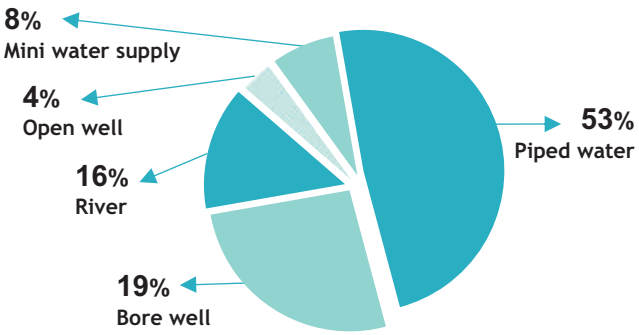
- Population: 16,69,762
- Agro-Climatic Zone: Eastern Dry Zone
- Average Rainfall: 621 mm
- Groundwater Status: Safe zone; presence of high fluoride and nitrate
- Literacy Rate: 62%
- Talukas: 5
- Number of GPs: Data not available
- Number of GPs covered in ASHWAS: 6

WATSAN score (on a scale of 100)

	District	State
Water supply infrastructure	83	75
Piped water is the main source of water		
Sanitation	29	49
Financial & space constraints are cited for not having toilets		
Health Indicator	83	86
Incidences of diarrhea & Incidence of chikungunya are high		
Governance	80	76
Gram panchayat plays a crucial role to address water problems		
Satisfaction level	48	49
People are not satisfied with water services and management		

Water

What are the primary water sources?



Multiple source dependency : 29% depend on two sources; 3% on three sources

78%

access water 'very near' to their house. Most people take 45 to 60 minutes to collect water. 20% take more than an hour to collect water

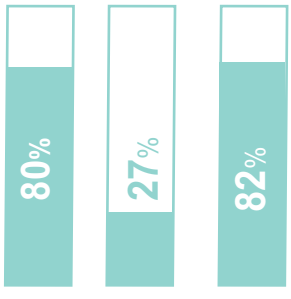
Village Water & Sanitation Committees

41%

of the villages have a VWSC; but only some of them are functioning

Water Quality

33% of the GPs in the district have water testing kits distributed by the government. Only 50% of the kits have been used



This chart indicates the percentage of sources over the desirable limits as per the standards. For fluoride, the standard limit is 1.0 ppm and for nitrates, it is 45 ppm

Who solves the drinking water problems?

68%

report that the gram panchayat solves the problem in 1 to 5 days

Sustainability

92%

have access to water throughout the year

Groundwater dependency in district

84%

depend on groundwater for their domestic needs

Satisfaction levels

41%

are fully satisfied with water services & management while 48% are partially satisfied, 10% are not satisfied & 1% have not answered

Reliability

14%

reported drinking water problems in the last one year

Storage

4%

store water because of irregular supply, while 74% store water because it is 'easier'

Reasons cited for water supply disruption

(by the villagers)

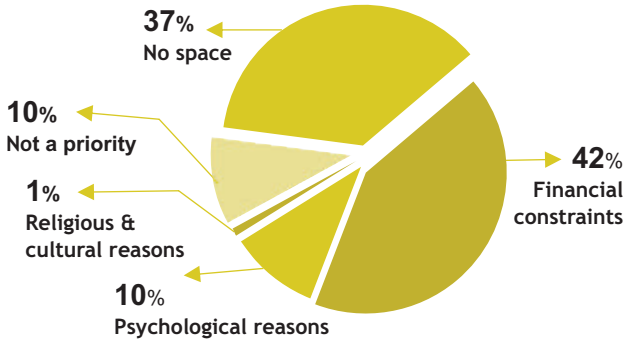
Power cut	19%
Reduced water yield	14%
Lack of staff	11%
Natural calamity	11%

Sanitation, health & hygiene

Access to toilets

2% have access to toilets. Most of them use pour flush toilets

Why don't people build toilets?

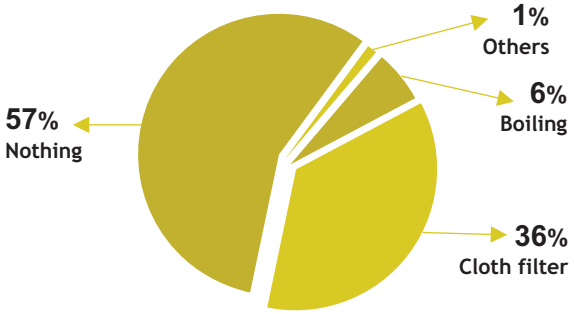


Drainage

38%

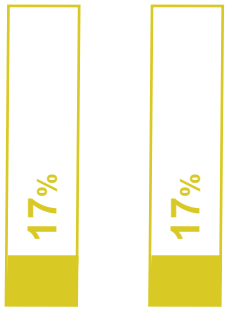
have drains outside the home

How do people treat their water?



Most people keep their water covered

Health & hygiene



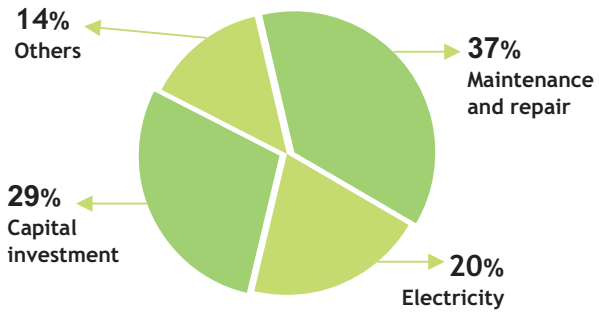
out of 6 GPs surveyed 100% reported incidences of diarrhea and chikungunya

Schemes & Finances

Ongoing schemes in our gram panchayat

- [x] ARWSP
- [x] Jal Nirmal
- [ ] Suvarna Jal
- [ ] Swajaladhara
- [x] NREGA
- [x] JSYS
- [x] TSC
- [x] Sachethana
- [x] Swachha Grama Yojana
- [ ] Suvarna Gramodaya
- [x] Watershed Project
- [ ] Others

Breakup of WATSAN spending



People's main demands

- Toilets
- Drainage facility
- Better water supply

Finances for 2007-08

Rs. 3,79,333/-
is the average amount spent by each GP on WATSAN services

Rs. 43/-
is the average amount spent per capita by the GPs on WATSAN

Rs. 82,700/-
is the average amount of user charges collected per GP

Equity

Derived category	Having household connection	Storing water in bindiges*	Not paying user charges	Having access to toilets	Incidence of diarrhea	Incidence of chikungunya
Low income	35%	21%	55%	0%	20%	15%
Middle income	34%	17%	58%	1%	23%	18%
High income	57%	10%	32%	13%	17%	15%

Refers to percentage of households

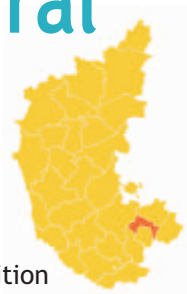
* Those storing water for domestic use in bindiges may not be able to consume 55 lpcd due to insufficient storage capacity

In general, low income groups had fewer household connections, had lower access to toilets, paid lesser user charges & had a higher incidence of disease when compared to the high income groups

Highlights from surveyed GPs

- Ragalparvi GP has a very high dependence on multiple sources at 90%, with more than 45% depending on 3 sources
- Majority of the people in Ragalparvi depend upon river water as their main source of water
- The water sources in Kota GP have very high levels of fluoride content
- Almost all water sources in Devaragudi have bacterial contamination. This GP also reported high incidences of disease

Bangalore Rural



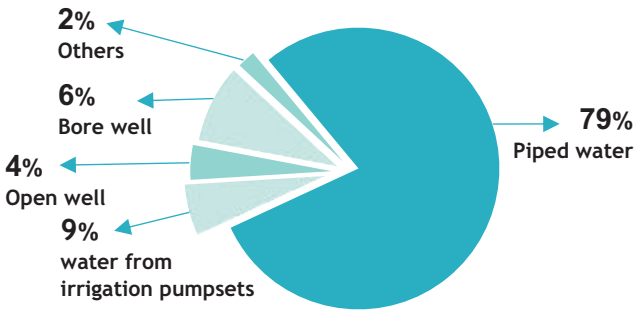
- Population: 14,39,116
- Agro-Climatic Zone: Northern transition zone
- Average Rainfall: 753 mm
- Groundwater Status: Critical zone ; high fluoride in some areas
- Literacy Rate: 65%
- Talukas: 4
- Number of GPs: 229
- Number of GPs covered in ASHWAS: 4

WATSAN score (on a scale of 100)

	District	State
Water supply infrastructure	84	75
Piped water is the main source of water		
Sanitation	63	49
Financial & space constraints are cited for not having toilets		
Health Indicator	99	86
Incidences of diarrhea and chikungunya reported are low		
Governance	67	76
Gram panchayat plays a crucial role to address water problems		
Satisfaction level	84	49
People are partially satisfied with quality & quantity of water		

Water

What are the primary water sources?



Multiple source dependency : 17% depend on two sources

81%

access water 'very near' to their house. Most people take 45 to 60 minutes to collect water

Village Water & Sanitation Committees

3%

of the villages have a VWSC; all of them are functioning

Water Quality

25% of the GPs in the district have water testing kits distributed by the government. But none of the kits have been used

This chart indicates the percentage of sources over the desirable limits as per the standards. For fluoride, the standard limit is 1.0 ppm and for nitrates, it is 45 ppm

Who solves the drinking water problems?

88%

report that the gram panchayat solves the problem in 1 to 5 days. 12% report waterman solves problem

Sustainability

98%

have access to water throughout the year

Groundwater dependency in district

100%

depend on groundwater for their domestic needs

Satisfaction levels

80%

are fully satisfied with water services & management while 19% are partially satisfied & 1% are not satisfied

Reliability

4%

reported drinking water problems in the last one year

Storage

76%

store water because of irregular supply, while 18% store water because source is 'too far'

Reasons cited for water supply disruption

(by the villagers)

Motor damage	30%
Power cut	21%
Pipe/taps damage	12%
Financial reason	8%

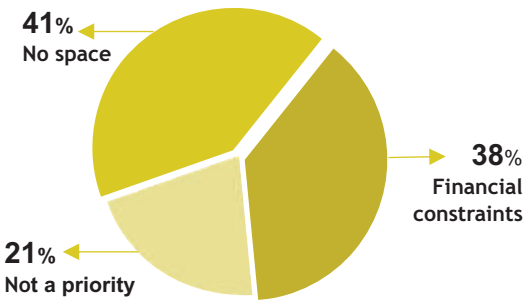
Sanitation, health & hygiene

Access to toilets

42%

have access to toilets. Most of them use pour flush toilets

Why don't people build toilets?

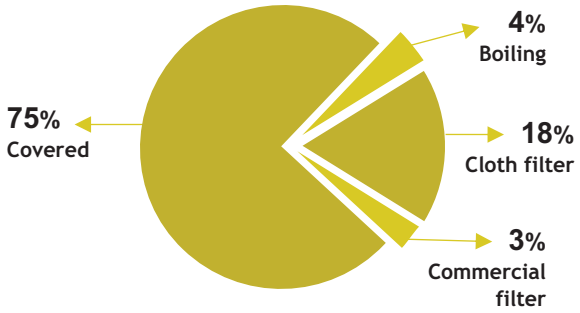


Drainage

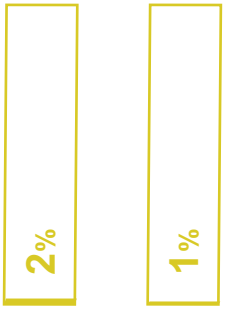
72%

have drains outside the home

How do people treat their water?



Health & hygiene



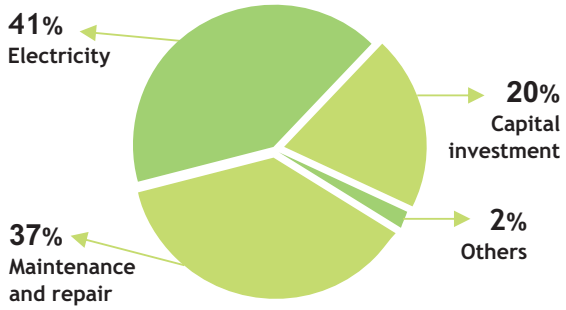
out of 4 GPs surveyed incidences of diarrhea were reported from 1 GP, and Incidences of chikungunya were reported from 1 GP

Schemes & Finances

Ongoing schemes in our gram panchayat

☑ ARWSP	☑ TSC
☑ Jal Nirmal	☐ Sachethana
☑ Suvarna Jal	☑ Swachha Grama Yojana
☐ Swajaladhara	☑ Suvarna Gramodaya
☑ NREGA	☑ Watershed Project
☐ JSYS	☐ Others

Breakup of WATSAN spending



People's main demands

- Build toilets
- Better drainage facility
- Need better water supply facilities
- Better garbage disposal

Finances for 2007-08

Rs. 4,57,744/-
is the average amount spent by each GP on WATSAN services

Rs. 65/-
is the average amount spent per capita by the GPs on WATSAN

Rs. 1,81,233/-
is the average amount of user charges collected per GP

Equity

Derived category	Having household connection	Storing water in bindiges*	Not paying user charges	Having access to toilets	Incidence of diarrhea	Incidence of chikungunya
Low income	6%	34%	24%	18%	1%	0%
Middle income	9%	23%	13%	41%	0%	0%
High income	8%	13%	12%	60%	1%	1%

Refers to percentage of households

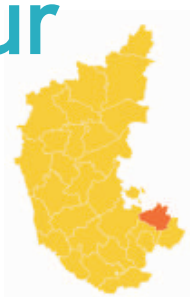
* Those storing water for domestic use in bindiges may not be able to consume 55 lpcd due to insufficient storage capacity

In general, low income groups had fewer household connections, had lower access to toilets & paid lesser user charges when compared to the high income groups

Highlights from surveyed GPs

- Viswesharapura collected nearly Rs. 500000 as water cess
- Viswesharapura has the lowest dependency on multiple sources at 4%
- There is low awareness on simple water treatment techniques, such as boiling, in all GPs

Chikballapur



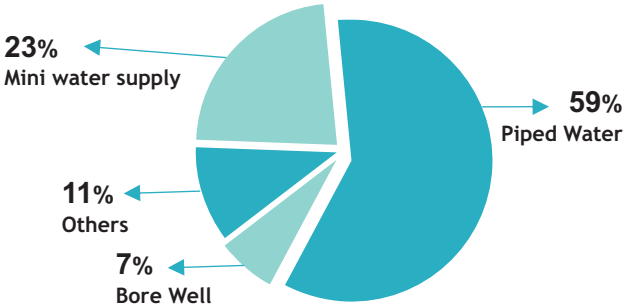
- Population: 11,49,007
- Agro-Climatic Zone: Eastern Dry Zone
- Average Rainfall: 750 mm
- Groundwater Status: Over exploited; presence of bacterial contamination
- Literacy rate: 57%
- Talukas: 6
- Number of GPs: 150
- Number of GPs covered in ASHWAS: 6

WATSAN score (on a scale of 100)

	District	State
Water supply infrastructure	90	75
Piped water is the main source of water		
Sanitation	49	49
Financial & space constraints are cited for not having toilets		
Health Indicator	88	86
Incidences of diarrhea reported are hgh		
Governance	92	76
Gram panchayat plays a crucial role to address water problems		
Satisfaction level	47	49
People are not satisfied with water services and management		

Water

What are the primary water sources?



Multiple source dependency : 18% depend on two sources; 1% depend on three sources

77%

access water 'very near' to their house. Most people take 45 to 60 minutes to collect water

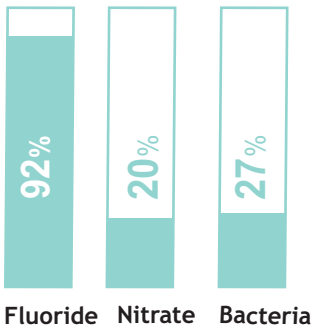
Village Water & Sanitation Committees

32%

of the villages have a VWSC; but only some of them are functioning

Water Quality

none of the GPs in the district have water testing kits distributed by the government



This chart indicates the percentage of sources over the desirable limits as per the standards. For fluoride, the standard limit is 1.0 ppm and for nitrates, it is 45 ppm

Who solves the drinking water problems?

51%

report that the gram panchayat solves the problem in 1 to 5 days

Sustainability

72%

have access to water throughout the year

Groundwater dependency in district

97%

depend on groundwater for their domestic needs

Satisfaction levels

43%

are fully satisfied with water services & management while 36% are partially satisfied, 21% are not satisfied

Reliability

38%

reported drinking water problems in the last one year

Storage

37%

store water because of irregular supply, while 49% store water because it is 'easier'

Reasons cited for water supply disruption

(by the villagers)

Motor damage	23%
Lack of staff	18%
Pipe/taps damage	17%
Power cut	9%

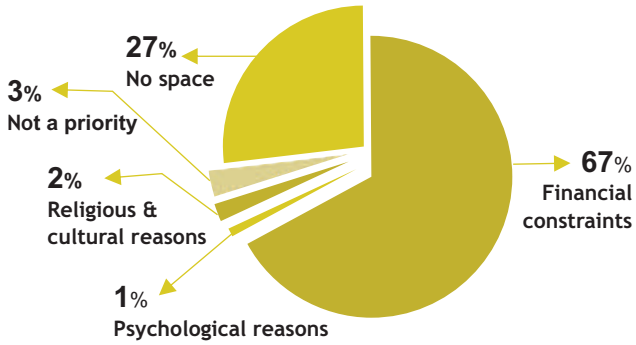
Sanitation, health & hygiene

Access to toilets

27%

have access to toilets. Most of them use pour flush toilets

Why don't people build toilets?

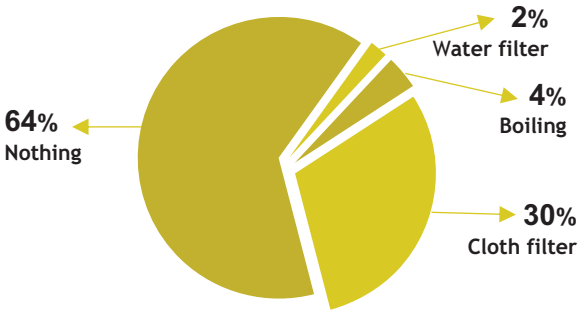


Drainage

59%

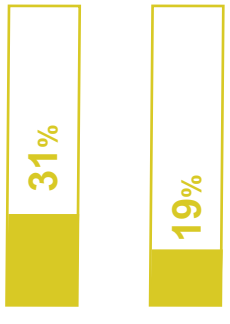
have drains outside the home

How do people treat their water?



Most people keep their water covered

Health & hygiene



out of 6 GPs surveyed incidences of diarrhea were reported from 5 GPs, and Incidences of chikungunya were reported in all 6 GPs

Schemes & Finances

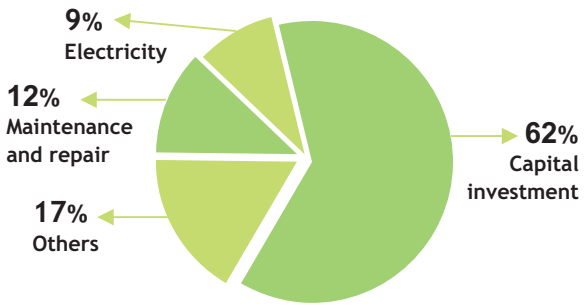
Ongoing schemes in our gram panchayat

☑ ARWSP	☑ TSC
☐ Jal Nirmal	☐ Sachethana
☑ Suvarna Jal	☑ Swachha Grama Yojana
☑ Swajaladhara	☑ Suvarna Gramodaya
☑ NREGA	☐ Watershed Project
☑ JSYS	☐ Others

People's main demands

- Toilets
- Drainage facility
- Roads

Breakup of WATSAN spending



Finances for 2007-08

Rs. 4,81,301/-
is the average amount spent by each GP on WATSAN services

Rs. 71/-
is the average amount spent per capita by the GPs on WATSAN

Rs. 45,428/-
is the average amount of user charges collected per GP

Equity

Derived category	Having household connection	Storing water in bindiges*	Not paying user charges	Having access to toilets	Incidence of diarrhea	Incidence of chikungunya
Low income	17%	64%	7%	5%	10%	5%
Middle income	28%	30%	5%	21%	12%	6%
High income	40%	20%	4%	51%	27%	19%

Refers to percentage of households

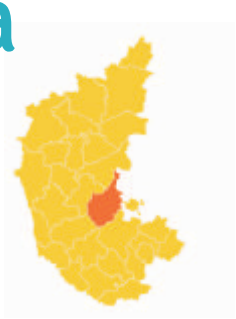
* Those storing water for domestic use in bindiges may not be able to consume 55 lpcd due to insufficient storage capacity

In general, low income groups had fewer household connections, had lower access to toilets & paid lesser user charges when compared to the high income groups

Highlights from surveyed GPs

- Coverage of House hold toilets in Arur GP & Puligal GP is only 12%
- There is a high dependency on multiple sources in Manchanabele GP
- Incidence of diarrhea and Incidence of chikungunya are relatively high in Kurubur GP
- Water sources in Gulur GP have high nitrate levels

Chitradurga



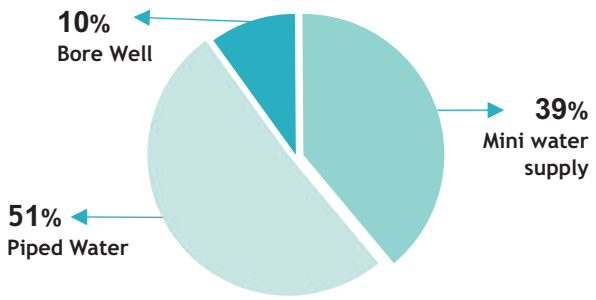
- Population: 15,17,896
- Agro-Climatic Zone: Central dry zone
- Average Rainfall: 573 mm
- Groundwater Status: Over exploited; presence of high fluoride and nitrate
- Literacy Rate: 76%
- Talukas: 6
- Number of GPs: 185
- Number of GPs covered in ASHWAS: 6

WATSAN score (on a scale of 100)

	District	State
Water supply infrastructure	99	75
Piped water is the main source of water		
Sanitation	49	49
Financial constraints are cited for not having toilets		
Health Indicator	73	86
Incidence of chikungunya reported are high		
Governance	93	76
Gram panchayat plays a crucial role to address water problems		
Satisfaction level	56	49
People are not satisfied with water services and management		

Water

What are the primary water sources?



Multiple source dependency : 10% depend on two sources

100%

access water 'very near' to their house. Most people take 45 to 60 minutes to collect water

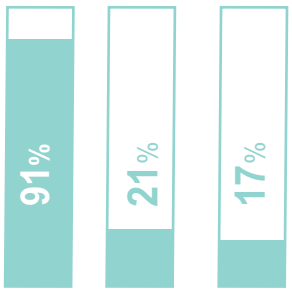
Village Water & Sanitation Committees

20%

of the villages have a VWSC; but only some of them are functioning

Water Quality

none of the GPs in the district have water testing kits distributed by the government



This chart indicates the percentage of sources over the desirable limits as per the standards. For fluoride, the standard limit is 1.0 ppm and for nitrates, it is 45 ppm

Who solves the drinking water problems?

77%

report that the gram panchayat solves the problem in 1 to 5 days

Sustainability

89%
have access to water throughout the year

Groundwater dependency in district

100%
depend on groundwater for their domestic needs

Satisfaction levels

55%
are fully satisfied with water services & management while 42% are partially satisfied & 3% are not satisfied

Reliability

43%
reported drinking water problems in the last one year

Storage

50%
store water because of irregular supply, while 29% store water because it is 'easier'

Reasons cited for water supply disruption
(by the villagers)

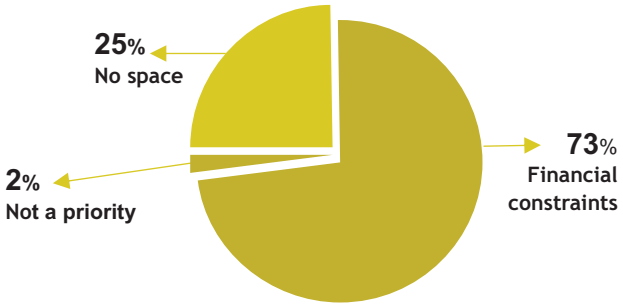
Pipe/taps damage	25%
Power cut	21%
Source dried up	17%
Reduced water yield	12%

Sanitation, health & hygiene

Access to toilets

13%
have access to toilets. Most of them use pour flush toilets

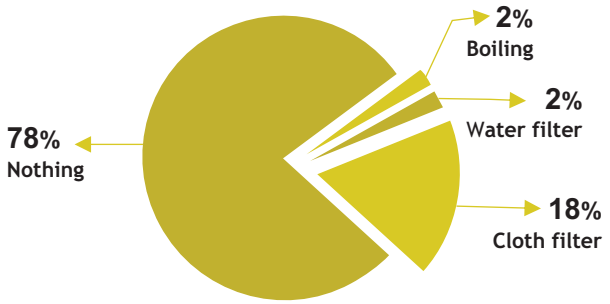
Why don't people build toilets?



Drainage

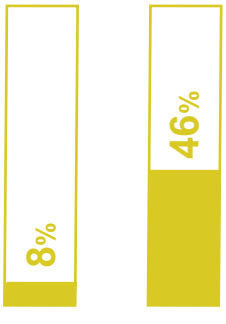
45%
have drains outside the home

How do people treat their water?



Most people keep their water covered

Health & hygiene



out of 6 GPs surveyed incidences of diarrhea were reported from 5 GPs, and Incidences of chikungunya were reported in all 6 GPs

Schemes & Finances

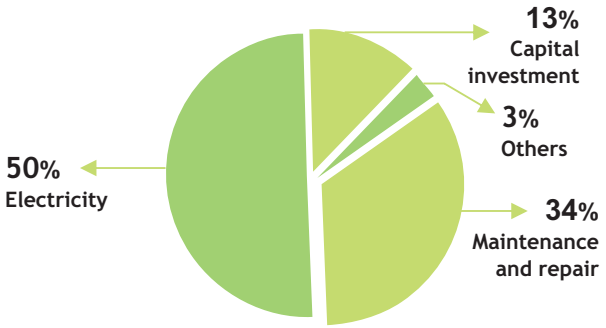
Ongoing schemes in our gram panchayat

☑ ARWSP	☑ TSC
☐ Jal Nirmal	☑ Sachethana
☑ Suvarna Jal	☑ Swachha Grama Yojana
☐ Swajaladhara	☑ Suvarna Gramodaya
☑ NREGA	☑ Watershed Project
☑ JSYS	☐ Others

People's main demands

- Toilets
- Drainage facility
- Better water facility

Breakup of WATSAN spending



Finances for 2007-08

Rs. 2,95,836/-
is the average amount spent by each GP on WATSAN services

Rs. 40/-
is the average amount spent per capita by the GPs on WATSAN

Rs. 72,079/-
is the average amount of user charges collected per GP

Equity

Derived category	Having household connection	Storing water in bindiges*	Not paying user charges	Having access to toilets	Incidence of diarrhea	Incidence of chikungunya
Low income	9%	69%	18%	3%	11%	43%
Middle income	25%	54%	13%	13%	8%	48%
High income	33%	29%	11%	36%	14%	44%

Refers to percentage of households

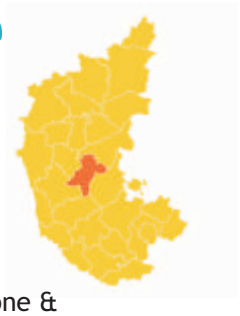
* Those storing water for domestic use in bindiges may not be able to consume 55 lpcd due to insufficient storage capacity

In general, low income groups had fewer household connections, had lower access to toilets & paid lesser user charges when compared to the high income groups

Highlights from surveyed GPs

- Coverage of household toilets in Devasamudra GP is only 1% & 8% in Devapura
- There is only 1% dependency on multiple sources in Gonur GP
- Water sources in Kuruburahalli GP have high nitrate levels
- In Devasamudra GP 15% respondents travel more than 1.6 km to collect water

Davanagere



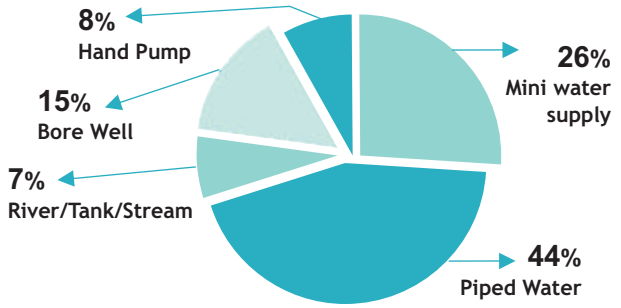
- Population: 17,90,952
- Agro-Climatic Zone: Central dry zone & Southern transition zone
- Average Rainfall: 700 mm
- Groundwater Status: Over exploited; presence of high fluoride
- Literacy Rate: 69%
- Talukas: 6
- Number of GPs: 230
- Number of GPs covered in ASHWAS: 6

WATSAN score (on a scale of 100)

	District	State
Water supply infrastructure	93	75
Piped water is the main source of water		
Sanitation	64	49
Financial & space constraints are cited for not having toilets		
Health Indicator	74	86
Incidence of chikungunya reported are high		
Governance	95	76
Gram panchayat plays a crucial role to address water problems		
Satisfaction level	43	49
People are partially satisfied with quality & quantity of water		

Water

What are the primary water sources?



Multiple source dependency : 20% depend on two sources

98%

access water 'very near' to their house. Most people take 45 to 60 minutes to collect water

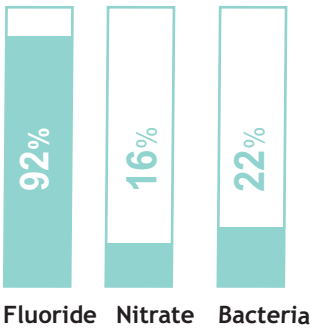
Village Water & Sanitation Committees

65%

of the villages have a VWSC; but none of them are functioning

Water Quality

33% of the GPs in the district have water testing kits distributed by the government. But none of the kits have been used



This chart indicates the percentage of sources over the desirable limits as per the standards. For fluoride, the standard limit is 1.0 ppm and for nitrates, it is 45 ppm

Who solves the drinking water problems?

76%

report that the gram panchayat solves the problem in 1 to 5 days

Sustainability

92%

have access to water throughout the year

Groundwater dependency in district

93%

depend on groundwater for their domestic needs

Satisfaction levels

48%

are fully satisfied with water services & management while 45% are partially satisfied & 7% are not satisfied

Reliability

42%

reported drinking water problems in the last one year

Storage

42%

store water because of irregular supply, while 41% store water because it is 'easier'

Reasons cited for water supply disruption

(by the villagers)

Pipe/taps damage	23%
Motor damage	15%
Power cut	14%
Source dried up	12%

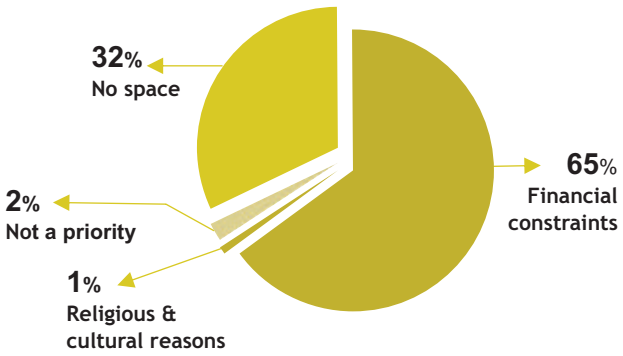
Sanitation, health & hygiene

Access to toilets

35%

have access to toilets. Most of them use pour flush toilets

Why don't people build toilets?

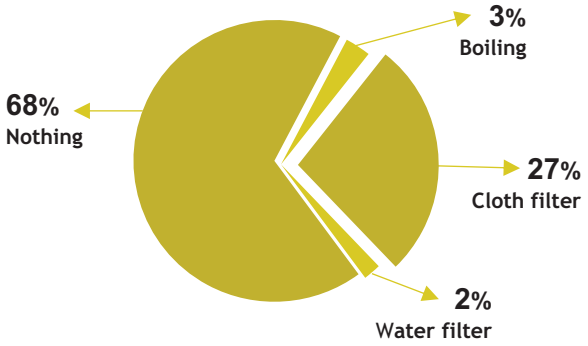


Drainage

70%

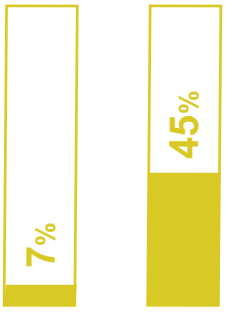
have drains outside the home

How do people treat their water?



Most people keep their water covered

Health & hygiene



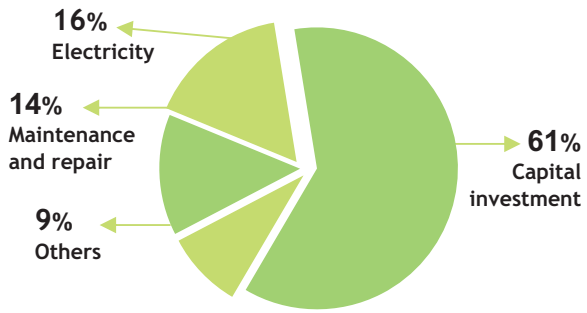
out of 6 GPs surveyed 100% reported incidences of diarrhea and chikungunya

Schemes & Finances

Ongoing schemes in our gram panchayat

☑ ARWSP	☑ TSC
☐ Jal Nirmal	☑ Sachethana
☑ Suvarna Jal	☑ Swachha Grama Yojana
☑ Swajaladhara	☑ Suvarna Gramodaya
☑ NREGA	☑ Watershed Project
☐ JSYS	☐ Others

Breakup of WATSAN spending



People's main demands

- Toilets
- Drainage facility
- Better water supply facility

Finances for 2007-08

Rs. 2,36,409/-
is the average amount spent by each GP on WATSAN services

Rs. 30/-
is the average amount spent per capita by the GPs on WATSAN

Rs. 2,32,960/-
is the average amount of user charges collected per GP

Equity

Derived category	Having household connection	Storing water in bindiges*	Not paying user charges	Having access to toilets	Incidence of diarrhea	Incidence of chikungunya
Low income	10%	73%	71%	16%	31%	45%
Middle income	18%	51%	52%	32%	28%	46%
High income	26%	32%	36%	71%	17%	38%

Refers to percentage of households

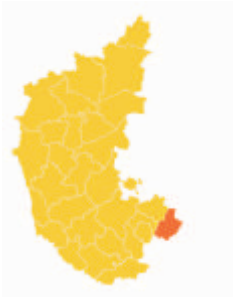
* Those storing water for domestic use in bindiges may not be able to consume 55 lpcd due to insufficient storage capacity

In general, low income groups had fewer household connections, had lower access to toilets, paid lesser user charges & had a higher incidence of disease when compared to the high income groups

Highlights from surveyed GPs

- Fluoride level is high in all GPs
- Coverage of Toilets in Gurusidapura GP is only 8%
- Incidence of Chikungunya is high in all GPs

Kolar



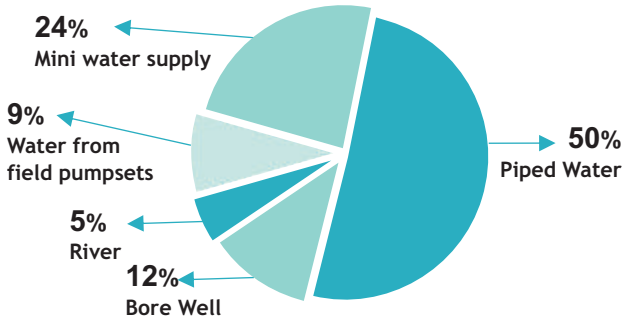
- Population: 25,36,069
- Agro-Climatic Zone: Eastern Dry Zone
- Average Rainfall: 744 mm
- Groundwater Status: Over exploited with presence of high fluoride
- Literacy Rate: 68.35%
- Talukas: 5
- Number of GPs: No data
- Number of GPs covered in ASHWAS: 4

WATSAN score (on a scale of 100)

	District	State
Water supply infrastructure	85	75
Piped water is the main source of water		
Sanitation	55	49
Financial & space constraints are cited for not having toilets		
Health Indicator	97	86
Incidence of diarrhea & Incidence of chikungunya are low		
Governance	68	76
Gram panchayat plays a crucial role to address water problems		
Satisfaction level	43	49
People are not satisfied with water services and management		

Water

What are the primary water sources?



multiple source dependency: 24% depend on two sources

96%

access water 'very near' to their house. Most people take 45 to 60 minutes to collect water

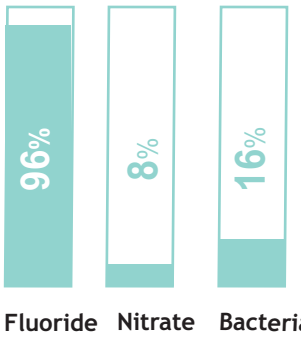
Village Water & Sanitation Committees

4%

of the villages have a VWSC; but none of them are functioning

Water Quality

none of the GPs in the district have water testing kits distributed by the government



This chart indicates the percentage of sources over the desirable limits as per the standards. For fluoride, the standard limit is 1.0 ppm and for nitrates, it is 45 ppm

Who solves the drinking water problems?

40%

report that the gram panchayat solves the problem in 1 to 5 days

Sustainability

95%

have access to water throughout the year

Groundwater dependency in district

95%

depend on groundwater for their domestic needs

Satisfaction levels

34%

are fully satisfied with water services & management while 54% are partially satisfied, 11% are not satisfied & 1% have not answered

Reliability

55%

reported drinking water problems in the last one year

Storage

15%

store water because of irregular supply, while 80% store water because it is 'easier'

Reasons cited for water supply disruption

(by the villagers)

Source dried up	24%
Pipe/taps damage	24%
Power cut	16%
Motor damage	11%

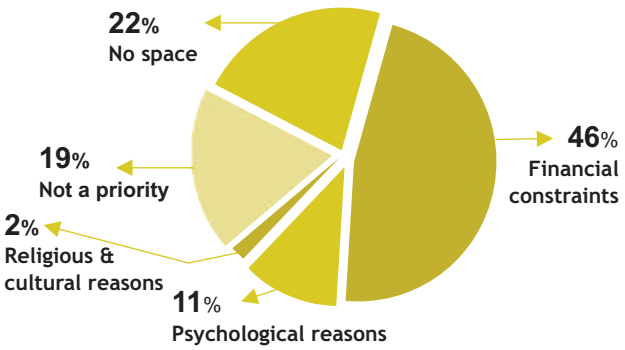
Sanitation, health & hygiene

Access to toilets

16%

have access to toilets. Most of them use pour flush toilets

Why don't people build toilets?

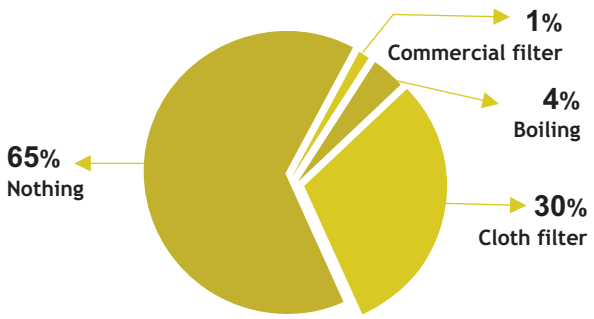


Drainage

68%

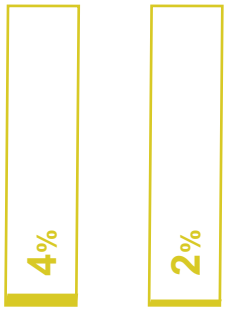
have drains outside the home

How do people treat their water?



Most people keep their water covered

Health & hygiene



out of 4 GPs surveyed, incidences of diarrhea were reported from 1 GP and incidences of chikungunya were reported from 2 GPs

Schemes & Finances

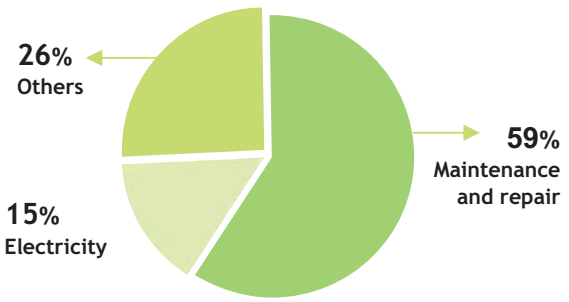
Ongoing schemes in our gram panchayat

☑ ARWSP	☑ TSC
☐ Jal Nirmal	☐ Sachethana
☑ Suvarna Jal	☑ Swachha Grama Yojana
☐ Swajaladhara	☑ Suvarna Gramodaya
☑ NREGA	☑ Watershed Project
☐ JSYS	☐ Others

People's main demands

- Drainage facility
- Better water supply
- Need toilets
- Roads

Breakup of WATSAN spending



Finances for 2007-08

Rs. 1,49,013/-
is the average amount spent by each GP on WATSAN services

Rs. 25/-
is the average amount spent per capita by the GPs on WATSAN

Rs. 52,321/-
is the average amount of user charges collected per GP

Equity

Derived category	Having household connection	Storing water in bindiges*	Not paying user charges	Having access to toilets	Incidence of diarrhea	Incidence of chikungunya
Low income	22%	77%	9%	1%	5%	1%
Middle income	22%	65%	4%	10%	4%	2%
High income	27%	38%	3%	29%	5%	2%

Refers to percentage of households

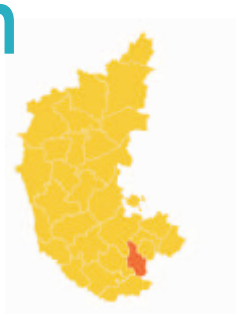
* Those storing water for domestic use in bindiges may not be able to consume 55 lpcd due to insufficient storage capacity

In general, low income groups had fewer household connections, had lower access to toilets & paid lesser user charges when compared to the high income groups

Highlights from surveyed GPs

- Muduvadi has the highest spending by the GP per capita on WATSAN at Rs. 57
- It also has the lowest satisfaction levels with water services and management at 14%
- In Muduvadi,nearly 50% take more than an hour to collect water although the source is very near to their house
- Water is highly contaminated with fluoride in this GP

Ramanagram



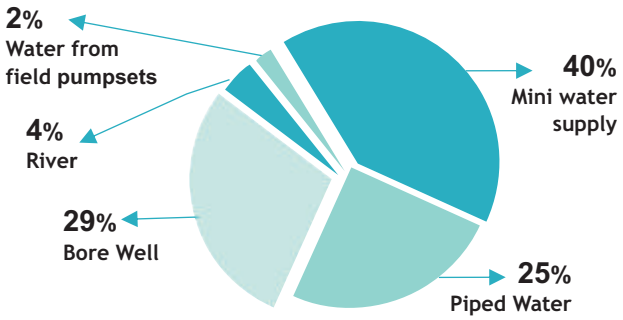
- Population: 79,365
- Agro-Climatic Zone: Eastern Dry Zone
- Average Rainfall: 817 mm
- Groundwater Status: Semi-critical
- Literacy Rate: 63%
- Talukas: 4
- Number of GPs: 23
- Number of GPs covered in ASHWAS: 4

WATSAN score (on a scale of 100)

	District	State
Water supply infrastructure	94	75
Mini water supply is the main source of water		
Sanitation	57	49
Financial & space constraints are cited for not having toilets		
Health Indicator	85	86
Incidence of chikungunya reported are high		
Governance	71	76
Local politician plays a crucial role to address water problems		
Satisfaction level	1	49
People are not satisfied with quality, quantity & management of water		

Water

What are the primary water sources?



Multiple source dependency : 47% depend on two sources; 7% on three sources

89%

access water 'very near' to their house. Most people take 15 to 30 minutes to collect water

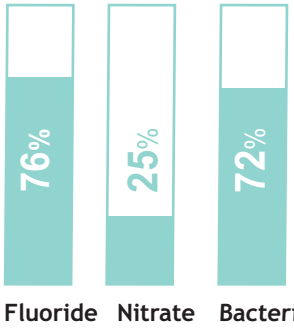
Village Water & Sanitation Committees

21%

of the villages have a VWSC; but only some of them are functioning

Water Quality

none of the GPs in the district have water testing kits distributed by the government



This chart indicates the percentage of sources over the desirable limits as per the standards. For fluoride, the standard limit is 1.0 ppm and for nitrates, it is 45 ppm

Who solves the drinking water problems?

45%

report that the gram panchayat solves the problem in 1 to 2 weeks. 8% report that it takes over a month to solve their problem

Sustainability

72%

have access to water throughout the year

Groundwater dependency in district

96%

depend on groundwater for their domestic needs

Satisfaction levels

1%

are fully satisfied with water services & management while 31% are partially satisfied, 47% are not satisfied & 21% have not answered

Reliability

29%

reported drinking water problems in the last one year

Storage

96%

store water because of irregular supply, while 3% store water because the source is 'too far'

Reasons cited for water supply disruption

(by the villagers)

Motor damage	23%
Pipe/taps damage	21%
Reduced water yield	19%
Power cut	18%

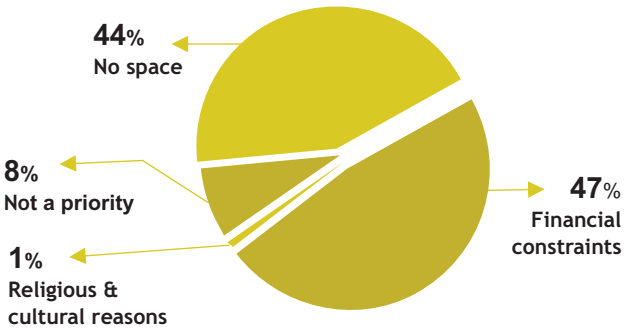
Sanitation, health & hygiene

Access to toilets

35%

have access to toilets. Most of them use pour flush toilets

Why don't people build toilets?

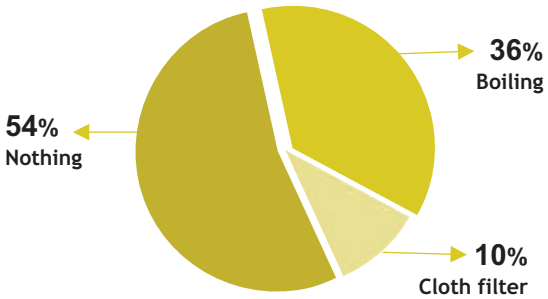


Drainage

56%

have drains outside the home

How do people treat their water?



Most people keep their water covered

Health & hygiene

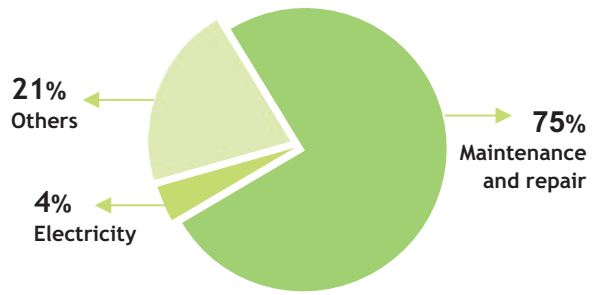
out of 4 GPs surveyed, incidences of diarrhea were reported from 3 GPs and incidences of chikungunya were reported from 4 GPs

Schemes & Finances

Ongoing schemes in our gram panchayat

☐ ARWSP	☑ TSC
☐ Jal Nirmal	☐ Sachethana
☐ Suvarna Jal	☑ Swachha Grama Yojana
☐ Swajaladhara	☑ Suvarna Gramodaya
☑ NREGA	☑ Watershed Project
☐ JSYS	☐ Others

Breakup of WATSAN spending



People's main demands

- Toilets
- Drainage facility
- Clean Village
- Better water supply

Finances for 2007-08

Rs. 1,68,702/-
is the average amount spent by each GP on WATSAN services

Rs. 34/-
is the average amount spent per capita by the GPs on WATSAN

Rs. 1,26,027/-
is the average amount of user charges collected per GP

Equity

Derived category	Having household connection	Storing water in bindiges*	Not paying user charges	Having access to toilets	Incidence of diarrhea	Incidence of chikungunya
Low income	5%	34%	50%	17%	6%	23%
Middle income	20%	27%	48%	41%	7%	24%
High income	30%	23%	45%	70%	5%	40%

Refers to percentage of households

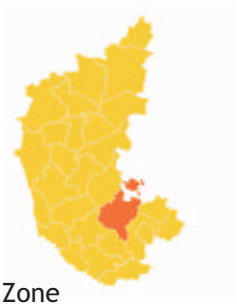
* Those storing water for domestic use in bindiges may not be able to consume 55 lpcd due to insufficient storage capacity

In general, low income groups had fewer household connections, had lower access to toilets & paid lesser user charges when compared to the high income groups

Highlights from surveyed GPs

- There is a high dependency on multiple sources in Channapatna taluka - Makali and Virupakshipura GPs
- The primary water source for these GPs is borewell, where the water level has gone down and yield is low
- There are frequent disruptions to the water supply in all the GPs, which are solved mostly with the help of the local politician

Tumkur



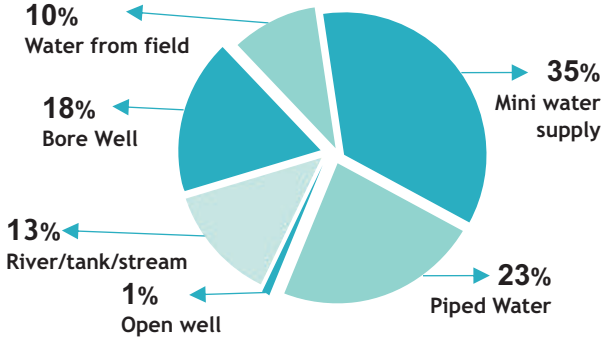
- Population: 25,84,711
- Agro-Climatic Zone: Eastern Dry Zone
- Average Rainfall: 688 mm
- Groundwater Status: Over exploited with presence of high fluoride
- Literacy Rate: 75%
- Talukas: 10
- Number of GPs: 312
- Number of GPs covered in ASHWAS: 10

WATSAN score (on a scale of 100)

	District	State
Water supply infrastructure	81	75
Mini water supply is the main source of water		
Sanitation	54	49
Financial & space constraints are cited for not having toilets		
Health Indicator	95	86
Incidence of diarrhea & Incidence of chikungunya reported are low		
Governance	87	76
Gram panchayat plays a crucial role to address water problems		
Satisfaction level	61	49
People are satisfied with water quality & services and management		

Water

What are the primary water sources?



Multiple source dependency : 34% depend on two sources; 14% on three sources; 1% on four sources

77%

access water 'very near' to their house. Most people take 45 to 60 minutes to collect water

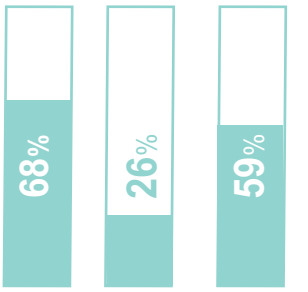
Village Water & Sanitation Committees

47%

of the villages have a VWSC; but none of them are functioning

Water Quality

none of the GPs in the district have water testing kits distributed by the government



This chart indicates the percentage of sources over the desirable limits as per the standards. For fluoride, the standard limit is 1.0 ppm and for nitrates, it is 45 ppm

Who solves the drinking water problems?

67%

report that the gram panchayat solves the problem in 1 to 5 days

Sustainability

83%

have access to water throughout the year

Groundwater dependency in district

87%

depend on groundwater for their domestic needs

Satisfaction levels

58%

are fully satisfied with water services & management while 35% are partially satisfied & 7% are not satisfied

Reliability

49%

reported drinking water problems in the last one year

Storage

63%

store water because of irregular supply, while 27% store water because it is 'easier'

Reasons cited for water supply disruption

(by the villagers)

Power cut `	28%
Motor damage	15%
Irregular operation	14%
Water contamination	11%

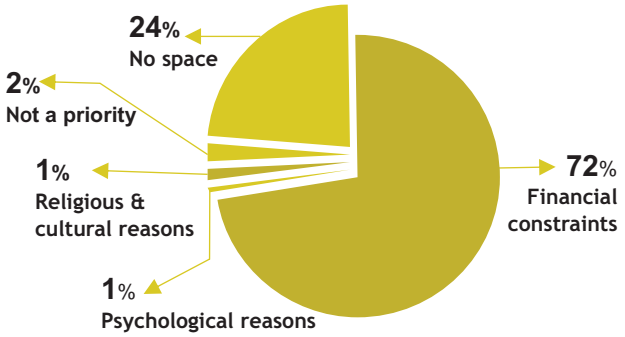
Sanitation, health & hygiene

Access to toilets

27%

have access to toilets. Most of them use pour flush toilets

Why don't people build toilets?

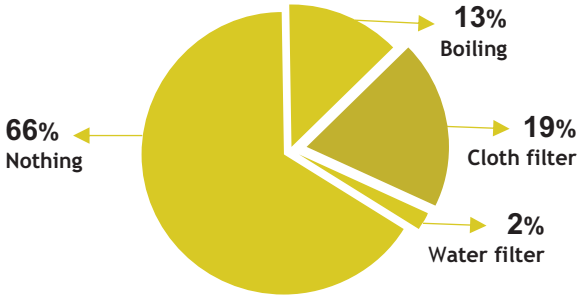


Drainage

54%

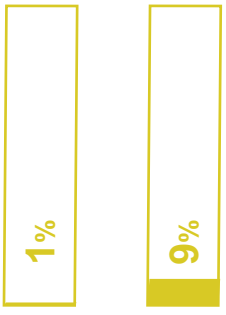
have drains outside the home

How do people treat their water?



Most people keep their water covered

Health & hygiene



Out of 10 GPs surveyed, incidences of diarrhea were reported from 7 GPs and incidences of chikungunya were reported from 8 GPs

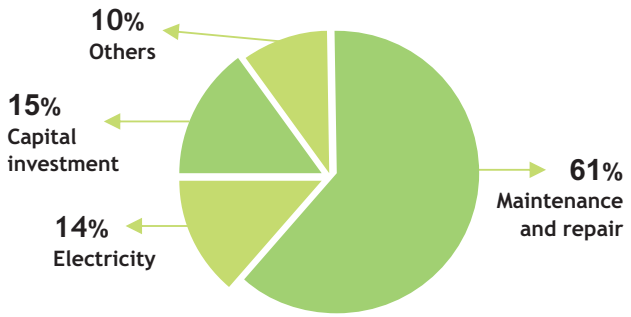
Schemes & Finances

- [x] ARWSP
- [x] Jal Nirmal
- [x] Suvarna Jal
- [x] Swajaladhara
- [x] NREGA
- [x] JSYS
- [x] TSC
- [ ] Sachethana
- [x] Swachha Grama Yojana
- [x] Suvarna Gramodaya
- [x] Watershed Project
- [ ] Others

People's main demands

- Toilets
- Roads
- Better garbage disposal
- Regular cleaning of water tanks
- Better water supply facility
- Drainage facility
- Clean village

Breakup of WATSAN spending



Finances for 2007-08

Rs. 4,36,130/-
is the average amount spent by each GP on WATSAN services

Rs. 65/-
is the average amount spent per capita by the GPs on WATSAN

Rs. 83,035/-
is the average amount of user charges collected per GP

Equity

Derived category	Having household connection	Storing water in bindiges*	Not paying user charges	Having access to toilets	Incidence of diarrhea	Incidence of chikungunya
Low income	7%	81%	25%	9%	6%	5%
Middle income	12%	65%	28%	21%	10%	10%
High income	18%	53%	25%	40%	9%	10%

Refers to percentage of households

* Those storing water for domestic use in bindiges may not be able to consume 55 lpcd due to insufficient storage capacity

In general, low income groups had fewer household connections, had lower access to toilets & paid lesser user charges when compared to the high income groups

Highlights from surveyed GPs

- Nitrate level is very high in Tavakere GP
- Only 2% respondents in Hosur GP have household toilets
- Only 1% depend on multiple sources in Hosur GP

Chamarajanagar

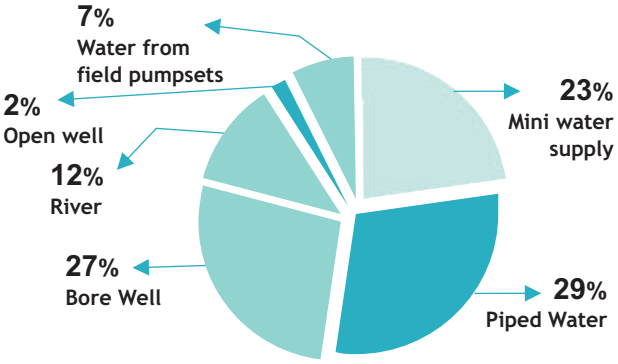
- Population: 9,65,462
- Agro-Climatic Zone: Southern Dry Zone
- Average Rainfall: 751 mm
- Groundwater Status: Safe zone; presence of high nitrate
- Literacy Rate: 51%
- Talukas: 4
- Number of GPs: 120
- Number of GPs covered in ASHWAS: 4

WATSAN score (on a scale of 100)

	District	State
Water supply infrastructure	79	75
Piped water & MMS are the main sources of water		
Sanitation	59	49
Lack of space is cited as the main reason for not having toilets		
Health Indicator	96	86
Incidence of diarrhea and Incidence of chikungunya are low		
Governance	96	76
Gram panchayat & waterman help to solve water problems		
Satisfaction level	14	49
People are not satisfied with water services and management		

Water

What are the primary water sources?



Multiple source dependency : 40% depend on two sources; 39% on three sources; 12% on four sources

82%

access water 'very near' to their house. Most people take upto 15 minutes to collect water

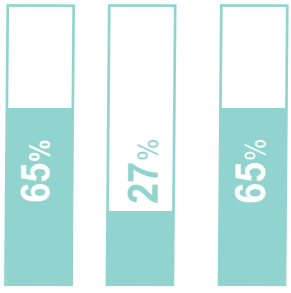
Village Water & Sanitation Committees

8%

of the villages have a VWSC; but none of them are functioning

Water Quality

none of the GPs in the district have water testing kits distributed by the government



This chart indicates the percentage of sources over the desirable limits as per the standards. For fluoride, the standard limit is 1.0 ppm and for nitrates, it is 45 ppm

Who solves the drinking water problems?

51%

report that the gram panchayat solves the problem and 47% report that the waterman solves the problem within 1 to 5 days

Sustainability

91%

have access to water throughout the year

Groundwater dependency in district

88%

depend on groundwater for their domestic needs

Satisfaction levels

7%

are fully satisfied with water services & management while 92% are partially satisfied & 1% are not satisfied

Reliability

52%

reported drinking water problems in the last one year

Storage

1%

store water because of irregular supply, while 98% store water because it is 'easier'

Reasons cited for water supply disruption

(by the villagers)

Pipe/taps damage	23%
Power cut	18%
Motor damage	18%
Irregular operation	15%

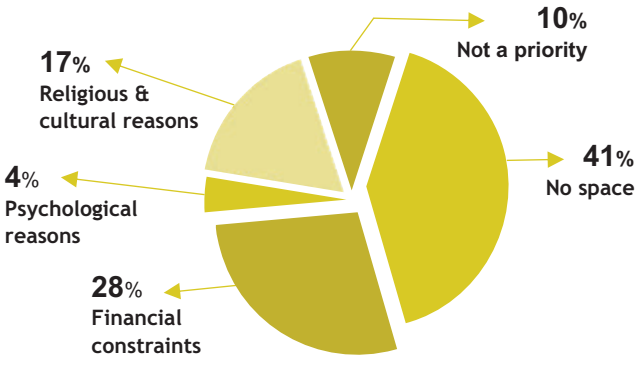
Sanitation, health & hygiene

Access to toilets

18%

have access to toilets. Most of them use pour flush toilets

Why don't people build toilets?

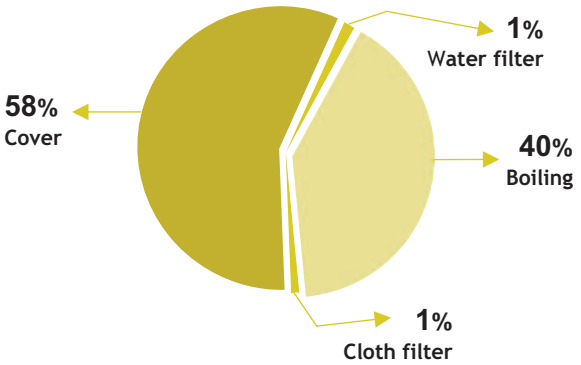


Drainage

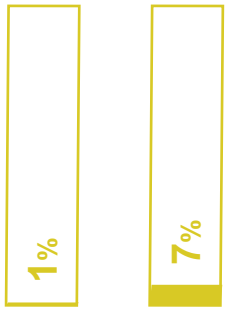
71%

have drains outside the home

How do people treat their water?



Health & hygiene



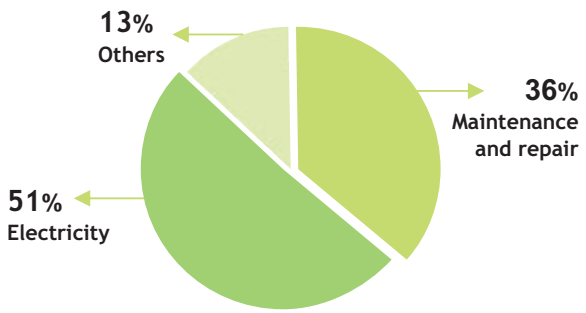
out of 4 GPs surveyed, incidences of diarrhea were reported from 2 GPs and incidences of chikungunya were reported from 4 GPs

Schemes & Finances

Ongoing schemes in our gram panchayat

- [x] ARWSP
- [x] TSC
- [ ] Jal Nirmal
- [ ] Sachethana
- [ ] Suvarna Jal
- [x] Swachha Grama Yojana
- [ ] Swajaladhara
- [x] Suvarna Gramodaya
- [x] NREGA
- [ ] Watershed Project
- [x] 12th Finance
- [ ] Others

Breakup of WATSAN spending



People's main demands

- Better water supply
- Drainage facility
- Toilets
- Clean village

Finances for 2007-08

Rs. 2,98,216/-
is the average amount spent by each GP on WATSAN services

Rs. 42/-
is the average amount spent per capita by the GPs on WATSAN

Rs. 52,390/-
is the average amount of user charges collected per GP

Equity

Derived category	Having household connection	Storing water in bindiges*	Not paying user charges	Having access to toilets	Incidence of diarrhea	Incidence of chikungunya
Low income	42%	96%	39%	4%	2%	8%
Middle income	47%	89%	31%	8%	3%	9%
High income	78%	73%	12%	34%	1%	4%

Refers to percentage of households

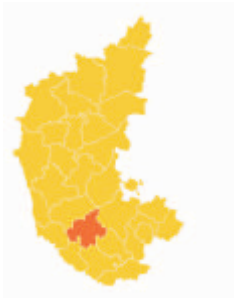
* Those storing water for domestic use in bindiges may not be able to consume 55 lpcd due to insufficient storage capacity

In general, low income groups had fewer household connections, had lower access to toilets, paid lesser user charges & had a higher incidence of disease when compared to the high income groups

Highlights from surveyed GPs

- Bommalapura GP spent Rs 203/- per capita on water and sanitation, whereas Gumballi GP spent only Rs. 12/- per capita
- Bommalapura has the lowest satisfaction levels with water services and management at 1% of the population, while Gumballi has the highest satisfaction levels at 15%
- There is a high dependence on multiple sources across all the GPs

Hassan



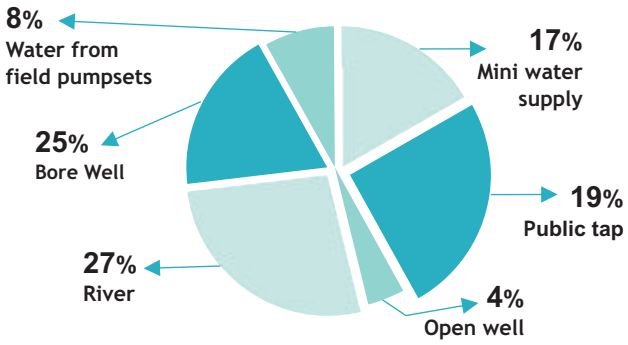
- Population: 17,21,669
- Agro-Climatic Zone: Southern Dry Zone
- Average Rainfall: 1031 mm
- Groundwater Status: Safe; presence of nitrate & chloride
- Literacy Rate: 61%
- Talukas: 8
- Number of GPs: 150
- Number of GPs covered in ASHWAS: 8

WATSAN score (on a scale of 100)

	District	State
Water supply infrastructure	60	75
Piped water and MWS are the main sources of water		
Sanitation	54	49
Financial constraints is the reason cited for not having toilets		
Health Indicator	92	86
Incidence of diarrhea and Incidence of chikungunya are low		
Governance	85	76
Village elders play a crucial role to address water problems		
Satisfaction level	41	49
People are partially satisfied with quality & management of water		

Water

What are the primary water sources?



Multiple source dependency : 45% depend on two sources, 42% on three sources & 6% on four sources

71%

access water 'very near' to their house. Most people take 30 to 60 minutes to collect water

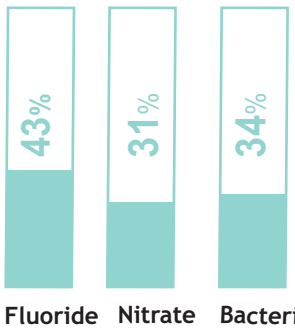
Village Water & Sanitation Committees

5%

of the villages have a VWSC; but only some of them are actively functioning

Water Quality

88% of the GPs in the district have water testing kits distributed by the government. 86% of these kits have been used



This chart indicates the percentage of sources over the desirable limits as per the standards. For fluoride, the standard limit is 1.0 ppm and for nitrates, it is 45 ppm

Who solves the drinking water problems?

53%

report that the village elders help solve the problem in 5 days to 1 week

Sustainability

80%

have access to water throughout the year

Groundwater dependency in district

73%

depend on groundwater for their domestic needs

Satisfaction levels

31%

are fully satisfied with water services & management while 48% are partially satisfied, 17% are not satisfied & 4% have not answered

Reliability

79%

reported drinking water problems in the last one year

Storage

70%

store water because of irregular supply, while 25% store water because it is 'easier'

Reasons cited for water supply disruption

(by the villagers)

Power cut	28%
Irregular operation	18%
Reduced water yield	15%
Motor damage	11%

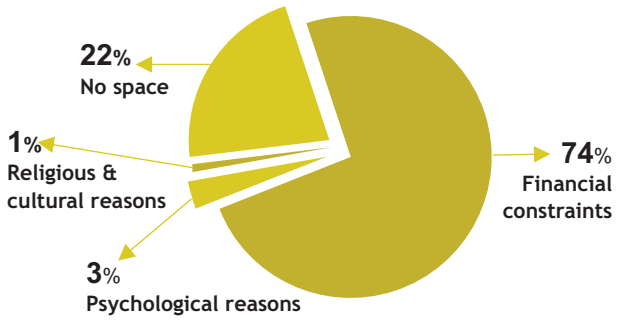
Sanitation, health & hygiene

Access to toilets

27%

have access to toilets. Most of them use pour flush toilets

Why don't people build toilets?

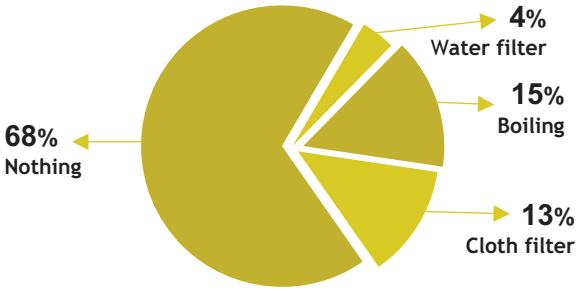


Drainage

55%

have drains outside the home

How do people treat their water?



Most people keep their water covered

Health & hygiene

out of 8 GPs surveyed, 100% reported incidences of diarrhea and chikungunya

Schemes & Finances

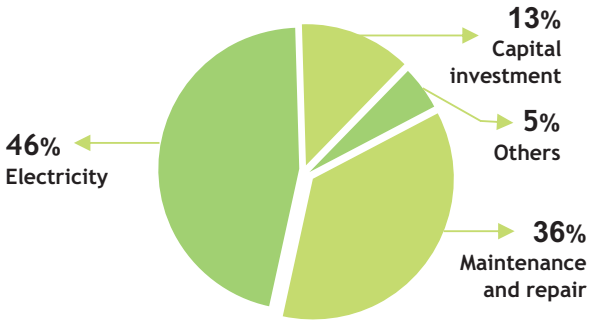
Ongoing schemes in our gram panchayat

☐ ARWSP	☑ TSC
☑ Jal Nirmal	☐ Sachethana
☐ Suvarna Jal	☐ Swachha Grama Yojana
☑ Swajaladhara	☐ Suvarna Gramodaya
☑ NREGA	☑ Watershed Project
☐ JSYS	☐ Others

People's main demands

- Drainage facility
- Better water supply facility
- Toilets
- Clean village
- Better garbage disposal
- Roads

Breakup of WATSAN spending



Finances for 2007-08

Rs. 4,29,908/-
is the average amount spent by each GP on WATSAN services

Rs. 66/-
is the average amount spent per capita by the GPs on WATSAN

Rs. 57,653/-
is the average amount of user charges collected per GP

Equity

Derived category	Having household connection	Storing water in bindiges*	Not paying user charges	Having access to toilets	Incidence of diarrhea	Symptoms of chikungunya
Low income	12%	71%	22%	9%	7%	14%
Middle income	18%	55%	19%	21%	8%	13%
High income	26%	46%	20%	43%	6%	12%

Refers to percentage of households

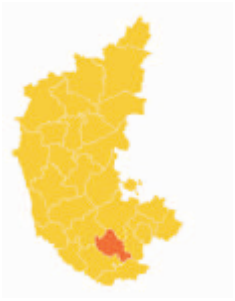
* Those storing water for domestic use in bindiges may not be able to consume 55 lpcd due to insufficient storage capacity

In general, low income groups had fewer household connections, had lower access to toilets, paid lesser user charges & had a higher incidence of disease when compared to the high income groups

Highlights from surveyed GPs

- In Ugane GP, the satisfaction level is very low at 17%
- Only Basavapatna GP has the highest access to toilets in the district at 54%
- In Channarayapatna taluk, Bagur and Kantharajapura GPs the water supply infrastructure is low
- Overall governance is effective but the satisfaction level is low

Mandya



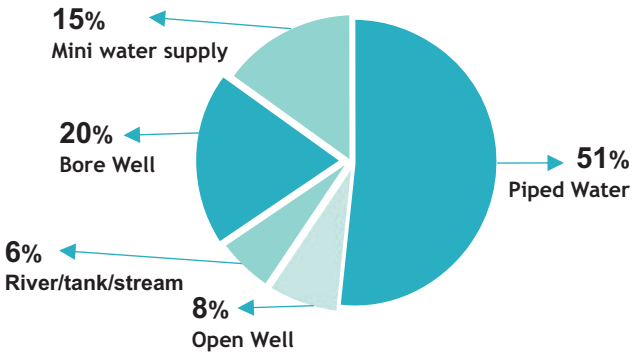
- Population: 17,63,705
- Agro-Climatic Zone: Southern Dry Zone
- Average Rainfall: 700 mm
- Groundwater Status: Over exploited; presence of fluoride
- Literacy Rate: 61%
- Talukas: 7
- Number of GPs: 232
- Number of GPs covered in ASHWAS: 8

WATSAN score (on a scale of 100)

	District	State
Water supply infrastructure	88	75
Piped water is the main source of water		
Sanitation	53	49
Financial & space constraints are cited for not having toilets		
Health Indicator	85	86
Incidences of chikungunya reported are high		
Governance	86	76
Gram panchayat plays a crucial role to address water problems		
Satisfaction level	24	49
People are not satisfied with quantity & management of water		

Water

What are the primary water sources?



Multiple source dependency : 30% depend on two sources

99%

access water 'very near' to their house. Most people take 15 to 30 minutes to collect water

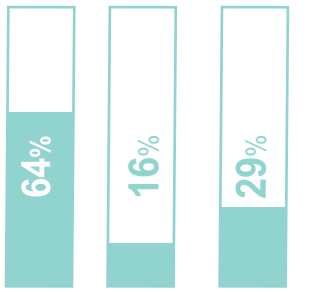
Village Water & Sanitation Committees

25%

of the villages have a VWSC; but none of them are functioning

Water Quality

88% of the GPs in your district have water testing kits distributed by the government. 86% of these kits have been used



This chart indicates the percentage of sources over the desirable limits as per the standards. For fluoride, the standard limit is 1.0 ppm and for nitrates, it is 45 ppm

Who solves the drinking water problems?

57%

report that the gram panchayat solves the problem in 2 weeks to 1 month

Sustainability

69%

have access to water throughout the year

Groundwater dependency in district

94%

depend on groundwater for their domestic needs

Satisfaction levels

23%

are fully satisfied with water services & management while 45% are partially satisfied, 29% are not satisfied & 3% have not answered

Reliability

50%

reported drinking water problems in the last one year

Storage

69%

store water because of irregular supply, while 21% store water because it is 'easier'

Reasons cited for water supply disruption

(by the villagers)

Power cut	29%
Motor damage	26%
Pipe/taps damage	17%
Source dried up	12%

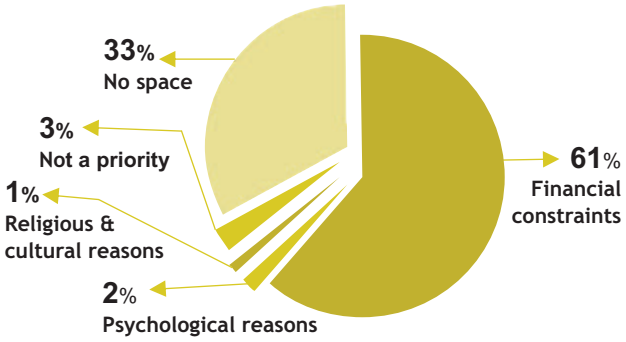
Sanitation, health & hygiene

Access to toilets

29%

have access to toilets. Most of them use pour flush toilets

Why don't people build toilets?

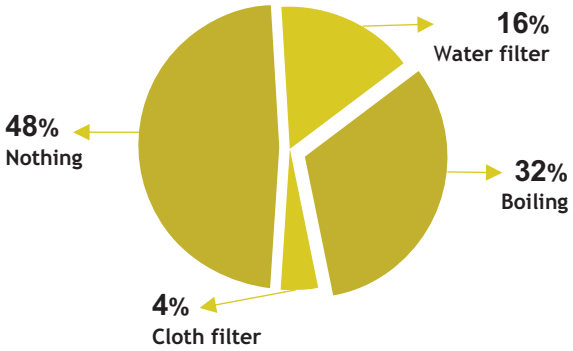


Drainage

52%

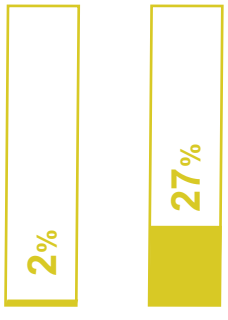
have drains outside the home

How do people treat their water?



Most people keep their water covered

Health & hygiene



out of 8 GPs surveyed, incidences of diarrhea were reported from 4 GPs and incidence of chikungunya were reported from 4 GPs

Schemes & Finances

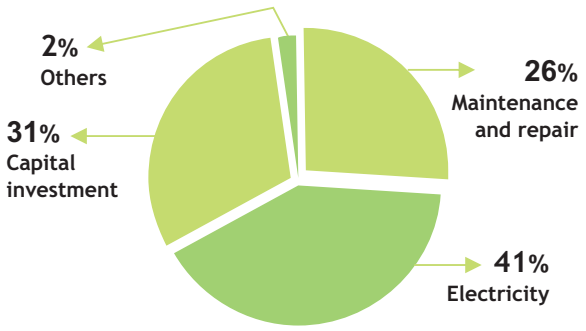
Ongoing schemes in our gram panchayat

- [x] ARWSP
- [x] Jal Nirmal
- [ ] Suvarna Jal
- [ ] Swajaladhara
- [x] NREGA
- [ ] JSYS
- [x] TSC
- [ ] Sachethana
- [x] Swachha Grama Yojana
- [x] Suvarna Gramodaya
- [x] Watershed Project
- [ ] Others

People's main demands

- Toilets
- Drainage facility
- Better water supply facility
- Roads
- Better garbage disposal

Breakup of WATSAN spending



Finances for 2007-08

Rs. 2,89,514/-
is the average amount spent by each GP on WATSAN services

Rs. 43/-
is the average amount spent per capita by the GPs on WATSAN

Rs. 1,06,940/-
is the average amount of user charges collected per GP

Equity

Derived category	Having household connection	Storing water in bindiges*	Not paying user charges	Having access to toilets	Incidence of diarrhea	Incidence of chikungunya
Low income	22%	54%	26%	10%	3%	24%
Middle income	33%	48%	17%	29%	4%	29%
High income	49%	45%	16%	66%	1%	24%

Refers to percentage of households

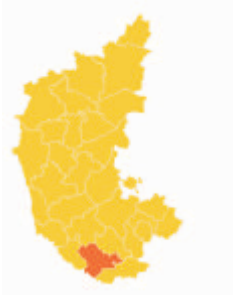
* Those storing water for domestic use in bindiges may not be able to consume 55 lpcd due to insufficient storage capacity

In general, low income groups had fewer household connections, had lower access to toilets, paid lesser user charges & had a higher incidence of disease when compared to the high income groups

Highlights from surveyed GPs

- In Hiremarali GP (Pandavapura taluk) groundwater is over exploited
- In Hiremarali GP only 17% get water every day. Water quality in this GP is very poor
- incidence of chikungunya is very high in Hiremarali GP
- In Bharathipura cross GP (Krishnarajpur Taluk) & Sunkatonnur GP (Pandavapura taluk) the coverage of toilets is less than 10%

Mysore



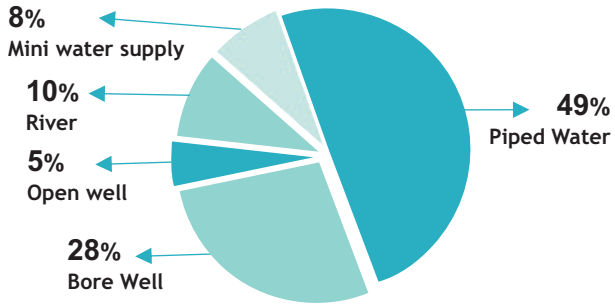
- Population: 26,41,027
- Agro-Climatic Zone: Southern dry zone, transition zone
- Average Rainfall: 782 mm
- Groundwater Status: Over exploited; salinity & nitrate above permissible limit
- Literacy Rate: 64%
- Talukas: 7
- Number of GPs: 235
- Number of GPs covered in ASHWAS: 6

WATSAN score (on a scale of 100)

	District	State
Water supply infrastructure	80	75
Piped water is the main source of water		
Sanitation	63	49
Financial & space constraints are cited for not having toilets		
Health Indicator	63	86
Incidences of chikungunya reported are high		
Governance	87	76
Village elders play a crucial role to address water problems		
Satisfaction level	55	49
People are not satisfied with water services & management		

Water

What are the primary water sources?



Multiple source dependency : 50% depend on two sources and 18% depend on three sources

91%

access water 'very near' to their house. Most people take 45 to 60 minutes to collect water

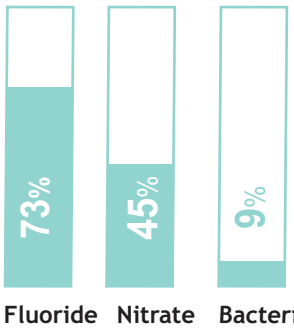
Village Water & Sanitation Committees

33%

of the villages have a VWSC; but only some of them are actively functioning

Water Quality

83% of the GPs in the district have water testing kits distributed by the government. 20% of these kits have been used



This chart indicates the percentage of sources over the desirable limits as per the standards. For fluoride, the standard limit is 1.0 ppm and for nitrates, it is 45 ppm

Who solves the drinking water problems?

48%

report that the village elders help solve the problem in 2 weeks to 1 month

Sustainability

92%

have access to water throughout the year

Groundwater dependency in district

90%

depend on groundwater for their domestic needs

Satisfaction levels

53%

are fully satisfied with water services & management while 37% are partially satisfied, 7% are not satisfied & 3% have not answered

Reliability

50%

reported drinking water problems in the last one year

Storage

60%

store water because of irregular supply, while 40% store water because it is 'easier'

Reasons cited for water supply disruption

(by the villagers)

Pipe/taps damage	30%
Power cut	20%
Source dried up	19%
Motor damage	7%

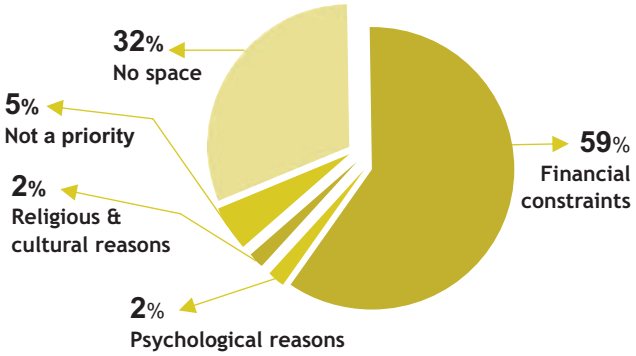
Sanitation, health & hygiene

Access to toilets

36%

have access to toilets. Most of them use pour flush toilets

Why don't people build toilets?

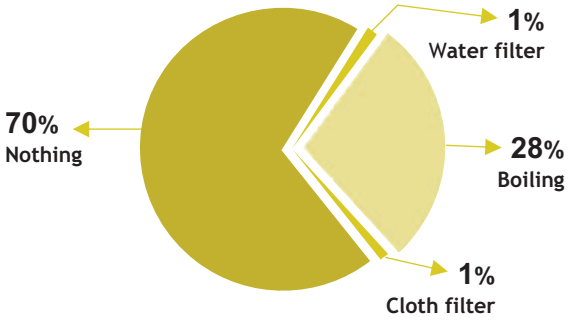


Drainage

67%

have drains outside the home

How do people treat their water?



Most people keep their water covered

Health & hygiene

out of 6 GPs surveyed, incidences of diarrhea were reported from 4 GPs and incidences of chikungunya were reported from all GPs

Schemes & Finances

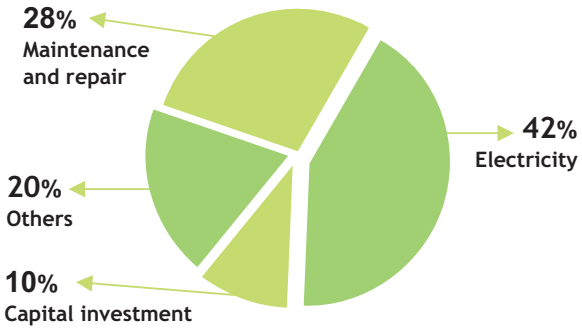
Ongoing schemes in our gram panchayat

☑ ARWSP	☑ TSC
☑ Jal Nirmal	☐ Sachethana
☐ Suvarna Jal	☑ Swachha Grama Yojana
☑ Swajaladhara	☑ Suvarna Gramodaya
☑ NREGA	☑ Watershed Project
☐ JSYS	☐ Others

People's main demands

- Drainage facility
- Better water supply facility
- Toilets
- Clean village

Breakup of WATSAN spending



Finances for 2007-08

Rs. 3,14,127/-
is the average amount spent by each GP on WATSAN services

Rs. 33/-
is the average amount spent per capita by the GPs on WATSAN

Rs. 1,15,509/-
is the average amount of user charges collected per GP

Equity

Derived category	Having household connection	Storing water in bindiges*	Not paying user charges	Having access to toilets	Incidence of diarrhea	Incidence of chikungunya
Low income	46%	60%	44%	16%	6%	27%
Middle income	61%	50%	23%	28%	5%	33%
High income	82%	42%	10%	59%	2%	24%

Refers to percentage of households

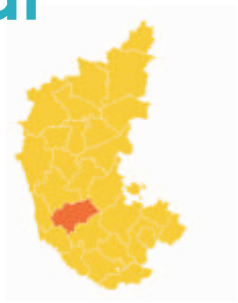
* Those storing water for domestic use in bindiges may not be able to consume 55 lpcd due to insufficient storage capacity

In general, low income groups had fewer household connections, had lower access to toilets, paid lesser user charges & had a higher incidence of disease when compared to the high income groups

Highlights from surveyed GPs

- In Bolanahalli GP, 95% of the respondents depend on multiple sources & 40% depend on three sources
- In Hinkal GP 94% of the respondents have access to toilets
- Kattemalalavadi GP has the highest spending of Rs. 73 per person per year by the GP on water and sanitation
- In Devanur GP 63% get water once in 2-3 days primarily due to frequent disruptions in water supply

Chikkamaglur



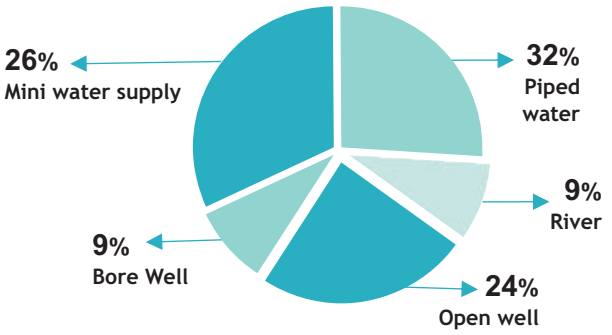
- Population: 11,40,905
- Agro-Climatic Zone: Hilly zone
- Average Rainfall: 1925 mm
- Groundwater Status: Safe; presence of nitrate in some areas
- Literacy Rate: 73%
- Talukas: 7
- Number of GPs: 226
- Number of GPs covered in ASHWAS: 8

WATSAN score (on a scale of 100)

	District	State
Water supply infrastructure	66	75
Piped water & MWS are the main sources of water		
Sanitation	56	49
Financial constraints are cited for not having toilets		
Health Indicator	95	86
Incidence of diarrhea and incidence of chikungunya are low		
Governance	92	76
Gram panchayat plays a crucial role to address water problems		
Satisfaction level	77	49
People are partially satisfied with quality & management of water		

Water

What are the primary water sources?



Multiple source dependency : 20% depend on two sources

90%

access water 'very near' to their house. Most people take 15 to 30 minutes to collect water

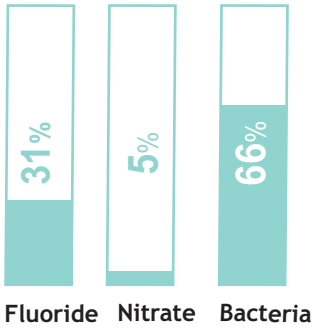
Village Water & Sanitation Committees

9%

of the villages have a VWSC; but none of them are functioning

Water Quality

50% of the GPs in the district have water testing kits distributed by the government. But none of the kits have been used



This chart indicates the percentage of sources over the desirable limits as per the standards. For fluoride, the standard limit is 1.0 ppm and for nitrates, it is 45 ppm

Who solves the drinking water problems?

48%

report that the gram panchayat solves the problem in 1 to 5 days

Sustainability

92%

have access to water throughout the year

Groundwater dependency in district

90%

depend on groundwater for their domestic needs

Satisfaction levels

76%

are fully satisfied with water services & management while 21% are partially satisfied, 3% are not satisfied

Reliability

20%

reported drinking water problems in the last one year

Storage

24%

store water because of irregular supply, while 70% store water because it is 'easier'

Reasons cited for water supply disruption

(by the villagers)

Power cut	23%
Motor damage	20%
Pipe/taps damage	13%
Source dried up	13%

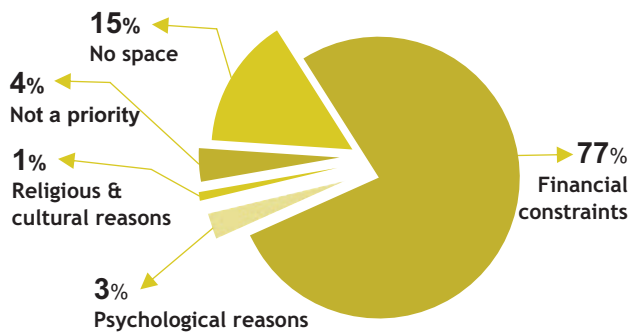
Sanitation, health & hygiene

Access to toilets

54%

have access to toilets. Most of them use pour flush toilets

Why don't people build toilets?

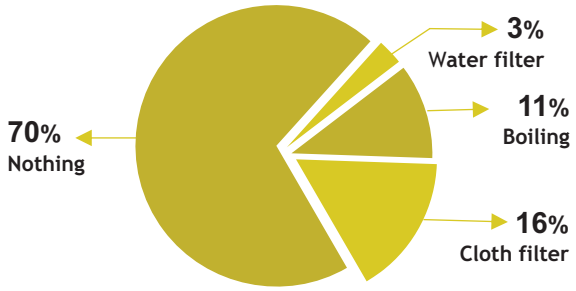


Drainage

28%

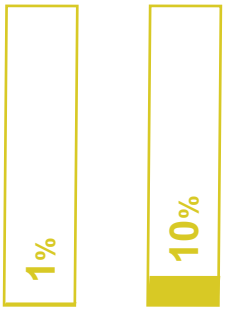
have drains outside the home

How do people treat their water?



Most people keep their water covered

Health & hygiene



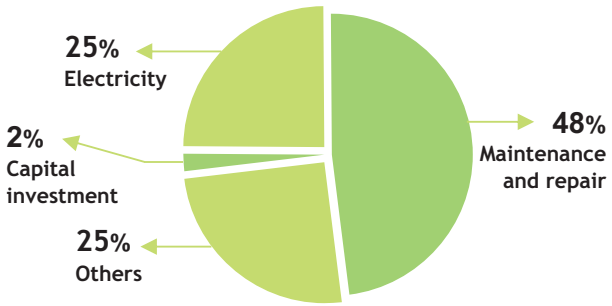
out of 8 GPs surveyed, incidences of diarrhea were reported from 4 GPs and incidence of chikungunya were reported from 4 GPs

Schemes & Finances

Ongoing schemes in our gram panchayat

☑ ARWSP	☑ TSC
☐ Jal Nirmal	☐ Sachethana
☑ Suvarna Jal	☑ Swachha Grama Yojana
☑ Swajaladhara	☑ Suvarna Gramodaya
☑ NREGA	☑ Watershed Project
☐ JSYS	☐ Others

Breakup of WATSAN spending



People's main demands

- Drainage facility
- Better water supply facility
- Toilets
- Clean village
- Better garbage disposal

Finances for 2007-08

Rs. 2,64,063/-
is the average amount spent by each GP on WATSAN services

Rs. 65/-
is the average amount spent per capita by the GPs on WATSAN

Rs. 57,480/-
is the average amount of user charges collected per GP

Equity

Derived category	Having household connection	Storing water in bindiges*	Not paying user charges	Having access to toilets	Incidence of diarrhea	Incidence of chikungunya
Low income	2%	48%	49%	24%	1%	7%
Middle income	5%	35%	34%	59%	2%	13%
High income	11%	26%	48%	88%	0%	8%

Refers to percentage of households

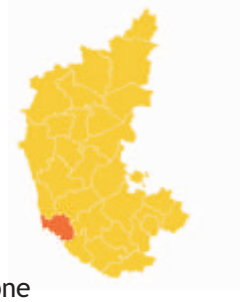
* Those storing water for domestic use in bindiges may not be able to consume 55 lpcd due to insufficient storage capacity

In general, low income groups had fewer household connections, had lower access to toilets & paid lesser user charges when compared to the high income groups

Highlights from surveyed GPs

- In your district, Menase and Chinniga GPs have been awarded Nirmal Gram Puraskar
- Overall open well is the main source in most GPs but the water is not potable because of bacterial contamination
- In Aduvalli Gadigeshwara GP, 62% take an hour to collect water despite the water source being 'very near'
- Chinniga and Marasanige GPs of Mudigere taluk have very low drainage coverage

Dakshina Kannada



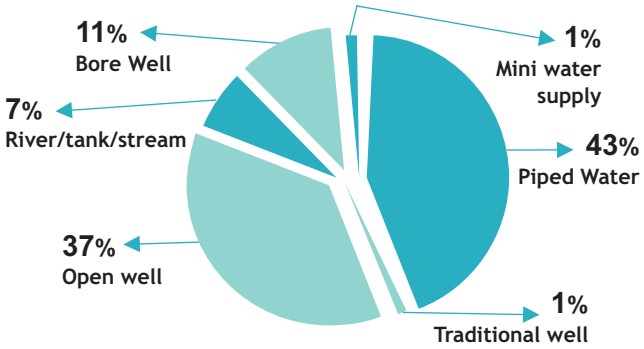
- Population: 18,97,730
- Agro-Climatic Zone: Coastal Zone
- Average Rainfall: 3975 mm
- Groundwater Status: Over exploited; presence of bacterial contamination
- Literacy Rate: 83%
- Talukas: 5
- Number of GPs: 203
- Number of GPs covered in ASHWAS: 4

WATSAN score (on a scale of 100)

	District	State
Water supply infrastructure	55	75
Piped water is the main source of water		
Sanitation	65	49
Financial constraints are cited for not having toilets		
Health Indicator	55	86
Incidences of chikungunya reported are high		
Governance	36	76
Gram panchayat plays the main role to address water problems		
Satisfaction level	82	49
People are satisfied with quality & management of water		

Water

What are the primary water sources?



Multiple source dependency : 25% depend on two sources

99%

access water 'very near' to their house. Most people take 45 to 60 minutes to collect water

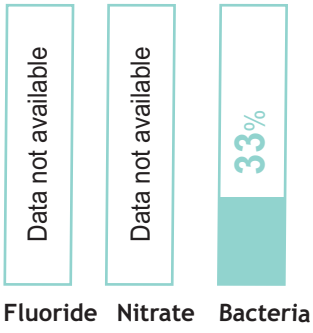
Village Water & Sanitation Committees

20%

of the villages have a VWSC; but none of them are functioning

Water Quality

50% of the GPs in the district have water testing kits distributed by the government. But none of the kits have been used



This chart indicates the percentage of sources over the desirable limits as per the standards. For fluoride, the standard limit is 1.0 ppm and for nitrates, it is 45 ppm

Who solves the drinking water problems?

79%

report that the gram panchayat solves the problem in 1 to 2 weeks

Sustainability

84%
have access to water throughout the year

Groundwater dependency in district

93%
depend on groundwater for their domestic needs

Satisfaction levels

84%
are fully satisfied with water services & management while 8% are partially satisfied, 5% are not satisfied & 3% have not answered

Reliability

4%
reported drinking water problems in the last one year

Storage

6%
store water because of irregular supply, while 91% store water because it is 'easier'

Reasons cited for water supply disruption
(by the villagers)

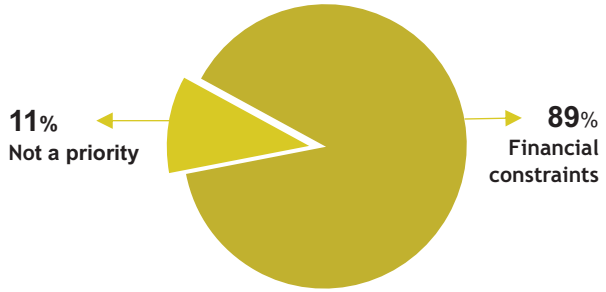
Reduced water yield	50%
Water contamination	24%
Problem during summer	14%
Financial reason	5%

Sanitation, health & hygiene

Access to toilets

84%
have access to toilets. Most of them use pour flush toilets

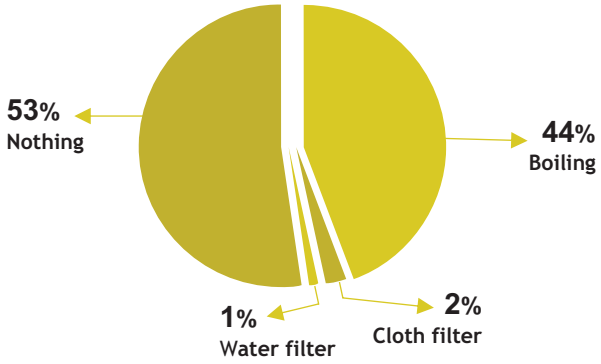
Why don't people build toilets?



Drainage

17%
have drains outside the home

How do people treat their water?



Most people keep their water covered

Health & hygiene

out of 4 GPs surveyed, 100% reported incidences of diarrhea and chikungunya

Schemes & Finances

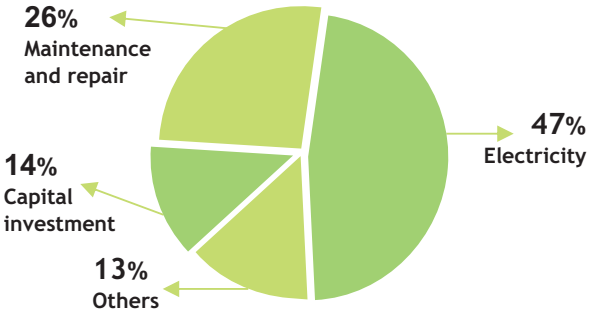
Ongoing schemes in our gram panchayat

☑ ARWSP	☑ TSC
☐ Jal Nirmal	☑ Sachethana
☑ Suvarna Jal	☑ Swachha Grama Yojana
☐ Swajaladhara	☑ Suvarna Gramodaya
☐ NREGA	☐ Watershed Project
☐ JSYS	☐ Others

People's main demands

- Toilets
- Drainage facility
- Better water supply facility
- Better garbage disposal
- Clean Village

Breakup of WATSAN spending



Finances for 2007-08

Rs. 1,45,000/-
is the average amount spent by each GP on WATSAN services

Rs. 22/-
is the average amount spent per capita by the GPs on WATSAN

Rs. 1,50,102/-
is the average amount of user charges collected per GP

Equity

Derived category	Having household connection	Storing water in bindiges*	Not paying user charges	Having access to toilets	Incidence of diarrhea	Incidence of chikungunya
Low income	37%	66%	46%	61%	2%	28%
Middle income	51%	50%	46%	83%	9%	25%
High income	38%	34%	56%	94%	2%	34%

Refers to percentage of households

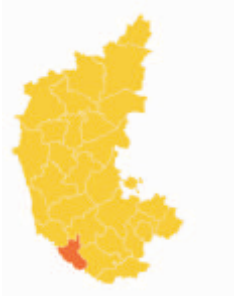
* Those storing water for domestic use in bindiges may not be able to consume 55 lpcd due to insufficient storage capacity

In general, low income groups had fewer household connections, had lower access to toilets & paid lesser user charges when compared to the high income groups. In this district most of the high income groups use their own open wells, thus reducing their user charges

Highlights from surveyed GPs

- Except in Ananthadi GP, all the remaining GPs reported high incidence of chikungunya (above 80%)
- Toilets coverage is above 80% in all Gps
- Bantwal & Puttur are NGP Gps
- Presence of drainages is very less in all 4 GPs (less than 20%)

Kodagu



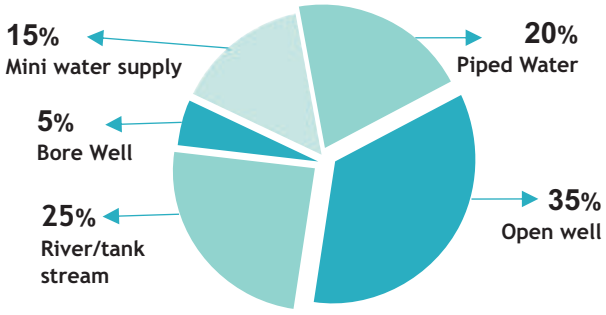
- Population: 5,48,561
- Agro-Climatic Zone: Hilly zone
- Average Rainfall: 2718 mm
- Groundwater Status: Ground water is not declining and water is good and potable
- Literacy Rate: 78%
- Talukas: 3
- Number of GPs: 98
- Number of GPs covered in ASHWAS: 4

WATSAN score (on a scale of 100)

	District	State
Water supply infrastructure	41	75
Open well is the main source of water		
Sanitation	60	49
Financial constraints & Not a priority are cited for not having toilets		
Health Indicator	99	86
Incidence of diarrhea and incidence of chikungunya are low		
Governance	50	76
Gram panchayat plays a crucial role to address water problems		
Satisfaction level	58	49
People are partially satisfied with quality & quantity of water		

Water

What are the primary water sources?



Multiple source dependency : 4% depend on two sources

99%

access water 'very near' to their house. Most people take 30 to 45 minutes to collect water

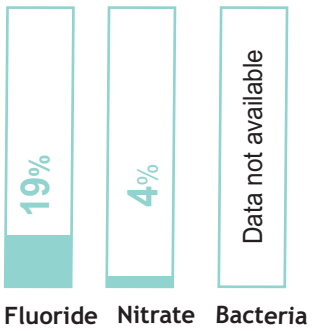
Village Water & Sanitation Committees

19%

of the villages have a VWSC; but none of them are functioning

Water Quality

25% of the GPs in the district have water testing kits distributed by the government. But none of the kits have been used



This chart indicates the percentage of sources over the desirable limits as per the standards. For fluoride, the standard limit is 1.0 ppm and for nitrates, it is 45 ppm

Who solves the drinking water problems?

73%

report that the gram panchayat solves the problem in 5 days to 1 week

Sustainability

97%
have access to water throughout the year

Groundwater dependency in district

76%
depend on groundwater for their domestic needs

Satisfaction levels

50%
are fully satisfied with water services & management while 4% are partially satisfied & 46% have not answered

Reliability

3%
reported drinking water problems in the last one year

Storage

8%
store water because of irregular supply, while 89% store water because it is 'easier'

Reasons cited for water supply disruption
(by the villagers)

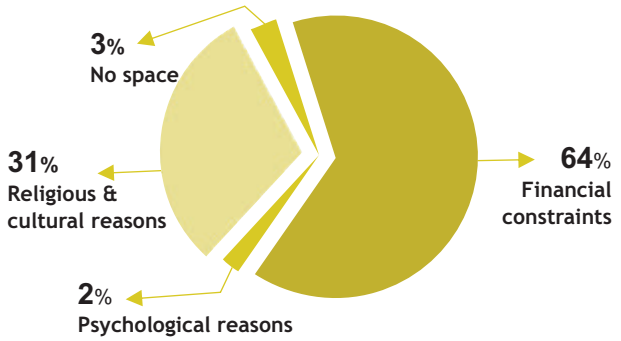
Power cut	36%
Motor damage	34%
Natural calamity	19%
Source dried up	5%

Sanitation, health & hygiene

Access to toilets

77%
have access to toilets. Most of them use pour flush toilets

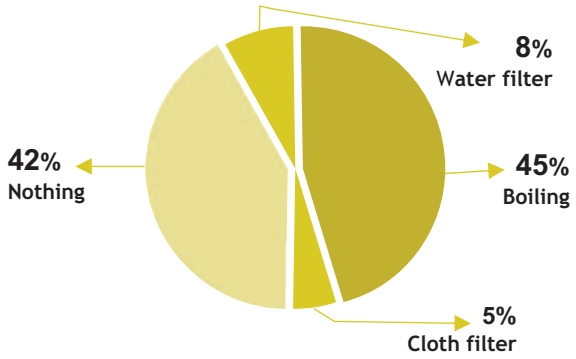
Why don't people build toilets?



Drainage

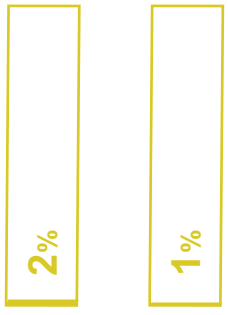
10%
have drains outside the home

How do people treat their water?



Most people keep their water covered

Health & hygiene



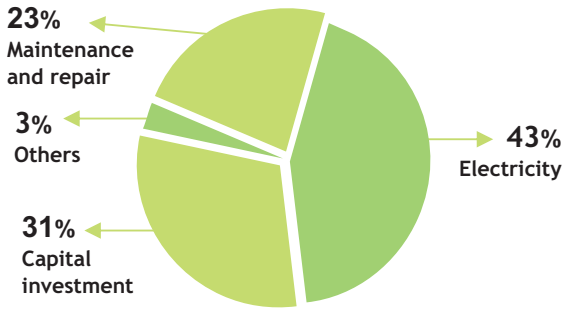
out of 4 GPs surveyed, incidences of diarrhea were reported from all GPs and incidences of chikungunya were reported from 3 GPs

Schemes & Finances

Ongoing schemes in our gram panchayat

- [x] ARWSP
- [x] Jal Nirmal
- [x] Suvarna Jal
- [ ] Swajaladhara
- [x] NREGA
- [ ] JSYS
- [x] TSC
- [x] Sachethana
- [ ] Swachha Grama Yojana
- [x] Suvarna Gramodaya
- [x] Watershed Project
- [ ] Others

Breakup of WATSAN spending



People's main demands

- Toilets
- Drainage facility
- Better water supply facility
- Clean Village

Finances for 2007-08

Rs. 1,23,240/-
is the average amount spent by each GP on WATSAN services

Rs. 26/-
is the average amount spent per capita by the GPs on WATSAN

Rs. 9,804/-
is the average amount of user charges collected per GP

Equity

Derived category	Having household connection	Storing water in bindiges*	Not paying user charges	Having access to toilets	Incidence of diarrhea	Incidence of chikungunya
Low income	5%	92%	79%	46%	5%	0%
Middle income	8%	77%	74%	70%	4%	1%
High income	9%	57%	73%	89%	5%	1%

Refers to percentage of households

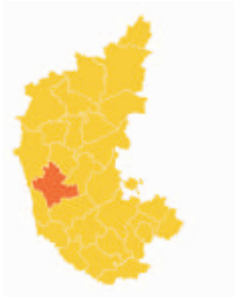
* Those storing water for domestic use in bindiges may not be able to consume 55 lpcd due to insufficient storage capacity

In general, low income groups had fewer household connections, had lower access to toilets & paid lesser user charges when compared to the high income groups

Highlights from surveyed GPs

- 50% of Galibeedu & Makandur GP depend on river water, whereas only 6% in Birunani depend on river water and Maldare GP depends completely on groundwater
- Drainage coverage is less in all GPs, only 1% coverage in Galibeedu & Birunani, 14% in Makandur & 27% in Maldare
- In all the GPs 45% of the people boil water

Shimoga



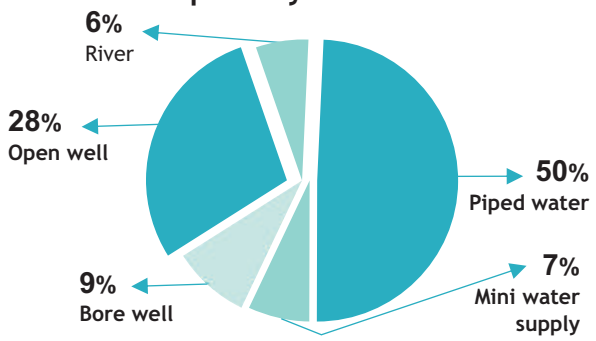
- Population: 16,42,545
- Agro-Climatic Zone: Southern Transition Zone
- Average Rainfall: 1813 mm
- Groundwater Status : Safe; presence of fluoride & nitrate
- Literacy Rate: 75%
- Talukas: 7
- Number of GPs: 260
- Number of GPs covered in ASHWAS: 8

WATSAN score (on a scale of 100)

	District	State
Water supply infrastructure	66	75
Piped water is the main source of water		
Sanitation	76	49
Financial constraints are cited for not having toilets		
Health Indicator	87	86
Incidences of chikungunya reported are high		
Governance	94	76
Local politician plays a crucial role to address water problems		
Satisfaction level	51	49
People are not satisfied with quality & management of water		

Water

What are the primary water sources?



Multiple source dependency : 26% depend on two sources

86%

access water 'very near' to their house. Most people take 30 to 60 minutes to collect water

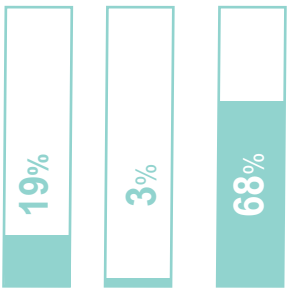
Village Water & Sanitation Committees

13%

of the villages have a VWSC; but only some of them are functioning

Water Quality

88% of the GPs in your district have water testing kits distributed by the government. 86% of these kits have been used



This chart indicates the percentage of sources over the desirable limits as per the standards. For fluoride, the standard limit is 1.0 ppm and for nitrates, it is 45 ppm

Who solves the drinking water problems?

45%

report that the local politician helps solve the problem in 1 to 5 days

Sustainability

79%

have access to water throughout the year

Groundwater dependency in district

94%

depend on groundwater for their domestic needs

Satisfaction levels

48%

are fully satisfied with water services & management while 44% are partially satisfied, 8% are not satisfied

Reliability

45%

reported drinking water problems in the last one year

Storage

35%

store water because of irregular supply, while 52% store water because it is 'easier'

Reasons cited for water supply disruption

(by the villagers)

Motor damage	19%
Power cut	19%
Reduced water yield	17%
Water contamination	15%

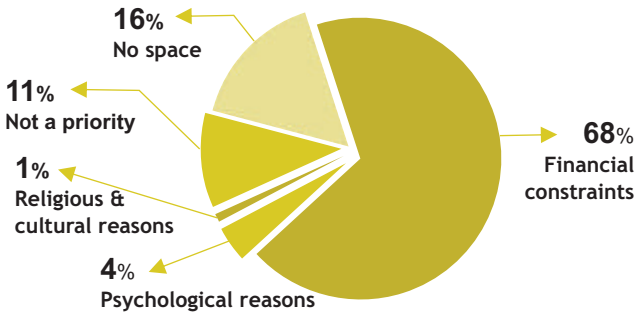
Sanitation, health & hygiene

Access to toilets

71%

have access to toilets. Most of them use pour flush toilets

Why don't people build toilets?

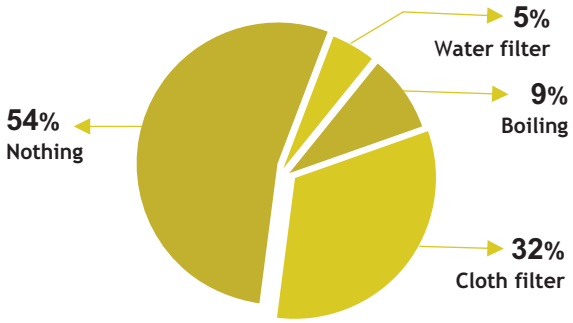


Drainage

69%

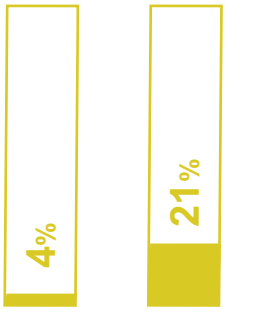
have drains outside the home

How do people treat their water?



Most people keep their water covered

Health & hygiene



out of 8 GPs surveyed, incidences of diarrhea and chikungunya were reported from 7 GPs

Schemes & Finances

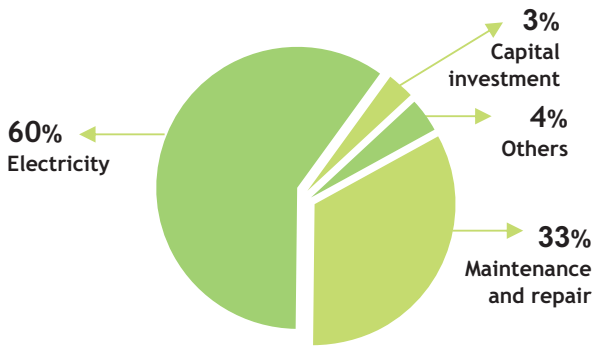
Ongoing schemes in our gram panchayat

☑ ARWSP	☑ TSC
☑ Jal Nirmal	☐ Sachethana
☑ Suvarna Jal	☑ Swachha Grama Yojana
☑ Swajaladhara	☑ Suvarna Gramodaya
☑ NREGA	☑ Watershed Project
☑ JSYS	☐ Others

People's main demands

- Drainage facility
- Better water supply facility
- Toilets
- Clean village
- Better garbage disposal

Breakup of WATSAN spending



Finances for 2007-08

Rs. 1,90,238/-
is the average amount spent by each GP on WATSAN services

Rs. 39/-
is the average amount spent per capita by the GPs on WATSAN

Rs. 48,145/-
is the average amount of user charges collected per GP

Equity

Derived category	Having household connection	Storing water in bindiges*	Not paying user charges	Having access to toilets	Incidence of diarrhea	Incidence of chikungunya
Low income	15%	47%	47%	39%	16%	18%
Middle income	20%	32%	37%	67%	15%	24%
High income	38%	16%	37%	90%	7%	12%

Refers to percentage of households

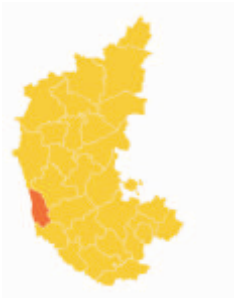
* Those storing water for domestic use in bindiges may not be able to consume 55 lpcd due to insufficient storage capacity

In general, low income groups had fewer household connections, had lower access to toilets, paid lesser user charges & had a higher incidence of disease when compared to the high income groups

Highlights from surveyed GPs

- According to ASHWAS water quality tests, water is 100% potable in Gama GP
- In the same GP there is 89% access to toilets and 92% drainage coverage
- Donabagatta, Hanagere, Kolur, Narasapura have been awarded NGP

Udupi



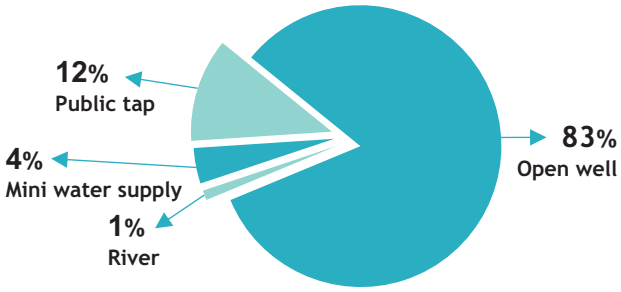
- Population: 11,12,243
- Agro-Climatic Zone: Coastal Zone
- Average Rainfall: 4119 mm
- Groundwater Status: Safe; presence of chloride concentration
- Literacy Rate: 92%
- Talukas: 3
- Number of GPs: 146
- Number of GPs covered in ASHWAS: 2

WATSAN score (on a scale of 100)

	District	State
Water supply infrastructure	17	75
Open well is the main source of water		
Sanitation	51	49
Financial constraints are cited for not having toilets		
Health Indicator	98	86
Incidence of diarrhea and Incidence of chikungunya are low		
Governance	29	76
Village elders play the main role to address water problems		
Satisfaction level	38	49
People are not satisfied with quality & management of water		

Water

What are the primary water sources?



Multiple source dependency : 7% depend on two sources

86%

access water 'very near' to their house. Most people take 15 to 30 minutes to collect water

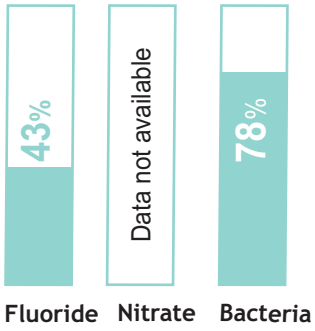
Village Water & Sanitation Committees

100%

of the villages have a VWSC; but none of them are functioning

Water Quality

none of the GPs in the district have water testing kits distributed by the government



This chart indicates the percentage of sources over the desirable limits as per the standards. For fluoride, the standard limit is 1.0 ppm and for nitrates, it is 45 ppm

Who solves the drinking water problems?

40%

report that the village elders help solve the problem in more than 1 month

Sustainability

72%

have access to water throughout the year

Groundwater dependency in district

99%

depend on groundwater for their domestic needs

Satisfaction levels

5%

are fully satisfied with water services & management while 58% are partially satisfied, 37% are not satisfied

Reliability

28%

reported drinking water problems in the last one year

Storage

7%

store water because of irregular supply, while 83% store water because it is 'easier'

Reasons cited for water supply disruption

(by the villagers)

Reduced water yield	41%
Pipe/taps damage	15%
Power cut	15%
Water contamination	11%

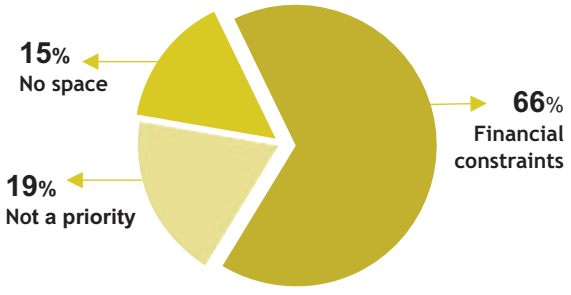
Sanitation, health & hygiene

Access to toilets

58%

have access to toilets. Most of them use pour flush toilets

Why don't people build toilets?



Drainage

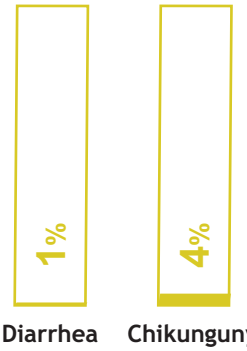
8%

have drains outside the home

How do people treat their water?

Most people keep their water covered

Health & hygiene



out of 2 GPs surveyed, incidences of diarrhea were reported from 1 GP and incidences of chikungunya were reported from all GPs

Schemes & Finances

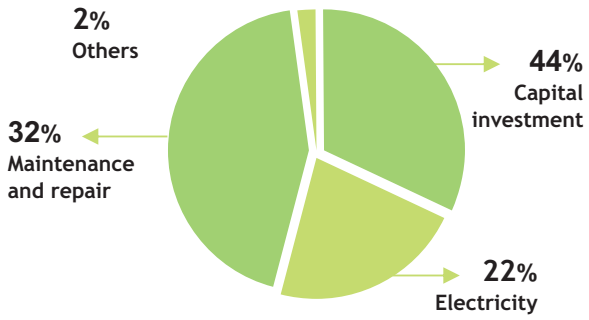
Ongoing schemes in our gram panchayat

☑ ARWSP	☑ TSC
☐ Jal Nirmal	☐ Sachethana
☐ Suvarna Jal	☐ Swachha Grama Yojana
☐ Swajaladhara	☐ Suvarna Gramodaya
☐ NREGA	☐ Watershed Project
☐ JSYS	☐ Others

People's main demands

- Financial support to build toilets
- Better water supply facility
- Toilets

Breakup of WATSAN spending



Finances for 2007-08

Rs. 1,77,773/-
is the average amount spent by each GP on WATSAN services

Rs. 35/-
is the average amount spent per capita by the GPs on WATSAN

Rs. 11,110/-
is the average amount of user charges collected per GP

Equity

Derived category	Having household connection	Storing water in bindiges*	Not paying user charges	Having access to toilets	Incidence of diarrhea	Incidence of chikungunya
Low income	4%	79%	96%	19%	0%	2%
Middle income	6%	80%	83%	45%	0%	2%
High income	0%	60%	94%	77%	4%	5%

Refers to percentage of households

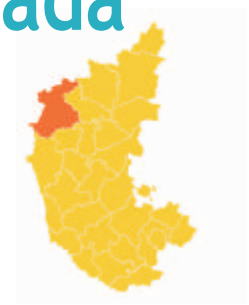
* Those storing water for domestic use in bindiges may not be able to consume 55 lpcd due to insufficient storage capacity

In general, low income groups had fewer household connections, had lower access to toilets & paid lesser user charges when compared to the high income groups

Highlights from surveyed GPs

- Both the GPs in Udupi taluk, Manipura and Billadi have very low access to drains at 8%
- The primary water source for these GPs is open well and the water quality is not potable because of bacterial contamination
- In Manipura GP, 78% have access to toilets

Uttara Kannada



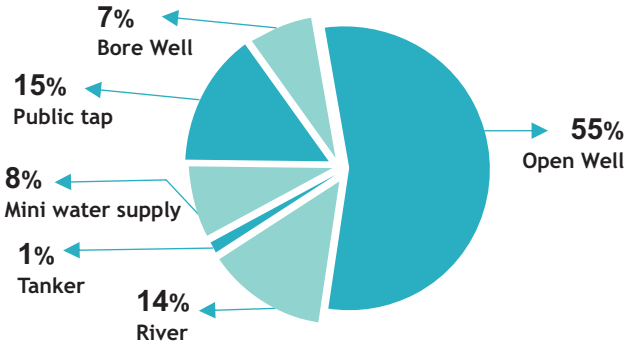
- Population: 13,53,644
- Agro-Climatic Zone: Hilly Zone
- Average Rainfall: 2835 mm
- Groundwater Status: Safe zone; presence of fluoride & nitrate
- Literacy Rate: 77%
- Talukas: 11
- Number of GPs: 207
- Number of GPs covered in ASHWAS: 10

WATSAN score (on a scale of 100)

	District	State
Water supply infrastructure	29	75
Open well is the main source of water		
Sanitation	53	49
Financial & space constraints are cited for not having toilets		
Health Indicator	98	86
Incidence of diarrhea and Incidence of chikungunya are low		
Governance	50	76
Local politician plays a crucial role to address water problems		
Satisfaction level	57	49
People are not satisfied with water services & management		

Water

What are the primary water sources?



Multiple source dependency : 21% depend on 2 sources

84%

access water 'very near' to their house. Most people take 15 to 30 minutes to collect water

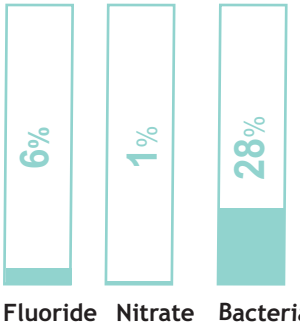
Village Water & Sanitation Committees

16%

of the villages have a VWSC; but only some of them are functioning

Water Quality

80% of the GPs in the district have and use water testing kits distributed by the government



This chart indicates the percentage of sources over the desirable limits as per the standards. For fluoride, the standard limit is 1.0 ppm and for nitrates, it is 45 ppm

Who solves the drinking water problems?

50%

report that the local politician helps solve the problem in 2 weeks to 1 month

Sustainability

69%

have access to water throughout the year while 31% state its seasonal

Groundwater dependency in district

85%

depend on groundwater for their domestic needs

Satisfaction levels

42%

are fully satisfied with water services & management while 34% are partially satisfied, 23% are not satisfied & 1% have not answered

Reliability

30%

reported drinking water problems in the last one year

Storage

6%

store water because of irregular supply, while 87% store water because it is 'easier'

Reasons cited for water supply disruption

(by the villagers)

Pipe/taps damage	25%
Motor damage	21%
Source dried up	14%
Power cut	12%

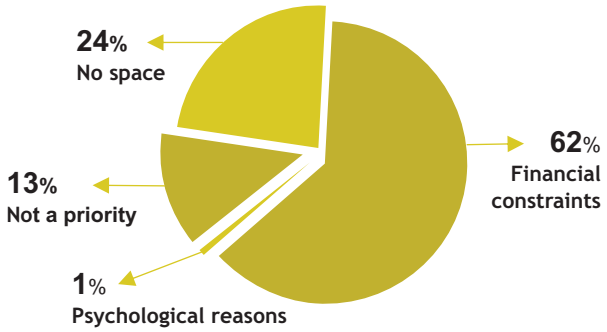
Sanitation, health & hygiene

Access to toilets

53%

have access to toilets. Most of them use pour flush toilets

Why don't people build toilets?

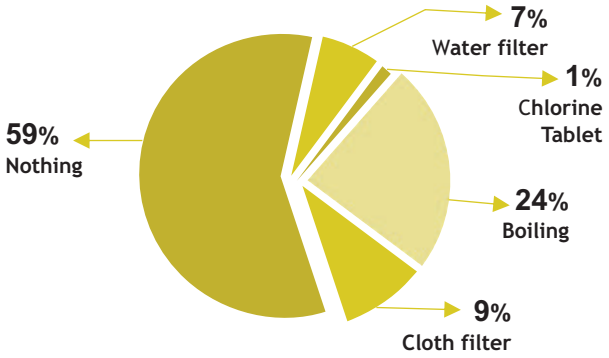


Drainage

25%

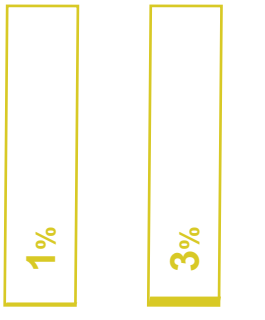
have drains outside the home

How do people treat their water?



Most people keep their water covered

Health & hygiene



out of 10 GPs surveyed, incidences of diarrhea were reported from 7 GPs and incidences of chikungunya were reported from 8 GPs

Schemes & Finances

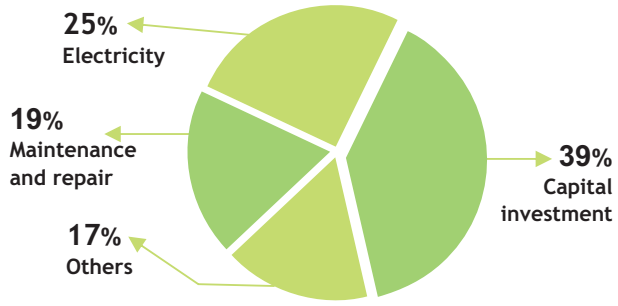
Ongoing schemes in our gram panchayat

- [ ] ARWSP
- [x] TSC
- [x] Jal Nirmal
- [ ] Sachethana
- [x] Suvarna Jal
- [x] Swachha Grama Yojana
- [x] Swajaladhara
- [x] Jeeva Vaidyatha Samithi
- [x] NREGA
- [x] Watershed Project
- [x] Small irrigation & pipe water plan

People's main demands

- Toilets
- Drainage facility
- Better water supply facility
- Clean Village

Breakup of WATSAN spending



Finances for 2007-08

Rs. 2,48,853/-
is the average amount spent by each GP on WATSAN services

Rs. 52/-
is the average amount spent per capita by the GPs on WATSAN

Rs. 64,697/-
is the average amount of user charges collected per GP

Equity

Derived category	Having household connection	Storing water in bindiges*	Not paying user charges	Having access to toilets	Incidence of diarrhea	Incidence of chikungunya
Low income	2%	68%	34%	25%	2%	2%
Middle income	2%	52%	20%	54%	3%	2%
High income	1%	44%	28%	81%	1%	3%

Refers to percentage of households

* Those storing water for domestic use in bindiges may not be able to consume 55 lpcd due to insufficient storage capacity

In general, low income groups had fewer household connections, had lower access to toilets & paid lesser user charges when compared to the high income groups. In this district most high income groups use their own open wells, reducing their need for household connections

Highlights from surveyed GPs

- Nandolli GP in Yellapur Taluk is awarded NGP
- In Yellapur taluk, Idagundi & Nandolli GPs have good access to toilets at about 72%
- The main source of water for all GPs is open well and the quality of water is satisfactory
- In Karki GP, 48% take more than an hour to fetch water despite the water source being near

Selective findings for all districts

Usage of different sources of water

District	River/ tank/ stream	Open well	Hand pump & borewell	Mini water supply	Piped water	Public tap	Water from the field
Bagalkot	1	8	12	12	12	29	1
Bangalore Rural	1	5	8	8	8	84	11
Belgaum	10	22	30	30	30	29	1
Bellary	19	6	5	5	5	47	0
Bidar	1	24	24	24	24	31	0
Bijapur	4	9	45	45	45	36	0
Chamarajanagar	30	6	68	68	68	20	0
Chikballapur	3	2	9	9	9	43	7
Chikkamaglur	11	29	11	11	11	34	0
Chitradurga	0	0	11	11	11	35	0
Dakshina Kannada	9	46	15	15	15	12	18
Davanagere	8	1	28	28	28	36	0
Dharawad	1	0	13	13	13	56	0
Gadag	23	1	8	8	8	20	0
Gulbarga	7	20	42	42	42	22	0
Hassan	66	10	61	61	61	27	20
Haveri	10	2	10	10	10	62	0
Kodagu	25	37	5	5	5	14	0
Kolar	6	0	15	15	15	38	11
Koppal	14	15	32	32	32	59	0
Mandya	8	9	26	26	26	37	0
Mysore	18	10	53	53	53	30	0
Raichur	22	5	25	25	25	35	0
Ramanagram	7	1	48	48	48	26	3
Shimoga	8	33	12	12	12	41	1
Tumkur	21	1	31	31	31	27	16
Udupi	1	87	1	1	1	11	2
Uttara Kannada	17	66	9	9	9	17	0
State Average	**13**	**16**	**24**	**24**	**24**	**34**	**3**

All values are in %

Fluoride contamination

District	Above permissible level (1 to 3 ppm)
Bagalkot	80
Bangalore Rural	58
Belgaum	23
Bellary	97
Bidar	24
Bijapur	81
Chamarajanagar	65
Chikballapur	92
Chikkamaglur	31
Chitradurga	91
Dakshina Kannada	not available
Davanagere	92
Dharawad	48
Gadag	87
Gulbarga	90
Hassan	43
Haveri	55
Kodagu	19
Kolar	96
Koppal	94
Mandya	64
Mysore	73
Raichur	80
Ramanagram	76
Shimoga	19
Tumkur	68
Udupi	43
Uttara Kannada	6
State Average	**60**

Nitrate contamination

District	Above permissible level (40 to 250 ppm)
Bagalkot	20
Bangalore Rural	not available
Belgaum	1
Bellary	31
Bidar	31
Bijapur	29
Chamarajanagar	27
Chikballapur	20
Chikkamaglur	5
Chitradurga	21
Dakshina Kannada	not available
Davanagere	16
Dharawad	12
Gadag	13
Gulbarga	32
Hassan	31
Haveri	18
Kodagu	4
Kolar	8
Koppal	56
Mandya	16
Mysore	45
Raichur	27
Ramanagram	25
Shimoga	3
Tumkur	26
Udupi	not available
Uttara Kannada	1
State Average	**20**

All values are in %

Bacteriological contamination

District	Contaminated Sources
Bagalkot	31
Bangalore Rural	not available
Belgaum	1
Bellary	90
Bidar	17
Bijapur	20
Chamarajanagar	65
Chikballapur	27
Chikkamaglur	66
Chitradurga	17
Dakshina Kannada	33
Davanagere	22
Dharawad	17
Gadag	100
Gulbarga	15
Hassan	34
Haveri	21
Kodagu	not available
Kolar	16
Koppal	83
Mandya	29
Mysore	9
Raichur	82
Ramanagram	72
Shimoga	68
Tumkur	59
Udupi	78
Uttara Kannada	28
State Average	**38**

All values are in %

OD Percentage

District	% OD
Bagalkot	88
Bangalore Rural	58
Belgaum	82
Bellary	82
Bidar	96
Bijapur	95
Chamarajanagar	82
Chikballapur	75
Chikkamaglur	46
Chitradurga	86
Dakshina Kannada	16
Davanagere	66
Dharawad	77
Gadag	95
Gulbarga	92
Hassan	74
Haveri	82
Kodagu	20
Kolar	86
Koppal	98
Mandya	72
Mysore	66
Raichur	98
Ramanagram	66
Shimoga	33
Tumkur	76
Udupi	45
Uttara Kannada	49
State Average	**72**

WATSAN Expenditure

District	Per capita WATSAN expenditure (Rs.)	Average expenditure per GP (Lakhs)
Bagalkot	41	2.99
Bangalore Rural	65	4.58
Belgaum	30	1.81
Bellary	15	1.14
Bidar	52	3.40
Bijapur	29	2.02
Chamarajanagar	42	2.98
Chikballapur	71	4.81
Chikkamaglur	65	2.64
Chitradurga	40	2.96
Dakshina Kannada	22	1.45
Davanagere	30	2.36
Dharawad	39	2.90
Gadag	91	3.78
Gulbarga	65	5.18
Hassan	66	4.30
Haveri	16	1.00
Kodagu	26	1.23
Kolar	25	1.49
Koppal	24	1.64
Mandya	43	2.90
Mysore	33	3.14
Raichur	43	3.79
Ramanagram	34	1.69
Shimoga	39	1.90
Tumkur	65	4.36
Udupi	35	1.78
Uttara Kannada	52	2.49
State Average	**43**	**2.82**

District Score Chart: An indication of where the districts stand in WATSAN parameters

District	Water supply infrastructure	Water quality	Sanitation	Health indicator	Governance	Satisfaction level	Overall
Bagalkot	92	90	28	92	43	84	63
Bangalore Rural	85	99	63	99	67	84	73
Belgaum	75	99	43	87	92	66	70
Bellary	79	63	33	78	89	65	66
Bidar	79	91	34	82	81	17	56
Bijapur	87	80	28	90	87	43	60
Chamarajanagar	79	73	59	96	96	14	65
Chikballapur	90	80	49	88	92	47	68
Chikkamaglur	66	83	56	95	92	77	76
Chitradurga	99	73	49	73	93	55	68
Dakshina Kannada	56	94	65	55	36	82	65
Davangere	93	83	64	74	95	44	70
Dharawad	99	91	41	85	84	80	73
Gadag	53	67	40	75	72	27	56
Gulbarga	77	89	33	77	84	28	58
Hassan	60	81	54	92	85	41	64
Haveri	91	90	50	82	92	42	68
Kodagu	41	91	60	99	50	58	65
Kolar	85	90	55	97	68	43	64
Koppal	81	45	37	86	37	48	52
Mandya	88	78	53	85	86	24	62
Mysore	88	85	63	84	87	55	70
Raichur	83	77	29	83	80	48	60
Ramanagram	94	69	57	85	71	1	54
Shimoga	66	77	76	87	94	51	74
Tumkur	81	66	54	95	87	61	71
Udupi	17	70	51	98	29	38	50
Uttara Kannada	29	89	53	98	50	57	62

All values are in %

SPOTLIGHT
Equity & Gender

EQUITY & GENDER

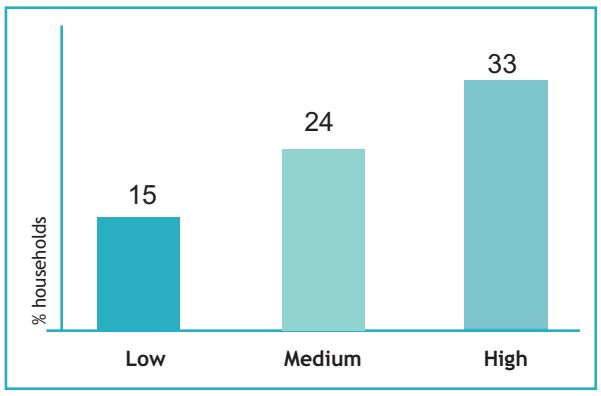
This section shines the spotlight on gender and equity, two important developmental parameters that critically affect and are affected by water and sanitation facilities.

As was seen in the previous Regional section, state-level statistics often hide the wide disparities amongst geographically and economically diverse districts. Similarly, broad findings at the community or even the household level mask the troubling figures associated with marginalized and vulnerable people and women. This section tries to draw this out through some of the findings.

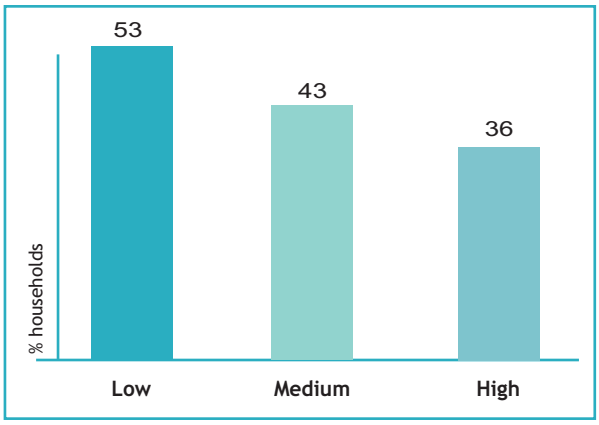
Equity

Equity here refers to equal access to basic services across various groups. People experience discrimination due to various factors such as economic status, caste, levels of education or physical disabilities. These impact access to water, sanitation and health facilities. The following section presents ASHWAS data on certain parameters through the lens of equity. The equity factors taken into account include economic status[1] and vulnerable population[2].

Piped water connection access



Storage of water in *bindiges* (vessels)



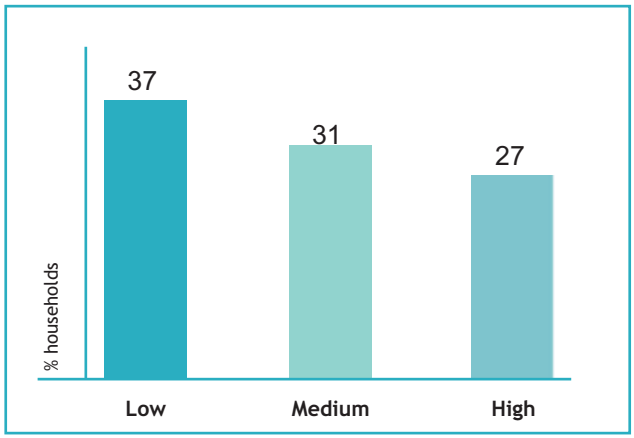
[1] Economic grouping is based on assets owned which include type of house, source of cooking energy, livestock, vehicles and household electronic gadgets. The groups are divided into low, middle and high income households.

[2] Vulnerable population is defined as people who are differently-abled, old, sick, and pregnant women.

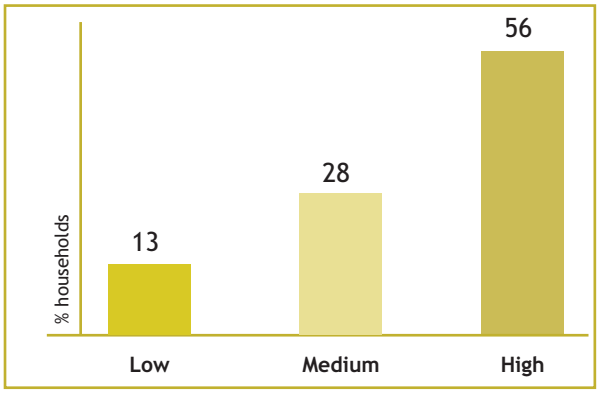
Water treatment

Economic category	Low	Medium	High
Boil	10	13	16
Use water filter	0	2	6
Filter by cloth	23	22	20
Cover	52	51	49
Do nothing	15	12	9

Not paying water charges



Access to toilet



Vulnerable people*

Collecting water

24%

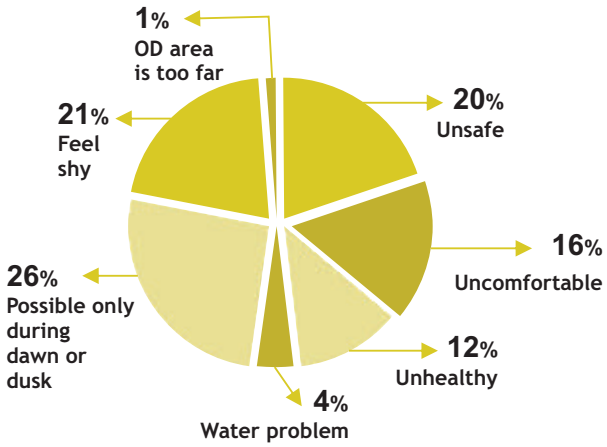
of the vulnerable population have to collect water from sources outside their homes. On an average they take about 51 minutes to collect water.

Access to toilets

30%

of the vulnerable population have access to toilets, and 92% of those who have to practice open defecation said they find it inconvenient.

Problems faced during OD

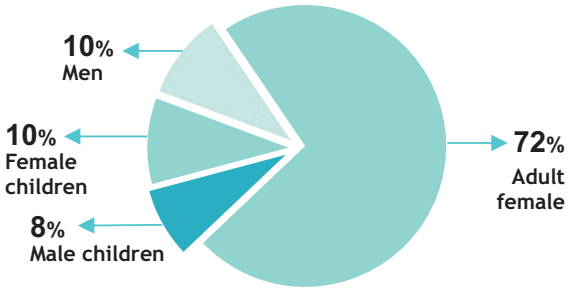


* Vulnerable people is defined as people who are differently abled, the aged, the sick and pregnant women

Gender

Unfortunately it is taken for granted that domestic water is the responsibility of the women of the household. This skews the way that domestic water issues are perceived and the priority given to addressing them. Poor domestic water facilities have a much broader impact on areas like the health of the family, economic opportunities for the woman, schooling of the girl-child and the family finances. These linkages however are largely ignored. This section presents the findings related to gender and domestic water, with the special focus on the issue of menstrual hygiene.

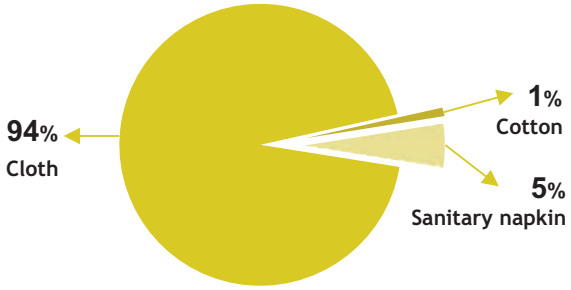
Who collects water?



- 90% of the people collecting water are **women** and children
- The average time spent on collecting water every day, across the state was **56 minutes**.

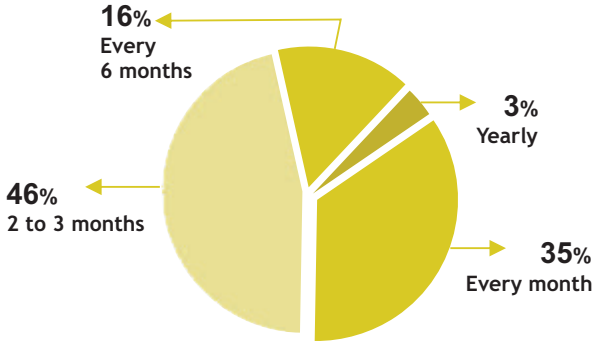
Menstrual Hygiene

What type of protection do women use during periods?



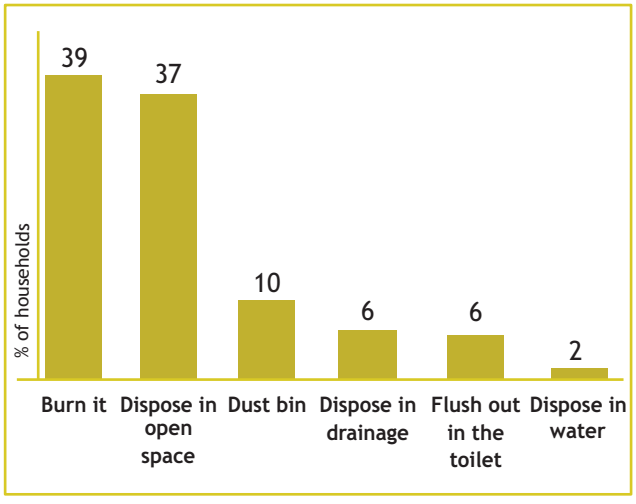
- 51% respondents said that they use cloth because they are accustomed to it and 29% because it is easily available.

How often do women change the cloth?



- 94% wash the cloth with soap and water.

How do people dispose of the used cloth?



CONCLUSION

ASHWAS, with its comprehensive sweep, based on people's perceptions and on direct observation, has led to some broad conclusions.

Some of these conclusions reinforce widely held beliefs. Others are new and more nuanced. The broader picture speaks of a water delivery system which has brought household water supply facilities close to a large percentage of the rural population.

Yet there is no room for complacence, especially when the water and sanitation space is being increasingly informed by a nationwide debate from the human rights perspective. Serious concerns remain regarding the reliability of supply, the sustainability of the primary water source and the quality of water accessed by people. Importantly, the survey reaffirms the alarming sanitation and hygiene situation with its inevitable impacts on public health.

A few key areas of significance emerge from the findings.

Water Supply

While the majority of rural households make do with the current water supply situation, erratic water supply and dry season difficulties result in almost 30% having to store water to suffice for three days or more. Additionally over 20% of respondents say they do not have water sources very near their homes. If we add to this the fact that a large proportion own cattle and stall-fed animals (44% own cows, for instance) the need to re-examine the actual water availability becomes very clear.

Survey results show that water quality is a critical issue. Sixty percent of water samples tested at source showed fluoride contamination above the desirable limits, 20% had excess nitrates and 38% had bacteriological contaminants. Notably, this coincided with a relatively high rate of satisfaction (54%) with water quality based on observable parameters such as clarity and taste. Lack of awareness combined with irregular water quality monitoring is a cause for worry, but it also suggests the way forward.

Sanitation and Hygiene

Regional disparities make a serious situation alarming. Against a poor state average of 72%, over 90% of households in the northern region of the state reported the practice of open defecation. Not surprisingly, there appears to be a close co-relation between poverty and the lack of toilets both regionally and at the household level. Only 13% of low income households have access to toilets as against 56% of the high income ones. A high 59% reported lack of finance as the leading cause for not building household toilets.

For the purpose of the survey, we have defined the vulnerable population as those who are differently abled, the aged, the sick and pregnant women. These people in a household have a particularly hard time since no sustained effort seems to have been made to meet their needs.

There are gender issues in hygiene that need to be understood and addressed. There appears to be inadequate recognition of the requirements of safe water and facilities such as safe disposal for menstrual hygiene.

Waste water disposal is another issue waiting to be adequately addressed, with open drains outside the home being the only formal method of carrying away wastewater.

From a public health perspective, a statewide reported 20% incidence of chikungunya is something to be looked at very carefully in terms of mosquito breeding sites and public awareness.

With almost 50% of rural households not using soap for washing hands, personal hygiene remains a public health challenge. This requires innovative approaches because of the inevitable consequence of water borne diseases.

Institutional Strengthening

With less than 15% of the villages recognizing the presence of a water and sanitation committee in their villages, there appears to be a lack of institutional cohesion at the gram panchayat (GP) level. This is likely to be a particularly serious impediment in addressing sanitation issues, borne out by the difference of perception in the existence and use of public toilets. Thirty percent of GPs reported the availability of public toilets although only 2% of households reported the use of these toilets.

The performance of GPs is better in water supply issues with over 80% of problems being successfully solved by them as reported by households. However with 77% of problems taking more than three days and up to two weeks to solve the issue. Building capacity and efficiency is a priority.

Finances

On the broader finance front, the average GP expenditure on water and sanitation was Rs 2.82 lakhs with the average per capita expenditure amounting to Rs 43 in 2007-08. In the same period, GPs reported collecting an average of Rs 14 per capita as water charges. Whether the expenditure is in line with the level of infrastructure and services being sought needs to be explored further.

Similarly, if poor families say they are not able to construct toilets for lack of funds, then the targeting and application of subsidies available through the Total Sanitation Campaign and other schemes needs further analysis.

It is well understood that even a single hospitalization episode or medical intervention can make low income families fall back below the poverty line. In the survey, respondents who had experienced incidences of the diseases in the previous year spent an average of Rs 2809 for treatment of chikungunya and Rs 1122 for the treatment of diarrhea. This puts a larger onus on the panchayats and the community for the prevention of such outbreaks.

In closing, the findings of the survey, while validating the advances made in the water supply situation, point to the very significant challenges that remain in overcoming equity issues and the public health problems caused by inadequate waste water disposal, poor water quality, high levels of open defecation and lack of hygiene awareness.

With decentralization, gram panchayats are increasingly being made responsible for the provision of water and sanitation services. A huge effort is needed to enable them to do so. Regular and transparent assessments of the situation, such as those provided by the ASHWAS model, may help in course correction and also in tracking progress.

ANNEXURE

GP REPORT SAMPLE

ASHWAS

A survey of household water and sanitation

Arghyam conducted a participatory survey called ASHWAS in 28 districts of Karnataka in 2008-09. The survey covered 17,200 households in 172 gram panchayats. The purpose of ASHWAS was (i) to capture the current water and sanitation situation as viewed by citizens and more importantly (ii) to create awareness on water and sanitation issues and introduce a participatory approach to deal with these issues. ASHWAS's surveyors included students, members of self help groups, and local NGO partners. The components of the survey included household questionnaires, village transects, village questionnaires, gram panchayat (GP) questionnaires and water quality tests in each village. The survey covered 100 households in each GP. In keeping with the participatory approach, ASHWAS is sharing the survey results with the respondents and Gram Panchayats in order to enhance a shared understanding of the problems. It is hoped that the results and the awareness that this report creates will empower citizens and gram panchayats to make important decisions to enhance the water supply and sanitation situation in their GP. The ASHWAS Survey intends to provide an impetus for improvements in the areas of water, sanitation and hygiene by making data and knowledge available.

This Gram Panchayat report provides information obtained from the survey on various aspects of water supply, sanitation and hygiene in your GP.

For further details, please visit:
www.ashwas.indiawaterportal.org

The aim of the report is to:

- Provide quantitative feedback on user perceptions of services
- Provide information on the status, quality, adequacy and efficiency of services in your Gram-Panchayat and enable you to take decisions for the improvement of those services.
- Serve as an instrument for public accountability and as a tool for empowerment of your communities

Muddapura

Water and Sanitation Rating (on a scale of 100)

Water supply infrastructure	99
Good provision of infrastructure	
Water availability	100
Public tap and MWS are the main source of water in your GP	
Usage of household toilets	14
GP lacks toilet facilities	
Drainage coverage	47
Most of the wastewater flows on the roads/kitchen garden	
Health Indicator	61
High incidence of diseases reported	
Governance	95
Good governance system is in place	
Satisfaction level	77
Most people are satisfied with water quality & management	

District
Chitradurga

Population
15,17,896

Taluka
Chitradurga

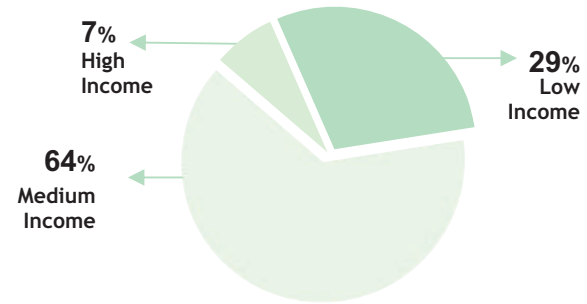
Villages
Chikkabbigere, Hire Kabbigere, Muddapura, Siddavvanadurga, Surenahalli

Gram Panchayat Population
9186

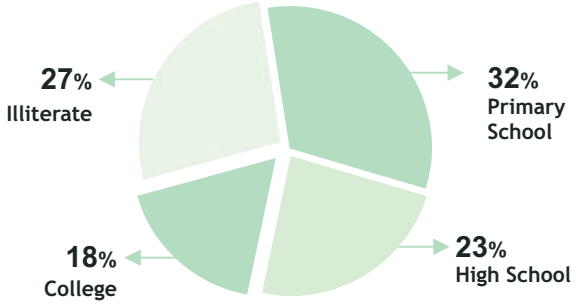
Agro-climatic Zone
Central Dry Zone

Average Annual rainfall
573 mm

Respondents Profile (Derived economic status)



Respondents Profile (Education Based)



Women testing water in Muddapura, where the fluoride level has been found to be high

Sourcing

What are our sources of water for general household purposes?

	River/Lake		Rainwater
41%	Public Tap		Open well
30%	Mini water supply (MWS)		Hand pump
29%	Household pipe-water		Tanker

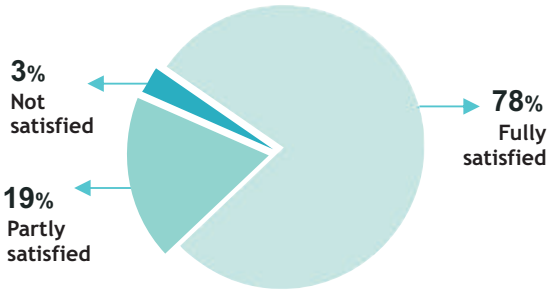
39%

source water from public tap and 29% source from MWS

4%

depend on multiple sources of water

Are we satisfied with the quality of our water?



74% people use, taste and appearance as primary indicators of quality

Action call

- Of all the sources tested in your GP there is no potable source. Many samples of water have high fluoride. The GP needs to send the water sample to the district laboratory to verify the results, as the tests are only indicative. The GP needs to raise awareness so that authorities and politicians make an effort to solve this major problem

Supply & Access

How far do we travel to fetch water?

87%

source water 'very near' to their house while 13% travel less than 1.6 km. Government regulations state that distance to source should be less than 1.6 km

12%

people take more than one hour to collect water

Quality

Is our water safe for drinking?

Village	Test results
Muddapura	Fluoride in Borewell PWS, MWS & bacteria contamination
Surenahalli	Fluoride in Borewell PWS
Siddavvanadurga	Fluoride in Borewell MWS
Chikkabbigere	Fluoride in Borewell MWS
Hire Kabbigere	Flouride in Borewell MWS and Borewell PWS. Bacterial contamination in Borewell PWS

PWS - Piped water supply
MWS - Mini water supply

Note: Test results can be seen in page **166**

Sustainability

How much do we depend on groundwater?

100%

dependence on ground water. In India, thousands of borewells have dried up due to over extraction of groundwater. Recharging with rainwater can replenish the water table

How often do we collect water?

95%

respondents have to collect water everyday

What causes water supply disruption?

Source	Reasons of disruption
Mini Water Supply(MWS)	Power cut, Pipes damage, Motor damage, Financial Reason
Public Tap	Power cut, Motor damage
Individual Piped Water	Power cut, Motor damage, Broken taps

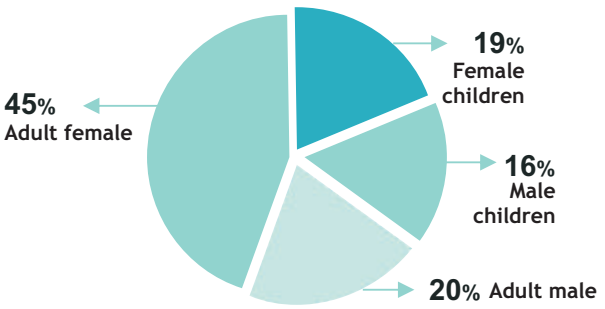
Coping Strategy: In case of water supply disruptions, people have to find other sources

98%

state that the water supplied is adequate throughout the year

Equity

Who collects water in our GP?



27%

of the vulnerable population* have to collect water
(No of respondents - 48 out of 100 households had atleast one person who was vulnerable)

WATER

Equity

In general it is women who collect and manage water in their houses. It is therefore important to include women in all decision making processes.

Sustainability

Water sources must be available throughout the year including dry seasons and must be free hfrom contamination.

New Name of ARWSP

The Accelerated Rural Water Supply Programme, which focuses on creating drinking water supply infrastructure has been renamed as the National Rural Water Supply Programme (NRWSP)

Sajal Gram Puraskar (SGP)

There is a new central government award for gram panchayats called Sajal Gram Puraskar (SGP). If your GP provides access to good quality water, ensures community participation & implements rainwater harvesting among other criteria, you are eligible for this award. However, you need to be a Nirmal Gram Puraskar (NGP) village to qualify for a SGP.
For more details, contact the Office of Joint Secretary, Department of Drinking Water Supply, at Phone-011-24361043.

*Vulnerable people is defined as people who are differently-abled, the aged, the sick and pregnant women.

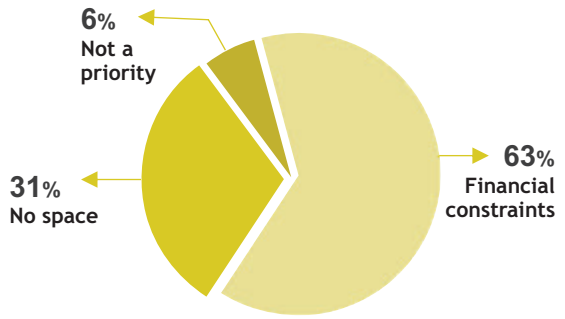
Sanitation

Do we have access to toilets?

15%

have and use household toilets.
85% practice open defecation

Why don't we build a toilet?



What is the status of school toilets in our GP?

	Toilets Presence		Toilets Usage	
School	All ☑	Some ☐	All ☐	Some ☑
Anganwadi	All ☑	Some ☐		

Do the vulnerable have toilet access?

20%

of the vulnerable population have access to toilets
(No of respondents - 49 out of 100)

Are there drains in our villages?

47%

said they had drains outside their home

How often are drains cleaned?

19% Everyday ☐ Weekly 57% Monthly

(No of respondents - 47 out of 100)
According to GP drains are cleaned weekly

Health

1%

respondents have reported incidence of diarrhea during the period 2007-08

76%

respondents have reported Incidence of chikungunya during the period 2007-08

Menstrual Hygiene practices

	Cloth	Cotton	Napkin
Use	95%	1%	4%
	Monthly	2-3 months	6 months
Frequency of change	37%	62%	
	Water	Soap	Bleaching powder
Washing	11%	89%	

How do we dispose the sanitary protection?

49%

respondents throw the used cloth in the field and 30% burn it

Awareness should be created on managing menstrual health. The cloth should be washed properly with antiseptic solutions. Serious health issues can result from improper practices. Proper toilet facilities should be provided to women.

Action call

- It has been informed that TSC is implemented in the GP, but only 15% respondents have access to a toilet. TSC is a government scheme to ensure sanitation facilities for all.
- In your GP 33% of the respondents filter water by cloth. If a cloth is folded 3 times over, it gives more protection from germs.

Hygiene

What hygiene practices do we follow?

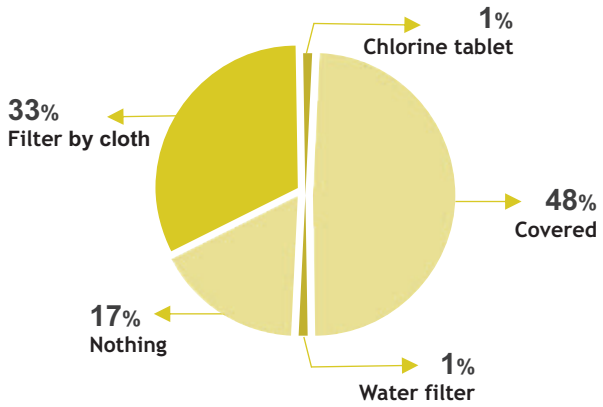
24%

of the respondents wash their hands with soap and water after defecation

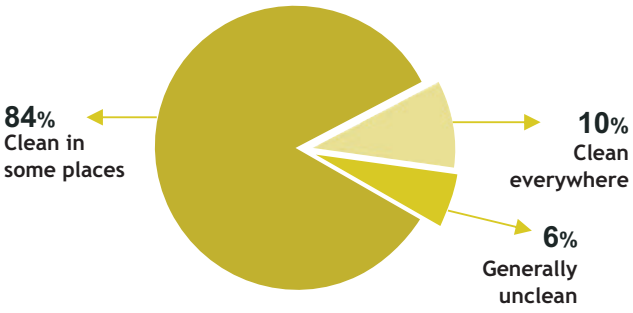
5%

of the respondents wash hands with soap & water before cooking & 6% before eating

How do we treat our water?



What is our opinion on overall sanitation in Gram Panchayat?



Action call

- A very high number of respondents have reported Incidence of Chinkungunya last year which spreads through mosquitoes. The GP should manage the mosquito problem.

Nirmal Gram Puraskar

The Central Government introduced the Nirmal Gram Puraskar for Gram Panchayats which achieve 100% sanitation coverage. This means that clean villages with household toilets, 100% school sanitation and no open defecation are eligible for this award. For details contact: Department of Drinking Water Supply, New Delhi Phone: 011-24366722

Grievances

What are our main grievances?

- Source dried up
- Power failures
- Pipes and taps broken

Problems with drinking water supply

33%

faced water supply related problems

Who solved our problem?

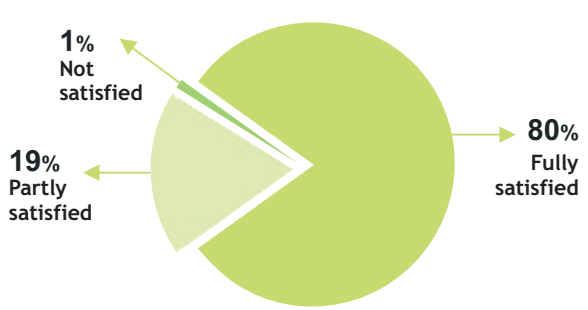
73%

stated that the gram-panchayat solved the problem

How much time did the gram panchayat take to solve problems?

33% 1 to 5 days	58% 1 week to 2 weeks
3% 2 weeks to 1 month	more than 1 month

Are we satisfied with the water service and management?



Finances

How much do we pay for our water?

81%

paid Rs. 25 per month as user charges for water during the period 2007-08

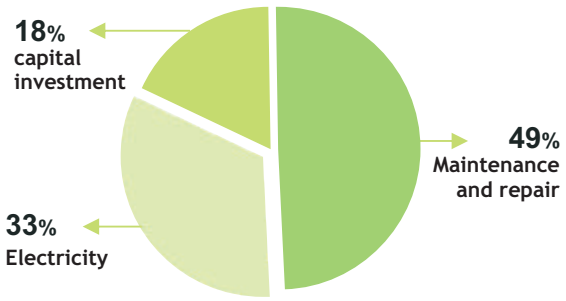
Rs. 20,45,000/-
was spent by the gram panchayat for water and sanitation services during the period 2007-08

Rs. 223/-
is the amount spent per person by the gram panchayat on water and sanitation during the period 2007-08

Rs. 95,975/-
was collected as water charges from consumers during the period 2007-08

Rs. 60,45,000/-
is the amount of unpaid electricity bill for the period 2007-08

Where do our funds go?



Schemes

Ongoing schemes in our gram panchayat

- [x] ARWSP
- [x] TSC
- [ ] Jal Nirmal
- [ ] Sachethana
- [ ] Suvarna Jala
- [ ] Swachha Grama Yojana
- [ ] Suvarna Gramodaya
- [ ] Swajaladhara
- [x] NREGA
- [x] Watershed Project
- [x] JSYS
- [ ] Others

Are there village water & sanitation committees?

Chikkabbigere	☐	Hire Kabbigere	☐
Muddapura	☐	Siddavanadurga	☐
Surenahalli	☐		

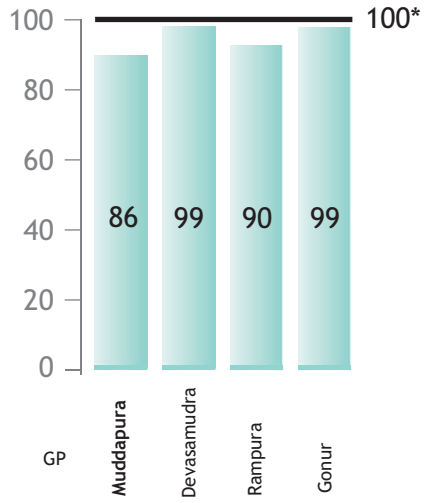
None of the villages had any Water and Sanitation committee. However, GP says there are 4 village water and sanitation committees and the members are actively participating

Role of VWSC

Village Water and Sanitation Committee (VWSC) is constituted by gram panchayat, as a statutory body of the gram panchayat and where constituted is responsible for operation and maintenance of water supply and sanitation system. They were constituted first as part of World Bank funded Jal Nirmal projects in 11 districts of North Karnataka. Subsequently under Section 61 A of the Karnataka Panchayat Raj Act 1993 they are to be constituted in all gram panchayats.

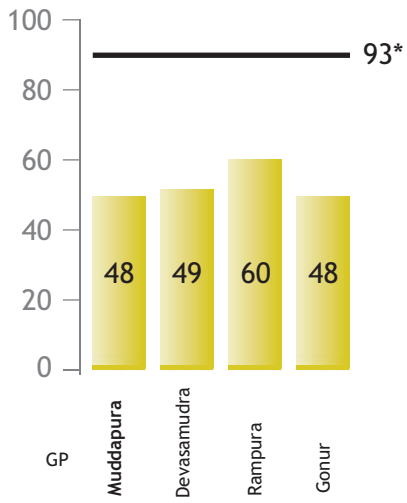
GP Comparative Charts

Water Services



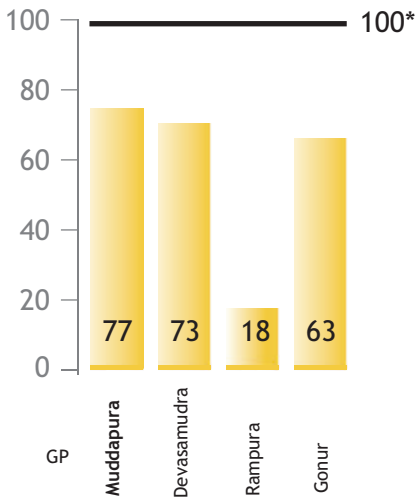
* Tavarekere, Tumkur

Sanitation



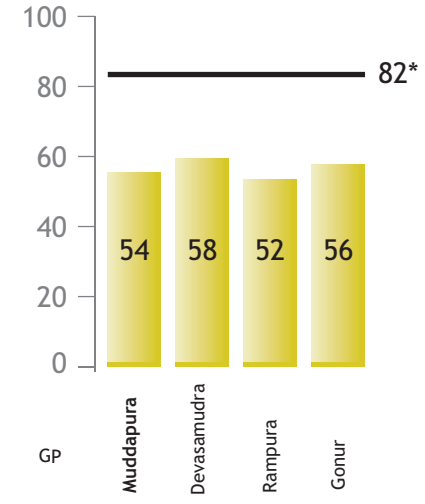
* Singhanamane, Shimoga

Satisfaction level



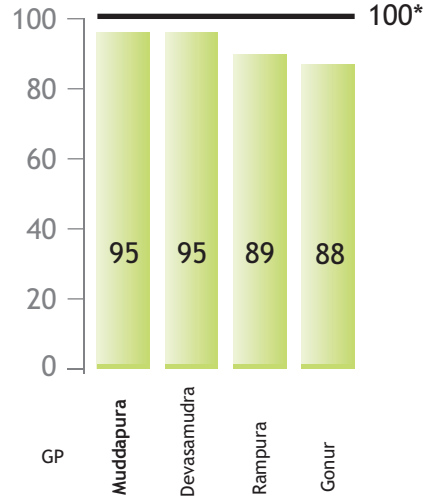
* Bijakal, Koppal

Health & Hygiene



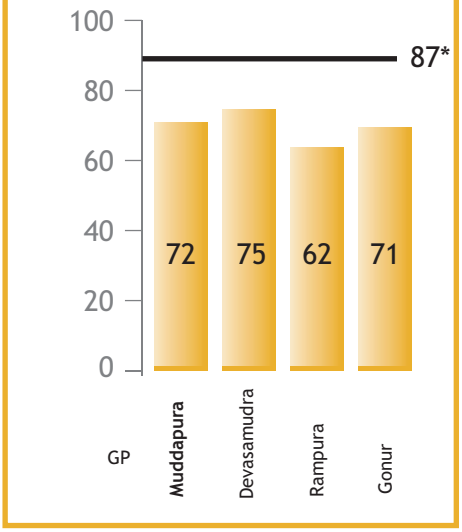
* Bijakal, Koppal

Governance



* Kodani, Belgaum

Overall



* Gama, Shimoga

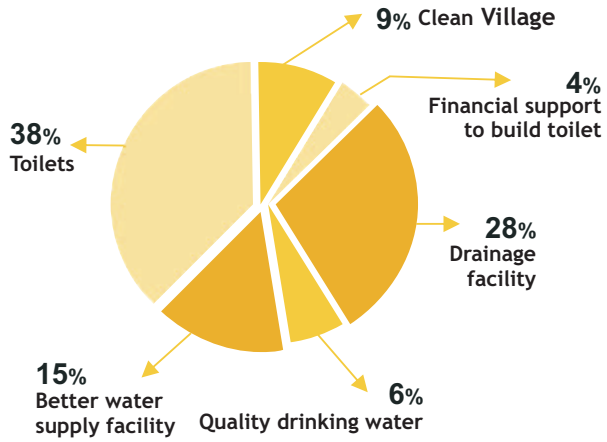
* States Best

Rating System

This gram panchayat (GP) chart reflects where your GP stands in relation to the nearby GPs surveyed in 5 key areas - Water, Sanitation, Health & Hygiene, Governance and Satisfaction levels. The score is NOT a reflection of the performance of the Gram Panchayat, but reflects the prevailing situation in different Gram Panchayats. The score assigned for each area has been derived directly through assigning points and weightages from the responses obtained. For detailed information on how the scores have been calculated, please visit: www.ashwas.indiawaterportal.org

Public Demand

What are your demands for improving the water and sanitation situation in Holemannur?



38%

of respondents expressed a need for toilet facilities and 28% for drainage facility

Recommendations

Keep the village clean

Treat your drinking water

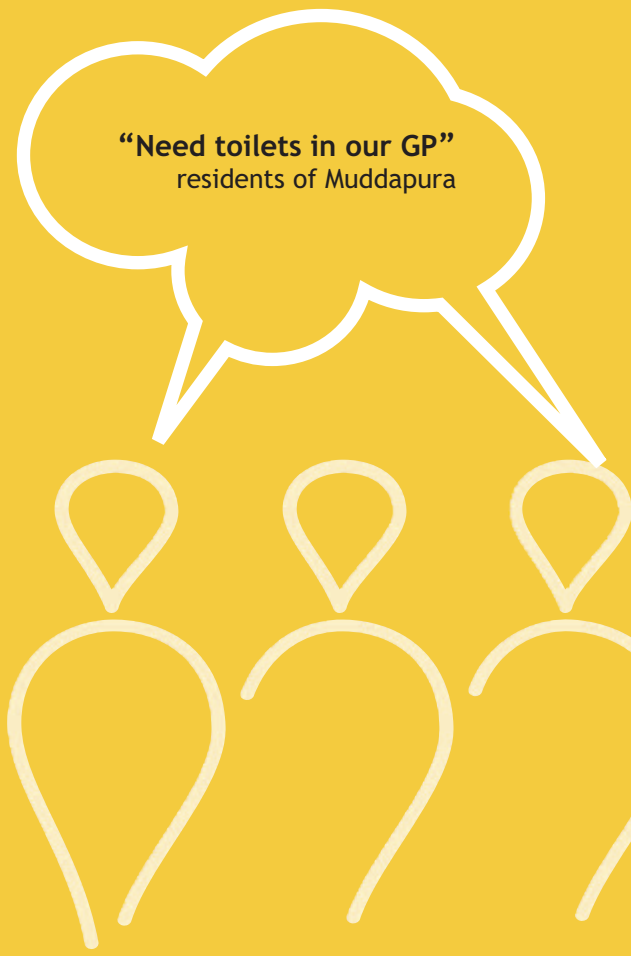
Build toilets

Clear electricity bills

Action call

- People in your GP want better toilet and drainage facilities which can be taken up under schemes like TSC and Swacha Grama Yojana.

CITIZEN SPEAK



Building community toilets ?

Building of Community Toilets can be taken up under the Total Sanitation Campaign(TSC). These toilets can be constructed when there is lack of space in the homes for construction of toilets. The community owns up the responsibility of their operation and maintenance. For further details contact: Department of Drinking Water Supply, New Delhi Phone: 011-24366722

Institutional structure

State Level Institutions

Rural Development and Panchayat Raj Department
Nodal Agency for planning, implementing, monitoring and evaluating all rural development activities
Contact: Director, Rural Infrastructure

District and Lower Levels

Panchayat Raj Institutions
Implement the programmes of drinking water supply along with other developmental works

Zilla Panchayat

District Project Monitoring Unit
Responsible to oversee activities at district level.
This unit has technical, administrative and social scientists.

Taluk Panchayat

Liaisons between ZP and Grama Panchayat
Responsible for implementing and monitoring developmental works at Taluk.
Contact: Chief Engineer

Grama Panchayat

Prepares and implements its own plan after getting approval from Taluk Panchayat
Responsible for collecting water charges, operations and maintenance of water supply schemes

Village Water and Sanitation Committee

Developed to involve community participation in Integrated Rural Water Supply and Sanitation Project
Play a crucial role in planning, implementation and operation and maintenance of water supply systems

Important contacts

Director
RDPR
M.S.Building,
Bangalore-560001
Ph:080-22254479

Deputy Commissioner
Phone : 08152-222001

Chief executive officer
Zilla panchayat
Chitradurga
phone : 08194-223061
e-mail : ceo_zp_ctd@nic.in

Muddapura map

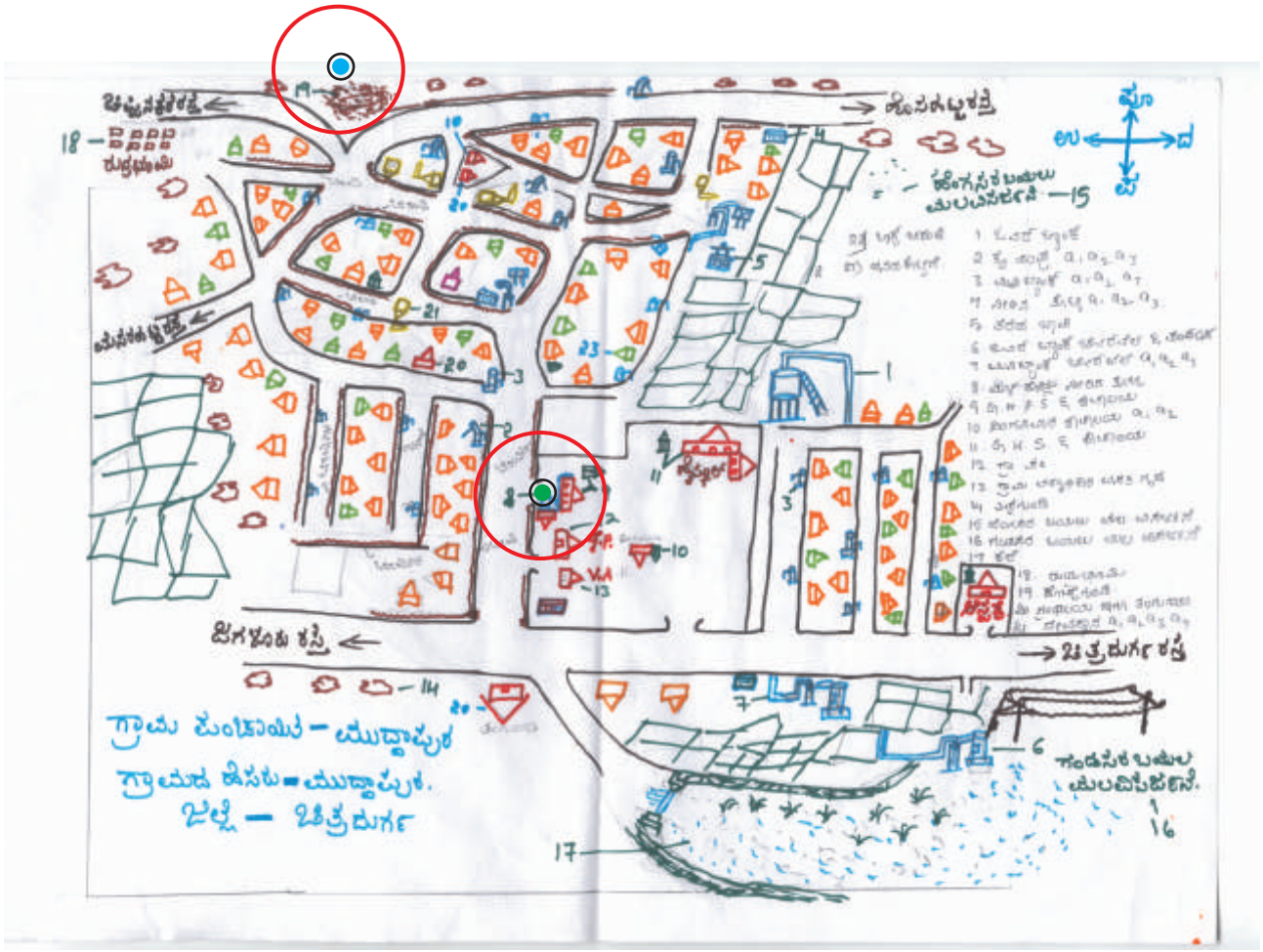
made by survey team and residents

In Muddapura village, rainwater harvesting is being implemented.

The garbage dumping yards are located outside the village which is good practice

Rain water harvesting

Garbage dumping yards



Water Quality Test Results

Muddapura	Fluoride	Nitrate	Bacteriological Contamination
Borewell MWS	1.5 PPM	40 PPM	No
Borewell MWS	1.5 PPM	10 PPM	No
Borewell PWS	2.0 PPM	0 PPM	Yes
Borewell MWS	1.5 PPM	25 PPM	No

Surenahalli	Fluoride	Nitrate	Bacteriological Contamination
Borewell PWS	1.5 PPM	0 PPM	No

Siddavvanadurga	Fluoride	Nitrate	Bacteriological Contamination
Borewell MWS	2.0 PPM	25 PPM	No

Chikkabbigere	Fluoride	Nitrate	Bacteriological Contamination
Borewell MWS	2.0 PPM	25 PPM	No

Hirekabbigere	Fluoride	Nitrate	Bacteriological Contamination
Borewell MWS	2.0 PPM	40 PPM	No
Borewell PWS	2.0 PPM	10 PPM	Yes

■ Fluoride - 1.5 ppm ■ Nitrate - 45 ppm are the drinking water standards (Indian Standards 10500:2003 maximum limits)

'ppm' is parts per million

Water quality test kit

ASHWAS surveyors also tested water sources in villages with the involvement of the community. The parameters tested were fluoride, nitrate and bacterial contamination. The water quality kit for fluoride and nitrate used for this purpose was manufactured by Orbit Technologies, Hyderabad. Bacterial contamination was tested by using H2S strips manufactured by LTEK, Nagpur. Tests for fluoride and nitrate provide immediate results and the results from the H2S strip test is obtained after 24-36 hours. **Please note that tests are indicative and if contaminants are detected using this kit, please go for further testing of water at the district water quality laboratory.**

Standards & Treatments

Indian drinking water standards (IS 10500:2003), desired limit for fluoride 1.0 ppm, maximum permissible limits for fluoride is 1.5 ppm. Drinking fluoride contaminated water for a long time results in damage to teeth and bones and the diseases are called dental and skeletal fluorosis. People also can be affected if they eat food cooked with fluoride water. Rainwater harvesting can be used as an alternative or supplemental source of water.

Indian drinking water standards (IS 10500:2003), specify 45ppm as the permissible limit for nitrate. Nitrate contamination is more harmful for babies. The best way to keep a source safe from nitrate contamination is to prevent it by ensuring that sewage and water from the agricultural fields does not flow towards the water source.

Water can be contaminated with bacteria if dirty water, sewage enters the water system. This can happen if people defecate near water sources, do not wash their hands or do not cover their drinking water containers. It is also important to keep the house and village clean. Contamination of water can lead to diarrhea. Many children die from diarrhea because they lose excess liquid from their bodies. The simplest treatment to avoid bacterial contamination is boiling water for at least one minute. After boiling, the water should be stored in clean, covered containers, away from dirt and germs, and a dipper should be used to take water from the container. At a community level, chlorination is most effective to remove bacterial contamination.

Safe, Sustainable water for all

599, 12th Main
Indiranagar
Bangalore-560008
Karnataka
Phone: 080-41698941
Email:ashwas@arghyam.org

Local survey partner

Geo Rain Water Board®

Opp. to Adarsha Kalyana Mantap
M. H. Road
Chitradurga
Karnataka
Ph : 94481 25498

All information in this report card has been collected at household level and from Gram Panchayat members.

Questions to be asked at households

Interviewer's name_____ Interview Staring time _____

District's name _____ Ending time _____

Taluk's name _____ Reviewer's name _____

Gram Panchayath's name _____ Spot check by _____

Name of the Village _____ Re reviewer's name _____

Section - A Family's information

Hello, I _____ have come from Arghyam organization. I would like to know the quality of Water and Sanitary services rendered by the Gram Panchyath. Your experiences and opinions will help in assessing the quality of the service. I prefer to speak to an adult in your family.

Note: speak to an adult (above 18 yrs).

1	Name of the Interviewee	
2	Name of the Head of the family	
3	Address of the interviewee	
4	Tel. no.	
5	Family's religion	
6	Family's caste	

7. Details of the Family

Name of the member Of the family	Sex Male 1 Female 2	Age	Whether married Married 1 Not Married 2 Widow 3 Widower 4 Divorced 5	Education	Occupation
	1 2		1 2 3 4 5		
	1 2		1 2 3 4 5		
	1 2 1 2 1 2 1 2		1 2 3 4 5 1 2 3 4 5 1 2 3 4 5 1 2 3 4 5		

8. Condition of the house (building)

Kutcha 1 Semi Pucca 2 Pucca 3

9.Mention whether the following facilities are available at home

Cooking Fuel source		Equipment at home		Conveyance utilities		Livestock	
Gas	1	Radio	6	Bicycle	9	Cow/ Ox	14
Biogas	2	TV	7	Motor cycle/ Scooter	10	Buffalo/Bull	15
Kerosene	3	Phone	8	Car	11	Goat/Sheep	16
Charcoal	4			Tractor	12	Chicken/ Duck	17
Firewood	5			Bullock cart	13	Pig	18

Section B Information about Water facilities

A Source of Water, distance, method of storage, expenses and the inevitability of the need to adjust to the situation.

1. Ask questions regarding the above issues and fill the answers in the table below. Ask other questions regarding the source of water and its use. And tick the options.

Sl. No.	Water source	For what purpose do you use this water (there may be more than one answer) For Drinking 1 For other uses 2	Availability Throughout the year 1 Only in rainy season or summer 2	How often do you collect water Everyday 1 Once in 2-3 days 2 Once in a Week 3	Distance Inside the house/very near 1 <1.6 km 2 > 1.6 km 3	How many pots of Water do you use Nil 1 1-3 2 4-6 3 7-9 4 10-12 5 >13 6						
						Drinking	Cooking	Bathing	Washing utensils	Cattle	Cottage industry	If unable to explain, mention total bindiges
1	River, Lake, Pond											
2	Open well											
3	Shallow hand pump											
4	Bore well, Hand pump											
5	Mini water supply project											
6	Piped water connection											
7	Public Tap (through piped water connection)											
8	Tanker											
9	Traditional source (well, pond)											
10	Rain Water											
11	Water flows from the field											

2. Why do you use this primary source of Water for drinking? (Mark from 1-7 based on the priority stated by the respondent and as per the rank)

It is near the house	The Water is clear	Cooking is fast and good
The taste is good	The water smells good	the government supplies water
There is no alternative	Others Specify _____	

3. Please answer the following questions regarding the storage of water.

Water usage	For use on subsequent days	What's the reason for storing water? (mark)	For how long do you store water?	Do you have enough utensils and space for storing water?	Do you cover the stored water?
	A	B	C	D	E
For Drinking	Yes 1 No. 2 Ask question B	The Water source is too far away 1 Irregular supply 2 It is easier Other 3	One day 1 Three days 2 For more than three days 3	Yes 1 No. 2	Yes 1 No. 2
For Other purposes	Yes 1 No. 2 Ask question 6	The Water source is too far away 1 Irregular supply 2 It is easier Other 3	One day 1 Three days 2 For more than three days 3	Yes 1 No. 2	Yes 1 No. 2

4. Where do you store the drinking water? (there may be more than one answer)

Drinking water	Buckets/ Pots / bindige	1	Outdoor tank	2	Tank / Drum inside the house	3
For other purposes	Buckets/ Pots / bindige	1	Outdoor tank	2	Tank / Drum inside the house	3

5. How often do you clean the vessel/ Tank used for storing water?

Drinking water	Daily 1	Once in two days 2	Twice in a week 3	Weekly once 4	Once in a while 5	Never 6
For other purposes	Daily 1	Once in two days 2	Twice in a week 3	Weekly once 4	Once in a while 5	Never 6

6. Whether water supplied is sufficient enough for your daily needs?

Drinking water	Enough water is supplied throughout the year 1	No. Enough water is not supplied throughout the year 2	Water supply stops during summer 3
For other purposes	Enough water is supplied throughout the year 1	No. Enough water is not supplied throughout the year 2	Water supply stops during summer 3

7. Who fetches water normally in your house?

Men 1	Women 2	Male children 3	Female children 4	Workers/ helpers 5

8. How much time does it take to fetch water for the domestic needs? (To reach the source and fetch water from there ____ Mins)

9. How long did you manage without enough water this year?
Less than one month 1) 1-3 months 2) 3-5 months 3) More than six months 4) That situation did not arise (ask question 11)

10. If there is a severe water scarcity what steps do you take?

Migrate	1
Try to get water from other sources (specify the source_____)	2
Depend on the water supplied by the govt. through tankers	3
We will have to use unpotable water	4
Other (specify _____)	

11. Whether water source was changed in your village changed during the last one year?
Yes 1 (if yes, why_____) No 2

12. What is the amount of water cess you pay?

None 1	Rs 25 per month or less than that 2	Between Rs 26 to 50 per month 3	Between Rs 51 to 74 per month 3
Between Rs 76 to 100 per month 5	More than Rs 100 per month 6	We pay it in a different way (specify_____)	

B. Water quality and satisfaction levels

13. How do you take water from the vessel?
By tilting the vessel 1
By inserting a cup or glass into the vessel 2
By hand 3
other (specify_____)

14. How do you purify water? (There may be two or three answers)
We boil the water 1 We add chlorine tablets 2 We add Alum tablets 3 We keep it covered 4
We filter it through a cloth 5 We use a water filter 6 We do not do anything 7

15. In your opinion, how should "good water" be?
It should have a good taste 1 It should be free from odor 2 It should be clear 3
It should be free of particles 4 Other specify _____

C Management of Institutions and problem handling

16. In the last one year, have you encountered any problems regarding the following issues?

Primary source If water is drawn from more than one source for a purpose, the source from which maximum quantity of water is drawn should be treated as the primary source.

Source of water	Problem/ event	Nature of the problem	Whom did you contact	Was the problem solved?	Time taken to solve the problem? (Days)
Drinking water (Primary source)	Yes 1 No 2		Gram Panchayath 1 Village water and sanitary committee 2 Voluntary organizations 3 Waterman 4 Head of the community /Elected representative 5 Other (specify)	Yes 1 No 2	
For other purposes	Yes 1 No 2 (Go to question 21)		Gram Panchayath 1 Village water and sanitary committee 2 Voluntary organizations 3 Waterman 4 Head of the community /Elected representative 5 Other (specify)	Yes 1 No 2 (Go to question 17)	

17. Did you know whom to contact, to solve your water related problems Yes 1 (How? _____)
No 2

18. When the water related problem was not solved, which influential person did you meet?
Local politician 1 Village elders 2 Teacher 3 Govt. servants 4
Others (specify_____)

19. Did you pay additional amounts or bribe to get the problem solved?
Yes 1 I do not know 2 (Ask question 21)

20. To whom did you pay the additional amount or bribe. Were you pressurized to pay the amount or did you pay it voluntarily?

To whom did you pay the money	How much did you pay In Rupees	I was forced to pay 1 No I paid voluntarily 2
		1 2
		1 2
		1 2
		1 2
		1 2
		1 2
		1 2

21. Are you satisfied with the water supply and its quality?

Issue	Fully satisfied 1 Partly satisfied 2 Not satisfied 3 Cannot say anything 4	Reasons for dissatisfaction (There may be more than one answer)
Water quantity	1 2 3 4	It is not enough for all the uses 1 It is enough only for cooking 2 It is not enough even for drinking 3
Water quantity	1 2 3 4	Fluoride 1 Nitrite 2 Water with soil content 3 Salt content 4 Excessive Iron content 5 Odor 6 Water is dirty 7
Overall service and management	1 2 3 4	

Section B: Information pertaining to toilets, waste water, drainage and overall sanitary system

22. Do you have a toilet in your house?
Yes It is inside the house 1 Yes it is out side the house 2 There is no toilet 3 (Go to question 29)

23. Do you use the toilet ? Yes 1 (Go to question 25) No 2

24. Why are you not using the toilet?

It is not clean and not healthy 1	It smells 2	It is inconvenient 3	Not accustomed to using it. 4
Toilet is not functioning properly 5	There is no water in the toilet 6	We use it as a store room 7	It is too small 8
Religious and cultural reasons 9	Others (specify)		

25 How did you get the capital for constructing the toilet?
Own investment 1 From the Govt. Project (name of the project:_____) 2
other 3

26. What motivated you to construct a toilet?

_____

_____

27. Do you think your social status improved after constructing the toilet?
Yes 1 No 2 I do not know 3

28. Choose the appropriate answer to the following question.

What is the type of the toilet in your house	Where does the toilet refuse go?
Water seal 1 Pour flush 2 Dry toilet 3	Single pit 1 Twin pit 2 Soaking pit 3 Septic tank 4 Waste pit 5 To the fields 6 Kitchen garden 7 I don't know 8

29. If you are not using the toilet at home, where do you go to answer your nature's call?
Public toilet 1 (go to question 32) Open field 2

30. Is it inconvenient to answer nature's call in an open field?
Yes 1 No 2 (Ask question 32)

31. What are the problems encountered when answering nature's call in an open field?

It is not safe/ dangerous 1	Uncomfortable 2	It is not healthy 3	Water problem 4
It is possible to go there only in the early morning or late evening 5	Embarrassment 6	Others (specify)	

32. Do you have a bathroom at home?
Yes 1 No. 2

33. If you have a bathroom and no toilet, why did you construct a bathroom alone? (See question 22)

_____

34. If you had a choice, which one would you choose (if the answer is no for question 22 and 32 ask this question)
A bath room 1 a toilet 2 (ask question 36)

35. Why don't you want a Toilet?
Financial constraints 1 Psychological reasons 2 Religious and cultural reasons 3
Not needed or not a priority 4 There is no space for it 5

36. Are there drainages in front of your house?
Yes 1 No 2 (Ask question 39)

37. How often is the drainage cleaned?
Daily 1 Once in a month 2 once in six months 3 once in a year 4 never cleaned 5 (ask question 39)

38. Who cleans the drainages?
Gram Panchayath staff/ member 1 Village water and sanitary committee 2 Voluntary organization 3 self 4 Others (specify_____)

39. Where does the waste water flow from your house?
Soaking Pit 1 Kitchen garden 2 Cess pool 3 Drainage 4 Fields 5 Road 6
Surface water body 7 I do not know 8

Waste water after washing clothes	Bath water	Kitchen refuse	From the toilets
1 2 3 4 5 6 7 8	1 2 3 4 5 6 7 8	1 2 3 4 5 6 7 8	1 2 3 4 5 6 7 8

40. What is the overall sanitary condition in the village?

Generally unclean 1	Clean at some places 2	Clean everywhere 3

Health and cleanliness

41. How and when do you wash your hands?
Only with water 1 With water and soap 2 Other (soil, ash) 3 No, I do not wash my hands 4

After defecation	1 2 3 4	Before cooking	1 2 3 4
After cleaning the baby	1 2 3 4	Before Eating	1 2 3 4
After handling live stock	1 2 3 4	After using pesticide	1 2 3 4

42. In the last one year, have there been any waterborne diseases in your house?
There were no diseases 1 Affected by diseases 2 Died due to diseases 3

		Expenses incurred for the treatment (in Rupees)
Dysentery	1 2 3	
Chikungunya	1 2 3	

36. Find out the following people in the house. Sick/Aged/Differently Abled / Pregnant women/Widows. Ask these questions to them only. If the person interviewed is one of them ask these questions to the same person

a. Do you fetch Water?
Yes 1 No. 2 (Ask question d)

b. How much time does it take to fetch water?
_____mins

c. What are the problems you face while fetching water?

_____

_____

d. Do you use the toilet?
Yes 1 No. 2 (ask question g)

e. Do you face any problems while using the toilet?
Yes 1 No. 2

f. What are the problems you face when you go to the toilet?

Toilet is too small 1	It is not comfortable 2	There is no proper seating arrangement 3	Other

g. If you go outside to answer nature's call, what are the problems you face?

Not safe /Dangerous 1	Not comfortable 2	Not healthy 3	Water problem 4
It is possible to go out only in the early morning or late evening 5		Embarrassment 6	Other (specify)

44. Ask these questions only to women
1 When women have their periods, what type of protection do they use?
Cloth 1 Cotton 2 (ask question 4) sanitary napkin 3 (Ask question 4)

2. When do you change the cloth you use for this purpose?
Every month 1 Once in 2- 3 months 2 Once in six months 3 Once in a year 4 after one year 5

3. How do you wash that cloth?
With water only 1 By using Soap/ soap powder 2 By using Bleaching powder 3
Other (specify_____)

4. Why do you use this type of protection?
Cheap 1 Easily available 2 Accustomed to it 3 Easy to dispose off 4
There is no other alternative 5 Other (specify_____)

5. How do you dispose it off?
I throw it in the toilet pit 1 I throw it away in the field 2 I burn it 3
Other(specify_____)

45. What are your suggestions to improve Water and sanitary conditions in your village?

Gram Panchayat information and questions

Interviewer's name _____ Interview time (hrs/mins) Starting time_____

District's name _____ Ending time _____

Taluk's name _____ Reviewer's name_____
(Co-ordinator)

Gram Panchayat's name _____ Re reviewer's name_____

Section- A Gram Panchayat Data

Hello, I _____ have come from Arghyam organization. I have come here to collect information about the water supply and sanitary services provided by the Gram Panchayath. This helps in assessing the quality of service. Please spare us some time to speak to you.
(It is better to meet the Gram Panchayath's president and collect information from him and also meet the secretary.)

1. Villages and settlements under the jurisdiction of Gram Panchayath.

Sl. No.	Village name	Sl. No	Village name	Sl. No	Hamlet name	Sl. No	Hamlet name

2. Population at the Gram Panchayat level. Male ____ ____ Female _____ Total _____

3. Total No. of families in the Gram Panchayat. _____

4. Families below poverty line _____

5. No. of Scheduled Caste and Scheduled Tribe Families _____ No. of Minority Families _____ Others_____

6. Literacy in the Gram Panchayat Male ____ __ % Female _____ % Total _____ %

7. Basic facilities at the Gram Panchayat

Sl.No	Resource	Yes- 1	No - 2
A	Anganavadi	1	2
B	Primary schools	1	2
C	Middle/High schools	1	2
D	Post Office	1	2
E	Primary health Centre/ Sub- Centre	1	2
F	Bank	1	2
G	Panchayat Office	1	2
H	Industries	1	2
I	Others (pl. specify)		

8. Information regarding active and suspended water supply and sanitary projects.

Projects	Year of implementation	Current Status 1 Currently active 2 suspended	Reasons for suspension or termination of project	Is/was the Project useful to you	Is/was there 100% coverage in the project implementation	Which basic resource was created
A	B	C	D	E	F	G
RGDWM	1	(go to E) 2	1. Project term ended 2. There are no funds 3. Other	Yes 1 No 2	Yes 1 No 2	Mini water supply 1 Public Taps 2 Domestic water supply 3 Hand Pump 4 Tank 5 Rain water harvesting 6
Total Sanitary Campaign	1	(go to E) 2	1.Project term ended 2. There are no funds 3. Other	Yes 1 No 2	Yes 1 No 2	Domestic Toilets have been built 1 Public Toilets have been built 2
Pure Water (Jal Nirmal)	1	(go to E) 2	1.Project term ended 2. There are no funds 3. Other	Yes 1 No 2	Yes 1 No 2	Mini water supply 1 Public Taps 2 Domestic water supply 3 Hand Pump 4 Tank 5 Rain Water harvesting 6
Sachethana		1 (go to E) 2	1.Project term ended 2. There are no funds 3. Other	Yes 1 No 2	Yes 1 No 2	Construction of ponds to recharge bore wells 1 Rain water harvesting 2 Farm ponds 3

Suvarna Jala		1 (go to E) 2	1.Project term ended 2. There are no funds 3. Other	Yes 1 No 2	Yes 1 No 2	Rain water harvesting in schools 1
Swachha Grama Yojana		1 (go to E) 2	1.Project term ended 2. There are no funds 3. Other	Yes 1 No 2	Yes 1 No 2	Toilet built for households 1 Built public toilets 2 Open drains 3 Garbage dump 4
Suvarna Gramodaya		1 (go to E) 2	1. Project term ended 2. There are no funds 3. Other	Yes 1 No 2	Yes 1 No 2	Mini water supply 1 Public taps 2 Water connection to house holds 3 Hand pump 4 Pond 5 Rain water harvesting 6 Toilet 7 Other
Swajaladhara		1 (go to E) 2	1.Project term ended 2. There are no funds 3. Other	Yes 1 No 2	Yes 1 No 2	Mini water supply 1 Public taps 2 Water connection to house holds 3 Hand pump 4 Pond 5 Rain water harvesting 6
NREGA		1 (go to E) 2	1.Project term ended 2. There are no funds 3. Other	Yes 1 No 2	Yes 1 No 2	Farm ponds 1 Watershed development 2

Watershed Project		1 (go to E) 2	1.Project term ended 2. There are no funds 3. Other	Yes 1 No 2	Yes 1 No 2	Farm ponds 1 Watershed development 2
JSYS		1 (go to E) 2	1.Project term ended 2. There are no funds 3. Other	Yes 1 No 2	Yes 1 No 2	Rehabilitation of tanks 1
Others		1 (go to E) 2	1.Project term ended 2. There are no funds 3. Other	Yes 1 No 2	Yes 1 No 2	Mini water supply 1 Public Taps 2 Domestic water supply 3 Hand Pump 4 Tank 5 Rain Water Harvesting 6 Toilets to households 7 Public toilets 8

9. Has the Govt. provided any kit for testing the Water quality
Yes 1(Under which Project _____) No. 2 (Ask question 14)

10. Have you used the kit for testing the water quality
Yes 1 No. 2 (Why has it not been used?) (Ask question 14)

11 What was the result of the Test

Water is fit for Drinking 1 (Ask question 14) Water is not fit for drinking 2

12.If the water is unfit for Drinking state the reasons

Fluoride content is high 1	Nitrate content is high 2	There are bacteria 3	other

13 What were the measures taken to tackle this problem?

It has been discussed in the Gram Panchayath meeting 1	Created awareness among villagers. 2	The water sample has been sent to the laboratory for testing 3	We have started to use other sources 4	Other

14. How much water cess was collected last year (2007-08)?

15. Are there any unpaid Electricity Bills with respect to Water supply?
Yes 1 (How much _____) No 2

16. How much have you spent during the last year (2007-08) for Water and Sanitation? Rs _____

17. Details of money spent towards water and sanitation during the year (2007-08)

A. Maintenance and repair Rs_____ B. Electricity Rs_____
C. Capital Investment Rs _____ D. Others Rs _____

18. Is there a village water and sanitation committee or a village health and sanitation committee?

Village water and sanitation committee	Village Health and sanitation committee
Yes 1 (in how many villages _____)	Ye s 1 (in how many villages _____)
No 2 (Ask question 20)	No 2 (Ask question 20)

19. How are the committees functioning?

Village water and sanitation committee	Village Health and sanitation committee
Members are actively participating 1	Members are actively participating 1
There is only building but no members 2	There is only building but no members 2
It is only on paper 3	It is only on paper 3

20. During the last one year whether your villagers were affected by any water borne disease? How many people were affected and How many succumbed to the disease?

Disease	Yes 1 No 2 (Ask question 21)	Total no of patients Less than 5 1 5 – 10 2 11- 20 3 >21 4	Total no of deaths Less than 5 1 5 – 10 2 11- 20 3 >21 4
Diarrhea	1 2	1 2 3 4	1 2 3 4
Cikungunya	1 2	1 2 3 4	1 2 3 4

21. Is there a non - government organization functioning in your village?
Yes 1 No 2 (Ask the questions in the next section)

Fill the columns in the table below

Name of the voluntary service Organization/NGO	In which water and sanitation Project is it involved	Does the NGO have any disputes with the Gram Panchayath?

Questions to be asked to the Gram Panchayath President/ Leader. (Try to In terview the Gram panchayath President and secretary together. If that is not possible, first visit the Gram Panchayath President. If that is also not possible Interview a panchayath member)

Interviewer's name _____ Interview time (hrs/mins) Starting time_____

Interviewee's name _____ Ending time _____

GP members/Interviewee's Phone No. _____

District's name _____

Taluk's name _____ Reviewer's name_____
(Co-ordinator)

Gram Panchayath's name _____ Re reviewer's name_____

1. During the previous year, has there been any shortfall in the Water supply by the Gram Panchayath?
   Yes 1 No. 2 (Ask question 3)

2. What, in your opinion, is the reason for the shortfall in Water supply?

Water source has dried up. 1	Water quality is bad 2	The source has depleted 3
Increase in population 4	Maintenance and repair 5	Financial crunch 6
Project term ended 7	Other specify	

3. What are the Electricity related problems that affect water supply In general? (There may be more than one answer)

Load Shedding (Electricity shortage) 1	Low Voltage 2	Power cuts 3
Transformer gets damaged 4	Electricity disconnected for non payment of bills. 5	Free Electricity 6
Others (Specify)		

4. Whether water in the GP is polluted?

   Yes 1 No 2 (Ask question 6) Do not know 3

5. Have any of the following quality defects been observed in your Gram Panchayath water?

Flouride defects	Yes 1	No 2	Do not know 3
Nitrite defects	Yes 1	No 2	Do not know 3
Excessive Salt contents	Yes 1	No 2	Do not know 3

6. Who is responsible for repair and maintenance?

Gram Panchayath 1	Village Water and sanitation committee 2	Community 3	Others 4

7. Do you have the necessary tools and equipment for repair and maintenance?
   Yes 1 No 2

8. If the system goes wrong, can the Gram Panchayath/ Water and sanitation committee/ community provide necessary funds to repair it?
   Yes 1 No 2 A small amount can be arranged. 3

9. Is there a water cess ?
   Yes 1 (How much? Public taps _____ Private taps_____) No 2 (Ask question 11)

10. How was the Water cess fixed?
    By discussing with the villagers 1 Gram Panchayath 2 Other 3

11. How many houses within the Gram Panchayath jurisdiction have toilets?

All houses have toilets 1	25 % of houses have toilets 2	26- 50 % of houses have toilets 3
50- 75 % of houses have toilets 4	More than 75 % of houses have toilets 5	None of the houses have toilets 6

12. Is there a community toilet facility in the village?
Yes 1 No 2 (Ask question 18) I do not know 3

13. Who maintains community toilets?

Gram Panchayath 1	Village Water and sanitation committee 2	Community 3	Others 4

14. The frequency at which the toilets are cleaned?

Regularly 1	Once in a while 2	When the toilet gets blocked 3	When people complain 4	Never cleaned 5

15. Who cleans community toilets?

Panchayath 1	Community 2	Others 3

16. Do people pay for the usage of community toilets?
Yes 1 (How much _____) No .2 (Ask question 18)

17. What is the mode of payment?

Once in a month on behalf of the whole family 1	Daily 2	As and when used 3	Other 4

18. Are there toilets in all the Anganavadis and schools?

Schools	In all the schools 1	In some schools 2	No 3 (Ask question 22)
Anganavadis	In all the Anganavadis 1	In some Anganavadis 2	No 3 (Ask question 22)

19. Do you use the toilets in the schools ?

Yes in all schools 1	In some schools 2	No 3

20. Is there sufficient Water in all school toilets?
Yes. Water is available in all school toilets 1 Water is available in toilets of some schools 2
No 3 I do not know 4

21. Whether number of toilets in a school is proportionate to the students' strength?
Yes in some schools 1 Yes in all schools 2 No 3 I don't know 4

22. Who is responsible for cleaning the drains in the village?

Gram Panchayath 1	Village Water and sanitation committee 2
Students 3	Others 4 (Specify)

23. The frequency of cleaning the drains

Not cleaned 1	Weekly 2	Monthly 3	Once in six months 4	Once in a year 5

24. Do the drains overflow during the rainy season?
Yes some drains 1 All drains 2 No 3

25. Where do you dispose off the waste and refuse?

Open place 1	Compost pit 2	Waste bin 3	Waste Pit 4	This work is not done at Gram Panchayath level 5	Other 6 (specify)

Is the place you dispose off your waste close to your water source?
Yes everywhere 1 In some places 2 No. 3

26. What suggestion do you offer to improve the WATSAN situation in your village?

Village Level Information

Name of the Village:_____ Name of the Taluk :_____

Name of the Gram Panchayat:_____ Name of the district:_____

Name of the Interviewer:_____

Name of the Interviewees:_____

Tel No. of the interviewees:_____

Date of Interview:_____

Time of interview: Start:_____ End:_____

Call a group of 4 to 5 elders and ask the following questions:

1. Ask about water sources and mark

Water Source	Is the water source working or defunct?	Is water being supplied?	Whether all communities in the village use this water source	Quality of the water?
Lake/river/stream/pond	getting water 1 defunct 2	regularly 1 sometimes regularly 2 irregular 3	yes 1 no 2 give reasons: caste 1 unique 2 far 3 others	good 1 bad 2
Rain water	water available 1 defunct 2	regularly 1 sometimes regularly 2 irregular 3	yes 1 no 2 give reasons: caste 1 unique 2 far 3 others	good 1 bad 2
Ground water (Open well/ Shallow hand pump/ Deep hand pump)	water available 1 defunct 2	regularly 1 sometimes regularly 2 irregular 3	yes 1 no 2 give reasons: caste 1 unique 2 far 3	good 1 bad 2

			others specify	
Mini water supply scheme or tank connected to piped water connection	water available 1 defunct 2	regularly 1 sometimes regularly 2 irregular 3	yes 1 no 2 give reasons: caste 1 unique 2 far 3 others specify	good 1 bad 2
Traditional water source (lake, pond, stream)	water available 1 defunct 2	regularly 1 sometimes regularly 2 irregular 3	yes 1 no 2 give reasons: caste 1 unique 2 far 3 others specify	good 1 bad 2
Others	water available 1 defunct 2	regularly 1 sometimes regularly 2 irregular 3	yes 1 no 2 give reasons: caste 1 unique 2 far 3 others specify	good 1 bad 2

2. Reasons commonly found for disruption in water supply (you can choose more than one reason)

Water source	Reason for water disruption
Lake/river/stream	The source is dried up 1 Natural calamity 2 Water is contaminated 3 Financial reason 4

	Others(specify):
Rain water	Natural calamity 1 Water is contaminated 2 Financial reason 3 The canal or tanks used for rain water harvest is damaged 4 Others: (specify)
Ground water(open well/ shallow hand pump /deep hand pump)	Pipes are broken 1 Tap is broken 2 Water supply switch is not switched on on-time 3 Power cut 4 Source is dried up 5 Lack of staff 6 Natural calamity 7 Contaminated water 8 Financial reason 9 Underground pump is under repair 10 Motor is damaged 11 Water level has gone down 12 Others: (specify)
Mini water supply scheme	Pipes are broken 1 Tap is broken 2 Water supply switch is not switched on on-time 3 Power cut 4 Source is dried up 5 Lack of staff 6 Natural calamity 7 Contaminated water 8 Financial reason 9 Underground pump is under repair 10 Motor is damaged 11 Water level has gone down 12 Others: (specify)
House has piped water connection (through tap)	Pipes are broken 1 Tap is broken 2 Water supply switch is not switched on on-time 3 Power cut 4 Source is dried up 5 Lack of staff 6 Natural calamity 7 Contaminated water 8 Financial reason 9 Underground pump is under repair 10 Motor is damaged 11 Water level has gone down 12 Others: (specify)
Public Tap(piped water connection)	Pipes are broken 1 Tap is broken 2 Water supply switch is not switched on on-time 3

	Power cut 4 Source is dried up 5 Lack of staff 6 Natural calamity 7 Contaminated water 8 Financial reason 9 Underground pump is under repair 10 Motor is damaged 11 Water level has gone down 12 Others: (specify)
Tanker	Supply has stopped 1 Shortage of staff 2 Contaminated water 3 Financial reason 4 Others(specify)
Traditional water source (lake, stream, pond)	System is damaged 1 Source dried up 2 Shortage of staff 3 Contaminated water 4 Financial reason 5 Water level has shrunk 6 Others: (specify)
Others:	Pipes are broken 1 Tap is broken 2 Water supply switch is not switched on on-time 3 Power cut 4 Source is dried up 5 Lack of staff 6 Natural calamity 7 Contaminated water 8 Financial crunch 9 Underground pump is under repair 10 Motor is damaged 11 Water level has gone down 12 Others: (specify)

3. Are there any other committees in the village for water and hygiene?
   Yes 1 No 2 (thank and leave)

4. What is the name of the committee and what is its role?

Sl.No	Name of the committee	Role of the committee

5. Whether these committees have helped in the improvement of water quality and supply in the village?
   Yes 1 No, It has become worse 2 No effect 3

Water Quality Data Sheet

WATER QUALITY DATA

Name of village:_____ Name of Gram Panchayat:_____

Taluka:_____ District:_____

Sl. No.	Source	Fluoride (ppm)	Nitrate (ppm)	Micro-organisms (H2S test)
1	Handpump			Yes/No
2	Open well			
3	River/Stream/Lake/Tank			
4	Borewell - MWS			
5	Borewell - PWS			
6				

Date:_____

Organization:_____

Signature:_____

Back checked by: _____

Instructions for Fluoride testing

Chemicals and Reagents:

1. Fluoride Reagent – Brown Bottle

Procedure:

1. Collect the sample water in the plastic beaker.
2. Pour the sample water into the clean glass test tube upto the 4 ml mark.
3. Add 15 drops of the Fluoride Reagent Solution (Brown bottle) to the sample water.
4. Replace cork.
5. Mix gently.
6. Colour will be developed instantly.
7. Take the Colour Chart for Fluoride, and place the test tube against the chart.
8. Match the colour in the test tube with the standard colours of Fluoride shown in the Standard Colour Chart.
9. Take the reading of the nearest colour standard which matches the colour in the test tube. This is the Fluoride concentration in milligrams/litre (mg/l) or parts per million (ppm) present in the water.

The Indian Standard Specifications for Drinking Water (IS 10500:1983) specify:

Desirable Limit:	1.0 mg/l maximum
Permissible Limit:	1.5 ppm maximum (in the absence of an alternate source)

If your water sample has a fluoride concentration of 1.5 ppm or more, please send it to the nearest district laboratory for further testing.

Precaution:

The Fluoride Reagent is acidic in nature and corrosive. Handle it carefully. If it falls on the hand or any part of the body, wash it immediately with plenty of water.

Instructions for Nitrate testing

Chemicals and Reagents:

1. Nitrate Reagent A – Tablet : 100 Nos.
2. Nitrate Reagent B – Tablet : 100 Nos.

Procedure:

1. Collect the water sample to be tested up to the white mark in the test tube.
2. Add one ***Nitrate Reagent A Tablet*** To the test tube.
3. Now add one ***Nitrate Reagent B Tablet*** to the test tube.
4. Replace the rubber cork and shake the test tube vigorously until the tablets dissolve completely.
5. After shaking, place the test tube in the test tube stand for 6 minutes.
6. Take the Standard Colour Chart for Nitrate and place the test tube against the chart.
7. Match the colour in the test tube with the standard colours of Nitrate shown in the Standard Colour Chart.
8. Take the reading of the nearest colour standard which matches the colour in the test tube. This is the Nitrate concentration in milligrams/litre (mg/l) or parts per million (ppm)

The Indian Standard Specifications for Drinking Water (IS 10500:1983) specify 45 ppm as the permissible level of nitrate concentration.

Precautions:

1. Wash hands with plenty of water and soap after completion of test.
2. Avoid contact of the chemicals and reagent with skin and eyes. If this happens, wash the contact part immediately with plenty of water.
3. All glassware should be properly washed and cleaned before conducting the test.

Note:

Colour matching must be done immediately after 6 minutes from the time of mixing. Delay in time will lead to wrong results.

Address of Water quality kit provider:

Orbit Technologies
B-5O, Industrial Estate ,
Post: Sanath Nagar,
Hyderabad-500018.
Tel: +91-040-23816354 (5Lines),
Fax: +91-040-23801579
E-mail:orlab@orlabindia.com
Website: www.orlabindia.com

ASHWAS local partners

IDF
141/A, 'USHA', 25th Cross,
II Block, Rajajinagar, Bangalore 560 010.
Ph: 080-23131382

MCF
Citizens Forum For Mangalore Development
St. Joseph's Highland Compound
Lower Bendoor
Mangalore 575 002
Ph: 0824-2434803

BIRD-K
BAIF INSTITUTE FOR RURAL DEVELOPMENT
KARNATAKA
"KAMADHENU" P.B.No.3
Sharadanagara, Tiptur 572 202
Tumkur District
Ph: 08134-250658, 250659, 251337

Sneha Kunj
SNEHAKUNJA
Kasarkod
Honavar - 581 342
Ph: 94801 89642

POWER
No. 235, Vivek Nagar(East)
Opp. K.S.F.C., Near Ibrahimpur Railway Gate
Managoli Road
Bijapur - 586 109
Ph: 08352-277638

DA
Development Alternatives
Sustainable Community Development
Programme(SCDP)
Near Suraksha Canteen
ACC Wadi-585225
Tq-Chittapur-Dist-Gulbarga-Karnataka
Ph: 99453 49077

Karuna Trust
Technology Resource Centre
Plot No. 81-82
Nanjanagud Road
Mysore-570 025
Ph: 0821 2480077

Vikasana
Institute for Rural and Urban Development
#1813, Ist Cross, Bandi Gowda Layout
Mandya-571 401
Karnataka, India
Ph: 08232- 221717, 329893

VRDS
Vanasiri Rural Development Society
Plot No. 123, 2nd Main, 2nd Cross
Marutinagar
Ranebennur-581 115
Haveri Dist, Karnataka, India
Ph: 99869 15605, 99807 29740

Geo Rain Water Board
Opp. Adarsha Kalyana Mantap
M.H.Road
Chitradurga
Karnataka
Ph: 94481 25498

Bhageerath
#14, 'Sarala' 2nd Sub main
Behind K.V.G Bank
Jayanagar, Dharwad 580 001
Ph: 0836-2472002

Vikasana, Tarikere
P.B.No. 23, Gallihalli Cross
Tarikere 577 228
Chickmangalore Dist
Karnataka, India
Ph: 08261-223739, 222500

MAHE
Centre for Rural Studies
A Unit of Manipal University,
BVT Campus, Shivally, Post Kunjibettu
Udupi 576 102
Karnataka, India
Ph: 91 820 2922124, 2571095

Janahitha Samasthe
Anantha Krupa, No.8-11-336
Neelakanteshwaranagar
NGO Colony, Raichur-584 103
Ph: 08532-240108

SLIGS
Sligs NGO
Rajeevgandhi Nagar
Gadag-582 101
Ph: 0836-2357091, 2356587

OUTREACH
Association of Volunteers for Rural Development
109, Coles Road, Frazer Town
Bangalore-560 005
Karnataka, India
Ph: 91-80-25545365, 25307532

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GLOSSARY*

Access to water: The ARWSP states that: (i) there should be one hand pump or public stand post for every 250 persons (ii) the water source should exist within the habitation or within a distance of 1.6 km. in the plains and within 100 meters elevation difference in the hills.

Coping Strategy: Is the mechanism chosen by people who experience water shortage from their regular source to supplement their water supply. The options provided in the survey include 'migrate', 'use other sources', 'use bad quality water' and 'use government tankers'.

GP Finance: Financial figures were taken from GP records.

GP infrastructure: Includes shallow and deep hand pumps, mini water supply, public taps and piped water which mostly represent improved sources. Other / alternative infrastructure includes open well, rivers, lakes, streams, tanker water, rainwater collection and water from irrigation channels which may be improved or unimproved sources.

Hand washing: Questions were asked on hand washing related to defecation, cooking, handling babies and eating.

Hygiene practices: Include treating water before drinking, handling of water, washing of vessels and hand washing.

Income group: Income grouping is based on assets owned (type of house, source of cooking energy, livestock, vehicles and household electronic gadgets).

LPCD: As per the Karnataka government drinking water norms, a citizen in rural Karnataka is eligible to receive a minimum of 55 litres per capita per day (LPCD).

Menstrual hygiene practices: Includes the practices adopted by women on the type of protection, how it is handled and how it is disposed.

Perception of water: People were asked what they perceive potable water to be and given 4 choices: good taste, clear water, odourless, and free from particles.

Potable Water: Refers to water that meets the BIS 10500:2003 standards for drinking water. The ARWSP states that drinking water is potable if it is free from bacterial contamination and chemical contamination

Pour flush toilet: A pour flush toilet uses a water seal but unlike a flush toilet, the water has to be poured by hand for the flush to work. The improved pour flush disposes excreta into a leach pit or hole in the ground. The unimproved pour flush disposes excreta directly into drains, streets etc.

*Terminologies used in ASHWAS

PPM for fluoride: According to World Health Organization standards, 1.0 ppm is the desirable limit for fluoride, but Indian standards (10500:2003) allow 1.5ppm as the acceptable limit in the absence of viable alternatives.

PPM for nitrate: According to Indian standards (10500:2003), the acceptable limit for nitrate levels is 45ppm.

Primary Source: It refers to the water source that people use regularly to obtain water throughout the year.

Public demand: Public demand is based on a question asked to the households on what changes they would like to see in their village.

Reliability: An indication of the reliability of the water supply infrastructure has been obtained from the percentage of households reporting breakdown of infrastructure, the frequency of occurrence of breakdowns and the percentage of households who store water primarily because of the irregularity in water supply.

Satisfaction level: Satisfaction is defined as the user perception on the quantity and quality of water as well as the water services and management, which includes the effectiveness of the GP grievance redressal system.

Schemes: GPs with schemes were compared with other GPs on a few indicators based on the purpose of each scheme.

Storage Capacity: It refers to the amount and type of storage present in the households to store water for their drinking and domestic needs. This becomes relevant when assessing whether the household is able to receive adequate amounts of water (at least 55 lpcd) for their needs.

Sustainability: An indication of sustainability of source has been obtained from the percentage of households who receive water throughout the year as well as the comparison between the groundwater dependency in the district (as obtained through the survey) and the status of groundwater in the district (as obtained from CGWB).

Time taken to collect water: This includes the time taken to prepare the container, walk to the water source, wait in line (if required), collect the water and return home.

User charge: In some cases, residents are required to pay a fee for water. The amount of money that is paid by the households was captured. This could be a formal water cess paid to the government or an informal fee paid to the person maintaining their systems.

VWSC: The Village Water and Sanitation Committee (VWSC) appointed in each village consists of 5-6 members from the village who are responsible to solve WATSAN problems. This government mechanism is made mandatory only in World-bank assisted villages.

Vulnerable people: Is defined as people who are differently-abled, the aged, the sick and pregnant women.

Water quality tests: The water quality tests are indicative in nature. Field level kits have been used for this purpose.

Water shortage: Is the time during the year (typically summer) when water supply is insufficient for the basic needs.

Waterman: The local waterman is the person appointed by GP for operation and maintenance of WATSAN infrastructure.

ABOUT ARGHYAM

Arghyam is a charitable trust setup with a personal endowment from Rohini Nilekani and has been working in the water sector since 2005.

Arghyam's vision is "Safe, sustainable water for all".

Arghyam is a Sanskrit word meaning "Offering". Arghyam's focus is on domestic water –that amount of water needed by every individual, every day to meet his/her basic needs. Our objectives are threefold. First, increase the number of people with access to safe water and sanitation facilities, especially (from) the vulnerable communities. Secondly, compile and create a set of tools, processes and practices for sustainable water management. And finally, enable sharing of more information and knowledge amongst more groups of people -from grassroot practitioners to decision-makers.

Water stress arises out of lack of local empowerment and equity, ineffective people and state institutional structures, insufficient investments in infrastructure and R&D, inappropriate technology, poor governance, little attention paid to ecological impact of projects, and non-inclusive financial models

Our work and the work we support looks at the problem in the above context. Arghyam has three core initiatives –Rural Grants, Urban Water Initiative and the India Water Portal. Supporting these, are the Research, Advocacy and Technology groups.

Arghyam works in the areas of drinking water supply, water quality, water body revival, sanitation, groundwater management, rainwater harvesting all with community participation, awareness, and local institutional strengthening for better governance.

Arghyam

Safe, Sustainable water for all