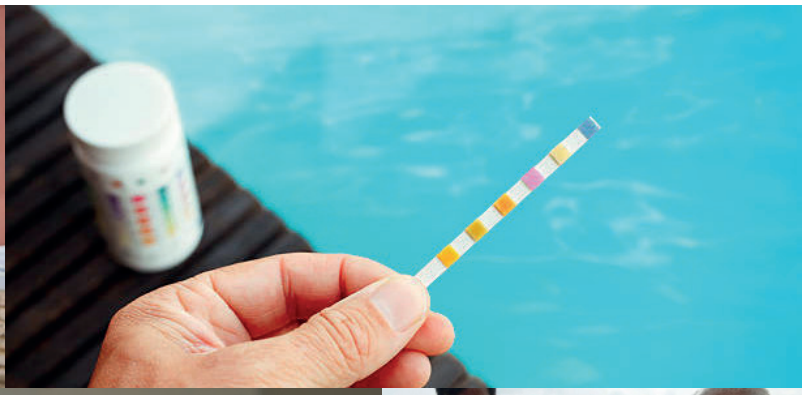
पेयजल एवं स्वच्छता विभाग
जल शक्ति मंत्रालय
DEPARTMENT OF DRINKING WATER AND SANITATION
MINISTRY OF JAL SHAKTI

Har Ghar Jal
Jal Jeevan Mission

NITI Aayog

BIU Behavioural Insights Unit of India



Jal Jeevan Mission

COMPENDIUM OF BEHAVIOURAL BEST PRACTICES

December 2023

ASHOKA UNIVERSITY

Centre for Social and Behaviour Change

Jal Jeevan Mission

COMPENDIUM OF BEHAVIOURAL BEST PRACTICES

December 2023

This page has been left blank intentionally.

Table of Contents

This page has been left blank intentionally.

List of Interventions

A Uptake and Payment for JJM Services

B Community Participation, Ownership and Maintenance

C Water Quality

D Sustainable Water Use

This page has been left blank intentionally.

This page has been left blank intentionally.

Letter from Vice Chairman, NITI Aayog

सुमन के. बेरी
उपाध्यक्ष
SUMAN K. BERY
VICE CHAIRMAN
Phones : 23096677, 23096699
Fax : 23096699
E-mail : vch-niti@gov.in

भारत सरकार
नीति आयोग, संसद मार्ग
नई दिल्ली - 110 001
Government of India
NATIONAL INSTITUTION FOR TRANSFORMING INDIA
NITI Aayog, Parliament Street,
New Delhi - 110 001

Azadi Ka Amrit Mahotsav

Foreword

In May 2023, the Jal Jeevan Mission (JJM) celebrated the milestone of providing safe and clean drinking water through tap connections to more than 12 crore rural households across the country. At the time the initiative was launched by the Hon'ble Prime Minister (on 15 August 2019), only 17% of households in India's villages had access to piped water connections. Less than four years later, over 60% of rural households are accessing clean drinking water through taps.

This is a phenomenal achievement in a short timeframe for a country of India's size and diversity. In fact, India is well positioned now to achieve the Sustainable Development Goal Target of "Safe and Affordable Water To All" well before time. In addition to covering the remaining households, the focus of the JJM must now shift towards achieving long-term sustainability of outcomes.

In this context, it is of vital importance that we disseminate and replicate social and behaviour change solutions that can be feasibly implemented in people's homes. I especially appreciate the step-by-step format of this document which simplifies and facilitates the translation of academic insights into action on the ground. By doing so, this compendium will empower the field partners of JJM to bolster their community engagement and behaviour change efforts for ensuring the sustainability of the programme.

I congratulate the NITI-Behavioural Insights Unit (BIU) team for their exemplary work, in collaboration with the Centre for Social and Behaviour Change at Ashoka University. I would also like to thank Ms. Vini Mahajan, Secretary, Department of Drinking Water and Sanitation; Mr. Vikas Sheel, Additional Secretary and Mission Director, JJM and my colleague Mr. B.V.R Subrahmanyam, CEO, NITI Aayog for providing their guidance to the BIU team, from the conceptualisation of this document to the dissemination of the final product. Finally, I would like to thank field officials from across the country, experts and various institutions that have contributed to this important initiative.

(Suman Bery)

स्वच्छ भारत

This page has been left blank intentionally.

Foreword by CEO, NITI Aayog

बी. वी. आर. सुब्रह्मण्यम
B.V.R. Subrahmanyam
मुख्य कार्यकारी अधिकारी
Chief Executive Officer

भारत सरकार
नीति आयोग, संसद मार्ग
नई दिल्ली - 110 001
Government of India
National Institution for Transforming India
NITI Aayog, Parliament Street,
New Delhi - 110 001
Tel. : 23096576, 23096574
E-mail : ceo-niti@gov.in

Foreword

Sustainability and water security are national and global priorities. Sustainability takes on a dual meaning with the Jal Jeevan Mission. It refers to both sustainability of the infrastructure and ecological sustainability. Both kinds of sustainability can only be achieved by a bottom-up citizen engagement. To this end, the compendium explores various initiatives that facilitate and encourage such participation from the people.

This report also marks a departure into a newly emerging and prospective coalition between policy and behaviour science. To design effective policy, it is essential to comprehend factors influencing beneficiaries and service providers and use such insights to optimise the design and implementation of schemes. I hope this report will be the first of many to document best practices in the exploration and application of behavioural solutions in India.

Given India's social and economic diversity, these influences differ across geographies, rendering a "one size fits all" approach ineffective. A bottom-up and localised method is required for successful behavioural solutions. I appreciate that this report explores solutions implemented in response to various barriers while drawing lessons across the development space. Thus the document empowers local champions to make choices based on their needs and circumstances.

I commend the work of the various Gram Panchayats, State Governments, Public Health Engineering Departments, think tanks, start-ups, foundations, NGOs and other organisations mentioned in this document. It is a matter of great inspiration that such creativity has been shown to resolve pertinent policy issues. I am grateful to Smt. Vini Mahajan, Secretary, Department of Drinking Water and Sanitation, and Shri. Vikas Sheel, Additional Secretary and Mission Director - JJM, Department of Drinking Water and Sanitation for their strong support and mentorship during this endeavour. I congratulate the Behavioural Insights Unit of India at NITI Aayog and the Center for Social and Behaviour Change for their work in producing this knowledge resource. I hope the programs in this document spark stakeholders into focusing on behaviour change and participation, thus accelerating our nation's journey towards sustainability, water security, gender equality and good health.

23/6

B. V. R. Subrahmanyam
CEO, NITI Aayog

This page has been left blank intentionally.

Message from Secretary, DDWS

विनी महाजन
VINI MAHAJAN
सचिव
Secretary

भारत सरकार
जल शक्ति मंत्रालय
पेयजल एवं स्वच्छता विभाग
चौथा तल, पं दीनदयाल अंत्योदय भवन
सी. जी. ओ. काम्पलैक्स, लोधी रोड़, नई दिल्ली-110003
Government of India
Ministry of Jal Shakti
Department of Drinking Water and Sanitation
4th, Floor Pt. Deendayal Antyodaya Bhawan
C. G. O. Complex, Lodhi Road, New Delhi-110003
Tel. : 24361011, 24362715, Fax : 24361207
E-mail : secydws@nic.in

Message

Jal Jeevan Mission envisages the provision of clean, adequate and reliable tap water to all rural households of the country. Remarkable progress has been achieved under the Jal Jeevan Mission since its launch. As a result of the strong combined efforts of the central and state governments, the coverage of rural households with tap water in the country has increased from below 17% to more than 70% in just a few years. Similar efforts are being made under AMRUT and other interventions in the urban areas.

While the governments continue to build the necessary infrastructure and put in place the required ecosystem for operations and management of the piped water supply schemes, the desired outcomes will eventually materialize only if the communities (especially women) take ownership of the schemes, and charge of their operations and maintenance. More importantly, communities must appreciate that water is a precious resource, to be used and reused judiciously.

Behavioral Economics provides insights whose application to these issues can greatly help trigger the desired behavioural change. It was against this background that the Department of Drinking Water and Sanitation teamed up with the Behavioural Insights Unit of India (BIU) at NITI Aayog. I am very pleased to see the rigorous and comprehensive research on the different aspects of behavioral change issues relating to the Water, Sanitation and Hygiene (WASH) sector that informs this document. The document also incorporates field insights from some of the solutions implemented on ground.

I thank the BIU team at NITI, my own team in the National Jal Jeevan Mission, and all the government and non-government bodies and experts who have contributed to this document.

I am confident that the various WASH sector stakeholders will find this document useful, and in turn will further add their rich experience so that the document can improve over time.

(Vini Mahajan)

This page has been left blank intentionally.

Foreword by Additional Secretary, DDWS and Mission Director, Jal Jeevan Mission

Vikas Sheel
विकास शील

National Jal Jeevan Mission
Government of India, Ministry of Jal Shakti
Department of Drinking Water and Sanitation

Foreword

Jal Jeevan Mission was announced by Hon'ble Prime Minister from the ramparts of the Red Fort, in his address to the Nation on the occasion of Independence Day on 15th August 2019, with the aim to provide drinking water through taps to all rural households in the country, with adequate quantity (55 lpcd), of prescribed quality BIS standard 10500, and on regular and long-term basis. In the period since then, significant progress has been made and the coverage of tap water to rural households has increased from a mere 17% at the start of Mission to more than 70%. The pace of implementation has been unprecedented, with more than one tap is being installed on an average every second in the country since January 2023. Apart from increased coverage of households, the coverage of tap water in schools and anganwadis has also improved by leaps and bounds. More than 8.98 lakh schools (88%) and 9.37 lakh anganwadi centers (84%) now have access to potable water through taps.

"People's Participation", being one of the main stays for the success of any government welfare programme, community participation has been at the heart of the implementation strategy of Jal Jeevan Mission. More than 5.8 lakh village level Pani Samitis have been constituted in the country, with representation of at least 50% women among their members. Village Action Plans have been prepared by the Pani Samitis for the piped water supply schemes in their respective villages. Rural communities, especially women have also been engaged in testing of water quality at households. More than 23 lakh such women have been trained under the Mission.

The Compendium of best behaviour change practices, implemented in various parts of the country & in other countries, aims to provide insights on the various "nudge" actions that may be incorporated in the IEC/ BCC interventions at the national, state and district levels. This compendium also showcases the work undertaken on ground by various partners, in successfully sensitizing the community for bringing about a positive behavioural change in their daily life. 50 such Best Practices from 14 countries and 18 States in India are included in the Compendium.

We applaud the efforts of all partners and stakeholders for providing their valuable inputs and insights for preparation of the Compendium. This ready to Use Handbook will help the States/ UTs in developing an understanding of the behaviour change techniques and their applications, to spur action in this regard.

(Vikas Sheel)
Additional Secretary & Mission Director
National Jal Jeevan Mission

November 14, 2023

This page has been left blank intentionally.

Overview to Compendium

This compendium has been drafted to allow development practitioners to test and implement behavioural solutions in their local geographies. Thus, this report has documented various behavioural solutions implemented primarily in India, and a few examples from other countries, by both government and non-government partners in the WaSH sector. Extensive primary and secondary research was conducted on each intervention to understand relevant problem statements, design behavioural principles, implementation strategies and subsequent impact.

The interventions described in the following document have been collected from the following sources;

1. **Literature review** of academic studies on effective behavioural interventions in the Water, Sanitation and Hygiene (WaSH) sector, focusing on solutions deployed in developing countries.
2. **Stakeholder consultations** with government and non-government organisations (including practitioners working at central, state, district and village levels) across all states in India to gather insights on behavioural solutions they have observed on the field or deployed themselves.
3. **Field research** was conducted across five states (Jharkhand, Gujarat, Andhra Pradesh, Rajasthan and Uttar Pradesh) to study water-related behavioural problems. Some relevant solutions were observed from field visits in Gujarat and Jharkhand.
4. **Ideation workshop** conducted over two days with behaviour science experts at the Center for Social and Behaviour Change (CSBC) to brainstorm and innovate potential solutions for major behavioural problems observed within JJM.

Selection Metrics

After this extensive data collection activity, the following metrics were used to create a shortlist of entries;

1. **Relevance:** Interventions were shortlisted and categorised based on their ability to address the four fundamental behavioural problems critical to JJM, as described below.
2. **Scalability:** Interventions which are cost-effective, easy to implement and do not require the creation of new physical or social assets were prioritised.

Based on these criteria, a final list of 50 interventions has been curated in this report for the benefit of all stakeholders and practitioners within JJM. These interventions have listed across four sections;

1. **Uptake and Payment for JJM services** includes all interventions encouraging people to take up and regularly pay user charges (one-time and recurring) for JJM services.
2. **Community Participation, Ownership and Maintenance** includes all interventions which will encourage people to participate in JJM activities and decision-making, take ownership of JJM assets in their locality and contribute to the maintenance of JJM assets under 'Har Ghar Jal'.
3. **Water Quality** includes all interventions which will encourage people to gather information about the quality of water in local sources and the impact of drinking unsafe water on health.
4. **Sustainable Water Use** includes all interventions which will encourage people to reduce water wastage and take up greywater management practices in their household.

To facilitate the implementation of these solutions, a simple yet robust monitoring and evaluation (M&E) framework along with suggested techniques for evaluation has been included in the compendium. The reader may choose any solution and accordingly will be recommended a relevant M&E tool.

Coverage

14+ Countries

The Compendium covers behaviour change programs conducted across India, Costa Rica, South Africa, Zambia, USA, Australia, UAE, Netherlands, Ghana, Kenya, Ethiopia, Haiti and countries in the Eastern Mediterranean Region (EMR).

18 States

Within India, this report documents behaviour change interventions that have been implemented in the states of Tamil Nadu, Maharashtra, Karnataka, Delhi, Jharkhand, Gujarat, Himachal Pradesh, Punjab, Andhra Pradesh, Assam, Uttar Pradesh, Rajasthan, Mizoram, Tripura, Haryana, Chattisgarh, Kerala and Arunachal Pradesh.

Within India, this report documents behaviour change interventions that have been implemented in the states of Tamil Nadu, Maharashtra, Karnataka, Delhi, Jharkhand, Gujarat, Himachal Pradesh, Punjab, Andhra Pradesh, Assam, Uttar Pradesh, Rajasthan, Mizoram, Tripura, Haryana, Chattisgarh, Kerala and Arunachal Pradesh.

This page has been left blank intentionally.

Acknowledgements

We sincerely thank Shri Suman Bery, Vice-Chairman of NITI Aayog, Shri B.V.R. Subrahmanyam, Chief Executive Officer of NITI Aayog, Smt. Vini Mahajan, Secretary of the Department of Drinking Water and Sanitation (DDWS), Shri. Vikas Sheel, Additional Secretary & Mission Director National Jal Jeevan Mission, Shri. Y. K. Singh, Director, JJM and Shri. P. Viswakannan, former Director, JJM, who have been an invaluable part of this process and supportive mentors throughout the engagement of the Behavioural Insights Unit of India (BIU) at NITI Aayog with the Jal Jeevan Mission. We also thank Ms Rachna Gahilote Bisht, who has supported us in developing the Compendium.

This report is a product of rigorous work by the Behavioural Insights Unit of India (BIU) at NITI Aayog. Special mention is accorded to Dr Shagata Mukherjee, the Academic Lead of the BIU and Deputy Director at Centre for Social and Behaviour Change, Ms Nilanjana Bargotra, Programme Manager at BIU and Ms Ananya Iyer, Associate at BIU, for their efforts in conceptualising and compiling this document. We also thank our reviewers and researchers, Dr Pavan Mamidi, Dr Sharon Barnhardt, Ms Swetha Selva, Ms Nymphea Noronha and Ms Jocelyn Joseph from the Center for Social and Behaviour Change for their support in this research endeavour.

In keeping with its objective, which is to document innovative behaviour change programs being conducted in the WASH sector across India, this report would be inconceivable without the patronage of numerous officials, development practitioners and organisations working across the national, state, district and village levels. We thank them all for offering their time, effort and unwavering support towards completing this compendium. We also congratulate all the partners mentioned in this compendium on the successful conception and implementation of behavioural solutions and thank them for their incredible work, whose massive impact has been experienced by all stakeholders and beneficiaries in JJM.

This report owes its completion and its profound potential for impact to the dedicated efforts of a wide variety of stakeholders. We extend our deep gratitude to them all.

This page has been left blank intentionally.

Abbreviations

AW	Aanganwadi
AWW	Aanganwadi Workers
BC	Behaviour Change
BIU/ NITI-BIU	Behavioural Insights Unit of India, at NITI Aayog
BMGF	Bill and Melinda Gates Foundation
CSBC	Centre for Social and Behaviour Change
DAP	District Action Plan
DDWS	Department of Drinking Water and Sanitation
FHTC	Functional Household Tap Connection
FTK	Field Testing Kit
GP	Gram Panchayat
HH	Household
IEC	Information, Education, Communication
ISA	Implementation Support Agency
JJM	Jal Jeevan Mission
M&E	Monitoring and Evaluation
MoJS	Ministry of Jal Shakti

NGO	Non-Governmental Organisation
NITI Aayog	National Institute for Transforming India
O&M	Operations and Maintenance
PHED	Public Health Engineering Department
PRI	Panchayati Raj Institutes
RoI	Return on Investment
RWSS	Rural Water Supply and Sanitation
SBCC	Social and Behaviour Change Communication
SDG	Sustainable Development Goal
SHG	Self-Help Groups
UPI	United Payment Interface
UT	Union Territories
VAP	Village Action Plan
VWSC	Village Water and Sanitation Committee
WaSH	Water, Sanitation and Hygiene

This page has been left blank intentionally.

This page has been left blank intentionally.

Behaviour Change in JJM

Effective engagement of the community and individual households is critical for the Jal Jeevan Mission. The scheme's long-term success and sustainability require individuals to take several essential actions - such as judicious use of water, grey water management, strengthening of water sources, maintenance of the water supply assets, payment for water supply services, and overall ownership of the scheme in their village. However, uptake of these actions 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 first to identify the broad behavioural goal that correspond to the stated policy objectives of the Jal Jeevan Mission:

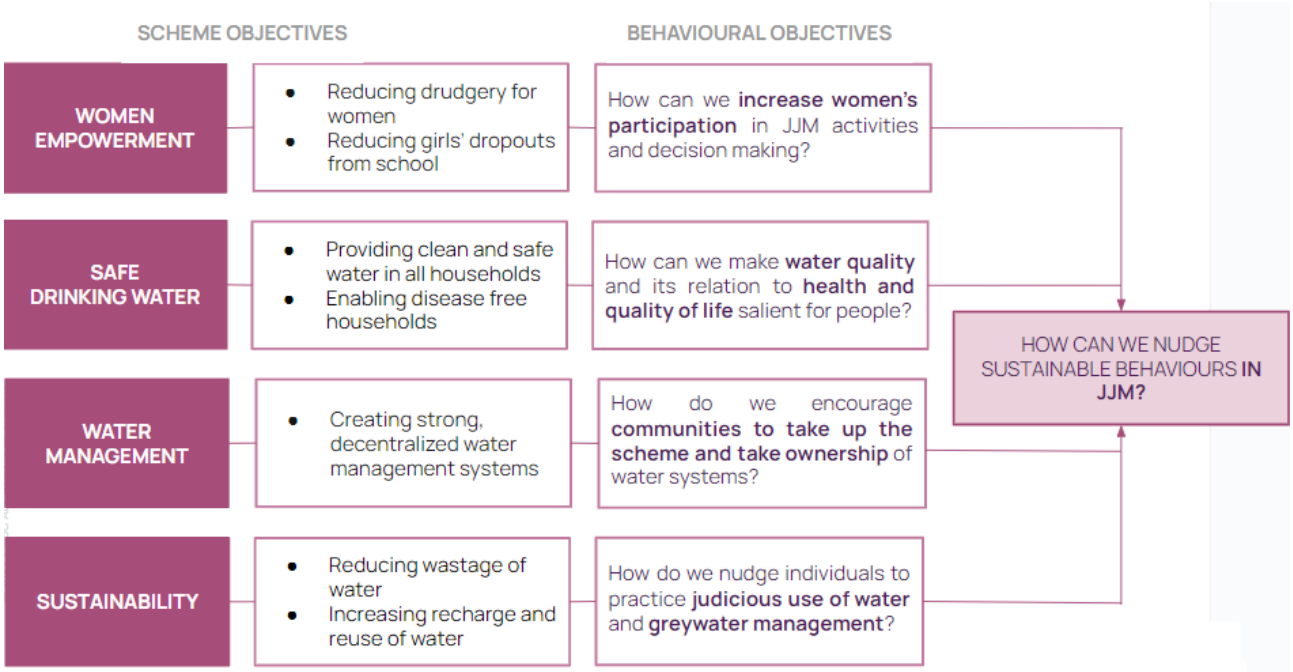


Fig: Behavioural objectives of JJM

This page has been left blank intentionally.

How to Use the Compendium

To assist practitioners and decision-makers within JJM in bringing about behaviour change, it is necessary to explore the potential behavioural problems and solutions that might impact one's constituency. As such, this document has been created to guide stakeholders in a step-by-step manner to diagnose behavioural issues and implement relevant behavioural solutions in their localities across. It elaborates on problems and potential solutions across four behavioural domains.

The following steps are recommended for stakeholders to effectively utilise this document

Step 1

Select a behavioural goal relevant to your geography

1. Uptake and Payment for JJM Services (page 40 - 61)
2. Community Participation, Ownership and Maintenance (page 62 - 95)
3. Water Quality (page 96 - 119)
4. Sustainable Water Use (page 120 - 155)

Step 2

The second step is to understand different factors that may be influencing the performance of target behaviours. Refer to the "Key Barriers and Levers" listed at the start of each section to pick which barriers and levers are relevant to your geography.

The BIU and DDWS had previously published a JJM Behavioural Diagnostic Report[1] which included detailed insights on different factors influencing key behaviours within JJM. These sections summarise the findings of the diagnostic report by detailing levers (thoughts, feelings and circumstances which encourage certain behaviours) and barriers (thoughts, feelings and circumstances which hinder certain behaviours) to each category.

1 JJM Behavioural Diagnostic Report, available here: https://csbc.org.in/upload/Jal-Jeevan-Mission-Diagnostic_Report_Final.pdf

Step 3

The next critical step is to select an appropriate intervention. Read through the list of interventions provided and determine which intervention will most likely be effective in your geography bearing in mind the prevalent behavioural barriers and levers, existing infrastructure and social context.

Step 4

It is essential to regularly track the progress and effectiveness of one's intervention and adjust the intervention if required. Therefore, refer to the Monitoring and Evaluation section (pg 160 - 174) and select relevant indicators and methods of evaluation for the intervention's evaluation strategy.

Step 5

Implement the intervention in your geography. Monitor its effectiveness on a weekly or monthly basis, or at a periodicity of your preference.

This page has been left blank intentionally.

This page has been left blank intentionally.

Compendium of Behavioural Best Practices

This page has been left blank intentionally.

A

Uptake and Payment for JJM Services

Payment Behaviours:

This section includes all interventions that encourage individuals and households to;

1. Take up JJM services
2. Pay the one-time and recurring user charges for JJM services

The following are key barriers and levers which impact the performance of these behaviours;

Barriers	Levers
1. Low-Value Perception Concerns about water quality or availability may not be prominent issues in people's minds, and thus are not treated as a mental priority. Hence, JJM services (which charge a premium for making safe and good quality water supply available) have low value-proposition, and people are hesitant to pay for it.	**1. Increase Value Perception** People are more likely to pay, or invest in services they perceive as high value (or premium quality). If individuals are convinced that JJM services are of high quality, they are likely to make payments.
2. Mental Accounting Inconsistent payment collection dates (periodicity) makes it challenging to develop payment as a mental habit and account for this as a regular expense in household budgets.	**2. Easier Mental Accounting** Payment collection is known to improve when they are collected at the same time/date every month(for ex: payment is collected on the same date every month). Regular schedules help in both actual and mental budgeting.
3. Conditional Cooperation Individuals are less likely to make payments if they observe other community members missing payments while still availing services. This reinforces the belief that payments can be missed without consequences.	**3. Social Payments** Households are more likely to pay when payment collection is a social and visible process. The likelihood of payment also increases if the timing of payment collection is aligned with a period when households have the highest propensity to spend (for ex: festivals, post-harvest season, etc.).

Barriers	Levers
4. Status Quo Bias The status quo bias states that individuals are unlikely to change their existing habits, or in other words, they may prefer to let things remain as they are (i.e., status quo). Most individuals view water as a free, natural resource that does not need to be paid for, since historically most previous water schemes in India have not charged any fee for water.	**4. Choice Architecture** Providing choices is known to improve an individual's ability to think that they matter (and thus enhance their scheme engagement). When households are given a choice between availing or not availing JJM services (as opposed to presenting JJM as a default), they are more likely to seek information and take up JJM.
5. Low Reciprocity Based on past experience, individuals may expect the quality of JJM assets and services to be subpar. They may also fear misuse of funds. Hence, community members may be hesitant to invest money, or time and effort in JJM (low reciprocity).	**5. High Legitimacy** Households are likely to pay JJM recurring user charges regularly when they believe these charges are legitimate, devoid of fraud, and worthy of investment.

INDIA, GUJARAT, ANDHRA PRADESH STATE

Household Stickers

TATA TRUSTS

TARGET BEHAVIOUR	• Regular payment of JJM recurring user charges by households
BEHAVIOURAL BARRIER	• Conditional Cooperation (see pg. 41)
BEHAVIOURAL LEVER	• Social Payments (see pg. 41)
BEHAVIOURAL SOLUTION	Reward stickers for households who make regular payments
DESCRIPTION OF SOLUTION	• A system where reward stickers are provided to households who have consistently paid the monthly JJM water tariff to the concerned local governance bodies
EXPECTED BEHAVIOUR CHANGES	• Increase in the number of households regularly paying recurring user charges for JJM
THEORY OF CHANGE	• Publicly visible stickers may provide households with social recognition and prestige, thus encouraging regular payment. • Additionally, seeing stickers on many other houses may nudge previously non-paying households to be swayed towards making regular payments.
INDICATORS FOR M&E	No. of households paying the recurring user charges in a month, total or average collected from households per month
METHODS FOR M&E	• 4.1. Public Expenditure Tracking (see pg. 171) • 4.2. Performance Indicator Tracking (see pg. 171) • 1.1. Household Surveys (single topic) (see pg. 163)

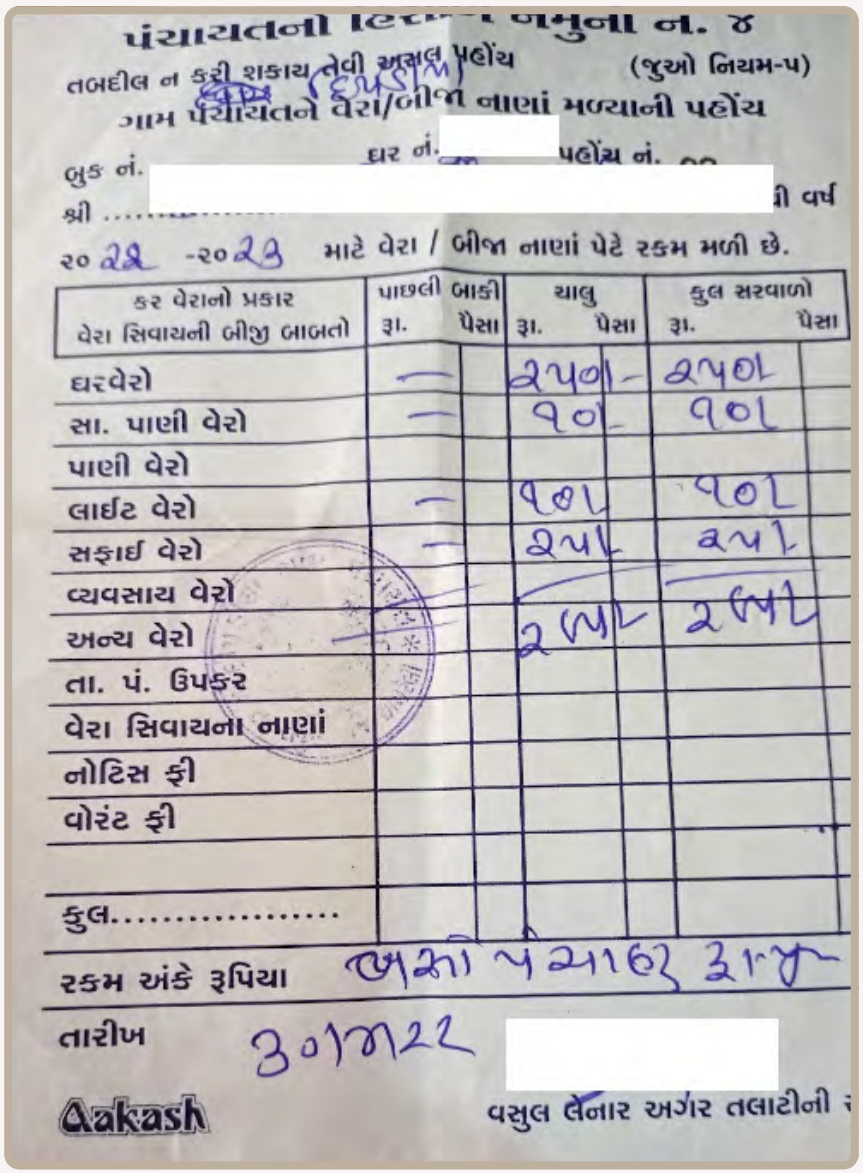
SOURCE: Tata Trusts, Coastal Salinity Prevention Cell

INDIA, GUJARAT STATE

Bundling of Utilities

Water And Sanitation Management Organisation

TARGET BEHAVIOUR	• Regular payment of JJM recurring user charges by households
BEHAVIOURAL BARRIER	• Status Quo Bias (see pg. 42) • Mental Accounting (see pg. 41)
BEHAVIOURAL LEVER	• High Legitimacy (see pg. 42) • Easier Mental Accounting (see pg. 41)
BEHAVIOURAL SOLUTION	Bundling of JJM tariff charges with other utility bills (ex: electricity, gas, etc.)
DESCRIPTION OF SOLUTION	• A system where JJM user tariff bills are combined with other, pre-existing utility bills such as electricity or gas bills. • The system may also include a common bill for all utility services.
EXPECTED BEHAVIOUR CHANGES	• Increase in number of households regularly paying monthly user charges for JJM
THEORY OF CHANGE	• Combining JJM charges with existing utility bills helps beneficiaries perceive JJM as similar to other paid utility services, which helps break the status quo bias of water as a free resource • It increased the sense of legitimacy around JJM payments, such that beneficiaries also expect similar quality from JJM services as other utilities, and are hence willing to pay for it. • Lastly it helps build memory and habits around paying for JJM services, similar to payment of other bills, every month.
INDICATORS FOR M&E	No. of households paying the recurring user charges in a month, total or average charges collected from households per month
METHODS FOR M&E	• 4.2. Performance Indicator Tracking (see pg. 171) • 1.1. Household Surveys (single topic) (see pg. 163) • 4.1. Public Expenditure Tracking (see pg. 171) • 5.2. Quasi-Experimental Design (see pg. 173)



પંચાયતનો [illegible] નમુના ન. ૪

તબદીલ ન કરી શકાય તેવી મિલ્કત પહોંચ (જુઓ નિયમ-૫)

ગામ પંચાયતને વેરા/બીજા નાણાં મળ્યાની પહોંચ

બુક નં. ઘર નં. પહોંચ નં.

શ્રી ..... ની વર્ષ

૨૦૨૨ -૨૦૨૩ માટે વેરા / બીજા નાણાં પેટે રકમ મળી છે.

કર વેરાનો પ્રકાર વેરા સિવાયની બીજી બાબતો	પાછલી બાકી રૂ.	પૈસા	ચાલુ રૂ.	પૈસા	કુલ સરવાળો રૂ.	પૈસા
ઘરવેરો	—		૨૫૦/-		૨૫૦/-	
સા. પાણી વેરો	—		૧૦/-		૧૦/-	
પાણી વેરો						
લાઈટ વેરો	—		૧૦/-		૧૦/-	
સફાઈ વેરો	—		૨૫/-		૨૫/-	
વ્યવસાય વેરો						
અન્ય વેરો			૨૫/-		૨૫/-	
તા. પં. ઉપકર						
વેરા સિવાયના નાણાં						
નોટિસ ફી						
વોરંટ ફી						
કુલ.....						

રકમ અંકે રૂપિયા બસો પચાસ રૂપિયા પૂરા

તારીખ 30/7/22

Aakash

વસુલ લેનાર અગર તલાટીની

Centre for Social and Behaviour Change

SOURCE: Water and Sanitation Management Organisation (WASMO), Gujarat

INDIA, GUJARAT STATE

Water Murals

Water And Sanitation Management Organisation

TARGET BEHAVIOUR	• Regular payment of JJM recurring user charges by households
BEHAVIOURAL BARRIER	• Status Quo Bias (see pg. 42) • Low Reciprocity (see pg. 42)
BEHAVIOURAL LEVER	• High Legitimacy (see pg. 42) • Higher Value Perception (see pg. 41)
BEHAVIOURAL SOLUTION	Publicization of information regarding income and expenditures for providing water supply under JJM
DESCRIPTION OF SOLUTION	• Wall paintings are used to show the set-up and maintenance costs of JJM services in the village. • These costs may include the costs of materials, labour, equipment, electricity, etc which are required to provide daily drinking water supply to households. • These murals may be placed in a community space.
EXPECTED BEHAVIOUR CHANGES	• Increase in number of households regularly paying monthly user charges for JJM
THEORY OF CHANGE	• Beneficiaries are sometimes worried about corrupt collection agents and low quality of services after payment. • Information regarding income and expenditure for JJM services shows community members that their money is being accounted for and utilised well and thereby increases transparency. They see the high effort and expense required to supply drinking water to one's home. • These factors validate the request for monthly user charges and beneficiaries are more likely to regularly pay the same.
INDICATORS FOR M&E	No. of households paying the recurring user charges in a month, total or average charges collected from households per month
METHODS FOR M&E	• 4.1. Public Expenditure Tracking (see pg. 171) • 3.1. Participatory Rural Appraisal (see pg. 169) • 1.4 Satisfaction/Confidence Survey (see pg. 166)

SOURCE: Water and Sanitation Management Organisation (WASMO), Gujarat

INDIA, MULTIPLE STATES

Water ATMs

TARGET BEHAVIOUR	• Regular payment of JJM recurring user charges by households
BEHAVIOURAL BARRIER	• Low Reciprocity (see pg. 42)
BEHAVIOURAL LEVER	• Choice Architecture (see pg. 42)
BEHAVIOURAL SOLUTION	Water vending machines that dispense drinking water based on the swipe of a rechargeable card.
DESCRIPTION OF SOLUTION	• Water ATMs are stationed at different points of the village, for floating populations in haats, during festivals, etc. • Beneficiaries can swipe their prepaid water ATM card at the machine, and collect a fixed amount of purified water. • These cards can be easily recharged using a mobile phone.
BEHAVIOUR CHANGES	• Several testimonials suggest that access to water ATMs are useful for floating populations, where water needs are to be met instantaneously and for a short duration.
THEORY OF CHANGE	• Often people hesitate to pay for water in advance since they worry that the water supply will be erratic or will stop.This water ATM counteracts this hesitation since consumers will be provided returns for their money instantly. • These water ATMs act as an effective method to bolster JJM water supply in areas where sustaining piped water connection is difficult due to difficult terrain, lack of water bodies or constant risk of damage to infrastructure.
INDICATORS FOR M&E	Total charges collected per village per month, average payment made by HHs per month.
METHODS FOR M&E	• 4.1. Public Expenditure Tracking (see pg. 171) • 1.4 Satisfaction/Confidence Survey (see pg. 166)

SOURCE: Piramal Sarvajal, India

INDIA, UTTAR PRADESH (BAHRAICH DISTRICT)

Digital Bills

AGA KHAN FOUNDATION

TARGET BEHAVIOUR	• Regular payment of JJM recurring user charges by households
BEHAVIOURAL BARRIER	• Low Reciprocity (see pg. 42)
BEHAVIOURAL LEVER	• High Legitimacy (see pg. 42)
BEHAVIOURAL SOLUTION	Digitally generated, printed bills to households.
DESCRIPTION OF SOLUTION	• Instead of makeshift or handwritten receipts of payment, households are given printed and digitally generated bills which inform them of the amount to be paid and due date of payment.
BEHAVIOUR CHANGES	Community members began to deposit JJM monthly user charges more regularly.
THEORY OF CHANGE	• Digital bills, instead of makeshift or handwritten ones, lend a sense of legitimacy and quality to both the service and the charges. • It also assures beneficiaries that the services are being systematically tracked and charges are being calculated accordingly, as opposed to believing that the charges are haphazardly decided or pocketed by the collection agent.
INDICATORS FOR M&E	No. of households paying the recurring user charges in a month, Average monthly charges collected per village.
METHODS FOR M&E	• 4.1. Public Expenditure Tracking (see pg. 171) • 4.2. Performance Indicator Tracking (see pg. 171) • 1.1. Household Surveys (single topic) (see pg. 163)

SOURCE: Aga Khan Foundation (AKF), India

INDIA, RAJASTHAN (BARMER DISTRICT)

Time Use Analysis

TARGET BEHAVIOUR	• Uptake of JJM scheme by households
BEHAVIOURAL BARRIER	• Low-Value Perception (see pg. 41)
BEHAVIOURAL LEVER	• Higher Value Perception (see pg. 41) • Choice Architecture (see pg. 42)
BEHAVIOURAL SOLUTION	Participatory "time use" exercise where women are made aware of time saved by supplied water (an ROI on installing a tap connection). • Video Link
DESCRIPTION OF SOLUTION	• Through group exercise, women are encouraged to calculate the number of hours taken to collect and purify water on a daily basis. • These results are presented to the group and women are informed of the time they will save daily, and the different activities they could undertake in that time, if they opt for supplied water services.
BEHAVIOUR CHANGES	• Adolescent and adult women in the group realised that water collection time could be utilised to pursue educational and additional income opportunities respectively. This increased their motivation to opt for JJM services.
THEORY OF CHANGE	• When certain practices become habits, it is often difficult to break the habit - even if more efficient alternatives exist. • However, here the benefits of the alternative have been laid out in easy and concrete terms, with returns that are relatable and highly appealing to the end user. • These factors together lead to increased motivation to take up JJM.
INDICATORS FOR M&E	No. of households registered for JJM scheme, no. of households paying the recurring user charges in a month, Total charges collected per village per month.
METHODS FOR M&E	• 2.1. FGDs / Community Group Interviews (see pg. 167) • 1.3 Time-Use Surveys (see pg. 165) • 3.1. Participatory Rural Appraisal (see pg. 169) • 4.1. Public Expenditure Tracking (see pg. 171)

SOURCE: United Nations Office for Project Services, India

INDIA, PUNJAB (SAS NAGAR)

Online Billing and Payment System

Department of Water Supply & Sanitation, Punjab

HDFC BANK

TARGET BEHAVIOUR	• Regular payment of JJM recurring user charges by households
BEHAVIOURAL BARRIER	• Low-Value Perception (see pg. 41)
BEHAVIOURAL LEVER	• High Legitimacy (see pg. 42) • Choice Architecture (see pg. 42)
BEHAVIOURAL SOLUTION	An online user charges monitoring, recording and payment system
DESCRIPTION OF SOLUTION	• An online system which monitors households with tap connections and generates bills accordingly. • Under this service, users can receive their bills and payment link via SMS. • They may also choose to pay collection agents in person using affiliated payment machines that accept UPI, cash or other modes and generate receipts.
BEHAVIOUR CHANGES	157 villages have adopted this payment system. All households in these villages now use the online system. On average, these villages have seen a 20% increase in payment collection.
THEORY OF CHANGE	• Digital monitoring and payment collection, instead of manual processes, lend a sense of legitimacy and quality to both the service and the charges. • It also assures beneficiaries that the services are being tracked and charges are being calculated accordingly, as opposed to believing that the charges are haphazardly decided or pocketed by the collection agent.
INDICATORS FOR M&E	No. of households paying the recurring user charges in a month, Total charges collected per village per month
METHODS FOR M&E	• 4.1. Public Expenditure Tracking (see pg. 171) • 3.2. Beneficiary Assessment (see pg. 170) • 1.1. Household Surveys (single topic) (see pg. 163)

SOURCE: Department of Water Supply & Sanitation, Punjab

INDIA, GUJARAT

Festive Payments

TARGET BEHAVIOUR	• Regular payment of JJM recurring user charges by households
BEHAVIOURAL BARRIER	• Conditional Cooperation (see pg. 41) • Mental Accounting (see pg. 41)
BEHAVIOURAL LEVER	• Social Payments (see pg. 42) • Easier Mental Accounting (see pg. 41)
BEHAVIOURAL SOLUTION	Collection of user charges on festivals
DESCRIPTION OF SOLUTION	• Paani Samiti of the village collects JJM user charges on a half-yearly basis on festival days - either on Holi or on Diwali.
BEHAVIOUR CHANGES	Increase in the number of households were paying JJM user charges regularly
THEORY OF CHANGE	• Festivals offer windows when there is likely to be gatherings and high interaction between community members. • In such circumstances, it is easier for households to discuss or observe that other households are making payments and hence feel more pressure to make payments themselves. • Additionally, households are likely to be spending money for other items during festivals. This reduces their resistance to making payments for JJM.
INDICATORS FOR M&E	No. of households paying user charges per village, Total charges collected per village per payment cycle, average payment made by HHs per month
METHODS FOR M&E	• 4.1. Public Expenditure Tracking (see pg. 171) • 1.1. Household Surveys (single topic) (see pg. 163)

Utsav, Ministry of Tourism https://utsav.gov.in/major-festival/navratri

SOURCE: Coastal Salinity Prevention Cell (CSPC)

INDIA, KARNATAKA STATE

Daily Bulletin

TARGET BEHAVIOUR	Regular payment of JJM recurring user charges by households
BEHAVIOURAL BARRIER	• Status Quo Bias (see pg. 42) • Low-Value Perception (see pg. 41) • Conditional Cooperation (see pg. 42)
BEHAVIOURAL LEVER	• Higher Value Perception (see pg. 41) • High Legitimacy (see pg. 42)
BEHAVIOURAL SOLUTION	Daily active Whatsapp group with service providers and beneficiaries
DESCRIPTION OF SOLUTION	• A Whatsapp group is made with community members and daily content is posted by Naandi officials on this group, including - the timing of water supply, pictures/videos of maintenance/treatment processes in the water treatment plant, and data about water quality pre and post-treatment. • Community members can also post questions or feedback for Naandi officials directly on the Whatsapp group. • Updates can be posted weekly, or on a daily basis as is necessary. • Once a grievance is registered, it can get acknowledged by the resolution committee. The message acknowledgement acts as a formal registration of the complaint.
BEHAVIOUR CHANGES	Field teams observed a higher financial contribution by community members who are on these Whatsapp groups. They also noted that community members were more engaged in water-related matters.
THEORY OF CHANGE	• Local and real-time content showing the water treatment instils trust by showing individuals that the facility is functional and useful. • The group provides easy access to the staff who run this plant, and helps build a rapport with the Naandi team. • This trust and rapport in relation to the plant and Naandi, eventually led to an increase in willingness to pay.
INDICATORS FOR M&E	No. of households paying the recurring user charges in a month, change in no. of members participating in JJM meetings/activities
METHODS FOR M&E	• 3.1. Participatory Rural Appraisal (see pg. 169) • 4.1. Public Expenditure Tracking (see pg. 171) • 4.2. Performance Indicator Tracking (see pg. 171) • 1.1. Household Surveys (single topic) (see pg. 163)

SOURCE: Naandi Community Water Services (NCWS)

This page has been left blank intentionally.

B

Community Participation, Ownership and Maintenance

Community participation, O&M Behaviours:

This section includes all interventions that encourage individuals and households to;

1. Increase community participation in JJM activities and decision-making
2. Increase sense of ownership of JJM assets by community members
3. Increase community participation in the maintenance of JJM assets

The following are key barriers and levers which impact the performance of these behaviours;

Barriers	Levers
1. Anchoring Bias Anchoring bias refers to the tendency of individuals to anchor their present assessment to past experiences or information. Individuals tend to assume JJM is similar to the region's previous water-related programmes, and . hence, there may be a belief that the quality of JJM may be subpar. Thus community participation may reduce.	**1. Voluntary Choice & Altruism** Households are more likely to participate when participation is presented as voluntary sewa, with various modes of participation that households can choose from, as opposed to compulsion. This also appeals to their altruism, enabling them to feel good about their contribution to JJM.
2. Low-Value Perception People may believe that JJM itself will not be a high-quality or value scheme, which reduces their motivation to participate. Similarly, they may also believe that their own participation does not hold value in the overall functioning and success of the scheme.	**2. Higher Value Perception** If individuals are convinced that JJM services are of great value, high quality and these benefits depend on their cooperation, they are likely to participate. People tend to cherish services they perceive as high value (or premium quality).
3. Creator vs Owner Dichotomy The government is the creator of the infrastructure (pipes, tap connections), while individuals are the owners of the taps installed. However, people tend to believe that since the government created the infrastructure under JJM, it must also be maintained by the government.	**3. Information Symmetry** Community members are more likely to contribute if all information regarding the scheme, and processes, implementation costs, benefits, risks, and key points of contact are communicated transparently. This improves trust and helps individuals understand that JJM is a valuable and functional scheme, and thus increases motivation to participate.

4. Mental Model - Tap Location

Generally, items inside the household's living quarters are perceived as the residents' property and their responsibility to maintain. Hence taps and other JJM infrastructure installed outside the household (in the *aangan*, or outside the boundary wall of the house) are generally not considered the individual's responsibility.

4. Easy Access - Cognitive overload

Individuals are more likely to participate if the avenues and forums for participation are easily accessible and participation tasks are easy to complete. Complex tasks with multiple steps and requirements may be cognitively taxing for a user.

5. Lack of Awareness

Individuals are often unaware of how they could participate in JJM or the negative impact of their non-participation on the program's success. They may also not have the ability to perform these participation activities.

5. Early Buy-In

When individuals are involved at the early stages of JJM, they are more likely to maintain the assets created after that than communities involved only at later stages.

6. Competition or Social Recognition

Competition and social recognition (through *Jal Jeevan Sarvekshan* awards, etc) can be a powerful tool to motivate beneficiaries and service providers to undertake maintenance activities. A trophy for the best panchayat may be a powerful motivator for the Sarpanch to ensure the upkeep of village infrastructure.

7. Salience

Highlighting the impact of water quality, the value of JJM water and the reduction in changes of waterborne diseases and/or associated financial costs from drinking unsafe water may increase motivation to participate in JJM.

8. Social and Religious Norms

Individuals are more likely to participate in JJM if the social norms or religious norms (i.e unwritten, informal rules in their community) also encourage participation in the maintenance of public or social goods.

This page has been left blank intentionally.

This page has been left blank intentionally.

This page has been left blank intentionally.

INDIA, KARNATAKA STATE

Exposure Visit

TARGET BEHAVIOUR	Increase community participation in program activities
BEHAVIOURAL BARRIER	• Anchoring Bias (see pg. 63)
BEHAVIOURAL LEVER	• Salience (see pg. 65) • Higher Value Perception (see pg. 63) • Early Buy-In (see pg. 64)
BEHAVIOURAL SOLUTION	Regular visits by community members, including school children to water treatment plant to make the efforts of the service provider salient.
DESCRIPTION OF SOLUTION	• Small groups of community members are invited to visit the water treatment plant once in 2 weeks. • They are given a tour of the facility and are told about the different processes used to purify the water.
BEHAVIOUR CHANGES	Community members who have previously visited the treatment facilities are more likely to participate in water-related activities and decision-making forums, and make regular payments for water.
THEORY OF CHANGE	• Community members see the tangible improvement in water quality pre and post-treatment, which increases the perceived value of the plant. It also proves that the facility is functional and useful. • Visits also provide access to the staff who run this plant, which helps build a rapport with the Naandi team. • This trust and rapport building (with the plant and Naandi) eventually translated into higher community participation.
INDICATORS FOR M&E	Change in no. of members participating in JJM meetings/activities
METHODS FOR M&E	• 1.1. Household Surveys (single topic) (see pg. 163) • 1.4 Satisfaction/Confidence Survey (see pg. 166) • 2.3. Direct Observational Study (see pg. 168)

SOURCE: Naandi Community Water Services (NCWS)

INDIA, TRIPURA STATE (AGARTALA CITY)

Ratings And Feedback

TARGET BEHAVIOUR	Increase community participation in maintenance of JJM assets
BEHAVIOURAL BARRIER	• Anchoring Bias (see pg. 63) • Low-Value Perception (see pg. 63)
BEHAVIOURAL LEVER	• Higher Value Perception (see pg. 63) • Competition or Social Recognition (see pg. 65)
BEHAVIOURAL SOLUTION	Digital platform for grievance redressal where beneficiaries can provide star-based ratings.
DESCRIPTION OF SOLUTION	• A public virtual forum where people can register grievances in an easy manner and track their application status. • Additionally, upon completion of redressal, individuals may provide ratings and feedback based on their grievance redressal experience. • These ratings are publicly displayed on the app.
EXPECTED CHANGES	Increase in reporting of grievances in JJM infrastructure, improved grievance redressal by local governance, increased trust in JJM stakeholders, increased willingness to contribute to JJM activities.
THEORY OF CHANGE	• The platform provides an easy and safe way for beneficiaries to register complaints regarding JJM infrastructure. • Additionally, it gives citizens a platform to raise their concerns and publish their opinions. • Since these ratings are public, service providers are incentivized to resolve grievances effectively and well. • This is likely to improve service delivery, grievance redressal and thus encourage more community participation in JJM.
INDICATORS FOR M&E	No. of grievances addressed, No. of grievances registered, Change in no. of members participating in JJM meetings/activities, amount spent by PHED on repairs of JJM infrastructure.
METHODS FOR M&E	• 4.1. Public Expenditure Tracking (see pg. 171) • 4.2. Performance Indicator Tracking (see pg. 171) • 5.2. Quasi-Experimental Design (see pg. 173)

Digital India, Municipal Corporation of Agartala

SOURCE: Ministry of Electronics and IT

INDIA, MULTIPLE STATES

Whatsapp Chatbot

MULTIPLE GOVERNMENT BODIES

TARGET BEHAVIOUR	Increase sense of ownership of JJM assets by community members Increase community participation in the maintenance of JJM assets
BEHAVIOURAL BARRIER	• Low-Value Perception (see pg. 63)
BEHAVIOURAL LEVER	• Easy Access - Cognitive overload (see pg. 64) • Information Symmetry (see pg. 64)
BEHAVIOURAL SOLUTION	Whatsapp chatbot to register grievances, track status of redressal and contact relevant stakeholder(s) directly.
DESCRIPTION OF SOLUTION	• The Whatsapp chatbot allows citizens to register their complaints by simply selecting a few options, typing their complaint and sending a picture on Whatsapp itself. • Citizens may also use the chatbot to enquire about the status of complaint redressal, name of relevant authorities and use the Whatsapp platform to chat directly with relevant officials or offices. • Similar chatbots have been launched by multiple state governments to ease citizen engagement across different sectors of work.
EXPECTED CHANGES	It is expected that the number of grievances received and addressed will increase due to it. Public trust in JJM service providers is also expected to rise. This will lead to increased willingness to participate and contribute to all JJM activities, including operation and maintenance of JJM assets.
THEORY OF CHANGE	• This chatbot provides citizens with ease of access to relevant offices and officials via Whatsapp to make complaints and communicate about their redressal. • This reduces the gap in information between service providers and citizens, which in turn has been shown to increase feelings of trust, reciprocity and willingness to participate. • Also, since the platform is public, it motivates service providers to resolve grievances quickly.
INDICATORS FOR M&E	No. of grievances registered, no. of grievances addressed, amount of money spent in O&M tasks.
METHODS FOR M&E	• 1.4 Satisfaction/Confidence Survey (see pg. 166) • 3.2. Beneficiary Assessment (see pg. 170) • 4.1. Public Expenditure Tracking (see pg. 171) • 4.2. Performance Indicator Tracking (see pg. 171)

Brighter Express, Punjab

SOURCE: Government of Punjab, Brihanmumbai Municipal Corporation, Virudhunagar District Administration

INDIA, RAJASTHAN STATE

Aao Nadi Ko Jaane: Youth Mobilisation

TARGET BEHAVIOUR	Increase community participation in maintenance of JJM assets
BEHAVIOURAL BARRIER	• Lack of Awareness (see pg. 64) • Anchoring Bias (see pg. 63)
BEHAVIOURAL LEVER	• Early Buy-In (see pg. 64) • Information Symmetry (see pg. 64)
BEHAVIOURAL SOLUTION	Youth training program to raise awareness about local water resources and need for community action.
DESCRIPTION OF SOLUTION	• A five-day training program which is conducted for the same participants twice a year. Youth participants are trained and involved in collecting data about local water resources. • This data is further analysed under a needs assessment to inform an action plan regarding the preservation of water quality and quantity.
BEHAVIOUR CHANGES	Field operatives observed more active involvement from participants of the training program in water treatment and supply-related activities. The youth were also successful in raising awareness and sparking conversations among other community members.
THEORY OF CHANGE	• Youth have proven to be very effective agents for behaviour change. This has been attributed to their inherent energy, motivation and influence over other household members. • Here, the youth are trained about the method and need for community engagement. Also, since they are involved in planning, they are more likely to be motivated to ensure adherence by households.
INDICATORS FOR M&E	No. of people participating in JJM activities/meetings, average water used per HH
METHODS FOR M&E	• 4.2. Performance Indicator Tracking (see pg. 171) • 2.3. Direct Observational Study (see pg. 168) • 3.1. Participatory Rural Appraisal (see pg. 169)

युवाओं के सहयोग से बच सकती है नदियां : राजेन्द्र सिंह

तरुण भारत संघ में चल रहा तीन दिवसीय प्रशिक्षण शिविर का हुआ समापन

किशोरी तरुण भारत संघ में अपनी नदी को जानो तीन दिवसीय प्रशिक्षण शिविर का रविवार को समापन हो गया। प्रशिक्षण में उत्तर प्रदेश, मध्य प्रदेश, उत्तराखंड, झारखंड, कर्नाटक आदि से आए महाप्रभा परियोजना स्तर जल उपयोगकर्ताओं के अधिकारी, किसान युवाओं व सामाजिक कार्यकर्ता व छात्र-छात्राओं ने भाग लिया। शिविर के अंतिम दिन राजेन्द्र सिंह ने युवाओं को देशभर में नदियों को बचाने व उनका संरक्षण करने के लिए प्रेरित किया। उन्होंने कहा कि अगर युवा शक्ति नदियों को बचाने के काम में लग जाए तो हमारी नदियां बच सकती हैं। नदी विशेषज्ञ नीतेश हेड़ा ने कहा कि नदियों को बचाने के लिए साझी पहल करना जरूरी है। नदियों में आखिर समाज को भी जोड़ना जरूरी है तभी नदिया बचेगी क्योंकि

तरुण भारत संघ से शिविर के अंतिम दिन संबोधित करते नदी विशेषज्ञ नीतेश हेड़ा।

कुल समुदाय नदियों पर ही जीवित हैं। उनकी आजीविका नदियां पर ही निर्भर है। उस बिरादरी महाराष्ट्र से आए सामाजिक कार्यकर्ता विनोद बोधनकर ने कहा कि इंसान को शांति की दिशा में काम करना होगा। संजय जोशी ने जलवायु परिवर्तन के बारे में जानकारी दी। प्रशिक्षण शिविर में गोपाल सिंह, चमन सिंह, सुरेशचंद लोटवाल मीना, रहुल मीना, राम, कैलाश, श्रीगणेश मीना सहित अनेक राज्यों से आए प्रतिभागी मौजूद रहे।

SOURCE: Tarun Bharat Sangh (TBS)

INDIA, RAJASTHAN (BARMER DISTRICT)

CLNOB : Community Leave No One Behind

TARGET BEHAVIOUR	Increase community participation in maintenance of JJM assets Increase sense of ownership of JJM assets by community members
BEHAVIOURAL BARRIER	• Lack of Awareness (see pg. 64)
BEHAVIOURAL LEVER	• Early Buy-In (see pg. 64) • Information Symmetry (see pg. 64)
BEHAVIOURAL SOLUTION	Participatory approach to ensure that JJM services are effective and functional , and reach the most marginalised households. • Video link • Handbook for Practisioners Link
DESCRIPTION OF SOLUTION	• Group exercises are held with community members to map households in the village, cluster-wise. • They identify households which do not have functional JJM services and mark these as “Leave No One Behind” category. • This is followed by discussions on problems and solutions for bringing functional FHTC to these households and other local water supply, water quality and management issues. • Similar mapping and problem solving is conducted for other aspects of water management such as greywater management to identify gaps and deliberate on solutions.
BEHAVIOUR CHANGES	This program led to higher engagement of community members with JJM program activities, even after the completion of CLNOB.
THEORY OF CHANGE	• Such engaging activities with deliberations and problem-solving provide community members with a sense of responsibility and personal investment in the project. • Also, it instils long-lasting confidence in their ability to identify and resolve local water related issues. • These factors together encourage a sense of ownership and responsibility which in turn encourages participation.
INDICATORS FOR M&E	No. of people participating in JJM activities/meetings
METHODS FOR M&E	• 2.3. Direct Observational Study (see pg. 168) • 3.1. Participatory Rural Appraisal (see pg. 169)

SOURCE: United Nations Office for Project Services (UNOPS), India

INDIA, JHARKHAND (KODERMA DISTRICT)

Daily Ratri Chaupal

कोडरमा
KODERMA

TARGET BEHAVIOUR	Increase community participation in maintenance of JJM assets Increase sense of ownership of JJM assets by community members
BEHAVIOURAL BARRIER	• Creator vs Owner Dichotomy (see pg. 64) • Creator vs Owner Dichotomy (see pg. 63)
BEHAVIOURAL LEVER	• Easy Access - Cognitive overload (see pg. 64) • Information Symmetry (see pg. 64)
BEHAVIOURAL SOLUTION	Daily discussions and weekly-walks organised walks with community members.
DESCRIPTION OF SOLUTION	• The District Collector's office organises daily meetings called Ratri Chaupals with community members to discuss short term goals and progress of work done in the day. • This is bolstered with weekly walks across the village with a trained mentor to observe the work completed over the past week. The walk is followed by discussions and problem-solving for the path ahead.
BEHAVIOUR CHANGES	This led to the development of inclusive, active and transparent local institutions. It also led to massive community action towards building structures for water conservation (rainwater harvesting and greywater management).4000 households built kitchen gardens for greywater outlay with community support.
THEORY OF CHANGE	• Daily chaupals like this give citizens ample opportunity to engage on community issues, including water. • Since this event is organised, and often attended by, representatives of the District Commissioner's office, the creator directly teaches and encourages the community to become the owner, thus easing the transition.
INDICATORS FOR M&E	No. of people attending JJM events/activities, No. of households with water conservation structures, No. of households paying the recurring user charges in a month.
METHODS FOR M&E	• 1.1. Household Surveys (single topic) (see pg. 163) • 1.4 Satisfaction/Confidence Survey (see pg. 166) • 2.3. Direct Observational Study (see pg. 168) • 3.1. Participatory Rural Appraisal (see pg. 169)

SOURCE: District Collector's Office, Koderma

INDIA, ANDHRA PRADESH (BODDAVALASA VILLAGE)

Raksha Bandhan

VILLAGE WATER AND SANITATION COMMITTEE AND ANGANWADI CENTER, BODDAVALASA

TARGET BEHAVIOUR	Increase community participation in program activities and decision
BEHAVIOURAL BARRIER	• Creator vs Owner Dichotomy (see pg. 64) • Low-Value Perception (see pg. 63)
BEHAVIOURAL LEVER	• Higher Value Perception (see pg. 63) • Social and Religious Norms (see pg. 65)
BEHAVIOURAL SOLUTION	Children celebrate Raksha Bandhan with taps
DESCRIPTION OF SOLUTION	• Aanganwadi students celebrate Raksha Bandhan by tying a Rakhi to the tap at their Anganwadi centre. • They take an oath to protect and take care of it. They also promise to use water judiciously.
BEHAVIOUR CHANGES	There is an expected increase in proactive upkeep and maintenance of JJM assets by households.
THEORY OF CHANGE	• The act of tying a rakhi to the tap signifies a level of personalisation and attachment to the tap itself. • Much like rakhis for siblings, it encourages feelings of personal responsibility and attachment over the tap for children. • These feelings are likely to be communicated to their other household members, which may result in better community participation.
INDICATORS FOR M&E	No. of people attending JJM events/activities, change (reduction) in no. of grievances registered
METHODS FOR M&E	• 2.1. FGDs / Community Group Interviews (see pg. 167) • 2.3. Direct Observational Study (see pg. 168) • 4.2. Performance Indicator Tracking (see pg. 171)

SOURCE: District Planning and Monitoring Unit, Vizianagaram

INDIA, UTTAR PRADESH (AYODHYA DISTRICT)

Jal Kranti Ayodhya

जिला अयोध्या
DISTRICT AYODHYA

TARGET BEHAVIOUR	Increase community participation in maintenance of JJM assets Increase sense of ownership of JJM assets by community members
BEHAVIOURAL BARRIER	• Mental Model - Tap Location (see pg. 64) • Low-Value Perception (see pg. 63)
BEHAVIOURAL LEVER	• Higher Value Perception (see pg. 63) • Social and Religious Norms (see pg. 65)
BEHAVIOURAL SOLUTION	Campaign for community participation in restoration and maintenance of water bodies that hold religious significance.
DESCRIPTION OF SOLUTION	• Jal Kranti in Ayodhya has focused on reviving water bodies which are of significance in religious stories. • The goal is to restore these water bodies to their glorious state as mentioned in the religious stories, and maintain it. • The campaign calls for support from the public to achieve the same.
BEHAVIOUR CHANGES	There were higher financial and non-financial contributions towards this project. It showed a reversal of public apathy towards areas which were previously ignored. It has also led to more community events and engagement in renovated areas, which is closely related to better upkeep and higher ownership.
THEORY OF CHANGE	• Highlighting the religious significance of water bodies ties community participation in the maintenance of these bodies with moral obligations. • It increases risk perception of apathy and non-participation since this will pose a societal and moral threat. • Also, religious spaces experience high ownership and hence community maintenance even when outside the household.
INDICATORS FOR M&E	No. of revived and active water bodies in the district, no. of people visiting water bodies daily
METHODS FOR M&E	• 3.1. Participatory Rural Appraisal (see pg. 169) • 3.3. Citizen Report Cards (see pg. 171) • 4.1. Public Expenditure Tracking (see pg. 171) • 2.3. Direct Observational Study (see pg. 168)

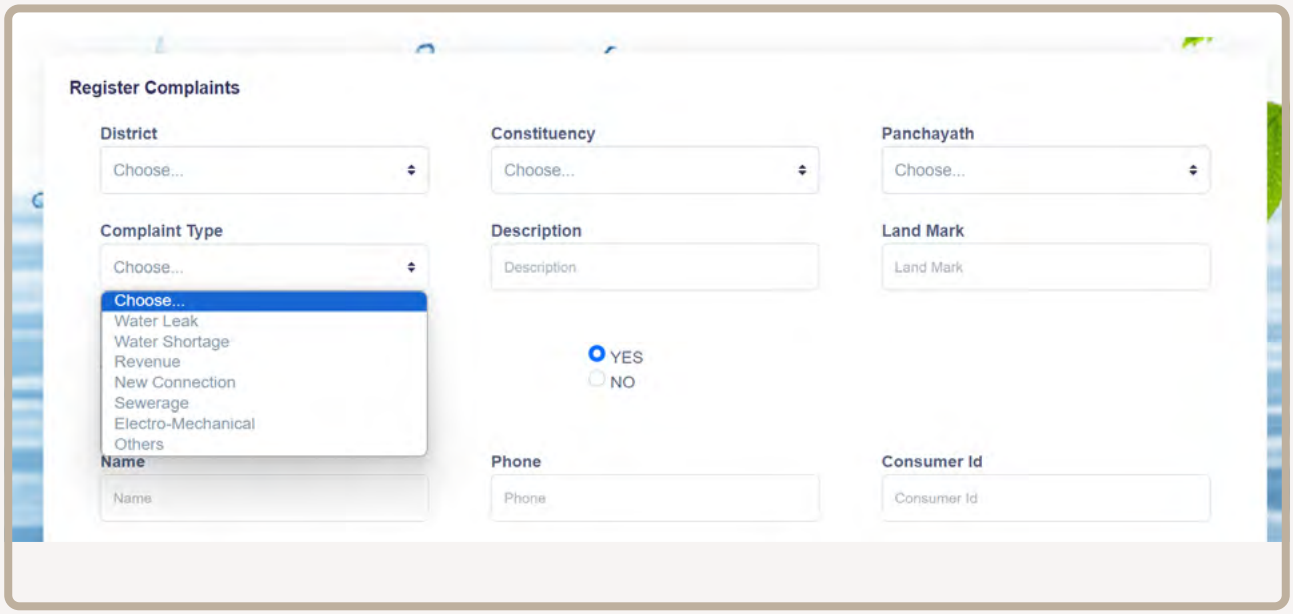
SOURCE: District Commissioner's Office, Ayodhya

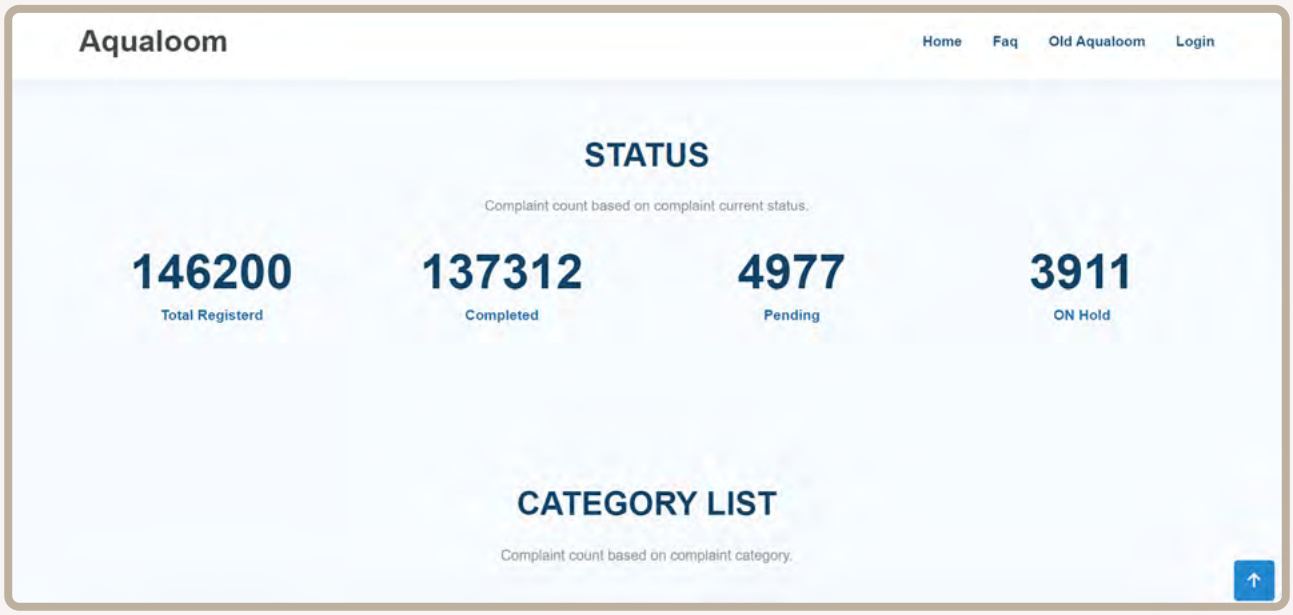
INDIA, KERALA

Aqualoom

KWA Kerala Water Authority

TARGET BEHAVIOUR	Increase community participation in maintenance of JJM assets
BEHAVIOURAL BARRIER	• Low-Value Perception (see pg. 63)
BEHAVIOURAL LEVER	• Easy Access - Cognitive overload (see pg. 64) • Information Symmetry (see pg. 64)
BEHAVIOURAL SOLUTION	Digital portal (link) to register grievances, track progress and request for water testing.
DESCRIPTION OF SOLUTION	• Aqualoom is a digital portal which can be accessed via a website, Whatsapp and Facebook Messenger. • Here, individuals can upload their complaints in a simple format, and then track their progress. Users choose their district and constituency, select a problem category, provide a district along with their phone number and Customer ID to file a complaint. • Individuals can also use this portal to request water quality testing from an accredited water testing laboratory for a nominal fee.
BEHAVIOUR CHANGES	An increase in the number of grievances registered and grievances addressed is expected. It is also expected to increase community engagement in other aspects of JJM.
THEORY OF CHANGE	• Platforms like this have led to an increase in feelings of trust and accountability. • It provides an easy and accessible way for beneficiaries to lodge grievances. Also, since the platform is public, it motivates service providers to resolve grievances quickly. • This reinforces feelings of trust towards JJM service providers and feelings of reciprocity towards JJM, which in turn motivate participation even outside of grievance redressal.
INDICATORS FOR M&E	No. of grievances registered, no. of grievances addressed
METHODS FOR M&E	• 4.1. Public Expenditure Tracking (see pg. 166) • 3.2. Beneficiary Assessment (see pg. 170) • 4.1. Public Expenditure Tracking (see pg. 171) • 4.2. Performance Indicator Tracking (see pg. 171)





SOURCE: Aqualoom, Kerala Water Authority

INDIA, CHHATTISGARH

Jal Utsav

unicef
VILLAGE GPS

TARGET BEHAVIOUR	Increase sense of ownership towards JJM assets Increase community participation in maintenance of JJM assets
BEHAVIOURAL BARRIER	• Anchoring Bias (see pg. 63)
BEHAVIOURAL LEVER	• Early Buy-In (see pg. 64) • Higher Value Perception (see pg. 63) • Competition or Social Recognition (see pg. 65)
BEHAVIOURAL SOLUTION	A large celebration conducted in villages after they receive "Har Ghar Jal" certification .
DESCRIPTION OF SOLUTION	• After all the households and institutions in a village receive FHTCs, the Sarpanch invites all government and non-government stakeholders involved in the implementation of JJM to the village's Jal Utsav. • A total audience of about 300-400 people enjoy cultural performances, street plays, rallies, artwork and games organised by community members, children, frontline workers, SHG members and GP members.
BEHAVIOUR CHANGES	Based on testimonials by Jal Bahinis (frontline workers) and other participants, this event led to great pride and ownership among community members. There is plenty of proactive participation, engagement and questions from community members.
THEORY OF CHANGE	• Celebrations like this instil a sense of pride in the community about the achievement of this milestone. • They also establish a perception of JJM as an achievement worth celebrating, which increases its perceived value. • These factors foster a sense of ownership and a desire to maintain these assets/services.
INDICATORS FOR M&E	No. of people attending JJM activities/meetings, no. of people paying user charges per month, no. of people
METHODS FOR M&E	• 2.3. Direct Observational Study (see pg. 168) • 3.1. Participatory Rural Appraisal (see pg. 169) • 3.2. Beneficiary Assessment (see pg. 170) • 3.3. Citizen Report Cards (see pg. 171)

SOURCE: UNICEF, Chattisgarh

INDIA, UTTAR PRADESH

Jal Diwali

GPS OF RESPECTIVE VILLAGES

TARGET BEHAVIOUR	Increase sense of ownership towards JJM assets Increase community participation in JJM activities and decisions
BEHAVIOURAL BARRIER	• Anchoring Bias (see pg. 63) • Low-Value Perception (see pg. 63)
BEHAVIOURAL LEVER	• Higher Value Perception (see pg. 63) • Voluntary Choice & Altruism (see pg. 63) • Social and Religious Norms (see pg. 65)
BEHAVIOURAL SOLUTION	A festival to celebrate the arrival of FHTCs and supplied water
DESCRIPTION OF SOLUTION	• A celebration held three days before Diwali where families light *diyas*, decorate their homes, sing and dance to celebrate that their households are now equipped with FHTCs and supplied water. • This celebration also led to innovations such as *water diyas* fueled by water instead of oil. Demand for these products was very high.
BEHAVIOUR CHANGES	51 lakh families in Uttar Pradesh celebrated Jal Diwali in 2022. It is expected to foster better financial and non-financial contributions to JJM by the communities in the long-run.
THEORY OF CHANGE	• Celebrations like this spark conversation around the scheme and instil a sense of pride regarding JJM. • As mentioned earlier, they establish JJM as an achievement worth celebrating, which increases its perceived value. • These factors foster a sense of ownership and a desire to maintain these assets/services.
INDICATORS FOR M&E	No. of people attending JJM activities/meetings, no. of people paying JJM user charges per cycle
METHODS FOR M&E	• 2.1. FGDs / Community Group Interviews (see pg. 167) • 2.3. Direct Observational Study (see pg. 168) • 3.2. Beneficiary Assessment (see pg. 170)

SOURCE: Kumar, Nitin (2022). Jal Diwali 2022: यूपी में 5 करोड़ दीपकों के साथ मनाई गई जल दवाली, गांवों में बांटी गई मठाइयां.

Prime News Live, available at https://primenewslive.com/breaking-news/jal-diwali-2022-jal-diwali-celebrated-with-5-crore-lamps-in-up-hindi-news/

INDIA, ARUNACHAL PRADESH AND LADAKH

Jal Jeevan Maah

RESPECTIVE PHED DEPARTMENT AND WATER SUPPLY DEPARTMENT

TARGET BEHAVIOUR	Increase sense of ownership towards JJM assets Increase community participation
BEHAVIOURAL BARRIER	• Low-Value Perception (see pg. 63) • Lack of Awareness (see pg. 64) • Anchoring Bias (see pg. 63)
BEHAVIOURAL LEVER	• Higher Value Perception (see pg. 63)
BEHAVIOURAL SOLUTION	A one month-long celebration to mark the completion of infrastructure building and handover management responsibilities
DESCRIPTION OF SOLUTION	• A 30-day celebration where the Secretary, PHED and elected representatives address the community about the importance of community participation in water supply. • Various training and capacity building modules for the community are conducted via videos, workshops and plays. These address aspects of community participation like grievance redressal, water quality testing, etc. • Similar celebrations were also conducted in Leh district under the name of "Jal Jeevan Maah."
BEHAVIOUR CHANGES	This program had a positive impact on ground by increasing community participation in operations and maintenance. There has been more proactive management by Paani Samitis.
THEORY OF CHANGE	• This program provided in-depth training to community members regarding what to do and how to do it. • Secondly, it involved senior government officials and politicians. This establishes JJM as an important and valuable scheme, which increases willingness to participate.
INDICATORS FOR M&E	No. of people attending JJM activities/meetings, no. of people paying JJM user charges per cycle.
METHODS FOR M&E	• 2.2. Key Informant Interviews (see pg. 168) • 3.2. Beneficiary Assessment (see pg. 170) • 3.3. Citizen Report Cards (see pg. 171)

SOURCE: State Public Health Engineering and Water Supply department, Arunachal Pradesh; District Water and Sanitation Mission and Public Health Engineering Department, Leh

INDIA, GUJARAT

Paani Samiti Rewards

Water Supply Department, Government of Gujarat

TARGET BEHAVIOUR	Increase community participation in maintenance of JJM assets
BEHAVIOURAL BARRIER	• Low-Value Perception (see pg. 63) • Anchoring Bias (see pg. 63)
BEHAVIOURAL LEVER	• Competition or Social Recognition (see pg. 65) • Higher Value Perception (see pg. 63)
BEHAVIOURAL SOLUTION	Financial reward to Paani Samitis which conduct O&M operations in their village
DESCRIPTION OF SOLUTION	• Every year on World Water Day (22nd March), Paani Samitis with a good track record of O&M in their village get financial reward. • This reward is equal to 10% of the cost of implementing their in-village scheme. This is given in the form of a fixed deposit with a three-year lock-in period. • Additionally, another reward is given to the best-performing all-women Paani Samiti
BEHAVIOUR CHANGES	The success and effectiveness of Gujarat's network of local water management bodies can largely be attributed to the existence of programs like this and others which appreciate and encourage the work of decentralised, local authorities.
THEORY OF CHANGE	• The awards provide social recognition and financial incentives to Paani Samitis for performing good work. • This encourages them to perform their duties and optimally conduct operation and maintenance activities. • It incentivizes them to value and take care of these assets.
INDICATORS FOR M&E	No. of meetings conducted by Paani Samiti per month, rupees spent in O&M tasks, no. of grievances addressed
METHODS FOR M&E	• 1.4 Satisfaction/Confidence Survey (see pg. 166) • 3.3. Citizen Report Cards (see pg. 171) • 4.1. Public Expenditure Tracking (see pg. 171)

SOURCE: Water Supply Department, Gujarat

INDIA, JHARKHAND STATE

Jal Sahiyas

झारखण्ड सरकार
GOVT. OF JHARKHAND

TARGET BEHAVIOUR	Increase community participation in maintenance of JJM assets Increase community participation in JJM activities and decisions
BEHAVIOURAL BARRIER	• Lack of Awareness (see pg. 64) • Creator vs Owner Dichotomy (see pg. 64)
BEHAVIOURAL LEVER	• Information Symmetry (see pg. 64)
BEHAVIOURAL SOLUTION	Women frontline workers dedicated to working with communities on water related issues.
DESCRIPTION OF SOLUTION	• Local women are chosen or volunteer to become Jal Sahiyas. • These women are in charge of multiple water related matters including community awareness, collecting water tariffs, monitoring water quality (via FTKs), coordinating community participation, liaison with Paani Samiti, etc • Similar cadres of women mobilizers also exist in other states under the name of Jal Bahinis, Jal Sahelis, etc.
BEHAVIOUR CHANGES	Multiple news articles suggest that villages with Jal Sahiyas tend to have better community-led maintenance,, more active Paani Samitis, better communication between the public and Paani Samiti/local government bodies and better public awareness regarding water quality concerns.
THEORY OF CHANGE	• Jal Sahiyas act both as a great interface between the government and the public, and a representative of the Government to the public. • They are able to provide better information to the public on a daily basis, and their opinion is received better since they are trusted members of the community themselves. • They also use the respect they hold in the community to raise awareness about important issues and encourage behaviour change.
INDICATORS FOR M&E	No. of meetings conducted by Paani Samiti per month, rupees spent in O&M tasks, no. of grievances addressed, no. of people attending JJM activities/meetings
METHODS FOR M&E	• 2.1. FGDs / Community Group Interviews (see pg. 167) • 2.2. Key Informant Interviews (see pg. 168) • 4.1. Public Expenditure Tracking (see pg. 171)

Tata Trusts Horizon, January 2023

Swacch Bharat Mission Gramin, Wordpress

SOURCE: Government of Jharkhand

C

Water Quality

Water Quality Related Behaviours:

This section includes all interventions that encourage individuals and households to;

1. Increase awareness about water quality
2. Increase salience of link between drinking water quality and health as well as the quality of life
3. Consumption of safe drinking water

The following are key barriers and levers which impact the performance of these behaviours;

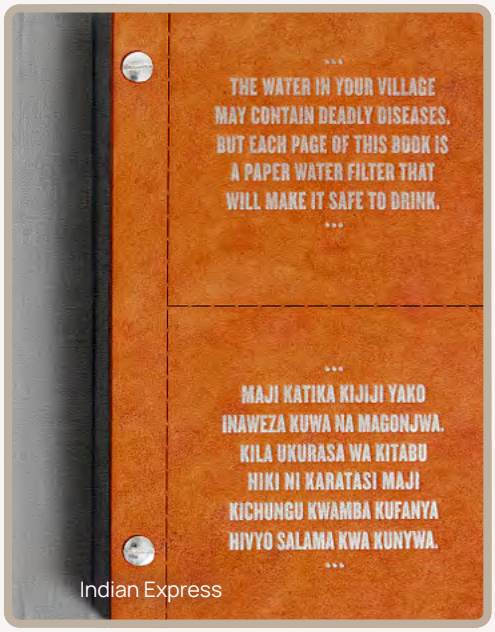
Barriers	Levers
1. Mental Models - Water Quality Individuals assess water quality through smell, taste, and colour; hence may be unaware of more microscopic quality issues beyond sensory perceptions.	**1. Salience** Highlighting the likelihood of acquiring waterborne diseases and/or associated financial costs from drinking unsafe water may increase motivation to gather information about water quality and take up hygienic water use practices
2. Low-Risk Perception Since the health impact of poor water quality is only visible or measurable in the long run, the incentive to make water quality a mental priority and invest in it remains low.	**2. Rewards** Individuals can be encouraged to proactively learn more about water quality and its impact by providing them with incentives or rewards for the same.
3. Status Quo Bias Individuals tend to believe that since many generations have been consuming water from the same sources without any observable harmful consequences, there is no harm in continuing to do so.	**3. Messenger Effect** Campaigns are more likely to increase people's willingness to engage with water quality issues if they cast relatable actors and quote examples of health effects of unsafe water that people may have observed in their neighbourhood. They are also shown to be more effective when information is presented in an entertaining or engaging manner.

4. Low Access to Information	4. Easy Access
Individuals may not be aware of existing results of water quality tests OR available facilities to test water quality Additionally, they are often unaware of the direct link between consumption of unsafe drinking water and lowering health or quality of life.	When individuals are provided access to facilities to test water OR accessible information regarding local water quality, they are more likely to actively seek information and utilise it to ensure that they are consuming safe water

GHANA, KENYA, ETHIOPIA AND HAITI

Drinkable Book

TARGET BEHAVIOUR	Increase consumption of safe drinking water Increase awareness of water quality concerns
BEHAVIOURAL BARRIER	• Mental Models - Water Quality (see pg. 97) • Low Access to Information (see pg. 98)
BEHAVIOURAL LEVER	• Easy Access (see pg. 98) • Salience (see pg. 97)
BEHAVIOURAL SOLUTION	Informative book with pages that can function as water filters
DESCRIPTION OF SOLUTION	• This is an awareness building AND water filtration tool in the form of a drinkable book. • Every book page contains basic water and sanitation advice printed on scientific filter paper that removes about 99% of microbial content and purifies water. • Each book provides clean water for four years for 1 person.
EXPECTED CHANGES	Since its inception, the Drinkable Book has been distributed to various provinces in African countries. It has led to higher awareness of water quality concerns and increased safe water consumption by users.
THEORY OF CHANGE	• This product informs individuals about contaminants in water, and concerns emerging from them. This heightens the risk perception of consuming unsafe water. • Simultaneously, it provides a method to filter available water to ensure safe water for consumption. • These factors together create behaviour change.
INDICATORS FOR M&E	Increase in awareness of water quality concerns, Reduction in water-borne diseases recording over a month
METHODS FOR M&E	• 1.1. Household Surveys (single topic) (see pg. 163) • 4.2. Performance Indicator Tracking (see pg. 171) • 5.1. Randomised Evaluation (see pg. 172)



SOURCE: Dankovich, T., (2015). The Drinkable Book.

INDIA, UTTAR PRADESH (SHRAVASTI AND BARABANKI DISTRICT)

Magic Show

AGA KHAN FOUNDATION

TARGET BEHAVIOUR	Increase awareness of water quality concerns
BEHAVIOURAL BARRIER	• Mental Models - Water Quality (see pg. 97) • Status Quo Bias (see pg. 97)
BEHAVIOURAL LEVER	• Messenger Effect (see pg. 97)
BEHAVIOURAL SOLUTION	A magic show aimed at raising awareness about water quality concerns
DESCRIPTION OF SOLUTION	• The magician incorporates different instant water quality tests into his show. Colour changes, test results and explanations were incorporated into the magic show. • Through these shows, the magician presented the importance of access to safe drinking water and also highlighted local water quality issues.
BEHAVIOUR CHANGES	Field teams noticed that audience members from the Magic Show were more likely to participate in O&M of JJM infrastructure. They showed interest in learning about the scheme and infrastructure.
THEORY OF CHANGE	• Magic shows offer an engaging medium of information dissemination and command the audience's attention. • The Magic Show audience had better awareness of local water quality concerns and their consequences on health. • This raises their perception of the value of the JJM scheme and infrastructure. Hence, community members are willing to contribute towards the O&M of water supply systems.
INDICATORS FOR M&E	No. of households paying the recurring user charges per cycle, change in no. of members participating in JJM meetings/activities, no. of requests for water quality testing of household source.
METHODS FOR M&E	• 4.1. Public Expenditure Tracking (see pg. 171) • 4.2. Performance Indicator Tracking (see pg. 171) • 2.1. FGDs / Community Group Interviews (see pg. 167) • 3.3. Citizen Report Cards (see pg. 171) • 1.1. Household Surveys (single topic) (see pg. 163)

SOURCE: Aga Khan Foundation (AKF)

INDIA, UTTAR PRADESH (SHRAVASTI AND BARABANKI DISTRICT)

Door-To-Door Demonstration

AGA KHAN FOUNDATION

TARGET BEHAVIOUR	Regular payment of JJM recurring user charges by households Increase community participation in program activities
BEHAVIOURAL BARRIER	• Mental Models - Water Quality (see pg. 97) • Status Quo Bias (see pg. 97)
BEHAVIOURAL LEVER	• Easy Access (see pg. 98) • Salience (see pg. 97)
BEHAVIOURAL SOLUTION	A water testing demonstration and interpretation for each household
DESCRIPTION OF SOLUTION	• A team visited households who were not making regular contributions/ payments and conducted 2-3 instant water quality tests on drinking water samples. • The results of the test were explained to the household along with relevant flip charts and videos.
BEHAVIOUR CHANGES	Field teams observed more willingness to contribute to JJM activities and decision-making, and there was regularity in payments from households where demonstrations had taken place.
THEORY OF CHANGE	• The household demonstrations made concerns about water quality salient and personally relevant for beneficiaries. • This increases the perception of risk of contamination and water-related health issues in the family. • In turn, they are more likely to financially and non-financially contribute towards safe drinking water supply in their household.
INDICATORS FOR M&E	No. of households paying the recurring user charges in a month, change in no. of members participating in JJM meetings/activities.
METHODS FOR M&E	• 3.2. Beneficiary Assessment (see pg. 170) • 4.1. Public Expenditure Tracking (see pg. 171) • 4.2. Performance Indicator Tracking (see pg. 171) • 1.1. Household Surveys (single topic) (see pg. 163)

SOURCE: Aga Khan Foundation (AKF)

INDIA, ASSAM

Students For Water Testing

TARGET BEHAVIOUR	Increased awareness of water quality concerns
BEHAVIOURAL BARRIER	• Low Access to Information (see pg. 98)
BEHAVIOURAL LEVER	• Easy Access (see pg. 98) • Messenger Effect (see pg. 97)
BEHAVIOURAL SOLUTION	School children are trained and enabled to test the quality of water in local sources
DESCRIPTION OF SOLUTION	• Students of Class nine and ten and science teachers were invited to visit their nearest PHED water testing laboratory. Here, they are trained on using FTKs for water quality testing. • Each school was provided with an FTK bag for a limited time. During this time, the school children tested various water sources and recorded their results. • They submitted a final project report with all the FTK data. • The laboratory analysed the results and took action against any contamination and reported back to the school so that children could observe the impact of their study.
BEHAVIOUR CHANGES	This intervention is expected to raise awareness about water quality concerns among village communities. It is also expected to increase interest and demand for FTK testing of local water sources.
THEORY OF CHANGE	• Through this intervention, children are made aware of water quality concerns and the need for action. Previous campaigns have shown that children are great agents of change, since they raise awareness within their households. • Lastly, children are encouraged to continue to engage on subjects of water quality since their actions are reinforced by positive results (remedial action by PHED).
INDICATORS FOR M&E	Increased knowledge of water quality concerns, no. of requests for household water quality tests, reduction of water borne diseases
METHODS FOR M&E	• 4.2. Performance Indicator Tracking (see pg. 171) • 1.1. Household Surveys (single topic) (see pg. 163)

SOURCE: UNICEF India

INDIA, HARYANA

Water Quality Van

TARGET BEHAVIOUR	Increase awareness of water quality
BEHAVIOURAL BARRIER	• Mental Models - Water Quality (see pg. 97) • Low Access to Information (see pg. 98)
BEHAVIOURAL LEVER	• Easy Access (see pg. 98) • Messenger Effect (see pg. 97)
BEHAVIOURAL SOLUTION	Van with water testing facilities used to demonstrate water quality tests to public
DESCRIPTION OF SOLUTION	• A state-of-the-art mobile water laboratory van travels from village to village in Haryana. • The goal of its journey is to perform live demonstrations of water quality tests, inform the public about results and explain the importance of water quality testing. • The van also allows people to submit water samples for testing at a nominal fee.
BEHAVIOUR CHANGES	As of January 2022, the van had travelled to 2,000 villages in 17 districts of Haryana. It is expected to raise awareness of water quality concerns, increase demand for regular household water testing and increase consumption of safe drinking water.
THEORY OF CHANGE	• The van heightens people's perception of risk of water contamination by testing sources live before their audience and help community members understand the test results. • It also provides beneficiaries with a platform to easily conduct water quality tests. • Additionally, since it is a government initiative, it is likely to garner more trust and attention from the audience.
INDICATORS FOR M&E	No. of requests for water quality testing, increased awareness of water quality concerns
METHODS FOR M&E	• 1.1. Household Surveys (single topic) (see pg. 163) • 2.1. FGDs / Community Group Interviews (see pg. 167) • 1.4 Satisfaction/Confidence Survey (see pg. 166) • 3.3. Citizen Report Cards (see pg. 171)

PHED Haryana

जन स्वास्थ्य अभियांत्रिकी विभाग, हरियाणा

PUBLIC HEALTH ENGINEERING DEPARTMENT, HARYANA

WE BRING MOBILE WATER TESTING LABORATORY FACILITY AT YOUR DOORSTEP

A step towards purity - Stay healthy by drinking quality water

Mini water quality testing laboratory

Effective surveillance of drinking water quality

Capable of measuring different water quality parameters

Shall provide support to eliminate water borne diseases

Mobilized to test water samples in remote and sensitive locations

SOURCE: Public Health and Engineering Department, Haryana

INDIA, GUJARAT

Colour Coding Of Sources

TARGET BEHAVIOUR	Consumption of safe drinking water
BEHAVIOURAL BARRIER	• Status Quo Bias (see pg. 97) • Mental Models - Water Quality (see pg. 97)
BEHAVIOURAL LEVER	• Easy Access (see pg. 98) • Salience (see pg. 97)
BEHAVIOURAL SOLUTION	Bands of different colours attached to water sources based on water quality
DESCRIPTION OF SOLUTION	• The quality of water from different sources (ex: handpumps, wells, ponds, etc) is tested. • Based on their quality and suitability for consumption, different coloured bands are put on these sources. For example, blue bands indicate that water is safe for drinking and yellow bands indicate that water is unsafe for drinking.
BEHAVIOUR CHANGES	This intervention is expected to increase awareness of water quality concerns, increase interest and demand for water quality testing for household sources also, and increase consumption of safe water.
THEORY OF CHANGE	• This intervention provides an easy way for people to understand water quality. • It provides minimal yet necessary information to the audience, hence decision-making about consumption becomes easy for individuals.
INDICATORS FOR M&E	No. of requests for water quality testing, increased awareness of water quality concerns
METHODS FOR M&E	• 5.2. Quasi-Experimental Design (see pg. 173) • 1.1. Household Surveys (single topic) (see pg. 163)

SOURCE: INREM Foundation

INDIA, TRIPURA (KALAHARI VILLAGE)

Display Board About Water Quality

Centre for Microfinance & Livelihood
An Initiative of TATA TRUSTS

TARGET BEHAVIOUR	Increase awareness of water quality concerns Consumption of safe water
BEHAVIOURAL BARRIER	• Low Access to Information (see pg. 98) • Low-Risk Perception (see pg. 97)
BEHAVIOURAL LEVER	• Easy Access (see pg. 98) • Salience (see pg. 97)
BEHAVIOURAL SOLUTION	Display board with accessible information regarding local water quality
DESCRIPTION OF SOLUTION	• A display board is placed on the wall of the Gram Panchayat building, showing results of the most recent water quality tests conducted in the village. This is shown alongside safe and unsafe limits for each quality parameter. • It also shows pictures depicting the health effects of drinking unsafe water.
BEHAVIOUR CHANGES	This intervention has resulted in more public attention towards water quality issues and its impact on well-being.
THEORY OF CHANGE	• This intervention provides people with accessible and relevant information about local water quality in a commonly used public space. • Additionally, this information is bolstered with information about the negative health impact of drinking unsafe water, thus commanding more attention from the audience. • These factors together educate and encourage people to think actively about water quality concerns.
INDICATORS FOR M&E	Awareness of water quality issues, no. of requests for water quality testing
METHODS FOR M&E	• 1.1. Household Surveys (single topic) (see pg. 163) • 3.3. Citizen Report Cards (see pg. 171) • 1.4 Satisfaction/Confidence Survey (see pg. 166)

SOURCE: Centre for Microfinance and Livelihood (CML), Tata Trusts

INDIA, RAJASTHAN, UP, MP, BIHAR AND JHARKHAND

Snakes And Ladders

TARGET BEHAVIOUR	Consumption of safe drinking water Increase salience of link between drinking water quality and health/quality of life
BEHAVIOURAL BARRIER	• Low-Risk Perception (see pg. 97) • Low Access to Information (see pg. 98)
BEHAVIOURAL LEVER	• Easy Access (see pg. 98) • Salience (see pg. 97)
BEHAVIOURAL SOLUTION	Snakes and ladder interactive game containing information about water quality
DESCRIPTION OF SOLUTION	• A 10 x 10 foot sheet is printed. • Each ladder shows a good water use practice (ex: used water judiciously, tested water quality) at its start and a good water-related outcome (Ex: low health problems) at its end, which brings the player up towards the goal. • Each snake shows a bad water use practice at its start and a bad water-related outcome at its end which brings the player downwards away from the goal.
BEHAVIOUR CHANGES	The intervention has been implemented in 20 villages and 12 schools. The district government of Araria (Bihar) has also had the game installed permanently in all girls schools of the district. The intervention has led to increased proactive demand for water quality testing. There are more soak pits and rainwater harvesting structures. People also have renewed interest in the JJM scheme and put effort towards reviving it. There is also more focus on using only JJM water for consumption.
THEORY OF CHANGE	• This game provides an engaging medium to provide information regarding water quality. Entertainment aids information retention. • Additionally, it ties every action to a concrete positive or negative outcome, which increases likelihood of behaviour change.
INDICATORS FOR M&E	No. of requests for water quality testing, increased awareness of water quality concerns.
METHODS FOR M&E	• 1.1. Household Surveys (single topic) (see pg. 163) • 2.1. FGDs / Community Group Interviews (see pg. 167) • 3.2. Beneficiary Assessment (see pg. 170)

SOURCE: Piramal Foundation

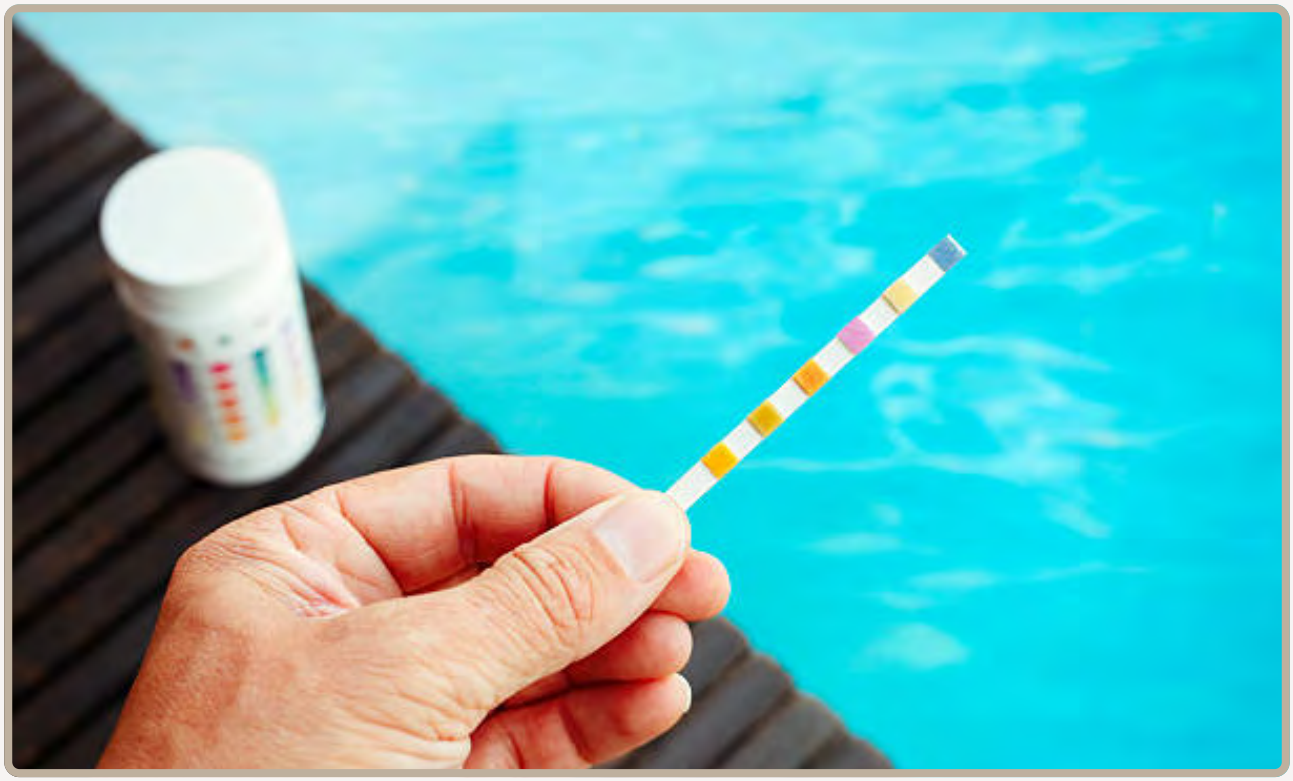
INDIA

Modified Instant Testing Strips

Centre for Social and Behaviour Change

IDEATION WORKSHOP

TARGET BEHAVIOUR	Increase awareness of water quality Consumption of safe drinking water
BEHAVIOURAL BARRIER	• Low-Risk Perception (see pg. 97) • Mental Models - Water Quality (see pg. 97)
BEHAVIOURAL LEVER	• Salience (see pg. 97) • Easy Access (see pg. 98)
BEHAVIOURAL SOLUTION	(Proposed Solution) Home-use water quality testing strips which instantly change colour based on water quality of sample
DESCRIPTION OF SOLUTION	• The test strip itself will contain illustrations, or a scale. This will enable respondents to interpret the strip test results themselves, and understand consequent health risks. • These strips may be designed and customised to measure dominant contaminants in the area of implementation. • These strips may also be distributed with prescriptions for stool/urine tests, or to patients with digestive concerns.
EXPECTED CHANGES	Increased awareness of water quality concerns among community members, increased consumption of safe water.
THEORY OF CHANGE	• Such test strips would allow community members to test the quality of water in their homes regularly. • The illustrations and/or scale would ensure that individuals are self-sufficient and will not have to wait for trained assistance to conduct testing. • Also, the illustrations and bundling of tests will help form the link between water quality and health.
INDICATORS FOR M&E	Reduction in water-borne diseases recording over a month, increase in awareness of water quality concerns.
METHODS FOR M&E	• 2.1. FGDs / Community Group Interviews (see pg. 167) • 4.2. Performance Indicator Tracking (see pg. 171) • 1.1. Household Surveys (single topic) (see pg. 163) • 1.4 Satisfaction/Confidence Survey (see pg. 166)

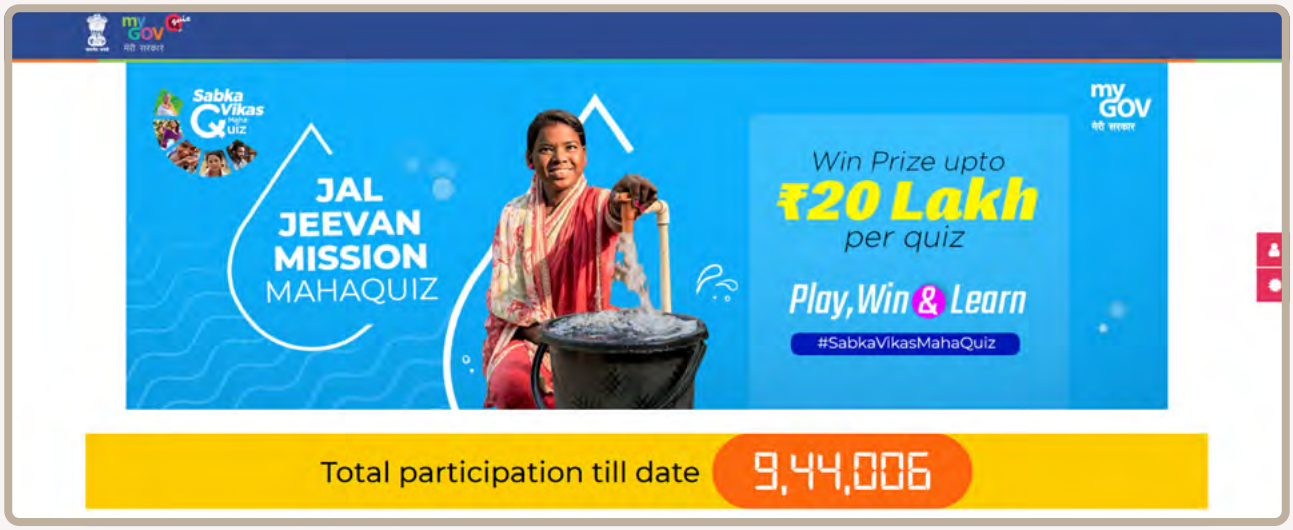


SOURCE: Ideation Workshop for Behavioural Solutions within the Jal Jeevan Mission. (2022). Centre for Social and Behaviour Change.

INDIA

JJM Sabka Vikas Mahaquiz

TARGET BEHAVIOUR	Increase awareness of water quality concerns
BEHAVIOURAL BARRIER	• Mental Models - Water Quality (see pg. 97)
BEHAVIOURAL LEVER	• Messenger Effect (see pg. 97) • Rewards (see pg. 97)
BEHAVIOURAL SOLUTION	A quiz regarding water and water quality with prizes for winning participants
DESCRIPTION OF SOLUTION	• MyGov drafted and launched a Jal Jeevan Mission themed quiz as part of their Mahaquiz series. • The quiz is available in 22 languages. • This quiz can be adapted and administered to students, children or community members to raise awareness.
BEHAVIOUR CHANGES	This quiz is expected to encourage people to learn more about water quality and increase interest in water quality testing. It is also expected to be adapted and implemented in local contexts (schools, community meetings, etc) with a smaller prize for winners.
THEORY OF CHANGE	• This quiz provides people a monetary incentive to learn about water quality. This awareness is likely to translate into a higher demand for water quality testing in households. • The quiz material is also likely to generate reception and interest since it comes from a source of repute (government). • It also provides an interface that can be easily modified and implemented in other contexts for better outreach.
INDICATORS FOR M&E	Awareness of water quality concerns, increase in demand for water quality testing.
METHODS FOR M&E	• 2.2. Key Informant Interviews (see pg. 168) • 3.3. Citizen Report Cards (see pg. 171) • 5.1. Randomised Evaluation (see pg. 172)



Full video available here: https://www.youtube.com/watch?v=lK1XElWd0uY

SOURCE: MyGov India

This page has been left blank intentionally.

D

Sustainable Water Use

Sustainable Water Use Behaviours:

This section includes all interventions that encourage individuals and households to;

1. Reduce excess water consumption in households
2. Increase uptake of greywater management in households

The following are key barriers and levers which impact the performance of these behaviours;

Barriers	Levers
1. Opportunity Cost With more accessible access to clean water, women and men no longer have to travel long distances or wait in long queues to fetch water, which may reduce their water conservation or judicious water use behaviours as it reduces their opportunity cost of accessing water.	**1. High-Risk Perception** Communities from areas with a high likelihood of water scarcity naturally adopt better water conservation behaviours. In these communities, there are higher social, financial and personal costs for wasting water. The fear of facing water shortage motivates judicious water use.
2. Lack of Incentive Currently, the monthly tariffs charged under JJM are fixed and are not linked to the amount of water households consume. There are also limited social costs or punishment for overconsumption. Hence, the incentive to remain mindful of the use of water being consumed is reduced.	**2. Create Incentives** Provision of monetary rewards, gifts or other incentives to households who conserve or reuse water is likely to encourage other households to use water judiciously. This is even more effective if people are informed of easy actions or strategies to save water
3. Present Bias People are likely to prioritise the immediate joy of uninhibited water use against the future benefits of water conservation. This may be attributed to individuals' future discounting and present bias.	**3. Planning and Goal Setting** Participatory activities where individuals are encouraged to think about their water consumption, chart a plan to reduce water overuse and set goals for themselves are effective pathways to encourage conservation

4. Low Awareness Community members are unaware of appropriate uses of grey (used) water.	**4. Efficacy** Individuals are likely to take up water conservation if they feel confident in their ability to create impact. Hence, Interventions which inform people of easy actions or strategies for water conservation are more effective
5. Novelty For those getting FHTCs for the first time, the novelty of supplied water daily demotivates households from adopting water reuse behaviours. They do not feel a need to use water sparingly anymore.	**5. Messenger Effect- Trust** Trusted channels of communication or entertainment can be used to raise awareness about appropriate uses of greywater. Emphasis must be placed on the safety of reuse and its benefits.
6. Salience The link between a household's water wastage, water use activities and depleting water sources/water scarcity is unclear in public knowledge, and hence causes overconsumption of water without realisation of its consequences.	**6. Social Comparison or Recognition** Social recognition of water-conserving households or announcement of their success in water conservation relative to other households through events, awards or media can be excellent motivators to encourage sustainable water use.

COSTA RICA, BELÉN CITY

Water Comparison Sticker

TARGET BEHAVIOUR	Reduce excess water consumption in households
BEHAVIOURAL BARRIER	• Opportunity Cost (see pg. 121) • Present Bias (see pg. 122)
BEHAVIOURAL LEVER	• Social Comparison or Recognition (see pg, 122) • Efficacy (see pg. 122)
BEHAVIOURAL SOLUTION	A coloured sticker (with smiles or frowns) is pasted on each household's water bill.
DESCRIPTION OF SOLUTION	• The sticker shows either a smiley face when water consumption is below or at average or a frowny face when water consumption is above average. • It also includes actions to reduce household water wastage.
BEHAVIOUR CHANGES	Average water consumption of households was reduced by 4.9%.
THEORY OF CHANGE	• If households are aware that they consume more than their neighbours with similar lifestyles, they are motivated to think about their excess water consumption actively. • These stickers can be used in India as tested SBCC material.
INDICATORS FOR M&E	Average household water consumption, average village level water consumption
METHODS FOR M&E	• 4.2. Performance Indicator Tracking (see pg. 171) • 5.1. Randomised Evaluation (RCT) (see pg. 172) • 1.2 Household Surveys (Multi-topic) (see pg. 164)

English translation:
"Water also runs out, let's take care of it!"
"Your home consumed less water than the average home in your neighborhood. Good job!"

English translation:
"Look out! Your home consumed more water than the average home in your neighborhood"
"Some tips to reduce your consumption:
- *Take shorter showers.*
- *Use less water for the lawn, lawn does not need water!*
- *Wash cars less frequently"*

"Water also runs out, let's take care of it!"

SOURCE: Miranda, J. J., Datta, S., & Zoratto, L. (2019). Saving water with a nudge (or two): Evidence from Costa Rica on the effectiveness and limits of low-cost behavioral interventions on water use. The World Bank Economic Review, 34(2), 444–463. https://doi.org/10.1093/wber/lhy025

COSTA RICA, BELÉN CITY

Planning Postcard

TARGET BEHAVIOUR	Reduce excess water consumption in households
BEHAVIOURAL BARRIER	• Opportunity Cost (see pg. 121) • Present Bias (see pg. 122)
BEHAVIOURAL LEVER	• Planning and Goal Setting (see pg. 121) • Social Comparison or Recognition (see pg. 122)
BEHAVIOURAL SOLUTION	A comparative worksheet that encouraged citizens to track their consumption against the city average.
DESCRIPTION OF SOLUTION	• The worksheet mentions the city's monthly average household water consumption and a checklist of tips to save water at home. • Recipients enter their monthly water usage and compare it with the city's average. • They also write down a personal goal for water use reduction and tick mark one or more items from the checklist, which they wish to implement in their house.
BEHAVIOUR CHANGES	Average water consumption reduced by 4.8% over two months.
THEORY OF CHANGE	• If households are aware that they consume more than their neighbours with similar lifestyles, they are motivated to think about their excess water consumption actively. • This motivation to act is further encouraged by the water conservation actions on the postcard (such as repairing water leaks), which can be easily adopted. • Goal setting (with suggestions for easy water reduction) makes the target behaviour salient for household members • Social comparison nudges individuals to lower consumption.
INDICATORS FOR M&E	Average household water consumption, average village level water consumption.
METHODS FOR M&E	• 4.2. Performance Indicator Tracking (see pg. 171) • 3.2. Beneficiary Assessment (see pg. 170) • 5.1. Randomised Evaluation (see pg. 172)

También en Belén el agua se agota....
¡Evitemos el desperdicio!

Instrucciones: Llena este formulario para planificar cómo tu hogar ahorrará agua.

Consumo promedio mensual de agua en Belén **29** m^3

Este mes, mi hogar consumió: _____ m^3

Vamos a seguir reduciendo el consumo a: _____ m^3

Vamos a lograr esta meta a través de:
Marque todas las opciones que correspondan.

- ☐ Utilice menos agua para regar el jardín. El zacate no necesita agua!
- ☐ Cierre el tubo al cepillarse los dientes y al rasurarse.
- ☐ No lave el carro a menudo.
- ☐ Dúchese en menos tiempo.
- ☐ Busque fugas de agua y repárelas.
- ☐ Utilice una escoba y no el agua para limpiar la acera.

Visite la página web http://www.belen.go.cr/consulta/Consulta_Agua.htm para más detalle sobre el costo del consumo de agua.

Si tiene alguna duda, puede contactarse con la Dirección de Servicios Públicos al teléfono 2587-0200 / 2587-0201 o al correo electrónico servicios@belen.go.cr

English translation:

"Water in Belén also runs out, let's avoid the waste!"

"Instructions: fill out this form to plan how you will save water:
Average monthly water consumption in Belén: 29 m3.
This month, my home consumed: __ m3.
We will continue reducing our consumption to: __ m3."

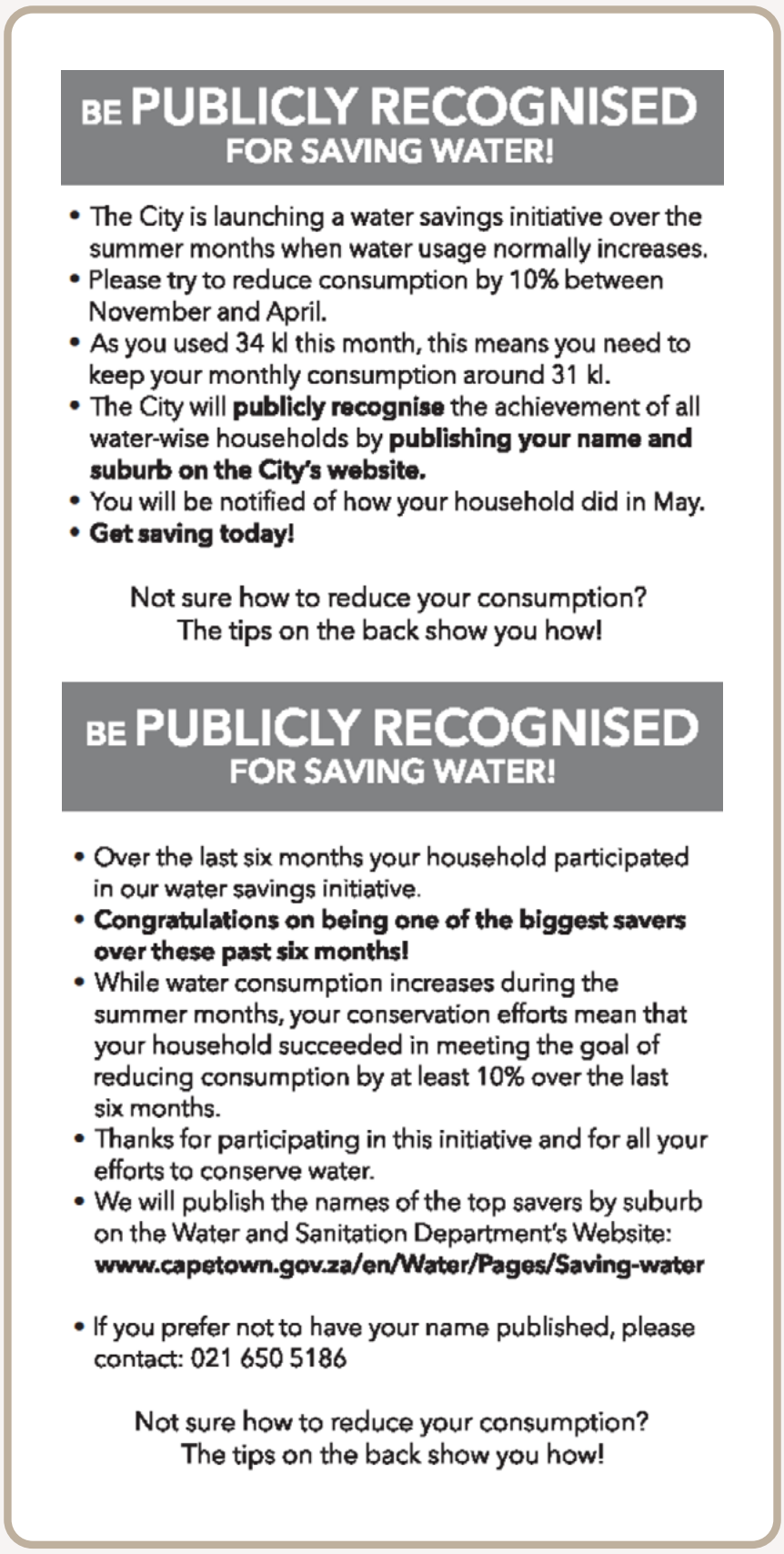
"We will achieve this goal through. Check all the options that apply:
Use less water for the lawn, lawn does not need water!
Close the pipe while brushing teeth and shaving.
Wash car less frequently.
Take shorter showers.
Look for water leaks and repair them.
Use a broom and not the water to clean the sidewalk."

SOURCE: Miranda, J. J., Datta, S., & Zoratto, L. (2019). Saving water with a nudge (or two): Evidence from Costa Rica on the effectiveness and limits of low-cost behavioral interventions on water use. The World Bank Economic Review, 34(2), 444–463. https://doi.org/10.1093/wber/lhy025

SOUTH AFRICA, CAPE TOWN CITY

Virtual Social Recognition

TARGET BEHAVIOUR	Reduce excess water consumption in households
BEHAVIOURAL BARRIER	• Lack of Incentive (see pg. 121) • Present Bias (see pg. 122)
BEHAVIOURAL LEVER	• Social Comparison or Recognition (see pg. 122) • Create Incentives (see pg. 121)
BEHAVIOURAL SOLUTION	Recognition for water savers on government websites.
DESCRIPTION OF SOLUTION	• A program where households that successfully reduce their water usage by 10% over two months are publicly recognized on the city government's website.
BEHAVIOUR CHANGES	Average water consumption was reduced by 1.3%.
THEORY OF CHANGE	• An opportunity for public recognition is a strong motivator to behaviour change. • Successful families are rewarded with appreciation and better social reputation, which encourages sustained behaviour change. • This intervention can be replicated in India as it is easy to implement even in rural areas.
INDICATORS FOR M&E	Average household water consumption, average village level water consumption
METHODS FOR M&E	• 4.2. Performance Indicator Tracking (see pg. 171) • 5.2. Quasi-Experimental Design (see pg. 173) • 1.2 Household Surveys (Multi-topic) (see pg. 164) • 3.2. Beneficiary Assessment (see pg. 170)



SOURCE: Brick, K., De Martino, S., & Visser, M. (2017). Behavioural Nudges for Water Conservation: Experimental Evidence from Cape Town. https://doi.org/10.13140/RG.2.2.25430.75848

SOUTH AFRICA, CAPE TOWN CITY

Quantified Conservation

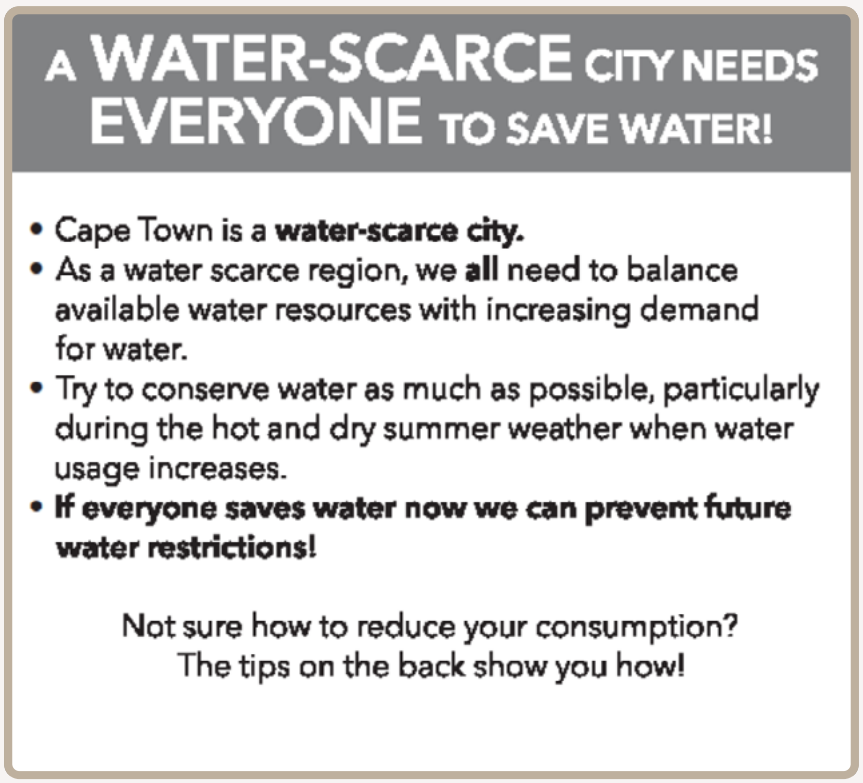
TARGET BEHAVIOUR	Reduce excess water consumption in households
BEHAVIOURAL BARRIER	• Salience (see pg. 122) • Present Bias (see pg. 122)
BEHAVIOURAL LEVER	• Create Incentives (see pg. 121) • Efficacy (see pg. 122)
BEHAVIOURAL SOLUTION	A poster showing litres of water saved.
DESCRIPTION OF SOLUTION	• A message provided to all households which lists easy actions to save water. • It also shows the savings that will occur by performing each action through the month in terms of total litres of water saved, per action.
BEHAVIOUR CHANGES	Average water consumption reduced by 0.6% over 5 months.
THEORY OF CHANGE	• It is difficult to interpret the amount of water that is being overused during activities. • When this wastage is quantified, wastage becomes more salient and tangible. • Therefore, people are motivated to avoid these losses and behaviour change occurs. • This intervention can be replicated in India as it is easy to implement even in rural areas.
INDICATORS FOR M&E	Average household water consumption, average village level water consumption
METHODS FOR M&E	• 4.2. Performance Indicator Tracking (see pg. 171) • 1.1. Household Surveys (single topic) (see pg. 163) • 5.1. Randomised Evaluation (see pg. 172)

SOURCE: Brick, K., De Martino, S., & Visser, M. (2017). Behavioural Nudges for Water Conservation: Experimental Evidence from Cape Town. https://doi.org/10.13140/RG.2.2.25430.75848

SOUTH AFRICA, CAPE TOWN CITY

Appeal To Public Good

TARGET BEHAVIOUR	Reduce excess water consumption in households
BEHAVIOURAL BARRIER	• Present Bias (see pg. 122) • Salience (see pg. 122)
BEHAVIOURAL LEVER	• High-Risk Perception (see pg. 121) • Efficacy (see pg. 122)
BEHAVIOURAL SOLUTION	A letter to households highlighting one's social responsibility to conserve water.
DESCRIPTION OF SOLUTION	• An appeal message sent to all households to conserve as much water as possible since water wastage will adversely impact the community as a whole. • The message emphasises everyone's societal duty in saving water, and the shared benefits of water conservation.
BEHAVIOUR CHANGES	Reduced average water consumption by 1.3%. In wealthy households, this intervention resulted in a 1.9% reduction.
THEORY OF CHANGE	• Linking water conservation to one's societal duty and ethics leads to higher motivation to save water. • It ties one's inaction to adverse consequences for oneself and others; thus linking wastage to social or reputation risk. • This intervention can be replicated in India as it is easy to implement even in rural areas.
INDICATORS FOR M&E	Average household water consumption, average village level water consumption.
METHODS FOR M&E	• 4.2. Performance Indicator Tracking (see pg. 171) • 2.1. FGDs / Community Group Interviews (see pg. 167) • 5.2. Quasi-Experimental Design (see pg. 173)

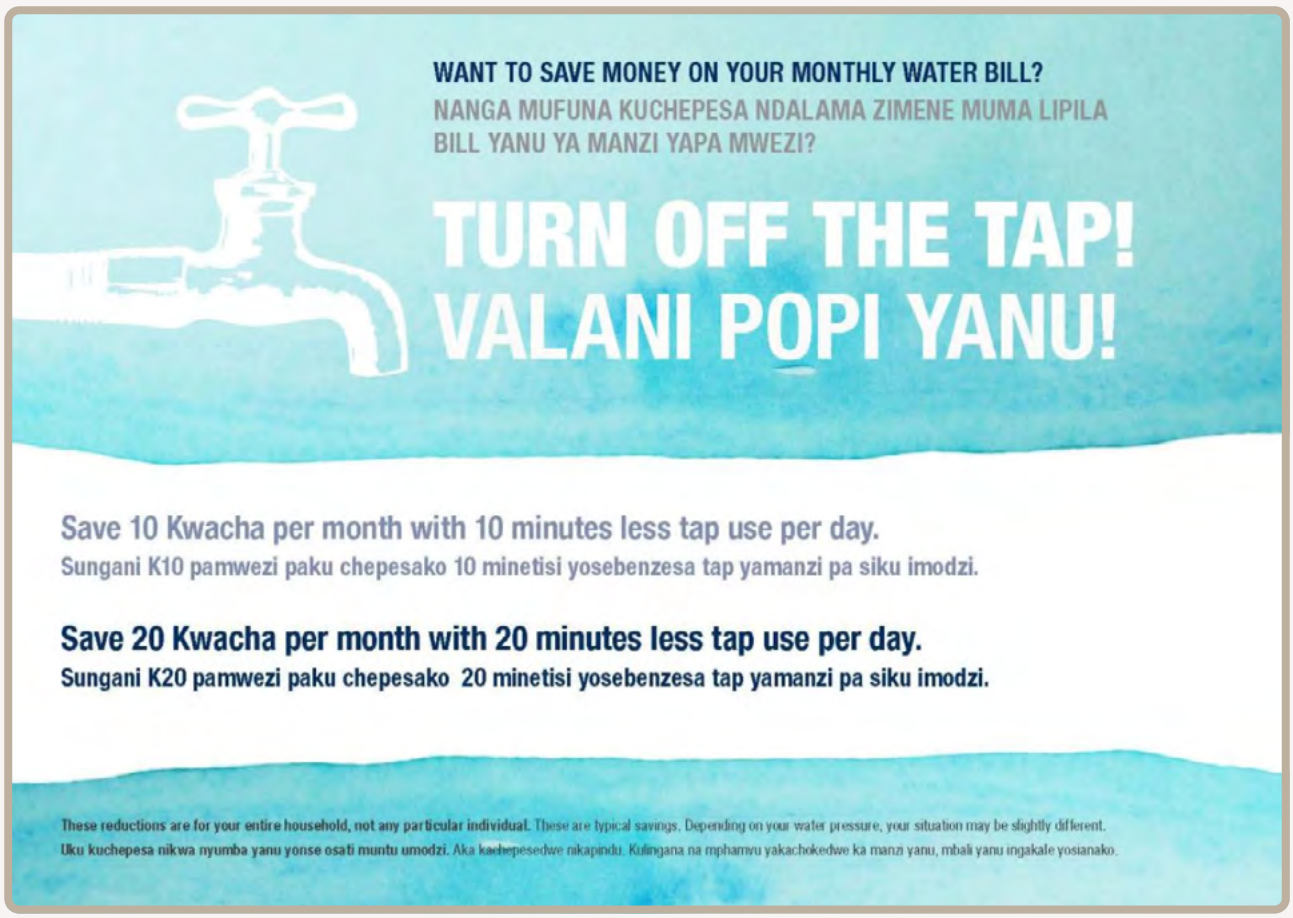


SOURCE: Brick, K., De Martino, S., & Visser, M. (2017). Behavioural Nudges for Water Conservation: Experimental Evidence from Cape Town. https://doi.org/10.13140/RG.2.2.25430.75848

ZAMBIA, LIVINGSTONE CITY

Water Conservation Lottery

TARGET BEHAVIOUR	Reduce non-essential water consumption in households
BEHAVIOURAL BARRIER	• Salience (see pg. 122) • Opportunity Cost (see pg. 121) • Present Bias (see pg. 122)
BEHAVIOURAL LEVER	• Create Incentives (see pg. 121) • Efficacy (see pg. 122)
BEHAVIOURAL SOLUTION	A program where households that reduce water consumption by 30% are enrolled in a lottery.
DESCRIPTION OF SOLUTION	• This intervention requires a pay-as-you-use payment system. • Households are automatically enrolled in a lottery if they reduce their consumption by 30%. The odds of winning the lottery are - 1 in 20 households winning Rs. 25,000. • All households are also informed of the cost of running the tap for 10 minutes.
BEHAVIOUR CHANGES	Households in which the lottery information was given to the women saw an average reduction of 11.5% in their water consumption.
THEORY OF CHANGE	• The chance of winning the lottery provides a potential reward and motivation to save water. • Also, since people are made aware of the cost of using the tap per minute, the financial loss caused by water overuse becomes salient. • Therefore, people are motivated to avoid losses and behaviour change occurs. • This intervention can be replicated in India as it is easy to implement even in rural areas.
INDICATORS FOR M&E	Average household water consumption, average village level water consumption.
METHODS FOR M&E	• 4.2. Performance Indicator Tracking (see pg. 171) • 1.1. Household Surveys (single topic) (see pg. 163) • 5.1. Randomised Evaluation (see pg. 172)

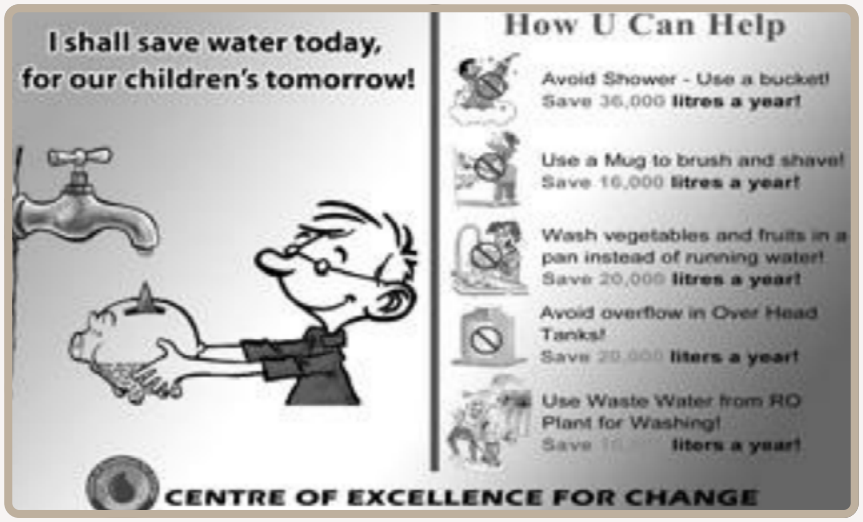


SOURCE: Jack, K., Jayachandran, S., & Rao, S. (2015). Information and Incentives to Decrease Water Waste in Zambia.

INDIA, CHENNAI CITY

Shut The Tap

TARGET BEHAVIOUR	Reduce excess water consumption in households
BEHAVIOURAL BARRIER	• Present Bias (see pg. 122) • Salience (see pg. 122)
BEHAVIOURAL LEVER	• High-Risk Perception (see pg. 121) • Efficacy (see pg. 122)
BEHAVIOURAL SOLUTION	Holistic water conservation campaign conducted by youth volunteers.
DESCRIPTION OF SOLUTION	• An awareness program conducted by trained youth volunteers consisting of the following parts; • Personal letter to Households to conserve water. • Information Card showing the plight of drought stricken communities and the impact of water saving actions with litres saved per action. • Reminder stickers nudging conservation of water at water use points.
BEHAVIOUR CHANGES	Nudging people to conserve water through children resulted in 10.3% reduction in average water use in one month, whereas nudging people to conserve water directly resulted in 5.02% reduction in water use.
THEORY OF CHANGE	• This program created a social movement around water conservation, with multiple sub-interventions within it. • The nature of this movement facilitated the creation of social norms, social support and social pressure around water conservation which led to its high impact.
INDICATORS FOR M&E	Household or village level water consumption
METHODS FOR M&E	• 4.2. Performance Indicator Tracking (see pg. 171) • 1.2 Household Surveys (Multi-topic) (see pg. 164) • 2.1. FGDs / Community Group Interviews (see pg. 167) • 5.1. Randomised Evaluation (RCT) (see pg. 172)

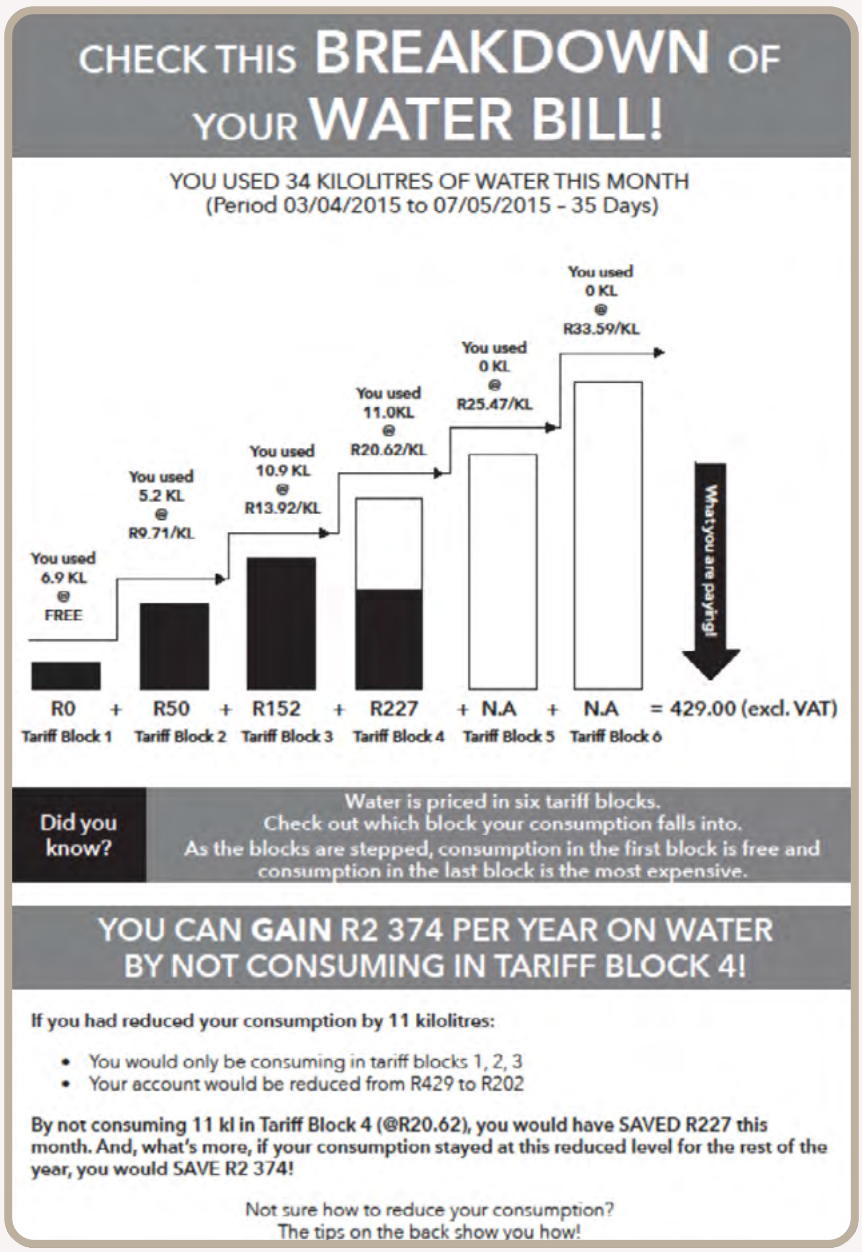


SOURCE: Amishi, N., & Kanaka, S. (2017). Nudging Urban Water Conservation: Evidence from India on the Effect of Behaviour Economics on Water Consumption. European Journal of Research in Social Sciences, 5(4), 73-84.

SOUTH AFRICA, CAPE TOWN CITY

Expected Savings

TARGET BEHAVIOUR	Reduce non-essential water consumption in households
BEHAVIOURAL BARRIER	• Salience (see pg. 122) • Lack of Incentive (see pg. 121)
BEHAVIOURAL LEVER	• Create Incentives (see pg. 121)
BEHAVIOURAL SOLUTION	Pamphlet showing monthly and annual bill savings per block reduction in consumption.
DESCRIPTION OF SOLUTION	• This intervention requires a pay-as-you-use payment system. • Along with water bills, each household receives a visual explanation of the water tariff structure. • The message quantifies the projected monthly and annual monetary savings from reducing consumption.
BEHAVIOUR CHANGES	Average water consumption reduced by 0.78%
THEORY OF CHANGE	• It is difficult to interpret the amount of water that is being overused during water use activities. • When this water wastage is quantified in financial terms, water wastage becomes tangible and salient. • Therefore, people are motivated to avoid these tangible losses and behaviour change occurs. • This intervention can be replicated in India as it is easy to implement even in rural areas.
INDICATORS FOR M&E	Household or village level water consumption
METHODS FOR M&E	• 4.2. Performance Indicator Tracking (see pg. 171) • 3.2. Beneficiary Assessment (see pg. 170) • 4.1. Public Expenditure Tracking (see pg. 171) • 5.2. Quasi-Experimental Design (see pg. 173)



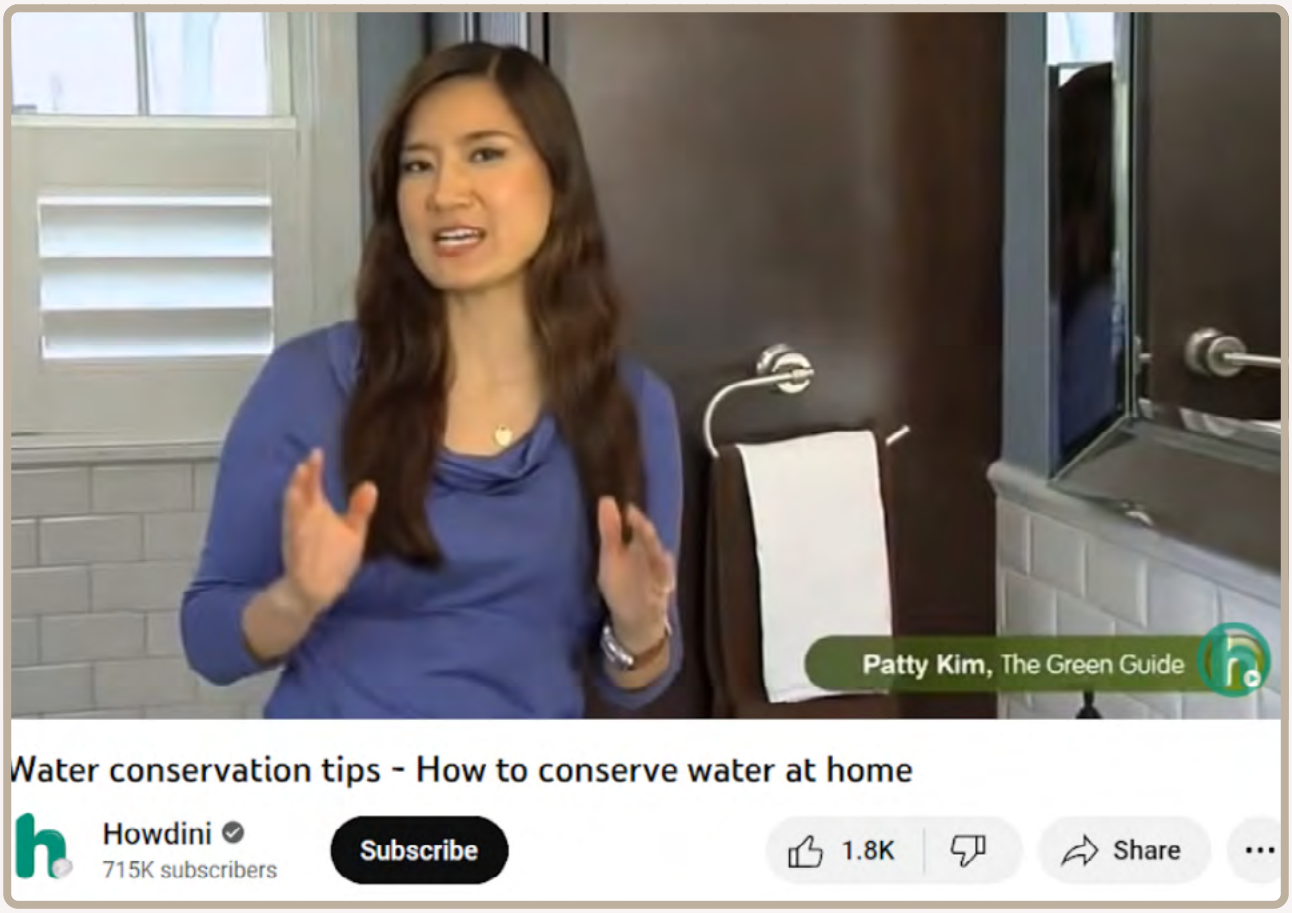
SOURCE: Brick, K., De Martino, S., & Visser, M. (2017). Behavioural Nudges for Water Conservation: Experimental Evidence from Cape Town.
https://doi.org/10.13140/RG.2.2.25430.75848

AUSTRALIA, NEW SOUTH WALES STATE

Scarcity Video

UNIVERSITY OF NEW ENGLAND
INNOVATION FOR A HEALTHIER PLANET

TARGET BEHAVIOUR	Reduce excess water consumption in households
BEHAVIOURAL BARRIER	• Present Bias (see pg. 122) • Salience (see pg. 122)
BEHAVIOURAL LEVER	• High-Risk Perception (see pg. 121) • Efficacy (see pg. 122)
BEHAVIOURAL SOLUTION	Video discussing water scarce future and actions for water conservation.
DESCRIPTION OF SOLUTION	• A video talks about an incoming water scarce future and suffering that may occur due to less water. • The video's audio highlights water scarcity as a serious global concern which needs to be addressed presently. • It also provides step-by-step water conservation actions that households can adopt and demonstrates the ease with which these actions can be done.
BEHAVIOUR CHANGES	Higher motivation to conserve water and higher intention to undertake water-conservation activities was seen among individuals who watched the video.
THEORY OF CHANGE	• The frightening video increases the perception of risk of water scarcity. • It helps visualise the various dangers or negative consequences that wasting water today may have in the future on one's life and surroundings. • It negates potential future discounting and increases motivation to conserve water. • This intervention can be replicated in India as it is easy to implement even in rural areas.
INDICATORS FOR M&E	Household or village level water consumption
METHODS FOR M&E	• 1.2 Household Surveys (Multi-topic) (see pg. 164) • 2.1. FGDs / Community Group Interviews (see pg. 167) • 3.2. Beneficiary Assessment (see pg. 168)



Full video available here: https://www.youtube.com/watch?v=4MDLpVHY8LE&t=6s

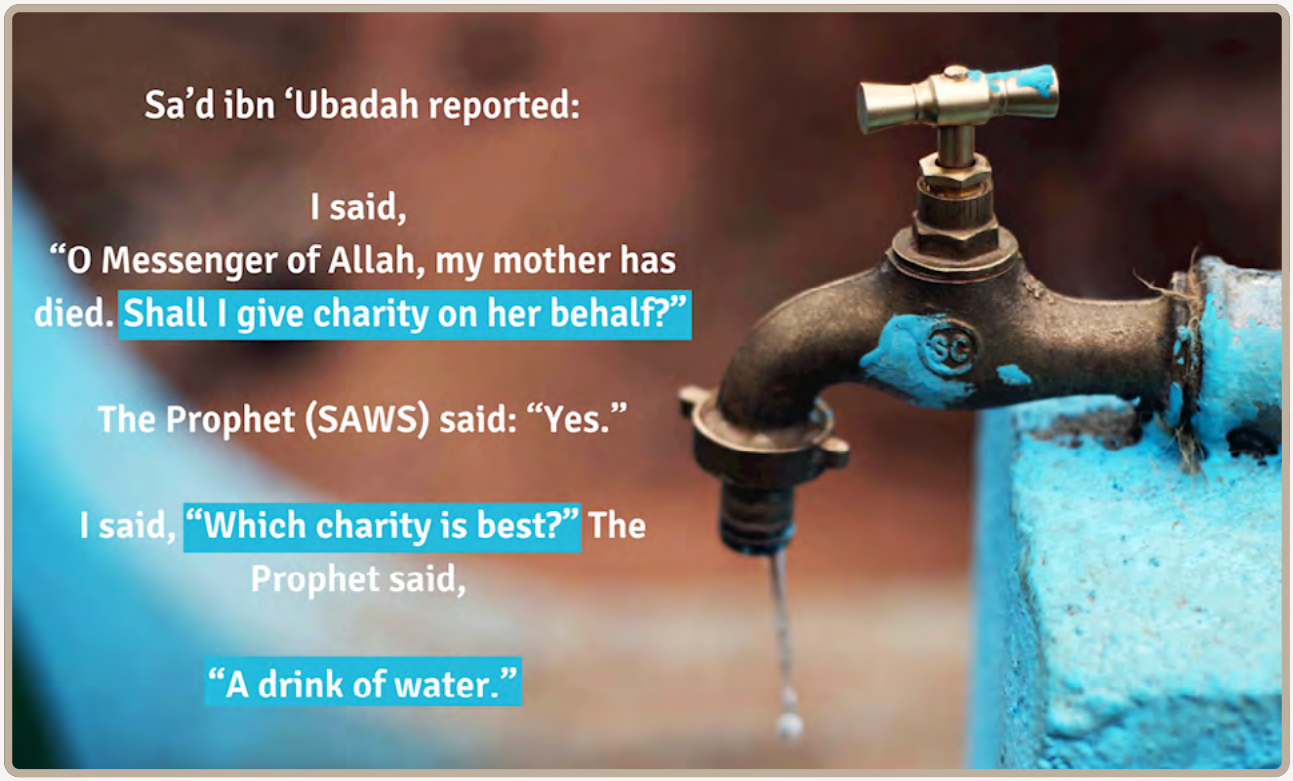
SOURCE: Addo, I. B., Thoms, M. C., & Parsons, M. (2019). The influence of water-conservation messages on reducing household water use. Applied Water Science, 9(5). https://doi.org/10.1007/s13201-019-1002-0

INDIA, AURANGABAD CITY AND
EASTERN MEDITERRANEAN REGION COUNTRIES

MULTIPLE
ORGANISATIONS

IEC Campaign Utilising Religious Beliefs

TARGET BEHAVIOUR	Reduce non-essential water consumption in households
BEHAVIOURAL BARRIER	• Low Risk or Threat (see pg. 119) • Future Discounting (see pg. 121)
BEHAVIOURAL LEVER	• High-Risk Perception (see pg. 121) • Messenger Effect- Trust (see pg. 122)
BEHAVIOURAL SOLUTION	Messages on water conservation including religious concepts and disseminated in religious spaces.
DESCRIPTION OF SOLUTION	• In their Khutbas (Friday sermons), Imams (priests) quoted verses of the Quran which profess the virtue and importance of water conservation. • There are many other campaigns which incorporate religious symbols or concepts to promote water saving, and are displayed near mosques and public spaces.
BEHAVIOUR CHANGES	Across multiple studies, average household water use reduced by 8-26% as a result of such campaigns.
THEORY OF CHANGE	• Highlighting the religious significance of water conservation ties water conservation with moral and ethical duties. • It increases risk perception since water wastage will now be both an environmental and moral misstep. • Additionally, religious leaders and channels of communication hold high trust among community members. Hence, messages received from them are more likely to be accepted by community members.
INDICATORS FOR M&E	Household or village level water consumption
METHODS FOR M&E	• 4.2. Performance Indicator Tracking (see pg. 171) • 1.1. Household Surveys (single topic) (see pg. 163) • 2.1. FGDs / Community Group Interviews (see pg. 167)



Muslim Hands Canada

SOURCE: Muhammad, S., & Amal, S. (2019). Religious based water management campaigns for sustainable development: prospects and challenges. Sustainable Urban Water International Seminar 2019. https://doi.org/10.1088/1755-1315/477/1/012018

Atallah, S., Ali Khan, M. Z., & Malkawai, M. (1999). Water Conservation through Islamic Public Awareness in the Eastern Mediterranean Region. Eastern Mediterranean Health Journal, 5(4).

500 Aurangabad mosques spread message about water conservation during Friday prayer (2019, March 25). Times of India. https://timesofindia.indiatimes.com/city/aurangabad/500-city-mosques-spread-message-on-water-conservation-during-friday-prayer/articleshow/68552493.cms

UNITED ARAB EMIRATES, ABU DHABI CITY

Arid Land Sticker

TARGET BEHAVIOUR	Reduce excess water consumption in households
BEHAVIOURAL BARRIER	• Salience (see pg. 122) • Present Bias (see pg. 122)
BEHAVIOURAL LEVER	• Efficacy (see pg. 122) • High-Risk Perception (pg. 121)
BEHAVIOURAL SOLUTION	Sticker under taps reminding users of potential drought.
DESCRIPTION OF SOLUTION	• A sticker resembling arid, cracked land is placed directly underneath the tap in the household.
EXPECTED CHANGES	Reduced water wastage in households, increased sense of risk of water scarcity.
THEORY OF CHANGE	• The link between a household's water wastage and the village's depleting water tables is not clear in public knowledge. • This sticker seeks to solidify this link in people's minds at the time and place where water is being used, and thus encourage conservation of water. • This intervention can be replicated in India as it is easy to implement even in rural areas.
INDICATORS FOR M&E	Household or village level water consumption
METHODS FOR M&E	• 4.2. Performance Indicator Tracking (see pg. 171) • 2.2. Key Informant Interviews (see pg. 168) • 2.3. Direct Observational Study (see pg. 168)

AL AIN ZOO

Client & Venue: Al Ain Zoo
Method: Sticker on the basin
Duration: A week
Copy line: **'Stop draining the planet. Use water wisely.'**
Agency: Team Y&R, Abu Dhabi.

On the occasion of World Water Day (22 March), we came up with this idea to tackle the problem right at the source. We created a sticker (shown in the picture) to persuade people not to drain the planet. Whenever someone came to use the tap, he/she was reminded of what might happen if the world's water resources dried up.

SOURCE: Al Ain Zoo, Abu Dhabi

INDIA, UTTAR PRADESH

Water Ritual At Convocation

GOVERNOR'S OFFICE, UTTAR PRADESH

TARGET BEHAVIOUR	Reduce excess water consumption in households Increase uptake of greywater management
BEHAVIOURAL BARRIER	• Lack of Incentive (see pg. 121) • Present Bias (see pg. 122)
BEHAVIOURAL LEVER	• Messenger Effect- Trust (pg. 122) • High-Risk Perception (pg. 121)
BEHAVIOURAL SOLUTION	"Save water" ritual before the start of convocation ceremonies.
DESCRIPTION OF SOLUTION	• The lighting of the lamp ceremony at the start of the convocation is replaced by a "Jal Bharo" ceremony to symbolise Jal Shakti. • All present dignitaries fill one cup of water into an auspicious pot.
EXPECTED CHANGES	This intervention is expected to increase the value of water in people's minds, instil the need to conserve water and thus reduce water wastage and increase water reuse in households.
THEORY OF CHANGE	• This ritual encourages entire batches of outgoing students and their families to think more actively about their water consumption. • Also, given the ritual and symbolic importance of the lighting of the lamp ceremony, replacing it with the Jal Bharo ceremony establishes water conservation as an important subject to be understood and undertaken urgently by all. • Since this event occurs at an educational institution by respected/ reputed individuals, people are also likely to trust in the sources and undertake this.
INDICATORS FOR M&E	Average household water consumption, average village water consumption
METHODS FOR M&E	• 4.2. Performance Indicator Tracking (see pg. 171) • 1.1. Household Surveys (single topic) (see pg. 163)

Times of India

SOURCE: Governor's Office, Uttar Pradesh

INDIA, ANDHRA PRADESH STATE

Generational Water Game: Passing the Water

TATA TRUSTS

TARGET BEHAVIOUR	Reduce excess water consumption in households
BEHAVIOURAL BARRIER	• Present Bias (see pg. 121) • Salience (see pg. 122)
BEHAVIOURAL LEVER	• Efficacy (see pg. 122)
BEHAVIOURAL SOLUTION	Game wherein participants attempt to pass handfuls of water from person to person.
DESCRIPTION OF SOLUTION	• A game or demonstration wherein 5-7 people are asked to stand in a line. • The first person in the line is given a handful of water and asked to pass it to the 2nd, 2nd to the 3rd and so on. • The quantity of water in each hand naturally reduces with each pass. • The demonstration may conclude by discussing the need to conserve water today for the benefit of future generations.
EXPECTED CHANGES	Increase in participation of maintenance of JJM infrastructure, reduce non-essential water flow from taps, increase in community ownership of JJM infrastructure.
THEORY OF CHANGE	• This game helps community members visualise how seemingly small lapses in water conservation can build up to drastic scarcity over time. • It also shows how even if scarcity is not evident in the individual's lifetime, their actions might cause their children to face scarcity. • This helps to correct future discounting, directly linking wastage and scarcity, thus encouraging water conservation.
INDICATORS FOR M&E	Household or village level water consumption
METHODS FOR M&E	• 2.1. FGDs / Community Group Interviews (see pg. 167) • 1.2 Household Surveys (Multi-topic) (see pg. 164)

SOURCE: Tata Trusts, Andhra Pradesh

NETHERLANDS

Water Battle

TARGET BEHAVIOUR	Reduce non-essential water consumption in households
BEHAVIOURAL BARRIER	• Salience (see pg. 122) • Lack of Incentive (see pg. 121)
BEHAVIOURAL LEVER	• Create Incentives (see pg. 121) • Planning and Goal Setting (see pg. 121)
BEHAVIOURAL SOLUTION	Children's game which is linked to household water metres and encourages water conservation.
DESCRIPTION OF SOLUTION	• This game is linked to the house's water metre and monitors the household's water use. • The child's character gets to move ahead in the app/game, once the household is able to meet a set daily water consumption target. • If the household exceeds its daily target, the game restarts.
EXPECTED BEHAVIOUR CHANGES	This intervention is expected to lead to a decrease of excess water consumption in households and more engagement between parents and children regarding water conservation. *Note:* Since JJM is a rural centric programme, use of app and game on technology driven android mobile phone may not be feasible. It can be tried as a model in select model habitations.
THEORY OF CHANGE	• Children are known to be very effective agents of change. • Games are also a good pathway to behaviour change since; • Storytelling and virtual avatars encourage engagement with messages and content • Virtual incentives in games act as motivation to conduct the target behaviour, especially when the real world benefits are not immediate or tangible. • The game encourages children to engage with and persuade other household members to conserve water.
INDICATORS FOR M&E	Household or village level water consumption
METHODS FOR M&E	• 4.2. Performance Indicator Tracking (see pg. 171) • 1.1. Household Surveys (single topic) (see pg. 163) • 2.1. FGDs / Community Group Interviews (see pg. 167)

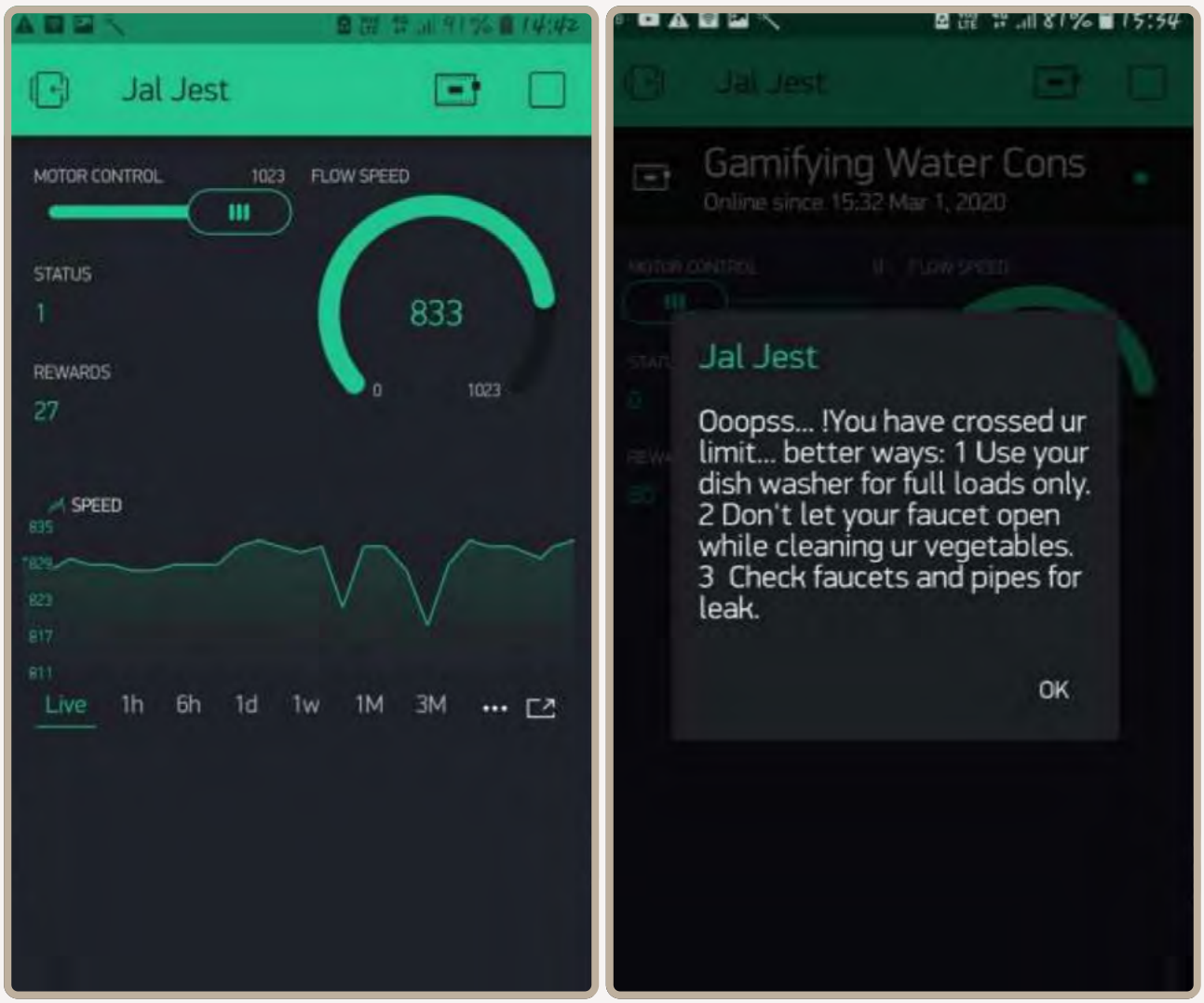
Full video available here: https://www.youtube.com/watch?v=0JDjfduOyZY

SOURCE: Grendel Games. (2019). Water Battle. https://waterbattle.com/

INDIA, TAMIL NADU STATE

Jal Jest

TARGET BEHAVIOUR	Reduce excess water consumption in households
BEHAVIOURAL BARRIER	• Opportunity Cost (see pg. 121) • Salience (see pg. 122) • Lack of Incentive (see pg. 121)
BEHAVIOURAL LEVER	• Create Incentives (see pg. 121) • Planning and Goal Setting (see pg. 122)
BEHAVIOURAL SOLUTION	Application which shares alerts upon excess water use, and provides incentives for water conservation.
DESCRIPTION OF SOLUTION	• The application sends notifications to a phone when the household's water consumption exceeds the normal usage. • The notifications also mention strategies to conserve water. • Households with water consumption under permissible limits score Jal Jest points, which can be used to purchase products at the Jal Jest store. • This app is connected to a home's water meter through a small arduino board.
EXPECTED CHANGES	Reduction in household water wastage.
THEORY OF CHANGE	• People are often unaware about their water overuse. • The notifications encourage people to introspect about their water consumption and identify areas of wastage. • This is bolstered with strategies to conserve water. • Also, the available virtual incentives act as motivation to conduct the target behaviour, especially when the real world benefits are not immediate or tangible.
INDICATORS FOR M&E	Household or village level water consumption
METHODS FOR M&E	• 4.2. Performance Indicator Tracking (see pg. 171) • 1.1. Household Surveys (single topic) (see pg. 165) • 5.1. Randomised Evaluation (see pg. 172)



SOURCE: Ayyar, K., Praveena, S., Reshma, H., Thanuja, S., & Vinodhini, B. (2020). Gamifying Water Conservation. International Journal of Advance Research and Innovative Ideas in Education (IJARIIE), 6(2), 572–580

INDIA, MIZORAM

Letter From Kalam

PUBLIC HEALTH ENGINEERING DEPARTMENT - MIZORAM

TARGET BEHAVIOUR	Reduce excess water consumption in households
BEHAVIOURAL BARRIER	• Salience (see pg. 122) • Present Bias (see pg. 121)
BEHAVIOURAL LEVER	• Messenger Effect- Trust (see pg. 122) • High-Risk Perception (see pg. 121)
BEHAVIOURAL SOLUTION	Translated from former president Abdul Kalam warning readers of an impending water crisis by 2070.
DESCRIPTION OF SOLUTION	• A letter written by former President APJ Abdul Kalam, which states that India will face a water crisis by 2070, was translated to local language. • Pictures showing water scarce landscapes and societies were added to the document. • This letter was disseminated and explained in awareness programs targeting students and children.
BEHAVIOUR CHANGES	This intervention is expected to increase judicious water use in households by reducing overconsumption and increasing water reuse.
THEORY OF CHANGE	• This intervention increases motivation to save water by depicting the harsh negative effects of water scarcity in the future and by providing a concrete date (2070) by when this situation will arise, helping recipients visualise this event. • More importantly, President Kalam represents a trusted and widely respected figure. Hence it is likely that his words and opinions will be positively received and his suggestions duly accepted.
INDICATORS FOR M&E	Average household water consumption, average village water consumption.
METHODS FOR M&E	• 4.2. Performance Indicator Tracking (see pg. 171) • 1.2 Household Surveys (Multi-topic) (see pg. 164)

President Kalam on tour in Mizoram, http://abdulkalam.nic.in/

SOURCE: PHED, Mizoram

INDIA, TAMIL NADU

Personal Notices

Government of Tamil Nadu
தமிழ்நாடு அரசு

TARGET BEHAVIOUR	Increase uptake of greywater management practices
BEHAVIOURAL BARRIER	• Low Risk or Threat (see pg. 121) • Low Awareness (see pg. 121)
BEHAVIOURAL LEVER	• Social Comparison or Recognition (see pg. 122) • Messenger Effect- Trust (see pg. 122)
BEHAVIOURAL SOLUTION	Notices to households who have not built soak pits.
DESCRIPTION OF SOLUTION	• Households without soak pits were sent an official notice by the local governance instructing them to build soak pits for the collection of greywater. • Repeat notices were sent to defaulter households after a month. • Similarly, local authorities' work was evaluated during visits by the District Collector and well-performing bodies received appreciation and awards from the Collector.
BEHAVIOUR CHANGES	This program led to the major increase in the number of soak pits constructed in households within these localities or constituencies.
THEORY OF CHANGE	• This program was successful since a respected and authoritative local body was informing households that they were one of the few households in the locality which was lagging behind others. This inculcates a sense of social comparison and not wanting to fall behind others. • Also, even though no concrete penalty or punishment was mentioned, people tend to accept instructions from respected authority figures.
INDICATORS FOR M&E	No. of households with soak pits, increased awareness of the importance of greywater management.
METHODS FOR M&E	• 2.3. Direct Observational Study (see pg. 168) • 5.3. Pre-Post Evaluation (see pg. 173)

SOURCE: Town Panchayats, Tamil Nadu

This page has been left blank intentionally.

Monitoring and Evaluation

Monitoring and Evaluation

Monitoring is the **routine process of collecting data and measuring progress** towards an objective. On the other hand, evaluation uses **specific study designs to measure the extent to which changes** in the desired outcomes have been observed and to what extent. Depending on the requirements of the practitioner, either:

A. A monitoring plan, or

B. An evaluation plan, or

C. Both (M&E plan) may be recommended.

Largely, a key difference on the choice of plan depends on the kind of indicators being used. Process-based indicators are used to conduct monitoring activity, while outcome indicators will be used for an evaluation activity. If both are being used, then a M&E plan comes to fruition.

M&E plans can be helpful for project leaders to:

a. Decide if project resources are being used effectively and efficiently

b. Make informed decisions about further steps for a project

c. Develop institutional memory about learnings and best practices

d. Conclude if a project is successful and cost-effective

e. Determining whether the intervention should be scaled

Developing an M&E plan

This section will provide readers with a step-by-step guide towards creating and implementing an M&E plan for their intervention(s) of interest

A. Indicators

The first step in the creation of an M&E plan is choosing key indicators that are relevant to the success of one's intervention. This selection can be conducted on the basis of feasibility of measuring the indicator and correlation of the indicator with the behaviour an intervention aims to change. Increase or decrease in the indicator should inform one of the success or failure of a behaviour change solution. Please find below a suggested list of some sample indicators which can be used for an M&E plan in JJM. Each intervention listed in the compendium above also recommends monitoring at least 2-3 indicators which are best suited to it.

SN	CATEGORY	INDICATOR	METRIC
1.	**Infrastructure**	FHTC coverage	% or numeric
2.	**Infrastructure**	HHs with a tap connection within premises	% or numeric
3.	**Infrastructure**	Functionality (quantity): • Fully functional (>=55 lpcd) • Partially functional (40-55 lpcd) • Non functional (<40 lpcd)	Scale (fully, partially, non-functional)
4.	**Infrastructure**	Health facilities or schools gaining access to drinking water services	Number of schools, anganwadi centres, etc
5.	**Health**	Reduction in water-borne diseases reported in xx week / month / time horizon	% or numeric
6.	**Health**	No. of people (or HHs) gaining access to a safe drinking water resource	Number of people OR Number of HHs (assuming 1 HH = 5 people)
7.	**Gender**	Reduction in time spent by women on water-collection activities	Time use survey
8.	**Gender**	Increase in school attendance by adolescent girls	% increase in adolescent girls attending school OR Sum total of no. of days a girl student attends school
9.	**Payment**	No. of people paying the recurring user charges out of the total population (in a month)	%, or absolute number of HHs
10.	**Payment**	Average payment made by HHs	Numeric (median or mean)

B. Methods of Evaluation

The second step in the creation of an M&E plan is the selection of a method(s) of evaluation. This selection is made based on the stakeholder's bandwidth, relevance to the intervention and access to required data/subjects. If one's resources permit, one may choose to implement multiple methods of evaluation for the same intervention in order to crosscheck one's findings. Please find below a list of evaluation methods that can be used for an M&E plan in JJM. Each intervention listed in the compendium above also recommends 1-2 methods of evaluation which are best suited to it.

1. Surveys

1.1. Household Surveys (single topic)

Single topical household surveys are surveys done with households but with great depth on a single topic. A single topical survey is recommended when we are clear on what we would like to monitor or evaluate - and are not looking for general insights.

For instance, a single topical survey is sufficient when we want to ask a family/individual specific targeted questions on water consumption patterns only. Since the objective is only to evaluate how water consumption has changed before/after an intervention, a single topical survey would do.

An example of a short survey on water consumption could look like this:

Eg of a short Single Topical survey: Water Consumption

	QUESTION	INDICATOR	CATEGORY
1	**How many taps do you have at home?**	FHTC (Numeric , 0-5)	Infrastructure
2	**Do you have a well/borewell installed at home?**	Yes, No	
3	**Do you reuse water from the kitchen?**	Yes, No	Attitudes to household water reuse
4	**Do you feel that you are using as much water as you did before for domestic cleaning?**	Yes, No	Attitudes to household water reuse
5	**Do you use indoor water to wash your cattle / agricultural purposes?**	Yes, No	Attitudes to outdoor water reuse

However, a single topical survey is not recommended under two circumstances: a.) when we are looking for general insights or b.) when we are looking for cross-cutting impact across different areas.

1.2 Household Surveys (Multi-topic)

Multi-topical surveys are surveys done with households on multiple topics. Unlike single-topical surveys, these are less in-depth and are more general.

This kind of survey is recommended when we look for general insights or test if a hypothesis is true.

For instance, we may want to gather insights into the change in the living standards of a community post-JJM. In this case, the questionnaire should contain cross-cutting questions across multiple areas such as - spending, education, income sources, employment, family size, fertility, etc., which warrants a multi-topical household survey

1.3 Time-Use Surveys

A time-use survey attempts to gather information on how, on average, a person spends their time in a day. A list of suggested activities is often provided against different time slots across a day. A respondent is then asked to tick all the activities they do and the time when they do them.

Two simplified time-use survey samples are provided below:

TUS - Sample 1		MORNING					AFTERNOON						EVENING	
ACTIVITY		...	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	...
1	Sleep													
2	HH chores													
3	Travel													
4	Work													
5	Fetching - wood, water													
6	(Etc...)													

TUS - Sample 2		How much time do you spend (per day or per week) on the following activities?			
ACTIVITY		PER DAY		PER WEEK	
		HOURS	MINS	HOURS	MINS
1	Travel to work				
2	Household chores (cooking, cleaning, family care)				
3	Work				
4	Sleeping				
5	Leisure				
6	Fetching - water				
7	Looking after cattle (if within the HH)				
8	Travel for non-work activities				
9	(Etc..)				

A time-use survey is an excellent tool to evaluate an intervention that attempts to reduce time burdens/ drudgery involved in fetching water. By measuring time-use for women before and after an intervention is introduced, we can calculate the time saved and, thus, the efficacy of an intervention.

1.4 Satisfaction/Confidence Survey

Satisfaction (with respect to service delivery) or confidence (with respect to trust, ease of service, etc) can be measured with specialised scales called the likert scales. Likert scales are either 2-point, 3-point, or 5-point scales used to measure customer satisfaction, agreement/ disagreement or confidence levels in a questionnaire.

SN	QUESTION	SCALE / RESPONSE
1	How has the water supply been like in the past month within your household?	Regular Irregular
2	How would you rate your experience with the PHED department in installing FHTCs in your village?	Good Average Bad
3	Are you satisfied with the O&M activities undertaken in JJM within your village?	Very Satisfied Mostly Satisfied Neither Mostly Dissatisfied Very Dissatisfied

Likert scales are significant indicators for evaluating scheme engagement and for government institutions to measure performance and beneficiary experience, and are recommended to be included as a whole survey, or a component while evaluating service delivery of JJM. They can be created for evaluating user-experience with service providers at the local level, or even experience with a scheme at a larger state/national level.

2. Rapid appraisal methods

2.1. FGDs / Community Group Interviews

Focus group discussions are interviews done with groups of selected community members (five-ten people usually) with similar backgrounds or experiences. It is a form of survey design where enquiries into a group's beliefs, knowledge, attitudes, or practices are made through conversations, as a collective. A single moderator will usually lead the discussion and ask questions to the group through a questionnaire/discussion guide while a few note-takers record observations or comments.

This form of qualitative design is usually suggested when evaluating the impact of communication/IEC solutions to gather insights into behaviour change that cannot be captured quantitatively. It is also recommended when time or monetary constraints are significant, and individual respondents cannot be surveyed. However, since moderators may come in with their own preconceived notions and biases, FGDs should be conducted with a trained moderator, several note-takers and a signaler who helps the moderator stick to the discussion guide. Another caveat is to not include sensitive questions in an FGD, since people are less likely to respond to personal / taboo questions in a group setting.

2.2. Key Informant Interviews

Key informant interviews are semi-structured, qualitative surveys where a single respondent is asked a few open-ended questions to gain information about their knowledge, attitudes, practises or experience in general.

This form of a survey is very similar to an FGD but is specifically recommended for cases when sensitive discussions are posited (which may require in-depth probing or confidentiality).

2.3. Direct Observational Study

A direct observational study involves one (or several) note-takers filling out a detailed observation form at the programme implementation site. The form can contain a checklist of observable indicators that may not necessarily need human interaction, such as - present infrastructural facilities, processes or activities being followed, and other observable discussions or social interactions.

This form of a survey is usually recommended when an individual is either trying to monitor or evaluate indicators tracking the progress of a programme or due diligence in processes being followed (process-evaluation).

3. Participatory tools

3.1. Participatory Rural Appraisal

These tools involve using the local communities' knowledge and opinions in the planning and managing of development projects. It incorporates a mix of visual communication and techniques. PRAs rely on reducing the need for written communication and being inclusive of an unlettered population using techniques such as community resource mappings, transect walks, ecograms, timelines, etc.

While PRAs are actively used in the different phases of JJM - they can also be used as an M&E tool specially for pre-implementation, and during-implementation areas.

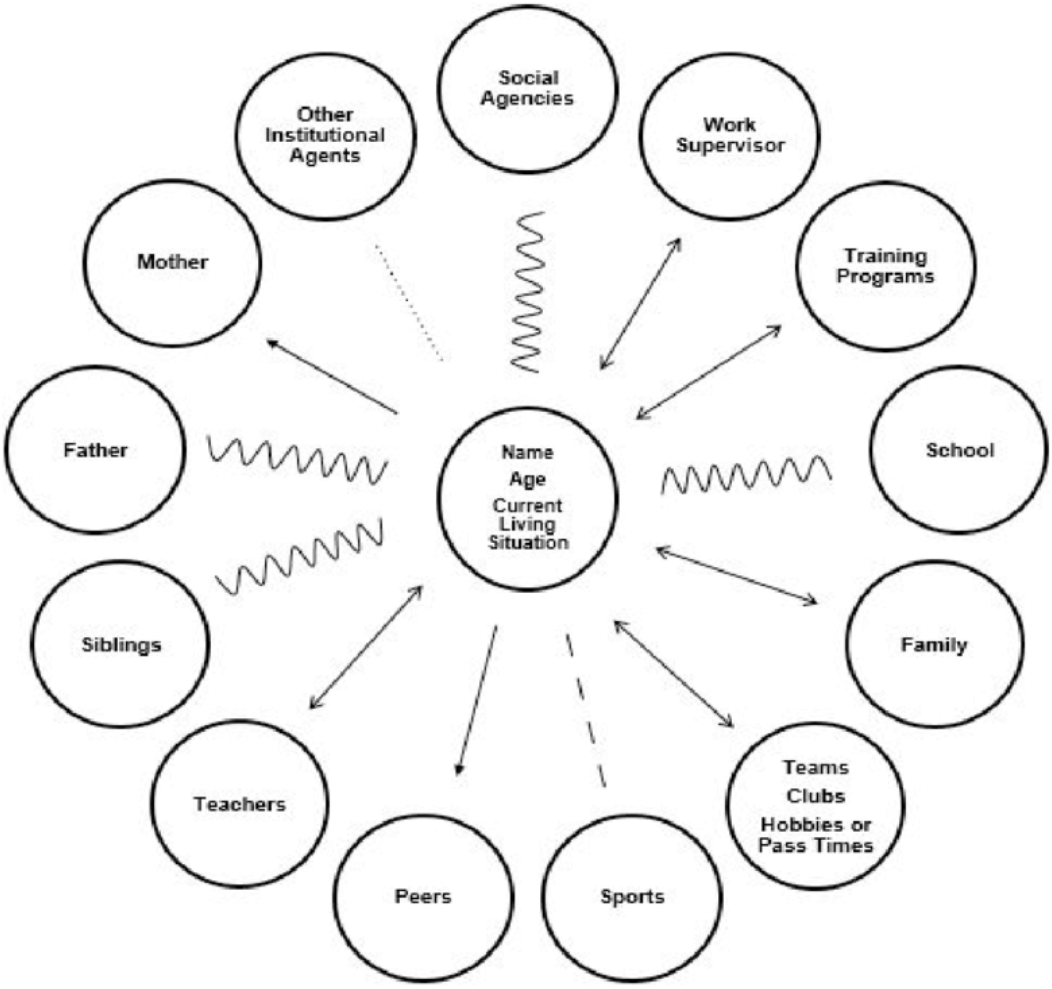
Some of the recommended cases for using a PRA are when we may want to track improvements or changes in resources mapped within a community, or changes in social networks or dynamics as a result of the intervention. For instance, in cases where an intervention may affect interactions within a community (e.g., an intervention that focuses on grievance redressal), a PRA technique (with an ecomap[1]) is recommended. An example of an ecomap (Bennett, Jo & Grant, Natalie, 2016[2]) is provided below:

Source: New Horizons in Adult Education and Human Resource Development. 28. 1-13. 10.1002/nha3.20134.

1 Ecomap is a qualitative tool, which maps interactions between all the groups in a community / ecosystem

2 Using an Ecomap as a Tool for Qualitative Data Collection in Organizations. New Horizons in Adult Education and Human Resource Development. 28. 1-13. 10.1002/nha3.20134.

AN ECOMAP



SOURCE: New Horizons in Adult Education and Human Resource Development. 28. 1-13. 10.1002/nha3.20134.

3.2. Beneficiary Assessment

Beneficiary assessment is another participatory tool involving consultations with government stakeholders, beneficiaries, service providers, etc., to understand constraints to participation and provide feedback on services and activities.

This technique can also be recommended for early evaluations when trying to understand the impact of a new solution on the takeup of the programme OR, while trying to understand the impact of a solution on beneficiary enrollment / dropout.

3.3. Citizen Report Cards

Citizen report cards (CRC) are another participatory technique that focuses on understanding changes in citizen engagement and beneficiary experience by creating surveys for govt performance and execution, which look very much like customer-satisfaction surveys.

4. Tracking Surveys

4.1. Public Expenditure Tracking

Public expenditure tracking (PET) surveys are used to track the flow of funds (and how they reach the end beneficiaries). They also provide a manner of examination which tracks at what time,in what manner, and at what levels of the government the funds are released. It is an excellent tool to understand how the service delivery mechanism works to deliver services to the end-beneficiary and at what cost.

A PET survey is recommended for cases when the intervention or solution is implemented on subjects from the supply-provisions system / administrative system. For instance, if an intervention is trying to improve communication and delivery of services between the Paani Samiti and the local panchayat or the block/district administration - a PET would be an excellent tool to examine bureaucratic bottlenecks, leakage of funds, quantitatively estimate the cost of delays etc.

4.2. Performance Indicator Tracking

Performance indicator tracking is any process or survey that tracks the changes in performance indicators of a programme overtime. It is extended but not limited to indicators such as - service delivery, beneficiary reach, change in health or wellbeing indicators, socio-economic indicators, etc.

This can be a survey in itself, or one component (a section) of a more extensive survey. The advantage of performance indicator tracking is in its measurability across groups. The same target or goal (e.g. FHTC coverage) can be used to measure and compare progress across organisations, districts, or verticals.

A performance indicator tracking survey is particularly recommended in cases when the outcome of interest / indicator is an infrastructure indicator that doesn't require participation of human subjects in a survey. It can also be extended to setting performance targets, assessing key milestones and benchmarking the time taken in achieving each milestone as against a set target.

5. Impact Evaluation

5.1. Randomised Evaluation (RCT)

This is one of the more robust forms of evaluation and is considered the gold standard for impact evaluation. This form of evaluation is possible when participants can be divided randomly into two groups that either receive[1] and do not[2] receive an intervention or when the intervention is phased-in and the two groups receive the intervention at different points in time.

Changes in the value of any indicator (for eg: water consumption per day, number of complaints raised per month, number of complaints addressed etc) is observed for both groups. Difference in the value of the indicator for both the groups is what we consider or call as the "impact" of the intervention. Since participants have been randomly allocated to treatment and control groups, there is no systematic difference in the two groups and therefore any difference in outcome between them is purely attributable to the effect of the intervention only. This kind of evaluation can be undertaken by conducting surveys both before (baseline) and after (endline) the intervention for both groups or only after (endline) the intervention for both groups to measure the difference in outcome for impact evaluation.

5.2. Quasi-Experimental Design

Although randomised evaluation is the gold standard for impact evaluation, many times, randomisation[3] is not feasible. For instance, we may want to evaluate the impact of a technology on reduction in disease. In this case, a randomised allocation of people to a group that receives a treatment, and one that doesn't may not be ethically feasible or logistically possible.

In such a scenario, we can do a quasi-randomised evaluation. The difference being, that we find a similar comparable group to our treatment group. This comparable group can be similar in all characteristics (income, demographics, gender, etc) to our treatment group, but have not received the treatment, thereby mimicking randomization. There are various methods to conduct quasi-randomised evaluations. Some common methods include Difference-in-Difference, Propensity Score Matching and Synthetic Control Design.

5.3. Pre-Post Evaluation

In a scenario when we cannot find a control group to conduct an RCT or a quasi-randomised evaluation, we can still do a pre-post evaluation. This is recommended in cases where we cannot find a control group, that is a comparable group that did not receive the intervention, but we can collect information for both before and after for the treatment group. In this case, we can conduct a baseline and endline survey with the treatment group and measure the difference in outcome pre and post the intervention.

In this case, we make the crucial assumption that the treatment group before receiving the intervention acts as our control group. However, for this to be a valid assumption, we also have to assume that no other factor has changed over time that can impact the outcome for this group which often does not hold true in the real world.

1 Treatment group - Those that receive the intervention

2 Control group - Those who do not receive the intervention or receive the intervention at a later phase

3 Randomisation - Allocation of subjects to treatment and control groups at random

5.4. Rapid Assessment Ex-Post Evaluation

In yet another case, we may still want to capture the impact of an intervention even if we did not plan for capturing or evaluating it. This method is also known as cross-section evaluation as it is conducted based on data at a single point in time only.

This is recommended for cases when we hear of an innovation from the field that is already running or has been completed. We may not have data to capture what the situation was at baseline (before the intervention). In such a scenario, we may find a control group and proceed with simply measuring the impact of an intervention after it has occurred for both the treatment and the control group. For instance, an intervention may improve FHTC coverage. If we do not have data on what the FHTC coverage was before an intervention, we may simply measure the impact after the intervention in the treatment and control group. However, here we have to make a crucial assumption that there is no selection bias between the treatment and control group, that is, there is no systematic reason why one group was selected to receive the treatment and the other to not receive it. Similar to the pre-post evaluation, this assumption also often does not hold true in the real world.

This page has been left blank intentionally.

This page has been left blank intentionally.

This page has been left blank intentionally.

Way Ahead

Behaviour change and community participation is critical to ensuring the long-term success and sustainability of the Jal Jeevan Mission.

Thus this document aims to highlight key factors influencing community participation and behaviour change within JJM. It has also collated exemplary behaviour change programs and innovative solutions observed within the WASH sector. These programs have been mapped to a) different behavioural barriers and levers which JJM stakeholders may be observing in their regional geographies, b) different methods and metrics which can be used to ensure that the behaviour change program is successful.

The presented solutions are potential gateways to resolving these behavioural gaps observed in the smooth, long-term functioning of JJM. We hope that this report will enable local authorities, development partners and government officials to select and implement solutions to behavioural issues they may face during the implementation of JJM.

We also encourage JJM stakeholders to contact our team in case our assistance is required within these selection, tailoring, implementation or monitoring exercises.

Behaviour Science 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
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.
9.	**Conditional cooperation**	Conditional cooperation is the tendency of individuals to engage in cooperation depending on the degree of cooperation of other individuals
10.	**Present Bias**	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.
11.	**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
12.	**Nudge**	A way to encourage or guide behaviour but without significantly changing any economic incentives or prohibiting any options
13.	**Opportunity cost**	The potential cost faced by an individual when they choose one action (or opportunity) and forgo others
14.	**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
15.	**Risk perception**	An individual's judgement of how threatening a particular hazard or occurrence will be to their individual or collective well-being.
16.	**Salience**	An object's trait of being particularly prominent, important or noticeable

17. Social conformity

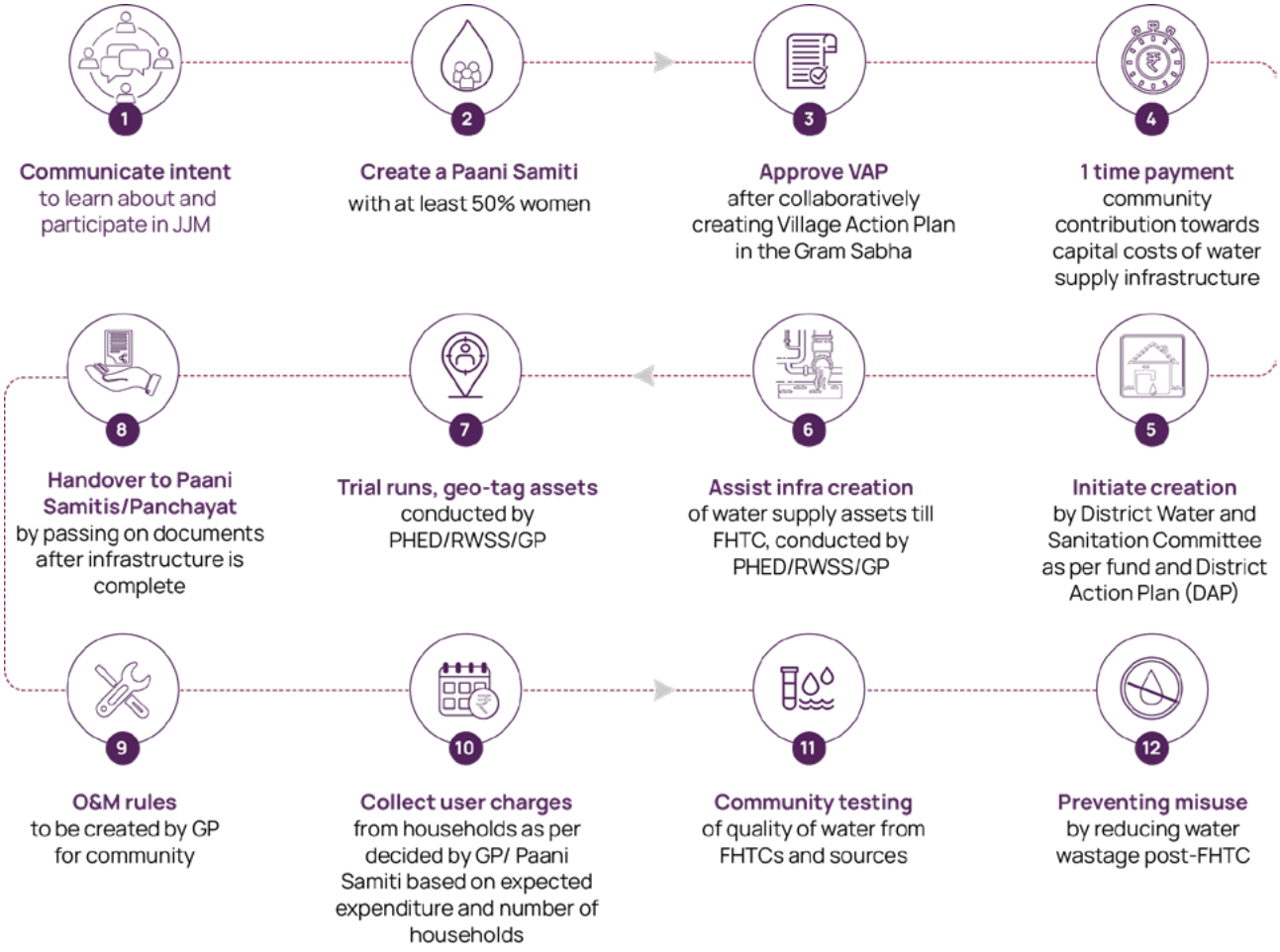
A principle which states that people are likely to perform a new behaviour when others (peers, friends, family, neighbours, etc) are already performing this behaviour or are supportive of this behaviour. This principle implies that desirable behaviour can be increased by drawing public attention to what others are doing

18. Sunk cost fallacy

A mental bias wherein a person tends 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.

JJM Policy Process Map

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.



This page has been left blank intentionally.

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 within NITI Aayog, aimed at enhancing the design and delivery of public policy in India using a behavioural approach.

Contact Us

www.csbc.org.in/national-biu.php

csbc-niti-biu@ashoka.edu.in

@Centre for Social and Behaviour Change

@CSBC_AshokaUniv

@CSBCAshokaUniversity

To learn more, please scan this QR code.

Contact JJM

www.jaljeevanmission.gov.in

iec-njjm@gov.in

@jal-jeevan-mission

@jaljeevan_

@jaljeevanmission

This page has been left blank intentionally.