

# WATER SECTOR, BUSINESS AND THE NEED

Ravindra Sewak – Country Director, Safe Water Network

Water is a fundamental human need and foundation for a robust civilization. Each person on Earth requires at least 20 to 100 liters of clean, safe water a day for drinking, cooking and simply keeping themselves clean. Polluted water is not just dirty – it is deadly. As per UNICEF, worldwide 361,000 children under 5 years old die due to diarrhea every year. In India, about 140,000 children die from diarrheal diseases each year, after using dirty water as per UNICEF. Approximately 80% of rural illness, 21% of transmissible diseases and 20% of deaths of children under 5 are directly linked to consumption of unsafe water. [www.safewaternetwork.org](http://www.safewaternetwork.org)

India's Supreme Court has already held that "the fundamental right to clean water is right to life". However, more than 63 million Indians still do not have access to clean drinking water. In addition to this, there is growing concern over depleting groundwater. More than 2 billion people worldwide live in regions facing water scarcity, and India too is facing acute crisis. In the last few

decades the consequences of population growth, increasing food production, untreated sewage disposal, industrialization and urbanization have interfered with the natural hydrological cycle of rainfall, soil moisture, groundwater, surface water both due to anthropogenic and geogenic reasons. This has led to overuse, abuse and pollution of our vital water resources and has disturbed the quality and the natural cleansing capacity of water. According to estimates, India's water sector requires investment worth INR 8.5 Lakh crore over the next decade. India has to judiciously utilize its resources to become a superpower by 2050.

The country's water resources, on which its economic growth hinges, will play an especially important role. India loses 200 million person days and INR 36,600 crore every year due to water-related diseases.

This calls for immediate attention by the stakeholders to make sustainable use of the available water resources and ensure better

quality of life. Given this backdrop, it is necessary that our national water policy recognizes and adequately addresses the challenges we face and plan for future.

## Drinking Water in India

Water availability is increasingly becoming a challenge that needs to be addressed in conjunction with access and quality concerns, to ensure the long term sustainability of the country's water programme. As per Census 2011 of the 37.5 crore population living in urban India 14.4 crore i.e. 38% do not have access to treated or tap water. Similarly, of the 83 crore population residing in rural India, 68 crore i.e. 82% do not have access to treated piped water.

The recently published 'Har Ghar Jal by 2030' Current Status And Next Steps released by Safe Water Network India as a 'Key Resource Centre' to Ministry of Drinking Water and Sanitation states that rural India currently serves 42% habitations with piped water covering 54% of 90.39 crores

**Favorite book/author...**

Catch-22 by Joseph Heller

**Favorite Movie**

Butch Cassidy and the  
Sundance Kid

**Favorite holiday  
destination...**

San Francisco

**Advice for  
EverythingAboutWater...**

Keep connecting the water  
industry, we have miles to go.



### VISION OF MY COMPANY

We envision a world with healthy, thriving communities, each managing its own sustainable supply of safe water. Our mission is to develop and demonstrate affordable, economically viable solutions, to share sector knowledge, and to build partnerships that reach millions in need. We are serving over 200 communities by providing safe water access to over 700,000 people.

### ANNUAL REVENUES

The annual revenue of Safe Water Network is: USD 8 million

### NUMBER OF EMPLOYEES

20 employees in India

### KEY ACHIEVEMENTS OF LAST YEAR

- ▶ Inclusion of Small Water Enterprises (SWE) in policy document of Government of India's Atal Mission for Rejuvenation and Urban Transformation (AMRUT) mission for providing safe drinking water to urban poor
- ▶ Online Chlorination & Monitoring pilot awarded to Safe Water Network by Rural Water Supply and Sanitation (RWSS) Telangana in the Telangana Water Grid program
- ▶ Member to review 'Restructuring of National Drinking Water Program' Ministry of drinking Water and Sanitation.

### KEY PARTNERSHIP

- ▶ Resource Center for Ministry of Drinking Water and Sanitation (MDWS), Government of India
- ▶ Partnership with Greater Hyderabad Municipal Corporation to establish Small Water Enterprises
- ▶ Partnership with District Collector Medak to establish Small Water Enterprise.
- ▶ Empanelled with Tata Institute of Social Sciences (TISS) and Indian Institute of Corporate Affairs (IICA)

### MANAGEMENT

Ravindra Sewak – Country Director

Poonam Sewak – V.P Program & Partnerships

Anil Sondhi – VP Technical Operations

rural population. Under the National Rural Drinking Water Programme of Ministry of Drinking Water and Sanitation a separate National Water Quality Sub-Mission is established to provide safe drinking water to 13,819 Arsenic and 13,725 Fluoride affected habitations on mission mode.

NITI Aayog has earmarked INR 2800 crore for this initiative. At the core of India's water access challenges lies a growing source-water availability crisis and challenge of poor management of water resources. We have feeble 385 cubic meters per capita storage as compared to Canada with 25,337 cubic meters or United States of America at 2,192 cubic meters per capita storage. Deeper drilling of groundwater is leading to geogenic water quality contamination. One concern is that India may lack overall long-term availability of replenishable water resources. In addition, water scarcity in India is expected to worsen as the overall population is expected to increase to 1.6 billion by the year 2050.

The challenge is in providing daily water and more so safe drinking water to the population.

### Solution: Participatory Approach to Safe Drinking Water Solutions

For providing universal access to safe drinking water, the management of the water resources for diverse uses should be done by adopting a participatory approach: by involving not only the various governmental agencies at the center and State Public Health Engineering Department (PHED) & Rural Water Supply and Sanitation Department (RWSS) but also the users and other stakeholders in an effective and decisive way in aspects of planning, design, development and management of the water resources schemes. Water User Associations (WUAs) and the local bodies such as municipalities and gram panchayats should particularly be involved in the operation, maintenance and the management of water infrastructures/facilities at appropriate levels progressively with a view to eventually transfer the management of such facilities to the user groups/local bodies.

### Safe Water Network's Model

We at Safe Water Network, a not for profit organization have been working alongside

communities in Ghana and India since 2009 to establish decentralized and locally-owned community water purification systems that provide affordable, reliable and safe off-grid drinking water. Our approach is to provide safe drinking water to the communities.

In India, over the past seven years we have established over 200 Safe Water Stations called 'iJal Stations' in the quality affected habitations in the states of Telangana, Maharashtra, Uttar Pradesh and Karnataka providing access of safe water to over 700,000 populations. We work along with local governments (Municipality and Panchayati Raj Institutions) and enable local communities / entrepreneurs by providing training, tools and support to establish financially sustainable iJal Stations that provide safe water reliably. The communities buy safe drinking water at affordable rate of INR 5 for 20 liters/can for walk in consumers. Working with government and other stakeholders, our priority is to document the best practices and disseminate them for broad-scale replication and scale to serve millions in need.

We are committed to ensure that communities have access to safe water, especially the poor. We focus on driving sustainability by building local capabilities to operate safe water stations, and mobilize strong grassroots community support. A series of activation events, including: door-to-door consumer awareness, ward or village-level meetings, live demonstrations of water quality, and the use of audio visuals, help raise awareness and drive safe water adoption at a nominal/affordable charge. Engagement at all levels of the targeted community for social, operational, financial, institutional and environmental sustainability ensure the continued success of the program.

Through these iJal Stations, our aim is to reduce the dependency of communities on contaminated water sources for drinking and cooking and in turn save those from the consequences of water borne diseases linked with it. The operator, entrepreneur, female change agents etc. are all chosen from the communities. The planned outcomes of the initiative include: better access to safe and clean drinking water, reduction in the incidences of water borne diseases, livelihood generation in the communities, more men collecting water from

the iJal Station, reduction in the drudgery of women and girl child, children missing fewer days in school, earning members missing fewer days at work, less expenditure on doctors, medicines and health care and better quality of life.

Without the widespread and well-analyzed buy-in of community leaders a Safe Water Station is highly unlikely to be successful in providing uninterrupted service. This includes a complex series of steps that introduce, educate in the local language, assign responsibilities and organize a way forward creating institutions like local field service entity and monitoring mechanisms. To improve the efficiency of our system we use internet of thing and number of digital tools in education, monitoring and community connect. This includes: Remote Monitoring System, Cashless auto dispensing, Financial transaction using the Bharat Interface for Money (BHIM) application, Plant Assessment Tool, Financial Viability Tool, Field Executive Tool, Operator Tool and Technology Selection Tool to name a few.

The impact of this intervention as measured by IMRB Consumer Research of the intervention in May 2016 concludes that the iJal water stations have <2% downtime providing reliable water supply, the water ATMs provide 24x7 convenience, solar powered iJal stations are overcoming the challenge of having erratic power supply thus water as per the national water quality norms is available affordably at INR 5. The community self-reports 51% reduction in medical bill, 73% increase in school attendance, 60% reduction in loss of work days and 75% men / boys collecting water from iJal stations. Additionally, 700 livelihoods are generated as plant operators, water distributors, technicians, community mobilizers etc.

### Future Plans

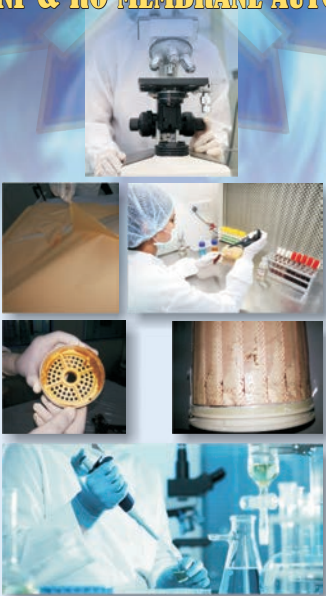
We are committed to demonstrate success at scale. By 2021 we intend to implement small water enterprises in 400+ communities, document lessons and best practices, build open source 'internet of things' and digital tools 'tool kit' for decision support, monitoring and evaluation, consumer service etc. enabling us to develop a robust proposition that can achieve scale by:

- ▶▶ Building market demand among both: communities needing small water enterprises, consumers' willingness to pay for safe water
- ▶▶ Demonstrating financial sustainability throughout the value chain, at such a low price point
- ▶▶ Realizing economies of scale, including reduced procurement costs, cost-effective support services and consolidated management costs
- ▶▶ Establishing financial reserves to pool station risks and major break downs
- ▶▶ Aggregating funding for larger scale implementation

Operating at scale enables us to build a compelling case for governments and funding agencies to adopt small water enterprises as a priority solution for the billions of people beyond the reach of large infrastructure investment. Our standard operating procedures and ready to use toolkit would promote replication and scale by providing technical advisory services to organizations interested in safe and affordable water sector.


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## Safe Water Network – An Agent of Change

Our focus is on the development of a business model that makes long term, pro-poor delivery of safe drinking water to all the villages across India and mobilizes broad scale replication. We establish clusters of potable drinking water stations in rural and peri-urban slums using a market based model grounded in local ownership and data-driven oversight dedicated to long-term sustainability.

We sustain the communities that are served for five years providing local standards compliance water quality with less than 2% downtime. All iJal Stations are locally owned and operated by the village youth.

We also continually analyze and improve our operations to reduce costs and standardize for replication and scale. Areas of ongoing improvement include:

- ▶▶ Technical improvements to reduce capital and operating costs
- ▶▶ Automation through remote monitoring system to reduce downtime
- ▶▶ Tablet-based project management for improved implementation and monitoring
- ▶▶ Consumer activation to increase demand for safe water
- ▶▶ Field service support capabilities ensure that 'iJal' Stations work less than 2% downtime

## Enabling Environment for Successful Action Plan

Support and action from each of the major stakeholders – Government, Corporates, Community Safe Water Solutions (CSWS) implementers, and communities is vital to the success. Some ideas for how each of these stakeholders could contribute are:

### Government

Create an enabling environment to set up small water enterprises by enhancing the quality of PPPs through their tenders by mandating pre-bid qualifications and standardizing the time for the contract process, plant setup and delivery. Develop policies to regulate quality, reliability, affordability, sustainability, and inclusion of small

water enterprise especially in the water quality affected habitations and areas where piped water provision is difficult.

### Corporates

As per the Indian Companies Act 2013, Schedule VII, corporates can allocate 2% of profit after tax (PAT) in CSR funding to safe drinking water projects, R&D and environmental sustainability. They can apply their expertise toward improving managerial and technical functions, support in organizing large-scale marketing campaigns and consumer awareness programs about the need for safe drinking water and conducting baseline surveys to assess need.

### Small Water Enterprise (SWE) Implementers

Adopt a framework that enables coordination with other initiatives in the field and promotes transparency. Incorporate the basic principles of quality, reliability, affordability, sustainability and inclusion. Develop a sector-wide association of players to enhance the effectiveness of SWE operations. Support public authorities in drafting and implementing related policies pertaining to drinking water. Share knowledge across the sector on optimal financial, operating, and pricing models, and successes and failures of innovation in the field. Collaborate with universities and other technical institutions to develop new ways to mitigate environmental risks and ensure supply security, reliability, and quality.

### Communities

They are the owners and sole beneficiary of the service. Their sense of ownership would lead to sustainable operations. They should be encouraged to invest in SWEs by providing infrastructural support in terms of land, building, raw water source, etc. form groups to mobilize community and conduct demand generation to enroll consumer and be willing to participate through willingness to pay for water at a nominal charge. This will benefit their health and sustainability of the plant.

### Conclusion

Through rigorous community engagement, skilling, education, working with local governance, monitoring, and setting up local field service

entity – our communities are drinking safe water reliably and earning their livelihoods. Our iJal stations are sustainable working with less than 2% downtime over the past seven years. We have distilled knowledge of SWEs and disseminated them through our Filed Insights, Sector Reports, Scientific publications and our biennial 'Beyond the Pipe' Forum. Our innovations have been selected for showcasing in the Stockholm International Water Week.

At Safe Water Network, we are confident in the potential of small water enterprises to provide affordable safe drinking water to millions to improve their health and also generate livelihoods. To realize this, we envision working alongside multiple stakeholders nationally and globally. Our work over the next five years will build on and expand our current work. We wish to see healthy and thriving communities where girls go to school and women are free from water drudgery.

### Future for Water Industry

The bottled water industry in India is growing at a CAGR of 30% for the last three years and is currently valued at INR 6,000 crore approximately. The industry is expected to grow at a CAGR of 33% approximately by FY 2018 due to the influx of overseas tourists, a rise in per capita income changes in lifestyle and public awareness.

With the increased consumer awareness of the importance of having safe and high quality drinking water and the benefits of leading a healthy lifestyle, more Indian consumers are opting for point-of-use treated water or bottled bulk water in their homes if they do not have water purifiers and when they are away from home.

## for me

### WATER INDUSTRY 2020

A forum to educate people about the water challenges we face today but to inspire them with incredible innovations being implemented around the world to address these challenges. Water industry has a bright future; especially in India because it has to meet enormous demand of water and water treatment in addition to meeting equally onerous water source augmentation targets.