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ASHWAS is an Arghyam initiative.

Arghyam is a public charitable trust setup with an endowment from Rohini Nilekani. Since 2005, Arghyam has been supporting efforts to address equity and sustainability in access to water and sanitation for all citizens.

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The ASHWAS project was managed by Binayak Das. Team members included Niteen Shastri, Dr K J Parmeswarappa, Reena Pinto, Radhica Kanniganti, Arun Patre, Sonali Srivastava and Gopal Kulkarni.

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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
SGV: Swachha Grama Yojane
SHG: Self Help Groups
SQL: Structural Query Language
TMC: Thousand Million Cubic feet
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): Chikkamagalur, Kodagu, Shimoga, Dakshina Kannada, Udupi, Uttara Kannada
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 proactive 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

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:
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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.
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.

Argyam 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 defecation 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 complacency, 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.pratham.org) [http://www.aksharafoundation.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 Arghyam’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

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 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 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.

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

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.
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.

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

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.

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

<table>
<thead>
<tr>
<th>Type of problem</th>
<th>No of habitations affected</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fluoride</td>
<td>5,838</td>
</tr>
<tr>
<td>Nitrate</td>
<td>4,077</td>
</tr>
<tr>
<td>Iron</td>
<td>6,633</td>
</tr>
<tr>
<td>Brackishness</td>
<td>4,460</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>21,008</strong></td>
</tr>
</tbody>
</table>


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 taluks in the state, where the rate of extraction is higher than the rate of recharge. Of these, 98% are in southern Karnataka. Forty three taluks 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

<table>
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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.

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

Economic classification of respondents:

- Medium income: 42%
- Low income: 38%
- High income: 20%

Total population of surveyed GPs: 11,31,080
Total number of households: 2,54,712
Literacy rate: 60%

Coverage of key GP institutions in sampled GPs:

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

Survey sample demographics:

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

- **High income** 20%
- **Low income** 38%
- **Medium income** 42%

- 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?

- 38% households
- 38% households
- 12% households

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
- 74% One day
- 31% More than 3 days
- 24% Three days

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

<table>
<thead>
<tr>
<th>Fluoride levels (≥ 1 ppm)</th>
<th>Nitrates levels (≥ 40 ppm)</th>
<th>Bacteriological contamination</th>
</tr>
</thead>
<tbody>
<tr>
<td>ASHWAS tests: 60 samples</td>
<td>GP observation: 11 samples</td>
<td>20 samples</td>
</tr>
<tr>
<td>38 samples</td>
<td>38 samples</td>
<td>38 samples</td>
</tr>
</tbody>
</table>

- 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.

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 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.
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?

- 53% Fully satisfied
- 35% Partially satisfied
- 11% Not satisfied
- 1% Can’t say

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

- 54% Fully satisfied
- 31% Partially satisfied
- 8% Not satisfied
- 7% Can’t say

Are people satisfied with overall services and management?

- 48% Fully satisfied
- 37% Partially satisfied
- 12% Not satisfied
- 3% Can’t say

*Power switch for water not switched on time

ASHWAS 2008-09
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?

- 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

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

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

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

ASHWAS Findings
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%

• 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%

• At the district level, Raichur (17%), Koppal (16%) and Chikballapur (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?

- 13% Boil
- 12% Do nothing
- 2% Use commercial filter
- 22% Filter by cloth
- 51% Cover

- 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?

- 5% Pour
- 92% Dip a glass or mug
- 3% By hand

- 71% wash their drinking water vessels daily

How do people wash their hands after defecation?

- 43% Only water
- 50% Water & soap
- 7% Others (Soil/ash)

- 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

ASHWAS 2008-09

40
Governance

These findings are all from the questions put to the GPs

How useful are WATSAN schemes in the GP?

<table>
<thead>
<tr>
<th>GP Schemes</th>
<th>Usefulness (%)</th>
<th>Main assets created</th>
</tr>
</thead>
<tbody>
<tr>
<td>ARWSP</td>
<td>97</td>
<td>MWS &amp; Public toilets</td>
</tr>
<tr>
<td>Total Sanitation Campaign</td>
<td>88</td>
<td>Domestic toilets</td>
</tr>
<tr>
<td>Jal Nirmal</td>
<td>80</td>
<td>MWS &amp; Public toilets</td>
</tr>
<tr>
<td>Suvarna Jala</td>
<td>79</td>
<td>Rainwater harvesting</td>
</tr>
<tr>
<td>Swachha Grama Yojane</td>
<td>74</td>
<td>Toilets &amp; drains</td>
</tr>
<tr>
<td>Suvarna Gramodaya</td>
<td>74</td>
<td>MWS &amp; Public toilets</td>
</tr>
<tr>
<td>Swajaladara</td>
<td>76</td>
<td>MWS &amp; Public toilets</td>
</tr>
<tr>
<td>NREGA</td>
<td>77</td>
<td>Watershed development</td>
</tr>
<tr>
<td>Watershed Project</td>
<td>85</td>
<td>Watershed development</td>
</tr>
<tr>
<td>JSYS</td>
<td>69</td>
<td>Tank desiltation</td>
</tr>
<tr>
<td>Others</td>
<td>82</td>
<td>MWS &amp; Public taps</td>
</tr>
</tbody>
</table>

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?

- Transformer gets damaged 15%
- Load shedding 31%
- Power cuts 31%
- Low voltage 23%
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?

- 50% Only on paper
- 42% Members active
- 5% Only building
- 3% Not answered

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**

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

### REGIONAL FINDINGS

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

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

Table 1: Sub-Regions
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.

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Table 1: Sub-Regions

<table>
<thead>
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<th>Districts</th>
</tr>
</thead>
<tbody>
<tr>
<td>SR-1</td>
<td>Bagalkot, Belgaum, Bellary, Bijapur, Bidar, Dharwad, Gadag, Gulbarga, Haveri, Koppal</td>
</tr>
<tr>
<td>SR-2</td>
<td>Bangalore Rural, Chickballarpur, Chitradurga, Davangere, Kolar, Ramnagaram, Tumkur</td>
</tr>
<tr>
<td>SR-3</td>
<td>Chamrajnagar, Mandya, Mysore, Hassan</td>
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<td>Chickmagalur, Kodagu, Shimoga, Dakshina Kannada, Udupi, Uttara Kannada</td>
</tr>
</tbody>
</table>

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?

![Score Chart]

- 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?

<table>
<thead>
<tr>
<th>Sub Region</th>
<th>Water Sanitation</th>
<th>Health and hygiene</th>
<th>Grievance and redressal</th>
</tr>
</thead>
<tbody>
<tr>
<td>SR-1</td>
<td>86</td>
<td>36</td>
<td>63</td>
</tr>
<tr>
<td>SR-2</td>
<td>80</td>
<td>56</td>
<td>61</td>
</tr>
<tr>
<td>SR-3</td>
<td>83</td>
<td>57</td>
<td>64</td>
</tr>
<tr>
<td>SR-4</td>
<td>79</td>
<td>60</td>
<td>66</td>
</tr>
</tbody>
</table>

- 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?

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

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

What percentage of people depend on groundwater?

<table>
<thead>
<tr>
<th>% of households</th>
</tr>
</thead>
<tbody>
<tr>
<td>SR-1</td>
</tr>
<tr>
<td>SR-2</td>
</tr>
<tr>
<td>SR-3</td>
</tr>
<tr>
<td>SR-4</td>
</tr>
</tbody>
</table>

What percentage of people depend on multiple sources?

<table>
<thead>
<tr>
<th>No. of sources</th>
<th>SR - 1</th>
<th>SR - 2</th>
<th>SR - 3</th>
<th>SR - 4</th>
</tr>
</thead>
<tbody>
<tr>
<td>One</td>
<td>81</td>
<td>70</td>
<td>32</td>
<td>80</td>
</tr>
<tr>
<td>Two</td>
<td>18</td>
<td>25</td>
<td>41</td>
<td>20</td>
</tr>
<tr>
<td>Three</td>
<td>1</td>
<td>5</td>
<td>23</td>
<td>0</td>
</tr>
<tr>
<td>Four</td>
<td>0</td>
<td>0</td>
<td>4</td>
<td>0</td>
</tr>
</tbody>
</table>

- In SR3, 41% depend on two sources and 23% depend on three sources.
What is the status of access to water?

<table>
<thead>
<tr>
<th>Distance</th>
<th>SR - 1</th>
<th>SR - 2</th>
<th>SR - 3</th>
<th>SR - 4</th>
</tr>
</thead>
<tbody>
<tr>
<td>Very Near</td>
<td>73</td>
<td>83</td>
<td>81</td>
<td>87</td>
</tr>
<tr>
<td>&lt; 1.6 k.m.</td>
<td>22</td>
<td>14</td>
<td>16</td>
<td>11</td>
</tr>
<tr>
<td>&gt; 1.6 k.m.</td>
<td>5</td>
<td>3</td>
<td>3</td>
<td>2</td>
</tr>
</tbody>
</table>

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

How long do people take to collect water?

<table>
<thead>
<tr>
<th>Duration</th>
<th>SR - 1</th>
<th>SR - 2</th>
<th>SR - 3</th>
<th>SR - 4</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt; 15 minutes</td>
<td>2</td>
<td>7</td>
<td>9</td>
<td>10</td>
</tr>
<tr>
<td>16 - 30 minutes</td>
<td>28</td>
<td>33</td>
<td>36</td>
<td>40</td>
</tr>
<tr>
<td>31 - 60 minutes</td>
<td>45</td>
<td>41</td>
<td>35</td>
<td>37</td>
</tr>
<tr>
<td>&gt; 60 minutes</td>
<td>25</td>
<td>19</td>
<td>20</td>
<td>13</td>
</tr>
</tbody>
</table>

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

Why do people store water?

<table>
<thead>
<tr>
<th>Reason</th>
<th>SR - 1</th>
<th>SR - 2</th>
<th>SR - 3</th>
<th>SR - 4</th>
</tr>
</thead>
<tbody>
<tr>
<td>Source is far</td>
<td>19</td>
<td>11</td>
<td>3</td>
<td>7</td>
</tr>
<tr>
<td>Irregular supply</td>
<td>31</td>
<td>53</td>
<td>57</td>
<td>17</td>
</tr>
<tr>
<td>It is easy</td>
<td>50</td>
<td>34</td>
<td>40</td>
<td>76</td>
</tr>
</tbody>
</table>

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

How many days did people face water shortage?

<table>
<thead>
<tr>
<th>Duration</th>
<th>SR - 1</th>
<th>SR - 2</th>
<th>SR - 3</th>
<th>SR - 4</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt; 1 month</td>
<td>25</td>
<td>45</td>
<td>50</td>
<td>16</td>
</tr>
<tr>
<td>1 - 3 months</td>
<td>8</td>
<td>17</td>
<td>8</td>
<td>12</td>
</tr>
<tr>
<td>3 - 6 months</td>
<td>0</td>
<td>1</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>&gt; 6 months</td>
<td>2</td>
<td>2</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>No shortage</td>
<td>65</td>
<td>35</td>
<td>40</td>
<td>68</td>
</tr>
</tbody>
</table>

- 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?

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

What percentage of people store water for drinking?

- 68% in SR1
- 81% in SR2
- 97% in SR3
- 96% in SR4

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

<table>
<thead>
<tr>
<th>Region</th>
<th>Satisfied</th>
<th>Partially Satisfied</th>
<th>Not Satisfied</th>
<th>Can't Say</th>
</tr>
</thead>
<tbody>
<tr>
<td>SR -1</td>
<td>50</td>
<td>35</td>
<td>12</td>
<td>3</td>
</tr>
<tr>
<td>SR -2</td>
<td>48</td>
<td>38</td>
<td>12</td>
<td>2</td>
</tr>
<tr>
<td>SR -3</td>
<td>30</td>
<td>51</td>
<td>15</td>
<td>3</td>
</tr>
<tr>
<td>SR -4</td>
<td>59</td>
<td>26</td>
<td>8</td>
<td>7</td>
</tr>
<tr>
<td>State</td>
<td>48</td>
<td>37</td>
<td>12</td>
<td>3</td>
</tr>
</tbody>
</table>

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

How many people practice OD?

<table>
<thead>
<tr>
<th>% of households</th>
<th>SR-1</th>
<th>SR-2</th>
<th>SR-3</th>
<th>SR-4</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>88</td>
<td>74</td>
<td>73</td>
<td>38</td>
</tr>
</tbody>
</table>

What is the overall sanitation status within sub-regions?

<table>
<thead>
<tr>
<th>Status</th>
<th>SR-1</th>
<th>SR-2</th>
<th>SR-3</th>
<th>SR-4</th>
</tr>
</thead>
<tbody>
<tr>
<td>Generally unclean</td>
<td>31</td>
<td>30</td>
<td>33</td>
<td>4</td>
</tr>
<tr>
<td>Clean in some areas</td>
<td>61</td>
<td>64</td>
<td>57</td>
<td>61</td>
</tr>
<tr>
<td>Clean everywhere</td>
<td>8</td>
<td>6</td>
<td>10</td>
<td>35</td>
</tr>
</tbody>
</table>

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

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

<table>
<thead>
<tr>
<th>% of households</th>
<th>SR-1</th>
<th>SR-2</th>
<th>SR-3</th>
<th>SR-4</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>29</td>
<td>59</td>
<td>59</td>
<td>32</td>
</tr>
</tbody>
</table>
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**

<table>
<thead>
<tr>
<th>Source type</th>
<th>Most backward talukas</th>
<th>Other talukas</th>
</tr>
</thead>
<tbody>
<tr>
<td>Public Tap</td>
<td>22</td>
<td>26</td>
</tr>
<tr>
<td>Mini water Supply</td>
<td>17</td>
<td>16</td>
</tr>
<tr>
<td>Handpump/Borewell</td>
<td>17</td>
<td>14</td>
</tr>
<tr>
<td>Piped water</td>
<td>14</td>
<td>17</td>
</tr>
</tbody>
</table>

**Distance to water source**

<table>
<thead>
<tr>
<th>Distance</th>
<th>Most backward talukas</th>
<th>Other talukas</th>
</tr>
</thead>
<tbody>
<tr>
<td>Very Near</td>
<td>71</td>
<td>81</td>
</tr>
<tr>
<td>&lt; 1.6 K.M</td>
<td>22</td>
<td>16</td>
</tr>
<tr>
<td>&gt; 1.6 K.M</td>
<td>7</td>
<td>3</td>
</tr>
</tbody>
</table>

**Water quality status**

<table>
<thead>
<tr>
<th>Quality parameters</th>
<th>Most backward talukas</th>
<th>Other talukas</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fluoride ≥ 1 ppm</td>
<td>82</td>
<td>55</td>
</tr>
<tr>
<td>Nitrate ≥ 40 ppm</td>
<td>33</td>
<td>17</td>
</tr>
<tr>
<td>Bacteriologically contaminated</td>
<td>43</td>
<td>37</td>
</tr>
</tbody>
</table>

**Overall satisfaction - water services**

<table>
<thead>
<tr>
<th>Satisfaction levels</th>
<th>Most backward talukas</th>
<th>Other talukas</th>
</tr>
</thead>
<tbody>
<tr>
<td>Satisfied</td>
<td>36</td>
<td>51</td>
</tr>
<tr>
<td>Partially satisfied</td>
<td>42</td>
<td>35</td>
</tr>
<tr>
<td>Not satisfied</td>
<td>20</td>
<td>10</td>
</tr>
<tr>
<td>Can’t say</td>
<td>2</td>
<td>4</td>
</tr>
</tbody>
</table>

*All values in percentage

### Status of toilets

<table>
<thead>
<tr>
<th>Toilet Status</th>
<th>Most backward talukas</th>
<th>Other talukas</th>
</tr>
</thead>
<tbody>
<tr>
<td>Inside the house</td>
<td>3</td>
<td>8</td>
</tr>
<tr>
<td>Outside the house</td>
<td>6</td>
<td>24</td>
</tr>
<tr>
<td>No toilets (OD)</td>
<td>91</td>
<td>68</td>
</tr>
</tbody>
</table>

### Access to drainage

<table>
<thead>
<tr>
<th>% of households</th>
<th>Most backward talukas</th>
<th>Other talukas</th>
</tr>
</thead>
<tbody>
<tr>
<td>27</td>
<td></td>
<td>44</td>
</tr>
</tbody>
</table>

### Incidence of diseases

<table>
<thead>
<tr>
<th>Disease</th>
<th>Most backward talukas</th>
<th>Other talukas</th>
</tr>
</thead>
<tbody>
<tr>
<td>Diarrhea</td>
<td>8</td>
<td>5</td>
</tr>
<tr>
<td>Chikungunya</td>
<td>24</td>
<td>20</td>
</tr>
</tbody>
</table>

### Overall cleanliness

<table>
<thead>
<tr>
<th>Levels of cleanliness</th>
<th>Most backward talukas</th>
<th>Other talukas</th>
</tr>
</thead>
<tbody>
<tr>
<td>Generally unclean</td>
<td>50</td>
<td>21</td>
</tr>
<tr>
<td>Clean in some areas</td>
<td>46</td>
<td>63</td>
</tr>
<tr>
<td>Generally clean</td>
<td>4</td>
<td>16</td>
</tr>
</tbody>
</table>

*Backward talukas

Gulbarga: Afzalpur, Chincholi, Shorapur, Yadgir
Bidar: Bidar
Chitrardurga: Hosadurga
Koppal: Kushtagi
Bellar: Sandur
Bijapur: Sindgi, Muddebihal
Raichur: Sinchapur
Tumkur: Sira, Madugiri, Kunigal
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

<table>
<thead>
<tr>
<th>Source Type</th>
<th>Most backward talukas</th>
<th>Other talukas</th>
</tr>
</thead>
<tbody>
<tr>
<td>Public Tap</td>
<td>22%</td>
<td>17%</td>
</tr>
<tr>
<td>Mini water Supply</td>
<td>17%</td>
<td>17%</td>
</tr>
<tr>
<td>Handpump/Borewell</td>
<td>14%</td>
<td>14%</td>
</tr>
<tr>
<td>Piped water</td>
<td>71%</td>
<td>22%</td>
</tr>
</tbody>
</table>

### Distance to water source

<table>
<thead>
<tr>
<th>Distance to Water Source</th>
<th>Most backward talukas</th>
<th>Other talukas</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt; 1.6 K.M</td>
<td>71%</td>
<td>22%</td>
</tr>
<tr>
<td>&gt; 1.6 K.M</td>
<td>28%</td>
<td>7%</td>
</tr>
</tbody>
</table>

### Water quality status

<table>
<thead>
<tr>
<th>Quality Parameters</th>
<th>Most backward talukas</th>
<th>Other talukas</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fluoride ≥ 1 ppm</td>
<td>82%</td>
<td>33%</td>
</tr>
<tr>
<td>Nitrate ≥ 40 ppm</td>
<td>55%</td>
<td>17%</td>
</tr>
<tr>
<td>Bacteriologically</td>
<td>36%</td>
<td>20%</td>
</tr>
</tbody>
</table>

### Satisfaction levels

<table>
<thead>
<tr>
<th>Satisfaction Levels</th>
<th>Most backward talukas</th>
<th>Other talukas</th>
</tr>
</thead>
<tbody>
<tr>
<td>Satisfied</td>
<td>26%</td>
<td>16%</td>
</tr>
<tr>
<td>Partially satisfied</td>
<td>16%</td>
<td>24%</td>
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<td>37%</td>
</tr>
<tr>
<td>Can't say</td>
<td>2%</td>
<td>10%</td>
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</table>

### Toilet status

<table>
<thead>
<tr>
<th>Toilet Status</th>
<th>Most backward talukas</th>
<th>Other talukas</th>
</tr>
</thead>
<tbody>
<tr>
<td>Inside the house</td>
<td>27%</td>
<td>44%</td>
</tr>
<tr>
<td>Outside the house</td>
<td>73%</td>
<td>56%</td>
</tr>
<tr>
<td>No toilets (OD)</td>
<td>91%</td>
<td>68%</td>
</tr>
</tbody>
</table>

### Access to drainage

<table>
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<tr>
<th>Access to Drainage</th>
<th>Most backward talukas</th>
<th>Other talukas</th>
</tr>
</thead>
<tbody>
<tr>
<td>27%</td>
<td>44%</td>
<td>56%</td>
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</tbody>
</table>

### Disease incidence

<table>
<thead>
<tr>
<th>Disease Incidence</th>
<th>Most backward talukas</th>
<th>Other talukas</th>
</tr>
</thead>
<tbody>
<tr>
<td>Diarrhea</td>
<td>8%</td>
<td>24%</td>
</tr>
<tr>
<td>Chikungunya</td>
<td>5%</td>
<td>20%</td>
</tr>
</tbody>
</table>

### Levels of cleanliness

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<tr>
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<th>Other talukas</th>
</tr>
</thead>
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<td>50%</td>
<td>46%</td>
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<td>21%</td>
</tr>
<tr>
<td>Generally clean</td>
<td>63%</td>
<td>63%</td>
</tr>
</tbody>
</table>

---

*Backward talukas—A comparison

ASHWAS 2008-09

**DISTRICT FINDINGS**
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

82% access water 'very near' to their house. Most people take 15 to 30 minutes to collect water.

Village Water & Sanitation Committees (VWSC) of the villages have a VWSC; but none of them are functioning.

Who solves the drinking water problems?

What are the primary water sources?

- Piped water: 63%
- Mini water supply: 18%
- Bore well: 11%
- Open well: 1%
- Water from the field: 7%

Multiple source dependency: 8% depend on two sources

Water Quality

- Fluoride: 80%
- Bacteria: 31%
- Nitrate: 20%

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

Incidences of diarrhea and chikungunya reported are low.

Village elders play a crucial role to address water problems.

Most people are satisfied with water services and management.

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.

Fluoride

Bacteria

Nitrate

75% of the people report that village elders helped solve the problem. Average time taken to solve problems is more than a month.

Satisfaction level

- District: 75%
- State: 3%
- Village: 7%

Sanitation

- Open defecation: 86%
- Improved sanitation: 49%

Health Indicator

- Incidence of diarrhea: 53%
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%
- Taluks: 6
- Number of GPs: 164
- Number of GPs covered in ASHWAS: 6

Water

What are the primary water sources?

- Piped water: 63%
- Mini water supply: 18%
- Bore well: 11%
- Open well: 7%
- Water from the field: 1%

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

WATSAN score (on a scale of 100)

<table>
<thead>
<tr>
<th></th>
<th>District</th>
<th>State</th>
</tr>
</thead>
<tbody>
<tr>
<td>Water supply infrastructure</td>
<td>92</td>
<td>75</td>
</tr>
<tr>
<td>Sanitation</td>
<td>28</td>
<td>49</td>
</tr>
<tr>
<td>Health Indicator</td>
<td>92</td>
<td>86</td>
</tr>
<tr>
<td>Governance</td>
<td>43</td>
<td>76</td>
</tr>
<tr>
<td>Satisfaction level</td>
<td>84</td>
<td>49</td>
</tr>
</tbody>
</table>

Water supply infrastructure: Piped water is the main source of water
Sanitation: Financial & space constraints are cited for not having toilets
Health Indicator: Incidences of diarrhoea and chikungunya reported are low
Governance: Village elders play a crucial role to address water problems
Satisfaction level: Most people are satisfied with water services and management

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

- Fluoride: 80%
- Nitrate: 20%
- Bacteria: 31%

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’

Sanitation, health & hygiene

Access to toilets

8%
have access to toilets. Most of them use pour flush toilets

Why don’t people build toilets?

16% Not a priority

9% Religious & cultural reasons

2% Psychological reasons

34% No space

39% Financial constraints

Drainage

6%
have drains outside the home

How do people treat their water?

66% Nothing

32% Cloth filter

1% Boiling

1% Water filter

Most people keep their water covered

Health & hygiene

Diarrhea

8%

Chikungunya

3%

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

- Maintenance and repair: 34%
- Others: 3%
- Capital investment: 16%
- Electricity: 47%

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

<table>
<thead>
<tr>
<th>Derived category</th>
<th>Having household connection</th>
<th>Storing water in bindiges</th>
<th>Not paying user charges</th>
<th>Having access to toilets</th>
<th>Incidence of diarrhea</th>
<th>Incidence of chikungunya</th>
</tr>
</thead>
<tbody>
<tr>
<td>Low income</td>
<td>26%</td>
<td>43%</td>
<td>29%</td>
<td>0%</td>
<td>6%</td>
<td>5%</td>
</tr>
<tr>
<td>Middle income</td>
<td>41%</td>
<td>43%</td>
<td>19%</td>
<td>4%</td>
<td>8%</td>
<td>6%</td>
</tr>
<tr>
<td>High income</td>
<td>59%</td>
<td>31%</td>
<td>19%</td>
<td>26%</td>
<td>13%</td>
<td>8%</td>
</tr>
</tbody>
</table>

*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

Water

What are the primary water sources?

<table>
<thead>
<tr>
<th>Source</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Piped water</td>
<td>42%</td>
</tr>
<tr>
<td>Open well</td>
<td>18%</td>
</tr>
<tr>
<td>Bore well</td>
<td>22%</td>
</tr>
<tr>
<td>Hand pump</td>
<td>3%</td>
</tr>
<tr>
<td>Mini water supply</td>
<td>7%</td>
</tr>
<tr>
<td>River</td>
<td>8%</td>
</tr>
</tbody>
</table>

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

WATSAN score (on a scale of 100)

<table>
<thead>
<tr>
<th>Category</th>
<th>District</th>
<th>State</th>
</tr>
</thead>
<tbody>
<tr>
<td>Water supply infrastructure</td>
<td>75</td>
<td>75</td>
</tr>
<tr>
<td>Sanitation</td>
<td>43</td>
<td>49</td>
</tr>
<tr>
<td>Health Indicator</td>
<td>87</td>
<td>86</td>
</tr>
<tr>
<td>Governance</td>
<td>92</td>
<td>76</td>
</tr>
<tr>
<td>Satisfaction level</td>
<td>66</td>
<td>49</td>
</tr>
</tbody>
</table>

People are not satisfied with quantity of water

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?

- No space: 45%
- Not a priority: 10%
- Psychological reasons: 9%
- Financial constraints: 36%

Drainage

37% have drains outside the home

How do people treat their water?

- Boiling: 1%
- Alum tablet: 1%
- Water filter: 2%
- Cloth filter: 28%

Health & hygiene

Out of 10 GPs surveyed, 100% reported incidences of diarrhea and chikungunya
Schemes & Finances

Ongoing schemes in our gram panchayat

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

Breakup of WATSAN spending

- 62% Capital investment
- 12% Maintenance and repair
- 9% Electricity
- 17% Others

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

<table>
<thead>
<tr>
<th>Derived category</th>
<th>Having household connection</th>
<th>Storing water in bindiges*</th>
<th>Not paying user charges</th>
<th>Having access to toilets</th>
<th>Incidence of diarrhea</th>
<th>Incidence of chikungunya</th>
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<tbody>
<tr>
<td>Low income</td>
<td>13%</td>
<td>11%</td>
<td>9%</td>
<td>5%</td>
<td>11%</td>
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* 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

Water

What are the primary water sources?

- Piped water: 22%
- Mini water supply: 11%
- Bore well: 4%
- River/tank/stream: 15%
- Open well: 8%

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

WATSAN score (on a scale of 100)

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<td>Satisfaction level</td>
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</table>

Piped water is the main source of water

Financial constraints are the reason cited for not having toilets

incidences of chikungunya reported are high

Gram panchayat plays a crucial role to address water problems

People are satisfied with water quality & services and management

ASHWAS 2008-09

WATSAN score (on a scale of 100)

79 75

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

Water supply infrastructure

Sanitation

Health Indicator

Governance

Satisfaction level

Water supply infrastructure

Sanitation

Health Indicator

Governance

Satisfaction level

Water supply infrastructure

Sanitation

Health Indicator

Governance

Satisfaction level

Water supply infrastructure

Sanitation

Health Indicator

Governance

Satisfaction level

Water supply infrastructure

Sanitation

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Sanitation

Health Indicator

Governance

Satisfaction level

Water supply infrastructure

Sanitation

Health Indicator

Governance

Satisfaction level

Water supply infrastructure

Sanitation

Health Indicator

Governance

Satisfaction level
**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?**

- 17% No space
- 3% Not a priority
- 2% Religious & cultural reasons
- 3% Psychological reasons
- 75% Financial constraints

**Drainage**

**32%**
have drains outside the home

---

**How do people treat their water?**

- 71% Nothing
- 1% Boiling
- 25% Cloth filter
- 3% Water filter

Most people keep their water covered

**Health & hygiene**

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

- **Diarrhea**: 15%
- **Chikungunya**: 28%
Schemes & Finances

Ongoing schemes in our gram panchayat

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

People’s main demands

- Toilets
- Drainage facility
- Better water supply facility

Breakup of WATSAN spending

- 61% Capital investment
- 16% Electricity
- 14% Maintenance and repair
- 9% Others

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

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

*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

Water

What are the primary water sources?

- 46% Piped water
- 14% Hand pump
- 21% Open well
- 7% Bore well
- 12% Mini water supply

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?

- 27% No space
- 6% Not a priority
- 10% Religious & cultural reasons
- 2% Psychological reasons
- 55% Financial constraints

Drainage

23% have drains outside the home

How do people treat their water?

- 5% Alum & Chlorine tablet
- 45% Cloth filter
- 50% Nothing

Most people keep their water covered

Health & hygiene

- 2% Diarrhea
- 33% Chikungunya

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

Ongoing schemes in our gram panchayat

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

People’s main demands

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

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

Breakup of WATSAN spending

- 65% Electricity
- 35% Maintenance and repair

Equity

<table>
<thead>
<tr>
<th>Derived category</th>
<th>Having household connection</th>
<th>Storing water in bindiges*</th>
<th>Not paying user charges</th>
<th>Having access to toilets</th>
<th>Incidence of diarrhea</th>
<th>Incidence of chikungunya</th>
</tr>
</thead>
<tbody>
<tr>
<td>Low income</td>
<td>14%</td>
<td>5%</td>
<td>83%</td>
<td>1%</td>
<td>3%</td>
<td>37%</td>
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<td>4%</td>
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<tr>
<td>High income</td>
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<td>48%</td>
<td>24%</td>
<td>0%</td>
<td>18%</td>
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</tbody>
</table>

* 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)

<table>
<thead>
<tr>
<th></th>
<th>District</th>
<th>State</th>
</tr>
</thead>
<tbody>
<tr>
<td>Water supply infrastructure</td>
<td>93</td>
<td>75</td>
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<tr>
<td>Sanitation</td>
<td>64</td>
<td>49</td>
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<tr>
<td>Health Indicator</td>
<td>74</td>
<td>86</td>
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<tr>
<td>Governance</td>
<td>95</td>
<td>76</td>
</tr>
<tr>
<td>Satisfaction level</td>
<td>43</td>
<td>49</td>
</tr>
</tbody>
</table>

Water

What are the primary water sources?

- Piped Water: 46%
- Bore Well: 39%
- River/tank/stream: 3%
- Hand pump: 4%
- Open Well: 8%

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

Fluoride: 81%
Nitrate: 29%
Bacteria: 20%

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?

18% Not a priority
6% Religious & cultural reasons
5% Psychological reasons
28% No space
43% Financial constraints

Drainage

11% have drains outside the home

How do people treat their water?

58% Nothing
37% Cloth filter
4% Boiling
1% Water filter

Health & hygiene

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

Diarrhea 14%
Chikungunya 5%
Schemes & Finances

Ongoing schemes in our gram panchayat

- ARWSP
- Jal Nirmal
- Suvarna Jal
- Swajaladhara
- NREGA
- JSYS

- TSC
- Sachethana
- Swachha Grama Yojana
- Suvarna Gramodaya
- Watershed Project
- Others

Breakup of WATSAN spending

- 43% Maintenance and repair
- 32% Capital investment
- 17% Electricity
- 8% Others

People’s main demands

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

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

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

Water

What are the primary water sources?

- 78% Piped water
- 10% Mini water supply
- 8% Bore well
- 3% Hand pump
- 1% Water from field pumpsets

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

WATSAN score (on a scale of 100)

<table>
<thead>
<tr>
<th>Indicator</th>
<th>District</th>
<th>State</th>
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</thead>
<tbody>
<tr>
<td>Water supply infrastructure</td>
<td>99</td>
<td>75</td>
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<tr>
<td>Sanitation</td>
<td>41</td>
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<tr>
<td>Health Indicator</td>
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<td>86</td>
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<tr>
<td>Governance</td>
<td>84</td>
<td>76</td>
</tr>
<tr>
<td>Satisfaction level</td>
<td>80</td>
<td>49</td>
</tr>
</tbody>
</table>

Water is the main source of water
Financial & space constraints are cited for not having toilets
Incidence of chikungunya reported are high
Gram panchayat plays a crucial role to address water problems
People are fairly satisfied with water services & management
WATSAN score (on a scale of 100)
99
41
85
84
80

Piped water is the main source of water
Financial & space constraints are cited for not having toilets
Incidence of chikungunya reported are high
Gram panchayat plays a crucial role to address water problems
People are fairly satisfied with water services & management

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<td>Dharwad</td>
<td></td>
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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

83 %
38 %

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

What are the primary water sources?
Multiple source dependency: 11% depend on two sources

Water Quality
Village Water & Sanitation Committees of the villages have a VWSC; but none of them are functioning

Who solves the drinking water problems?
report that the gram panchayat solves the problem in 1 to 5 days

82 %
33 %
of the GPs in the district have and use water testing kits distributed by the government

78 %
Piped water

10 %
Mini water supply

8 %
Bore well

3 %
Hand pump

1 %
Water from field pumpsets

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

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?

- 38% No space
- 2% Not a priority
- 6% Religious & cultural reasons
- 54% Financial constraints

Drainage

48 %
have drains outside the home

How do people treat their water?

- Commercial filter: 1%
- Nothing: 58%
- Boiling: 1%
- Cloth filter: 40%

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
- Jal Nirmal
- Suvarna Jal
- Swajaladhara
- NREGA
- JSYS

People’s main demands
- Toilets
- Drainage facility
- Better water supply facility

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

Breakup of WATSAN spending

- 12% Capital Investment
- 48% Maintenance and repair
- 40% Electricity

Equity

<table>
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<td>22%</td>
<td>47%</td>
<td>27%</td>
<td>8%</td>
<td>7%</td>
<td>20%</td>
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<tr>
<td>Middle income</td>
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<tr>
<td>High income</td>
<td>50%</td>
<td>40%</td>
<td>19%</td>
<td>51%</td>
<td>1%</td>
<td>9%</td>
</tr>
</tbody>
</table>

*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

**Water**

**What are the primary water sources?**

- Piped water: 58%
- River: 21%
- Mini water supply: 15%
- Bore well: 6%

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

- Fluoride: 87%
- Nitrate: 13%
- Bacteria: 100%

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?

- 42% No space
- 38% Financial constraints
- 13% Religious & cultural reasons
- 6% Not a priority
- 1% Psychological reasons

Drainage

26% have drains outside the home

How do people treat their water?

- 67% Nothing
- 32% Cloth filter
- 1% Boiling

Most people keep their water covered

Health & hygiene

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

- Diarrhea 8%
- Chikungunya 8%
Schemes & Finances

Ongoing schemes in our gram panchayat

- ARWSP
- Jal Nirmal
- Suvarna Jal
- Swajaladhar
- NREGA
- JSYS
- TSC
- Sachethana
- Swachha Grama Yojana
- Suvarna Gramodaya
- Watershed Project
- Others

Breakup of WATSAN spending

- 22% Electricity
- 9% Capital Investment
- 26% Maintenance and repair
- 43% Others

Equity

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<tr>
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<tbody>
<tr>
<td>Low income</td>
<td>41%</td>
<td>64%</td>
<td>11%</td>
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<td>10%</td>
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<td>Middle income</td>
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<tr>
<td>High income</td>
<td>86%</td>
<td>14%</td>
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<td>17%</td>
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</tbody>
</table>

*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 Hollemannur, only 45% collect water everyday as the source is too far away
- Hollemanur is the only GP in the sample that depends primarily on river water

People’s main demands

- Toilets
- Drainage facility
- Better water supply facility

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

<table>
<thead>
<tr>
<th>Derived category</th>
<th>Having household connection</th>
<th>Storing water in bindiges*</th>
<th>Not paying user charges</th>
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</thead>
<tbody>
<tr>
<td>Low income</td>
<td>41%</td>
<td>64%</td>
<td>11%</td>
<td>0%</td>
<td>10%</td>
<td>7%</td>
</tr>
<tr>
<td>Middle income</td>
<td>56%</td>
<td>63%</td>
<td>7%</td>
<td>4%</td>
<td>7%</td>
<td>8%</td>
</tr>
<tr>
<td>High income</td>
<td>86%</td>
<td>14%</td>
<td>4%</td>
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<td>12%</td>
<td>14%</td>
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*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 Hollemannur, only 45% collect water everyday as the source is too far away
- Hollemanur is the only GP in the sample that depends primarily on river water

Financials for 2007-08

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Equity

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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 Hollemannur, only 45% collect water everyday as the source is too far away
- Hollemanur 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)

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

Water

What are the primary water sources?

- 38% Borewell
- 37% Piped water
- 18% Open well
- 6% River
- 1% Mini water supply

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

Water Quality

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

- 90% Fluoride
- 32% Nitrate
- 15% Bacteria

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

Village Water & Sanitation Committees

13% of the villages have a VWSC; but only some of them are actively functioning
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?

- 37% No space
- 3% Not a priority
- 1% Religious & cultural reasons
- 3% Psychological reasons
- 56% Financial constraints

Drainage

15% have drains outside the home.

How do people treat their water?

- 68% Nothing
- 28% Cloth filter
- 1% Boiling
- 2% Alum & Chlorine Tablet
- 1% Water filter

Most people keep their water covered.

Health & hygiene

- 6% Diarrhea
- 40% Chikungunya

out of 10 GPs surveyed, 100% reported incidences of diarrhea and chikungunya.
Schemes & Finances

Ongoing schemes in our gram panchayat

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

Breakup of WATSAN spending

- 13% Electricity
- 16% Maintenance and repair
- 71% Capital investment

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

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

*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
**Schemes & Finances**

- 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.

**Ongoing schemes in our gram panchayat**

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- Suvarna Jal
- Swajaladhara
- NREGA
- JSYS
- Watershed Project
- Sachethana
- Swachha Grama Yojana
- Suvarna Gramodaya
- Others

**People’s main demands**

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

**Equity**

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- 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.

**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%

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.

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

**ASHWAS 2008-09**

- 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)**

- 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?**

- 8% River/tank/stream
- 20% Mini water supply
- 2% Open well
- 63% Piped water
- 7% Bore well

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.

<table>
<thead>
<tr>
<th>Fluoride</th>
<th>Nitrate</th>
<th>Bacteria</th>
</tr>
</thead>
<tbody>
<tr>
<td>55%</td>
<td>18%</td>
<td>21%</td>
</tr>
</tbody>
</table>

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

Sanitation, health & hygiene

Access to toilets

16% have access to toilets. Most of them use pour flush toilets

Why don’t people build toilets?

- 31% No space
- 5% Not a priority
- 11% Religious & cultural reasons
- 1% Psychological reasons
- 52% Financial constraints

Drainage

56% have drains outside the home

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%

How do people treat their water?

- 59% Nothing
- 41% Cloth filter

Most people keep their water covered

Health & hygiene

- 10% reported incidences of diarrhea and chikungunya

Out of 8 GPs surveyed, 100% reported incidences of diarrhea and chikungunya
Schemes & Finances

Ongoing schemes in our gram panchayat
- ARWSP
- NREGA
- JSYS
- Jal Nirmal
- Swarna Jal
- Swajaladhara
- TSC
- Sachethana
- Swachha Grama Yojana
- Suvarna Gramodaya
- Watershed Project

Breakup of WATSAN spending
- 75% Maintenance and repair
- 16% Electricity
- 2% Capital investment
- 7% Others

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

<table>
<thead>
<tr>
<th>Derived category</th>
<th>Having household connection</th>
<th>Storing water in bindiges*</th>
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<tbody>
<tr>
<td>Low income</td>
<td>10%</td>
<td>47%</td>
<td>6%</td>
<td>7%</td>
<td>17%</td>
<td>24%</td>
</tr>
<tr>
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<td>16%</td>
<td>33%</td>
<td>4%</td>
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<td>22%</td>
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*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

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

Water

What are the primary water sources?

- Piped water: 51%
- Open well: 17%
- Mini water supply: 10%
- Hand pump: 9%
- Bore well: 3%
- River: 10%

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

WATSAN score (on a scale of 100)

<table>
<thead>
<tr>
<th>Water supply infrastructure</th>
<th>District</th>
<th>State</th>
</tr>
</thead>
<tbody>
<tr>
<td>Piped water is the main source of water</td>
<td>81</td>
<td>75</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Sanitation</th>
<th>District</th>
<th>State</th>
</tr>
</thead>
<tbody>
<tr>
<td>Financial &amp; space constraints are cited for not having toilets</td>
<td>37</td>
<td>49</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Health Indicator</th>
<th>District</th>
<th>State</th>
</tr>
</thead>
<tbody>
<tr>
<td>Incidences of diarrhea reported are high</td>
<td>86</td>
<td>86</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Governance</th>
<th>District</th>
<th>State</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gram panchayat plays a crucial role to address water problems</td>
<td>37</td>
<td>76</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Satisfaction level</th>
<th>District</th>
<th>State</th>
</tr>
</thead>
<tbody>
<tr>
<td>People are not satisfied with quality &amp; management of water</td>
<td>48</td>
<td>49</td>
</tr>
</tbody>
</table>
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’

Sanitation, health & hygiene

Access to toilets

4% have access to toilets. Most of them use pour flush toilets

Why don’t people build toilets?

26% No space

8% Not a priority

1% Religious & cultural reasons

65% Financial constraints

17% Boiling

55% Nothing

28% Cloth filter

Most people keep their water covered

Health & hygiene

17% Diarrhea

11% Chikungunya

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

How do people treat their water?

Motor damage 38%

Power cut 32%

Pipe/taps damage 21%

Reduced water yield 4%

Reasons cited for water supply disruption (by the villagers)

out of 4 GPs surveyed, 100% reported incidences of diarrhea and chikungunya
Ongoing schemes in our gram panchayat

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

Breakup of WATSAN spending

- 43% Capital investment
- 9% Electricity
- 48% Maintenance and repair

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

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<tbody>
<tr>
<td>Low income</td>
<td>12%</td>
<td>88%</td>
<td>91%</td>
<td>1%</td>
<td>12%</td>
<td>7%</td>
</tr>
<tr>
<td>Middle income</td>
<td>22%</td>
<td>69%</td>
<td>72%</td>
<td>2%</td>
<td>22%</td>
<td>12%</td>
</tr>
<tr>
<td>High income</td>
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<td>47%</td>
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<td>7%</td>
<td>26%</td>
<td>21%</td>
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* 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

Water

What are the primary water sources?

- 8% Mini water supply
- 4% Open well
- 16% River
- 19% Bore well
- 53% Piped water

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

Water Quality

- 80% Fluoride
- 27% Nitrate
- 82% Bacteria

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

Piped water is the main source of water.

Sanitation

- 29% Financial & space constraints are cited for not having toilets

Health Indicator

- 83% Incidences of diarrhea & Incidence of chikungunya are high

Governance

- 80% Gram panchayat plays a crucial role to address water problems

Satisfaction level

- 48% People are not satisfied with water services and management

WATSAN score (on a scale of 100)

<table>
<thead>
<tr>
<th>District</th>
<th>State</th>
</tr>
</thead>
<tbody>
<tr>
<td>Water supply infrastructure</td>
<td>83</td>
</tr>
<tr>
<td>Sanitation</td>
<td>29</td>
</tr>
<tr>
<td>Health Indicator</td>
<td>83</td>
</tr>
<tr>
<td>Governance</td>
<td>80</td>
</tr>
<tr>
<td>Satisfaction level</td>
<td>48</td>
</tr>
</tbody>
</table>
**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?**

- 37% No space
- 10% Not a priority
- 1% Religious & cultural reasons
- 10% Psychological reasons
- 42% Financial constraints

**Drainage**

- **38%** have drains outside the home

**Health & hygiene**

- **17%** out of 6 GPs surveyed
  - 100% reported incidences of diarrhea and chikungunya

**How do people treat their water?**

- 57% Nothing
- 36% Cloth filter
- 6% Boiling
- 1% Others
- 1% Others

*Refers to percentage of households*
Schemes & Finances

Ongoing schemes in our gram panchayat

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

Breakup of WATSAN spending

- 29% Capital investment
- 20% Electricity
- 37% Maintenance and repair
- 14% Others

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

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

* 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

**Water**

What are the primary water sources?

- Piped water: 79%
- Bore well: 6%
- Open well: 4%
- Others: 2%
- Water from irrigation pumpsets: 9%

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

**WATSAN score (on a scale of 100)**

<table>
<thead>
<tr>
<th></th>
<th>District</th>
<th>State</th>
</tr>
</thead>
<tbody>
<tr>
<td>Water supply infrastructure</td>
<td>84</td>
<td>75</td>
</tr>
<tr>
<td>Sanitation</td>
<td>63</td>
<td>49</td>
</tr>
<tr>
<td>Health Indicator</td>
<td>99</td>
<td>86</td>
</tr>
<tr>
<td>Governance</td>
<td>67</td>
<td>76</td>
</tr>
<tr>
<td>Satisfaction level</td>
<td>84</td>
<td>49</td>
</tr>
</tbody>
</table>

Piped water is the main source of water.

Financial & space constraints are cited for not having toilets.

Incidences of diarrhea and chikungunya reported are low.

Gram panchayat plays a crucial role to address water problems.

People are partially satisfied with quality & quantity of water.

**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.

- Fluoride: Data not available
- Nitrate: Data not available
- Bacteria: Data not available

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?

- **41%** No space
- **38%** Financial constraints
- **21%** Not a priority

Drainage

- **72%** have drains outside the home

How do people treat their water?

- **75%** Covered
- **18%** Cloth filter
- **3%** Commercial filter
- **4%** Boiling

Health & hygiene

- **2%** Diarrhea
- **1%** Chikungunya

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
- Jal Nirmal
- Swarna Jal
- NREGA
- JSYS
- TSC
- Sachethana
- Swachha Grama Yojana
- Suvarna Gramodaya
- Watershed Project

**Breakup of WATSAN spending**

- 41% Electricity
- 20% Capital investment
- 37% Maintenance and repair
- 2% Others

**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

<table>
<thead>
<tr>
<th>Derived category</th>
<th>Having household connection</th>
<th>Storing water in bindiges*</th>
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</tr>
</thead>
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<tr>
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<td>6%</td>
<td>34%</td>
<td>24%</td>
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</tr>
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<td>Middle income</td>
<td>9%</td>
<td>23%</td>
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</tr>
<tr>
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<td>13%</td>
<td>12%</td>
<td>60%</td>
<td>1%</td>
<td>1%</td>
</tr>
</tbody>
</table>

*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)

<table>
<thead>
<tr>
<th>Category</th>
<th>District</th>
<th>State</th>
</tr>
</thead>
<tbody>
<tr>
<td>Water supply infrastructure</td>
<td>90</td>
<td>75</td>
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<tr>
<td>Sanitation</td>
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<td>49</td>
</tr>
<tr>
<td>Health Indicator</td>
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<td>86</td>
</tr>
<tr>
<td>Governance</td>
<td>92</td>
<td>76</td>
</tr>
<tr>
<td>Satisfaction level</td>
<td>47</td>
<td>49</td>
</tr>
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</table>

Water supply infrastructure: Piped water is the main source of water
Sanitation: Financial & space constraints are cited for not having toilets
Health Indicator: Incidences of diarrhea reported are high
Governance: Gram panchayat plays a crucial role to address water problems
Satisfaction level: People are not satisfied with water services and management

Water

What are the primary water sources?

- **59%** Piped Water
- **23%** Mini water supply
- **11%** Others
- **7%** Bore Well

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

- **92%** Fluoride
- **20%** Nitrate
- **27%** Bacteria

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

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
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ASHWAS 2008-09

<table>
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<tr>
<th>Village</th>
<th>Population</th>
<th>Agro-Climatic Zone</th>
<th>Average Rainfall</th>
<th>Groundwater Status</th>
<th>Literacy rate</th>
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Population: 11,49,007
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Average Rainfall: 750 mm
Groundwater Status: Over exploited; presence of bacterial contamination
Literacy rate: 57%
Talukas: 6
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Number of GPs covered in ASHWAS: 6

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

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

ASHWAS 2008-09

WATSAN score (on a scale of 100)

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People are not satisfied with water services and management

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% Having household connection
- 34% Storing water in bindiges
- 24% Not paying user charges
- 18% Having access to toilets
- 1% Incidence of diarrhea
- 0% Incidence of chikungunya

Middle income

- 9% Having household connection
- 23% Storing water in bindiges
- 13% Not paying user charges
- 41% Having access to toilets
- 0% Incidence of diarrhea
- 0% Incidence of chikungunya

High income

- 8% Having household connection
- 13% Storing water in bindiges
- 12% Not paying user charges
- 60% Having access to toilets
- 1% Incidence of diarrhea
- 1% Incidence of chikungunya

Financial & space constraints are cited for not having toilets
Incidences of diarrhea reported are high
Gram panchayat plays a crucial role to address water problems
People are not satisfied with water services and management

Who solves the drinking water problems?

- 51% report that the gram panchayat solves the problem in 1 to 5 days

Water

What are the primary water sources?

- **59%** Piped Water
- **23%** Mini water supply
- **11%** Others
- **7%** Bore Well

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

- **92%** Fluoride
- **20%** Nitrate
- **27%** Bacteria

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

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
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?

- No space 27%
- Not a priority 3%
- Religious & cultural reasons 2%
- Psychological reasons 1%
- Financial constraints 67%

Drainage

59% have drains outside the home

How do people treat their water?

- Nothing 64%
- Boiling 4%
- Cloth filter 30%
- Water filter 2%

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

Diarrhea 31%
Chikungunya 19%
Schemes & Finances

Ongoing schemes in our gram panchayat

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

People’s main demands

- Toilets
- Drainage facility
- Roads

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

<table>
<thead>
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<th>Derived category</th>
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</tr>
<tr>
<td>Middle income</td>
<td>28%</td>
<td>30%</td>
<td>5%</td>
<td>21%</td>
<td>12%</td>
<td>6%</td>
</tr>
<tr>
<td>High income</td>
<td>40%</td>
<td>20%</td>
<td>4%</td>
<td>51%</td>
<td>27%</td>
<td>19%</td>
</tr>
</tbody>
</table>

*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

Country

- 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)

<table>
<thead>
<tr>
<th>Score</th>
<th>District</th>
<th>State</th>
</tr>
</thead>
<tbody>
<tr>
<td>99</td>
<td>75</td>
<td></td>
</tr>
</tbody>
</table>

- Piped water is the main source of water
- Financial constraints are cited for not having toilets
- Incidence of chikungunya reported are high
- Gram panchayat plays a crucial role to address water problems
- People are not satisfied with water services and management

Chitradurga

Water

What are the primary water sources?

- 51% Piped Water
- 39% Mini water supply
- 10% Bore Well

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
- 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**

<table>
<thead>
<tr>
<th>Percentage</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>89%</td>
<td>89% have access to water throughout the year</td>
</tr>
</tbody>
</table>

**Groundwater dependency in district**

<table>
<thead>
<tr>
<th>Percentage</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>100%</td>
<td>100% depend on groundwater for their domestic needs</td>
</tr>
</tbody>
</table>

**Satisfaction levels**

<table>
<thead>
<tr>
<th>Percentage</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>55%</td>
<td>55% are fully satisfied with water services &amp; management while 42% are partially satisfied &amp; 3% are not satisfied</td>
</tr>
</tbody>
</table>

**Sanitation, health & hygiene**

**Access to toilets**

<table>
<thead>
<tr>
<th>Percentage</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>13%</td>
<td>13% have access to toilets. Most of them use pour flush toilets</td>
</tr>
</tbody>
</table>

**Why don’t people build toilets?**

- 25% No space
- 2% Not a priority
- 73% Financial constraints

**Drainage**

<table>
<thead>
<tr>
<th>Percentage</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>45%</td>
<td>45% have drains outside the home</td>
</tr>
</tbody>
</table>

**Reliability**

<table>
<thead>
<tr>
<th>Percentage</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>43%</td>
<td>43% reported drinking water problems in the last one year</td>
</tr>
</tbody>
</table>

**Storage**

<table>
<thead>
<tr>
<th>Percentage</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>50%</td>
<td>50% store water because of irregular supply, while 29% store water because it is ‘easier’</td>
</tr>
</tbody>
</table>

**Reasons cited for water supply disruption** *(by the villagers)*

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

**How do people treat their water?**

- 78% Nothing
- 18% Cloth filter
- 2% Water filter
- 2% Boiling

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

Breakup of WATSAN spending

- 13% Capital investment
- 3% Others
- 34% Maintenance and repair
- 50% Electricity

People’s main demands

- Toilets
- Drainage facility
- Better water facility

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

<table>
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<tr>
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<tbody>
<tr>
<td>Low income</td>
<td>9%</td>
<td>69%</td>
<td>18%</td>
<td>3%</td>
<td>11%</td>
<td>43%</td>
</tr>
<tr>
<td>Middle income</td>
<td>25%</td>
<td>54%</td>
<td>13%</td>
<td>13%</td>
<td>8%</td>
<td>48%</td>
</tr>
<tr>
<td>High income</td>
<td>33%</td>
<td>29%</td>
<td>11%</td>
<td>36%</td>
<td>14%</td>
<td>44%</td>
</tr>
</tbody>
</table>

*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

Water

What are the primary water sources?

- Piped Water: 44%
- Mini water supply: 26%
- Bore Well: 15%
- Hand Pump: 8%
- River/Tank/Stream: 7%

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?**

- No space: 32%
- Not a priority: 2%
- Religious & cultural reasons: 1%
- Financial constraints: 65%

**Drainage**

**70%**
have drains outside the home

**How do people treat their water?**

- Boiling: 3%
- Cloth filter: 27%
- Water filter: 2%
- Nothing: 68%
- Other: 3%

**Health & hygiene**

- Diarrhea: 7%
- Chikungunya: 45%

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

ASHWAS 2008-09
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

- 16% Electricity
- 14% Maintenance and repair
- 9% Others
- 61% Capital investment

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

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

*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: Overexploited with presence of high fluoride
- Literacy Rate: 68.35%
- Talukas: 5
- Number of GPs: No data
- Number of GPs covered in ASHWAS: 4

Water

What are the primary water sources?

- 50% Piped Water
- 24% Mini water supply
- 9% Water from field pumpsets
- 5% River
- 12% Bore Well

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

WATSAN score (on a scale of 100)

<table>
<thead>
<tr>
<th>District</th>
<th>State</th>
</tr>
</thead>
<tbody>
<tr>
<td>Water supply infrastructure</td>
<td>85</td>
</tr>
<tr>
<td>Sanitation</td>
<td>55</td>
</tr>
<tr>
<td>Health Indicator</td>
<td>97</td>
</tr>
<tr>
<td>Governance</td>
<td>68</td>
</tr>
<tr>
<td>Satisfaction level</td>
<td>43</td>
</tr>
</tbody>
</table>

Piped water is the main source of water

Financial & space constraints are cited for not having toilets

Incidence of diarrhea & incidence of chikungunya are low

Gram panchayat plays a crucial role to address water problems

People are not satisfied with water services and management
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 cut 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?

- 22% No space
- 19% Not a priority
- 2% Religious & cultural reasons
- 11% Psychological reasons
- 46% Financial constraints

Drainage

68% have drains outside the home

How do people treat their water?

- 65% Nothing
- 30% Cloth filter
- 4% Boiling
- 1% Commercial filter

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

Diarrhea

4%

Chikungunya

2%
Schemes & Finances

Ongoing schemes in our gram panchayat

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

Breakup of WATSAN spending

- 59% Maintenance and repair
- 26% Others
- 15% Electricity

People’s main demands

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

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

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

*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
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.

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

59% is the average amount spent by each GP on WATSAN services. Rs. 25/- Rs. 52,321/- is the average amount spent per capita by the GPs on WATSAN. Rs. 1,49,013/- 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 diarrhoea
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%

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.

ASHWAS 2008-09
WATSAN score (on a scale of 100)

<table>
<thead>
<tr>
<th>District</th>
<th>State</th>
</tr>
</thead>
<tbody>
<tr>
<td>Water supply infrastructure</td>
<td>94</td>
</tr>
<tr>
<td>Mini water supply is the main source of water</td>
<td></td>
</tr>
<tr>
<td>Sanitation</td>
<td>57</td>
</tr>
<tr>
<td>Financial &amp; space constraints are cited for not having toilets</td>
<td></td>
</tr>
<tr>
<td>Health Indicator</td>
<td>85</td>
</tr>
<tr>
<td>Incidence of chikungunya reported are high</td>
<td></td>
</tr>
<tr>
<td>Governance</td>
<td>71</td>
</tr>
<tr>
<td>Local politician plays a crucial role to address water problems</td>
<td></td>
</tr>
<tr>
<td>Satisfaction level</td>
<td>1</td>
</tr>
<tr>
<td>People are not satisfied with quality, quantity &amp; management of water</td>
<td></td>
</tr>
</tbody>
</table>

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

Water

What are the primary water sources?

- 2% Water from field pumpsets
- 4% River
- 29% Bore Well
- 25% Piped Water
- 40% Mini water supply

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.

Fluoride 76% 25% 72%
Nitrate
Bacteria

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.

District     State
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

District     State
Mini water supply is the main source of water
Financial & space constraints are cited for not having toilets
Incidence of chikungunya reported are high
Local politician plays a crucial role to address water problems
People are not satisfied with quality, quantity & management of water
**Sustainability**

72% have access to water throughout the year

**Groundwater dependency in district**

96% depend on groundwater for their domestic needs

**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?

- 44% No space
- 8% Not a priority
- 1% Religious & cultural reasons
- 47% Financial constraints

**Drainage**

56% have drains outside the home

**How do people treat their water?**

- 36% Boiling
- 54% Nothing
- 10% Cloth filter

Most people keep their water covered

**Health & hygiene**

- 2% Diarrhea
- 27% Chikungunya

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

**Sanitation, health & hygiene**

- 35% have access to toilets. Most of them use pour flush toilets
- 44% No space
- 8% Not a priority
- 1% Religious & cultural reasons
- 47% Financial constraints

**Drainage**

56% have drains outside the home

**How do people treat their water?**

- 36% Boiling
- 54% Nothing
- 10% Cloth filter

Most people keep their water covered

**Health & hygiene**

- 2% Diarrhea
- 27% Chikungunya

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

Peop-le'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

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

*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 Virupakshipuram 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
WATSAN score (on a scale of 100)

<table>
<thead>
<tr>
<th></th>
<th>District</th>
<th>State</th>
</tr>
</thead>
<tbody>
<tr>
<td>Water supply infrastructure</td>
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<tr>
<td>Sanitation</td>
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<td>Health Indicator</td>
<td>95</td>
<td>86</td>
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<tr>
<td>Governance</td>
<td>87</td>
<td>76</td>
</tr>
<tr>
<td>Satisfaction level</td>
<td>61</td>
<td>49</td>
</tr>
</tbody>
</table>

Mini water supply is the main source of water

Financial & space constraints are cited for not having toilets

Incidence of diarrhea & Incidence of chikungunya reported are low

Gram panchayat plays a crucial role to address water problems

People are satisfied with water quality & services and management

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

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

Water

What are the primary water sources?

- 10% Water from field
- 18% Bore Well
- 13% River/tank/stream
- 23% Piped Water
- 35% Mini water supply

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

Fluoride 68%
Nitrate 26%
Bacteria 59%

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

Growth & economic development

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?

- 24% No space
- 2% Not a priority
- 1% Religious & cultural reasons
- 1% Psychological reasons
- 72% Financial constraints

Drainage

54% have drains outside the home

How do people treat their water?

- 13% Boiling
- 66% Nothing
- 19% Cloth filter
- 2% Water filter

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

People’s main demands
- Toilets
- Drainage facility
- Roads
- Clean village
- Better garbage disposal
- Regular cleaning of water tanks
- Better water supply facility

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

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<thead>
<tr>
<th>Derived category</th>
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<tbody>
<tr>
<td>Low income</td>
<td>7%</td>
<td>81%</td>
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<td>6%</td>
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<td>40%</td>
<td>9%</td>
<td>10%</td>
</tr>
</tbody>
</table>

*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

Water

What are the primary water sources?

- 29% Piped Water
- 23% Mini water supply
- 12% River
- 7% Water from field pumpsets
- 2% Open well
- 27% Bore Well

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 up to 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

WATSAN score (on a scale of 100)

<table>
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</tr>
</thead>
<tbody>
<tr>
<td>Water supply infrastructure</td>
<td>79</td>
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<tr>
<td>Sanitation</td>
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<td>Health Indicator</td>
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<tr>
<td>Governance</td>
<td>96</td>
</tr>
<tr>
<td>Satisfaction level</td>
<td>14</td>
</tr>
</tbody>
</table>

Piped water & MMS are the main sources of water
Lack of space is cited as the main reason for not having toilets
Incidence of diarrhea and Incidence of chikungunya are low
Gram panchayat & waterman help to solve water problems
People are not satisfied with water services and management

ASHWAS 2008-09

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

Water

What are the primary water sources?

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- 2% Open well
- 27% Bore Well

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 up to 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

WATSAN score (on a scale of 100)

<table>
<thead>
<tr>
<th>District</th>
<th>State</th>
</tr>
</thead>
<tbody>
<tr>
<td>Water supply infrastructure</td>
<td>79</td>
</tr>
<tr>
<td>Sanitation</td>
<td>59</td>
</tr>
<tr>
<td>Health Indicator</td>
<td>96</td>
</tr>
<tr>
<td>Governance</td>
<td>96</td>
</tr>
<tr>
<td>Satisfaction level</td>
<td>14</td>
</tr>
</tbody>
</table>

Piped water & MMS are the main sources of water
Lack of space is cited as the main reason for not having toilets
Incidence of diarrhea and Incidence of chikungunya are low
Gram panchayat & waterman help to solve water problems
People are not satisfied with water services and management
### 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?**

- 10% Not a priority
- 41% No space
- 28% Financial constraints
- 4% Psychological reasons
- 17% Religious & cultural reasons

**Drainage**

- **71%**
  - have drains outside the home

**How do people treat their water?**

- **58%** Cover
- **40%** Boiling
- **1%** Cloth filter
- **1%** Water filter

**Health & hygiene**

- **1%** Diarrhea
- **7%** Chikungunya

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

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

Breakup of WATSAN spending

- 51% Electricity
- 13% Others
- 36% Maintenance and repair

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

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

*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

Water

What are the primary water sources?

- 8% Water from field pumps
- 25% Bore Well
- 27% River
- 17% Mini water supply
- 19% Public tap
- 4% Open well

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

WATSAN score (on a scale of 100)

<table>
<thead>
<tr>
<th></th>
<th>District</th>
<th>State</th>
</tr>
</thead>
<tbody>
<tr>
<td>Water supply infrastructure</td>
<td>60</td>
<td>75</td>
</tr>
<tr>
<td>Sanitation</td>
<td>54</td>
<td>49</td>
</tr>
<tr>
<td>Health Indicator</td>
<td>92</td>
<td>86</td>
</tr>
<tr>
<td>Governance</td>
<td>85</td>
<td>76</td>
</tr>
<tr>
<td>Satisfaction level</td>
<td>41</td>
<td>49</td>
</tr>
</tbody>
</table>

Water supply infrastructure: Piped water and MWS are the main sources of water.
Sanitation: Financial constraints is the reason cited for not having toilets.
Health Indicator: Incidence of diarrhea and Incidence of chikungunya are low.
Governance: Village elders play a crucial role to address water problems.
Satisfaction level: People are partially satisfied with quality & management of water.

Water Quality

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

- Fluoride: 43%
- Nitrate: 31%
- Bacteria: 34%

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.

Water

Incidence of diarrhea & Incidence of chikungunya are low.
Village elders play a crucial role to address water problems.
People are partially satisfied with quality & management of water.
**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?**

- 74% Financial constraints
- 22% No space
- 1% Religious & cultural reasons
- 3% Psychological reasons

**Drainage**

- **55%** have drains outside the home

---

**How do people treat their water?**

- 68% Nothing
- 15% Boiling
- 13% Cloth filter
- 4% Water filter

**Most people keep their water covered**

- Health & hygiene

  - **13%** Chikungunya
  - **3%** Diarrhea

Out of 8 GPs surveyed, 100% reported incidences of diarrhea and chikungunya
Schemes & Finances

Ongoing schemes in our gram panchayat

<table>
<thead>
<tr>
<th>Scheme</th>
<th>Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>ARWSP</td>
<td></td>
</tr>
<tr>
<td>JaN Reddy</td>
<td></td>
</tr>
<tr>
<td>Suvarna Jal</td>
<td></td>
</tr>
<tr>
<td>Swajaladhar</td>
<td>✔️</td>
</tr>
<tr>
<td>NREGA</td>
<td>✔️</td>
</tr>
<tr>
<td>JSYS</td>
<td></td>
</tr>
</tbody>
</table>

Breakup of WATSAN spending

- 13% Capital investment
- 5% Others
- 36% Maintenance and repair
- 46% Electricity

People’s main demands

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

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

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

* 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 and 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

**Water**

**What are the primary water sources?**

- 51% Piped Water
- 20% Bore Well
- 6% River/tank/stream
- 8% Open Well
- 15% Mini water supply

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

**WATSAN score (on a scale of 100)**

<table>
<thead>
<tr>
<th>Water supply infrastructure</th>
<th>District</th>
<th>State</th>
</tr>
</thead>
<tbody>
<tr>
<td>Piped water is the main source of water</td>
<td>88</td>
<td>75</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Sanitation</th>
<th>District</th>
<th>State</th>
</tr>
</thead>
<tbody>
<tr>
<td>Financial &amp; space constraints are cited for not having toilets</td>
<td>53</td>
<td>49</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Health Indicator</th>
<th>District</th>
<th>State</th>
</tr>
</thead>
<tbody>
<tr>
<td>Incidences of chikungunya reported are high</td>
<td>85</td>
<td>86</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Governance</th>
<th>District</th>
<th>State</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gram panchayat plays a crucial role to address water problems</td>
<td>86</td>
<td>76</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Satisfaction level</th>
<th>District</th>
<th>State</th>
</tr>
</thead>
<tbody>
<tr>
<td>People are not satisfied with quantity &amp; management of water</td>
<td>24</td>
<td>49</td>
</tr>
</tbody>
</table>

**Water Quality**

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

- 64% Fluoride
- 16% Nitrate
- 29% Bacteria

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?**

- 33% No space
- 3% Not a priority
- 1% Religious & cultural reasons
- 2% Psychological reasons
- 61% Financial constraints

**Drainage**

52% have drains outside the home

**How do people treat their water?**

- 48% Nothing
- 16% Water filter
- 32% Boiling
- 4% Cloth filter

16% out of 8 GPs surveyed, incidences of diarrhea were reported from 4 GPs and incidence of chikungunya were reported from 4 GPs

---

**Health & hygiene**

**Outcomes 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%

---

**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**

- Maintenance and repair 41%
- Electricity 31%
- Capital investment 2%
- Others 2%

---

**People's main demands**

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

---

**Equity**

- Low income 22%
- 54%
- 22%
- 3%
- 24%

- Middle income 33%
- 48%
- 17%
- 29%
- 4%
- 29%

- High income 49%
- 45%
- 16%
- 66%
- 1%
- 24%

Refers to percentage of households

ASHWAS 2008-09
Schemes & Finances

Ongoing schemes in our gram panchayat

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

Breakup of WATSAN spending

- 26% Maintenance and repair
- 41% Electricity
- 31% Capital investment
- 2% Others

People’s main demands

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

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

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

* 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)  

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

Water

What are the primary water sources?

- Piped Water: 49%
- Mini water supply: 8%
- River: 10%
- Open well: 5%
- Bore Well: 28%

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.

<table>
<thead>
<tr>
<th></th>
<th>District</th>
<th>State</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fluoride</td>
<td>73%</td>
<td></td>
</tr>
<tr>
<td>Nitrate</td>
<td>45%</td>
<td></td>
</tr>
<tr>
<td>Bacteria</td>
<td>9%</td>
<td></td>
</tr>
</tbody>
</table>

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?

- 32% No space
- 29% Financial constraints
- 2% Religious & cultural reasons
- 2% Psychological reasons
- 5% Not a priority

Drainage

67%

have drains outside the home

How do people treat their water?

- 70% Nothing
- 28% Boiling
- 1% Cloth filter
- 1% Water filter

Most people keep their water covered

Health & hygiene

Diarrhea 29%

Chikungunya 3%

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
- ✔ Jal Nirmal
- ✔ Suvarna Jal
- ✔ Swajaladhara
- ✔ NREGA
- ✔ JSYS
- ✔ TSC
- ❌ Sachethana
- ❌ Swachha Grama Yojana
- ✔ Swarna Gramodaya
- ✔ Watershed Project
- ❌ Others

Breakup of WATSAN spending

- 28% Maintenance and repair
- 42% Electricity
- 20% Others
- 10% Capital investment

People’s main demands

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

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

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

* 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)

| Water supply infrastructure | 66 | 75 |
| Sanitation | 56 | 49 |
| Health Indicator | 95 | 86 |
| Governance | 92 | 76 |
| Satisfaction level | 77 | 49 |

Water supply infrastructure: Piped water & MWS are the main sources of water
Sanitation: Financial constraints are cited for not having toilets
Health Indicator: Incidence of diarrhea and incidence of chikungunya are low
Governance: Gram panchayat plays a crucial role to address water problems
Satisfaction level: People are partially satisfied with quality & management of water

Water

What are the primary water sources?

- Piped water: 32%
- Mini water supply: 26%
- Bore Well: 9%
- River: 9%
- Open well: 24%

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

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

<table>
<thead>
<tr>
<th>Fluoride</th>
<th>Nitrate</th>
<th>Bacteria</th>
</tr>
</thead>
<tbody>
<tr>
<td>31%</td>
<td>5%</td>
<td>66%</td>
</tr>
</tbody>
</table>

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

Village Water & Sanitation Committees

9% of the villages have a VWSC; but none of them are functioning
**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?**

- 15%: No space
- 4%: Not a priority
- 1%: Religious & cultural reasons
- 3%: Psychological reasons
- 77%: Financial constraints

**Drainage**

- **28%** have drains outside the home.

**How do people treat their water?**

- Water filter: 3%
- Boiling: 11%
- Cloth filter: 16%
- Nothing: 70%

**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
- Jal Nirmal
- Suvarna Jal
- Swajaladhara
- NREGA
- JSYS
- TSC
- Sachethana
- Swachha Grama Yojana
- Suvarna Gramodaya
- Watershed Project

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

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

*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 Gadjeshwara 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

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

Water

What are the primary water sources?

- Piped Water: 43%
- River/tank/stream: 37%
- Bore Well: 11%
- Mini water supply: 1%
- Open well: 3%
- Traditional well: 1%

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

WATSAN score (on a scale of 100)

<table>
<thead>
<tr>
<th>Water supply infrastructure</th>
<th>District</th>
<th>State</th>
</tr>
</thead>
<tbody>
<tr>
<td>Piped water is the main source of water</td>
<td>55</td>
<td>75</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Sanitation</th>
<th>District</th>
<th>State</th>
</tr>
</thead>
<tbody>
<tr>
<td>Financial constraints are cited for not having toilets</td>
<td>65</td>
<td>49</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Health Indicator</th>
<th>District</th>
<th>State</th>
</tr>
</thead>
<tbody>
<tr>
<td>Incidences of chikungunya reported are high</td>
<td>55</td>
<td>86</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Governance</th>
<th>District</th>
<th>State</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gram panchayat plays the main role to address water problems</td>
<td>36</td>
<td>76</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Satisfaction level</th>
<th>District</th>
<th>State</th>
</tr>
</thead>
<tbody>
<tr>
<td>People are satisfied with quality &amp; management of water</td>
<td>82</td>
<td>49</td>
</tr>
</tbody>
</table>

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

Fluoride  
Nitrate  
Bacteria

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
- **93%** depend on groundwater for their domestic needs

Reliability

- **4%** reported drinking water problems in the last one year

Groundwater dependency in district

- **6%** store water because of irregular supply, while 91% store water because it is ‘easier’

Reasons cited for water supply disruption (by the villagers)

<table>
<thead>
<tr>
<th>Reason</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reduced water yield</td>
<td>50%</td>
</tr>
<tr>
<td>Water contamination</td>
<td>24%</td>
</tr>
<tr>
<td>Problem during summer</td>
<td>14%</td>
</tr>
<tr>
<td>Financial reason</td>
<td>5%</td>
</tr>
</tbody>
</table>

Sanititation, health & hygiene

Access to toilets

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

Why don’t people build toilets?

<table>
<thead>
<tr>
<th>Reason</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Not a priority</td>
<td>11%</td>
</tr>
<tr>
<td>Financial constraints</td>
<td>89%</td>
</tr>
</tbody>
</table>

Drainage

- **17%** have drains outside the home

Health & hygiene

- **87%** reported incidences of diarrhea and chikungunya

How do people treat their water?

- **53%** Nothing
- **44%** Boiling
- **1%** Water filter
- **2%** Cloth filter

Most people keep their water covered
**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**

- 26% Maintenance and repair
- 14% Capital investment
- 13% Others
- 47% Electricity

**People's main demands**

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

**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**

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

*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%)
Ongoing schemes in our gram panchayat
- ARWSP
- TSC
- Jal Nirmal
- Sachethana
- Suvarna Jal
- Swachha Grama Yojana
- Swajaladhara
- Suvarna Gramodaya
- NREGA
- Watershed Project
- JSYS
- Others

Schemes Finances & Breakup of WATSAN spending
- Rs. 1,45,000/-

People's main demands
- 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%)

Maintenance and repair
- 26%
- Electricity
- 14%
- Capital investment
- 13%
- Others

WATSAN score (on a scale of 100)
- District
- State
- Water supply infrastructure
  - Open well is the main source of water
- Sanitation
  - Financial constraints & Not a priority are cited for not having toilets
- Health Indicator
  - Incidence of diarrhea and incidence of chikungunya are low
- Governance
  - Gram panchayat plays a crucial role to address water problems
- Satisfaction level
  - People are partially satisfied with quality & quantity of water

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

Water
What are the primary water sources?
- Piped Water: 20%
- Mini water supply: 15%
- Bore Well: 5%
- River/tank stream: 35%
- Open well: 35%

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

Data not available
- Fluoride
- 19%
- Nitrate
- 4%
- Bacteria

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?

3% No space
31% Religious & cultural reasons
2% Psychological reasons
64% Financial constraints

Drainage

10% have drains outside the home

How do people treat their water?

- Water filter 8%
- Boiling 45%
- Cloth filter 5%
- Nothing 42%

Most people keep their water covered

Health & hygiene

2% Diarrhea
1% Chikungunya

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

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

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

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
Schemes & Finances

Ongoing schemes in our gram panchayat

- ARWSP
- Jal Nirmal
- Suvarna Jal
- NREGA
- JSYS

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

Breakup of WATSAN spending

- 23% Maintenance and repair
- 31% Capital investment
- 43% Electricity
- 3% Others

Equity

<table>
<thead>
<tr>
<th>Derived category</th>
<th>Having household connection</th>
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</thead>
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<td>Low income</td>
<td>5%</td>
<td>92%</td>
<td>79%</td>
<td>46%</td>
<td>5%</td>
<td>0%</td>
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<tr>
<td>Middle income</td>
<td>8%</td>
<td>77%</td>
<td>74%</td>
<td>70%</td>
<td>4%</td>
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</tr>
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<td>9%</td>
<td>57%</td>
<td>73%</td>
<td>89%</td>
<td>5%</td>
<td>1%</td>
</tr>
</tbody>
</table>

* 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%
- Taluks: 7
- Number of GPs: 260
- Number of GPs covered in ASHWAS: 8

Water

What are the primary water sources?

- Piped water: 50%
- Open well: 28%
- Mini water supply: 9%
- Bore well: 7%
- River: 6%

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.

WATSAN score (on a scale of 100)

<table>
<thead>
<tr>
<th></th>
<th>District</th>
<th>State</th>
</tr>
</thead>
<tbody>
<tr>
<td>Water supply infrastructure</td>
<td>66</td>
<td>75</td>
</tr>
<tr>
<td>Sanitation</td>
<td>76</td>
<td>49</td>
</tr>
<tr>
<td>Health Indicator</td>
<td>87</td>
<td>86</td>
</tr>
<tr>
<td>Governance</td>
<td>94</td>
<td>76</td>
</tr>
<tr>
<td>Satisfaction level</td>
<td>51</td>
<td>49</td>
</tr>
</tbody>
</table>

Piped water is the main source of water.
Financial constraints are cited for not having toilets.
Incidences of chikungunya reported are high.
Local politician plays a crucial role to address water problems.
People are not satisfied with quality & management of water.

Governance

45% of the GPs in your district have water testing kits distributed by the government. 86% of these kits have been used.
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’

Sanitation, health & hygiene

Access to toilets

71% have access to toilets. Most of them use pour flush toilets

Why don’t people build toilets?

- 16% No space
- 11% Not a priority
- 1% Religious & cultural reasons
- 4% Psychological reasons
- 68% Financial constraints

Drainage

69% have drains outside the home

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

People’s main demands

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

Breakup of WATSAN spending

- 60% Electricity
- 33% Maintenance and repair
- 4% Others
- 3% Capital investment

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

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

* 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

Water

What are the primary water sources?

- 83% Open well
- 12% Public tap
- 4% Mini water supply
- 1% River

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

Sanitation, health & hygiene

Access to toilets

**58%**

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

Why don’t people build toilets?

- **15%** No space
- **19%** Not a priority
- **66%** Financial constraints

Drainage

**8%**

have drains outside the home

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%**

How do people treat their water?

- **66%** Nothing
- **33%** Boiling
- **1%** Water filter

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

Diarrhea  Chikungunya

- **1%**
- **4%**
Schemes & Finances

Ongoing schemes in our gram panchayat

- ARWSP
- TSC
- Jal Nirmal
- Sachethana
- Suvarna Jal
- Swachha Grama Yojana
- Swajaladharar
- Suvarna Gramodaya
- NREGA
- Watershed Project
- JSYS
- Others

People’s main demands

- Financial support to build toilets
- Better water supply facility
- Toilets

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

<table>
<thead>
<tr>
<th>Derived category</th>
<th>Having household connection</th>
<th>Storing water in bindiges*</th>
<th>Not paying user charges</th>
<th>Having access to toilets</th>
<th>Incidence of diarrhea</th>
<th>Incidence of chikungunya</th>
</tr>
</thead>
<tbody>
<tr>
<td>Low income</td>
<td>4%</td>
<td>79%</td>
<td>96%</td>
<td>19%</td>
<td>0%</td>
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<tr>
<td>Middle income</td>
<td>6%</td>
<td>80%</td>
<td>83%</td>
<td>45%</td>
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<tr>
<td>High income</td>
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<td>60%</td>
<td>94%</td>
<td>77%</td>
<td>4%</td>
<td>5%</td>
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</table>

*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 Biliadi 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

Water

What are the primary water sources?

- 55% Open Well
- 15% Public tap
- 14% River
- 8% Mini water supply
- 7% Bore Well
- 1% Tanker

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

WATSAN score (on a scale of 100)

<table>
<thead>
<tr>
<th>District</th>
<th>State</th>
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</thead>
<tbody>
<tr>
<td>Water supply infrastructure</td>
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<tr>
<td>Sanitation</td>
<td>53</td>
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<tr>
<td>Health Indicator</td>
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<tr>
<td>Governance</td>
<td>50</td>
</tr>
<tr>
<td>Satisfaction level</td>
<td>57</td>
</tr>
</tbody>
</table>

Open well is the main source of water

Financial & space constraints are cited for not having toilets

Incidence of diarrhea and incidence of chikungunya are low

Local politician plays a crucial role to address water problems

People are not satisfied with water services & management

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.

Sanitation, health & hygiene

Access to toilets

53% have access to toilets. Most of them use pour flush toilets.

Why don’t people build toilets?

- 24% No space
- 13% Not a priority
- 1% Psychological reasons
- 62% Financial constraints

Drainage

25% have drains outside the home.

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%

How do people treat their water?

- 7% Water filter
- 1% Chlorine Tablet
- 9% Boiling
- 24% Cloth filter
- 59% Nothing

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**
- **Jal Nirmal**
- **Suvarna Jal**
- **Swajaladhara**
- **NREGA**
- **Small irrigation & pipe water plan**

**Breakup of WATSAN spending**

- **25%** Electricity
- **19%** Maintenance and repair
- **17%** Others
- **39%** Capital investment

**People’s main demands**

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

**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**

<table>
<thead>
<tr>
<th>Derived category</th>
<th>Having household connection</th>
<th>Storing water in bindiges*</th>
<th>Not paying user charges</th>
<th>Having access to toilets</th>
<th>Incidence of diarrhea</th>
<th>Incidence of chikungunya</th>
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</thead>
<tbody>
<tr>
<td>Low income</td>
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<td>68%</td>
<td>34%</td>
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</table>

* 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

<table>
<thead>
<tr>
<th>District</th>
<th>River/ tank/stream</th>
<th>Open well</th>
<th>Hand pump &amp; borewell</th>
<th>Mini water supply</th>
<th>Piped water</th>
<th>Public tap</th>
<th>Water from the field</th>
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<td><strong>24</strong></td>
<td><strong>34</strong></td>
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</table>

All values are in %
## Fluoride contamination

<table>
<thead>
<tr>
<th>District</th>
<th>Above permissible level (1 to 3 ppm)</th>
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</thead>
<tbody>
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<td>Bagalkot</td>
<td>80</td>
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<td>Bangalore Rural</td>
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## Nitrate contamination

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*All values are in %*
## Bacteriological contamination

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<th>Contaminated Sources</th>
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<td>Ramanagram</td>
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<td><strong>State Average</strong></td>
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</table>

All values are in %
## OD Percentage

<table>
<thead>
<tr>
<th>District</th>
<th>% OD</th>
</tr>
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<tbody>
<tr>
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<td>Bangalore Rural</td>
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<td>Bellary</td>
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<td>Bidar</td>
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<td>Bijapur</td>
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<td>Chamarajanagar</td>
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<td>Chikballapur</td>
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<td>Chikkamaglur</td>
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</tr>
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<td>Chitradurga</td>
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<td>Dharawad</td>
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<td>49</td>
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<tr>
<td><strong>State Average</strong></td>
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</table>

## WATSAN Expenditure

<table>
<thead>
<tr>
<th>District</th>
<th>Per capita WATSAN expenditure (Rs.)</th>
<th>Average expenditure per GP (Lakhs)</th>
</tr>
</thead>
<tbody>
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<tr>
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<td>1.14</td>
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<td>2.96</td>
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<td><strong>State Average</strong></td>
<td><strong>43</strong></td>
<td><strong>2.82</strong></td>
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### District Score Chart: An indication of where the districts stand in WATSAN parameters

<table>
<thead>
<tr>
<th>District</th>
<th>Water supply infrastructure</th>
<th>Water quality</th>
<th>Sanitation</th>
<th>Health indicator</th>
<th>Governance</th>
<th>Satisfaction level</th>
<th>Overall</th>
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<td>53</td>
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<td>62</td>
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</table>

All values are in %
SPOTLIGHT
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**

<table>
<thead>
<tr>
<th>Economic Grouping</th>
<th>Low</th>
<th>Medium</th>
<th>High</th>
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</thead>
<tbody>
<tr>
<td>% Households</td>
<td>15</td>
<td>24</td>
<td>33</td>
</tr>
</tbody>
</table>

**Storage of water in bindiges (vessels)**

<table>
<thead>
<tr>
<th>Economic Grouping</th>
<th>Low</th>
<th>Medium</th>
<th>High</th>
</tr>
</thead>
<tbody>
<tr>
<td>% Households</td>
<td>53</td>
<td>43</td>
<td>36</td>
</tr>
</tbody>
</table>

\(^1\) 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

<table>
<thead>
<tr>
<th>Economic category</th>
<th>Low</th>
<th>Medium</th>
<th>High</th>
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</thead>
<tbody>
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<td>Boil</td>
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<td>13</td>
<td>16</td>
</tr>
<tr>
<td>Use water filter</td>
<td>0</td>
<td>2</td>
<td>6</td>
</tr>
<tr>
<td>Filter by cloth</td>
<td>23</td>
<td>22</td>
<td>20</td>
</tr>
<tr>
<td>Cover</td>
<td>52</td>
<td>51</td>
<td>49</td>
</tr>
<tr>
<td>Do nothing</td>
<td>15</td>
<td>12</td>
<td>9</td>
</tr>
</tbody>
</table>

Not paying water charges

![Bar chart](image)

Access to toilet

![Bar chart](image)

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

![Pie chart](image)

* 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?

- 39% Burn it
- 37% Dispose in open space
- 10% Dust bin
- 6% Dispose in drainage
- 6% Flush out in the toilet
- 2% Dispose in water
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. 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.

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.
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**Water Supply**

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**Sanitation and Hygiene**

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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 in 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.
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.

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.

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Institutional Strengthening

Finances

ASHWAS 2008-09

ANNEXURE
ASHWAS

A survey of household water and sanitation

Argyam 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
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---

Water and Sanitation Rating (on a scale of 100)

<table>
<thead>
<tr>
<th>Component</th>
<th>Rating</th>
</tr>
</thead>
<tbody>
<tr>
<td>Water supply infrastructure</td>
<td>99</td>
</tr>
<tr>
<td>Good provision of infrastructure</td>
<td></td>
</tr>
<tr>
<td>Water availability</td>
<td>100</td>
</tr>
<tr>
<td>Public tap and MWS are the main source of water in your GP</td>
<td></td>
</tr>
<tr>
<td>Usage of household toilets</td>
<td>14</td>
</tr>
<tr>
<td>GP lacks toilet facilities</td>
<td></td>
</tr>
<tr>
<td>Drainage coverage</td>
<td>47</td>
</tr>
<tr>
<td>Most of the wastewater flows on the roads/kitchen garden</td>
<td></td>
</tr>
<tr>
<td>Health Indicator</td>
<td>61</td>
</tr>
<tr>
<td>High incidence of diseases reported</td>
<td></td>
</tr>
<tr>
<td>Governance</td>
<td>95</td>
</tr>
<tr>
<td>Good governance system is in place</td>
<td></td>
</tr>
<tr>
<td>Satisfaction level</td>
<td>77</td>
</tr>
<tr>
<td>Most people are satisfied with water quality &amp; management</td>
<td></td>
</tr>
</tbody>
</table>

Respondents Profile (Derived economic status)

- 64% Medium Income
- 29% Low Income
- 7% High Income

Respondents Profile (Education Based)

- 27% Illiterate
- 32% Primary School
- 23% High School
- 18% College

---

**Muddapura**

- *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

---

Women testing water in Muddapura, where the fluoride level has been found to be high.
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?

<table>
<thead>
<tr>
<th>Village</th>
<th>Test results</th>
</tr>
</thead>
<tbody>
<tr>
<td>Muddapura</td>
<td>Fluoride in Borewell PWS, MWS &amp; bacteria contamination</td>
</tr>
<tr>
<td>Surenahalli</td>
<td>Fluoride in Borewell PWS</td>
</tr>
<tr>
<td>Siddavannadurga</td>
<td>Fluoride in Borewell MWS</td>
</tr>
<tr>
<td>Chikkabigere</td>
<td>Fluoride in Borewell MWS</td>
</tr>
<tr>
<td>Hire Kabbigere</td>
<td>Fluoride in Borewell MWS and Borewell PWS. Bacterial contamination in Borewell PWS</td>
</tr>
</tbody>
</table>

PWS - Piped water supply  
MWS - Mini water supply

Note: Test results can be seen in page 166

Sourcing

What are our sources of water for general household purposes?

- River/Lake
- Rainwater
- Public Tap
- Open well
- Mini water supply (MWS)
- Hand pump
- 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

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

In India, thousands of borewells have dried up due to over extraction of ground water. Recharging with rainwater can replenish the water table

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Sustainability

In India, thousands of borewells have dried up due to over extraction of ground water. Recharging with rainwater can replenish the water table
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?

<table>
<thead>
<tr>
<th>Source</th>
<th>Reasons of disruption</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mini Water Supply(MWS)</td>
<td>Power cut, Pipes damage, Motor damage, Financial Reason</td>
</tr>
<tr>
<td>Public Tap</td>
<td>Power cut, Motor damage</td>
</tr>
<tr>
<td>Individual Piped Water</td>
<td>Power cut, Motor damage, Broken taps</td>
</tr>
</tbody>
</table>

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).

16% Male children

45% Adult female

19% Female children

20% Adult male

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?

- 6% Not a priority
- 63% Financial constraints
- 31% No space

What is the status of school toilets in our GP?

<table>
<thead>
<tr>
<th>School</th>
<th>Toilets Presence</th>
<th>Toilets Usage</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>All ✓ Some</td>
<td>All ✓ Some ✓</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Anganwadi</th>
<th>Toilets Presence</th>
<th>Toilets Usage</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>All ✓ Some</td>
<td>All ✓ Some ✓</td>
</tr>
</tbody>
</table>

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

Use

- Cloth 95%
- Cotton 1%
- Napkin 4%

Frequency of change

- Monthly 37%
- 2-3 months 62%
- 6 months

Washing

- Water 11%
- Soap 89%
- Bleaching powder

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?

- 33% Filter by cloth
- 48% Covered
- 17% Nothing
- 1% Water filter
- 1% Chlorine tablet

What is our opinion on overall sanitation in Gram Panchayat?

- 84% Clean in some places
- 10% Clean everywhere
- 6% Generally unclean
- 1% Covered
- 1% Water filter
- 1% Chlorine tablet

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

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.
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%
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

Are we satisfied with the water service and management?

80%
Fully satisfied
19%
Partly satisfied
1%
Not satisfied

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?

49%
Maintenance and repair
18%
capital investment
33%
Electricity
Role of VWSC

Village Water and Sanitation Committee (VWSC) is constituted by the 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.

Are there village water & sanitation committees?

<table>
<thead>
<tr>
<th>Village</th>
<th>Committee</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chikkabbigere</td>
<td></td>
</tr>
<tr>
<td>Hire Kabbigere</td>
<td></td>
</tr>
<tr>
<td>Muddapura</td>
<td></td>
</tr>
<tr>
<td>Siddavanadurga</td>
<td></td>
</tr>
<tr>
<td>Surenahalli</td>
<td></td>
</tr>
</tbody>
</table>

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.
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

* States Best
Public Demand

What are your demands for improving the water and sanitation situation in Holemannur?

![Pie chart showing public demands]

- 38% Toilets
- 28% Drainage facility
- 15% Better water supply facility
- 9% Clean Village
- 4% Financial support to build toilet
- 6% Quality drinking water

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.

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

<table>
<thead>
<tr>
<th>Source</th>
<th>Fluoride (ppm)</th>
<th>Nitrate (ppm)</th>
<th>Bacteriological Contamination</th>
</tr>
</thead>
<tbody>
<tr>
<td>Borewell MWS</td>
<td>1.5</td>
<td>40</td>
<td>No</td>
</tr>
<tr>
<td>Borewell MWS</td>
<td>1.5</td>
<td>10</td>
<td>No</td>
</tr>
<tr>
<td>Borewell PWS</td>
<td>2.0</td>
<td>0</td>
<td>Yes</td>
</tr>
<tr>
<td>Borewell MWS</td>
<td>1.5</td>
<td>25</td>
<td>No</td>
</tr>
</tbody>
</table>

### Surenahalli

<table>
<thead>
<tr>
<th>Source</th>
<th>Fluoride (ppm)</th>
<th>Nitrate (ppm)</th>
<th>Bacteriological Contamination</th>
</tr>
</thead>
<tbody>
<tr>
<td>Borewell PWS</td>
<td>1.5</td>
<td>0</td>
<td>No</td>
</tr>
</tbody>
</table>

### Siddavanadurga

<table>
<thead>
<tr>
<th>Source</th>
<th>Fluoride (ppm)</th>
<th>Nitrate (ppm)</th>
<th>Bacteriological Contamination</th>
</tr>
</thead>
<tbody>
<tr>
<td>Borewell MWS</td>
<td>2.0</td>
<td>25</td>
<td>No</td>
</tr>
</tbody>
</table>

### Chikkabigere

<table>
<thead>
<tr>
<th>Source</th>
<th>Fluoride (ppm)</th>
<th>Nitrate (ppm)</th>
<th>Bacteriological Contamination</th>
</tr>
</thead>
<tbody>
<tr>
<td>Borewell MWS</td>
<td>2.0</td>
<td>25</td>
<td>No</td>
</tr>
</tbody>
</table>

### Hirekabigere

<table>
<thead>
<tr>
<th>Source</th>
<th>Fluoride (ppm)</th>
<th>Nitrate (ppm)</th>
<th>Bacteriological Contamination</th>
</tr>
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<tbody>
<tr>
<td>Borewell MWS</td>
<td>2.0</td>
<td>40</td>
<td>No</td>
</tr>
<tr>
<td>Borewell PWS</td>
<td>2.0</td>
<td>10</td>
<td>Yes</td>
</tr>
</tbody>
</table>

---

*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.
Questions to be asked at households

Interviewer's name_____________________________
District's name ________________________________
Taluk's name _________________________________
Gram Panchayath's name _______________________
Name of the Village ____________________________

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 Panchayath. 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).

7.  Details of the Family

Interview Staring time _________________________
Ending time __________________________________
Reviewer's name  _____________________________
Spot check by  _______________________________
Re reviewer's name ____________________________

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
   Age
   Occupation
   Education
   Sex
   Male     1
   Female 2
   Married         1
   Not Married  2
   Widow          3
   Widower       4
   Divorced       5

Annexure

All information in this report card has been collected at household level and from Gram Panchayat members.
Questions to be asked at households

<table>
<thead>
<tr>
<th>Interviewer’s name</th>
<th>Interview Staring time</th>
<th>District’s name</th>
<th>Ending time</th>
<th>Taluk’s name</th>
<th>Reviewer’s name</th>
<th>Gram Panchayath’s name</th>
<th>Spot check by</th>
<th>Name of the Village</th>
<th>Re reviewer’s name</th>
</tr>
</thead>
</table>

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 Panchayath. 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).*

7. Details of the Family

<table>
<thead>
<tr>
<th>Name of the member Of the family</th>
<th>Sex Male 1 Female 2</th>
<th>Age</th>
<th>Whether married</th>
<th>Education</th>
<th>Occupation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Name of the member Of the family</td>
<td>1 2</td>
<td>1 2 3 4 5</td>
<td>Married</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td></td>
<td>1 2</td>
<td>1 2 3 4 5</td>
<td>Not Married</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td></td>
<td>1 2</td>
<td>1 2 3 4 5</td>
<td>Widow</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td></td>
<td>1 2</td>
<td>1 2 3 4 5</td>
<td>Widower</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td></td>
<td>1 2</td>
<td>1 2 3 4 5</td>
<td>Divorced</td>
<td>5</td>
<td></td>
</tr>
</tbody>
</table>
8. Condition of the house (building)
Kutcha 1  Semi Pucca 2  Pucca 3

9. Mention whether the following facilities are available at home

<table>
<thead>
<tr>
<th>Cooking Fuel source</th>
<th>Equipment at home</th>
<th>Conveyance utilities</th>
<th>Livestock</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gas</td>
<td>Radio</td>
<td>Bicycle</td>
<td>Cow/ Ox</td>
</tr>
<tr>
<td>Biogas</td>
<td>TV</td>
<td>Motor cycle/ Scooter</td>
<td>Buffalo/Bull</td>
</tr>
<tr>
<td>Kerosene</td>
<td>Phone</td>
<td>Car</td>
<td>Goat/Sheep</td>
</tr>
<tr>
<td>Charcoal</td>
<td></td>
<td>Tractor</td>
<td>Chicken/ Duck</td>
</tr>
<tr>
<td>Firewood</td>
<td></td>
<td>Bullock cart</td>
<td>Pig</td>
</tr>
</tbody>
</table>

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.

<table>
<thead>
<tr>
<th>Sl. No.</th>
<th>Water source</th>
<th>For what purpose do you use this water (there may be more than one answer)</th>
<th>Availability Throughout the year</th>
<th>How often do you collect water</th>
<th>Distance inside the house/very near</th>
<th>How many pots of Water do you use</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>River, Lake, Pond</td>
<td>For Drinking 1</td>
<td>Everyday 1</td>
<td>Once in 2-3 days</td>
<td>&lt;1.6 km 2</td>
<td>Nil 1 1-3 2 4-6 3 7-9 4</td>
</tr>
<tr>
<td>2</td>
<td>Open well</td>
<td>For Drinking 1</td>
<td>Only in rainy season or summer 2</td>
<td>Once in a Week</td>
<td>&gt; 1.6 km 3</td>
<td>10-12 5 &gt;13 6</td>
</tr>
<tr>
<td>3</td>
<td>Shallow hand pump</td>
<td>For Drinking 1</td>
<td>Everyday 1</td>
<td>Once in 2-3 days</td>
<td>&lt;1.6 km 2</td>
<td>Nil 1 1-3 2 4-6 3 7-9 4</td>
</tr>
<tr>
<td>4</td>
<td>Bore well, Hand pump</td>
<td>For Drinking 1</td>
<td>Only in rainy season or summer 2</td>
<td>Once in a Week</td>
<td>&gt; 1.6 km 3</td>
<td>10-12 5 &gt;13 6</td>
</tr>
<tr>
<td>5</td>
<td>Mini water supply project</td>
<td>For Drinking 1</td>
<td>Everyday 1</td>
<td>Once in 2-3 days</td>
<td>&lt;1.6 km 2</td>
<td>Nil 1 1-3 2 4-6 3 7-9 4</td>
</tr>
<tr>
<td>6</td>
<td>Piped water connection</td>
<td>For Drinking 1</td>
<td>Only in rainy season or summer 2</td>
<td>Once in a Week</td>
<td>&gt; 1.6 km 3</td>
<td>10-12 5 &gt;13 6</td>
</tr>
<tr>
<td>7</td>
<td>Public Tap (through piped water connection)</td>
<td>For Drinking 1</td>
<td>Everyday 1</td>
<td>Once in 2-3 days</td>
<td>&lt;1.6 km 2</td>
<td>Nil 1 1-3 2 4-6 3 7-9 4</td>
</tr>
<tr>
<td>8</td>
<td>Tanker</td>
<td>For Drinking 1</td>
<td>Only in rainy season or summer 2</td>
<td>Once in a Week</td>
<td>&gt; 1.6 km 3</td>
<td>10-12 5 &gt;13 6</td>
</tr>
<tr>
<td>9</td>
<td>Traditional source (well, pond)</td>
<td>For Drinking 1</td>
<td>Everyday 1</td>
<td>Once in 2-3 days</td>
<td>&lt;1.6 km 2</td>
<td>Nil 1 1-3 2 4-6 3 7-9 4</td>
</tr>
<tr>
<td>10</td>
<td>Rain Water</td>
<td>For Drinking 1</td>
<td>Only in rainy season or summer 2</td>
<td>Once in a Week</td>
<td>&gt; 1.6 km 3</td>
<td>10-12 5 &gt;13 6</td>
</tr>
<tr>
<td>11</td>
<td>Water flows from the field</td>
<td>For Drinking 1</td>
<td>Everyday 1</td>
<td>Once in 2-3 days</td>
<td>&lt;1.6 km 2</td>
<td>Nil 1 1-3 2 4-6 3 7-9 4</td>
</tr>
</tbody>
</table>
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)

<table>
<thead>
<tr>
<th>Water usage</th>
<th>For use on subsequent days</th>
<th>What’s the reason for storing water? (mark)</th>
<th>For how long do you store water?</th>
<th>Do you have enough utensils and space for storing water?</th>
<th>Do you cover the stored water?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Drinking</td>
<td>Yes 1</td>
<td>The Water source is too far away 1</td>
<td>One day 1</td>
<td>Yes 1</td>
<td>Yes 1</td>
</tr>
<tr>
<td></td>
<td>No. 2</td>
<td>Irregular supply 2</td>
<td>Three days 2</td>
<td>No. 2</td>
<td>No. 2</td>
</tr>
<tr>
<td></td>
<td>Ask question B</td>
<td>It is easier Other 3</td>
<td>For more than three days 3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other purposes</td>
<td>Yes 1</td>
<td>The Water source is too far away 1</td>
<td>One day 1</td>
<td>Yes 1</td>
<td>Yes 1</td>
</tr>
<tr>
<td></td>
<td>No. 2</td>
<td>Irregular supply 2</td>
<td>Three days 2</td>
<td>No. 2</td>
<td>No. 2</td>
</tr>
<tr>
<td></td>
<td>Ask question 6</td>
<td>It is easier Other 3</td>
<td>For more than three days 3</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

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?

<table>
<thead>
<tr>
<th>Drinking water</th>
<th>Daily 1</th>
<th>Once in two days 2</th>
<th>Twice in a week 3</th>
<th>Weekly once 4</th>
<th>Once in a while 5</th>
<th>Never 6</th>
</tr>
</thead>
<tbody>
<tr>
<td>For other purposes</td>
<td>Daily 1</td>
<td>Once in two days 2</td>
<td>Twice in a week 3</td>
<td>Weekly once 4</td>
<td>Once in a while 5</td>
<td>Never 6</td>
</tr>
</tbody>
</table>

6. Whether water supplied is sufficient enough for your daily needs?

<table>
<thead>
<tr>
<th>Drinking water</th>
<th>Enough water is supplied throughout the year 1</th>
<th>No. Enough water is not supplied throughout the year 2</th>
<th>Water supply stops during summer 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>For other purposes</td>
<td>Enough water is supplied throughout the year 1</td>
<td>No. Enough water is not supplied throughout the year 2</td>
<td>Water supply stops during summer 3</td>
</tr>
</tbody>
</table>

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?

<table>
<thead>
<tr>
<th>None</th>
<th>Rs 25 per month or less than that</th>
<th>Between Rs 26 to 50 per month</th>
<th>Between Rs 51 to 74 per month</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Between Rs 76 to 100 per month</th>
<th>More than Rs 100 per month</th>
<th>We pay it in a different way (specify__________)</th>
</tr>
</thead>
<tbody>
<tr>
<td>5</td>
<td>6</td>
<td></td>
</tr>
</tbody>
</table>

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_____________) 4

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.

<table>
<thead>
<tr>
<th>Source of water</th>
<th>Problem/ event</th>
<th>Nature of the problem</th>
<th>Whom did you contact</th>
<th>Was the problem solved?</th>
<th>Time taken to solve the problem? (Days)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Drinking water (Primary source)</td>
<td>Yes 1</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>No 2</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Gram Panchayath                        1</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Village water and sanitary committee    2</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Voluntary organizations                 3</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Waterman                             4</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Head of the community/Elected representative 5</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Other (specify)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Yes 1</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>No 2</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

| 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                        |

(Annexure 173)
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?

<table>
<thead>
<tr>
<th>To whom did you pay the money</th>
<th>How much did you pay</th>
<th>I was forced to pay</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>In Rupees</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td></td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>1</td>
<td>2</td>
</tr>
</tbody>
</table>

21. Are you satisfied with the water supply and its quality?

<table>
<thead>
<tr>
<th>Issue</th>
<th>Fully satisfied 1</th>
<th>Partly satisfied 2</th>
<th>Not satisfied 3</th>
<th>Cannot say anything 4</th>
<th>Reasons for dissatisfaction (There may be more than one answer)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Water quantity</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>It is not enough for all the uses 1</td>
</tr>
<tr>
<td></td>
<td>2</td>
<td>2</td>
<td>4</td>
<td></td>
<td>It is enough only for cooking 2</td>
</tr>
<tr>
<td></td>
<td>3</td>
<td>4</td>
<td></td>
<td></td>
<td>It is not enough even for drinking 3</td>
</tr>
<tr>
<td></td>
<td>4</td>
<td></td>
<td></td>
<td></td>
<td>Fluoride 1</td>
</tr>
<tr>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td>Nitrite 2</td>
</tr>
<tr>
<td></td>
<td>2</td>
<td></td>
<td></td>
<td></td>
<td>Water with soil content 3</td>
</tr>
<tr>
<td></td>
<td>3</td>
<td></td>
<td></td>
<td></td>
<td>Salt content 4</td>
</tr>
<tr>
<td></td>
<td>4</td>
<td></td>
<td></td>
<td></td>
<td>Excessive Iron content 5</td>
</tr>
<tr>
<td></td>
<td>5</td>
<td></td>
<td></td>
<td></td>
<td>Odor 6</td>
</tr>
<tr>
<td></td>
<td>6</td>
<td></td>
<td></td>
<td></td>
<td>Water is dirty 7</td>
</tr>
<tr>
<td>Overall service and management</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td></td>
</tr>
</tbody>
</table>
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?

<table>
<thead>
<tr>
<th>Reason</th>
<th>Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>It is not clean and not healthy</td>
<td>1</td>
</tr>
<tr>
<td>Toilets is not functioning properly</td>
<td>5</td>
</tr>
<tr>
<td>Religious and cultural reasons</td>
<td>9</td>
</tr>
<tr>
<td>It smells</td>
<td>2</td>
</tr>
<tr>
<td>It is inconvenient</td>
<td>3</td>
</tr>
<tr>
<td>Not accustomed to using it</td>
<td>4</td>
</tr>
<tr>
<td>There is no water in the toilet</td>
<td>6</td>
</tr>
<tr>
<td>We use it as a store room</td>
<td>7</td>
</tr>
<tr>
<td>It is too small</td>
<td>8</td>
</tr>
<tr>
<td>Others (specify)</td>
<td></td>
</tr>
</tbody>
</table>

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.

<table>
<thead>
<tr>
<th>Type of Toilet</th>
<th>Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Water seal</td>
<td>1</td>
</tr>
<tr>
<td>Pour flush</td>
<td>2</td>
</tr>
<tr>
<td>Dry toilet</td>
<td>3</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Refuse Disposal</th>
<th>Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Single pit</td>
<td>1</td>
</tr>
<tr>
<td>Twin pit</td>
<td>2</td>
</tr>
<tr>
<td>Soaking pit</td>
<td>3</td>
</tr>
<tr>
<td>Waste pit</td>
<td>5</td>
</tr>
<tr>
<td>To the fields</td>
<td>6</td>
</tr>
<tr>
<td>Kitchen garden</td>
<td>7</td>
</tr>
<tr>
<td>I don’t know</td>
<td>8</td>
</tr>
</tbody>
</table>

29. If you are not using the toilet at home, where do you go to answer your nature’s call?
   Public toilet 1  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?

<table>
<thead>
<tr>
<th>Problem</th>
<th>Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>It is not safe/ dangerous</td>
<td>1</td>
</tr>
<tr>
<td>Uncomfortable</td>
<td>2</td>
</tr>
<tr>
<td>It is not healthy</td>
<td>3</td>
</tr>
<tr>
<td>Water problem</td>
<td>4</td>
</tr>
<tr>
<td>It is possible to go there only in the early morning or late evening</td>
<td>5</td>
</tr>
<tr>
<td>Embarrassment</td>
<td>6</td>
</tr>
<tr>
<td>Others (specify)</td>
<td></td>
</tr>
</tbody>
</table>

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

<table>
<thead>
<tr>
<th>Waste water after washing clothes</th>
<th>Bath water</th>
<th>Kitchen refuse</th>
<th>From the toilets</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1 2 3 4 5 6 7 8</td>
<td>1 2 3 4 5 6 7 8</td>
<td>1 2 3 4 5 6 7 8</td>
</tr>
</tbody>
</table>

40. What is the overall sanitary condition in the village?
   Generally unclean 1   Clean at some places 2   Clean everywhere 3

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

<table>
<thead>
<tr>
<th>After defecation</th>
<th>Before cooking</th>
<th>1 2 3 4</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 2 3 4</td>
<td>1 2 3 4</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>After cleaning the baby</th>
<th>Before Eating</th>
<th>1 2 3 4</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 2 3 4</td>
<td>1 2 3 4</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>After handling live stock</th>
<th>After using pesticide</th>
<th>1 2 3 4</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 2 3 4</td>
<td>1 2 3 4</td>
<td></td>
</tr>
</tbody>
</table>

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 |

46. 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?

<table>
<thead>
<tr>
<th>Problems</th>
<th>Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>Toilet is too small</td>
<td>1</td>
</tr>
<tr>
<td>It is not comfortable</td>
<td>2</td>
</tr>
<tr>
<td>There is no proper seating arrangement</td>
<td>3</td>
</tr>
<tr>
<td>Other</td>
<td>4</td>
</tr>
</tbody>
</table>

44. Ask these questions only to women

1. When women have their periods, what type of protection do they use?
   - Cloth 1
   - Cotton 2
   - Sanitary napkin 3

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

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

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) 4

45. What are your suggestions to improve Water and sanitary conditions in your village?
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.

<table>
<thead>
<tr>
<th>Sl. No</th>
<th>Village name</th>
<th>Sl. No</th>
<th>Village name</th>
<th>Sl. No</th>
<th>Hamlet name</th>
<th>Sl. No</th>
<th>Hamlet name</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
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</tr>
</tbody>
</table>

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

<table>
<thead>
<tr>
<th>Sl. No</th>
<th>Resource</th>
<th>Yes- 1</th>
<th>No - 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>Anganavadi</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>B</td>
<td>Primary schools</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>C</td>
<td>Middle/High schools</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>D</td>
<td>Post Office</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>E</td>
<td>Primary health Centre/ Sub- Centre</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>F</td>
<td>Bank</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>G</td>
<td>Panchayat Office</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>H</td>
<td>Industries</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>I</td>
<td>Others ( pl. specify)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
8. Information regarding active and suspended water supply and sanitary projects.

<table>
<thead>
<tr>
<th>Projects</th>
<th>Year of implementation</th>
<th>Current Status</th>
<th>Reasons for suspension or termination of project</th>
<th>Is/was the Project useful to you</th>
<th>Is/was there 100% coverage in the project implementation</th>
<th>Which basic resource was created</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>1. Project term ended</td>
<td>Yes 1</td>
<td>Yes 1</td>
<td>Mini water supply 1</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>2. There are no funds</td>
<td>No 2</td>
<td>No 2</td>
<td>Public Taps 2</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>3. Other</td>
<td></td>
<td></td>
<td>Domestic water supply 3</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Hand Pump 4</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Tank 5</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Rain water harvesting 6</td>
</tr>
<tr>
<td>RGDWM</td>
<td>1</td>
<td>(go to E)</td>
<td>1. Project term ended</td>
<td>Yes 1</td>
<td>Yes 1</td>
<td>Domestic Toilets have been built 1</td>
</tr>
<tr>
<td></td>
<td></td>
<td>2</td>
<td>2. There are no funds</td>
<td>No 2</td>
<td>No 2</td>
<td>Public Toilets have been built 2</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>3. Other</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total Sanitary Campaign</td>
<td>1</td>
<td>(go to E)</td>
<td>1. Project term ended</td>
<td>Yes 1</td>
<td>Yes 1</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>2</td>
<td>2. There are no funds</td>
<td>No 2</td>
<td>No 2</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>3. Other</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pure Water (Jal Nirmal)</td>
<td>1</td>
<td>(go to E)</td>
<td>1. Project term ended</td>
<td>Yes 1</td>
<td>Yes 1</td>
<td>Mini water supply 1</td>
</tr>
<tr>
<td></td>
<td></td>
<td>2</td>
<td>2. There are no funds</td>
<td>No 2</td>
<td>No 2</td>
<td>Public Taps 2</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>3. Other</td>
<td></td>
<td></td>
<td>Domestic water supply 3</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Hand Pump 4</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Tank 5</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Rain Water harvesting 6</td>
</tr>
<tr>
<td>Sachethana</td>
<td>1</td>
<td>(go to E)</td>
<td>1. Project term ended</td>
<td>Yes 1</td>
<td>Yes 1</td>
<td>Construction of ponds to recharge bore wells 1</td>
</tr>
<tr>
<td></td>
<td></td>
<td>2</td>
<td>2. There are no funds</td>
<td>No 2</td>
<td>No 2</td>
<td>Rain water harvesting 2</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>3. Other</td>
<td></td>
<td></td>
<td>Farm ponds 3</td>
</tr>
<tr>
<td>Project</td>
<td>1 (go to E)</td>
<td>2</td>
<td>1. Project term ended</td>
<td>2</td>
<td>3. Other</td>
<td>1</td>
</tr>
<tr>
<td>----------------------------------------------</td>
<td>-------------</td>
<td>---</td>
<td>-----------------------</td>
<td>---</td>
<td>----------</td>
<td>---</td>
</tr>
<tr>
<td>Suvarna Jala</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
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<td></td>
</tr>
</tbody>
</table>

| Swachha Grama Yojana                        | 1           |   |                       |   |          |   |       |       | Toilet built for households 1     |
|                                             |             |   |                       |   |          |   |       |       | Built public toilets 2           |
|                                             |             |   |                       |   |          |   |       |       | Open drains 3                    |
|                                             |             |   |                       |   |          |   |       |       | Garbage dump 4                   |

| Suvarna Gramodaya                           | 1           |   |                       |   |          |   |       |       | 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           |   |                       |   |          |   |       |       | Mini water supply 1              |
|                                             |             |   |                       |   |          |   |       |       | Public taps 2                    |
|                                             |             |   |                       |   |          |   |       |       | Water connection to house holds 3|
|                                             |             |   |                       |   |          |   |       |       | Hand pump 4                      |
|                                             |             |   |                       |   |          |   |       |       | Pond 5                           |
|                                             |             |   |                       |   |          |   |       |       | Rain water harvesting 6          |

| NREGA                                       | 1           |   |                       |   |          |   |       |       | Farm ponds 1                     |
|                                             |             |   |                       |   |          |   |       |       | Watershed development 2          |

| Annexure                                    | 179         |   |                       |   |          |   |       |       |                                   |
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 | Nitrate content is high | There are bacteria | other |
    |-------------------------|-------------------------|-------------------|-------|
    | 1                       | 2                       | 3                 | 4     |

13. What were the measures taken to tackle this problem?

<table>
<thead>
<tr>
<th>It has been discussed in the Gram Panchayath meeting</th>
<th>Created awareness among villagers</th>
<th>The water sample has been sent to the laboratory for testing</th>
<th>We have started to use other sources</th>
<th>Other</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td></td>
</tr>
</tbody>
</table>

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?

<table>
<thead>
<tr>
<th>Village water and sanitation committee</th>
<th>Village Health and sanitation committee</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes 1 (in how many villages ________)</td>
<td>Yes 1 (in how many villages ________)</td>
</tr>
<tr>
<td>No 2 (Ask question 20)</td>
<td>No 2 (Ask question 20)</td>
</tr>
</tbody>
</table>

19. How are the committees functioning?

<table>
<thead>
<tr>
<th>Village water and sanitation committee</th>
<th>Village Health and sanitation committee</th>
</tr>
</thead>
<tbody>
<tr>
<td>Members are actively participating 1</td>
<td>Members are actively participating 1</td>
</tr>
<tr>
<td>There is only building but no members 2</td>
<td>There is only building but no members 2</td>
</tr>
<tr>
<td>It is only on paper 3</td>
<td>It is only on paper 3</td>
</tr>
</tbody>
</table>

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?

<table>
<thead>
<tr>
<th>Disease</th>
<th>Yes 1</th>
<th>Total no of patients</th>
<th>Total no of deaths</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>No 2</td>
<td>Less than 5</td>
<td>Less than 5</td>
</tr>
<tr>
<td></td>
<td>(Ask question 21)</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td></td>
<td>5 - 10</td>
<td>5 - 10</td>
</tr>
<tr>
<td></td>
<td></td>
<td>11 - 20</td>
<td>11 - 20</td>
</tr>
<tr>
<td></td>
<td></td>
<td>&gt;21</td>
<td>&gt;21</td>
</tr>
<tr>
<td>Diarrhea</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>2</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>3</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>4</td>
<td>4</td>
<td>4</td>
</tr>
<tr>
<td>Cikungunya</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>2</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>3</td>
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<td>3</td>
</tr>
<tr>
<td></td>
<td>4</td>
<td>4</td>
<td>4</td>
</tr>
</tbody>
</table>

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

<table>
<thead>
<tr>
<th>Name of the voluntary service Organization/NGO</th>
<th>In which water and sanitation Project is it involved</th>
<th>Does the NGO have any disputes with the Gram Panchayath?</th>
</tr>
</thead>
<tbody>
<tr>
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</tr>
</tbody>
</table>

Annexure
Questions to be asked to the Gram Panchayath President/ Leader. (Try to interview 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?

<table>
<thead>
<tr>
<th>Reason</th>
<th>Yes</th>
<th>No</th>
<th>Others</th>
</tr>
</thead>
<tbody>
<tr>
<td>Water source has dried up</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>Increase in population</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>Project term ended</td>
<td>7</td>
<td>8</td>
<td>9</td>
</tr>
<tr>
<td>Load Shedding (Electricity shortage)</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>Transformer gets damaged</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
</tbody>
</table>

3. What are the Electricity related problems that affect water supply in general? (There may be more than one answer)

<table>
<thead>
<tr>
<th>Problem</th>
<th>Yes</th>
<th>No</th>
<th>Others</th>
</tr>
</thead>
<tbody>
<tr>
<td>Load Shedding (Electricity shortage)</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>Transformer gets damaged</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
</tbody>
</table>

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?

<table>
<thead>
<tr>
<th>Defect</th>
<th>Yes</th>
<th>No</th>
<th>Others</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fluoride defects</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>Nitrite defects</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>Excessive Salt contents</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
</tbody>
</table>

6. Who is responsible for repair and maintenance?

<table>
<thead>
<tr>
<th>Responsible</th>
<th>Yes</th>
<th>No</th>
<th>Others</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gram Panchayath</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>Village Water and sanitation committee</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
</tbody>
</table>

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?

<table>
<thead>
<tr>
<th>All houses have toilets</th>
<th>25% of houses have toilets</th>
<th>26-50% of houses have toilets</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes 1</td>
<td>No 2</td>
<td>I do not know 3</td>
</tr>
<tr>
<td>50-75% of houses have</td>
<td></td>
<td></td>
</tr>
<tr>
<td>toilets</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4</td>
<td></td>
<td></td>
</tr>
<tr>
<td>More than 75% of houses</td>
<td></td>
<td></td>
</tr>
<tr>
<td>have toilets</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5</td>
<td></td>
<td></td>
</tr>
<tr>
<td>None of the houses have</td>
<td></td>
<td></td>
</tr>
<tr>
<td>toilets</td>
<td></td>
<td></td>
</tr>
<tr>
<td>6</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

12. Is there a community toilet facility in the village?

Yes 1  No 2  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  No 2  I do not know 3

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

Anganavadis  In all the Anganavadis 1  In some Anganavadis 2  No 3

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  Water is not available in toilets 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  Community 3  Others 4

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?

<table>
<thead>
<tr>
<th>Open place 1</th>
<th>Compost pit 2</th>
<th>Waste bin 3</th>
<th>Waste Pit 4</th>
<th>This work is not done at Gram Panchayath level</th>
<th>Other (specify)</th>
</tr>
</thead>
</table>

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

<table>
<thead>
<tr>
<th>Water Source</th>
<th>Is the water source working or defunct?</th>
<th>Is water being supplied?</th>
<th>Whether all communities in the village use this water source</th>
<th>Quality of the water?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lake/river/stream/pond</td>
<td>getting water 1</td>
<td>regularly 1</td>
<td>yes 1</td>
<td>good 1</td>
</tr>
<tr>
<td></td>
<td>defunct 2</td>
<td>sometimes regularly 2</td>
<td>no 2  give reasons:</td>
<td>bad 2</td>
</tr>
<tr>
<td></td>
<td></td>
<td>irregular 3</td>
<td>caste 1, unique 2, far 3, others</td>
<td></td>
</tr>
<tr>
<td>Rain water</td>
<td>water available 1</td>
<td>regularly 1</td>
<td>yes 1</td>
<td>good 1</td>
</tr>
<tr>
<td></td>
<td>defunct 2</td>
<td>sometimes regularly 2</td>
<td>no 2  give reasons:</td>
<td>bad 2</td>
</tr>
<tr>
<td></td>
<td></td>
<td>irregular 3</td>
<td>caste 1, unique 2, far 3, others</td>
<td></td>
</tr>
<tr>
<td>Ground water (Open well/ Shallow hand pump/ Deep hand pump)</td>
<td>water available 1</td>
<td>regularly 1</td>
<td>yes 1</td>
<td>good 1</td>
</tr>
<tr>
<td></td>
<td>defunct 2</td>
<td>sometimes regularly 2</td>
<td>no 2  give reasons:</td>
<td>bad 2</td>
</tr>
<tr>
<td></td>
<td></td>
<td>irregular 3</td>
<td>caste 1, unique 2, far 3, others</td>
<td></td>
</tr>
<tr>
<td>Water source</td>
<td>Reason for water disruption</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>--------------</td>
<td>-----------------------------</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lake/river/stream</td>
<td>The source is dried up</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Natural calamity</td>
<td>2</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Water is contaminated</td>
<td>3</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Financial reason</td>
<td>4</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

2. Reasons commonly found for disruption in water supply (you can choose more than one reason)
### Rain water

<table>
<thead>
<tr>
<th>Reason</th>
<th>Frequency</th>
</tr>
</thead>
<tbody>
<tr>
<td>Natural calamity</td>
<td>1</td>
</tr>
<tr>
<td>Water is contaminated</td>
<td>2</td>
</tr>
<tr>
<td>Financial reason</td>
<td>3</td>
</tr>
<tr>
<td>The canal or tanks used for rain water harvest is damaged</td>
<td>4</td>
</tr>
</tbody>
</table>

### Ground water (open well/shallow hand pump/deep hand pump)

<table>
<thead>
<tr>
<th>Reason</th>
<th>Frequency</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pipes are broken</td>
<td>1</td>
</tr>
<tr>
<td>Tap is broken</td>
<td>2</td>
</tr>
<tr>
<td>Water supply switch is not switched on-time</td>
<td>3</td>
</tr>
<tr>
<td>Power cut</td>
<td>4</td>
</tr>
<tr>
<td>Source is dried up</td>
<td>5</td>
</tr>
<tr>
<td>Lack of staff</td>
<td>6</td>
</tr>
<tr>
<td>Natural calamity</td>
<td>7</td>
</tr>
<tr>
<td>Contaminated water</td>
<td>8</td>
</tr>
<tr>
<td>Financial reason</td>
<td>9</td>
</tr>
<tr>
<td>Underground pump is under repair</td>
<td>10</td>
</tr>
<tr>
<td>Motor is damaged</td>
<td>11</td>
</tr>
<tr>
<td>Water level has gone down</td>
<td>12</td>
</tr>
</tbody>
</table>

### Mini water supply scheme

<table>
<thead>
<tr>
<th>Reason</th>
<th>Frequency</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pipes are broken</td>
<td>1</td>
</tr>
<tr>
<td>Tap is broken</td>
<td>2</td>
</tr>
<tr>
<td>Water supply switch is not switched on-time</td>
<td>3</td>
</tr>
<tr>
<td>Power cut</td>
<td>4</td>
</tr>
<tr>
<td>Source is dried up</td>
<td>5</td>
</tr>
<tr>
<td>Lack of staff</td>
<td>6</td>
</tr>
<tr>
<td>Natural calamity</td>
<td>7</td>
</tr>
<tr>
<td>Contaminated water</td>
<td>8</td>
</tr>
<tr>
<td>Financial reason</td>
<td>9</td>
</tr>
<tr>
<td>Underground pump is under repair</td>
<td>10</td>
</tr>
<tr>
<td>Motor is damaged</td>
<td>11</td>
</tr>
<tr>
<td>Water level has gone down</td>
<td>12</td>
</tr>
</tbody>
</table>

### House has piped water connection (through tap)

<table>
<thead>
<tr>
<th>Reason</th>
<th>Frequency</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pipes are broken</td>
<td>1</td>
</tr>
<tr>
<td>Tap is broken</td>
<td>2</td>
</tr>
<tr>
<td>Water supply switch is not switched on-time</td>
<td>3</td>
</tr>
<tr>
<td>Power cut</td>
<td>4</td>
</tr>
<tr>
<td>Source is dried up</td>
<td>5</td>
</tr>
<tr>
<td>Lack of staff</td>
<td>6</td>
</tr>
<tr>
<td>Natural calamity</td>
<td>7</td>
</tr>
<tr>
<td>Contaminated water</td>
<td>8</td>
</tr>
<tr>
<td>Financial reason</td>
<td>9</td>
</tr>
<tr>
<td>Underground pump is under repair</td>
<td>10</td>
</tr>
<tr>
<td>Motor is damaged</td>
<td>11</td>
</tr>
<tr>
<td>Water level has gone down</td>
<td>12</td>
</tr>
</tbody>
</table>

### Public Tap (piped water connection)

<table>
<thead>
<tr>
<th>Reason</th>
<th>Frequency</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pipes are broken</td>
<td>1</td>
</tr>
<tr>
<td>Tap is broken</td>
<td>2</td>
</tr>
<tr>
<td>Water supply switch is not switched on-time</td>
<td>3</td>
</tr>
</tbody>
</table>
### 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?

<table>
<thead>
<tr>
<th>Sl. No</th>
<th>Name of the committee</th>
<th>Role of the committee</th>
</tr>
</thead>
</table>

### 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  

---

### Other Sources of Water

<table>
<thead>
<tr>
<th>Source</th>
<th>Fluoride (ppm)</th>
<th>Nitrate (ppm)</th>
<th>Micro-organisms (H2S test)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Handpump</td>
<td>Yes/No</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Open well</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>River/Stream/Lake/Tank</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Borewell - MWS</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Borewell - PWS</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

---

### Date

Date: ____________________________

---

### Organization

Organization: ____________________

---

### Signature

Signature: _______________________

---

### Back checked by

Back checked by: ___________________
**Water Quality Data Sheet**

**WATER QUALITY DATA**

Name of village: _________________  Name of Gram Panchayat: _________________
Taluka: _________________  District: _________________

<table>
<thead>
<tr>
<th>Sl. No.</th>
<th>Source</th>
<th>Fluoride (ppm)</th>
<th>Nitrate (ppm)</th>
<th>Micro-organisms (H2S test)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Handpump</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>Open well</td>
<td></td>
<td></td>
<td>Yes/No</td>
</tr>
<tr>
<td>3</td>
<td>River/Stream/Lake/Tank</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>Borewell - MWS</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>Borewell - PWS</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

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-50, 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
SNEHAKUNJJA
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
Rajeevandgti 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

Benchmarking India's Public Services, 2005, Public Affairs Centre, Bangalore

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People, water and sanitation-what they know, believe and do in rural India, 1989, The National Drinking Water Mission, Government Of India, New Delhi

People's Audit of Health, Education and Livelihoods (PAHELI), 2007, Pratham, New Delhi

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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.
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**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.
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.