

FINAL REPORT

2022

Grassroot Gender Empowerment in Water Quality testing using Field Test Kits for improved public health

Program Duration:

Overall Duration (months): 11 Months

Start Date: 01.02.2022

End Date: 31.12.2022

Report submitted to:

INDIA WATER PARTNERSHIP

By:

SAFE WATER NETWORK INDIA

Year:

2022

ACKNOWLEDGEMENTS

Safe Water Network India sincerely thanks India Water Partnership (GWP-India) for supporting the project entitled “**Grassroot Gender Empowerment in Water Quality testing using Field Test Kits for improved public health.**”

Dr. Veena Khanduri, Executive Secretary-cum-Country Coordinator’s guidance, comments, and suggestions throughout the project were invaluable to its success. This study was undertaken under the **Thematic areas as per GWP Strategy 2020-2025#** Contributing to Gender Equality and Engaging Private Sector.

We are also thankful to our donors, PepsiCo and Pentair Foundation, for their funding support for developing resource materials for execution of the training, and our local field service support partners, Clean Water and Energy Trust (CWET).

Prepared by:

Poonam Sewak, *Vice President – Programs & Partnerships*

Reena Kumari, *Research Manager*

Implementation Support:

Shanker Batra, *Head of Operations*

Rohit Kumar, *Field Executive*

LIST OF ABBREVIATIONS

BIS	Bureau of Indian Standards
FTK	Field Test Kit
GOI	Government of India
GP	Gram Panchayat
GWP	Global Water Partnership
IEC	Information Education Communication
JJM	Jal Jeevan Mission
IWP	India Water Partnership
M&E	Monitoring & Evaluation
SDGs	Sustainable Development Goals
SHGs	Self Help Groups
SWNI	Safe Water Network India
UN	United Nations
VWSC	Village Water & Sanitation Committees
WQMIS	Water Quality Management Information System
WQM&S	Water Quality Monitoring & Surveillance

EXECUTIVE SUMMARY

India is implementing the Jal Jeevan Mission, designed to provide universal water supply coverage to all households through functional taps by 2024. The Ministry of Jal Shakti, Government of India, is focusing on building capacities of the Village Water Sanitation Committees, a primary institution of Panchayati Raj Institute, on operations and maintenance of piped water supply to create local ownership. There is a strong focus on Water Quality and Water Quality Monitoring and Surveillance of the piped water supply. It mandates that five women per village be trained using Field Test Kits (FTKs) for Water Quality testing and monitoring at source and delivery points. The role of women is crucial as they are the primary managers of water demand, victims of the drudgery of water collection, and household care providers in incidents of water-borne disease.

This report summarizes the initiative of Safe Water Network India to build the capacities of VWSC in 10 villages of Telangana in Water Quality monitoring using Field Test Kits (FTKs). Under this project, supported by India Water Partnership, Safe Water Network India trained VWSC women and members, ASHA, Anganwadi workers, SHGs, health officials, teachers, school students, and the community to test water quality using the Field Test Kits (FTKs). Safe Water Network India conducted one-day training twice a year, pre-monsoon and post-monsoon.

The VWSC women and members were trained on identifying the water quality deviation using FTKs for prompt action, their roles, responsibilities as water quality managers under JJM, monitoring, and reporting. The local community, especially women, SHG, ASHA, Anganwadi workers, school teachers, and village elders, were sensitized on water quality and its impact on public health. A few of the FTKs were also distributed to them to enable testing on their own as and when required.

Under this project, training on water quality testing with Field Testing Kits (FTK) was imparted to the women, community members, and VWSC members. They were also trained on the Water Quality Management Information System (WQMIS) portal and on uploading the water quality test reports on the WQMIS portal. This project examines the empowerment of grassroots women in water quality testing and provides evidence support for including women in the implementation and replication of the program. This was complemented by the Safe Water Network India's training resource materials, including videos on

i) Water Quality parameters and standards as per the national standards BIS 10500 Training Video can be accessed at the [Water Quality Training using Field Test Kits - YouTube](#)

ii) VWSC women demonstrating the use of FTKs – Training Video can be accessed at [Empowering Women and Youth on Water Quality Testing using Field Test Kits - Bing video](#)

The program impacted ~ 900 people, which included 50 Village Water Sanitation Committee members, sensitization of 500 community women/members, 200 school children, and 100 PRI members.

The program contributes to the UN Sustainable Development Goal (SDG) 6.1, Safe water access for all, and Goal 5, Gender Equality.

INTRODUCTION

I. PROJECT TITLE & PURPOSE

Title: “Grassroot Gender Empowerment in Water Quality testing using Field Test Kits for improved public health”

The project aimed to build women’s capacity in water quality testing at the grassroots and operate and improve public health. This project examined the empowerment of grassroots women in water quality testing and provided evidence support for including women in the implementation and replication of the program.

II. STUDY OBJECTIVES

- Contribute to the National JJM (R) by capacity building of VWSC in water quality testing through the demonstration of Field Test Kits (FTKs)
- VWSC training on roles, responsibility, reporting, and monitoring with emphasis on the escalation matrix
- Sensitize the community, especially women, SHGs, ASHA, Anganwadi workers, school teachers, and village elders, especially on water quality and its impact on public health

III. PROJECT SUMMARY

A. Summary

Under this project, supported by India Water Partnership, Safe Water Network India (SWNI) envisioned empowering women and other grassroots communities in all aspects of water quality testing and making them independent to perform WQ testing and water demand management. The training envisaged the Jal Jeevan Mission's (JJM) main objective, which was to create a community-based Water Quality Monitoring & Surveillance system at the grassroots level of the community itself to enhance awareness on safe drinking water.

Safe Water Network India conducted one day of training twice a year – pre-monsoon and post-monsoon at all “ten selected project villages” in the Medak district of Telangana. SWNI covered the PRI representatives, VWSC, SHG women group ASHA, Anganwadi workers, Gram Panchayat members, Block Development Officers, Waterman, school teachers, and village elders, especially women, to train them in using Field Test Kit. SWNI also provided practical training on treating water through boiling, chlorination, and Point of Use filters and sensitized school children and community members on the importance of water quality importance and the benefits of consuming safe water. 900 people were trained in Water Quality testing using Field Test Kits (FTKs) and sensitized on the importance of quality water and its impact on human health. This included training 50 Village Sanitation Water Committee (VWSC) members, 250 school students, and 500 community members.

Water Quality Training using Field Test Kits has enabled them to monitor the water quality of their community's existing drinking water supply systems for improved health outcomes. In addition, they were trained in water quality reporting and management systems. WQMS training on reporting and escalation matrix.

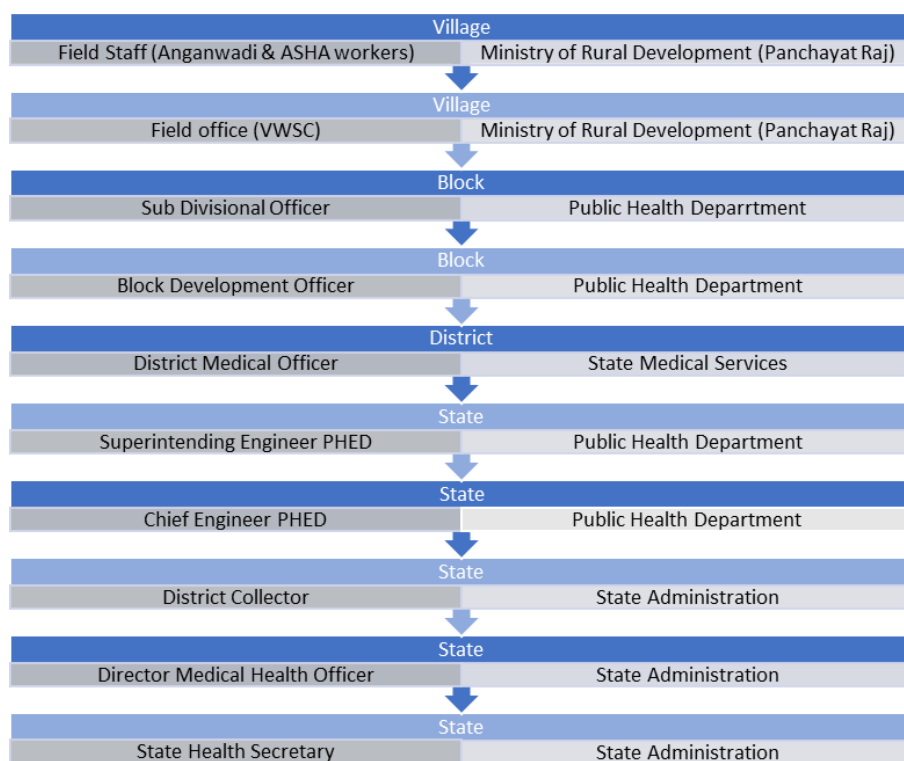
Jal Jeevan Mission mandate and Water Quality Monitoring and Surveillance

In partnership with States, the Ministry of Jal Shakti, the Government of India is implementing Jal Jeevan Mission (JJM)-Har Ghar Jal, including quality-affected habitations. 2% of the annual funds of JJM is allocated for Water Quality Monitoring & Surveillance (WQM&S) activities, including community surveillance using field test kits (FTKs), etc.¹ This mandate necessitates training of 5 women per village in water quality training using Field Test Kits (FTKs).

Roles of Village Water Sanitation Committees (VWSC):

As a part of the 73rd constitutional amendment, 1993, To proceed and empower the masses in India under the Jal Jeevan Mission Rural. “Gram Panchayat and/or its subcommittee, i.e., Village Water and Sanitation Committees (VWSC)/ Paani Samiti/ User Group, etc., has been assigned the responsibility. It is envisaged that the community will lead in planning, implementing, managing, operating, and maintaining in-village water and sewage infrastructure. The community manages and controls the village's water supply system and sewage infrastructure.

The statutory support system and escalation matrix in case of any water/sewage/health-related issue are as under as prescribed by the ‘Uniform Drinking Water Quality Monitoring Protocol’ The Standard Operating Procedure (SOP) escalation matrix is as under:



Challenges faced in project implementation:

Difficulty in mobilizing the community for training, and alignment with the VWSC members. Difficult to impart knowledge on water quality parameters to semi-educated women.

¹ <https://pib.gov.in/PressReleaselframePage.aspx?PRID=1807849>

IV. OUTCOMES

The project trained the VWSC members and women on use of FTKs, improved awareness of the local community, SHG, ASHA, Anganwadi workers, and school teachers on water Quality and the impact of unsafe water on health.

- Reduced dependency of the VWSC on quality testing laboratories to check water quality
- Prompt action and alert in case the water quality is not meeting the desired standards
- Improved awareness of the local community, SHG, ASHA Anganwadi workers, and school teachers in Water Quality and the impact on health by using unsafe water
- Contribute to achieving SDG 6.1 & Improved Public Health



Input Indicator	Explanation of targets	Results achieved in 2022	Explanation of results achieved in 2022
Number of documents produced outlining the lessons from the project and a plan for replicating solutions	Annual project report and testimonials/video	Annual Project Report (1) Case Studies (2) Training Video (1)	Under this assignment, SWNI developed an annual project report and two case studies from the field.
Number of people trained in 10 villages	Capacity Building of PRI representatives, VWSC, SHG women group ASHA, Anganwadi workers, school students, and village elders in Water Quality monitoring using Field Test Kits (FTKs) to support the National JJM (R) in grassroots women capacity building in water quality.	50 PRIs, 100 VWSC members, 250 school children, and 500 HHs community members (of which at least 100 women) 10 villages of Medak district trained.	Training program water quality testing using FTK executed in 10 villages of Medak district of Telangana. 900 PRI representatives, VWSC, SHG women group ASHA, Anganwadi workers, school teachers, and village elders trained for Water Quality, Water Quality Monitoring, Surveillance, and unsafe water's impact on health.
Capacity building and knowledge development initiatives to create awareness in the community	Empowerment of VWSC members/women & PRIs to carry out WQ testing and also WQMS using FTK.	Ten villages VWSC members & PRIs trained for Water Quality, Water Quality Monitoring Surveillance and impact of unsafe water on health.	Awareness in the community on the importance of safe drinking water for good health and prevention of water-borne diseases and thus reduce the expenditure on household / public health expenses.

Media coverage for Quality training under IWP project 2022

Kolcharam village, Narsapur, Medak Telangana

The Water Quality training conducted by Safe Water Network India under the India Water Partnership program 2022 to train the VWSC members and women on using the FTKs highlighted the importance of safe water for good health. The training informed the VWSC, ASHA volunteers, Anganwadi teachers, and Gram Panchayat staff on the water quality standards and the use of Field Test Kits for testing water quality. The participants tested the piped water they received at home for TDS, pH, and chlorine. The FTKs were distributed to the VWSC members and the health staff.



Exhibit 1: Media coverage for Quality training under IWP

Recommendations and Next Steps

- The program has proven replication as there are digital training modules in the local language available and master trainers for scale up across the country
- The program has a great impetus from the Ministry of Jal Shakti for scaling.
-

Project Beneficiaries: The main beneficiaries for the given project are:

- The local government Village Water Sanitation Committee under the Panchayati Raj Institute.
- The PHED and the Block Resource Development of Rural Water Supply and Sanitation (RWSS) Telangana
- Community
- Women SHGs, ASHA, Anganwadi workers, who can test their water quality using the Field Test Kit independently and report.

V. OUTPUTS

1. Key outputs achieved in the reporting period:

- 10 Village Water Sanitation Committee women/members trained to check their village water quality using Field Test Kits ~50 members
- PRI members trained through workshops 100
- Sensitization and awareness of ~250 School children and 500 community members
- Total Impact ~900
- Raised alert and alarm about contaminated water sources to the block and district functionaries

2. Outputs and the type and number of beneficiaries

Outputs	Percentage of completion	Type of beneficiaries
Annual Project Report (1) Case Study (2) Training Video (1)	✓	Women/Community Water Sector
50 PRIs, 100 VWSC members, 250 school children, and 500 HHs community members (of which at least 100 women) 10 villages of Medak district trained	✓	Women/Community
Ten villages VWSC members & PRIs trained for Water Quality, Water Quality Monitoring Surveillance, and the impact of unsafe water on health.	✓	Women/Community

3. **Catalytic effects:** The program has proven replication of VWSC capacities on Water Quality testing and WQMS for improving public health and can be scaled

4. Key Partners of the project supporting your interventions

The program has been supported for training and execution by our partner Clean Water and Energy Trust (CWET) to train the Master Trainers. The local NGO Modern Architects of Rural India (MARI) supported in translation and engagement with the local community and the Village Water Sanitation Committee.

VI. EXPLAIN, IF ANY DELAYS IN IMPLEMENTATION, CHALLENGES, AND LESSONS LEARNED & BEST PRACTICES

No delays in project implementation

Challenges faced in the implementation of project – Productive engagement with the stakeholders especially the VWSC and Sarpanch in SWEs

VII. SUCCESS STORY

Link to video testimonials -

https://drive.google.com/drive/folders/1ibcvOZQf366snyJXqDmSGwKBerIZmISO?usp=share_link

Case Study 1

Manjula, Self Help Group member in Gavalapalli Village, shared her experience about the benefit realized through the training program. She attended the water quality training conducted by the safe water Network India team and gained the efficiency to check water during the rainy season before drinking.

"I have attended the training once. The water is not good during rainy days. So, I check first, then we drink."

V. Manjula, SHG member, Gavlapalli village, Medak, Telangana.



Image 1: V. Manjula: Gavlapalli Village, Medak district, Telangana

Case Study 2

Vadala Sravani, Student from Gavlapalli village attended the training on water quality conducted by Safe Water Network India team. She has become self-sufficient in checking the TDS and PH of water and can train other women in the community on water quality testing.

"My name is Vadala Shrivani, I am from Gavalpalli village. Earlier I didn't know anything about water. I was trained twice by the Safe Water Network, and now I can check TDS and PH of the water. The Gram Panchayat has kept a field test kit for further tests."

Vadala Sravani, Student Gavlapalli village, Medak district, Telangana



Image 2: Vadala Sravani, Student Gavlapalli village, Medak district, Telangana

PHOTO GALLERY

Pictures of the training can be accessed at [link](#)



Exhibit 1: Water Quality Training at Enigandla, Medak District, Telangana



Exhibit 2: Field Test Kit distribution at Chitkul, Medak District, Telangana



Exhibit 3: Water Quality Training at Pothamshetpally, Medak District, Telangana



Exhibit 4: Water Quality Training at Sangaipet, Medak District, Telangana



Exhibit 5: Water Quality Training at Machavaram, Medak District, Telangana



Exhibit 6: Water Quality Training at Kulcharam, Medak District, Telangana



Exhibit 7: IWP water quality training in Pothamshetpally village, Medak district, Telangana



Exhibit 8: IWP water quality training in Gavalapally village, Medak district, Telangana

VIII. RESOURCES (OPTIONAL) PROVIDE ANY INFORMATION ON FINANCIAL MANAGEMENT, PROCUREMENT AND HUMAN RESOURCES

Financial Management Resources

Suresh Nair (Head of Finance) > **Shweta Arora** (Finance Manager) > **Rajiv Jha** (Sr. Accounts Officer) > **Sandeep Kumar** (Accounts and Admin Officer)> **Rohit Prajapati** (Accounts Officer)

Procurement Resources

Deepak Tokas (Manager Procurement and Partnerships)

Human Resource

Poonam Sewak (Vice President – Program & Partnerships)> **Pooja Singh** (Head M&E) >**Shanker Lal Batra** (Head of Operations) > **Reena Kumari** (Research Manager) > **Dr. B.E.H Raj Kumar** (Project Officer) > **Rohit Kumar** (Field Executive) > **Praveen Kumar** (Field Executive)

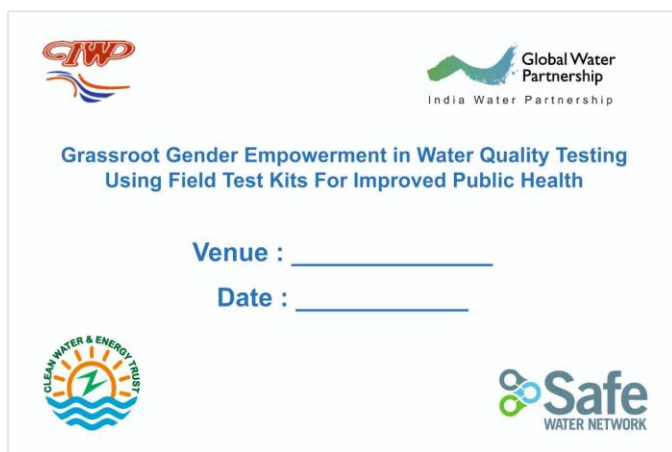
Leverage Partners

The Project mobilized equal resources from Pentair Foundation and PepsiCo Foundation to execute the project.



ANNEXURES

I.RESOURCE MATERIALS USED FOR TRAINING



Training on Water Quality Testing Using Field Test Kit

Water Safety
Water Sample Collection
Water Testing

Drinking Water Quality Parameters as per (IS:10500)

Parameter	Unit	Indian Standard (IS:10500)	
		Acceptable Limit	Permissible Limit
1 pH	pH units	6.5-8.5	6.5-8.5
2 TDS	mg/L	500	2000
3 Total Hardness	mg/L	200	600
4 Total alkalinity	mg/L	200	600
5 Chloride	mg/L	250	1000
6 Free residual chlorine, min.	mg/L	0.2	1
7 Nitrate	mg/L	45	No relaxation
8 Fluoride	mg/L	1	1.5
9 Iron	mg/L	0.3	No relaxation
10 Arsenic	mg/L	0.01	0.05
11 Total Coliforms	MPN	Absent	Absent
12 E. Coli	MPN	Absent	Absent

II.TRAINING VIDEOS



Water Quality Testing – Training Video can be accessed at [Water Quality Training using Field Test Kits - YouTube](#)



Water Quality Testing using Field Test Kits – Training Video can be accessed at [Empowering Women and Youth on Water Quality Testing using Field Test Kits - Bing video](#)



INDIA

The Centrum, TB-3, 3rd Floor, 369-370,
Main Mehrauli-Gurgaon Road, Sultanpur
New Delhi, India 110030
Phone: +91 11 26 80 0884
Email: india@safewaternetwork.org

www.safewaternetwork.org

December 2022