



BIU Behavioural
Insights Unit
of India



JAL JEEVAN MISSION Behavioural Diagnostic Report

November 2022

TATA TRUSTS



Disclaimers



This document presents key community-centric desired behaviours in JJM, and the salient motivators and barriers that those behaviours are observed to operate under. The findings and analysis in this report must be viewed in the context of the following disclaimers:

1. While the telephonic interviews and consultations spanned across stakeholders from all regions of India, the in-depth field study is based on data from specific contexts of Jharkhand, Gujarat, Rajasthan, Uttar Pradesh and Andhra Pradesh. As such, the findings may not be fully generalizable
2. In several districts and states, JJM is operating on a 'mission mode' with the physical provision of the tap on priority. As such, many of the community-engagement modalities (such as payments) are yet to be executed
3. Any early solutions presented in this report are based on evidence from the field and suggestions from people working on-ground. However these solutions have not been empirically tested yet.



NITI Aayog

BIU Behavioural
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of India



पेयजल एवं सफाई विभाग
असु सुविधा मिशन
भारत सरकार
DEPARTMENT OF DRINKING WATER AND SANITATION
MINISTRY OF JAL SHAKTI
GOVERNMENT OF INDIA

JAL JEEVAN MISSION

Behavioural Diagnostic Report

November 2022

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Letter from Vice Chairman, NITI Aayog

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On behalf of NITI Aayog, I am pleased to note the concentrated effort that has been taken by the Behavioural Insights Unit of India (BIU) to identify and address the behavioural aspects of the National Jal Jeevan Mission in a scientific manner through this Behavioural Diagnostic for NJJM Report.

Underpinned in the vision of 'Har Ghar Jal', NJJM has the potential to expedite India's journey towards achieving Sustainable Development Goal Three (Good Health and Well-being), Five (Gender Equality), and Six (Clean Water and Sanitation). More importantly, NJJM aims to accomplish the mammoth goal of supplying tap water to every rural household in the country by 2024, achieving. As such, this report provides valuable and unique insights on the behavioural barriers and levers present within the NJJM ecosystem and the scientific tools that may be used to address these aspects. I am especially pleased to note the specific actions that the report has highlighted which are necessary for the long-term sustainability of NJJM, and more importantly, of water.

Behavioural Diagnostic for NJJM Report is, indeed, the first of its kind publication in India, which will bolster the behaviour change efforts of several policy programmes in India. I am certain that this knowledge resource will offer actionable insights to different stakeholders for strengthening the sustainable implementation of NJJM.

I congratulate Shri Parameswaran Iyer, CEO, NITI Aayog, for guiding the efforts of the BIU team in this endeavour, Smt. Vini Mahajan, Secretary, Ministry of Drinking Water and Sanitation, for offering valuable inputs throughout the preparation of the report and to the Aspirational Districts Programme team for facilitating insights from the field. Lastly, I applaud the concerted efforts of the Behavioural Insights Unit of India who have led the development of this report in a scientific and rigorous manner, in partnership with the Centre for Social and Behaviour Change and the Tata Trusts.

(Suman Bery)



Foreword by CEO, NITI Aayog

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Parameswaran Iyer
मुख्य कार्यकारी अधिकारी
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FOREWORD

Achieving sustainable water security for all populations is now a global priority, and the Jal Jeevan Mission is instrumental in expediting India's journey towards the same by 2024. At the outset, I would like to first commend the efforts of the Department of Drinking Water and Sanitation, Ministry of Jal Shakti, State Missions, Aspirational Districts Program and all other institutions, communities and individuals who are working tirelessly to achieve this aspiration of creating a water-secure nation under JJM.

In this context, I am pleased to note the efforts of the Behavioural Insights Unit of India at NITI Aayog, in partnership with the Centre for Social and Behaviour Change, in methodically applying the research on behaviour science to the successful implementation of the Jal Jeevan Mission. I also extend my deep appreciation to the various on-ground partners, state and district officials who have facilitated the authors' research into the Jal Jeevan Mission.

India's experience with the Swachh Bharat Mission has also demonstrated that for any successful policy behavioural insights cannot remain an afterthought. Swachh Bharat is an example of how large-scale behaviour change programs can be successfully implemented in India. The goals of citizen participation and community uptake need a rigorous and scientific approach during policy design and implementation.

Behavioural insights can thus act as a guide in understanding why people do what they do, which is a key consideration when designing and implementing any successful policy. This document seeks to inform policymakers, implementers and other stakeholders about behavioural considerations for implementing JJM.

I hope that the insights presented in this report will assist decision-makers at the state, district and community levels in taking evidence-based and behaviourally-informed decisions and accelerate the achievement of total water security in India.

Parameswaran Iyer
(Parameswaran Iyer)



S

Special Remarks by Secretary, Department of Drinking Water and Sanitation

विनी महाजन
VINI MAHAJAN
सचिव
Secretary



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आज़ादी का
अमृत महोत्सव

भारत सरकार
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Message

The Jal Jeevan Mission has made remarkable progress in providing drinking water to rural households across geographics, with over 10.2 crore households (53.3%, as of 23rd September 2022) having received Functional Household Tap Connections, and six States/ UTs reported 100% coverage.

I am confident that the Jal Jeevan Mission will achieve the aspirational dream of tap water reaching every rural Indian household, very soon. And I would like to take the opportunity to thank all state missions, district officials, PRIs, village communities and development partners for their efforts in tirelessly driving the mission forward since its inception three years ago in 2019.

While rapid progress is being made towards bringing water to everyone's doorstep, efforts towards sustainability are critical especially in view of the relatively low availability of fresh water in our country, and rising demands. In this regard, behaviour science can play a pivotal role in encouraging participatory behaviours from the community that may, in-turn, drive the objectives of sustainability. As seen during the Swachh Bharat Mission, behaviour change activities can have a lasting impact on development indicators that tend to last longer than the duration and scope of the scheme.

This document has been drafted with the intent of arming JJM policymakers, implementers and partners with a behavioural lens to the program and the water sector. It provides research insights, prompts, ideas and a methodology that stakeholders can use to develop relevant behaviour change initiatives suited to their local context.

I extend my compliments to the various private and public sector partners of JJM, and on-ground functionaries whose invaluable inputs have shaped this document. I would also like to appreciate NITI Aayog and the Behavioural Insights Unit of India team for their efforts in developing this publication.

I hope this report will be used to improve the services and impact of JJM and ensure its sustainability in the coming years.

(Vini Mahajan)

How to use the report



Traditional approaches to economics and policy-making have assumed that human beings are rational actors who make rational decisions to maximise their economic benefits. However, in reality, people often make choices that are detrimental to their well-being, such as smoking or rash driving. Behavioural economics moves away from the traditional assumption of rationality to understand why people make the decisions they do in real life. It includes insights from economics and psychology to deconstruct decision-making in human beings, along with insights from the larger field of behavioural sciences.¹

A behavioural approach to public policy is underscored by the fact that people make imperfect decisions and that the decision-making process is riddled with biases. It seeks to explore behavioural barriers of inaction (or undesired actions) to design solutions that can make it easier or more natural for people to follow a specific behaviour. As such, leveraging behavioural insights can help to design and implement more citizen-centric policies.² For example, children's immunisation is influenced by the availability of the necessary infrastructure and resources and their parents' motivation to complete the immunisation cycle. Borrowing insights from economics, psychology, and neurosciences, a behavioural lens can provide a realistic understanding of how people may respond to an intervention. Taking the above example forward, it may be likely that parents are hesitant to vaccinate their children as they are not fully aware of its benefits and side effects. A behavioural approach will explore why parents may not be vaccinating their children in the presence of physical and human infrastructure and design potential solutions to alleviate parents' concerns.

In countries such as the United States of America and the United Kingdom, behavioural economics has been used in policy-making across sectors such as agriculture, finance, and the environment. (Reisch and Sunstein, 2018). For instance, the UK introduced tax prompts leading to timely payments by more citizens by simply adding the line "most people pay their tax on time" in letters to taxpayers.³ By leveraging people's desire to conform to what the majority around them are doing (paying taxes on time, in this case), the Behavioural Insights Team in the UK demonstrated how social norms can be leveraged to drive behaviour change.⁴

The increasing adoption of a behavioural approach in public policies creates a unique opportunity for India. On the one hand, India could learn from other countries' experiences, while on the other, emerge as a leader in the space of behavioural public policy in the Global South. Using JJM as the policy programme of interest, the report diagnoses different motivations, decision making rubrics and mental models of relevant individuals and communities.

A list of specific actions or behaviours that individuals must undertake at different stages of JJM for the programme to be successful and sustainable is specified on pages 35-37. Insights on barriers and facilitators that the above behaviours may face is specified on pages 38-49.

Please note that all of these findings may not be applicable or relevant to your geography or context. Hence

¹ *Thematic Report on Behaviour Change, DMEQ, 2022*

² *John, 2015*

³ *Halpern & Sanders, 2016*

⁴ *Larkin et al., 2018*

you are encouraged to use the applied-exercise worksheets provided in the appendix to derive insights that are applicable to your contexts. The worksheets will help contextualise behaviour change to your region. You are encouraged to take active notes in the space provided.

At the end of finishing the report, we hope that you will be able to identify key actions or behaviours that are needed to make JJM sustainable in your context, insights on barriers and levers that those desired behaviours face, and some early ideas on how to address these behavioural barriers. You may also be able to identify best practices from your region that can be scaled.

Acknowledgements



We would like to sincerely thank Shri Suman Bery, Vice-Chairman NITI Aayog, and Shri Parameswaran Iyer, Chief Executive Officer, who have been instrumental mentors throughout the endeavour of writing this document, providing all necessary support and guidance for the timely completion of the project. We are also grateful to Ms. Vini Mahajan, Secretary of Department Drinking Water and Sanitation for her foresight and invaluable inputs towards this report.

This report is a product of rigorous work and efforts by the entire team of the Behavioural Insights Unit of India (BIU) at NITI Aayog. Special mention is accorded to Ms. Cheistha Kochhar, Senior Advisor of the BIU, Mrs. Nilanjana Bagotra, Deputy Programme Manager at BIU and Ms. Ananya Iyer, Associate at BIU for authoring this report as a useful and actionable knowledge resource. We are also grateful to our behavioural expert, Dr. Shagata Mukherjee, Lead of the BIU and Deputy Director of Centre for Social and Behaviour Change for continuous support and timely inputs in designing this report.

We also extend our heartfelt gratitude to Dr. Pavan Mamidi, Dr. Sharon Marie Barnhardt, Ms. Diksha Radhakrishnan, Ms. Nympha Noronha, Ms. Selva Swetha and Ms. Jocelyn Joseph from the Centre for Social and Behaviour Change, Mr. Divyang Waghela and the team from Tata Trusts, Mr. Ketan Hingu and the team from the Coastal Salinity Prevention Cell, Mr. Kalyan Ram Challapali, Mrs. Prerna Dubey Gupta and the Wolfzhowl team for their consistent inputs towards generating the behavioural insights displayed in this document. This report would not have been possible without the invaluable insights, efforts and cooperation of officials across the central, state and district levels who, on all occasions, have assisted and warmly hosted the BIU team.

Lastly, we express our heartfelt gratitude to our on-ground partners, Tata Trusts, Piramal Foundation, and their state field teams- whose experiences and insights have been invaluable contributions to this diagnostic report.

In accordance with the massive scope and scale of the exercise, this report owes its successful completion to the dedicated efforts of a wide variety of stakeholders. We extend our deep gratitude to them all.

Abbreviations



ASHA	Accredited Social Health Activist
AWC	Aanganwadi Centre
AWW	Aanganwadi Workers
BASIC	Behaviour, Analysis, Strategy, Intervention, Change framework
BC	Behaviour Change
BIU/ NITI-BIU	Behavioural Insights Unit of India, NITI Aayog
BMGF	Bill and Melinda Gates Foundation
CSBC	Centre for Social and Behaviour Change
EAST	Easy, Attractive, Social, Timely framework
FTK	Field Testing Kit
GP	Gram Panchayat
HH	Household
IEC	Information, Education, Communication
JJM / JJM	Jal Jeevan Mission
NITI Aayog	National Institute for Transforming India
O&M	Operations and Maintenance
OECD	Organisation for Economic Co-operation and Development
PMAY-U	Pradhan Mantri Awas Yojana - Urban
SBCC	Social and Behaviour Change Communication
SHG	Self-Help Groups
UTs	Union Territories
VAP	Village Action Plan
VWSC	Village Water and Sanitation Committee

Executive Summary

Announced by the Hon'ble Prime Minister Shri. Narendra Modi in 2019, the Jal Jeevan Mission (JJM) is a mission-mode initiative that aims to provide a Functional Household Tap Connection (FHTC) to every rural household by 2024. The objectives of JJM are to empower women, manage water resources sustainably, and provide safe drinking water.

Every phase of JJM's life cycle works towards the sustainability of the programme, and of water. The scheme's long-term success requires individuals to take several actions within and outside the household. However, uptake of such behaviours may be subject to several barriers (systemic, social, or psychological). Behavioural solutions can be designed to counteract these barriers, encourage uptake of these behaviours, and improve the sustainability of the program.

In this context, the Jal Jeevan Mission Behavioural Diagnostic Report has been produced with the objectives of -

1. Identifying key behaviours and actions that specific target groups must undertake at different stages of JJM
2. Identifying motivators and barriers that may facilitate or impede the above desired behaviours respectively
3. Providing directional recommendations for behaviour change activities in JJM, based on (1) and (2).

This report also provides applied exercises for officials and development practitioners to develop their own regional insights and tailor context-relevant behavioural solutions.

Findings of the following report are based on extensive research via rigorous literature reviews, policy reviews, stakeholder consultations and field research across multiple states.

The following section details the five categories of citizens' behaviours required for the success of JJM, and barriers and motivators relevant to each category.

1. Ownership: All behaviours and activities that show a community or individual's desire to contribute to microdecisions through all phases of the program. The key barriers and levers to ownership behaviours are available here.

2. Payment: Any activities or conduct that makes it easier for individual families to pay the initial financial contribution for the installation of JJM and pay the monthly water user charges. The key barriers and levers to payment behaviours are available here.

3. Maintenance: All behaviours that result in the active maintenance of the assets and infrastructure built under JJM, including water sources, overhead tanks, pipes, taps, and other fixtures. The key barriers and levers to payment behaviours are available here.

4. Consumption: All actions and behaviours that lead individuals, households, and communities to be aware about the limited availability of water and consume water judiciously. The key barriers and levers to judicious water use behaviours are available here.

5. Grey Water Management: All actions and behaviours that facilitate individuals and communities to appropriately reuse, manage and use wastewater arising from the household and from the village. The key barriers and levers to grey water management behaviours are available here.

BACKGROUND TO BEHAVIOUR CHANGE



Overview

All public policies are designed with the intent to maximise their impact on human life. Depending on the problem they are out to tackle, policy makers use different types of policy instruments based on their assessments of feasibility and impact. We interact with these policy instruments daily, which shapes our actions. Drunk driving incurs criminal penalties, but not saving for retirement won't put you in jail. Taxes on cigarettes discourage smoking, but pre-natal sex determination is outrightly banned.

The Economic Survey of India 2019-20 attempted to categorise these various types of policy instruments, placing them on a spectrum of policy making based on their influence on behaviour.⁵ The focus of this section is a specific policy instrument sandwiched between various classes of policies: Nudges. Nudges are policy instruments that gently steer behaviour in a particular direction, while preserving people's liberty to choose. It does so by altering aspects of a person's mental choice architecture without forbidding any options or significantly changing their economic incentives.



Figure 1. Nudges in the spectrum of policy making (Source: Economic Survey of India 2019-20)

Nudges can change choice architectures in different ways. A predominant way is changing the default status. For example, countries such as Austria consider every individual an organ donor at the time of death by default. Those who do not wish to donate their organs can follow a simple process of opting out. The result is that more than 90% of people are registered to donate their organs. In countries which instead have an "opt in" system for organ donation, for example the U.S.A and Germany, fewer than 15% of people are registered to donate.⁶ People tend to stick with the default option, because making an active choice incurs cognitive costs. Thus, a lot of opt-in policies can have low impact not because of a lack of will, but a lack of action.

This is especially pertinent when we think about the number of choices we are faced with every day, each with their own albeit small cognitive costs.

Nudges can also be an effective tool for policy making when the problem involves people's failure to follow through on their intentions, or a gap in their knowledge to form an **intention-action gap**. The rest of this report will explore different kinds of behavioural interventions that hold utility in policy making, gains to the government from the use of these interventions, designing and measuring the impact of these interventions, their relevance and application in different sectors of policy making and specifically in the context of the JJM.

⁵Economic Survey of India, 2019-2020

⁶Davidai, Gilovich & Ross, 2012

Relevance of behavioural science in policy making

Each of us has unconscious biases that often drive our perception and decision making. This is at the centre of the distinction that behavioural economics makes between “Humans” and “Economic agents”. A few decades ago, policymakers relied predominantly on the idea that the target for their policies were perfectly rational humans (*homo economicus*) who would make predictable decisions with the purpose of maximising their individual utility. This insight would predict that all farmers would naturally opt to buy fertilisers (because it increases their yield), all residents in villages prone to malaria will see value in sleeping under mosquito nets, and people will automatically stop open defecation once toilets are built in their neighbourhood. However, actual end results can often be different from the intended results.

Nevertheless, it might be pertinent here to identify the distinction between irrational and imperfectly-rational agents. While an irrational agent will go against their costs and benefits; an imperfectly-rational agent will account for costs, benefits and also additional factors in their decision making.

Behavioural science seeks to investigate what these additional factors are, and as a result provides insights for real-world policy making for healthcare, savings, agriculture, sustainability, business, and many others, especially in situations where recipients of a policy may be imperfectly-rational agents. It works with the assumption that the targets of public policy are humans rather than economic agents. This is reflected aptly in the chapter on behavioural economics in the Economic Survey of India 2019-20, which carried the title “Policy for Homo Sapiens, Not Homo Economicus”.

Consider the small exercise in Box 1.

Box 1

Answer the following questions

- Which of the two is a more frequent cause of death in India: Road traffic accidents or Diarrhoea?
- Which of the two is a more frequent cause of death in India: Neonatal disorders or Suicide?

The correct answers are diarrhoea and neonatal disorders, respectively. Studies have shown that respondents' health estimates are warped by media coverage: stories of suicides and road accidents are covered more often by the media. This is called **Availability Bias**: Beliefs about events are formed based on which examples come to mind most easily. This has a huge impact on people's risk assessments. For example, women might perceive themselves to be at a lower risk of having anaemia or breast cancer than they are, or people might overweight their risk from road accidents and underweight their risk of heart disease.

Two Systems of Thinking

At the heart of behavioural science is the concept of two systems of thinking in our brain that drive decision-making:

SYSTEM 1

95%

Automatic and quick
No sense of voluntary control
Prone to unconscious biases
More influence on behaviour when
System 2 is busy



SYSTEM 2

5%

Effortful mental activities
Requires voluntary attention
Analytical in decisions

Consider the exercise in Box 2

Box 2

Imagine that you are asked to retain a list of 10 digits for two minutes. You are told that remembering the digits is your top priority. These are the digits you must remember: 5 7 4 8 9 3 4 7 5 8

Attempt to commit them to memory and then read on.

While your attention is focused on the digits, you are offered a choice between two meals: a chocolate cake, and a salad. Which do you pick?

Evidence suggests that people are more likely to select a tempting chocolate cake when their mind is engaged in a demanding cognitive task. Both self-control and cognitive effort are forms of mental work.

A series of experiments by researchers show that living in scarcity taxes bandwidth, reducing cognitive capacity and executive control in decision-makers.⁷ This bandwidth tax explains several confounding kinds of self-defeating behaviour among those living in scarcity of resources. For instance researchers found that sugarcane farmers performed worse on cognitive tasks before a harvest than after.⁸ They concluded that perhaps poverty itself reduces cognitive capacity, and cannot be merely explained by differences in nutrition, time available or work effort. Poverty-related concerns consume mental resources, leaving less

⁷Mullainathan & Shafir, 2013

⁸Mani et al., 2013

for other tasks. Thus, stress and poverty have a negative impact on people's mental capacity to process information and make rational decisions.

Social policies often rely on (or assume) active decisions by those living in poverty, such as saving in bank accounts, enrolling in pension schemes, immunising children, pregnant mothers taking iron and folic acid tablets, assuming that these decisions are the natural, rational choice.

Behavioural science shows us that not only are all humans prone to biases, those living in poverty might also be constrained by cognitive bandwidth. This makes independent evaluation of policies beneficial for them quite difficult.

Higher policy impact - Benefits of “behaviouralising” policies

Governments around the world aim to increase social spending through efficiently designed policies that will achieve high social impact. Yet, a myriad of well-intended policies often suffers from low enrolment rates or lower than expected impact. These policies are not only costly for governments, but they also incur the temporal costs of slow progress on desired indicators. When policies don't reach optimal impact, many governments resort to higher outreach and incentives, which again incur high costs.

Behavioural science offers low-cost alternatives for increasing the effectiveness of policies. The gains from these interventions can often offset their much larger cost. For instance, in a great example for road safety the city of Ahmedabad deployed nudges in the form of painted optical illusions that looked like roadblocks, on highway roads near school zones.⁹ Highway officials reported that as a result, accidents (especially in dangerous traffic areas) reduced significantly. From a distance, the illusion of a roadblock in the middle of the highway activates our System 2 (deliberate thinking mind) and forces us to pay attention. As drivers approach closer, they realise that it is an optical illusion and hence they don't brake completely or stop the flow of traffic.



Figure 2. Optical illusion nudges for road safety in school zones in Ahmedabad, India

⁹Olewitz, 2016

Consider the exercise in Box 3.

Box 3

The city of Hyderabad wants to increase tax compliance among residents. Which of the following statements do you think will be more effective in their information campaign?

- A. "Your taxes go towards various good works, including education, police protection, and fire protection."
- B. "Not filing taxes will make you liable for a fine of Rs. 20,000."
- C. "90% of Hyderabad residents file their taxes regularly and on time."
- D. "If you have questions or face any problems filling out your tax form, you can dial the city wide tax helpline 311 for assistance."

Studies across contexts show that one of these interventions has a significant effect on tax compliance, and that is option C. Research shows that taxpayers are more likely to violate the law when they believe that the level of compliance is low. When informed that the actual compliance level is high, they become less likely to cheat. This principle of social conformity shows that desirable or undesirable behaviour can be increased by drawing public attention to what others are doing. A similar study conducted on a sample of 10,000 citizens in the UK, increased tax revenues by £9 million (INR 91 crores) in just 23 days.

Thus, the gains received in terms of government savings, lives saved, societal welfare, and efficiency make nudges an effective low-cost high-impact tool. Behavioural science can help inform low-cost yet nuanced tweaks in program design, implementation, and communication which can increase potential impact. Finally, the process of using a behavioural lens for policy making can also help challenge existing biases and assumptions, by providing policy designers unique insights into the user experience of the target group, thus improving service delivery.



Source: Behavioural Insights Unit Research team

OVERVIEW OF THE DIAGNOSTIC REPORT



Objective

The Jal Jeevan Mission is designed keeping sustainability at the core. Each step in the life cycle of JJM converges towards the goal of sustainability of the programme, and more importantly, of water. This makes the effective engagement of the community and individual households critical for driving sustainability of and for JJM. However, participatory behaviours from individuals and from the community towards JJM may be subject to several systematic, social, and psychological barriers.

For instance, individuals may be unaware about the benefits of JJM which prevents them from developing the intention to partake in the program. Similarly, individuals who may have the intention to, say, pay for the JJM services may be unable to turn that intention into action because of ad-hoc payment collection cycles OR social network effects which dampen participation because a majority of people around him/her are not paying. Like these, there can be several reasons which may inhibit both the intention and action of individuals to engage effectively with JJM, and thus challenge the sustainability of the program.

In this context, the objective of the Jal Jeevan Mission Behavioural Diagnostic Report is to:

1. Identify key behaviours and actions that specific target groups must undertake at different stages of JJM
2. Identify motivators and barriers that may facilitate or impeded the above desired behaviours respectively
3. Provide directional recommendations for behaviour change activities in JJM, based on (1) and (2)

Approach

Findings of this report are based upon the following sources:

1. **Literature review** of all community participation, water and JJM-relevant academic materials, government reports and independent publications
2. **Stakeholder Consultations:** Approximately 40 hours of one-on-one in-depth telephonic interviews and consultations were conducted over a period of 35 days, with Field Teams of Tata Trusts across 10 states of India and 28 Piramal Foundation Water Fellows
3. **Preliminary Field Research:** For context gathering, preliminary field visits were conducted to the aspirational districts of Vizianagaram (Andhra Pradesh), Karauli (Rajasthan) and Sewapuri (Uttar Pradesh).
4. **Field Diagnostic 1 (Jharkhand):** A team of 2 members from the Behavioural Insights Unit (BIU) of India, two from the Centre for Social and Behaviour Change (CSBC) and six enumerators (trained in both quantitative and qualitative field research work) conducted an extensive 15-day field study in the districts of Ranchi, Khunti and Lohardaga of Jharkhand.

- 5. Field Diagnostic 2 (Gujarat):** A team of 1 member from the Behavioural Insights Unit (BIU) of India, 1 member from the Center for Social and Behaviour Change (CSBC) and 5 enumerators (trained in both quantitative and qualitative field research work) conducted an extensive 11-day field study in the districts of Bhavnagar and Amreli.
- 6. Field Diagnostic 3 (Andhra Pradesh, Jharkhand, Uttar Pradesh):** A team of 6 members from Tata Trusts and Wolfzhowl conducted a 4-week ethnographic and qualitative field research study in the districts of Baharaich and Pratapgarh (Uttar Pradesh), East Singhbhum and Hazaribagh (Jharkhand), and NTR and Sri Sathyasai districts (Andhra Pradesh).

(Detailed discussion guides that were used for the field study are annexed to this report. An approximate total count of interactions and the sample segmentation across the three diagnostic studies is provided in the table below)

Sample	Interactions	Method
Women	89	In-depth Interview (IDI), Observations
Men	79	IDI
Children, Youth	4	Focus Discussion Groups (FDGs)
Paani Samiti Members	32	IDI Process Mapping
Community leaders, Sarpanch (s)	27	IDI, Process Mapping
PHED officials, Block officers	6	IDI
O&M Operators	5	IDI Process Mapping
Total	242	IDIs, FDGs

BACKGROUND TO JJM



Overview to the Jal Jeevan Mission

18% of the global human population and 16% of the global livestock population resides in India. However, India has only 4% of global freshwater resources leading to asymmetry in the supply of clean water in different regions of the country.¹⁰ For instance, as of 15th August 2019, only 17% rural households in India had a Functional Household Tap Connection (FHTC) whereas the rest relied on other sources of water such as handpumps, wells, community taps and others.

Announced by the Hon'ble Prime Minister Shri. Narendra Modi in 2019, the Jal Jeevan Mission (JJM) is a mission-mode initiative that aims to provide a Functional Household Tap Connection (FHTC) to every rural household by 2024. Since its inception the program has extended tap water coverage to 54.20% of rural households, with 10.48 crore rural households now drawing clean water from a FHTC within their homes.¹¹ The scheme/programme is designed to be decentralised, demand-driven and community-owned.

The objectives of the scheme may broadly be categorised as following:



Women Empowerment: Women disproportionately face the burden of travelling long distances, spending long hours bringing water, while also conducting chores and managing water in the households. This strain leads to failing health and employment outcomes for women, with adolescent girls at risk of dropping out of education due to time spent on water related activities. By providing FHTCs in every household, JJM aims to reduce drudgery of women and increase the school attendance for adolescent girls. JJM also advocates for active engagement from women in making decisions related to water supply via provisions for compulsory representation of women (50% in Paani Samitis) and promoting the idea of women as local water champions.



Safe Drinking Water: Diarrhoea and other water borne diseases are one of the major causes of mortality of children in India, killing one child every minute in India. These health concerns are caused by inaccessibility to clean water, low awareness about bad water quality and contamination while it is stored and handled in the household. JJM seeks to address these challenges by improving household attitudes and behaviours towards water quality, handling, storage and grey water management.



Sustainable Management of Water Resources: Sustainability is important to consider within JJM because water sources must remain recharged for drinking water to be supplied adequately and regularly to households. The aim is to run the JJM program without a high ecological cost while imbibing judicious water use, water reuse and water conservation behaviours across the country. A core focus of JJM is to revive transitional sustainability

¹⁰ Tripathi, 2018

¹¹ According to the JJM dashboard, as of 10th November 2022 the mission has been able to add an additional 45.01% households to the fold, with current FHTC coverage standing at 54.20% of total HHs in the country.

¹² Pneumonia and Diarrhea Progress Report, 2018

practices through community-led change, behaviour change and community ownership of water supply assets and services, facilitated by the government. It hopes to make communities responsible users, have community members leading the community's water management efforts and encourage community members to engage with local governments to address their water supply related concerns. This will ensure that decentralised water management exists even beyond the scope and duration of JJM.

Current Status

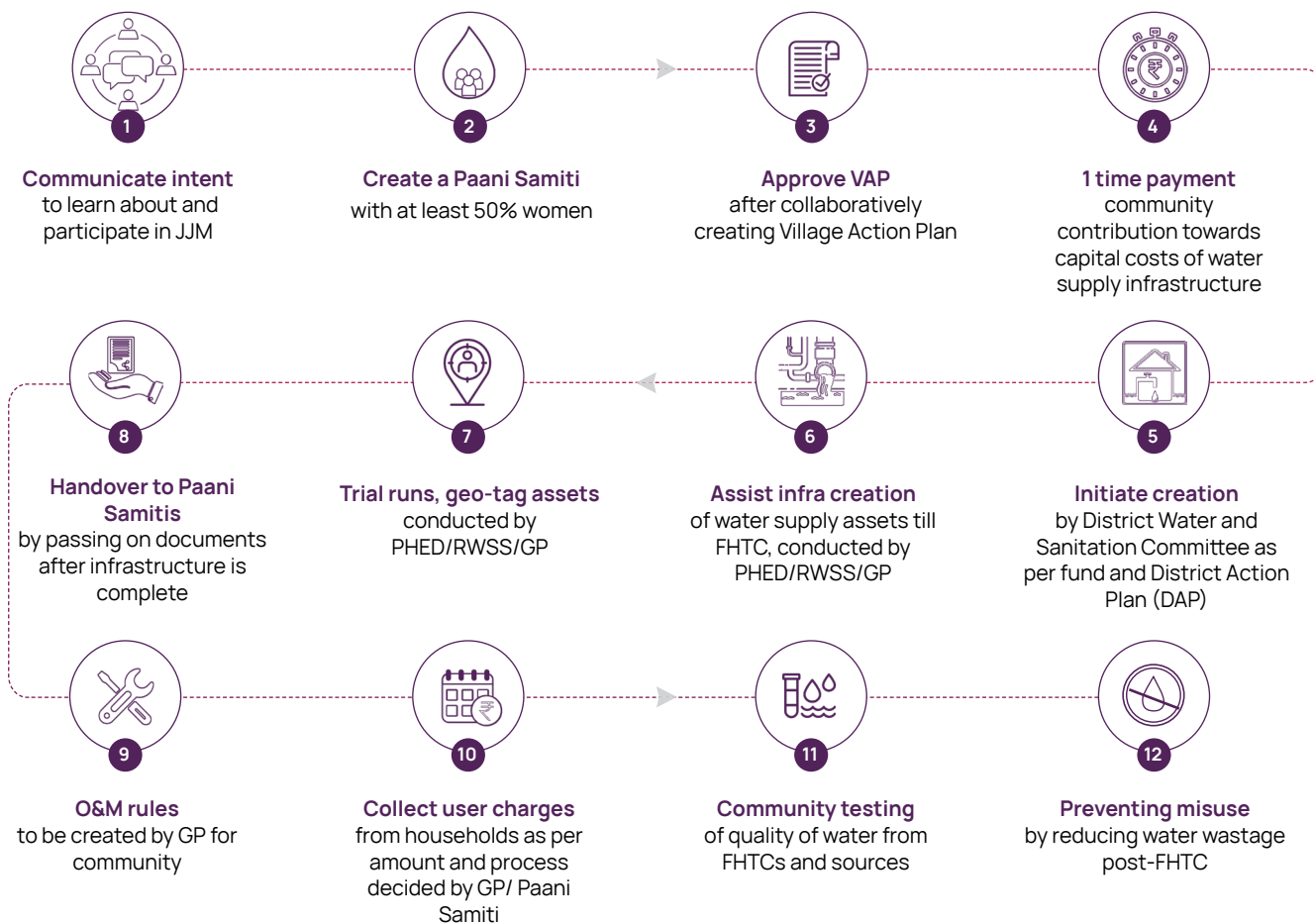
In the Union budget, the Jal Jeevan Mission remains a priority area of intervention for the Government of India, with an allocated budget of INR 60,000 crores in FY 2022-23. As of November 2022, approximately 10.48 crore rural households have received an FHTC under the Jal Jeevan Mission and 7 States and UTs have reported 100% FHTC including Goa, Telangana, Andaman and Nicobar Islands, Puducherry, Dadra and Nagar Haveli and Daman and Diu, Haryana and Gujarat.



Source: Behavioural Insights Unit Research team

POLICY IMPLEMENTATION PROCESS

The following diagram summarizes the JJM policy process from end to end. The focus of the JJM process is on improving community participation and ownership by gathering inputs from community members and local governance at every step:



Role of Community Engagement

As can be seen above, the Jal Jeevan Mission is designed with keeping sustainability at the core. Each of the processes and/or behaviours contribute towards the sustainability of the programme, and more importantly, of water. As such, the effective engagement of the community and of individual households becomes critical for driving sustainability of and for the Jal Jeevan Mission. Without necessary participation and ownership by the community and individual households at different stages of JJM, the programme is unlikely to achieve its intended goals. Broadly, the role of community participation in JJM may be categorised into:



Ownership: All actions and behaviours across the lifecycle of JJM that display intention of individuals and/or community to gain awareness about JJM, to contribute towards micro-decision across different stages of the program



Payment: All actions and behaviours that facilitate individual households to (a) make the one-time financial contribution at the outset of JJM in their village and (b) to pay the user charges collected for the operations and maintenance of JJM in their village.



Maintenance: All actions and behaviours by individuals, households and/or the community that lead to active maintenance of the infrastructure and assets created under JJM, such as overhead tanks, pipelines, taps and others. This also includes all behaviours that lead to maintenance of the source of water.



Consumption: All actions and behaviours that lead individuals, households, and communities to (a) be aware about the limited availability of water and (b) to consume water judiciously.



Grey Water Management: All actions and behaviours that facilitate individuals and communities to appropriately channel, manage, reuse and use wastewater arising from the household and from the village.



Source: Behavioural Insights Unit Research team

BEHAVIOUR CHANGE IN JJM

Overview

As emphasised in the previous sections, effective engagement of the community and of individual households is critical for the Jal Jeevan Mission. However, such behaviours may be subject to several systemic, social, and psychological barriers; Necessitating the infusion of deliberate and consistent behavioural solutions into the programme.

Therefore it may be useful to first identify the broad behavioural objectives (BO) that correspond to the stated policy objectives of the Jal Jeevan Mission:



Women Empowerment

How can we increase the participation of women in the decision making processes and community engagement activities of Jal Jeevan Mission?



Safe Drinking Water

How can we change the mental models of individuals around water quality?
How can we make water quality salient to individuals?



Sustainable Water Management

How can we encourage community ownership of water supply and management systems?
How can we nudge individuals to manage grey water appropriately?

Collectively, all the above behavioural objectives converge into one broader objective, i.e.

How do we nudge sustainable behaviours for and through JJM?

Desired Behaviours

*Defining a specific and measurable behaviour forms the foundations for any successful behaviour change solution. Refer to **Exercise 1** in the Annexure to identify and define specific behaviours in your district and/or village which may be becoming bottlenecks in JJM and require targeted behaviour change solution.*

The first, and most critical, step in any behaviour change activity is to define a specific and measurable behaviour/action that we desire from the target audience. In other words, **what specifically must the individual do?** Defining a specific behaviour is necessary to measure the success of any behaviour change activities, including nudges, process engineering, products, communication, IEC materials and others. For instance, a broader objective of 'Pregnant women must address their iron deficiency' may translate into several specific actions such as 'A pregnant woman must consume an IFA tablet every day for 180 days' or, 'A pregnant woman must not stop consuming IFA tablets after experiencing expected side effects' and others.

In this context, some key specific behaviours for JJM have been listed below, divided into 5 categories. These behaviours have been defined based on the behavioural objectives of JJM, the policy process cycle, literature review, stakeholder consultation and field study. Kindly note that the following behaviours are not exhaustive in nature and only representative.

S.No	Desired Action / Behaviour	Actor(s)
Ownership		
All actions and behaviours that display intention of individuals to gain awareness about and to participate in the decision making(s) of JJM		
1	Dedicate fixed time to discuss JJM in Gram Panchayat and/or SHG meetings	GP / Women/ Paani Samiti
2	Conduct community workshops to educate members on the benefits of JJM	Women/ Teachers
3	Enrol for skilling activities under JJM	Women / HH / Men
4	Create specific micro assets (such as platform for taps) through Shramdaan	HH / Paani Samiti / GP
Payment		
All actions and behaviours that leads to desired payment(s) for JJM		
1	Announce a specific one-time community share amount that each HH must contribute for JJM	GP
2	Pay the one-time contribution towards the setup of JJM in the village	HH
3	Announce a specific amount that each HH must contribute for operations and maintenance of JJM	GP / HH
4	Create a Paani Samiti bank account to deposit the one-time contributions and the monthly user charge	GP / Pani Samiti
5	Regularly pay the water user charges(s) for the operations and maintenance of JJM	HH/Women/Men
Maintenance		
All actions and behaviours that lead to active maintenance of water sources and of JJM assets		
1	Identify and train operators from the community for the O&M activities of JJM	Paani Samiti
2	Conduct water quality inspections at pre-determined frequency	Paani Samiti
3	Safeguard the water source from pollution and contamination	Paani Samiti

4	Repair or replace any damaged or lost asset, including pipeline, tap, water tank and others	HH/Paani Samiti
Consumption		
All actions and behaviours that lead to judicious and hygienic usage of water		
1	Maintain water hygiene <ul style="list-style-type: none"> ● Keep drinking water covered ● Use long-handle ladle or a vessel with a tap ● Elevate the area where water is stored 	HH/Women
2	Reduce water wastage at HH <ul style="list-style-type: none"> ● Put a closing lid (including but not restricted to a tap) at the end of any water pipeline ● Shut all taps when not in usage ● Fix any leaking taps in the HH or in the village ● Use stale stored water for washing utensils, clothes or farms (instead of discarding) 	HH/Women/ Men
Grey Water Management		
All actions and behaviours that lead to appropriate management of grey water		
1	Build water channels from household water use areas towards outdoor or backyard areas	HH
2	Build grey water soak pit within household	HH
3	Store used water	HH/Women
4	Reuse grey water from house chores for kitchen garden or outdoor activities	HH/Women
5	Build knowledge and awareness about appropriate uses of grey water	GP/Paani Samiti
6	Build knowledge and awareness about methods of grey water collection in community members	GP/Paani Samiti

BEHAVIOURAL BARRIERS AND LEVERS



The following section contains insights on the barriers and motivators that the aforementioned desired behaviours face. In other words, ***why the respective actors may not be undertaking the desired actions?***

Please note that the following findings are based on a sample of data and not applicable across all contexts and geographies in India.



Source: Behavioural Insights Unit Research team

OWNERSHIP



Behavioural Barriers

Why do individuals not have awareness about JJM and/or display intention to participate in the decision makings of the programme?

- a) **Anchoring Bias:** Individuals view JJM like a supply-driven government of India programme which will proceed to install water tanks, pipelines and taps irrespective of community engagement, anchoring their experience to prior government schemes provided similarly. They may view engagement with the programme as optional with no implications of non-participation.
- b) **Low Value Perception:** JJM is viewed as a good-to-have programme but not a must-to-have, especially in geographies with high water tables and with water sources close to the household, with little incentive to dedicate time and effort towards the program.
- c) **Availability Bias:** Individuals tend to associate JJM with the previous and/or ongoing water related programmes in the region, assuming the programme to hold similar characteristics as that of the other programs. As such, they assume awareness about the programme as well about the ways in which they need to participate (or not).

Behavioural Levers

What has been observed to encourage individuals in developing intention to gain awareness about JJM and/or to participate in the decision makings of the programme?

- a) **Opt-in:** When households are provided with the explicit choice between availing the JJM services OR not availing them, they are observed to be more willing to give inputs into the decision making as compared to the case when JJM is presented as a default option.
- b) **Sewa:** In the context of JJM, individuals are most motivated by a feeling of recognised community service OR sewa. When early participation in JJM is presented as a sewa, individuals are more likely to participate.
- c) **Choice:** When individuals deliberately choose the way in which they can engage with JJM, from a curated set of options, they are more likely to adhere and participate as compared to the scenario where individuals are instructed about *all* the ways in which they *must* participate.
- d) **Reciprocity:** If individuals are given to understand that the success of future engagement is dependent on their current cooperation, they are likely to improve their participation. For instance, in several villages it was important for the household to provide a no-dues certificate (utility bills) from the Panchayat to take school admissions.
- e) **Information Symmetry:** All information that individuals may need in order to cooperate with service providers, are communicated in a transparent and accessible manner to the community. For instance, information on public funds and costs associated with piped water provision are displayed as a painted mural on walls in the village square, leaving no room for ambiguity.



PAYMENT



Behavioural Barriers

Why are individuals unable or unwilling to pay the one-time contribution and/or the recurring O&M user charges?

- a) **Mental Models about Water Quality:** In positioning water quality to be the core service for which people must pay, JJM faces the following barriers:
 - i. Individuals in India assess water quality through salient indicators of smell, taste, and colour. Any other alternative cue of water quality, such as the FTK, may not register with the prevailing mental models of water quality
 - ii. Given other daily cognitive distractions, quality of their water does not feature as a mental daily priority for most individuals
 - iii. Since the health risks associated with poor quality of water are either not immediately visible or measurable, the incentive to invest in the quality of water remains low for most individuals
- b) **Unpredictable Payment Cycles:** Inconsistent payment collection dates (periodicity) make it challenging for individuals to develop payment as a mental habit. Each payment, consequently, is a deliberate mental decision that an individual must make every time and is therefore more susceptible to failure. Additionally, unpredictable payment cycles also prevent individuals (especially low income households) from being able to plan their expenses in advance and may compromise their ability to pay.
- c) **Conditional Cooperation:** Individuals are more willing to pay if they can see others in their community or village to be paying. Conversely, the presence of free-riding individuals can proliferate feelings of unwillingness to pay in the community.
- d) **Status quo Bias:** Most individuals view water as a free, natural resource that must not be paid for. This mental bias is furthered by the fact that most of the previous or ongoing water related schemes in India have not charged for water, deepening people's resistance to pay for JJM.

Behavioural Levers

What has been observed to encourage individuals to develop willingness and/or ability to pay the one-time contribution and/or the recurring O&M user charges?

- a) **Predictability:** When individual households have a predictable schedule of JJM user charges payments, they are more likely to pay regularly as compared to when the payment collection periodicity and/or method is dynamic. For instance, if the payment is collected on the same date of each month, an individual is more likely to set-aside, budget and pay as compared to when the payment is collected on different dates.
- b) **Bundling utilities:** When the monthly user charge of JJM are attached to a pre-existing fee and/or payment that the households are already making, they are more likely to pay the JJM user charges regularly as compared to cases when households must pay the JJM user charges as a separate and independent payment. Bundling utilities helps build muscle memory for payments, especially for resources which are viewed as free, such as water. For instance, adding the user charges amount to the monthly electricity or ration bill is likely to increase payments from individuals than sending it as a separate water bill.
- c) **Social Payments:** It has been observed that when payment collection is a social and visible process, as compared to a private process, individuals are more likely to make the payments. In addition, if the timing of JJM payment collection is aligned with a period when individual households have the highest propensity to spend (festivals, post-harvest season), their probability of paying the user charges is higher than otherwise. For instance, in some districts of Gujarat, JJM user charges are collected on an annual basis around the time of Navaratri. Due to festival season, the propensity of households to spend is higher, which also means that more money is budgeted for expenditures. Payments collected are observably higher for districts that collect payment during this time, as compared to districts where payments are not linked to Navaratri.
- d) **Lump-sum payments:** In order to reduce instances of households not paying for water when payments were collected on a regular basis, many panchayats experimented with collecting water user charges as a lump-sum amount at the start of the year. This appeared to improve compliance and adherence to the program and payment cycles but also motivated people to take a greater interest in the water-related issues and management of the water supply in the village – given, that they now had a greater amount invested. However, this may not be feasible across many districts, especially with socio-economic status affecting ability to pay.
- e) **Early-bird Discounts:** Individuals can also be motivated to pay user charges on time if offered rewards against timely payments. In several instances across villages visited, advance payments of yearly water bills were rewarded with a discount on the payments by the gram panchayat.

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MAINTENANCE



Behavioural Barriers

Why are individuals not willing or able to maintain the water sources and the assets created under JJM?

- a) **Mental Model (government):** The prevailing mental models around public assets and infrastructure compels people to believe that since the water tanks, pipeline, taps and other infrastructure under JJM is created by the government, it must also be owned and maintained by the government. The dissociation between creator and owner is observed to be a challenge for most individuals.
- b) **Anchoring and Availability Bias:** Individuals tend to associate JJM with the previous and/or ongoing water related programmes in the region, and therefore assume the programme to hold similar characteristics as that of the other programs. As such, individuals expect the quality of assets created under JJM to be low and are unwilling to take responsibility for them.
- c) **Mental model (location):** It is observed that most taps installed under JJM are placed outside the household, along the boundary wall, in the aangan. Such a placement fuels the perception of households that the tap is not theirs to maintain and that it is a government asset that must be maintained by the government.

Behavioural Levers

What has been observed to encourage individuals in developing the willingness and/or ability to maintain the water sources and the assets created under JJM?

- a) **Location:** When the taps are placed inside the boundary wall of the house, the willingness of the household to maintain the tap is higher than when the tap is placed outside the boundary wall, driven by a heightened sense of use and ownership for objects within the household.
- b) **Project Stage:** When individuals are involved at the early stages of JJM (refer section on ownership), they are more likely to maintain the assets created thereafter as compared to communities that are involved at a later stage.
- c) **Social Recognition:** Social recognition can be a powerful tool to motivate both beneficiaries and service side providers to undertake maintenance-related activities regularly and ensure the upkeep of infrastructure under JJM. In several instances, a revolving trophy of the best panchayat at the district/state level is seen to be a powerful motivator for the Sarpanch to resolve grievances and ensure the upkeep of assets, and village infrastructure.



CONSUMPTION



Behavioural Barriers

Why are individuals not willing or able to use water judiciously?

- a) **Opportunity Cost:** With easier access to clean water within or near their households, the labour cost and/or opportunity cost of acquiring clean water has substantially reduced for individuals. Women and/or men no longer must travel long distances or wait in long queues to fetch water, which in-turn may reduce their water conservation or judicious water use behaviours.
- b) **Fixed User charges:** Currently, the monthly user charge charged under JJM are a fixed amount and are not linked to the amount of water units that the households consume. As such, the incentive to remain mindful of the cost of water being consumed is reduced for the households.
- c) **Future discounting:** The perceived value /gratification that individuals are likely to receive from uninhibited consumption of water in the present is likely to be greater than the future benefit that they see from conserving water. This may be attributed to the future discounting bias that individuals have.

Behavioural Levers

What has been observed to encourage individuals in developing the willingness and/or ability to use water judiciously?

- a) **Risk perception:** Communities from areas with high likelihood of water scarcity or drought naturally adopt better water use and water conservation behaviours. The fear of facing water shortage motivates these communities to use water judiciously throughout the year. Communicating this sense of risk of water shortage to others might encourage better water conservation practices.
- b) **Pay-as-you-use:** Members of communities which adopt a pay-as-you-use model of water user charges use water much more sparingly than others. Here, the appeal of saving money on water bills serves as an incentive to adopt judicious water use practices
- c) **Salience:** Communication campaigns which cast relatable actors, and highlights the high likelihood of acquiring water borne diseases and/or the associated financial costs are likely to increase an individual's motivation to take up hygienic water use practices
- d) **Availability heuristic:** Creating communication that reinforces recent history, rather than older instances of seasonal water shortage, is an effective lever that reminds people to conserve water actively. This was observed to be particularly helpful in encouraging individuals to conserve water even during instances of water abundance (monsoons), as several respondents recalled the harsh summers and long durations of water shortage in water-scarce villages.



GREY WATER MANAGEMENT



Behavioural Barriers

Why are individuals not willing or able to adopt appropriate grey water management behaviours?

- a) **Low costs:** As mentioned earlier (refer section on behavioural barriers to consumption), due to low labour costs and low financial costs of acquiring fresh water, people are not motivated to reuse water or store used water
- b) **Low awareness:** Community members are unaware of appropriate uses of grey (used) water. Used water is often considered dirty, a by-product meant to be disposed of immediately. People are also often worried about the health and hygiene implications of reusing water.
- c) **Novelty:** For households which are getting FHTCs for the first time, the novelty of supplied water on a daily basis demotivates households from adopting water reuse behaviours. They do not feel a need to use water sparingly anymore.
- d) **Salience:** The link between a household's water wastage and the village's depleting water tables is not clear in public knowledge. This leads to more wastage of water since the severe consequences of this wastage are not apparent to the individual water user.

Behavioural Levers

What has been observed to encourage individuals to adopt appropriate grey water management behaviours?

- a) **Pay-as-you-use:** As mentioned earlier (refer section on behavioural barriers to consumption), pay-as-you-use models are effective in encouraging judicious water use and water reuse for non-potable purposes.
- b) **Risk perception:** As mentioned earlier (refer section on behavioural barriers to consumption), developing awareness and a sense of risk of water scarcity increases people's motivation to save water via reuse.
- c) **Infrastructure:** If new houses in the village are built with water reuse infrastructure (ex: soak pits, channels, drums etc) in place, the inhabitants of the house are more likely to automatically opt-in and make use of this infrastructure to reuse water. Additionally, old houses can be retrofitted or provided the required facilities.
- d) **Awareness about safety:** Entertainment or other trusted channels of communication can be used to raise awareness about appropriate uses of grey water. Emphasis must be placed on the safety of reuse and its benefits. Communication from popular or trusted sources may help overcome the initial public resistance to new notions.

WAY FORWARD



The report has endeavoured to highlight specific elements of behaviour change and decision making in the policy ecosystem of JJM. Different aspects of behaviour science have been applied to the theory of change within JJM. Currently, the team is developing a compendium of additional and specific insights for any SBCC and non-SBCC interventions that are to be developed for JJM.

Presented findings from primary, secondary and field research are intended to assist stakeholders in identifying and addressing behavioural challenges in JJM in their contexts and regions. The report will also form the basis of targeted interventions that NITI-BIU will develop to address key behavioural barriers in JJM.

GLOSSARY



1.	Anchoring bias	The tendency to rely too heavily, or “anchor” on one trait or piece of information when making decisions
2.	Availability bias	The tendency to overestimate the likelihood of events with greater “availability” in memory, which can be influenced by how recent the memories are or how unusual or emotionally charged they may be
3.	Bandwidth tax	A research finding which demonstrates that living in scarcity or poverty taxes mental bandwidth, reducing cognitive capacity and executive control in decision-makers
4.	Behavioural barriers	Factors which discourage or prohibit the performance of a particular behaviour
5.	Behavioural levers	Factors which encourage or motivate the performance of a particular behaviour
6.	Bundling	A bundle allows people to have the convenience of multiple services, such as electricity, gas and water as part of the same package. Setting up bundled utilities can make it easier to pay bills together, save money, etc.
7.	Choice architecture	Way/pattern in which different options (potential choices) are presented to decision makers, and the impact this pattern has on their choice
8.	Cognitive cost	Utilisation of an individual's mental capacity, such that there are reduced mental capabilities available to utilise for other actions or thoughts
9.	Conditional cooperation	Conditional cooperation is the tendency of individuals to engage in cooperation depending on the degree of cooperation of other individuals
10.	Functional Household Tap Connection	A household tap which regularly supplies sufficient drinking water to each household
11.	Future discounting	A mental bias in which the immediate value /gratification that individuals are likely to receive from performing a certain action is perceived as greater than the future negative consequences the performance of the action may have.
12.	Homo economicus	An erroneous assumption that human beings are perfectly rational beings who make predictable decisions based solely on cost-benefit analyses

13.	Intention-action gap	A commonly observed behavioural barrier in which an individual's intention to perform a certain action does not always translate into actual performance of the action
14.	Nudge	Tools that gently steer behaviour in a particular direction, while preserving an individual's freedom to choose by altering aspects of a person's mental choice architecture without significantly changing any economic incentives or prohibiting any options.
15.	Opportunity cost	The potential loss faced by an individual when they choose one action (or opportunity) and forgo others
16.	Opt-in policy	Policies or schemes where all consumers or citizens are included or "opted-in" by default. In such a system, one must explicitly opt-out of the scheme if they do not wish to participate in it
17.	Risk perception	An individual's judgement of how threatening a particular hazard or occurrence will be to their individual or collective well-being.
18.	Saliency	An object's trait of being particularly prominent, important or noticeable
19.	Social conformity	A principle which states that people are likely to perform a new behaviour when others (peers, friends, family, neighbours, etc) are already performing this behaviour or are supportive of this behaviour. This principle implies that desirable behaviour can be increased by drawing public attention to what others are doing
20.	Sunk cost fallacy	A mental bias where in a person tend to follow through on a detrimental strategy or action in which they have already invested time, money or resources- even though it would be advantageous to abandon the strategy or action.
21.	System 1	One out of two systems of thinking which drive an individual's decision-making. This system is called the "fast thinking" system since it operates automatically and quickly, with little or no effort and no sense of voluntary control. It is also prone to more biases and errors in decision-making
22.	System 2	One out of two systems of thinking which drive an individual's decision-making. This is called the "slow thinking" or "deliberate thinking" system since it allocates attention to effortful mental activities. The operations of this system are not automatic, it can only function when attention is given to it and gets disrupted when attention is withdrawn

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ANNEXURES



Source: Behavioural Insights Unit Research team

Applied Exercises

Exercise 1

Tick all behaviours that the respective actors are NOT doing in your district and/or village. Under notes, please include your observations on why the actors may not be undertaking the specific desired actions.

Box	Desired Action / Behaviour	Actor(s)
Ownership		
All actions and behaviours that display intention of individuals to gain awareness about and to participate in the decision making(s) of JJM		
<input type="checkbox"/>	Dedicate fixed time to discuss JJM in Gram Panchayat and/or SHG meetings	GP / Women/ Paani Samiti
<input type="checkbox"/>	Conduct community workshops to educate members on the benefits of JJM	Women / Teachers
<input type="checkbox"/>	Enrol for training in skills needed to be a JJM operator	Women/ Men/ HH
<input type="checkbox"/>	Create specific micro assets (such as platform for taps) through Shramdaan	HH/ Paani Samiti/ GP
Notes:		
Payment		
All actions and behaviours that leads to desired payment(s) for JJM		
<input type="checkbox"/>	Announce a specific one-time contribution amount that each HH must pay for JJM	GP
<input type="checkbox"/>	Pay the one-time contribution towards the setup of JJM in the village	HH
<input type="checkbox"/>	Announce a specific amount that each HH must pay for JJM	GP / HH
<input type="checkbox"/>	Regularly pay the monthly user charges for the operations and maintenance of JJM	HH/ Women/ Men
<input type="checkbox"/>	Create a Paani Samiti bank account to deposit the one-time contributions and the monthly user charge	GP/ Paani Samiti
Notes:		

Maintenance		
All actions and behaviours that lead to active maintenance of water sources and of JJM assets		
<input type="checkbox"/>	Identify and train operators from the community for the O&M activities of JJM	Paani Samiti
<input type="checkbox"/>	Conduct water quality inspections at pre-determined frequency	Paani Samiti
<input type="checkbox"/>	Safeguard the water source from pollution and contamination	Paani Samiti
<input type="checkbox"/>	Repair or replace any damaged or lost asset, including pipeline, tap, water tank and others	Paani Samiti/ HH
Notes:		
Consumption		
All actions and behaviours that lead to judicious and hygienic usage of water		
<input type="checkbox"/>	Maintain water hygiene <ul style="list-style-type: none"> Keep drinking water covered Use long-handle ladle Elevate the area where water is stored 	HH/Women
<input type="checkbox"/>	Reduce water wastage at HH <ul style="list-style-type: none"> Put a closing lid (including but not restricted to a tap) at the end of any water pipeline Shut all taps when not in usage Fix any leaking taps in the HH or in the village Use stale stored water for washing utensils, clothes, or farms (instead of discarding) 	HH/ Women/ Men
Notes:		
Grey Water Management		
All actions and behaviours that lead to appropriate management of grey water		
1	Build water channels from household water use areas towards outdoor or backyard areas	HH
2	Build grey water soak pit within household	HH
3	Store used water	HH/ Women/ Men
4	Reuse grey water from house chores for kitchen garden or outdoor activities	HH/Women
5	Build knowledge and awareness about appropriate uses of grey water	GP/ Paani Samiti
6	Build knowledge and awareness about methods of grey water collection in community members	GP/ Paani Samiti

Exercise 2

In the above Exercise 1, you may have identified some of the specific behaviours that the JJM actor(s) are NOT undertaking in your district OR village. Those may be referred to as the 'Behavioural Bottlenecks'. Further, the section of the report on Behavioural Barriers and Levers would have provided you with some perspectives on the underlying reasons that cause the Behavioural Bottlenecks.

As a next step, you may now use the information provided on some of the behavioural levers that can address the Behavioural Bottlenecks and ideate towards effective and scalable behavioural solutions.

The prompts below are only suggestive and not exhaustive in nature:

Ownership

- a. At the initial stages of JJM in your villages, can you think of ways in which you can present JJM as a service that households feel they can either choose or reject?
- b. In your village, can you think of ways in which you can provide different options of community participation to the people from within which they must select one or two?
- c. Can you think of any IEC or SBCC materials where you can frame community participation in JJM as noteworthy Sewa, especially to men?

Payment

- a. In your village, can you think of ways in which you can make the JJM user charges predictable for individuals? For instance, can you collect them on a specific date each month?
- b. Are there any recurring bills that households in your village pay on a monthly OR quarterly OR annual basis? Are there ways in which the JJM amount can be added to these bills?
- c. Can you think of ways in which paying the JJM user charges can be made into a social and public event?
- d. Can you think of ways in which you can make the monetary cost of health issues arising from water quality very clear to the people in your village?

Maintenance

- a. Can you think of any IEC or SBCC materials where you can highlight the differences between JJM and other previous water related programs of the state?
- b. Can you think of ways in which the participation of women can be increased as Operators of JJM in your village?
- c. Can you think of different locations in a household where the JJM tap can be installed? Which of these locations is most likely to make households consider the tap as their private tap?

Consumption

- a. Are there easy ways in which you can charge JJM user charges in your village based on individual household's consumption? For instance, can you have bands of payments based on rough consumptions?
- b. Can you think of ways in which you can emphasize the future benefits of saving water in

comparison to the present benefits of enjoying water?

- c. Can you make the relationship between daily water usage and depleting water tables clear through innovative ways?

Grey Water Management

- a. Can you think of innovative IEC or SBCC activities through which you can make people aware that certain uses of grey (used) water are healthy, safe and encouraged?
- b. Are there ways in which you can inform households that other individuals in the community are actively practising water reuse?
- c. Can you facilitate or encourage the building of grey water collection (soak pits) and water reuse infrastructure in each household?



Source: Behavioural Insights Unit Research team

Field Questionnaires

The following are discussion guides and questionnaires used to interview the mentioned sample groups during our field visits to diagnose behavioural barriers and motivators relevant to JJM.

A. Women residents of village

Section 1: Intro & Household behaviours	
First, we would like to start by asking your questions about you and your household	
1.1	What are the main sources of income for your family?
1.2	How many members live in your household, who are they?
1.3	i) What have been some of the big changes in the village in the past couple of years? ii) Have there been any new schemes and projects in your village - eg. for employment, health, education, infrastructure? If yes, what are these?
1.4	i) How did your life change because of Covid? Did your work and household income get affected because of it? ii) Have a lot of people returned to the village recently?
1.5	i) How have the monsoons been here? Do you get sufficient rain? ii) Has the village gone through any water shortages in recent times?
Section 2: JJM Programme	
Next, we would like to ask you a few questions about the JJM programme	
2.1	Have you heard of the Jal Jeevan Mission where people are getting tap connections within their houses? i) What do you know about the programme? ii) Do you think such a programme was needed for the village? Why or Why not? iii) Do you think this programme will make a difference? a) If yes, what difference would it make: - on convenient availability of water? - on time and effort to collect water - on the quantity of water available? - on the quality of water available? - any other changes? b) If no, what not? - There have been other water related programmes in the past that have been not worked - It will take a long time to be set up - Other community members are also not interested in it - These taps, pipelines, testing units etc could be low quality and will need alot of maintenance - Even if there are taps, water may not come frequently

2.2	<ul style="list-style-type: none"> i) When did the process of setting up the taps begin in the village? ii) Were other women involved in the decision making / discussions / setup up of the programme? Who were they, what did they do? iii) Were you involved in any of the activities when the programme was being set up? iv) What kind of activities were these, and what did you do? v) Did other people also get involved, and what did they do? vi) Did all the other households also have to join in such activities?
2.3	<p>Were any financial contributions required for the programme from the households? If yes:</p> <ul style="list-style-type: none"> i) Was there a one-time setup fee? If yes - how much was it? Did your household pay? ii) Is there a monthly user user charges? If yes - how much is it? How regularly is it collected? Did your household pay for it? iii) Do you think households should pay for this? <ul style="list-style-type: none"> a) If yes - why? b) If no - why not? <ul style="list-style-type: none"> - too expensive - did not see the value of what you are getting in return - have paid before, but did not receive what was promised - others are not paying?
2.4	<p>Who was responsible for the set-up of JJM related things such as the cement platform, laying the pipelines, installing the taps at home etc? What was their role?</p>
2.5	<ul style="list-style-type: none"> i) Were there any challenges during the set up of the programme? Eg. <ul style="list-style-type: none"> a) Financial problems - eg. not enough funds b) Administrative problems - eg. officials not conducting their duties on time c) Community problems - eg. disagreement on programme d) Anything else ii) How were these resolved?

Section 3: Tap installation in the household	
Next, we'd like to ask you some questions about the experience of having the tap installed	
3.1	<ul style="list-style-type: none"> i) When did the pipeline reach your house? ii) Do you have a tap in your household now? iii) Did your household have a choice in getting the tap or not? iii) Have other people in the village you know also received taps? If no - why not?
3.2	<p>Did you want to have the tap?</p> <ul style="list-style-type: none"> i) If yes - why? What difference do you think it would make: <ul style="list-style-type: none"> a) Availability of water b) Less time/effort in collecting water c) More quantity of water d) Better quality of water e) Other households are getting the tap f) You have already paid the GP, so you should get the tap ii) If no - why not? <ul style="list-style-type: none"> a) Did not see the need/ use of the tap. If so, why? <ul style="list-style-type: none"> - Have water available in the home - Have water available near the home - Do not see a problem in time / effort in collecting water - Getting good quality of water at home b) Do not trust that the tap will work properly. If so, why? <ul style="list-style-type: none"> - have heard that quality of water/ tap/pipe is not good - have seen that earlier sucg schemes / programmes have not worked as promised c) Found the payment too expensive <ul style="list-style-type: none"> - Should not need to pay for water - should be given by the govt for free - Cannot afford to pay for connection - if it was lower charge, would consider d) Expecting high maintenance chargers

3.3	<p>i) Was everyone in your household in agreement to get the tap? If no: Who did not want to have the tap?</p> <p>ii) What were their reasons for not wanting the tap?</p> <p>a) Did not see the need/ use of the tap. If so, why?</p> <ul style="list-style-type: none"> - Have water available in the home - Have water available near the home - Do not see a problem in time/effort in collecting water - Getting good quality of water at home <p>b) Do not trust that the tap will work properly. If so, why?</p> <ul style="list-style-type: none"> - have heard that quality of water/ tap/pipe is not good - have seen that earlier sucg schemes / programmes have not worked as promised <p>c) Found the payment too expensive</p> <ul style="list-style-type: none"> - Should not need to pay for water - should be given by the govt for free - Cannot afford to pay for connection - if it was lower charge, would consider <p>d) Expecting high maintenance chargers</p> <p>iii) How did they opinion change?</p> <p>a) Who convinced them?</p> <p>b) What did they say to change their opinion?</p>
3.4	<p>Tap installation process:</p> <p>i) Were you asked about how the tap should be installed, and where you would like it to be installed? If yes - who asked you, and was this followed?</p> <p>ii) How long did it take to install the tap? After it was installed, how much time did you have to wait before water started coming properly?</p> <p>iii) Did your household have to do anything else to have the tap set up?</p> <p>a) Additional financial contribution for setting up the tap - if yes, how much</p> <p>b) Getting something constructed yourself for the tap</p>

3.5	<p>i) Since the tap got installed, have you faced any issues?</p> <ul style="list-style-type: none"> a) tap giving trouble b) unavailability of water c) water not available at regular frequency d) water coming at low pressure e) water that is not clean f) bad quality water g) health issues because of water h) maintenance problems in the pipelines <p>ii) How many times have such issues occurred since the tap got installed?</p> <p>iii) How did you deal with these issues?</p> <ul style="list-style-type: none"> a) Who did you inform? Who came to fix them? b) How were they fixed? How much time did it take? c) Did you have to pay any money for fixing such issues? <p>iv) If you haven't faced any issues, but if they were to come up in the future</p> <ul style="list-style-type: none"> a) who can you complain to? b) what is the process of making a complaint c) How do you expect it to get fixed?
3.6	Where is the tap installed in your household? [researcher to take picture of the tap]
3.7	<p>Were any community meetings held about how to use the water from the tap, or on good water use practices?</p> <p>iv) Did you do anything differently, after what you learnt in these meetings? What did you do differently?</p>
<p>Section 4: Water usage</p> <p>Next, we'd like to ask you some questions about your water usage practices before and after the FHTC installation</p>	
4.1	<p>What were your main sources of water before the installation of the tap?</p> <ul style="list-style-type: none"> i) If they were away from your house, how far is the source from your house? ii) Were there specific times during the day that the water was available? iii) Was this source accessible to everyone, or were some people not allowed to use it?

4.2	<p>Who was responsible for collecting the water?</p> <p>i) How many times in a day did they go to collect the water?</p> <p>ii) How many buckets of water did they collect?</p> <p>iii) What difficulties did they face while collecting water?</p> <p>a) Time involved</p> <p>b) Physical difficulty in collecting water / a lot of effort involved</p> <p>c) Unsafe area the water was collected from</p> <p>d) Problem in containers/storage units</p> <p>e) Arguments on water collection with other community members</p> <p>f) Water is not good quality</p> <p>g) Anything else?</p>
4.3	<p>How much water was used for the following purposes, from the previously used water source? Mention in terms of buckets</p> <p>[researcher to click pictures of the buckets/containers used to store water]</p> <p>a) Drinking water</p> <p>b) Bathing</p> <p>c) Cooking</p> <p>d) Washing Utensils</p> <p>e) Washing Clothes</p> <p>f) Cleaning house</p> <p>g) Toilet</p> <p>h) Animals - drinking</p> <p>i) Animals - cleaning</p> <p>j) farming / agricultural purposes</p> <p>k) any Other:</p>
4.4	<p>Were there days when water was not available at the source? What did you do on such days?</p>
4.5	<p>Since you've gotten the FHTC, do you still procure water from the previously used water source?</p> <p>i) If yes, how many buckets do you get from that source?</p> <p>ii) Why don't you solely use the FHTC?</p>

4.6	<p>Since the installation of the FHTC, how much of the FHTC water do you use? Mention in terms of buckets</p> <ul style="list-style-type: none"> a) Drinking water b) Bathing c) Cooking d) Washing Utensils e) Washing Clothes f) Cleaning house g) Toilet h) Animals - drinking i) Animals - cleaning j) farming / agricultural purposes k) any other:
4.7	<p>Do you see any changes in the following household behaviours since the tap got installed?</p> <ul style="list-style-type: none"> a) Time availability of members, especially person who used to collect water b) Cooking c) Toilet usage d) Washing of clothes/utensils/house e) Water used for other purposes eg. agriculture f) Health of family g) Mood of the family
4.8	<p>According to you, what does clean water</p> <ul style="list-style-type: none"> i) look like ii) taste like iii) smell like <p>Is there a difference in the cleanliness of the water you're receiving through the FHTC in comparison to the water you used to collect from the previously used water source?</p>
4.9	<p>What are some water related illnesses you know of?</p>
<p>Section 5: Water Wastage</p> <p>Next, we'd like to ask you some questions about household water conservation practices</p>	
5.1	<p>Have you seen a lot of the following in your village and/or your household?</p> <ul style="list-style-type: none"> i) leaky taps ii) taps not closed after use

5.2	<p>Do you take any specific steps to save water / prevent water from being wasted?</p> <ul style="list-style-type: none"> i) What steps do you take? ii) Why is it important to save water? iii) Where did you learn about these? iv) Do other households make an effort to save water?
<p>[explain white water and grey water to the respondent before asking questions 27 and 28 White water is fresh, completely clean and potable; greywater is water that has been used once and is now considered wastewater.]</p>	
5.3	<p>What all tasks do you use white water for?</p> <ul style="list-style-type: none"> a) Drinking water b) Bathing c) Cooking d) Washing Utensils e) Washing Clothes f) Cleaning house g) Toilet h) Agricultural purposes i) Other:
5.4	<p>Can grey water be reused?</p> <p>If yes, what all tasks do you use grey water for?</p> <ul style="list-style-type: none"> a) Drinking water b) Bathing c) Cooking d) Washing Utensils e) Washing Clothes f) Cleaning house g) Toilet h) Agricultural purposes i) Other:
5.5	<p>Where do you dispose of the water that needs to be thrown?</p> <ul style="list-style-type: none"> a) Left into outdoors - on the ground b) Put into the field, where crops are growing c) Put into the drain outside the house d) Put into the toilet, if it exists

Section 6: Observation Exercise

Please observe and note down the following. Where possible, please click related pictures.

6.1	Number of containers filled with water - brief description of the containers
6.2	How water for drinking/cooking is maintained (eg. is it kept separately, is it covered, are clean utensils used for it)
6.3	Where is the FHTC fixed?
6.4	Is there any visible defect in the FHTC installation causing the pipe/tap to leak?
6.5	What other sources of water are visible? Borewell, private hand pump etc.
6.6	Pictures and description of “jugaad” methods of water conservation

List of photos to be taken:

- FHTC
- Area that FHTC is in
- Water containers for:
 - Drinking/cooking
 - Cleaning/bathing
 - Other household purposes
- Other sources of water available
 - In the house
 - In the immediate vicinity of the house



Source: Behavioural Insights Unit Research team

B. Gram Panchayat, Village Water and Sanitation Committee (VWSC) or Paani Samiti members

1. First, we'd like to ask you a few questions about yourself and your roles in the gram panchayat / paani samiti / village leadership		
1.1	Intro: How long have you been a member of GP / PS	
1.2	Has the village action plan been created? Has the village action plan been submitted? When?	
2. Next, we'd like to ask you some questions about the formation of the paani samiti and the roles and responsibilities		
2.1	What is your role in the paani samiti? ii) How were you selected? iii) Do you find any problems in fulfilling your duties?	GP member, Female member, SC/ST member
2.2	Was the community a part of the selection process?	
3. Next, we'd like to ask you a few questions about the grievance redressal mechanism		
3.1	Does the community come to you for grievance redressal?	
3.2	What's the process to submit complaints? When a complaint is submitted, what are the steps the paani samiti takes to resolve it? How long does it take to resolve a complaint?	
3.3	What issues have you faced in resolving a complaint?	
3.4	Do you think people trust the paani samiti to resolve their problems? Why or why not?	
4. Next, we'd like to ask you a few questions about the JJM scheme and your perspective on it		
4.1	Were people eager to have the JJM scheme in their village? a) If yes, why - has it lived up to people's expectations? b) If no, what were their reasons for not wanting it? c) Will they be willing to pay for JJM?	
4.2	Do you think a scheme like JJM is suitable for your village? Why or why not?	

5. Next, we'd like to ask you a few questions about water practices in your village	
5.1	<p>Are FHTCs installed in all the households?</p> <p>i) If there are houses where the FHTCs are not installed, why haven't they been installed?</p>
5.2	<p>What is the main source of water for your village?</p> <p>If there is a common water source:</p> <p>Was community sharing of water an issue in the village?</p> <p>i) Did some people have access to the community water source? Eg: did some people control the access to the water source?</p> <ul style="list-style-type: none"> - If yes, how did they control it? - How did the others access it? <p>ii) Were there rules about water collection?</p>
6. Next, we will talk about some of the payment related behaviours	
6.1	<p>Is a financial contribution being collected from the community?</p> <p>i) What is the fee?</p> <ul style="list-style-type: none"> a) What was the initial one-time charge? b) What is the current monthly financial contribution? <p>ii) Who decided the amount for the financial contribution?</p> <p>iii) Is the collection of the financial contribution important? Why?</p> <ul style="list-style-type: none"> a) What will the fee be used for? b) How is it allocated for different needs within the JJM scheme?
6.2	<p>i) How did you communicate the information about the financial contribution to the community?</p> <p>ii) How did you explain to them the need for financial contributions?</p> <p>iii) How did the community respond to it?</p> <p>iv) Was there discussion/ disagreement?</p> <p>v) How did you convince them of the need for payment?</p>
6.3	<p>i) Who collects the financial contribution? How is it collected?</p> <p>ii) How frequently is the fee collected?</p> <p>iii) Is a bill/receipt provided? What info does it contain?</p> <p>iv) What are the problems faced during collection?</p> <p>v) Is it collected from everyone?</p> <ul style="list-style-type: none"> a) if yes - is everyone expected to pay the same amount? b) if no - who all are excluded, and why?

6.4	<ul style="list-style-type: none"> i) What percentage of households pay? ii) For households that pay: <ul style="list-style-type: none"> a) Why do you think they agreed to pay? b) What are some things that make it easy for them to pay? ii) For households who don't pay, why are they unwilling to pay <ul style="list-style-type: none"> a) unable to afford the fee b) want the tap, but do not want to pay for it c) already have access to a tap/water d) do not have trust in the quality of tap/water being provided e) believe that water should not be paid for
6.5	<ul style="list-style-type: none"> i) Do you know which households have not paid? ii) Is this knowledge available to the community? What does the GP do in case some households are not paying? iii) What does the GP do in case some households are not paying?
7. Next, we will ask you a few questions about community participation	
7.1	<ul style="list-style-type: none"> i) How are JJM assets being maintained currently? ii) What are the different maintenance needs?
7.2	<ul style="list-style-type: none"> i) What are the operation & maintenance related problems the village is facing? ii) What are the system issues. Eg: <ul style="list-style-type: none"> a) insufficient funds b) lack of trained technicians c) lack of govt support for maintenance d) higher officials not following up on complaints e) anything else iii) What are the community issues <ul style="list-style-type: none"> a) community not cooperating with maintenance activities b) community not paying for maintenance c) insufficient volunteers d) insufficient involvement e) lack of education/awareness f) anything else

7.3	<ul style="list-style-type: none"> i) How often are quality tests and cleaning conducted? ii) Who conducts these? iii) Are there any difficulties faced in this? iv) What is done with the test results? v) What have past results indicated?
7.4	<ul style="list-style-type: none"> i) How should community members ideally participate in the upkeep of JJM assets? What are the different activities they should be undertaking? ii) What are the activities you have seen good participation in?
<p>8. Lastly, we want to ask you a few questions about water usage in the community</p>	
8.1	<ul style="list-style-type: none"> i) Is overconsumption and water wastage an issue? If yes - what are the major reasons for it?
8.2	<ul style="list-style-type: none"> i) What is the community doing to ensure the availability and cleanliness of water? <ul style="list-style-type: none"> a) households are careful about water use b) social norms around water use c) community rules established d) education/awareness programmes



Source: Behavioural Insights Unit Research team

The following questions are for the woman PS member and the SC/ST member, please ask for individual time with them before asking them the following questions. In case such a member doesn't exist in the PS, similar questions need to be asked to households from lower caste/class

Questions for SC/ST member	
1.	<p>What are the problems that someone from a minority community (SC, ST, and BPL) may face regarding water? Eg.</p> <ul style="list-style-type: none"> a) are there separate water sources for different communities b) is it hard for them to access clean water for drinking & cooking c) are there different rules of water use for different communities d) do they face difficulty in making payments for water fee e) do they face additional water quality-related problems on health
2.	<ul style="list-style-type: none"> i) What are the problems such communities face within the JJM programme and regarding community-level water-assets <ul style="list-style-type: none"> a) are they involved in community-level discussions b) are their opinions and concerns addressed adequately by GP / authorities - if not, why c) do they find it difficult to pay the water use fee is collected? For households that cannot afford to pay - what is being done? - Are there any monetary considerations for them? d) Do they have to wait for longer to receive taps/pipelines
3.	As part of the Paani Samiti, what changes do you think would help in addressing these problems?

C. Male and female residents: in-depth questioning

SECTION 01: PAYMENTS

Exercise 01 - Willingness to Pay

Objective: Understanding what is the cost measurement they think is worth the benefits; or understanding what they think the current benefits are worth

Method:

1. Present the respondent with the following benefits and costs.
2. Start with the first benefit and the average cost (Eg. Rs30). Ask them whether they will be willing to pay that much for that particular benefit
3. If they respond yes, increase the cost in steps to see if they will be willing to pay a higher amount
4. If they respond no, decrease the cost in steps until you find the cost they are willing to pay for that benefit.
5. Please includes notes from the probe questions for each benefit

Example:

Benefits	Range of costs	Notes
1. Having a bathroom attached to the house	3500 3000 2500 2000 1500 1000	

Activity:

Avg cost: _____

Benefits	Range of costs	Notes
1. _____		
2. _____		

Probes for this activity:

- Why did you choose that particular amount? What are the factors you considered in arriving at this amount?
- What amount do you think most people in your village would choose?

Exercise 02 - Communal Payments

1. In a village, the people were asked to pay _____ for the installation and _____ on a monthly basis. However, there were some people in the village who refused to pay this amount.
 - If people collect money amongst themselves to repair things, why are they unwilling to pay for the tap?
 - If people are unable to pay, is there another way they can compensate? Through contributing works, land etc?
 - Is there a way that the scheme can work even if everyone doesn't pay?

Excercise 03 - Conditional Cooperators

1. "Manoj and Sangeeta have recently gotten an FHTC at home. They paid the single payment for the JJM pipelines that everyone in the village paid, however, they are unwilling to pay the monthly fee because they have a borewell connection at home which they use more than the FHTC. The gram panchayat tells them that the whole village needs to pay but Manoj and Sangeeta still refuse to pay because they don't feel the need to."
 - Who is in the right here? Is it fair to ask them to pay?
 - What should the Gram Panchayat do?
 - Is there a solution here that would make everyone happy?
 - If they refuse to pay, how will others in the village respond to them?
 - If each household agrees to pay the financial contribution, what are the benefits the village can see?

Exercise 04 - Affordability and Penalties

1. "Imran and Noor live far away from the community handpump and they don't have a borewell at home either. Before JJM came to their village, Noor would leave her two children alone at home to go and collect water. They are very happy that a scheme like JJM has now come to their village because Noor no longer needs to leave her children alone and go a long distance. However, when they hear about the financial contributions they feel worried because they don't know whether they'll be able to pay the money or not."

- What are possible reasons that Noor and Imran may not be able to pay the financial contributions?
- What are some solutions Noor and Imran can try out?
- If they choose to pay, which area can they pay lesser in order to pay this amount?
- Do you think the GP/PS can do something about this? What is that?
- If the GP allows them to not pay, how will others in the village respond to them?
- Will others be willing to pay, knowing that someone is not paying?

Exercise 05 - Water as a Commodity vs Resource

- Do you think water is something to pay for?
- Do you think clean water is something to pay for?
- Do you think clean water being available inside your house is something to pay for?
- Do you pay for electricity? If electricity is paid for, then why shouldn't water be paid for?

Exercise 06 - Payment Structures

- Do you find it difficult to pay for the JJM scheme? Why is it difficult to pay?
- Are there other people in the village who also find it difficult to pay?
- If you were the mukhia, how would you set up the payment structure



Source: Behavioural Insights Unit Research team

SECTION 02: WATER QUALITY AND DISTRIBUTION

Exercise 01 - Water Quality and Health

“Wahida has two children, a 3-year-old and a 16-year-old who takes care of the household while her husband and she go to the local town to work. While they’re gone, the older daughter fills up water in different utensils. She collects water from their borewell, from the FHTC and from the community water pump to ensure there is enough water at home. By the time Wahida and her husband return, the daughter leaves for school”

Probes for this activity:

- How can Wahida know the difference between the different types of water?
- Which water should Wahida use for drinking, and why? What could possibly happen if they drink from the other sources?
- What's the best way to utilize the different sources of water for the various household tasks that need to be carried out?
- Which water would she collect in the largest quantities?
- If the water smells and tastes alright, how can Wahida be sure that it is good and will not affect their health?
- Is it possible that water can lead to illnesses in Wahida's family? In what situation can water lead to illnesses?
- Which of the sources is most valuable? Why do you think so?
- Which of this water is the most valuable?
 - What all activities can this water be used for?
 - How do you feel if you see someone wasting this water?

SECTION 03: HOUSEHOLD STRUCTURES

Exercise 01 - Accessibility and Benefits

“Geeta has to walk 15 mins one way to fetch water from the community handpump. Because of this, she wants to get an FHTC connection at home. However, they need to pay a monthly financial contribution of Rs. 50 to get this tap. Her father in law, who manages all the money at home, says that getting this tap would be an unnecessary expenditure and instead Geeta should be able to manage to go the distance because that's what everyone in their family has done till now. Geeta feels like she could do something better with the time saved.”

Probes for this activity:

- Who is in the right here? Why do you think they're in the right?
- What could the other person do differently to make this situation better?
- Are the GP/PS trying to take advantage of their situation?

SECTION 04: WATER CONSUMPTION

Exercise 01 - Water as a Commodity or Resource

- Earlier water use was public and shared by all - now it has become private - where you can open a tap at your own house: how do you think that has changed behaviours with regard to:
 - Fights over water
 - Sharing responsibilities & Cooperation among villagers
 - Privacy of activities - like toilet use, bathing
 - Earlier you (assumingly) had a limit on the amount of water you could collect (based on answers in Phase 1) - now that you don't, do you think all HHs might be using a lot more water or less? Why?

Exercise 02 - Individual Consumption

- Now that there's a tap connection at home, should one still be careful about how much water they use?
- Does the amount of water you use, have an effect on your neighbour's water availability? If it will affect your neighbour, do you think it will affect others in the village also?
 - What kind of effect do you think you'll see?
- Can water finish in your village? What will happen if water finishes in your village?

SECTION 05: MAINTENANCE OF ASSETS

Exercise 01 - Free Resources

- Can you give me a few examples of free resources?
 - Are these resources well maintained?
 - Who maintains these resources?
 - Do they get anything in return for maintaining these resources?

- We heard from the neighbouring village that someone made a separate pipeline connected to the JJM pipeline. Have you seen something like this in your village
 - Why do you think they did that?

SECTION 06: WATER WASTAGE AND CONSERVATION

Excercise 01 - Normative Questions

- Which of the following activities are considered water wastage:
 - Broken pipelines
 - Taps that are left open, buckets overflowing
 - Tap dripping, leaking pumps
 - Tap water being used for agriculture, kitchen gardens
 - Using extra water to wash and bathing
 - Water thrown on the ground to keep the house/surroundings cool
 - Extra water thrown on the mud

Excercise 02 - Water Shortage

- What will happen if too many people overuse/waste water in your village?
- Have there been any water shortage issues in your village?
- How do you feel about this statement - "There are countries that are running out of water, India is also on the list."

SECTION 07: MENTAL MODELS AROUND A SERVICE

Excercise 01 - Metered Services

- Do you think the metered payment is fair?
- Who do you think controls and decides the amount one has to pay?
- Do you think water can be based on a metered usage? Why or why not?

SECTION 8: SHARED ASSETS

Excercise 01 - Imagination of a Shared Asset

- What is an example of a shared asset in your community?

- What are the rules around this shared asset? Who sets the rules for this shared asset?
- What are some ways these rules have been broken? What happens when someone breaks the rules of this shared asset?
- Who takes ownership of maintenance for this asset?
- What's the process of grievance redressal when it comes to this shared asset?

Exercise 02 - Sharing Assets

- What are some good things about sharing this asset?
- What are some bad experiences people have had by sharing this asset?

Exercise 03 - Ownership of Assets

- Is it easier to have a shared asset taken care of by everyone or should everyone have their own assets which they care of by themselves? Why do you think so?
- If you had the opportunity would you get a private asset instead of using the community one? Why? What are the benefits you see?

SECTION 9: SENSE OF COMMUNITY

Exercise 01 - Feelings about their Community

- What are some community events that happen in your villages? For eg. melas, bazaars, circuses etc Which of these events do you enjoy the most? What do you do at these events?
- What are activities that women get together for? (Eg, SHG meetings, health-related activities)

Exercise 02 - Sense of Community Ownership

- Do you feel responsible for the growth of your village?
- Do you think people feel the need to serve their community? If yes, in what way does that happen?
- If a community resource, like a handpump, gets spoilt, how does it get fixed?

Exercise 03 - Community Decision Making

- How are events organised in your village? Who organises them?
- Does the community contribute in any way? (in terms of financial contribution, voluntary help in setting up, setting up stalls etc)
- Do you think people come together to work on problems in the village?

- If yes - what are some of the problems the community has been working on together, and how are they solving for them?
- If no - why not? What are the barriers in working together as a community

SECTION 10: ROLE MODELS

Exercise 01 - Identified Role Models

- Who are some powerful women in your village?
- Who are some powerful men in your village?
- Who resolves disputes in your village?
- Is there someone you go to, to resolve your problems outside your family?
 - Who is it?
 - Why do you go to them?

Exercise 02 - Influence

- Do you trust them to be wise and give you good advice? When/why did people start trusting this person?
- How does this role model solve problems?

Exercise 03 - Role Models vs Government

- What change have these role models managed to bring in your village?
- Are any of these role models in important positions in the community?
- Have they ever given advice to the GP and other government officials?

Exercise 04 - Women Leaders

- Have women come together to change things in the village?
- Can you give examples of such incidents?
- In Andhra, women came together to fight against local breweries which were supplying alcohol to their husbands. Can you think of similar examples in your village?

FIELD PICTURES



FHTC supplying clean drinking water (Alaundi, Jharkhand)



Research and survey team, with block-level PHED department officials, water and sanitation officers, ISA partners (Silagai, Jharkhand)



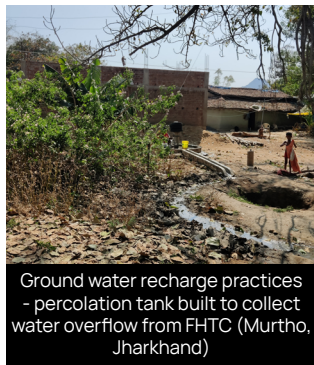
Field Test Kit (FTK) used by communities to conduct quality testing of water from FHTCs and other sources



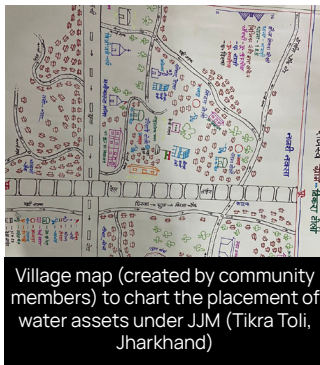
Good water use behaviour - using a long-handled ladle to collect water (Murtho, Jharkhand)



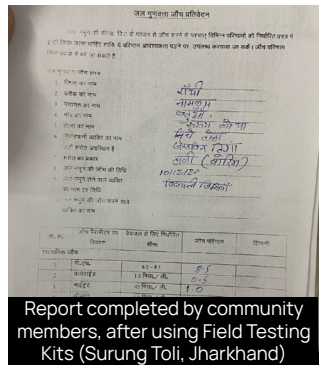
Functional Household Tap Connection (FHTC) provided under JJM (Silagai, Jharkhand)



Ground water recharge practices - percolation tank built to collect water overflow from FHTC (Murtho, Jharkhand)



Village map (created by community members) to chart the placement of water assets under JJM (Tikra Toli, Jharkhand)



Report completed by community members, after using Field Testing Kits (Surung Toli, Jharkhand)



Research and survey team interacting with women and community leaders on water and related issues (Surung Toli, Jharkhand)



Research and survey team conducting in-depth interviews with community members and village leaders (Alaundi, Jharkhand)



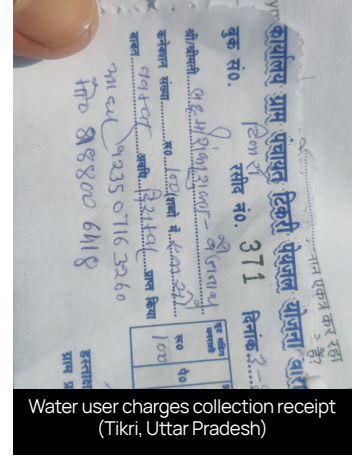
Pump house built under JJM to transport surface level water from source to a treatment unit (Silagai, Jharkhand)



Research and survey team, with village and block level water and sanitation leaders (Alaundi, Jharkhand)



IEC awareness drive on water quality through posters and announcements (Nayi Toli, Jharkhand)



Water user charges collection receipt (Tikri, Uttar Pradesh)



Water treatment plant built under JJM connecting 3 villages (Silagai, Jharkhand)

विशेषता		इकाई	अनुमत स्वीकार्य सीमा	महानगरों (कोटा) स्वीकार्य सीमा	सुरक्षित स्रोतों	विशेषता	स्वीकार्य सीमा (सुरक्षित स्रोत)	महानगरों (कोटा) स्वीकार्य सीमा	
1	गंध (odor)					1	गंध (odor)	1	50
2	रंग (Color)					2	रंग (Color)	1	1
3	पीएच (PH Value)		6.5 - 8.5	कड़े कील नहीं		3	पीएच (PH-Value)	1	1
4	कठोरता (Total Hardness)	किलोग्राम/लिटर	500	2000		4	कठोरता (Total Hardness)	1	1
5	गंदगी (Turbidity)	एनटीयू	1	5		5	गंदगी (Turbidity)	5	5
6	पूर्ण क्षारीयता (Total Alkalinity)	किलोग्राम/लिटर	200	600		6	पूर्ण क्षारीयता (Total Alkalinity)	20	20
7	पूर्ण क्लोरिडिटी (Total Chloride)	किलोग्राम/लिटर	200	600		7	पूर्ण क्लोरिडिटी (Total Chloride)	20	20
8	असंश्लिष्ट क्लोरिडिटी (Residual Chlorine)	किलोग्राम/लिटर		0.2		8	असंश्लिष्ट क्लोरिडिटी (Residual Chlorine)	1	1
9	क्लोराइड (Chloride)	किलोग्राम/लिटर	250	1000		9	क्लोराइड (Chloride)	50	50
10	सल्फेट (Sulphate)	किलोग्राम/लिटर	200	400		10	सल्फेट (Sulphate)	50	50
11	आयरन (Iron)	किलोग्राम/लिटर	1.0	कड़े कील नहीं		11	आयरन (Iron)	50	50
12	असंश्लिष्ट आर्सेनिक (Total Arsenic)	किलोग्राम/लिटर	0.01	कड़े कील नहीं		12	असंश्लिष्ट आर्सेनिक (Total Arsenic)	100	100
13	फ्लोराइड (Fluoride)	किलोग्राम/लिटर	1.0	1.5		13	फ्लोराइड (Fluoride)	100	100
14	नाइट्रेट (Nitrate)	किलोग्राम/लिटर	4.5	कड़े कील नहीं		14	नाइट्रेट (Nitrate)	50	50
15	कोलाइफॉर्म बैक्टीरिया (Coliform Bacteria)	किलोग्राम/लिटर	100	1000		15	कोलाइफॉर्म बैक्टीरिया (Coliform Bacteria)	50	50
16	फेकली कोलाइफॉर्म बैक्टीरिया (Fecal Coliform Bacteria)	किलोग्राम/लिटर	100	1000		16	फेकली कोलाइफॉर्म बैक्टीरिया (Fecal Coliform Bacteria)	100	100

IEC poster for raising water quality awareness [Outlining characteristics (metrics) of good quality water on the left, and corresponding metrics of water from local sources on the right (Ranchi district, Jharkhand)]



IEC poster encouraging community members to think about water security (Ranchi district, Jharkhand)



The Behavioural Insights Unit of India (BIU) was constituted in November 2019, as a collaboration between NITI Aayog, Centre for Social and Behaviour Change and Bill & Melinda Gates Foundation. It is an independent unit under the office of the CEO of NITI Aayog, aimed at enhancing the design and delivery of public policy in India

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