Jal Jeevan Samvad

Har Ghar Jal
Jal Jeevan Mission

Building Partnership
Changing Lives

January | Volume 6 | Issue 01 | Year 2025

JJM Special Guest
of 76th Republic Day Parade-2025

Contents

Editor: **Yogendra Kumar Singh,** Director, NJJM

Editorial Team: Chanchal Kumar Modi, Lopamudra Panda, Amit Kumar Ranjan, Arpan De Sarkar, Shailika Sinha

Design: Arif Khan

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National Jal Jeevan Mission, Ministry of Jal Shakti, New Delhi - 110 003
E-mail: rnd-ddws@gov.in

Prime Minister on Jal Jeevan Mission

Narendra Modi
Prime Minister

I am satisfied that our government is also working in the interest of the countrymen with complete dedication and with this spirit of service. Building toilets in every house, providing Ujjwala gas connection to every poor woman, providing tap water facility to every house, providing free medical treatment up to Rs 5 lakh to every poor person, bringing every elderly person above the age of 70 under the ambit of this facility, providing permanent houses to every homeless person, these are the works done with this spirit of service, with this spirit of dedication, which for me is a prasad of our great cultural tradition.

- PM's speech at inauguration of Sri Sri Radha Madanmohanji Temple of ISKCON in Navi Mumbai, 15th January, 2025

Minister of Jal Shakti on Jal Jeevan Mission

Shri C R Patil

Minister of Jal Shakti

पूरी दुनिया ऐसा मानती थी की भारत में स्वच्छ और शुद्ध पानी मिलना बहुत मुश्किल है। पहले सबको पानी लाने के लिए कई दूर तक जाना पड़ता था, जो महिला सशक्तिकरण के लिए एक बड़ा चुनौती थी। मोदी जी ने 'हर घर नल से जल' योजना शुरू की, और सिर्फ 5 साल के अंदर 39% लोग जिनके पास पानी की सुविधा थी, उन्हें सुधार कर दिया। लेकिन सिर्फ पानी नहीं, बल्कि शुद्ध और पर्याप्त मात्रा में पानी उपलब्ध कराया। WHO के मुताबिक, इस योजना के कारण महिलाओं के 5.5 करोड़ घंटे हर दिन बचे हैं, जो पहले पानी लाने में व्यर्थ जाते थे। यह समय अब महिलाएं अपने घर और बच्चों की शिक्षा में लगा सकती हैं, या अपनी आर्थिक स्थिति सुधारने के लिए काम कर सकती हैं।

पानी की वजह से कई जगह लोगों को दवा लेनी पड़ती थी, लेकिन अब स्वच्छ पानी मिलने के कारण करीब 8.4 लाख करोड़ रुपए, जो अलग-अलग परिवारों द्वारा दवाइयों पर खर्च होते थे, वो भी बच गए हैं। WHO भी मानता है कि यह एक महान उपलब्धि है। आज दुनिया भारत की तरफ देख रही है, जो हर सेक्टर में आगे बढ़ रहा है और तीसरे नंबर की अर्थव्यवस्था बनने की तरफ बढ़ रहा है। यह सब कुछ नरेंद्र मोदी जी की नेतृत्व में संभव हो पाया है, और इसी लिए भारत के लोग कहते हैं - 'मोदी है तो मुमकिन है'।

Shri C R Partil, keynote address during the India Pavilion at World Economic Forum 2025 in Davos, a global discussion titled "India's WASH Innovation: Driving Global Impact in Climate and Water Sustainability" held in 23rd January 2025

Foreword

सर्वे भवन्तु सुखिनः, सर्वे सन्तु निरामयाः। सर्वे भद्राणि पश्यन्तु, मा कश्चिद् दुःखभाग्भवेत्॥

(May all be happy; may all be free from illness. May all see auspiciousness; may no one suffer.)

The New Year is a reminder of fresh opportunities and renewed commitments. This timeless Sanskrit prayer encapsulates our collective aspiration for universal well-being and harmony. It resonates deeply with the mission of Jal Jeevan Mission (JJM), which strives to bring safe and clean drinking water to every rural household in India. For JJM, 2025 is yet another step forward in its transformative journey—a mission that continues to mobilize people, empower communities, and redefine lives. This is a year to not only reflect on our achievements but also envision the possibilities ahead.

Water, often regarded as a basic necessity, has emerged as a powerful agent of socio-economic transformation under JJM. In countless villages, access to clean drinking water has been instrumental in breaking barriers, enabling women to step out of their homes, engage in local governance, and take leadership roles in the management of water resources.

With the time saved from fetching water, women are now exploring new avenues of income generation, turning their skills into livelihood opportunities. The youth, too, is becoming more vigilant, recognizing the value of resource management and sustainability. Children, no longer burdened by long walks to collect water, are happier and more focused on their education. At the same time, technical training for the operation and maintenance of water supply systems is equipping people with skills and expertise, leading to self-reliance and long-term sustainability. Overall, JJM is creating a holistic transformation across various facets of life.

This month was particularly special, as the Department of Drinking Water and Sanitation had the honour of welcoming 172 special guests, along with their spouses – leaders and members of Village Water & Sanitation Committees (VWSCs)/Pani Samitis from 27 States and Union Territories, who were part of approximately 10,000 special invitees of the Government of India for the 76th Republic Day celebrations. Their presence was a reflection of the grassroots spirit that drives JJM.

As JJM moves forward, real-time monitoring and data-driven governance are ensuring that the delivery of clean drinking water is not only swift but also sustainable. Technology has enabled communities to take charge, ensuring transparency and efficiency in water supply management.

The synergy of grassroots efforts, community participation, technology and visionary leadership has made it possible to reach millions of rural households. As we look ahead to 2025, the emphasis will be on strengthening these collaborations, scaling best practices, ensuring that no one is left behind and ensuring sustainability of schemes.

The success of JJM is a reminder that when people come together, equipped with strategies and tools for change, even the most daunting challenges can be overcome. This year is not just about meeting targets; it is about redefining how we perceive water, not merely as a resource, but as the essence of life and an instrument of equity.

Shri Ashok K. K. Meena
Secretary,
Department of Drinking Water & Sanitation

Note from the desk of

Additional Secretary & Mission Director...

In the ever-evolving journey towards ensuring water security and sustainability, communities and institutions continue to overcome challenges with resilience and collaboration, proving that shared vision and effort can bridge any gap. This January, Jal Jeevan Samvad celebrates the power of collective determination and the milestones achieved under Jal Jeevan Mission (JJM), reflecting the spirit of a nation united by its commitment to water for all.

Our world is urbanizing rapidly, reshaping how we use natural resources, especially water. As cities grow, rural communities often face scarcity and neglect. Yet, rural India remains vital, with agriculture, traditions, and daily life deeply tied to water. The Jal Jeevan Mission bridges this gap, ensuring these communities are not left behind. True progress means balancing development with equity, sustainability, and well-being for all.

At the heart of this transformative journey is the community. No longer just beneficiaries, people have become stakeholders, custodians, and changemakers in ensuring access to clean drinking water. Village Water and Sanitation Committees (VWSCs)/ Pani Samitis, along with grassroots leaders, have stepped forward to take ownership of water management, ensuring that the mission's goals are met with accountability and transparency. Their commitment to sustainable water systems and behavioural change has laid the foundation for lasting impact.

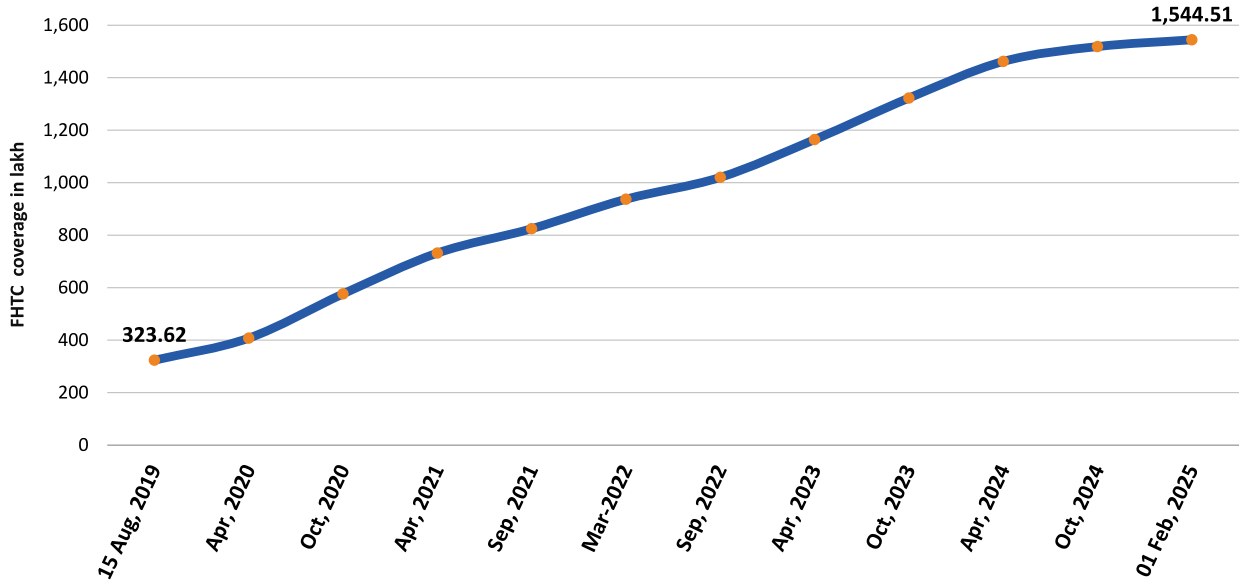
This January, the Republic Day 2025 celebrations brought a special opportunity to honour these grassroots leaders. A total of 172 VWSC members with spouses, from 27 States and UTs were invited to New Delhi in recognition of their exemplary contributions to community-led water management. Their visit was enriched by interactions with dignitaries and visits to iconic landmarks. A felicitation ceremony, graced by the Hon'ble Union Minister of Jal Shakti and the Ministers of State, saw these community leaders being applauded for their role in making villages self-reliant and water-secure. The event also marked the unveiling of three key publications.

The theme of this edition 'Community-Based Initiatives' perfectly aligns with the special guests' programme. The pages ahead are full of examples that illustrate the transformative power of community-led action in addressing local water challenges. From implementation efforts to source sustainability, water quality management, and community-led solutions, these narratives reflect the unwavering spirit of the communities on the ground.

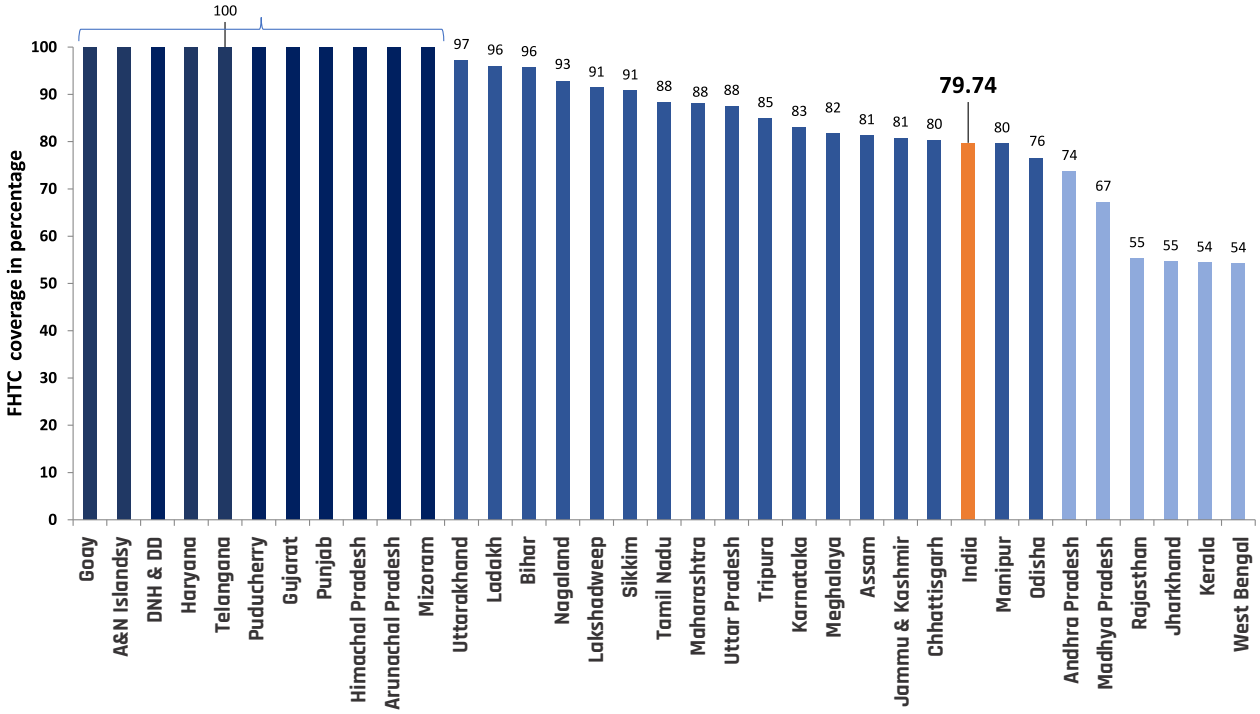
As we step into 2025, the path to a water-secure future calls for fresh perspectives, informed research, and innovative water management strategies. The journey continues, and with collective will, it will shape a future where clean water is not just a service but a shared responsibility.

Kamal Kishore Soan
Additional Secretary & Mission Director (NJJM)
Department of Drinking Water & Sanitation

Progressive coverage - Functional Household Tap Connection (FHTC) (as on 31.01.2025)



Comparative FHTC coverage status of States/ UTs (as on 31.01.2025)



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As on 31st January, 2025

Source: JJM-IMIS

India | Status of tap water supply in rural homes

Total number of households (HHs)	Households with tap water connections as on 15th Aug 2019	Households with tap water connections as on date
19,36,93,462	3,23,62,838 (16.71%)	+32,032 15,44,51,044 (79.74%)

Households provided with tap water connection since launch of the Mission

12,20,88,206 (75.68%)

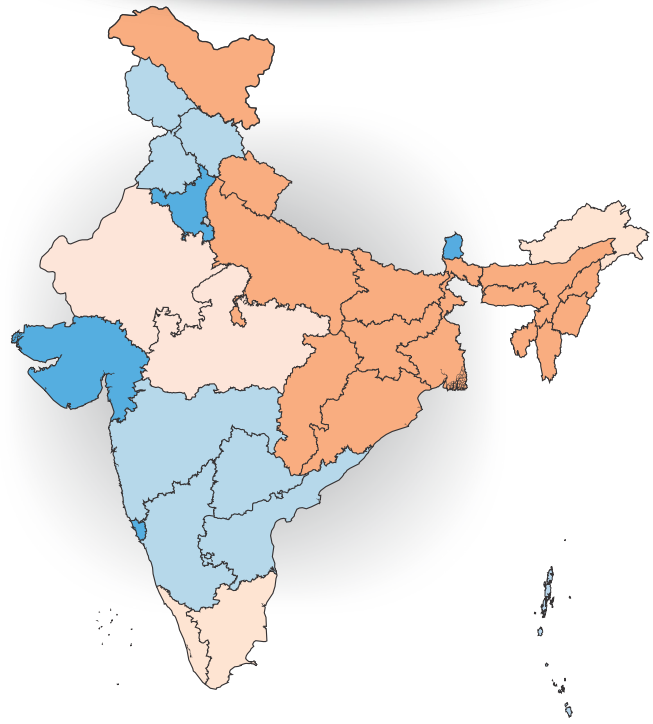
Har Ghar Jal [100% HHs with tap water connections]

100% FHTC States/ UTs

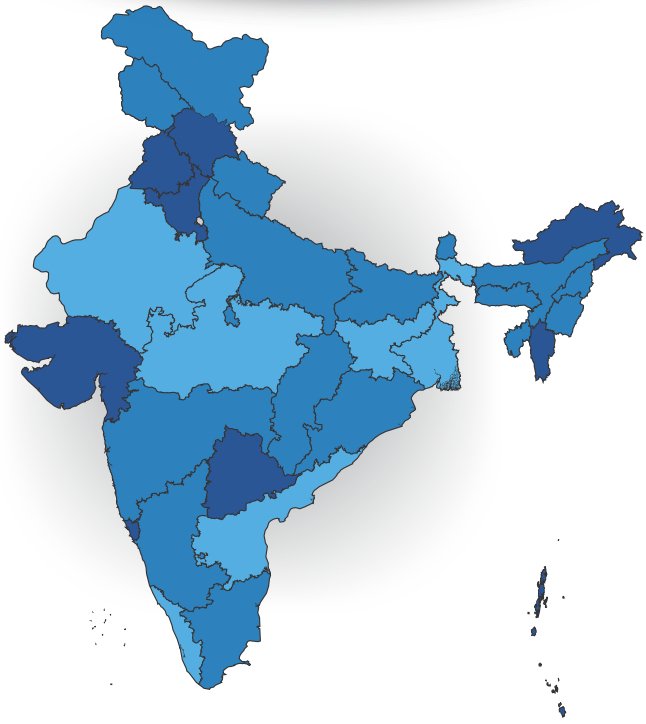
Goa, A & N Islands, Puducheerry, D&NH and D&D, Arunachal Pradesh, Haryana, Punjab, Telangana, Mizoram, Himachal Pradesh, Gujarat

100% FHTC Districts	100% FHTC Blocks	100% FHTC Panchayats	100% FHTC Villages
189	1,862	1,18,230	2,51,579

As on 15th August, 2019



As on 31st January, 2025



0 to <10% | 10% to <25% | 25% to <50% | 50% to <75% | 75% to <100% | 100%

A Republic Day to Remember

Honouring Grassroots Leaders Who Shape India's Water Future

- Shailika Sinha, NJJM

26th of January, the Republic Day in India is always a grand spectacle, a celebration of democracy, unity, and the collective journey of a nation. But beyond the regiments marching down Kartavya Path, the vibrant tableaux, and the soaring fly-pasts, this year's celebrations held a special meaning for a group of grassroots champions of the Jal Jeevan Mission (JJM).

Witnessing the Republic Day Parade: A Moment of National Pride

The journey of these 172 special invitees had begun a few days earlier when they arrived in Delhi on 24th and 25th January as part of a larger contingent of 10,000 grassroots leaders invited by the Government of India for the 76th Republic Day celebrations.

For many, it was their first visit to the capital, their first time witnessing the grandeur of the nation's most prestigious ceremonial event. Seated along Kartavya Path, they watched as the might of India's armed forces, the vibrancy of its cultural tableaux, and the unity of its diverse people unfolded before their eyes.

The theme of this year's parade, "Swarnim Bharat: Virasat aur Vikas", resonated deeply with them. Heritage and progress - that was exactly what they had been working towards in their villages, blending traditional wisdom with modern water governance.

Figure 1: Special Guests excited for the Republic Day Parade 2025 | *Source: NJJM*

Figure 2 & 3: Special Guests seated at Kartavya Path to witness the grandeur of Republic Day celebrations | *Source: NJJM*

A Day of Recognition, Reflection, and Renewed Commitment

On 27th January 2025, the Ministry of Jal Shakti organized a special event at the Palika Services Officers' Institute (PSOI) Club, Chanakyapuri, to honour 172 Village Water and Sanitation Committee (VWSC) members from 27 States and Union Territories. These individuals, who have played an instrumental role in ensuring access to safe drinking water in rural India were recognized for their contributions.

The ceremony was graced by Hon'ble Union Minister of Jal Shakti, Shri C.R. Paatil, and Hon'ble Ministers of State, Shri V. Somanna and Shri Raj Bhushan Choudhary. Senior officials, including Shri Ashok Kumar Meena, Secretary – DDWS, and Shri Kamal Kishore Soan, Additional Secretary and Mission Director – National Jal Jeevan Mission, were also present.

As the VWSC members took their seats in designated enclosures, each representing their home state, the setting became a vibrant mosaic of India's grassroots leadership. Their faces bore a mix of pride, excitement, and quiet humility, the realization that their relentless efforts, often away from the limelight, had been noticed at the highest levels.

Each VWSC member was individually acknowledged by the Hon'ble Ministers, their achievements applauded. It was a moment of validation, proof that true leadership lies not in authority but in action.

Figure 4: Shri CR Paatil, Hon'ble Minister of Jal Shakti, along with Hon'ble Ministers of State Shri V. Sommanna and Shri Raj Bhushan Choudhary, senior officials, and special invitees from States/UTs, come together to celebrate collective efforts | *Source: NJJM*

Figure 5 & 6: Special invitees share a memorable moment with their inspiring leaders | *Source: NJJM*

Figure 7 & 8: Special invitees share a memorable moment with their inspiring leaders | *Source: NJJM*

Stories That Inspire: Launch of Three Transformative Books

The event was also marked by the release of three books that captured the essence of Jal Jeevan Mission's impact:

- ***Stories of Change***: A compilation of remarkable transformations in Particularly Vulnerable Tribal Groups (PVTGs), shedding light on communities that have overcome the toughest challenges to secure access to drinking water.
- ***Transformational Stories:*** *Redefining Lives Through Water* – A deep dive into how rural communities across India have evolved, adapted, and taken ownership of their water sources.
- ***Peyjal: Jan Shakti ki Abhivyakti***: A tribute to the VWSC members themselves, bringing forth firsthand accounts of their struggles, triumphs, and unwavering commitment to ensuring 'Har Ghar Jal'. The stories on the pages mirrored their own, making them realize that their journey was part of a much larger movement.

Figure 9,10 & 11: Three books unveiled, marking a new chapter of knowledge and inspiration | *Source: NJJM*

A Journey Through History and Inspiration

These VWSC leaders, who came along with their spouses/ guardians, were nominated by States/ UTs based on the best-performing VWSC/ Pani Samiti members from certified Har Ghar Jal villages with community-managed schemes. They were accompanied by designated nodal officers from their respective States/ Uts.

Their experience in Delhi was not limited to the Republic Day parade and felicitation. It was carefully curated to immerse them in the story of India's progress.

- A visit to the **Pradhanmantri Sangrahalaya** on 25th January offered them insights into the vision and leadership that has shaped modern India.
- At **Gandhi Smriti** and the **Rashtriya Swachhata Kendra (RSK)** on 26th January, they saw the ideals of Mahatma Gandhi come to life, reinforcing the philosophy that clean water and sanitation are not just amenities but fundamental rights.
- A solemn visit to the **National War Memorial** and **India Gate** on 27th January afternoon, reminded them that nation-building comes in many forms, while soldiers defend borders, citizens like them safeguard the very essence of life: water.

These experiences enriched their perspective, strengthening their resolve to take their learnings back to their villages.

Figure 12: Special Invitees at Pradhanmantri Sangrahalaya | *Source: NJJM*

Figure 13: Special Invitees at Pradhanmantri Sangrahalaya | *Source: NJJM*

Figure 14: Special Invitees at Pradhanmantri Sangrahalaya | *Source: NJJM*

Figure 15: Special Invitees at Rashtriya Swachhata Kendra | *Source: NJJM*

Figure 16: Special Invitees at India Gate | *Source: NJJM*

Figure 17: Special Invitees at National War Memorial | *Source: NJJM*

A Commitment That Goes Beyond Recognition

Beyond the tours, the mementos, and the formal acknowledgments, this initiative by the Department of Drinking Water and Sanitation (DDWS) sent a powerful message: The success of Jal Jeevan Mission is in the hands of the people!

By honoring VWSC members and recognizing their role as the backbone of the mission, the event was not just about past achievements but about the future—a future where every drop of water is valued, every village takes ownership of its resources, and every citizen becomes a custodian of sustainability.

As the VWSC members boarded their trains and flights back home, they carried more than just memories. They took back a renewed sense of purpose, a reaffirmation that their work mattered, and a belief that real change begins from the ground up.

Copy editing by : Shailika Sinha

The Power of Community:
How Jal Mitras Are Transforming Water Management in Assam

- **Kapil Dhabu**, Project Associate, Jal Jeevan Mission, and **Prashant Sarbahi**, Project Lead, EPIC India, International Innovation Corps

Access to clean, and safe water is a fundamental human right, but ensuring it flows consistently is no easy feat. In Assam, where thousands of water supply systems serve remote and resource-constrained areas, the challenge is particularly daunting. Even the best-designed infrastructure is at risk of falling into disrepair without the right support. This is where the Jal Jeevan Mission (JJM) has made a transformative impact, and at the heart of its success are the Jal Mitras—local volunteers who have become the backbone of water management in their communities.

The Jal Mitras have emerged as a powerful force in bridging the gap between infrastructure creation and long-term sustainability. They are not just caretakers of water supply systems; they are educators, motivators, and local leaders driving the shift towards more sustainable water management practices.

Jal Mitras are community members who undergo extensive training in plumbing, electrical maintenance, asset management, and reporting. These skills empower them to independently manage repairs, troubleshoot issues, and ensure the consistent operation of water systems. Their current role will extend beyond technical maintenance, however—they instil a culture of water conservation and hygiene within their villages, helping to ensure that water is used wisely and that sanitation practices are improved. In a place where unreliable water systems once left households without access to clean water, the presence of Jal Mitras will bring about a remarkable transformation in the coming years.

Figure 18: A Jal Mitra, working at PWS system | *Source: EPIC India, International Innovation Corps*

In districts like Cachar, Jal Mitras manage Public Water Supply (PWS) schemes and oversee surface water source points, ensuring smooth operations and timely repairs. Their local knowledge and quick response times have made water delivery more reliable, creating a sense of trust within the community. The key to their success lies in their deep connection to the area—Jal Mitras are familiar faces, rooted in the community, and deeply invested in its well-being. This local ownership model will prove far more effective than top-down approaches in maintaining long-term water systems.

The empowerment of these volunteers has far-reaching effects. By training local individuals and giving them responsibility, the Jal Jeevan Mission fosters a sense of accountability and ownership. The Jal Mitras are not just maintaining infrastructure—they will lead the way in creating sustainable solutions tailored to the needs of their villages. Going forward, they shall be the enablers for addressing challenges, utilizing the agency of proximity to the issues, in the real time with context-specific responses. This model envisions that water management is not just the

Figure 19: IEC Messages in & around PWS system by Jal Mitras
Source: EPIC India, International Innovation Corps

responsibility of the government but a shared task, with communities playing an active role.

Looking ahead, the potential for scaling the success of Jal Mitras is immense. With continued support for training and resources, more remote and underserved areas can benefit from their expertise. But scaling this initiative requires a focus on inclusivity. Engaging women and marginalized groups, especially in leadership roles within Water User Committees (WUCs), will ensure more equitable decision-making and further strengthen community ownership.

The success of Jal Mitras in Assam will lie in the power of community-driven change. By supporting local volunteers and fostering a sense of responsibility, the Jal Jeevan Mission is not just providing water - it is building resilient communities. The Jal Mitras model proves that when communities are empowered to manage their own resources, sustainable, transformative change is possible. This approach offers valuable lessons for water management initiatives across India and beyond, showing that grassroots action can create lasting, positive change.

Copy editing by: Lopamudra Panda

Figure 20: Jal Mitra, during hands-on training | *Source: EPIC India, International Innovation Corps*

Strengthening Water Quality Monitoring and Surveillance in Madhya Pradesh

A Community-Based Initiative involving Community Health Officers

- **Ravindra Pare**, PHED Madhya Pradesh, **Kiran Kumar Sen, Kalpana Bilwal, & Maansi Shah**, INREM Foundation

Introduction

Jal Jeevan Mission has placed a strong emphasis on enhancing Water Quality Monitoring and Surveillance (WQMS) through community participation. As part of this initiative, five women in each village have been trained to regularly test the water quality using Field Test Kits (FTKs).

In Madhya Pradesh, an innovative and experimental initiative has been sprung to involve a broader group of community members, specifically Community Health Officers (CHOs), in testing the drinking water quality. This initiative is a collaborative effort involving various stakeholders, including the State Public Health Engineering Department (PHED), INREM Foundation, UNICEF, and district-level departments such as Water Resources, Health, and Panchayati Raj. The project aimed to improve water quality, raise community awareness about the health impacts of water, and establish a robust water surveillance mechanism at the village level.

It starts with one right person!

Located about four kilometers from the district headquarters of Jhabua, the village of Charolipada is home to around 3,500 people. **Neeta Katara**, a Community Health Officer (CHO), is in charge of the *'Aroghyam Kendra'*, the village's sub-health center that provides primary health care services.

Fig 21: Sub-Health Centre of Karolipada village in Jhabua district | *Source: INRIM Foundation*

Neeta was one of 86 CHOs trained by the Jhabua district PHED in September 2023, with support from UNICEF Madhya Pradesh and the INREM Foundation. The training focused on Water Quality Testing and completing assessment forms related to WQMS. Post-training, Neeta and her fellow CHOs were tasked with testing the water quality at schools, Anganwadis, and other village-level water sources. They were provided with FTKs and instructed to upload the results into an online form.

Initially, the CHOs were unsure about their testing capabilities and the necessity of performing this task. As a result, there was a lack of responses in the assessment forms. To address this, the District Collector of Jhabua, along with various departments such as Water Resources, Health, Panchayati Raj, and partners like UNICEF and INREM Foundation, convened to review the situation. They recognized that the purpose of the activity needed to be clearly communicated to the CHOs. A refresher session was then organized, focusing on the connection between drinking water testing and its health impacts. This session helped alleviate the CHOs' concerns and improved their understanding.

The Journey of Understanding Water Quality

Neeta soon realized the importance of this activity and how it would enhance her role at the Aroghyam center. She began testing the drinking water sources with greater focus, including water samples from schools, Anganwadis, and communal sources like hand pumps and open wells. She tested for 11 parameters

provided with the FTKs, such as pH, nitrate, fluoride, chloride, total hardness, salinity, and iron.

During her testing in Bilidaj village, one open well sample showed a high concentration of nitrate—100 milligrams per liter (mg/l). Neeta wasn't initially sure about the significance of this result. She referred to the manual and discovered that the test was for nitrate. However, she still didn't fully understand the relevance of this high nitrate concentration.

After completing her tests, Neeta uploaded the results into the online form, ensuring that the data was entered into the Water Quality Monitoring and Information System (WQMIS) at the state level. She also recorded the values in the result sheet provided with the kit.

Leveraging Digital Tools to build WQMS

Like Neeta, other CHOs also carried out assessments, which were recorded in Google Forms. These forms were user-friendly and scalable, making data collection easier. In collaboration with the district team, the CHOs collected data from 314 villages, uploading the results, which helped gauge the overall water quality status.

This assessment, conducted by the MP PHED, was unique in its objective to gather ground-level information about water testing practices in the villages. This included evaluating the availability and usage of field testing kits, the frequency of their use, and identifying who was responsible for testing versus who actually conducted the tests. This information helped the district PHED devise better strategies, improve testing practices, distribute kits where needed, and offer refresher training when roles were unclear.

Figure 22: A Jal Mitra, working at PWS system | *Source: EPIC India, International Innovation Corps*

Building Awareness and Knowledge

Despite her initial uncertainty about the implications of high nitrate levels in water, Neeta's curiosity grew. She interacted with various people in her role and wanted to know more about how nitrate contamination occurs in drinking water sources such as open wells, and its potential health risks. This desire for knowledge led her to inquire more about it, so she could better communicate the issue and raise awareness in her community.

Recognizing this knowledge gap, the INREM Foundation developed "OurWater Bot" on the open-source Glific platform. This bot facilitates conversations via WhatsApp, using large language models like ChatGPT and Indian language translation models under the Bhashini mission. The bot's knowledge base draws from the Safe Water Learning Cards (SWLCs), which simplify complex topics related to water quality management for diverse stakeholders. These SWLCs were developed based on years of on-the-ground work on water quality.

When Neeta was introduced to the bot, her first question was about nitrate—how it occurs in water, its harmful effects on human health, and what can be done to address it. This interaction helped Neeta gain a clearer understanding, which she could then share with her community.

Neeta is now confident in sharing information with her community about nitrate contamination and its health impacts. Through regular water testing, recording results, and educating the villagers, she is playing a crucial role in strengthening the Water Quality Monitoring and Surveillance system (WQMS) in her area.

Conclusion

The initiative to strengthen water quality monitoring and surveillance in Madhya Pradesh stands as a model for community-based water quality management. It highlights the effectiveness of collaborative efforts between the Water and Health Departments, stakeholder engagement, and capacity building in improving water quality and ensuring sustainable water resources. As the project continues to evolve and is adopted in other districts of the state, it has the potential to transform water quality management and guarantee safe drinking water for all communities. With continued support, innovation, and commitment, this initiative paves the way for a healthier and water-secure future for the region's communities.

Copy editing by: Lopamudra Panda

Greywater Management in Uttarakhand and Himachal Pradesh

- **Virendra Verma**, Team Leader at, Himmotthan Society (Tata Trusts)

Under the Water, Sanitation, and Hygiene (WaSH) initiatives of Himmotthan Society (Tata Trusts): 'Jal Jeevan Mission-JJM' Programme is being executed in 80 villages of Tehri District of Uttarakhand covering 20 villages in Chamba block, 20 in Saklala, 20 villages in Bhilangana and 20 villages in Jadipani block) and 104 villages at Kumaon region (42 Gangolihat-Pithoragarh, 40 Lamgarha and 22 Hawalbag-Almora) and 87 villages at Kangra & 30 village – Paonta Sahib, Sirmaor, Himachal and 33 villages at Leh since August 2021 and will last till October 2024. The project is being financed by Tata Trusts and implemented by Himmotthan Society in Uttarakhand, Leh and Himachal covering a total of 320 villages.

Tata Trusts is a RWPF Partner with DDWS, Ministry of Jal shakti, Government of India to support in Swachh Bharat Mission – Gramin (SBM-G) and Jal Jeevan Mission, therefore, Tata Trusts with its associate organization 'Himmotthan Society' has focused on a challenging issue of greywater in the intervention villages. In Uttarakhand and Himachal Pradesh Himmotthan's field team members are creating awareness on various components SBM-G & JJM through different innovative activities like wall paintings, participatory activities through SARAR tool kit, village rallies, transact walk for sensitization on ill-effects of greywater and its management, demo sessions on WaSH, awareness generation on waste management, clean toilet, composting and plastic segregation, call based assessment of model villages created under SBM-G and physical assessment of community sanitary complexes and training sessions on SBM-G components.

With abundance of water available through household tap connections under JJM, the quantum of greywater generation also increased in villages. If proper management of greywater is not taken care, then it will lead to environmental hazards and ill effect on health. Thus, under the key focus area of greywater management, the villagers are sensitized on managing the greywater well by constructing soak pits, using it in kitchen garden etc. In the same line Himmotthan has selected some villages where the awareness generation activities were being conducted since last 2 years. Knowing the bad effect of greaywater and benefits of it's management community gathered to deal with this and contributed to build the soak pits in the form of labor, like pit digging & arranging extra pipe for connecting greywater with soak pit.

Himmotthan supported individual HH beneficiary members in bricks, cement, sand, pit lid, pipe and joins, SS Jali and provided a successful soak pit design and full technical support during soak pit construction. The following are the details of soak pits constructed in Uttarakhand and Himachal.

The 21 villages covered under this initiative have shown remarkable progress, with many households already equipped with soak pits. Some villagers have even taken the initiative to reuse wastewater in their kitchen gardens. This direct support, combined with the villagers' self-initiatives, has fostered a sense of community willingness towards adopting soak pits for greywater

State	District	No. of Blocks	No. of Villages	No. of Soak Pits constructed for greywater management
Uttarakhand	Tehri	03	08	229
	Almora	02	04	103
	Pithoragarh	01	02	63
Himachal	Kangra	02	05	330
	Sirmaor	01	02	47
	Total	**09**	**21**	**762**

management. As a result, villages are becoming cleaner and more hygienic. Regular motivation and sensitization efforts on greywater management have encouraged more villages to construct soak pits using their own resources, supplemented by government support through programs like MNREGA. This is a true testament to the power of community unity. When communities come together for a common cause, they can achieve remarkable things and make lasting change happen.

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Figure 23 and 24: Kemra Gaon, Bhilangana, Tehri Uttarakhand | *Source: Himmothan Society (Tata Trusts)*

Figure 25 and 26: Manjyad Gaon, Chamba, Tehri Uttarakhand | *Source: Himmothan Society (Tata Trusts)*

Women empowered through group participation and involvement in JJM

- **Vinod Kothari**, Programme Coordinator, Himmotthan Society (Tata Trusts)

Issue: One of the major challenges faced by Mehat village was lack of access to water. The primary cause of this issue is the absence of natural water sources in the area. The village has an old water supply line, but water is available only 3 to 4 days a week, and the pipelines are in poor condition, failing to meet the daily needs of the people. There is just one *naula* (a traditional water source) near the village, which all households depend on for their regular water supply.

This scarcity of water led to significant daily struggles for the women of Mehat. People were unaware of the importance of clean drinking water and sanitation, and their water had never been tested for quality. In conversations with the women of the village, it was revealed that falling ill was common, though the exact reasons were unclear. Financial constraints further aggravated the situation, as they lacked funds for treatment. According to some elderly women, they had been consuming this water for generations, despite suffering from waterborne diseases like cholera, diarrhea, and jaundice.

Background Mehat is a revenue village in Gram Panchayat Kathwari Baghrat, Sirmaur development block, Himachal Pradesh. It is located 47 kilometers from the district headquarters in Sirmaur. According to reports from the Anganwadi and the village head, Mehat has a total population of 140 people. The village is situated about 1 kilometer from the main road. The primary sources of income for the community are agriculture and animal husbandry. Women dedicate most of their time to farming, cultivating crops like wheat, barley, gram, and mustard.

Water scarcity created numerous challenges for the residents, including disruptions in agriculture and animal husbandry. Impure drinking water further worsened their situation, causing illnesses and financial hardships. During the rainy season, the water supply was relatively sufficient, but the problem would intensify by April and peak by June when the water volume in taps significantly reduced.

Intervention: Every problem has a solution, and finding it requires determination and action. The women of Mehat reached out to the concerned department and the Himmotthan Society (Tata Trusts) for assistance, paving the way for Jal Jeevan Mission (JJM) to begin it's work in the village. The mission, along with the genuine efforts of Himmotthan Society, aimed to provide clean water to every household, offering residents an opportunity to improve their lives.

Prior to JJM's intervention, the residents were unaware of how to clean or test their drinking water. The Himmotthan Society conducted capacity-building training for Village Water and Sanitation Committee (VWSC) and Water Quality Monitoring and Surveillance Committee (WQMSC) members through multiple meetings and sessions. The members

Figure 27: Focused Group Discussion | *Source: Himmotthan Society (Tata Trusts)*

Figure 28: Water Quality testing by surveillance committee members
Source: Himmotthan Society (Tata Trusts)

were trained in water quality testing, sanitation, hygiene, prevention of waterborne diseases, and water conservation.

The eagerness to learn was evident, especially among committee members and schoolgirls who participated in the training. They were educated about water-soluble impurities, diseases caused by contaminated water, and the process of water testing. Practical demonstrations were conducted, and the Pani Samiti members performed water testing experiments themselves, using samples from Bavdri and tap water. This hands-on training boosted the confidence of several women, notably Mrs. Kavita Verma, Mrs. Lata Verma, Mrs. Geeta Verma, and Mrs. Rita Verma, who can now independently inspect water quality and teach others.

Figure 29: Community Awareness drive | *Source: Himmotthan Society (Tata Trusts)*

As a result, the locals have become more aware of water conservation and cleanliness practices. Every household in Mehat now has access to taps under the Jal Jeevan Mission's "Har Ghar Jal" initiative, and the water supply scheme is nearing completion. Despite limited water resources, residents have adopted innovative methods to sustain agriculture and improve productivity.

Outcomes: This is a success story of the resilient and determined women of Mehat village. Through their efforts, they raised community awareness about water sanitation and its importance. With the support of the Himmotthan Society, the women of the WQMSC are saving lives by ensuring access to safe drinking water and preventing waterborne diseases.

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> ***"Before JJM, we were overwhelmed by our struggles and sought any possible help to resolve them. We were unaware of water sanitation and cleanliness practices. Thanks to Government, Jal Jeevan Mission and the efforts of Himmotthan and Tata Trusts, we have gained self-confidence, overcome hesitation, and now understand the importance of water quality,"*** say the village women with gratitude.

Transforming Rural WASH:
The Community-Driven Success of Jakekurwadi Village

- Tushar Suryavanshi, Navnath Ghodke, Ankita Yadav, Arun Dahale, Eshwer Kale[1]

In the heart of Dharashiv district, nestled along the Solapur highway in, Jakekurwadi village emerges as a beacon of hope and innovation in rural water, sanitation, and hygiene (WASH) practices. With a population of 1,594, this small village has transformed its environmental and community landscape through remarkable collective effort and strategic interventions.

Background and Context

Jakekurwadi faced significant challenges typical of rural Indian villages: limited water infrastructure, sanitation issues, and potential health risks. Located in a region prone to water scarcity, the village could have easily succumbed to environmental and infrastructural limitations. Instead, the community chose a path of proactive transformation.

Innovative Community Practices

The village's journey began with empowering its most valuable resource: its people. A Village Water Supply and Sanitation Committee (VWSC), led by three dynamic women members, became the driving force of change. Their first breakthrough was achieving 100% water tax collection and implementing monthly water testing procedures a mandate under Jal Jeevan Mission for operation & maintenance of the Pipe Water Supply System for a long term basis and ensure people are getting quality water.

Waste Management Movement

The community didn't just manage waste; they reimagined it. Every household received separate dustbins for wet and dry waste. What seemed like a simple intervention became a catalyst for broader environmental stewardship. They started converting collected waste into fertilizer and prohibited plastic under 50 microns, demonstrating how small actions can create significant impact.

Remarkable Outcomes

Figure 30: Cleaning drive | *Source: Jakekurwadi Gram Panchayat Album*

[1] All authors are part of WOTR Centre for Resilience Studies (W-CReS), a research centre of Watershed Organisation Trust (WOTR). For feedbacks, you can write to eshwer.kale@wotr.org.in. This case study is documented with the support from the Water for People.

Water and Sanitation Transformation

Through Jal Jeevan Mission, 349 houses now receive regular water supply via a sophisticated household tapping scheme. The village achieved 100% toilet coverage, eliminating open defecation. They even innovatively began using treated sewage water for coconut tree cultivation, turning a potential environmental challenge into an agricultural opportunity.

The results speak volumes:

- Har Ghar Jal by providing 100% household tap connections
- A robust water purification system
- 100% toilet use resulting maintaining ODF status
- Wastewater management
- Monthly community cleaning drives
- Bans on harmful practices like spitting in public and consuming gutkha
- Active community participation across all age groups
- Empowered Community

Lessons Learned

Jakekurwadi demonstrates that sustainable development is possible when communities come together with a shared vision. Their model proves that grassroots involvement, women's leadership, innovative thinking, and state support can overcome significant infrastructural challenges.

Conclusion

From a village struggling with basic WASH infrastructure to a model of community-driven sustainable development, Jakekurwadi stands as a testament to the power of collective action and visionary local governance.

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Figure 31: Village Entrance view – coconut farming using treated sewage water | *Source: Jakekurwadi Gram Panchayat Album*

Blending water and education for sustainability!

A case study on Government Inter College Patrani–Nainital, Uttarakhand

- **Deon Sajan,** Central Himalayan Rural Action Group, Uttarakhand

> *"Education is the most powerful weapon which you can use to change the world"*
>
> -A.P.J. Abdul Kalam

Educating a child is empowering them into making a nation's future. And for a child to get the necessary foundation, they should have access to an educational institution that provides with all the basic necessities for the child's education. A Government Intermediate college is one such institution that provides intermediate/ secondary education to the children from the rural parts of our country. One of the important basic necessity for an operational educational institution as such is the access to clean and hygienic drinking water, water for sanitation and other domestic use in the schools. Internalising this Jal Jeevan Mission has provisioned tap water connections in anganwadi centres (AWCs), schools and ashramshalas across rural India. Currently 89.36% schools and 85.21% AWCs have tap water connections as reported by states/UTs.

Many CSR initiatives and organizations are also working towards the same cause of ensuring water avalability and education on safe

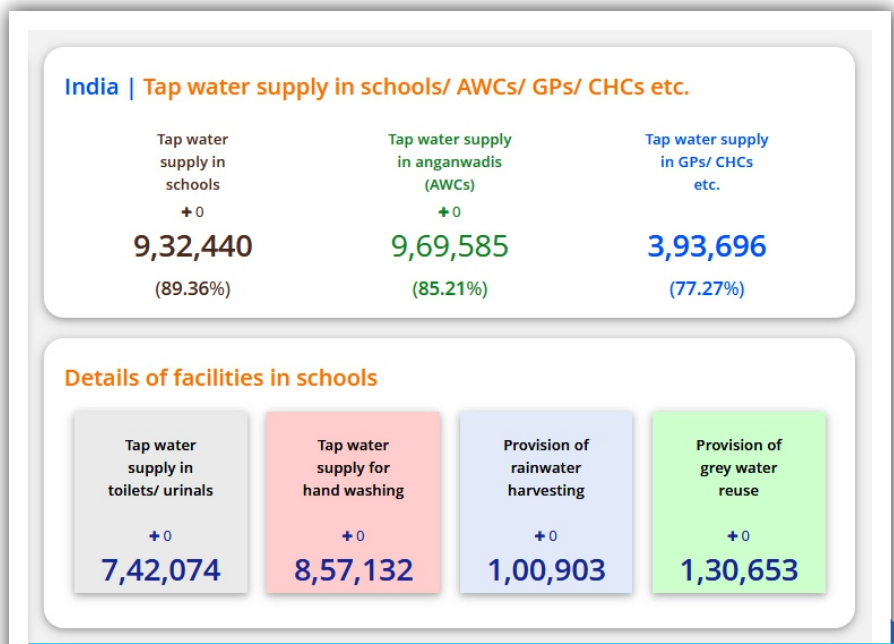

Figure 32: Status of Tap water connections in schools and AWCs | *Source: JJM Dashboard*

Figure 33: Rainwater Harvesting Tank at Patrani Inter College | *Source:CHIRAG*

water, management, water quality and conservation etc. Ashok Leyland in partnership with CHIRAG, aims to improve water security for the school's children, teachers and *bhojan mata*[2] alike by which the children are able to gain the basic right to education at a hygienic and clean institution. One such institution, that transformed itselves with the initiative is 'Government Intermediate College, Patrani', a remote institution located in the Okhalkanda block of Nainital District in Uttarakhand. The school has a strength of 235 students, attending from 5 surrounding villages at a radius of 4 km.

> ***"The provision of water at schools is one of the 'highly effective practices in increasing access and learning outcomes. In addition to the necessity of water to maintain personal and environmental hygiene, reducing student dehydration in schools has been associated with improved cognitive abilities"[3]***

The availability of water was in a pitiful state in 2020. In addition to scanty availability, the quality of the water was also heavily compromised. The consequences were clear in the food prepared, dirty utensils and the standards of sanitation & hygiene.

The remote village's harsh terrain and water scarcity severely impacted the 106 girls at the local school. During their menstrual cycles, many preferred to stay home due to lack of water and proper sanitation. The school recorded a significant 23% absenteeism rate due to water-borne diseases like dysentery and typhoid.

The mid-day meal cooks, Ms. Pushpa Devi and Ms. Nanda Devi, had to travel 2.5 km to fetch clean water for cooking. This highlighted the crucial role access to clean water plays in the education system.

CHIRAG, with support from Ashok Leyland, constructed a 10,000-liter Rainwater Harvesting Tank (RWHT) at the school. This collects and filters rainwater, providing additional water for various purposes. Two 50-liter gravity-based water filters were also installed to ensure safe drinking water for students.

Post-project completion, the school now has year-round water availability. Students are participating in activities like planting flowers and vegetables and have access to clean drinking water and handwashing facilities. This has significantly improved their overall health, hygiene, and educational experience.

The children are now less prone to water borne diseases as they have easy and clean access to safe and hygienic drinking water and cleaner toilets. The practice of keeping good hygiene will always keep the children away from diseases and help them study in the school without fear of skipping classes due to illness or lack of basic facilities in the school. The *bhojan mata* or the cooking lady now has easy access to water anytime to cook the mid-day meal without walking to faraway springs or handpumps to fetch water and having to carry the heavy load on her head.

Besides the infrastructure, the notable successful aspect of the ongoing collaboration between CHIRAG and the Ashok Leyland, is the effort put on engaging with the students for a dialogue on water. Considering this cadre of young children to be the forebearers of conserving the natural resources in the future, heavy investment is made on building their capacities at the foundational level. Through training programs, practical demonstrations, competitions their enthusiasm is built, and the overwhelming part is the learning that gets carried to their homes, their parents, other family members in spreading the urgency of the situation.

Certainly, the experience inspires how 'Water' blended with 'Education' is promising 'Sustainability'. The students, teachers and the management of the institution express sincere gratitude to the Ashok Leyland, a Hinduja Group company for their continued support and commitment to conserve the Natural Resources without any compromise to the needs of the future generations.

Key Outcomes:

1. 30,000 liters of extra water/each year is available for the children
2. 12,90,600 liters of filtered water is dispensed for the school children since 2020
3. The absenteeism due to water borne illness has reduced by 72% since 2020
4. Drop-out among the girl children on attaining puberty reduced by 23%

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[3] https://data.unicef.org/resources/wash-in-schools

A Renewable Safeguard for the Water Woes in Uttarakhand

A case study from Jadh village of Uttarakhand

- **Shri Surendra Singh Negi,** Central Himalayan Rural Action Group, Uttarakhand

Context

Water the fundamental necessity for the existence of life. Uttarakhand is known to be a state from where all the perennial water systems originate. With the glaciers and snow-capped peaks in the state, it is hard to believe that the state faces a severe challenge of access to water. Moreover, the contribution of the springs to the water systems in the hills and the plains remain latent. Ironically the springs are the largest contributors to the major river systems in Northern India and yet glaciers remain highly overrated contributors.

These water sources are in grave danger. The water levels are deteriorating at an alarming rate and challenge the existing life form in the region. The vegetation patterns have changed, the landscape has transformed into barren, rocky terrain and many spices of birds can hardly be seen. The birds are an indication of the health of natural regeneration, which remains grim. One of such cases is village Jadh, a remote village with 23 households from Okhalkanda administrative block in Nainital District.

All the households in this village belong to backward category of Scheduled Caste. They heavily depend on labour work for their livelihood. With the unavailability of water, the agriculture is practiced merely for their subsistence and heavily relies on the rainfall. They depend on 'Badikudi Dhara' a natural spring at a proximity of 550m from the village along the steep and narrow trails. The spring was historically a perennial spring, but over last 5 years, it becomes completely dry during the summer season.

Poor accessibility makes it even more difficult for any help in the form of tankers etc. to reach to the village. The hardships have been pushing the people to migrate to Haldwani and live in miserable conditions.

In September 2019 (soon after monsoon), the spring had a discharge of 3 litres per minute; which means roughly 4,320 litres available in a day for 150 individuals (approximately 28.8 litres per person per day). As per the National Rural Drinking Water Programme, an individual requires at least 55 litres of water per day for his/her water needs in a day[4] which is further mandated under Jal Jeevan Mission[5]. However, each individual in the village received pretty less water. The shortfall forced the villagers to compromise on their sanitation and hygiene as they would use available water for drinking and cooking and skip bathing, washing clothes, using toilets.

Intervention:

A) Source Rejuvenation

Azim Premji Philanthropic Initiatives (APPI), in collaboration with Central

Village Profile		
Hamlet	:	Jadh
Gram Panchayat	:	Simalkanya
Block	:	Okhalkanda
Total Population	:	151 (80 Male, 71 Female)
Altitude	:	1450 m to 1650 m
Average Rainfall	:	900mm to 1100mm
Available area	:	11.25 Ha

Treatment Measures
Structural Repairs to arrest leakages
Deep Recharge Pits: 91 Nos
Roof water Recharge Pits: 13
Vegetative Measures: Tree Plantations: 91 Nos.

[4] https://jalshakti-ddws.gov.in/sites/default/files/NRDWP_Guidelines_2013.pdf
[5] JJM_Operational_Guidelines.pdf

Figure 34: Pre-intervention Assessment | *Source: CHIRAG*

Figure 35: Structural Restoration of the Spring | *Source: CHIRAG*

Himalayan Rural Action Group (CHIRAG) intervened and worked closely with the communities to solve this problem. Priority was laid out to study the catchment area of the source to identify the Recharge zone[6]. The recharge of the springs is a long term and continual process; during the planning of interventions, special measures were taken to address the immediate crisis of water. For the identified spring, the recharge zone span over 2.53 Ha area.

The land identified as the recharge zone had private ownership. Engineering and Vegetative measures were recommended to treat the catchment area of the spring. The owners of the land cooperated to allow the recharge measures in the interest of rejuvenating the water source for the community's use, as the shortage of water was acute.

Treatment measures adopted in the catchment area were successful in arresting the surface run-off and infiltrating the rainwater under the ground. This resulted in the recharge of aquifers feeding water to the spring. The implementation was carried out in close coordination with the Water User Group (WUG), who took the ownership of the operations and maintenance of the treatment measures.

The committee took the responsibility of mobilizing the communities, solving any internal conflicts and ensuring that a continuous dialogue around water is made. As a commitment for future maintenance of the interventions, the beneficiaries contributed **Rs 100 monthly** towards O&M of the structures. As of January 2025, the communities have raised **Rs 41,267/-** from community contribution.

Mr. Prakash Chandra and Ms. Khila Arya are the Key Resource Persons designated to monitor the discharge of the springs on a monthly frequency to maintain quality.

Now the discharge level of spring is 7.2 litres per minute, which is equivalent to 10,368 litres in a day. As a result everyone in the village has abundance of water which was only 28.8lpcd pre-intervention.

Women are saving around 2 hours (120 minutes) of time daily, as they no longer wait to fill their containers. On average, 15 minutes are saved per trip, with 6-8 trips made daily. This saved time is utilized for rest and childcare.

Figure 36: Monitoring of Spring Discharge by a KRC | *Source: CHIRAG*

[6] Recharge Zone: The region where the soil & moisture conserved results in recharge of the water in the source.

Figure 37: Rainwater harvesting Tank | Source: *CHIRAG*

B) Reducing Pressure on the Source

To reduce pressure on the spring during summer and winter lean periods, 13 rainwater harvesting tanks (7,500 litres each) were integrated with rooftops. These tanks fill thrice a year, utilizing the region's 900mm-1100mm rainfall, and reduce the spring's workload by 2,92,500 litres. The harvested water is used for washing, sanitation, and hygiene, freeing up spring water for cooking and drinking.

The tanks have reduced daily water trips from 5-8 to 2-3, saving households up to 300 minutes of drudgery per day. Women now have time to engage in vocational activities like knitting and teaching.

C) Reducing Drudgery

The community's water woes were largely addressed through source rejuvenation and rainwater harvesting tanks. However, fetching water remained stressful, especially for women and girls who had to carry heavy containers over 1.1km of steep trails. During summer, they had to walk 2.8kms to another village. This stress led to serious health complications, including miscarriages and prolapsed uterus.

To address this, CHIRAG and APPI collaborated on a unique initiative to use solar energy to lift water to the village. Two high-discharge perennial springs were tapped, and solar energy was used to lift water to the village tank. Spring treatment measures ensured a perennial flow. With abundant solar light in the region, this renewable energy solution effectively conserves water for perpetuity. Cherry on the top of the cake is household tap water connection that has further relieved the burden of water woes.

The Design:

The solar lift scheme design consists of two water collecting tanks of 10,000litres capacity from which the water is pumped into a distribution tank (of 10,000l capacity) which is at a

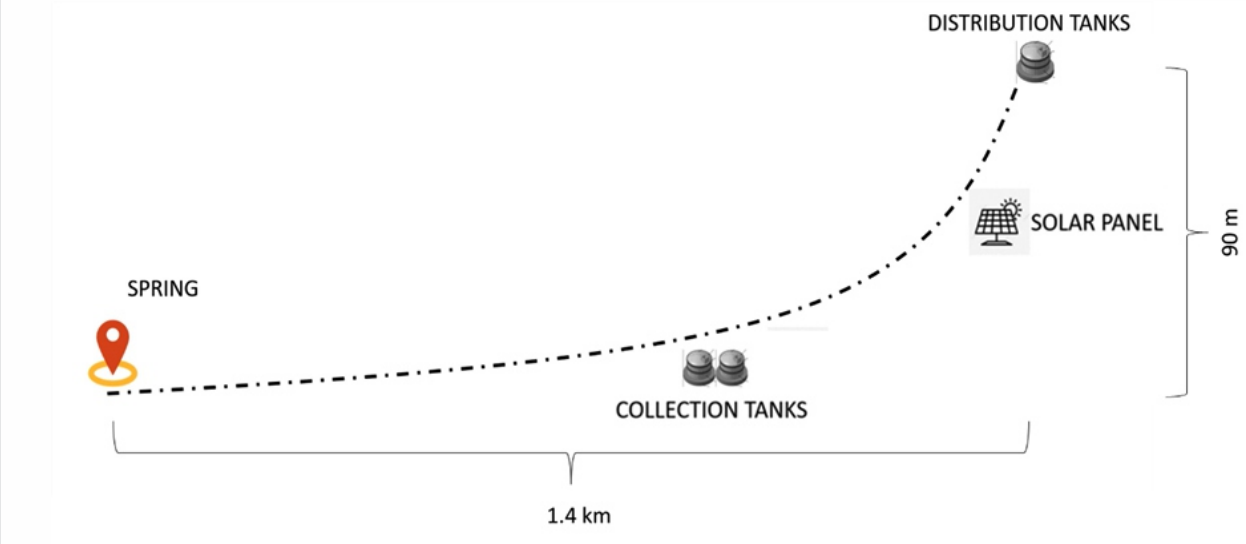

Figure 38: Conceptual Layout of the solar lifting scheme | Source: *CHIRAG*

> The community takes ownership of the system's operation and maintenance. Mr. Prakash Chandra, a Key Resource Person, says: ***"I've been trained to operate the solar panel and control panel. Mr. Bhupal and I were trained on how to operate the pump. We run the motor two times a day and make sure that the motor is not run in dry condition. Also, every month, we encourage that each household contributes to the O&M funds regularly. I feel this is a big responsibility and I will work sincerely to protect the support received."***

common point in the village the community level. The solar panels convert the solar power into the electrical energy to run a 3 hp submersible pump to lift the water. The technical specifications of the pump allow water to be lifted to a head of up to 150mts. In the case of Jadh village, the water is lifted to a head of 90m.

The solar lifting unit makes a provision of 30,000 litres of additional water per day to the community. With the water being lifted to the village and setting up of a distribution network by community themselves, the drudgery is completely reduced. As the spring water is lifted and distributed till homes, it is used by the households for their drinking and cooking purposes.

Moreover, with the surplus water, benefited households have been growing vegetables and other agricultural crops. This is a positive indication of a better living standard of the communities where availability of water has enabled better sanitation & hygiene, reduced stress of drudgery, ample time for childcare, engaging in vocational livelihood options, better nutritional intake with the growth of vegetables etc. The influence of this initiative has been immense on the village.

> ***"A good number of ladies are now attended meetings as they now have the freedom to do so, having been relieved of their daily water-fetching duties. You can see the relaxed faces of the women here, who are no longer burdened by this strenuous task. We can now even assist our husbands in farming and vegetable cultivation. The availability of water in our village is a blessing and a sign of prosperity. We are grateful to APPI and CHIRAG for their support."***
>
> - Smt. Lilavati Devi, Member Water User Committee

Water from the lens of Development:

The transformational stories from this village have inspired many in the region to organize themselves and conserve natural resources. This success story demonstrates how addressing fundamental needs can improve living standards and overall community development.

Once a water-stressed village with limited water, Jadh village now boasts the liters per capita per day. The block-level government acknowledges and appreciates the impact of the CHIRAG-APPI collaboration.

This initiative showcases the effectiveness of source rejuvenation, rainwater harvesting, and solar energy in lifting water closer to communities which also encouraged under Jal Jeevan Mission. It demonstrates how community driven renewable energy can ensure sustainable management of depleting water resources.

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A Success Story:
Transforming Rural Water Management through Community Empowerment

- **Dr Banasree Dutta,** Project Coordinator, Water for People

Jal Jeevan Mission (JJM), a flagship initiative by the Government of India, aspires to provide every rural household with Functional Household Tap Connections (FHTCs). This visionary program, aimed at ensuring equitable access to potable water, has found a success story in the collaborative efforts spearheaded in villages across the Birbhum District, West Bengal. Through innovative community engagement and the establishment of Water User Committees (WUCs), these rural communities are rewriting the narrative of water resource management.

At the heart of this transformation are the WUCs, institutions designed to empower local communities to take charge of their water supply systems. Recognizing the importance of inclusive participation, stakeholders from multiple levels of governance — Block Development Officers, RWS Engineers, Gram Panchayat (GP) representatives, and grassroots community members — came together to form these committees.

Key Features of WUCs:

- Representation of marginalized groups, women, and youth.
- Leadership roles such as Chairperson, Secretary, and Treasurer, entrusted to respected and capable community members.
- Clearly defined responsibilities, including daily operations, minor maintenance, and grievance redressal.

Figure 39: Meeting with Community | *Source: Water for People*

These committees have proven instrumental in ensuring the sustainable operation of water schemes, fostering accountability, and promoting community ownership.

The journey began with meticulous planning and coordination through Block- and GP-level meetings. In Blocks like Dubrajpur, Rajnagar, Suri I, and Khoyrasol, stakeholders convened to review progress, address challenges, and lay the groundwork for WUC formation. At the GP level, meetings focused on strengthening Village Water and Sanitation Committees (VWSCs) and institutionalizing practices aligned with JJM objectives.

Key achievements include:

- Formation of Beneficiary Committees in 9 villages from 9 Gram Panchayats of Birbhum District.
- Discussions on operational sustainability and utilization of funds for maintenance.
- Scheduled follow-ups to address specific local challenges, ensuring no community was left behind.

Village-level meetings brought the vision of JJM closer to reality. These meetings saw enthusiastic participation from GP members, District Project Management Unit (DPMU) and Implementation Support Agency (ISA) representatives, as well as local residents. In villages like

Figure 40: Focus group Meeting | *Source: Water for People*

Modapa, Dedaha, Adampur, Jhikra, Pungalaur, Harinajol, Amlachaturi, Aamgachi and Aduria, the formation of WUCs was formalized with resolutions emphasizing water conservation, equitable distribution, and inclusivity.

By engaging local communities, these efforts not only secured the formation of WUCs but also fostered a sense of collective responsibility. Women and marginalized groups were particularly encouraged to take active roles, making the process truly representative and equitable.

Once established, the WUCs embarked on their mission to oversee and manage water supply systems. Their responsibilities extended beyond routine maintenance to include financial management and monitoring of water quality. With transparent record-keeping and regular reporting to higher authorities, the committees demonstrated their capability to maintain high operational standards.

These efforts ensured that the water supply systems remained functional and sustainable, meeting the needs of every household.

The story of WUCs under Jal Jeevan Mission in Birbhum District is a testament to the power of community-driven initiatives. By fostering accountability, encouraging participation, and institutionalizing robust frameworks, these efforts have set a benchmark for sustainable rural development.

This success story highlights not just the provision of water but also the empowerment of communities to take charge of their future. It serves as an inspiring example for similar initiatives across the country, proving that with the right approach, the vision of equitable access to resources can indeed become a reality.

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Figure 41: Meeting with Community | *Source: Water for People*

Rani Asati: A Beacon of Water Conservation and Social Service

- **Sanjay Singh**, CEO, Parmarth Samaj Sevi Sansthan

The story of Rani Asati from Karri Village in Rajnagar Tehsil of Chhatarpur district in Madhya Pradesh is a testament to how determination and a dream to create change can transform a woman individual into an extraordinary force. Just three years ago, Rani knew nothing about water conservation, environmental protection, or social service. Her hunger to contribute for the development of her society and people made a way. Today, she stands as a source of inspiration, not only for women and girls in her village but also in neighbouring villages.

The Beginning of Change

Rani's village was grappling with an escalating water crisis. People were struggling with water scarcity, and awareness about environmental conservation was non-existent that has painted a bleak picture. Initially, Rani observed the challenges in silence. But soon, she resolved to take matters into her own hands.

Her turning point came when she attended meetings and discussions organized by Parmarth Samaj Sevi Sansthan. These interactions made her realize that the water crisis wasn't just a challenge—it was an opportunity for transformation. Learning about the impactful role of *Jal Sahelis* (Water Companions) inspired Rani to step up and take on the responsibility of improving her village's water and environmental conditions by becoming a *Jal Saheli*.

Figure 42: Rani writing awareness messages on wall | *Source: Parmarth Samaj Sevi Sansthan*

An Ordinary Woman's Extraordinary Transformation

As a *Jal Saheli*, Rani began with grassroots efforts. She held neighbourhood meetings, engaging women in conversations about water conservation. Her relentless commitment struck a chord with the community, gradually drawing other women to her cause.

Rani didn't stop within her village boundry. She extended her efforts to neighbouring villages like Siroj, Rani Kheda, Tanhaga, Vinenda, Surajpura Road, and Bamni Ghat. She organized and inspired women and girls in these areas, forming the *Kishori Jal Sena* (Adolescent Water Army), which trained girls in water conservation

> Rani says, ***"I have seen that when a woman becomes aware, the entire family and community become aware. My dream is for every village to have women and girls leading water conservation efforts and creating a better future for the coming generations."***

and environmental improvement. She aims to build a strong *Kishori Jal Sena* with 1,000 girls, believing that empowering women and girls with the responsibility of water conservation will lead to transformative societal change.

A Model of Collective Effort and Volunteerism

Rani's efforts transcend raising awareness. She and her team of Jal Sahelis and Kishori Jal Sena have actively worked on rejuvenating water bodies, including the village Chopra, Vinenda's pond, and Bamni Ghat's small lake. Their dedication not only revived these vital water sources but also ensured sufficient drinking water for animals, especially during droughts.

When Jal Jeevan Mission penetrated in the village, Rani come forward and supported in identification of source, and planning of PWS scheme. She often helps the VWSC members in all aspects. Today all the households in Karri have a tap connection at their homes. The village is a 'Har Ghar Jal' village. Rani's initiative in greywater management is another remarkable achievement. When Rani found out that though people are happy with ease access to tap water under JJM there is a possibility of water misuse and increase in greywater generation. She aware community about judicious use of water. By promoting the use of household wastewater for kitchen gardens, she has enabled families to grow fresh vegetables, significantly improving their nutrition and health.

Rani Asatin - An Inspiration

Rani Asati's story proves that resources and means are secondary to determination and dedication when it comes to driving change. She has demonstrated that even an ordinary woman can initiate extraordinary transformations.

Today, Rani is not just an individual but a movement, igniting hope and action wherever she goes. Her journey is a reminder that even a single person, armed with a vision, can inspire extraordinary transformations in society.

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Figure 43: Jal Sahelis led by Rani cleaning the water sources | *Source: Parmarth Samaj Sevi Sansthan*

Bridging Entrepreneurial Gap through Water:
A Case Study from Nainital, Uttarakhand

- **Goutam,** Central Himalayan Rural Action Group, Uttarakhand

Water is the most important resource that every human being requires to survive. This precious resource is reducing at a vulnerable rate especially in the Himalayan mountainous regions. Himalayan springs are major sources of water to nearly 90% of the communities in the Indian Himalayan Region. Additionally, these springs contribute significantly to the major perennial river systems in India. Yet, the communities residing in the region face a major challenge accessing them. Uttarakhand is one such state that faces major water crisis, as the access to groundwater in these regions is very difficult and the growing population as well as the demand is stressing the natural resource.

Jal Jeevan Mission is emphasising on recharge and rejuvenation of the traditional water sources to ensure water source sustainability. The mission is organised many workshops to reenforce this in Uttarakhand and other Himalayan states. Ashok Leyland, a Hinduja Group company initiated a project in Uttarakhand in collaboration with Central Himalayan Rural Action Group (CHIRAG) to recharge and rejuvenate the water sources that are on the decline. The project has successfully treated 140 springs till date under Jal Jeevan Mission.

The houses in the hills are traditionally scattered. Before the communities travelled to reach the water sources to fetch water for their domestic needs. The task was stressful, especially for the women and girls.

Figure 44: A Himalayan Spring | *Source: CHIRAG*

To reduce the stress for such remote households, the project made a special provision of integrating the rooftop for harvesting the rainwater. The project site receives an annual rainfall of 1600mm to 1800mm. This rainfall is good enough to fill a tank of 10,000 liters capacity (2 large water

tankers) thrice in a year. The intervention not only benefits the individual houses with additional water, but also reduces pressure from the spring source and wastage of tap water supplied under JJM.

> **"The water user committee had sanctioned a rainwater harvesting tank for my house. I had to walk a steep height of 1.4 kms to fetch water for my domestic needs and for feeding animals. Since the project required a contribution of 20% by the beneficiary, I along with my wife volunteered to contribute in the form of 40 person days of labour. It was the first time I was introduced to this technology of 'Ferro-cement' configuration."-** Recollects Mr. Lal Singh, resident of Okhaldunga village

Construction activity in the hilly region is very tough and expensive. This is mainly due to poor accessibility by roads, steep gradients. For the remotest household, the material needs to be carried as head load or on mules. Hence, a general practice is that for any construction activity, local materials (stones, sand etc) are used rather than procuring.

One technical challenge faced in the construction of the rainwater harvesting tanks was that the rocks found in the region was of 'Sandstone type'. Sandstone rocks are not ideal for any civil constructions as they have a tendency to absorb water and leak. Sourcing stones from outside was very expensive. The solution to this challenge was 'Ferro cement configuration'[7] tanks. This configuration of tank is analogous to 'composite' structures used in aviation industry. The moulds of the tank are light weight and repairable, making them easy to install at the site of construction.

Figure 45: Rain water harvesting Tank | *Source: CHIRAG*

The configuration is very cost effective, at the cost of a 6,500-litre capacity conventional tank one ferro-cement tank of 10,000 litre capacity can be built. There are only limited number of contractors who can build this configuration of tanks.

Mr. Lal Singh is a resident of Okhaldunga and is actively associated with the project since its inception in 2019. He is the president of Water User Group, Okhaldunga and the credit to influence interest among other members in the village to participate in the Springshed management activities. Before his association with the project, his main source of income was from odd labour job under the MGNREGA and small-scale cultivation of agriculture. The income for agriculture was unreliable as it was rain-fed. He stays with his wife and two children.

> ***"At first, people doubted if this tank was for real. Many had apprehensions; if the tank would be functional, what will be the consequence if it fails. This was the reason many people withdrew their request for the tanks. We were the first takers of the tanks. Our confidence was on the engineers from CHIRAG team and we took our chance. I have constructed conventional (PCC/RCC) water tanks through MGNREGA. This experience drew my interest in this."*** - Says Lal Singh

[7] Ferrocement is a type of thin walled reinforced concrete, commonly constructed of hydraulic cement mortar, reinforced with closely spaced layers of continuous and relatively small sized wire mesh of suitable material.

Figure 46: Sequence of building rainwater harvesting tank | *Source: CHIRAG*

In Lal Singh's word, ***"There are no employment opportunities in the village. For stable opportunities one would need to move to the plains. With a nucleus family relocating seems a difficult option for me. I used to rely on government benefits for the poor and some form of labour from MGNREGA or any odd constructions happening around. At times, I would feel depressed looking to the hardships and even indulge in alcoholism, gambling. Similar situation exists for several others also in the village.***

The project appeared as a saviour to me and my family. There was good employment generated from the implementation of Springshed treatment plans. We started seeing water increase in our springs and in year 2020, the water did not dry up at all in the springs. More than the benefits of employment, the long-term solution to our water problems were in place. The surplus overflow of the water now reaches till my farm and in my memory first time we could irrigate our farmland and cultivate onions, chillies etc. It was thrilling. I kept in touch with the project, participated in trainings, monitored the spring data and also assisted with the field level implementations. Under JJM almost 90% families have tap water connection at homes. So we have now quality water to quench our thrust and through Springshed water for farming and other use."

The construction of the rainwater harvesting tanks had another challenge. With limited number of contractors capable of constructing the tanks, there were delays in the execution of the tanks. These delays had cascading effect on the overall schedule of project timeline and we would miss out on harvesting the water from monsoon. The project has a back-log of 20 tanks from the first year. The strategy to mitigate this risk was to develop local cadre of contractors who can independently carry out construction of more tanks. At this stage, the active representatives from the village were encouraged to involve in learning the technique. Mr. Lal singh was trained by the civil engineers and exposed to on-the-job training with the ongoing contractor Mr. Heera Panda. The ideas was to transfer the technology to a local person so that any repairs in the future can be locally addressed. This guarantees the sustainability aspect. In the present day, Mr. Lal Singh has the capacity to build 60 tanks each year.

Till date, the project has handed over 180 rainwater harvesting tanks to the communities in the Okhaldunga cluster and has benefited 3,460 people. There have been zero reports of quality issues on the tanks handed

Figure 47: A rejuvenated spring structure | *Source: CHIRAG*

> ***"I volunteered as a labour with Mr. Heera Panda, the contractor who made the ferro-cement tanks for a period of 6 months. Working with him has helped me learn the skill. I started building tanks in tandem for the project at other sites. Till date, I have built 47 tanks and also trained 4 youth to assist me in building more."*** - Mr. Lal says.
>
> ***"He quotes: Ashok Lelyand has made this technology very popular in the region and created a business for me and other youth trained by me. Also, their support in encouraging me has helped me become an entrepreneur. From the construction of tank, I have earned close to Rs 5,70,000/- and can now afford to send my daughter and son to the school. I want them to study and become engineers. I have bought myself a scooty so that I can commute easily and inspect the work happening at different sites. I would have never imagined my life to transform to this level. We are thankful to Ashok Leyland and CHIRAG for the noble and sincere work they are facilitating."***

over to the communities and all the tanks are functional. Through water, prospects for other allied livelihood activities have opened up for the communities.

Indeed, the initiative has certainly inspired many in the communities like Mr. Lal Singh; with a lot of livelihood opportunities within their villages without having to migrate to the cities. This has certainly bridged a gap of entrepreneurship and promises to drive the development in the cluster.

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Figure 48: Lal Singh with one rainwater harvesting tank | Source: CHIRAG

Leading the change:
Inspiring action through awareness in communities

- **Deepa Rose,** State Safe Water Lead - Madhya Pradesh, Evidence Action

Figure 49: Smt. Sapna Kushwaha, at the National Safe Water Dialogue, India Water Week, 2024
Source: Evidence Action

Grit and determination define Smt. Sapna Kushwaha, a resident of Bharkheda Bondar village in Bhopal district, Madhya Pradesh. As a Tax Sakhi and an active member of a Self-Help Group (SHG), Sapna has become a beacon of empowerment and a leader in transforming her community. Her relentless efforts to address water challenges in her village highlight the profound impact of women-led, community-driven initiatives.

Bharkheda Bondar, a remote village with 391 households and a population of about 2,124, faced severe drinking water scarcity. Residents relied on unsafe sources like wells and distant hand pumps, resulting in widespread waterborne diseases, particularly among children. The dire situation underscored the need for a sustainable and safe water solution.

A Beacon of Hope: Jal Jeevan Mission

In 2023, the Gram Panchayat, with support from Evidence Action and under the guidance of the Jal Jeevan Mission, installed an In-Line Chlorination (ILC) device in the village. This initiative aimed to provide a regular supply of safe, chlorinated drinking water. Local pump operators were trained to maintain the device, but the community initially resisted chlorinated water due to its taste and smell.

Figure 50: Table-based doser In-Line Chlorination device set up by Evidence Action
Source: Evidence Action

This is where Sapna stepped in. She spearheaded grassroots awareness campaigns and organized community meetings to dispel myths and educate villagers on the health benefits of chlorinated water. Collaborating with the rural water and sanitation department, the Jal Samiti, SHG members, ASHA workers, and ANMs, Sapna facilitated door-to-door interactions and awareness programs. Her relentless efforts-built trust within the community and led to widespread acceptance of chlorinated water, which significantly reduced waterborne diseases among children.

A Female Trailblazer

Sapna's leadership not only improved access to safe drinking water but also empowered women in her community. She encouraged SHG members and other women to take on leadership roles and actively participate in village development. By fostering a sense of ownership among villagers, Panchayat members, and stakeholders, she ensured the sustainability of the initiative.

> Reflecting on her journey, Sapna shared, ***"After installing the water purification device in our village, people's health has improved. Initially, there were challenges, but awareness programs helped everyone understand its importance."***

Her remarkable work was recognized nationally when she shared her experiences at the National Safe Water Dialogue in New Delhi during India Water Week, organized by the Jal Jeevan Mission.

Strengthening Communities, Motivating Change

Sapna Kushwaha's story exemplifies how government initiatives like the Jal Jeevan Mission extend beyond infrastructure development to foster behavioral change and empower women. From being a member of an SHG to becoming a community leader, Sapna's journey underscores the transformative power of determination and community participation.

Through her tireless efforts, Sapna has demonstrated that one woman's determination can uplift an entire community. Her journey is a shining example of how initiatives like the Jal Jeevan Mission can inspire women to lead and create healthier, self-reliant villages. Sapna Kushwaha's story serves as a beacon of inspiration, proving that empowered women can drive sustainable change and build stronger communities.

Copy editing by: Lopamudra Panda

Figure 51: Community members discussing about the importance of safe drinking water | *Source: Evidence Action*

Swachh Sujal Gaon in Maha Kumbh 2025

- **Shri Radhakrishna Tripathi**, SWSM, UP & **Amit Ranjan**, NPMU

The 'Swachh Sujal Gaon' initiative features a Digital Corner with interactive games that raise awareness about water hygiene and conservation, alongside real-time information on village-level water supply status.

Over 40-45 crore devotees from across the globe attending Maha Kumbh 2025 is witnessing the remarkable transformation of Uttar Pradesh's villages through the concept of 'Swachh Sujal Gaon' (Clean and Water-Secure Villages). Themed 'Solution to Drinking Water: New Identity of My Village', the initiative highlights how Bundelkhand, once synonymous with water scarcity, now stands as a symbol of success in resolving drinking water crisis.

Set across 40,000 square feet, the exhibition is representing a vivid picture of a prosperous Uttar Pradesh, highlighting initiatives such as Swachh Bharat Mission, PM Awas, CM Awas, gram panchayat development, Water Quality, Quiz, and village solar energy adoption. The exhibit also provides multilingual accessibility, with information in Hindi, English, Bengali, Telugu, and Marathi, ensuring inclusivity for a diverse audience.

Figure 52: Set up of Swachh Sujal Gaon | *Source: SWSM, Uttar Pradesh*

Figure 53: Installation of milestone board at SSG, Prayagraj | *Source: SWSM, Uttar Pradesh*

fun and educational games highlighting the benefits of clean drinking water and the risks of consuming contaminated water. These activities aim to raise awareness about the importance of water conservation in an engaging manner.

Villagers from Uttar Pradesh can utilize the Digital Corner to access real-time information about water, tap connections, and water supply status in their respective villages with just a click. This initiative combines tradition, technology, and sustainability, leaving a lasting impression on the millions attending Maha Kumbh 2025.

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The 47-day event features numerous programs, offering a platform for rural women of Bundelkhand to share their stories of change. These include life-altering experiences. One such example is from villages in Banda, Jhansi, and Chitrakoot where youths remained unmarried due to shortage of water and now they are witnessing weddings. Similarly, women from Lalitpur and Mahoba recount how access to clean water has improved their lives and even addressed severe health impacts like hair loss caused by carrying heavy water load for years.

India's tradition of 'Atithi Devo Bhava' (Guest is God) is also being celebrated at Namami Gange and the Rural Water Supply Department's Swachh Sujal Gaon where guests are given 'Jal Prasad' in eco-friendly jute-cloth bags containing sacred water from the Sangam, a diary on the Jal Jeevan Mission, and study material showcasing success stories of transformation through water initiatives.

The 'Swachh Sujal Gaon' also features a Digital Corner with interactive elements such as a digital screen and a gaming zone. Visitors can engage in

Figure 54: A display of tap water at entry gate of exhibition area | *Source: SWSM, Uttar Pradesh*

Ensuring Water Security in Rural Areas of South Bihar through a Blended Scientific and Community-Based Approach

- **David Kumar Chaturvedi,** Joint Director, JJM-Bihar, PHED, Govt. of Bihar and **Pawan Kumar,** Coordinator, Aga Khan Foundation (India)

Need of Effective Groundwater Management

Groundwater management plays a critical role in ensuring water security in rural areas by sustaining drinking water utilities, fostering economic development, and enhancing human well-being. In alignment with Sustainable Development Goal (SDG)-6, the Government of Bihar has made significant progress, achieving 95.71% household coverage with functional piped water supply connections. Beneficiaries receive six hours of daily water supply, primarily sourced from groundwater. The state's flagship program, 'Har Ghar Nal Ka Jal' Yojna, encompasses four principal components: i) Source, ii) Storage tank, iii) Treatment Unit and iv) Water distribution pipeline networks. Among these, the source- predominantly groundwater - is of utmost importance for functionality of drinking water supply schemes. This state initiative is well aligned with centre's flagship mission 'Har Ghar Jal'. Any failure at the source disrupts the functionality of the entire water supply system. The regions of South Bihar are facing a critical challenge in terms of water availability, particularly during the summer months. The primary issue stems from the low water yield from borewells, which are a vital source of piped based drinking water supply. In many cases, borewells fail to provide any water during the peak summer period, exacerbating the water scarcity problem. To mitigate this challenge in South Bihar, a synergistic approach integrating advanced scientific techniques such as remote sensing and Geographic Information System (GIS) with robust community participation was implemented, with support from the Aga Khan Foundation (India).

Project Scope and Methodology

The initiative commenced with a pilot project in the districts of Gaya and Nawada regions (as shown in figure 1) identified for their high incidence of source failure. The methodology comprised:

- Development of groundwater prospective zones through scientific studies.
- Construction of recharge structures based on technical recommendations.
- Community engagement through Jal Chaupal and regular consultations in accordance with state guidelines.

These interventions aimed to achieve groundwater sustainability while addressing critical issues such as declining water levels and recurrent droughts.

Development of Thematic Maps and Groundwater Prospective Zones

To plan and implement area-specific groundwater recharge initiatives effectively, the first step is to develop

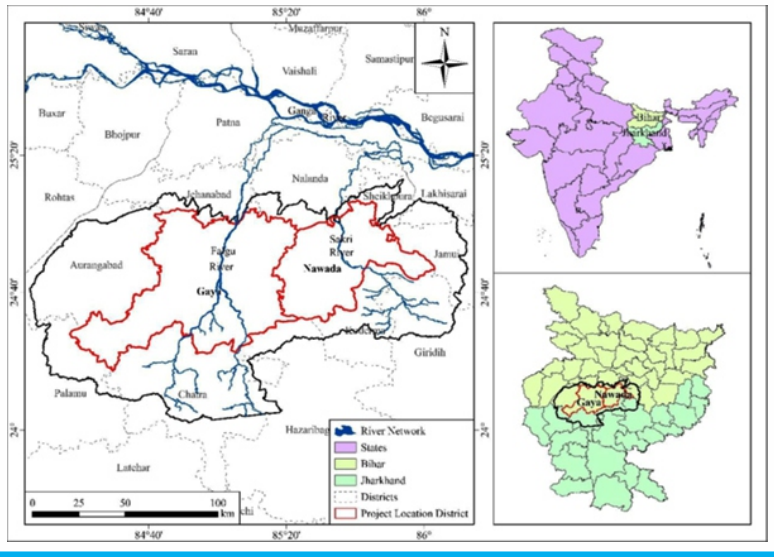

Figure 55: District border is shown in red color and large catchment area is shown in black color | *Source: PHED Bihar*

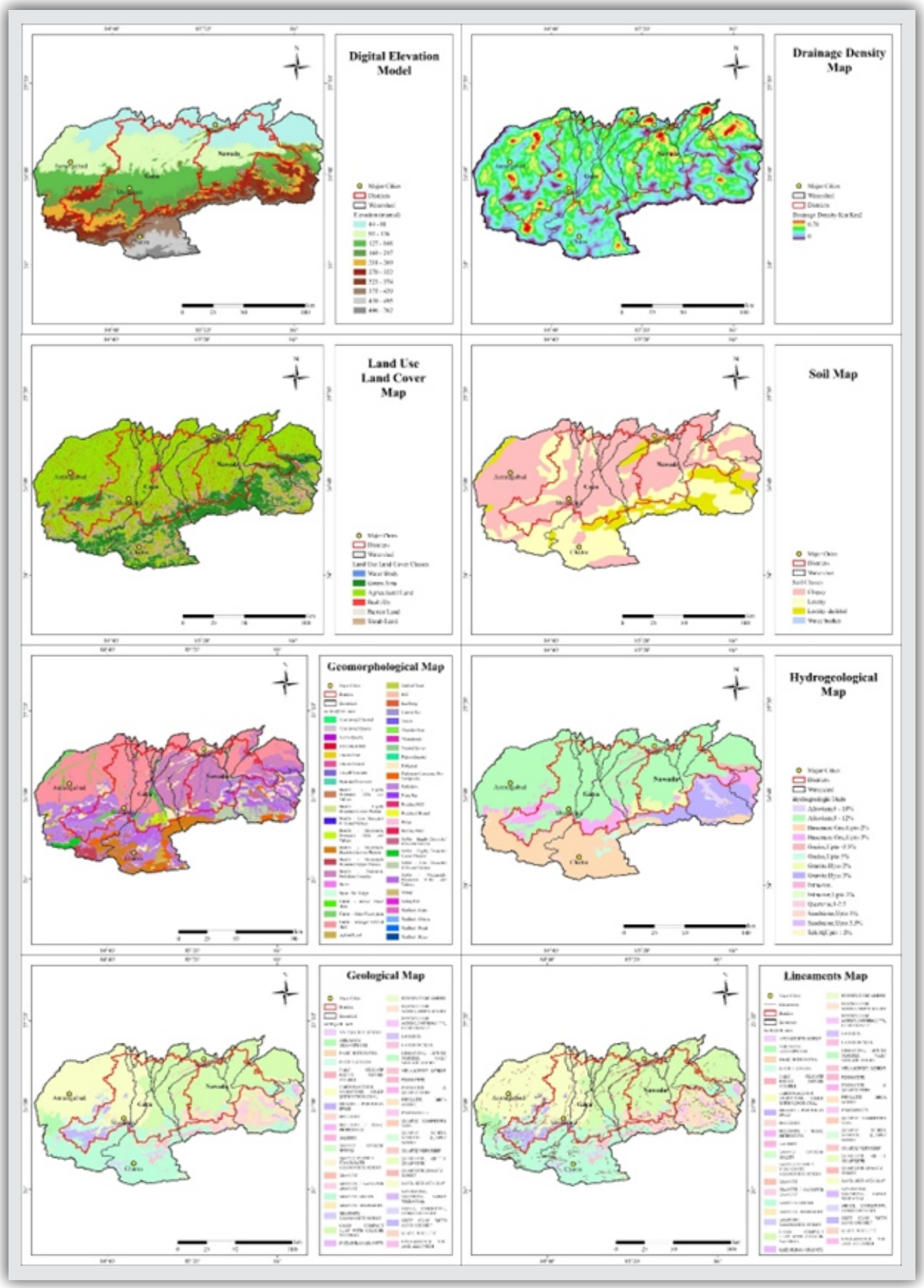

Figure 56: Different thematic maps generated for the catchment area under pilot study | *Source: PHED Bihar*

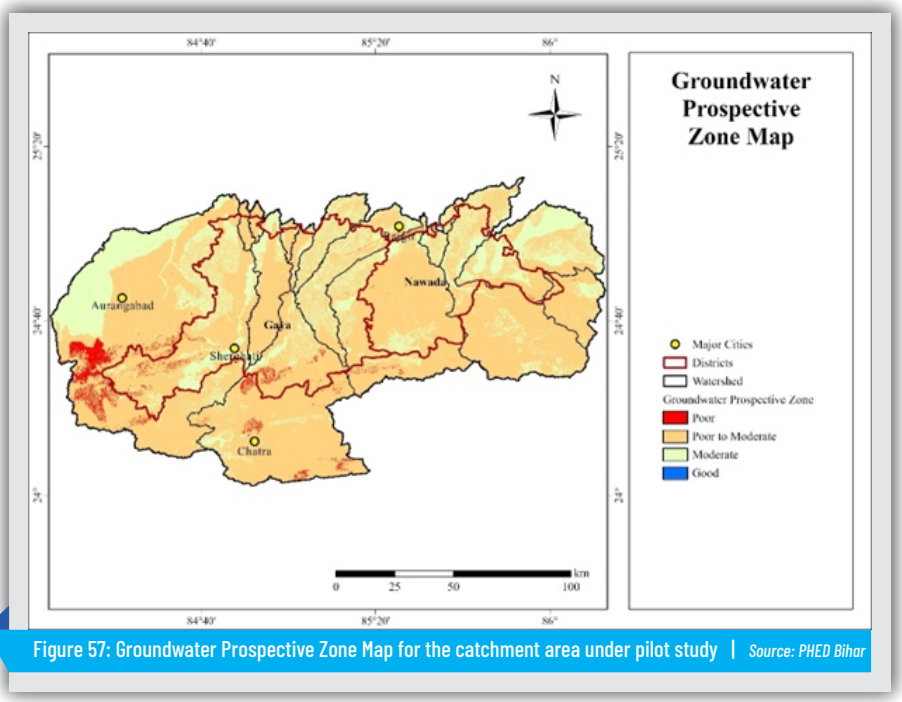

Figure 57: Groundwater Prospective Zone Map for the catchment area under pilot study | *Source: PHED Bihar*

various thematic maps and utilize hydro-geomorphological maps that identify groundwater potential zones for targeted recharge. This approach classifies catchment areas into distinct recharge zones, which are critical for efficient groundwater management. Hydro-geomorphological maps provide a comprehensive understanding of the geological and topographical features influencing groundwater availability. By categorizing catchment areas into recharge potential zones—ranging from "Good", "Good" to "Moderate," "Moderate to Poor," and "Poor"—the study enables the prioritization of recharge activities according to each zone's specific characteristics. Using remote sensing and GIS tools, thematic maps are created and, through overlay analysis, groundwater prospective zones are delineated, as shown in the figure 2.

Once the groundwater prospective zone map for the catchment area is created, a water conservation plan is developed and shared with the relevant department responsible for water conservation and harvesting initiatives. The groundwater prospect zones reveal approximately 13,304 sq. km classified as poor to moderate, 4,130 sq. km as moderate, 286 sq. km as poor, and 0.06 sq. km as good (Figure 3). In addition to addressing the broader catchment area, a micro-catchment water conservation plan is prepared to focus on panchayat-level initiatives. This plan includes recommendations for constructing site-specific recharge structures and monitoring changes in groundwater levels during the post-monsoon period.

Implementation of Site-Specific Recharge Structures

Recharge structures were strategically designed considering the groundwater flow dynamics and geological characteristics of the hard rock terrain. These structures aim to enhance infiltration through the vadose zone, positively influencing the drinking water sources. Construction adhered to the recommendations derived from remote sensing and GIS analyses, facilitating artificial recharge by channeling surface water into aquifers.

Role of Community Participation

While science and background study provide the tools and data necessary for addressing water challenges, sustainable outcomes depend on the active participation of local communities and governance structures. Recognizing this, the study placed significant emphasis on community engagement and capacity building. This approach ensured that interventions were not only effective but also socially inclusive and locally owned.

Various IEC and behavioural change communication activities were conducted to educate the communities about the household water conservation activities, engage the community's member through informative activities and empower the communities to actively contribute towards the water conservation needs. Community meetings and Jal Chaupals were regularly organized to discuss various issues related to water conservation and the procedures which could be followed to address water scarcity problems in the region. The meetings aimed to address concerns related to rooftop rainwater harvesting, water exploitation, water conservation at the household level, and the implementation of user charges for water tariffs.

Community meetings aimed to mobilize the local community to indulge in water conservation practices and construct roof-top rainwater harvesting structures to use rainwater for recharging groundwater reservoirs. Design and estimated cost for the construction of the rooftop rainwater harvesting structures were shared. The community was also motivated to convert dry-borewell, abandoned borewell and abandoned handpump into recharge structures which would

Figure 58: Discussion with the community on the issue related to water conservation and piped water supply | *Source: PHED Bihar*

Figure 59: Meeting with Panchayat functionaries regarding construction of water conservation structures | *Source: PHED Bihar*

address the water scarcity problem in the region. After continuous and regular mobilization, few households agreed to convert their abandoned borewells to recharge borewells at their own cost.

Panchayats were identified as key players for driving local action on water sustainability. The study organized capacity-building workshops for panchayat members to enhance their understanding of water management principles and equip them with practical tools for planning and implementation. Support in the field to delineate catchment area for a water conservation structure during the construction was also provided. The financial resources of the 15th Finance Commission were leveraged for implementation and construction of recharge structures in potential areas identified by RS-GIS study as guided by Jal Jeevan Mission, DDWS. Through targeted training programs, the panchayat leaders learned to integrate water resource management into existing Gram Panchayat Development plans (GPDP) and Village Action Plan (VAP) ensuring that water sustainability became a core agenda.

Outcomes of Recharge Interventions

Key recharge interventions included the rejuvenation of ponds, construction of recharge wells (rejuvenation wells connected to household roof top), recharge borewells and aquifer storage and recovery (ASR). These structures were designed to capture and store rainwater runoffs, enhancing the natural recharge of aquifers naturally and hydraulically. Traditional water bodies such as Ahar-pyne system were rejuvenated to improve water storage capacity and reduce surface runoff during heavy rains.

Post-construction of recharge structures, groundwater levels exhibited notable improvement. Borewells and other drinking water sources like handpumps, previously non-functional, were restored following the initial rains. This development significantly reduced reliance on water tankers and alleviated the burden on rural populations. The comparative analysis of groundwater levels measured during pre-monsoon and post-monsoon periods revealed that approximately 80% of drinking water sources have experienced a positive impact.

Conclusion

The integration of advanced scientific methodologies, including remote sensing and Geographic Information Systems (GIS), with proactive community engagement has proven to be a highly effective strategy in groundwater management. By leveraging these cutting-edge tools, the approach allows for the precise identification and mapping of groundwater recharge zones, enabling the implementation of targeted interventions. Active involvement of local communities further enhances the effectiveness of these initiatives by ensuring local knowledge, needs, and practices are incorporated into the planning and execution phases. The improvement in groundwater level during post-monsoon underscores the efficacy of combining scientific methodologies with community participation in enhancing water security. The observed success highlights the approach's potential as a replicable model for ensuring long-term water availability and resilience in other water-stressed regions. This integrated model has demonstrated significant potential for scalability and replication, offering a robust framework to address groundwater challenges and achieve sustainable water resource management.

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A Drop of Change: From water crisis to economic growth

Story of Kiran Joshi breaking stereotypes as a para-worker

- **Er. Abhishek Likam**, Central Himalayan Rural Action Group

Jal Jeevan Mission (JJM), with support from key development and CSR partners like Ashok Leyland and Central Himalayan Rural Action Group (CHIRAG), has not only ensured access to safe drinking water but also created new livelihood opportunities for many rural communities in Uttarakhand. One such inspiring story is that of Kiran Joshi, who transitioned from a homemaker burdened with fetching water to a skilled para-worker and entrepreneur, breaking gender stereotypes along the way.

For Kiran, like many women in rural areas, daily life revolved around collecting water, gathering fodder, preparing meals, and managing household chores. Water scarcity was a persistent challenge, and her mornings and evenings were spent travelling long distances to fetch water.

The hardship even rises to many folds in summers; harsh weather, low rainfall led to dried-up springs, forcing her to walk even further to secure drinking water. Bathing was a luxury, and washing clothes was limited to once every two weeks. The situation created social tensions, and women had to compete for water even in the early hours of the morning, often facing dangers like encounters with wild animals.

The turning point came with the revival of the *Asswa Naula spring rejuvenation*, a community-led initiative, with the vital support of Ashok Leyland and CHIRAG. These partners have played a crucial role in mobilizing resources, providing technical expertise, and facilitating community-driven water management efforts. Kiran, along with other community members, was able to contribute significantly to this effort. What made this initiative remarkable was that women took charge of the

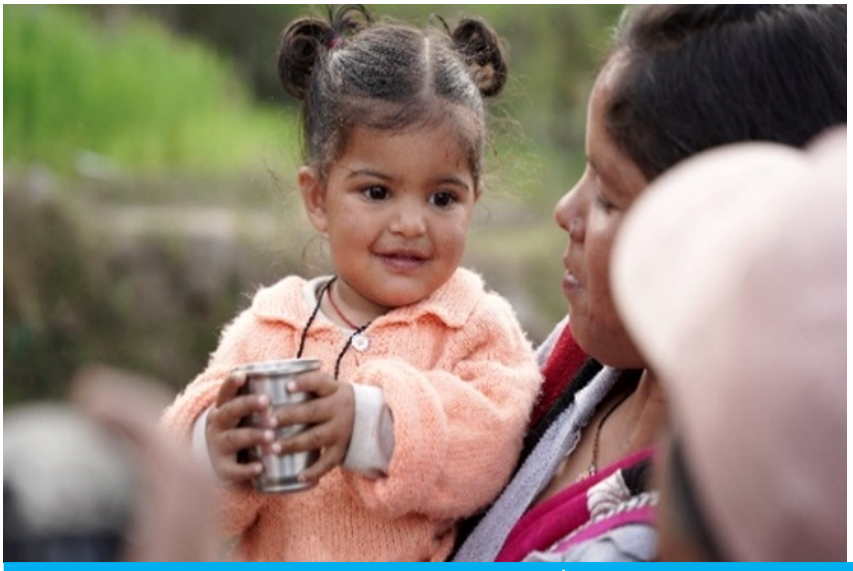

Figure 60: Spending Time With The Children | *Source: CHIRAG*

> ***"We have always done strenuous work like carrying grass, firewood, and fetching water, but never had the opportunity to engage in construction. Learning this new skill was exciting and empowering. It was considered a man's job, and breaking that stereotype felt incredible. Even the engineer appreciated the quality of our work, which passed inspection on the first attempt. My husband, who initially worked as an auto-rickshaw driver, saw the value in this work and decided to stay back, assisting me and managing small-scale farming. Today, I am a skilled laborer, earning better wages and gaining more respect in my community."***

labor-intensive work—carrying materials, preparing the site, constructing structures, and ensuring their completion.

As a para-worker trained under skill development initiative, Kiran learned essential skills in basic geology, water discharge monitoring, social mobilization, bookkeeping, and leadership. She worked alongside technical experts from CHIRAG to conduct field surveys, assess water sources, and implement conservation measures. Her confidence grew as she became a key figure in managing water resources in her village.

During the COVID-19 lockdown, Kiran and her team surveyed the local water sources and identified leakages—often caused by minor earthquakes or human disturbances. They took immediate action by constructing a sub-surface check dam, which led to an astounding increase in water discharge from 0.33 liters per minute to 16 liters per minute. The surplus water is now used for irrigation, benefiting farmers who earn an additional ₹20,000-₹25,000 per season.

> ***With increased water availability, our hygiene and sanitation have improved, and women have saved 2-3 hours daily from fetching water. This time is now invested in childcare, stitching, knitting, and other productive activities. Personally, I feel empowered—my opinions are valued, I am financially independent, and I can provide a better future for my child.***

Ffigure 61: Ms. Kiran Joshi on her way back from fields | *Source: CHIRAG*

Thanks to JJM's integrated water management approach, and the dedicated efforts of Ashok Leyland and CHIRAG, the initiative has successfully revived 140 critical springs, benefiting over 16,000 people in the Okhaldunga cluster of Uttarakhand. This has not only secured drinking water but also opened new economic avenues such as agriculture, skill development, and forest-based livelihoods.

The project has generated direct employment worth ₹86,83,595, and its impact extends beyond water security to economic resilience, skill-building, and social transformation. Kiran's journey exemplifies how JJM, with the collaboration of partners like Ashok Leyland and CHIRAG, is not just about providing water-it is about empowering communities, enhancing livelihoods, and driving sustainable development.

Copy editing by: Lopamudra Panda

Figure 62: Ms Kiran Joshi preparing cement mixture | *Source: CHIRAG*

Need for O&M Framework for Assessing Drinking Water Schemes and Ranking Panchayats

- Eshwer Kale, Jayant Patil, Arun Dahale, Tushar Survanshi, Navnath Ghodake, and Ankita Yadav[8]

Background

Ensuring access to safe drinking water for every household has been a longstanding goal for India. Since independence, numerous initiatives have been implemented as part of various Five-Year Plans. Key programs include the Accelerated Rural Drinking Water Programme (ARDWP) in 1972-73, the National Drinking Water Mission (NDWM) in 1986, the Swajaldhara Programme in 2000, and the National Rural Drinking Water Programme (NRDWP) launched in 2009-10. The NRDWP aimed to achieve 100% household water supply coverage by 2030, aligning with Sustainable Development Goal (SDG) 6.

In 2019, the Jal Jeevan Mission (JJM) was announced, consolidating NRDWP under its broader mandate with a significant allocation of ₹2.87 lakh crore over five years. The mission seeks to provide every rural household with a functional tap water connections and making villages 'Har Ghar Jal', ensuring coverage of 55 liters per capita daily.

Apart from 100% household tap coverage across rural India, JJM emphasizes community-driven operations and maintenance (O&M) systems. It made a provision of 5-10% capital cost contribution for village water infrastructure, promoting community ownership and accountability. Additional priorities include institutional reforms, strengthening Village Water and Sanitation Committees (VWSCs), water quality assurance, and source sustainability through conservation efforts like rainwater harvesting and groundwater recharge.

Importance of O&M of Water Supply Schemes as per JJM

Effective Operation and Maintenance (O&M) is crucial for the sustainability and success of water supply schemes under the Jal Jeevan Mission (JJM). The JJM guidelines emphasize the importance of O&M in ensuring the continuity and efficiency of water supply services. Proper O&M practices prevent premature deterioration, reduce maintenance costs, and extend the lifespan of water supply infrastructure.

Need for a Comprehensive O&M Framework

A robust O&M framework is essential to support the long-term sustainability of PWS assets created under JJM. It will enable Gram Panchayats to manage water supply schemes efficiently, ensuring reliable services to communities.

Key components of this framework should include:

- Regular performance monitoring and evaluation
- Preventive maintenance practices
- Adequate financing and resource allocation
- Capacity-building and training for operational staff
- Community engagement and participation in O&M

A comprehensive O&M framework will facilitate better governance, participatory management, and healthy competition among Gram Panchayats. By leveraging technology, such as dashboards and self-assessment tools, Gram Panchayats can track performance, identify areas for improvement, and make data-driven decisions. This will ultimately contribute to the success of JJM in providing sustainable and efficient water supply services to rural communities. Though many states have come up with various modules, it is time to develop a national level framework referring all the learning experiences from ground.

Development of the Framework

The Watershed Organisation Trust (WOTR) and its Centre for Resilience Studies (W-CReS) have been promoting Water Stewardship to enhance participatory governance as a WASH partner. The Water Governance Standard (WGS), developed by WOTR, assesses and rates villages for

[8] Authors are part of WOTR and WOTR Centre for Resilience Studies (W-CReS) and your feedback can be shared at eshwer.kale@wotr.org.in

water management using a modular approach. Leveraging this expertise, WOTR signed an MoU with the Water Supply & Sanitation Department (WSSD), Government of Maharashtra, on October 10, 2023, to develop a comprehensive O&M assessment framework for the state. Supported by the India Climate Collaborative (ICC), the framework has undergone extensive consultations and testing and is now being implemented at the state level.

Overview of the Framework

The proposed framework assesses the current status of water supply schemes and identifies improvement areas across engineering, institutional, financial, water quality, and source sustainability dimensions. It emphasizes community ownership through participatory self-validation by Panchayats. The framework encourages competitive dynamics among Panchayats to improve water charge collection and ensure scheme sustainability.

Villages scoring high on O&M performance can attract donors and investors for water resource development, enhancing their credibility.

Figure 63: Discussing the O&M framework with CEO-ZP of Dharashiv | *Source: WOTR*

Figure 64: Group Discussion of investigators with village Panchayat Members in Songiri village in Dharashiv | *Source: WOTR*

Objectives of the framework

1. Assess and rank villages based on O&M status and recommend remedial actions.
2. Foster competition among villages to improve O&M of drinking water systems.
3. Encourage investments and donations for water resource development in villages.

Framework Design

The framework employs a modular approach with five modules, each assigned a weighted score based on its importance. Indicators are derived from water supply operating procedures, components of the Water Governance Standards, and research findings. These indicators were revised after consultations with key stakeholders, including the Principal Secretary of WSSD and the Mission Director of JJM. The revised modules and their weightages are detailed in the following table, reflecting both essential and desirable indicators.

Opportunities in Applying the Framework

The application of this framework offers significant advantages, including an objective assessment of the O&M performance of all Gram Panchayats, enabling systematic tracking for continuous improvement. Additionally, ranking Panchayats based on their scores creates an opportunity for the state to provide targeted incentives or subsidies, encouraging progress in

Table 1: Scheme of modules and Weightage

No.	Module name	Essential indicators and weightage	Desirable indicators and weightage	Total indicators	Total Score	Remarks
1	Engineering/ Technical Module	7 (73%)	3 (27%)	10	15	Engineering/ Technical soundness highly matters in the functioning of the schemes. O&M mostly consists of equipments, tools, machines, etc. that are the major components of the water supply.
2	Institutional Module	7 (68%)	3 (32%)	10	25	Accountability and transparency of institutions in O&M, overall management, and community participation are the keys to sustaining these schemes.
3	Financial Module	7 (72%)	3 (28%)	10	25	Collection of regular and fair water charges from water users is essential to bear the cost of O&M of the schemes.
4	Water Quality Module	6 (73%)	4 (27%)	10	15	Human health depends a lot on drinking water quality therefore, along with availability, water with potable quality has to be ensured.
5	Source Sustainability Module	7 (75%)	3 (25%)	10	20	Source sustainability is important for assured supply. Along with the new sources, the existing water infrastructure also provides water to the community.
	Total	**34**	**16**	**50**	**100**	

the O&M agenda. Based on the experience in Maharashtra, this framework holds potential for nationwide adoption. With minor adjustments to accommodate state-specific conditions, it can strengthen the O&M of drinking water schemes, ensuring sustained and high-quality water supply under the Jal Jeevan Mission (JJM).

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India's WASH Innovations Lead Global Discourse at World Economic Forum 2025

- NJJM

The India Pavilion at World Economic Forum 2025 in Davos hosted a global discussion titled "India's WASH Innovation: Driving Global Impact in Climate and Water Sustainability." The high-profile session organised at the backdrop of showcasing best practices adopted by the mission, highlighted India's transformative achievements in water, sanitation, and hygiene (WASH), emphasizing their critical role in global climate resilience and sustainable development.

Shri C. R. Patil, Hon'ble Union Minister of Jal Shakti, delivered the keynote address, presenting India's journey in implementing the Swachh Bharat Mission (SBM) and Jal Jeevan Mission (JJM). These initiatives have been pivotal in improving sanitation coverage and providing safe drinking water to millions of rural households.

Shri C. R. Patil, Hon'ble Union Cabinet Minister of Jal Shakti stated, "This marks a significant milestone, demonstrating to the world that under the visionary leadership of Hon'ble Prime Minister Shri Narendra Modi Ji, India is not only deeply committed to water conservation but is also driving a transformative revolution in this critical sector. Through large-scale efforts, the nation has significantly strengthened its water resources, setting a global benchmark for sustainable water management. Addressing water scarcity as a universal challenge, further aggravated by climate change, overpopulation, and overuse, calls for strengthened international cooperation and collective action."

Figure 65: Hon'ble Union Minister during his key note address at Davos | *Source: Invest India*

The Hon'ble Minister further added, "Over the years, we have made remarkable progress in ensuring access to safe drinking water for rural India. In 2019, when Prime Minister Narendra Modi Ji launched the Jal Jeevan Mission (JJM) only 17% of rural households had functional tap water connections. However, today, a staggering 79.66% of rural households under the Jal Jeevan Mission have access to safe drinking water. This transformation is not just about providing water but also about changing lives—rural India is now saving 55 million hours per day on fetching water, enabling increased workforce participation and productivity, especially from women."

The World Economic Forum provides a platform for the ministry to showcase India's groundbreaking initiatives in WASH innovation and climate resilience, emphasizing efforts to promote equitable and inclusive access to WASH services.

The Swachh Bharat Mission and JJM demonstrate the effectiveness of large-scale, government-led initiatives in improving sanitation and water access. During the keynote address the Hon'ble Minister highlighted, "Through the focus on sanitation, the scheme has not only empowered women but also ensured their safety. According to WHO, the efforts made in the last decade towards improving sanitation have averted the deaths of 3 lakh children under the age of five." Moreover, India's focus on community engage-

ment, behaviour change, and leveraging technology provides a model for other countries facing similar challenges.

The keynote address was followed by two insightful panel discussions. The Water Panel, on the topic "Bringing Global Impact in Water Sustainability," featured distinguished global experts, including from the NMCG, UNICEF and WaterAid, and shared innovative approaches and strategies for advancing global water sustainability.

The Sanitation Panel, centred on the topic "Innovation in Global Health Through Sanitation," brought together esteemed panelists from the Gates Foundation, Riseberg Ventures, BCHAR, Capgemini and actor and policy advocate Shri Vivek Oberoi who discussed the theme, highlighting groundbreaking innovations in sanitation and their impact on global health.

The panel discussion at the India Pavilion spotlighted India's WASH innovations and their significance in addressing global sustainability challenges, aiming to promote dialogue on public-private partnerships, technology-driven solutions, and strategies for scaling successful models globally.

Discussions focused on India's scalable models for sustainable water management, climate-resilient practices, and public-private collaborations. Key achievements, such as the elimination of open defecation, construction of over 95 million toilets under SBM, and widespread household tap water connections under JJM, have established India as a global leader in WASH initiatives.

These efforts have transformed lives by improving health, education access, and economic opportunities through enhanced hygiene, sanitation, and reduced time spent fetching water. These achievements align with the broader goals of the World Economic Forum to foster collaborative solutions for climate action and water sustainability. The WEF emphasized the critical role of public-private partnerships in advancing the United Nations Sustainable Development Goals (UNSDG), particularly those focused on water and sanitation. Tackling the global water crisis, which threatens health, food security, economic growth, and biodiversity, requires collaborative action. India's experience provides insightful lessons to inform and strengthen global WASH strategies.

The session concluded with actionable insights and participant commitments, reaffirming India's key role in advancing the Sustainable Development Goals (SDGs), specifically Clean Water and Sanitation (SDG 6) and Climate Action (SDG 13). In addition to this, Sh. C R Paatil, Hon'ble Union Minister, Jal Shakti also chaired a transformative discussion on Fostering Global Collaboration for a Water-Secure Future at the World Economic Forum 2025, Davos, on 22.01.2025. He expressed, "It was an incredibly enriching experience to engage in meaningful discussions with such esteemed leaders and experts in the field, including Chief Minister of Maharashtra Shri Devendra Fadnavis Ji, Alderman (Vice Mayor) Aarhus City Denmark Mr. Nicolaj Bang, Head of 2030 Water Resources Group-World Bank Mr. Michael Webster, Professor Emeritus MIT Dr. James Wescoat, Research Physical Scientist-NASA Dr. Sujay V Kumar, Head Markets & Member, India Leadership Team-KPMG Mr. Akhilesh Tuteja Ji"

The discussion saw the participation of over 300 individuals, both in-person and virtually, reflecting a shared global commitment to addressing one of the world's most pressing challenges—ensuring sustainable and equitable water management for all. He further said, "together, we are shaping a roadmap for a water-secure future that prioritizes innovation, sustainability, and inclusivity. Let us continue working toward creating a world where access to clean and sufficient water is a reality for every individual."

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Figure 66: Key panels of the session | *Source: Invest India*

Snippets

On 8th January, 2025, Secretary, DDWS & Mr Paulos Workneh (Chief of WASH & Climate Change & Environmental Sustainability, UNICEF) signed work plan of UNICEF India from 2025-27 supporting in the presence of AS&MD-NJJM, JS&MD-SBMG and other officials at CGO Complex, New Delhi.

The goal of this work plan is to address Climate-resilient #WASH services, Safe sanitation & water and Inclusive WASH in schools, AWCs & health. *Figure: 67* ▶

New research project

The Anthropological Survey of India is going to start a research project entitled "Transformative Changes in Rural India through Jal Jeevan Mission (JJM): A Social Impact Evaluation through Anthropological Lens" in January 2025. This anthropological research with holistic approach would provide insights into the Jal Jeevan Mission's success in effective implementation, and ensure the program's continued relevance in addressing India's water challenge. *Figure: 68* ▼

Field Visit

Shri Kamal Kishore Saon, AS&MD-NJJM visited Ganje, Dhekale of Palghar block and Peth villages in Dahanu Aspirational Block in Palghar District, Maharashtra to see the status and progress of Jal Jeevan Mission, on 18.01.2025. He interacted with JJM beneficiaries, members of Pani Samitis, visited WS Infra, water sources, PVTG habitations etc. AS&MD advised villagers to focus on collection of user charges, and O&M of schemes. He was accompanied by the Mission Director, SWSM, Govt. of Maharashtra; EE-Palghar; Dy CEO, DWSM; BDO and other state officials. *Figure: 69* ▼

Meetings/ Webinars

Review Meeting chaired by MoS: On 29th January, 2025; Sh. V Somanna, Minister of States (MoS) chaired a review meeting to know the progress and status of implementation of Jal Jeevan Mission in the State of Karnataka, at CGO Complex, New Delhi. During the meeting, he instructed the concerned to ensure the quality of work and do ground-truthing of schemes. Under also laid emphasis on ensuring supply of clean tap water supply at each home. *Figure: 70* ▼

AS&MD-NJJM chaired a meeting to brief National WASH Experts (NWEs) for new monitoring and ground truthing protocols for field visits of rural piped water supply schemes and villages under Jal Jeevan Mission on 30.01.2025. The meeting was attended by empaneled NWEs, JS-NJJM and other officials. *Figure: 71* ▼

Initiatives

PM's Award-2024: Recognizing Excellence in Advancing Progress! Nominations are open for the PM Award 2024 under the Holistic Development of Districts in 11 priority sectors, including "Transforming Lives with Har Ghar Jal Scheme" The Har Ghar Jal Yojana, part of Jal Jeevan Mission (JJM), ensures safe tap water to rural households and public institutions, with progress tracked via an online dashboard. Let's celebrate innovation and commitment toward a water-secure future! *Empowering lives, fostering growth & building a brighter future for all. Learn more & nominate: http://pmawards.gov.in* *Figure: 72* ▶

Awareness Generation by Ladakh: On the occasion of Republic Day, PHED Kargil set up an awareness stall featuring on-site water testing, women's empowerment & water conservation. Applauded by dignitaries, it promoted sustainable water management & community participation under Jal Jeevan Mission. *Figure: 73* ▼

Jal Jeevan Mission in Social Media and News

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Government of India
Ministry of Jal Shakti
Department of Drinking Water & Sanitation
National Jal Jeevan Mission
New Delhi - 110 003
e - mail: rnd-ddws@gov.in