Impact Assessment of Safe Water Access Intervention in 154 communities in the Telangana State

SUPPORTED BY:

GRANT PARTNER

Honeywell

IMPLEMENTING NGO

Safe Water Network
ACKNOWLEDGMENTS

We are very grateful to Honeywell Hometown Solutions for their generous grant to serve the people of Telangana by establishing 154 iJal water stations from 2015-2020 to bring safe water access and improve public health and to create a decentralized safe drinking water model that can be scaled.

Our sincere thanks to the Government of Telangana for providing the enabling environment to execute the project and to the district collectors, local panchayats and other government officials for facilitating the use of the infrastructure with respect to land, building and raw water source for the use by the community.

We are proud that these locally owned and operated water treatment plants called ‘iJal stations’ by the social entrepreneur or a women self-help group provide affordable, 24x7 safe drinking water to the local community bringing health and well-being. This initiative brings safe water access to over 565,000 people in the region and generates ~340 livelihoods.

Special thanks to Ms. Sangita Ghalay, Head-CSR, Honeywell and her team for their active participation and guidance to jointly develop a robust and sustainable program.

ABOUT SAFE WATER NETWORK

Safe Water Network’s priority is to advance the scale-up of small water enterprises, a decentralized and locally owned approach to providing communities with affordable, reliable and safe drinking water. Working alongside communities in India and Ghana since 2009, SWN has documented and demonstrated the potential for SWEs to be scaled-up and be cost-effective.

Over the past 10 years, Safe Water Network India (SWNI) has established over 330 iJal water stations in Telangana, Maharashtra and Uttar Pradesh. These stations bring safe water access to over 1.2 million people. SWNI works with local governments, Urban Local Bodies (ULBs) and Panchayati Raj Institutions (PRIs) to empower local communities and entrepreneurs with the training, tools, and support needed for success alongside providing affordable safe water to the communities.

We derive lessons to provide recommendations on policy, institution building, and local viability. We build local technical service capability to reach affordable safe drinking water to the poor. We develop standardized systems, tools, and resources needed to scale small water enterprises to reach millions more in need of safe water.
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EXECUTIVE SUMMARY

The state of Telangana, India is home to 35 million people. In India, more than 70 percent of the surface water is contaminated by the waste of animal or agriculture origin, while groundwater contains high levels of fluoride, nitrate, salinity, etc. In the footprint of iJal Stations1, the raw water that is usually ground water prior to treatment has multiple contaminants such as high total dissolved solids in 73%, high nitrates in 51%, high fluoride in 36%, high sulphates in 98% and high iron in 94% of samples tested when compared against the IS 10500:2012 Standards. iJal is identified as “my water” initiative by the communities as it is completely managed and operated by them in a social entrepreneurship or self-help group model. Honeywell is deeply invested in the region, with close to 1,000 employees in the Hyderabad city that has a state-of-the-art global technology development centre on a 10-acre campus.

In 2015, Honeywell India, through the Honeywell Hometown Solutions (HHS) corporate citizenship initiative, engaged a non-profit registered Trust, Safe Water Network (SWN) India as a strategic partner to mobilize a safe water delivery strategy in the region to improve public health and develop a scalable model.

An impact assessment study was carried out in June 2019 to assess the impact of 154 Water ATMs iJal stations set up through HHS grant from 2015 to 2019. The purpose of the assessment was to get insights into:

1. To understand communities’ knowledge, attitude, practices and behavior (KAPB), towards various water sources’ consumption, collection, and usage behavior of beneficiaries including towards iJal.
2. Drudgery reduction of women and girl child and well-being of the communities enabled by ease of access and availability of quality drinking water.
3. Perception of current sources of water regarding availability, timing, supply, quality and other attributes.
4. Impact of iJal on health, education, expenses, wage savings, self-reported by the beneficiaries.

The study also measures the evolution of the iJal model in terms of technological advances in the water treatment plant as well as the creation of institutions for reliable and sustainable delivery of safe drinking water, especially when more than half the decentralized water delivery models fail within three to six months of installation and are in a state of abject disrepair and neglect2. To put it crudely, in India, about 30% of the annual investments i.e., US$ 0.79 billion becomes ineffective or is lost.

The impact study was conceived as a baseline, midline and end-line study spanning over five years. Data relates to survey of three cycles of total 6325 Households across randomly selected 125 iJal stations in 48 blocks and 16 districts of Telangana. It is not a longitudinal study of the same households. The Research used a holistic approach, including quantitative and qualitative study. The qualitative study included Focus Group Discussions with communities that had participation from women and marginalized sections of society, In-Depth Interviews among Key Stakeholders like Sarpanch (elected village head), teachers, doctors, other medical practitioners, retailers, ASHA (Accredited Social Health Activist) coordinators, and SHG coordinators. There were two Ethnographic Observations with women to understand their own and their family’s water usage and hygiene practices for a 360-degree assessment.

The main objective of each successive round has been to understand the barriers to scale, break the community’s myths around the use of iJal, improve iJal penetration and to adapt the model for sustainability such that village / local level operating costs can be recovered from the revenues of daily water sold. Besides providing evidence for the effectiveness of the ongoing programs with respect to consumer, the research data from midline helped in identifying gaps to strengthen the iJal operator functioning and adopt remote monitoring system, automation for 24x7 water dispensing, and inclusion of women as entrepreneurs. In the report, the contents of the previous rounds of studies are retained and additional components that were added during the end-line supported with two ethnographic studies are added.

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1 iJal stations are decentralized water treatment plants equipped with remote monitoring system set up through social entrepreneurs to provide safe drinking water to the quality affected communities under approval from local governance.
The scope of information areas was expanded in the end-line for the following key areas-

- evaluation of the benefits of safe water, especially in the lives of women and girl child with respect to time savings associated with (a) better access to water and the (b) release of productive time due to safe water quality reducing the incidence of water-borne diseases and (c) less time spent on care giving for sick at home.
- derive new social entrepreneurship models that promote women entrepreneurship through Self Help Group (SHG) participation in iJal operations for empowering women to achieve gender equality

The impact assessment results show that

- **iJal consumers’ Knowledge Attitude, Practices and Behaviour:**
  - iJal consumer understands the benefit of safe drinking water and good health
  - iJal has 94% awareness across all SEC category. The awareness for iJal has increased from 78% to 94% in two years. iJal usage also increased in the end-line with 76% villagers claimed to use iJal in the last 5 years.
  - iJal intervention provides water security within the village and beneficiaries remained loyal to brand iJal despite other lower priced available options. Consumers had faith in the brand iJal as a mark of sustained and consistent quality.
  - At INR 100 / month for water, the iJal water is perceived affordable.
  - 98% iJal consumers use the specially designed containers for iJal collection and storage. These containers are made of virgin grade HDPE plastic and have a narrow mouth, thereby minimizing the risk of re-contamination by preventing hand dipping.
  - Hygienic practices of iJal Consumers had 17% higher incidence of hand washing practices versus the non-users at various moments of day to day activities. There was a sharp increase of 29%in the hand washing after toilet. This change can be attributed to the Swachh Bharat Mission SBM program of Government of India.

- **Self-reported benefits of iJal consumers:**
  - Incidence of Water borne diseases has declined amongst iJal users from 34% to 23% over a period of three years
  - 63% reduction of medical expenses, resulting in a savings of Rs. 228 on household medical expenditure annually due to reduction in water-borne disease. 54% reduction in doctor’s visit
  - 78% average reduction in adults missing work due to sick days which equates to a notional savings of INR 246 per family, per month and INR 2,952 per year.
  - 73% reduction in school absenteeism of children

- **Drudgery reduction**
  - 92% men collect water from iJal stations in their bicycles or motorcycles thus reducing the drudgery and burden on women for fetching water

- **Livelihood generated**
  - Total of 336 livelihoods generated, many part-time
  - The monthly median income for SHG or community groups operating iJal stations stood at INR 4,300 and for the social entrepreneurs ranged between INR 7,000-12,000

- **iJal Station technological advancements** were made by introducing the next generation of Remote Monitoring System (RMS) with a tablet interface and 24x7 dispensing through a Water ATMs. The technical service was facilitated through a non-profit field service entity. This innovation helped mainstream local women SHG as entrepreneurs and operators, transforming their lives from water carriers to managers and giving them steady monthly source of income.

- **iJal station performance metrics**
  - The average consumer penetration is 43%.
- Each iJal Station generates an average sale of 109 cans per day that helps cover its own village level local operating costs as well as partially cover the costs for service and maintenance.
- iJal Stations dispense water conforming to the national water quality standards.
- Most iJal stations, ~98% are able to cover their village level operating costs from day one of operation. Over the four-year time frame, 60% of stations are able to generate enough revenue to provide a source of reasonable earnings to the SHG groups or community representative and contribute to a sustainability fund for any future refurbishment needs.
- SWNI’s oldest iJal station funded by Honeywell has operated with less than 2% downtime for more than five years, providing more than half a million litres of water to approximately 500 households.
- All iJal stations work under the approval of the local gram panchayat or the urban local body (ULB).
- 22 iJal stations were relocated and to new villages, as they were underperforming or having non-compliance with respect to adhering to the tenets of the iJal Stations like quality, affordability, equal access or operational sustainability etc as laid out in the MoU.

The study concluded that the implementation of the project was quite effective. The major impact of the project has been in testing and deriving new social entrepreneurship models that promote women entrepreneurship or Women Self Help Group participation in iJal operations as society changed. Additionally, it has brought safe water access to over 500,000 people in the region and generated ~388 livelihoods. A need for expansion of the project is envisaged to strengthen the capacity to provide reliable safe affordable water access to an increased number of communities. The best practices developed from this study are being replicated in the State of Maharashtra.

Exhibit 1: Consumer @ iJal station, Akkampeta village, Telangana
INTRODUCTION

Need
India’s Water Quality

70% of water is contaminated and India’s water quality ranks 120th out of 122 nations in the world3. Hence decentralized small water enterprises (SWEs) are largely accepted by the Government as a potential quick solution to fill the gap in safe water supply systems in the quality affected regions. The Government’s policy think tank National Institution for Transforming India NITI Ayog had launched National Water Quality Sub-Mission (NWQSM) in 2017 to mitigate the ground water contamination problem due to arsenic and fluoride and provide safe water to the 3,524 Arsenic affected habitations and 4,686 Fluoride affected habitations. Safe Water Network’s safe drinking water program called iJal safe water station supports this initiative of the government both in the rural and urban region. In the footprint of iJal Stations, the raw water prior to treatment has multiple contaminants such as high total dissolved solids in 73%, high nitrates in 51%, high fluoride in 36%, high sulphates in 98% and high iron in 94% of samples tested when compared against the IS 10500:2012 requirement or acceptable limits. iJal is identified as “my water” initiatives, especially since it is completely managed and operated by the local community, for the community. SWEs are essential to provide safe drinking water security in climate change, to build resilient cities and during epidemic conditions.

India: Ground Water Contamination by different Chemical Constituents

Exhibit 2: State-wise Districts Affected with Groundwater Contamination by Type of Chemical Constituents

Exhibit 3: No. of Districts Affected by Groundwater Contamination

<table>
<thead>
<tr>
<th>Contaminants</th>
<th>No. of affected districts</th>
<th>Affected State/UTs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nitrate</td>
<td>386</td>
<td>21</td>
</tr>
<tr>
<td>Fluoride</td>
<td>335</td>
<td>23</td>
</tr>
<tr>
<td>Iron</td>
<td>301</td>
<td>26</td>
</tr>
<tr>
<td>Salinity</td>
<td>212</td>
<td>15</td>
</tr>
<tr>
<td>Arsenic</td>
<td>153</td>
<td>21</td>
</tr>
<tr>
<td>Lead</td>
<td>93</td>
<td>14</td>
</tr>
<tr>
<td>Chromium</td>
<td>30</td>
<td>10</td>
</tr>
<tr>
<td>Cadmium</td>
<td>24</td>
<td>9</td>
</tr>
</tbody>
</table>

Source: Government of India, Ministry of Water Resources, River Development & Ganga Rejuvenation

3 Composite Water Management Index 2.0, 2019 NITI Aayog
ABOUT iJal INITIATIVE

For the project period April 2015 – Dec 2019, Safe Water Network India established 154 iJal stations in Telangana that bring safe, clean and treated water access to over 565,000 people.

The iJal initiative is community-centric and involves the community from the inception phase. An iJal station is a water treatment facility equipped with 6 step water treatment technology and a remote monitoring system (RMS). The treated water conforms to the national drinking water standards. These iJal stations have water ATM (Any Time Water) machines attached to them which allows customers to collect water 24x7 using Smart RFID cards. The RMS allows centralized tracking to monitor water quality and plant performance. Some iJal stations are equipped with solar panels to ensure uninterrupted reliable safe water can be dispensed.

We engage with all the key opinion leaders – Sarpanch, Village Water Sanitation Committee, SHGs, ASHA Didis, Anganwadi workers, village elders and leaders to mobilize the community support to adopt safe drinking water from the iJal stations. These stations are operated and governed by SHGs or social entrepreneur after seeking the Gram Panchayat consent. The community buys water from the iJal station at affordable INR 5 / 20L can in their own specially designed iJal containers made of virgin grade polymer with a narrow mouth to avoid the practice of dipping their hand while extracting water, thereby reducing recontamination risk. The consumers buy their daily water from pre-paid RFID cards or coin dispensing Water ATMs. Refer to Exhibit 4.

An independent non-profit Field Service Entity (FSE) provides maintenance & repairs to the iJal Stations to ensure less than 2% downtime and reliable safe drinking water availability. A rigorous Monitoring & Evaluation program is in place to measure against the ‘Performance Standards’. All the measures are reported monthly. Each village pays a ‘Service Fee’ and contributes to the ‘Sustainability Fund’ from the surplus after meeting their village level operating costs from the water sales. The financials of each village are tracked and individual P&L maintained.

This iJal initiative contributes to the following UN SDG Goals - GOAL 5: Gender Equality; GOAL 6: Clean Water and Sanitation; GOAL 8: Decent Work and Economic Growth; GOAL 10: Reduced Inequality; GOAL 11: Sustainable Cities and Communities; GOAL 13: Climate Action; GOAL 17: Partnerships to achieve the Goal. Refer to Exhibit 5 on next page.

Exhibit 5: Project iJal and UN -SDGs

The iJal program of Safe Water Network contributes to multiple UN Sustainable Development Goals (SDGs)
The financial and operational flow of iJal model is demonstrated in Exhibit 6 below.

Exhibit 6: Financial and operational flow of iJal model

1. Donors give grants to SWN to cover OPEX, for setting up plants, Ill sector building activities and Ill administrative overheads.
2. SWN undertakes site selection, and works with the local government and social entrepreneurs. SWN provide toolkits and skilling, monitoring processes.
3. Field Service Entity, a separate, non-profit legal entity, nominated by SWN for maintenance and repair of water stations and training of the operators.
4. Local government gives permission to operate, raw water source and connectivity. It also provides the infrastructure in a few cases.
5. Consumers are walk in and those that get water delivered at home.

Operational flow

Financial flow

Local Governance - Village Water Sanitation Committee User Groups and ULLBs

Water sale revenue pays for local operating cost

Field Service Entity

Water treatment system assembling
Installation & commissioning
Skilling the operator & distributor
THEORY OF CHANGE

Safe Water Network’s ‘Theory of Change’ to improve public health through Jal model

END GOAL: Improved Public Health and Livelihoods through Jal initiative

**Theory of Change**
- Deploy standardized design and implementation process for Jal expansion through social entrepreneurs and SHGs
- Build partnership between the Government, private sector and community for public health improvement through safe water
- Build capacity of social entrepreneurs, through master trainers using toolkits for reliable delivery of safe water
- Develop local institutions for monitoring and field service
- Replicate models to other States in India

**Action Plan**

**Challenges**
- Lack of safe, affordable drinking water leading to sub-optimal life outcomes, loss of lives and GDP loss due to waterborne diseases
- Government investment is heavily allocated to implementation of infrastructure rather than sustainability of operations for water supply
- Setting up of SWEs is subject to clearances from multiple departments for site selection, raw water and electricity related activities. Multiple Regulatory authorities.
- No standard performance benchmarks established.

**INDIA: RISK DUE TO UNSAFE WATER**

- 73M Workdays lost due to waterborne disease
- 443M School days lost from water related illness
- >8M Children below the age of 14 are at risk due to unsafe water
- 21% Of reported illness are due to water borne disease
- ~45 Minutes spent by women in daily water collection in water scarce regions

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4 Composite Water Management Index 2.0, 2019 NITI Aayog
HONEYWELL iJal Stations

Satellite mapping view of 154 Honeywell sponsored iJal Stations cluster on Google Earth

iJal Stations by the numbers and salient features

Exhibit 7: iJal Stations by the numbers and salient features

- 154 iJal stations
- Safe Water access to ~565,000 people
- Water Quality conforms to National Standards
- Remote Monitoring System
- ~388 Livelihoods generated
- Automatic Water ATMs
- Solar-enabled iJal station
- Coin dispenser
- Digital training
RESEARCH METHODOLOGY

Objectives of the Research

The objectives of the research were to understand the acceptance of iJal model by communities and their readiness to pay for water and thus develop an innovative replicable and scalable model of affordable safe water delivery that can be locally operated and maintained with local governance and community participation for improved public health. This was important as more than half of the decentralized water delivery models fail within three to six months of installation and are in a state of disrepair and neglect.

The program objective was to ensure regular consumption of safe water and improvement in the overall health profile of the consumers, corresponding to a decline in the water-borne ailments. Additionally, the program targeted a socio-economic impact - benefitting the lower segments of the society, lesser health-related expenses, and reduction in work absenteeism and therefore wages, as well decline in school absenteeism, leading to a better quality of life for the housewife.

The key research objectives were as follows:

- Map the current knowledge, attitudes, practices, and behavior of the population towards various water sources and consumption, collection, and usage behavior of beneficiaries towards iJal
- Understand the perceptions of current sources of water regarding availability timing, supply, quality, and other attributes
- Determine the impact of iJal on health, education, expenses, wage savings, both perceptually and actually among the beneficiaries, as well as a 360-degree assessment from other key stakeholders

The research measured the impact of the program, in terms of fulfilling the tactical as well as strategic objectives, which included acceptance of iJal water, pay per use and benefit in terms of health, livelihoods and other socio-economic parameters, leading to improvement in the overall quality of life, among consumers of iJal.

Exhibit 8: A moderator conducting Focus Group discussion amongst female consumers @ Shankarampet-1, Telangana
**Key Information Areas**

The table below highlights the indicators covered as key information areas during the impact assessment study of iJal initiative in Telangana.

<table>
<thead>
<tr>
<th>Population and Household profile</th>
<th>Characteristics of adults</th>
<th>Occupation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Family size and structure</td>
<td>Women who are literate</td>
<td>Livelihoods</td>
</tr>
<tr>
<td>Children under age 5 years</td>
<td>Men who are literate</td>
<td>Monthly income</td>
</tr>
<tr>
<td>Education of children</td>
<td>Women with 10 or more years of schooling</td>
<td>Monthly expenses</td>
</tr>
<tr>
<td>Type of house</td>
<td></td>
<td></td>
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<tr>
<td>Households with electricity</td>
<td></td>
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<tr>
<td>Households with an improved drinking-water source</td>
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<td>Households using improved sanitation</td>
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<tr>
<td>Households using clean fuel for cooking</td>
<td></td>
<td></td>
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<tr>
<td>Households with TV, radio, mobile phones</td>
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<table>
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<tr>
<th>Consumer Research</th>
<th>M&amp;E Data</th>
<th>Women empowerment</th>
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<tbody>
<tr>
<td>Awareness and usage of water sources</td>
<td>Geotagging iJal station</td>
<td>Currently married women who usually participate in household decisions</td>
</tr>
<tr>
<td>Awareness, availability and usage of different water sources</td>
<td>Safe water access</td>
<td>Women with mobile phones</td>
</tr>
<tr>
<td>Knowledge about current sources of water, and impact on health; knowledge of treated water</td>
<td>Consumer registration</td>
<td>Women with salary</td>
</tr>
<tr>
<td>Activities performed using water</td>
<td>Consumer penetration</td>
<td></td>
</tr>
<tr>
<td>Water Collection Practices</td>
<td>Volume of water sold</td>
<td></td>
</tr>
<tr>
<td>Water Storage Practices</td>
<td>Water Quality</td>
<td></td>
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<tr>
<td>Attitudes, perceptions &amp; benefits of iJal</td>
<td>Livelihood generated</td>
<td></td>
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<tr>
<td>Trial &amp; repeat behavior</td>
<td>Monthly Service fee paid</td>
<td></td>
</tr>
<tr>
<td>Adoption &amp; loyalty</td>
<td>Sustainability of water station</td>
<td></td>
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<tr>
<td>Household Structure &amp; Health</td>
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</tbody>
</table>
Research Design:

The research used a mixed approach, including quantitative and qualitative methods, suitable for each respondent segment.

- A quantitative, questionnaire-based survey was conducted amongst a large and robust sample of beneficiaries and non-beneficiaries (women), among a sample of villages, selected after a rigorous sampling methodology. The respondent households were selected from the village after mapping the sample village into clusters and picking up a proportionate sample from each cluster. Sample survey research was conducted amongst the female primary decision maker.

- In-Depth Interviews among Key Stakeholders in order to understand the effectiveness of awareness creation and support mechanism of iJal usage. These Key Opinion Leaders (KOL) included Sarpanch (elected village head), teachers, doctors, other medical practitioners, retailers, Asha coordinators, and SHG coordinators.

- Beneficiary Focus Groups (both men and women), and Ethnographic Observations among women to complete a 360-degree assessment.

A comprehensive research design was followed. Refer Exhibit 9

Exhibit 9: Snapshot of the research design
Sampling Methodology

For the Quantitative study the sample size for the i) **Baseline**: 450 households across 5 villages ii) **Midline**: 3000 households in 30 villages in Telangana iii) **Endline**: 2875 households in 28 villages in Telangana. The sampling methodology had a sample of respondent households chosen by using a rigorous stratified random sampling process. Refer Exhibit 10 for summary sample selection criteria and distribution.

**Exhibit 10: Survey sample selection & distribution**

For the Qualitative study, the following strategy was adopted. Refer to Exhibit 11.

**Exhibit 11: Qualitative studies conducted**
KEY FINDINGS

Population Demography: Following are the findings derived from the consumer research with respect to Socio-Economic Classification, Occupation, and monthly household income:

Exhibit 12: SEC profile; Occupation; Monthly household income

28% of the rural SEC belongs to the R1 and R2 category. This category has a pucca house and higher literacy. Agriculture is the mainstay occupation amongst males and the female work on their own farms. Balance 72% belonged to R3 & R4 category, which falls under the International Poverty Line of income under $1.9 per capita per day. 69% of these R3 and R4 households earn less than INR 10,000 or $ 140 per month.

Through the survey, it is evident that the communities face different challenges with respect to income, infrastructure, and health. Refer to Exhibit 13.

Exhibit 13: Issues faced by villagers

The key challenges faced by communities include (a) limited family income due to adverse effect of weather on farming, (b) lack of alternate employment opportunities in the village and vicinity; (c) lack of colleges, hospitals with adequate facilities; (d) health issues due to lack of access to safe water

Income related
- Income issues - Limited income to meet family needs remains the key issue
- Reasons stated for the same are farming practices getting affected by weather
- Unemployment/ limited work opportunities in the village and vicinity
- Poor monthly salary

Infrastructure related
- School and colleges with adequate facilities being far away from the village
- Non-availability of medical facilities for critical diseases. There are health care centers but not a full fledged hospital
- For treatment of critical diseases one has to go out till Warangal

Health issues
- Health issues that get mentioned
  - Adults: Sugar, BP Body pain, Knee pain, heart attack
  - Amongst kids - Health issues – Kids – Vomiting, fever, diarrhea
  - Leading to medical expenses

While consumers claim that they have witnessed growth in their village in terms of more educational institutions being built, better medical facilities and connectivity with cities, yet there are certain issues that still exist
A typical household in the intervention villages of Telangana has the profile as entailed in the Exhibit below. Refer to Exhibit 14.

Exhibit 14: Typical household profile

A typical family in the village has 4-7 members with approximately 3 children. Income is erratic as the main profession is farming. Some of the women do part-time jobs like bidi making, labor work to contribute to the family income. Erratic income makes them health-conscious to avoid medical expenses.

**TYPICAL HOUSEHOLD PEN PORTRAIT**

- Profession – men mostly farmers, laborers ( bidi making being key), run poultry farms
- Women – mostly housewife, few work in field, tailoring or labor work.
- Family size is an average of 7 members with approximately 3 children per family

Men most comfortable using phones:
- Make and receive calls
- Watch videos online
- Women limit use to calling relatives and few friends
- Mostly receive calls
- Are aware but do not use radio
- Young adults use phones for entertainment

Families have an erratic income structure due to dependence on rains
- Monsoon and after harvest – down time
- Almost none have secondary source of income
- Do not appear to save actively for the future
- Erratic income makes them very conscious about being healthy
- Falling ill necessitates additional expense
- Some families have dual income where the woman has a part-time job
- MHI spent on – child education, managing daily expenses, food, maintenance and medical treatment

Decision makers for purchase if iJal

- Men remain the key decision-makers for buying iJal from stations
  - Generally, remain cognizant of the money spent
  - Therefore, the decision of the number of water cans usage lies with the men of households
- However, post-purchase, the onus of optimal use of water to avoid extra spend lies on the woman of the house
- Most women use iJal water diligently and avoid wastage. Primary use is in drinking & cooking only

iJal awareness

The awareness for iJal has improved over the period from the baseline through the midline to end-line study in 2019. Refer to Exhibit 15.

- At a prompted level, almost every household is aware of iJal water (94%). This is true among both the upper and lower SEC. Awareness has steadily increased every year.
- iJal usage goes up versus the midline survey. 76% of villagers have claimed to use iJal in the last 5 years.
- Price awareness has improved steadily over the past few years, and about 90% recall the right price at the Station, and 80% recall the right price at ATM
The awareness for iJal has increased from 78% to 94% in two years. iJal usage also increased in the end-line with 76% villagers claimed to use iJal in the last 5 years. Price awareness has improved steadily over the past few years, and about 90% recall the right price at the Station, and 80% recall the right price at ATM.

Exhibit 15: iJal awareness findings

<table>
<thead>
<tr>
<th>TOM Awareness</th>
<th>R1/R2</th>
<th>R3/R4</th>
</tr>
</thead>
<tbody>
<tr>
<td>iJal/ Safe Water</td>
<td>59</td>
<td>57</td>
</tr>
<tr>
<td>Tap at home</td>
<td>29</td>
<td>32</td>
</tr>
<tr>
<td>Community Tap</td>
<td>5</td>
<td>4</td>
</tr>
<tr>
<td>Local supplier</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>Tube/Bore well</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>Tanker</td>
<td>1</td>
<td>1</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>SPONT Awareness</th>
<th>R1/R2</th>
<th>R3/R4</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tap at home</td>
<td>86</td>
<td>86</td>
</tr>
<tr>
<td>iJal/ Safe Water</td>
<td>85</td>
<td>84</td>
</tr>
<tr>
<td>Community Tap</td>
<td>72</td>
<td>67</td>
</tr>
<tr>
<td>Hand Pump</td>
<td>56</td>
<td>51</td>
</tr>
<tr>
<td>Tube/ Bore well</td>
<td>52</td>
<td>53</td>
</tr>
<tr>
<td>Ot bottled...</td>
<td>2</td>
<td>1</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Ever Used</th>
<th>R1/R2</th>
<th>R3/R4</th>
</tr>
</thead>
<tbody>
<tr>
<td>iJal Safe Water</td>
<td>76</td>
<td>76</td>
</tr>
<tr>
<td>Tap at home</td>
<td>61</td>
<td>58</td>
</tr>
<tr>
<td>Community Tap</td>
<td>49</td>
<td>41</td>
</tr>
<tr>
<td>Hand Pump</td>
<td>33</td>
<td>26</td>
</tr>
<tr>
<td>Tube/ Bore well</td>
<td>33</td>
<td>28</td>
</tr>
<tr>
<td>Tanker</td>
<td>22</td>
<td>14</td>
</tr>
</tbody>
</table>

Exhibit 15: iJal awareness findings

Switching to iJal:

When enquired about the reasons for switching to using iJal, consumers cited the following issues with their existing water sources i.e., Borewell or well water

**Issues with borewell or well water**

- Considered as poor quality – has a bad odour, dirt, worms and yellow-coloured
- Gets infected and carries germs in rainy seasons
- Have witnessed cases of kids and adults falling ill post-consumption

*iJal introduction came as a solution, introduced through following Offers*

**Issues with borewell or well water**

- Most mention that they were offered free water for a week
- Considering it is as treated water, consumers started consuming it
- Some consumers said that, at INR 5 / 20L their monthly expenditure is just INR 100 as they do not buy it daily.
Consumer Behavior

Water collection and storage

Profile of the person collecting water: Increasingly the number of Male Adults collect Jhal irrespective of the distribution point. From 60% in the initial stages of the program, Males constitute 92% of those who collect Jhal in the end-line, leading to increasing empowerment of female members of the household. Refer to Exhibit 16.

Exhibit 16: Jhal consumer behaviour

Increased number of Male Adults collect Jhal irrespective of the distribution point. From 60% in the initial stages of the program, Males constitute 92% of those who collect Jhal on bicycle or motorcycles, leading to increasing empowerment of female members of the household and reduction in their drudgery. Also, there is increased adoption of Jhal containers for the storage of Jhal. Consumers have switched from Household Vessels to Jhal containers.

<table>
<thead>
<tr>
<th>Time Taken to Collect Jhal for Drinking at Home</th>
<th>Baseline</th>
<th>Endline</th>
</tr>
</thead>
<tbody>
<tr>
<td>Overall</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Average time</td>
<td>6 minutes</td>
<td>4 minutes</td>
</tr>
<tr>
<td>Jhal Station</td>
<td>10 minutes</td>
<td></td>
</tr>
<tr>
<td>ATM</td>
<td>3 minutes</td>
<td></td>
</tr>
<tr>
<td>Retailer</td>
<td>4 minutes</td>
<td></td>
</tr>
</tbody>
</table>

Profile of the person collecting water

<table>
<thead>
<tr>
<th></th>
<th>Baseline</th>
<th>Endline</th>
</tr>
</thead>
<tbody>
<tr>
<td>Male Adult</td>
<td>60%</td>
<td>92%</td>
</tr>
<tr>
<td>Female Adult</td>
<td>29%</td>
<td>5%</td>
</tr>
<tr>
<td>Others</td>
<td>11%</td>
<td>3%</td>
</tr>
</tbody>
</table>

Exhibit 17: Jhal benefit perception

Jhal is perceived as pure with good taste and low density leading to more water consumption preventing the villages from dehydration.

Time taken for water collection

Water Storage behaviour

<table>
<thead>
<tr>
<th></th>
<th>Baseline</th>
<th>Endline</th>
</tr>
</thead>
<tbody>
<tr>
<td>Plastic containers</td>
<td>15%</td>
<td>80%</td>
</tr>
<tr>
<td>Large vessel</td>
<td>53%</td>
<td>19%</td>
</tr>
<tr>
<td>Small vessel</td>
<td>14%</td>
<td>7%</td>
</tr>
</tbody>
</table>

Increased adoption of Jhal containers for storage of Jhal. Consumers have switched from Household Vessels to Jhal containers.
Hygiene habits: iJal users vs. Non-users

Higher consciousness amongst iJal users was observed towards health and hygiene habits. Healthy hygiene practices have significantly higher incidences amongst iJal users

<table>
<thead>
<tr>
<th>Hygiene Habits Always Follow</th>
<th>Overall</th>
<th>iJal Users</th>
<th>iJal Non-Users</th>
</tr>
</thead>
<tbody>
<tr>
<td>Before cooking</td>
<td>62</td>
<td>65</td>
<td>54</td>
</tr>
<tr>
<td>Before meals</td>
<td>80</td>
<td>71</td>
<td>59</td>
</tr>
<tr>
<td>After meals</td>
<td>82</td>
<td>83</td>
<td>79</td>
</tr>
<tr>
<td>After feeding cattle</td>
<td>91</td>
<td>59</td>
<td>33</td>
</tr>
<tr>
<td>After coming from out</td>
<td>40</td>
<td>64</td>
<td>49</td>
</tr>
<tr>
<td>After using toilet</td>
<td>78</td>
<td>79</td>
<td>72</td>
</tr>
<tr>
<td>Before cooking</td>
<td>62</td>
<td>65</td>
<td>53</td>
</tr>
<tr>
<td>Before drinking water</td>
<td>60</td>
<td>64</td>
<td>48</td>
</tr>
<tr>
<td>Bathe regularly</td>
<td>63</td>
<td>67</td>
<td>50</td>
</tr>
</tbody>
</table>

- Higher consciousness among iJal Users towards health and hygiene habits
- Washing Hands before meals, after feeding cattle, after returning home from outside and before cooking; all have significantly higher incidence among iJal users

Change in hygiene habits after using iJal

Consumers have reported changes in their hygiene habits after usage of iJal. The findings have been summarized below. Refer to Exhibit 19.

Exhibit 19: Change in hygiene habits after iJal usage

iJal program has enabled villagers to recognize the importance of maintaining appropriate hygiene habits and drinking clean water considered integral in moving towards a healthier lifestyle

Washing hands religiously – after coming back from field, work, using the bathroom
Sewage management in and around the house to avoid diseases
Taking bath regularly (once a day)
Cleaning, washing, mopping everyday

Clean drinking water consumption has become one of the habits, gradually adopted by villagers

iJal is considered as key in helping consumers in adopting the habit

We are from Anganwadi. Women of all age group attend a meetings. We tell them to maintain sanitation and cleanliness in their surroundings. Washing hands before eating or cooking etc. Boiling drinking water and using, keeping outside the house clean, we have observed changes in their behavior – Aanganwadi worker

Since IJal water has come in we have started using closed vessels or cans to store the water, its pure and we don’t want it to get dirty, we store it water bottles and put them in fridge – Female
Exhibit 20: Activities for which water source is used for

iJal program is used as the main source of drinking water by 69% of respondents at home and 30% out-of-home. Tap water accounts for 64% of the water used for cooking while iJal use is less than 10%.

<table>
<thead>
<tr>
<th>Activity Use Water Source For</th>
<th>All Respondents</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Drinking at home</td>
</tr>
<tr>
<td>IJal</td>
<td>69</td>
</tr>
<tr>
<td>Safe Water</td>
<td>12</td>
</tr>
<tr>
<td>Tap Water</td>
<td>7</td>
</tr>
<tr>
<td>Community Water</td>
<td>2</td>
</tr>
<tr>
<td>Ground Water</td>
<td>0</td>
</tr>
<tr>
<td>Other</td>
<td>0</td>
</tr>
</tbody>
</table>

We use iJal for drinking and for washing pulses, and cooking use tap water otherwise there will be a lot of iJal water consumption and we cant afford that much.

Exhibit 21: Activities for which iJal is used for

Drinking remains the primary use of iJal water, with 9 out of every 10 user households using it for drinking at home. 37% of the households also use it for out of home drinking. 89% of the total iJal is used for drinking and the rest for cooking, cleaning and other kitchen activities.

<table>
<thead>
<tr>
<th>ACTIVITIES AMONG IJAL CONSUMERS</th>
<th>Rs/R2</th>
<th>Rs/R4</th>
</tr>
</thead>
<tbody>
<tr>
<td>Drink at home</td>
<td>84</td>
<td>85</td>
</tr>
<tr>
<td>Drink out</td>
<td>37</td>
<td>30</td>
</tr>
<tr>
<td>Cooking</td>
<td>6</td>
<td>8</td>
</tr>
<tr>
<td>Kitchen Washing</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>Other Washing</td>
<td>1</td>
<td>4</td>
</tr>
</tbody>
</table>

**IJAL Share of Usage**

<table>
<thead>
<tr>
<th></th>
<th>Overall</th>
<th>R1/R2</th>
<th>R3/R4</th>
</tr>
</thead>
<tbody>
<tr>
<td>Drink at home</td>
<td>62</td>
<td>63</td>
<td>63</td>
</tr>
<tr>
<td>Drink out</td>
<td>27</td>
<td>26</td>
<td>26</td>
</tr>
<tr>
<td>Cooking</td>
<td>61</td>
<td>62</td>
<td>61</td>
</tr>
<tr>
<td>Kitchen Washing</td>
<td>20</td>
<td>20</td>
<td>20</td>
</tr>
<tr>
<td>Other Washing</td>
<td>9</td>
<td>9</td>
<td>9</td>
</tr>
</tbody>
</table>

Drinking remains the primary use of iJal water, with 9 out of every 10 user households using it for drinking at home.

- 37% of the households, also use it for out of home drinking
- Cooking with iJal is still very negligible, in spite of communication and other efforts of Safe Water Network
- 89% of the total iJal purchased is used for Drinking and the rest for other uses.

* Includes other to posts
Enablers and barriers for iJal

Sarpanch claim that village has lesser incidence of diarrhoea and typhoid since the iJal plant got installed
ASHA mention that iJal has brought awareness of safe drinking water in the community
Teachers at school claim that they had better attendance in school
Consumers, user of iJal said that at INR100/month price of iJal is reasonable and the non-users claimed that free water is their expectation.

Hygiene habits score has improved in terms of washing hands after meals 76 (Baseline) to 99 (Endline) and washing hands after toilet from 69 (Baseline) to 98 (Endline) amongst regular users of iJal.

Exhibit 22: Comparison between Baseline (2015-16) and Endline (2019-20) scores on Hygiene Habits

<table>
<thead>
<tr>
<th>Activity</th>
<th>Regular</th>
<th>Sometimes</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Washing Hands before eating meals</td>
<td>68</td>
<td>31</td>
<td>99</td>
</tr>
<tr>
<td>Bathing regularly</td>
<td>96</td>
<td>9</td>
<td>105</td>
</tr>
<tr>
<td>Washing utensils before cooking</td>
<td>96</td>
<td>9</td>
<td>105</td>
</tr>
<tr>
<td>Washing utensils storing water daily</td>
<td>92</td>
<td>9</td>
<td>101</td>
</tr>
<tr>
<td>Washing hands before drinking water</td>
<td>91</td>
<td>8</td>
<td>99</td>
</tr>
<tr>
<td>Washing hands before cooking</td>
<td>90</td>
<td>8</td>
<td>98</td>
</tr>
<tr>
<td>Washing hands after feeding cattle</td>
<td>84</td>
<td>7</td>
<td>91</td>
</tr>
<tr>
<td>Washing hands after feeding cattle</td>
<td>83</td>
<td>8</td>
<td>91</td>
</tr>
<tr>
<td>Washing Hands after eating meals</td>
<td>76</td>
<td>8</td>
<td>84</td>
</tr>
<tr>
<td>Washing hands with soap after toilets</td>
<td>62</td>
<td>18</td>
<td>80</td>
</tr>
<tr>
<td>Washing utensils before cooking</td>
<td>71</td>
<td>15</td>
<td>86</td>
</tr>
<tr>
<td>Washing hands before cooking</td>
<td>62</td>
<td>18</td>
<td>80</td>
</tr>
<tr>
<td>Washing hands after feeding cattle</td>
<td>45</td>
<td>34</td>
<td>79</td>
</tr>
<tr>
<td>Washing Hands after coming from outside</td>
<td>31</td>
<td>17</td>
<td>48</td>
</tr>
</tbody>
</table>

Enablers

Voice of key influencers like Sarpanch, ASHA, School teachers
Voice of other influencers like SHGs, retailers

Barriers (top three reasons)

Midline 17 - Quality issues, Not Relevant, No Health Benefits
Endline 19 - Not relevant, Quality issues, No health benefits
iJal is seen as a convenient and smart innovative water facility which is available 24x7. The iJal RFID card facilitates cash-free transactions at the station.

**iJal Benefit Perception: Convenient and Smart Solution**

- **Smart Payment Method**
  - iJal card is considered as easy to carry and recharge
- **Water Transport Facility and Availability**
  - An added benefit – convenient in case man of the house is not available/ sick/ busy
- **No need to carry cash for daily buys**
  - Plus the cash gets locked in the card that’s just designated for clean water
  - Restricts one from spending it in other lesser necessary
- **Claim that iJal water is available all the time, hence, they never run short of drinking water**

Seen as smart innovative water facility

“We can bring the water whenever we require. It does not depend on power. Earlier we had to wait if the power is not available and moreover, we had to wait till morning as the mineral water suppliers will not be available during night. But with iJal it is different. They have given cards, using which we can go the plant and take water whenever necessary and it works even if there is no power also. Male”

iJal Areas of improvement from the lens of the user

Need for iJal home distribution has been identified especially when the male member is not available to fetch the cans from the station. Villagers expressed the need to set additional iJal plants. Additionally, there is a need for undertaking campaigns on spreading awareness about the filtration processes used.
Social impact of iJal consumption

iJal impact on mindset

Men have become an integral part of the changing societal framework. iJal has become the catalyst for change in the mindset and role of the men and the women. It has given the men a view on household water management, increased understanding of sanitation and hygiene, and an active participant of household chores. Refer to Exhibit 25.

Emerging Societal changes

Emerging Societal changes allow women to express themselves better. There is freedom for expression of opinions, lesser restrictions and free set up for women hence a preference for a nuclear family; there is less power gap between husband and wife, changing relations between mother-in-law and daughter-in-law thus supporting women to step out for earning a livelihood.

There is emerging potential in the villages, with changing societal structure, the women have become more amenable to going out for work. Hence, they can be tapped into by creating potential work opportunities at stations and further enabling them in their search for being able to contribute in the family. Refer to Exhibit 26.
What does it imply for women and iJal

“Condition of women is changing, they are studying, doing some tailoring, they are availing loans to be financially independent”

“Men are looking for helping hands in financial management, the woman of the house contributing to the household income takes away some pressure off their shoulders”

“When asked about iJal plants being operated by women – men seem positively disposed of as it is seen as creating work opportunities for women who have the potential if trained properly”
Socio-Economic impact of iJal consumption

Exhibit 27: Endline (2019-20) scores on iJal consumer - impact metrics

The scores on various parameters self reported by iJal consumers are stated as below

2019-20 scores on Consumer Impact Metrics

<table>
<thead>
<tr>
<th>Improvement</th>
<th>Agreement scores among Regular Consumers of iJal</th>
</tr>
</thead>
<tbody>
<tr>
<td>Improve, Quality of life</td>
<td>83</td>
</tr>
<tr>
<td>More time on other HH activities</td>
<td>79</td>
</tr>
<tr>
<td>Earning member miss office less</td>
<td>78</td>
</tr>
<tr>
<td>Children fall sick less often</td>
<td>75</td>
</tr>
<tr>
<td>Children miss fewer school days</td>
<td>73</td>
</tr>
<tr>
<td>Medical expense reduced</td>
<td>63</td>
</tr>
<tr>
<td>No. of doctor visits reduced</td>
<td>64</td>
</tr>
</tbody>
</table>

Exhibit 28: Hospitalisation incidence and change post iJal usage

iJal consumption has led to a significant reduction in hospitalisation incidences amongst iJal consumers. The average reduction in hospitalisation incidence from 2017 to 2019 was 36%.

#### Comparison of Hospitalisation Incidence

<table>
<thead>
<tr>
<th>None</th>
<th>1 day</th>
<th>2-3 days</th>
<th>4-5 days</th>
<th>More than 5 days</th>
<th>AVERAGE: 1.3 days</th>
</tr>
</thead>
<tbody>
<tr>
<td>Trialists</td>
<td>Regular User</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Not Reduced</td>
<td>2</td>
<td>2</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Reduced by 1 to 20%</td>
<td>17</td>
<td>16</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Reduced by 21 to 50%</td>
<td>74</td>
<td>74</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Reduced by &gt; 50%</td>
<td>17</td>
<td>8</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

AVERAGE REDUCTION IN HOSPITALISATION INCIDENCE

<table>
<thead>
<tr>
<th>Overall</th>
<th>Stations till 2017</th>
<th>Stations in 2018-19</th>
</tr>
</thead>
<tbody>
<tr>
<td>36%</td>
<td>38%</td>
<td>32%</td>
</tr>
</tbody>
</table>

- 51% of the households did not have any hospitalisation incidence in the last one year
- On an average, some member of the household had to be hospitalized on an average of 1.3 days
- Post consumption, incidence of hospitalisation has reduced significantly!
A higher proportion of iJal users believed that the health profile has improved leading to a positive impact on money spent as well as missing school and work. 85% of iJal non-trialists claim they have suffered from some illness; this is significantly higher versus 76% iJal trialist. Overall health quality improvement is reported by 48% of iJal users versus only 21% of non-users.

Reduction in illness incidences was observed amongst regular users of iJal which accounted for average savings of INR 228 per household annually due to illness-related expenses. The medical expense reduced by 63%.

### REDUCED INCIDENCES OF ILLNESSES

- In adults – knee pain seem to have reduced over time with consumption of iJal water
- In children – reduced instances of stomach ache/diarrhoea
- A life free from constant nagging pain
- No dependency – can walk around and do their own work
- Better attendance at school

### 36% Average Reduction in Hospitalisation Incidence

### Rs. 228 Average savings per household due to illness related expenses
iJal has helped reduce the drudgery of women for collecting water for the household through promoting active engagement of men of the house in the collection of water. Simultaneously, there has been an attitudinal and a behavioural change amongst men in terms of the responsibility of household chores.

**iJal Benefit Perception: Domestic Benefits**

- Reduced workload
  - Women don’t have to boil/sieve water anymore
- Active participation of man of the house
  - Gradually changing their set notion of women being only responsible for household chores
- Water cans provided by iJal are considered as easy to use. Water can be easily poured into the bottles and stored
  - Making them as helping hands instead of stotolic dominant figure

"In rainy season we had to sprinkle bleach water or boil water now we don’t have to do all that - Female"

**iJal Livelihood Impact**

Per family per month INR 246 and per year INR 2,952 notional saving

Exhibit 32: Reduction in days of work missed after iJal consumption (Self reported)

iJal consumption has led to average reduction in missing work by 78%, which equates to a notional savings of INR 246 per family an per month and INR 2,952 per year.
PERFORMANCE ASSESSMENT

All the iJal stations facilitated by Safe Water Network India are able to cover village level Local Operating Costs from Day 1. Safe Water Network India follows a portfolio approach for managing clusters and designates a local FSE (Field Services Entity) to provide regular technical services to maintain < 2% technical downtime and ensure the reliability of safe drinking water availability. FSE is directly paid a service fee by the stations, from the revenues generated through the sale of water at Rs. 5 for 20 Litre collected in their jerry cans.

The Community, SHG group or the social entrepreneur manages the station and pays all the operating expenses including the service fee from the revenues generated. They retain a minimum balance as compensation for their sweat equity necessary to sustain their families. They contribute towards a revolving fund maintained by SWNI called the Sustainability fund. The fund is maintained by SWNI in a separate account to be utilised as per the policy to support major repairs, capital replacements or refurbishments, as required for older stations.

Out of the 125 stations (excluding Urban ATMs), 120 (96%) are able to cover Local Operational expenses. The five that do not, are less than a year old or have been recently relocated to improve viability. 60% of the stations are able to generate enough revenues to pay for the following, in that order, based on their ability to pay:

1. Local village level OpEx (Operating Expenses)
2. Service Fee
3. An average return of Rs. 5,000/month to the Community/SHG group/Social Entrepreneur
4. An average contribution of Rs. 3,500/month to the Sustainability Fund

Important note: These numbers are based on the ability to pay on a cluster basis. Individual station performance may vary based on can sales recorded on a monthly basis and the willingness of the Community/Entrepreneur/SHG to pay for the service fees and the sustainability fund.

FINANCIAL METRICS

120, out of total 125 (96%) of the rural iJal stations funded through Honeywell grants, cover local village level operating expenses. 60% of the stations are able to generate enough revenue to be financially sustainable on the basis of ability to pay.

Exhibit 33: Financial performance of iJal stations excluding urban

Exhibit 34: Stations Revenue
SOCIAL METRICS

Exhibit 35: Honeywell-sponsored iJal Water Stations (grant 1-5)

All 125 iJal water stations sponsored by Honeywell together bring safe, affordable drinking water access to over 565,000 people. Of these, 95 are set up in rural and peri-urban districts of Telangana and Maharashtra, bringing access to 475,000 people, wherein 46% of the registered households collect water on a regular basis.

A total of 30 water ATMs have been set in Hyderabad city to bring additional water access to 90,000 people.

OPERATIONAL METRICS

Exhibit 36: Treated water sales per day (20L cans) year wise

On an average, the iJal water stations generate sales of 109 cans per day (on a year-to-date basis). On the other hand, the urban water ATMs set up in the city records an average of 35 servings per day.
Stations Performance based on age and seasonality

Exhibit 37: Consumer registration over the years

46% of the households are registered after having had bought iJal cans or enrolled for monthly membership RFID cards at the stations. It is with great effort that the consumer registration is maintained between 40 to 46% despite addition of new stations each year in the cluster.

Exhibit 38: Three years average seasonality

The 3 years’ seasonality of sales at stations shows that the revenues in Dec-Feb months are about 6-7% of the annual sales, which is almost half that of May @11.2% thereby putting pressure on the cashflows during the off-season months.

Seasonality is the percentage share of annual volume sold in a particular month.

The water demand is closely linked to the weather and temperature.

The water treatment capacity must be able to cater to the peak month of May.
RECOMMENDATIONS

Safe Water Network endeavours to bring about the maximum impact on women’s lives through the Ijal program. Impacting women’s life by changing their status from water carrier to water entrepreneur and operator and also by promoting men’s participation in collecting Ijal water.

Our next steps will focus on

**Technology:**
- Expansion of Ijal footprint to other states in India for safe drinking water access.
- Optimize the existing water purification technology and test new affordable technologies, improvise on the remote monitoring system

**Processes**
- Improve sustainability and accelerate scalability of Ijal stations
- Promote adoption of performance standards for small water enterprises.
- Continued consumer demand generation to increase Ijal adoption, coverage, and penetration.
- Build and support SWE ecosystems through city water alliances, dissemination of best practices, case studies through national and international fora, workshops and conferences
- Create collaborations and strengthen institutions to drive systemic change for promoting SWE water

**Training**
- Promote capacity building activities of women SHGs and entrepreneurs through knowledge hub using the digital SWE entrepreneur tools, ‘SWEET Tools’

**Sector engagement**
- Policy coherence and advisory with government both at the Union and State level
- Converge the small water enterprise sector through the platform SWE Alliance.

Exhibit 38: Freedom from diseases campaign on Independence Day at Mahadevpoor Station, Jayashankar District
About the Award: #WaterWomen SIWI Stockholm Award aims to collect images that illustrate the important roles and tell the stories of women as invaluable water managers, decision makers and users across the world.

Winner: Rani Barukaum, the leader of a women ‘Self Help Group – Divya’, Ambedkar Nagar, Medak, Telangana.

Story: Rani Barukaum, the leader of a women-run “self-help group” named Divya, understood the need for safe water and its health benefits. When Safe Water Network India set up the iJal water station in Ambedkar Nagar Colony, Rani ardentely began promoting the benefits of safe water to the community and urged them to adopt iJal for the reduction in jaundice and typhoid.

As a young mother, Rani had seen her two young children frequently fall sick due to consumption of the contaminated water. During that period there was no water treatment facility in the village, and boiling or filtering failed to solve the problem. She saw this iJal Station as a unique opportunity and, with missionary zeal; she began educating her community on the relationship between water and health. With this awareness program, she began talking to households, pregnant women, anganwadis (government-run nurseries) and schools throughout the village. One could see her passionately conducting water quality tests at homes using field test kits and TDS (total dissolved solids) meters, and tirelessly explaining the virtues of safe water, personal hygiene, and sanitation. To drive home her message, she compares the cost of monthly water spent at her iJal Station to that spent on doctors’ fees and medicine. “I have seen how safe water changed the health of my family”, Rani said. “Sometimes, I share my own experience or I tell how drinking safe water will reduce doctor bills.”

Respected in Ambedkar Nagar Colony, Rani leads excellent consumer mobilization programs and hopes to enroll each and every member of her community.
**TESTIMONIALS**

“Before children used to get viral fever and diarrhoea during rainy season. Since we are using iJal water, it is better. Children are not falling sick like earlier times.”

Sulochana, Village Dakoor, District Sangareddy, Telangana

“There are no chemicals in the water, it’s pure and its colour doesn’t change in rainy season, there is no smell we fall less ill now”

Sukanya, Village Shivnipally, District Jangaon, Telangana

“Knee pain has reduced for me and now I can do my work easily earlier I had joint pain and difficulty in walking”

Ramesh Goud, Village Tallapally, District Sangareddy, Telangana

“Parents now don’t hesitate in spending money in buying iJal water for family as they used to earlier”

Mallaiah, Village Shankarampeta-I, District Medak, Telangana

“The water is good and our children health is also good and the taste of water is also good. My family drinks this water. It is available at low cost. I tell my friends also to drink this water”

Mamatha, Village Aksanpally, District Sangareddy, Telangana
PICTURE GALLERY

Mark Green, USAID Administrator at Hyderabad Water ATM

Underwriter Laboratories experts conduct Field Assessment of iJal station

Sangita Ghalay, Head CSR Honeywell @ SIWI Stockholm 2019

Mike Bennet, VP Communication visit, Medak Hospital iJal station 2018

USAID team visit to Vinayak Nagar station 2019

Sanjeev Chadha, Adviser Safe Water visit to iJal Station 2019

Consumers at Narayan Reddy Colony iJal station, Telangana

Can sale program @ Bhupalapally-III iJal station, Telangana
SNAPSHOT OF HONEYWELL INITIATIVE IN TELANGANA

Operations

- 154 Social Stations
- 565,000 water access
- Water Quality as per national standards
- Optix positive from day 1

Innovation

- 154 Water ATMS
- 56 Cam Washers
- 10 Solar enabled
- RMS of all stations

Metrics

- ~135 Million litres (annualized)
- 46% Registrations
- <2% Downtime
- 336 Livelihoods generated

Consumer

- 63% reduction in medical bill
- 73% claim reduction in school absenteeism
- 78% reduction in lost of work days
- 92% men collect water from 1 km

Consumers self-reported claims

Explanation of the SEC Classification of R1 to R4 in the Rural India

- As per the Indian Readership Survey (IRS), the Rural, SEC Profile is identified based on two criteria: Type of House and the Education of the Chief Wage Earner (CWE).
- Type of House, classified into 3 types:
  - Pucca: Houses which have brick and cement walls and concrete casted ceiling.
  - Semi Pucca: Houses which have brick and cement walls but the roof is made of materials which are non-permanent, e.g., Tiles, Asbestos Sheets, Corrugated Sheet, Bamboo.
  - Kuchha: Houses whose walls as Walls & Roof are both made of non-permanent materials.
- Education of the CWE, classified into 10 segments from illiterate to Professional Post Graduate degree holder.

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<th>Type of House</th>
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<tr>
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<td>2 (Semi Pucca)</td>
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<tr>
<td>3</td>
<td>3 (Kuchha)</td>
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<table>
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<tr>
<th>R1</th>
<th>Pucca/Semi Pucca House</th>
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<td>R4</td>
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