

Jal Jeevan Samvad

December | 39th Edition | Year 2023



Har Ghar Jal
Jal Jeevan Mission

Building Partnership
Changing Lives

Special Feature
Water Quality Management

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Prime Minister on Jal Jeevan Mission



Narendra Modi
Prime Minister

In Kashi too, thousands of new beneficiaries have availed the government schemes, who were earlier deprived of it. Some got Ayushman cards, some got free ration cards, or were guaranteed a pucca house, some got tap water connection, while some got free gas connection.

...the foundation stone of development projects worth about Rs 20 thousand crores has been laid and inaugurated. Supply of drinking water in the villages of Varanasi, critical care unit in BHU Trauma Centre, projects related to many sectors like roads, electricity, Ganga Ghat, railways, airport, solar energy and petroleum are all important for the development of this region and will further accelerate the pace of development.

PM's address at the inauguration and dedication of various projects in Varanasi, 18th December 2023

Today, not only the construction of Mahakal Mahalok has taken place, but also more than 2 lakh tanks have been built to provide water to every home.

PM's address at the inauguration, dedication and laying foundation stone of multiple development projects in Ayodhya, 30th December 2023

Note from the desk of Additional Secretary & Mission Director...



New Delhi
31st December, 2023

As we embrace the winter chill and gear up to bid farewell to another eventful year, it is imperative to acknowledge the profound truth that change is the only constant in our lives. This principle is at the core of the Jal Jeevan Mission's (JJM) relentless pursuit to transform India's rural landscape by ensuring access to tap water in every home. As we delve into the final month of the year, let us reflect on the remarkable journey of the mission and its unwavering commitment to bring about positive change.

Jal Jeevan Mission's four-year journey has been a relentless effort set out with the ambitious goal of providing Functional Household Tap Connections (FHTCs) to every rural household in the country. Today, we stand on the brink of a significant achievement, with the mission inching close to delivering this life-changing amenity to a staggering 14 crore households. This remarkable progress is a testament to the dedication and collaborative efforts of all stakeholders involved in this transformative mission.

Even after 73 years of independence, a major chunk of India's rural population remained deprived of clean drinking water. With the launch of Jal Jeevan Mission on 15th August 2019 by our Hon'ble Prime Minister Shri Narendra Modi, providing clean water became an ultimate goal and no stones were left unturned to make it a reality.

By leveraging the strength of community participation, expertise of our development partners and other stakeholders, we were successful in delivering speed, scale and quality.

In this edition of Jal Jeevan Samvad, we have focused on a critical aspect that has been central to JJM's objectives — water quality. Recognising that access to water is not only about quantity but also about ensuring its purity, the Mission has placed a strong emphasis on water quality. We understand the pivotal role that safe and clean water plays in the health and well-being of communities, and JJM has adopted innovative technological solutions to monitor and guarantee water quality across its vast network.

In the inside pages, there are articles curated for our readers to give an insight into this crucial aspect. Stories of changemakers like Dr Kunal Kanto Majumdar from West Bengal and Babita Siroliya from Madhya Pradesh, who have done every bit to ensure water quality for their communities through participatory discussions and necessary actions serve as an inspiration.

The case of Gharbhar Panchayat case in the Baliapur block of Dhanbad district, Jharkhand emphasises on the importance of recognising various challenges a means to guarantee safe drinking water in a fluoride-affected community.

Another article is centred on the importance of Water Data points and how they serve as a public asset when they are effectively used for suitable action plan and implementation.

There is also an article on JJM Brain – an initiative by Jal Jeevan Mission (Assam) as an example of how software is bringing a paradigm shift in the management of water supply projects.

These articles on water quality from our RWPF partners showcase how actions are being taken at the grassroots level and contamination issues are being handled seamlessly, with transparency and accountability.

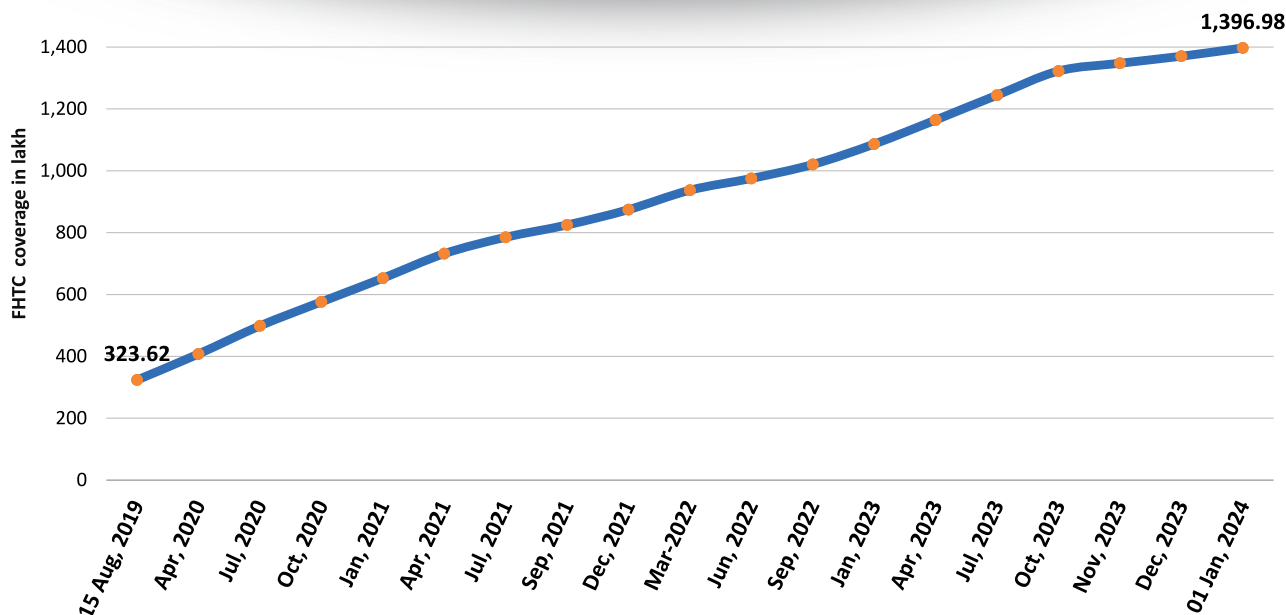
As we approach the end of another fruitful year, there is much to look forward to on the horizon. Jal Jeevan Mission remains steadfast in its commitment to reaching every last household in rural India, bringing the transformative power of tap water to millions more. Our journey continues, driven by the belief that access to clean water is not just a basic necessity but the resource that has the power to shape a healthier and more prosperous future for all.

In closing, let us celebrate the strides we have made, acknowledge the challenges we have overcome, and recommit ourselves to the noble cause of ensuring that no one is left behind in the journey towards a water-secure and resilient Bharat.

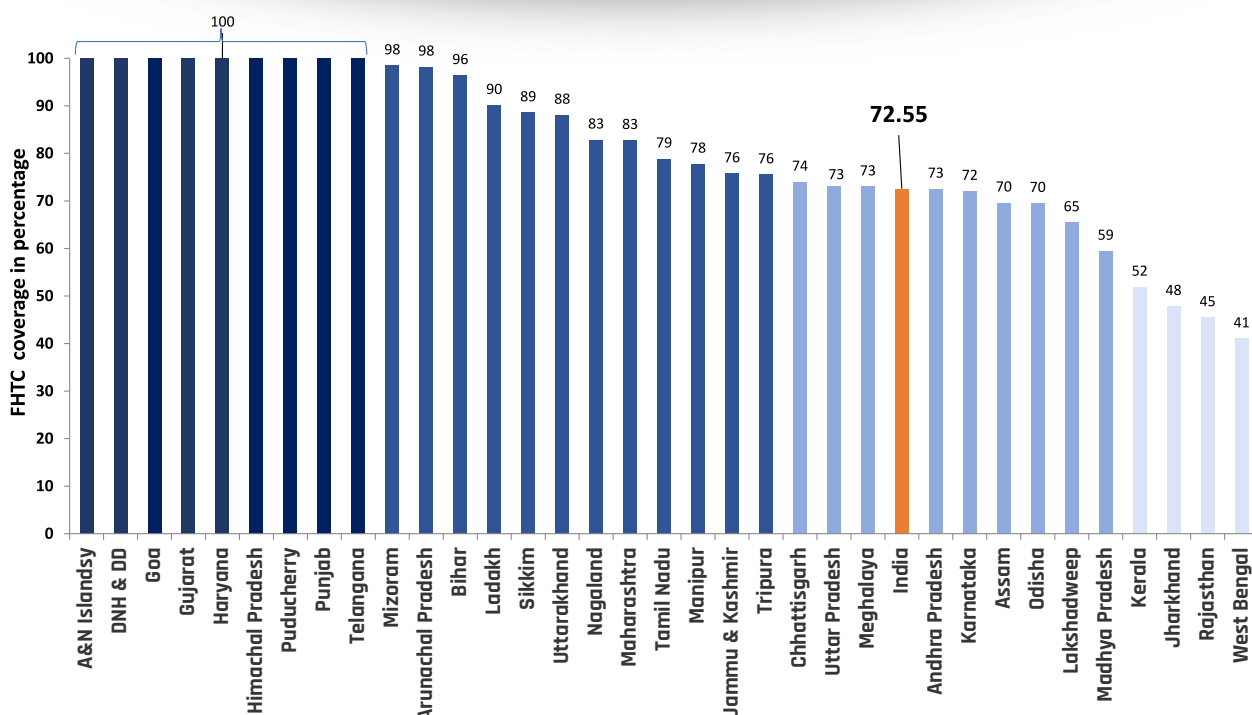
Wishing you all a joyous and prosperous 2024!

[Vikas Sheel]

Progressive coverage - Functional Household Tap Connection (FHTC) (as on 31.12.2023)



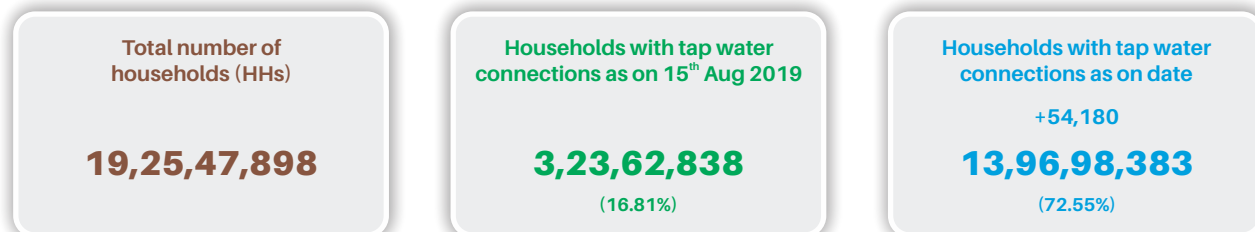
Comparative FHTC coverage status of States/ UTs (as on 31.12.2023)



As on 31st December, 2023

Source: JJM-IMIS

India | Status of tap water supply in rural homes



Households provided with tap water connection since launch of the Mission

10,73,35,545 (67.01%)

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

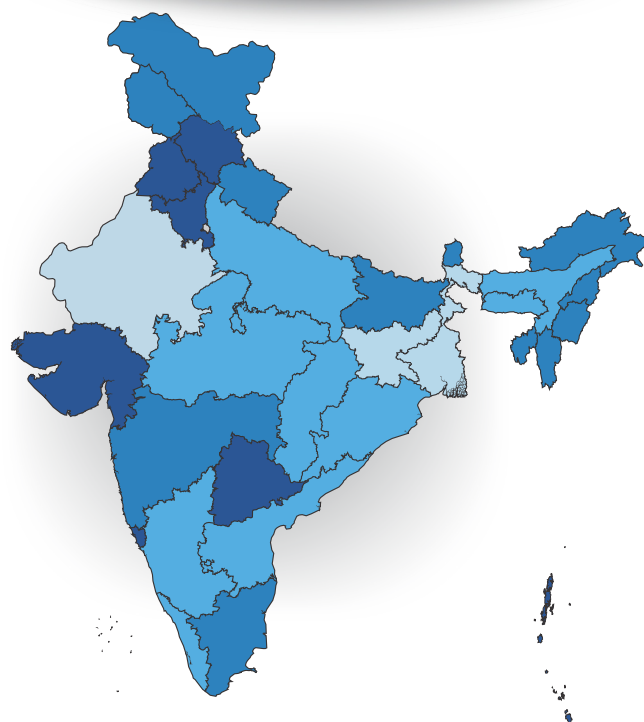
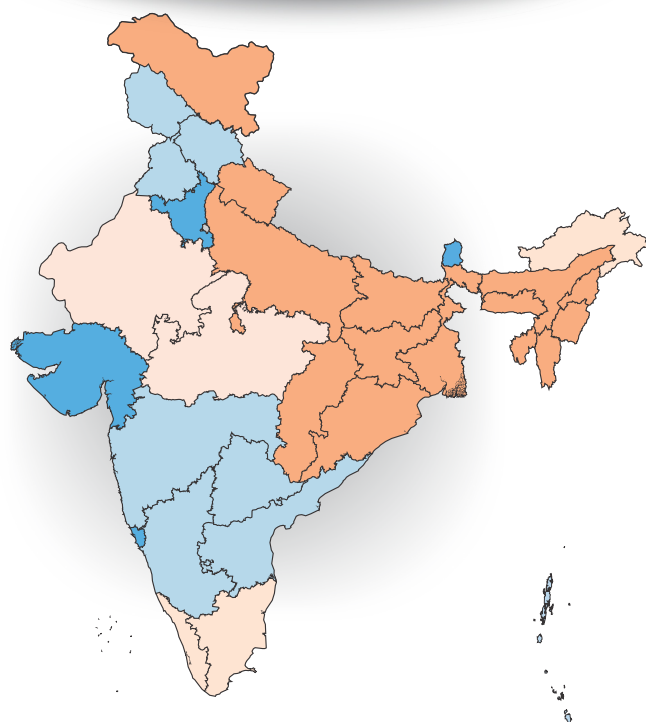
100% FHTC States/ UTs

Goa, A & N Islands, Puducheerry, D&NH and D&D, Haryana, Punjab, Telangana, Gujarat



As on 15th August, 2019

As on 31st December, 2023



0 to <10%

10% to <25%

25% to <50%

50% to <75%

75% to <100%

100%



Jal Jeevan Mission Har Ghar Jal

2023



HOUSEHOLD DRINKING WATER TAP COVERAGE AMPLIFIED MORE THAN 3 CRORES IN 2023

Arpan De Sarkar, NJJM

Rural drinking water supply in India has experienced a transformational change through the interventions of Jal Jeevan Mission. Almost **3.13 crore rural families have been covered** through functional household tap connections (FHTCs) across the country **in 2023 with an overwhelming average of more than 85,500 FHTCs per day.**

As on 31st December 2023, nearly 13.97 crore households in the country have the access to drinking water tap within premise. **With an increase in more than 16 percentage points in 2023,** FHTC coverage in rural India has reached 72.55% till the end of December 2023.

It is significant to refer here that more than **2.29 crore FHTCs have been provided in 13 focus States in 2023.** To accomplish this admirable accomplishment, **almost a tap has been installed per second** throughout 2023.

Foremost contribution of FHTCs have been recorded in **Uttar Pradesh with installation of more than 1.27 crore** household drinking water tap connections **averaging almost 35,000** tap connections every day. Thus, **more than 2 in every 5 FHTCs reported in the country in 2023 are in Uttar Pradesh.**

Uttar Pradesh has been followed by **Tamil Nadu (25 lakh), Assam (21 lakh), Chhattisgarh (19 lakh), West Bengal (19 lakh) and Rajasthan (17 lakh).** It is encouraging to note that **Uttar Pradesh and Tamil Nadu have already achieved the respective Annual Action Plans (2023-24).** ■

Droplets of Determination

Assam's Inspiring Water Warrior

- Lopamudra Panda, NJJM and CML Tata Trust Team

In the serene village of Choudhury Para, nestled within the heart of Uttar Dakhin Bongaon Gaon Panchayat, Bongaon Blocks, Kamrup District, Assam, a remarkable tale of grit and determination unfolds. This is the inspiring story of Bhabani Boro, a young woman who emerged as a beacon of resilience, transforming her life and that of her family through her unwavering determination and spirit.

Bhabani Boro's story begins in the midst of adversity. Born into an impoverished family, her world was shaken when her father, Prafulla Boro, departed prematurely, leaving them grappling with financial hardship. The responsibility of being the family's sole provider fell upon

her brother, Bhupen Boro. However, fate dealt a cruel blow as tragedy struck once more with Bhupen's sudden demise due to an unforeseen accident. The family's foundation crumbled, leaving only Bhabani and her mother to face a bleak reality.

Yet, in adversity, Bhabani refused to surrender to despair. Guided by her uncle, Paban Rabha, a seasoned *Khalashi* of PHED, she embarked on her journey of self-discovery. She courageously undertook tasks related to the water supply scheme, learning to start the machines, manage the backwash system, and maintain the scheme's hygiene. Paban Rabha's mentorship became the guiding light that illuminated her path toward hope and empowerment.

Bhabani's life took an unexpected turn when the Jal Jeevan Mission cast its transformative spell on their retrofitted scheme in her panchayat to provide tap connections to 153 households. The Panchayat President heard Bhabani's story from her uncle, who vividly painted the picture of dire circumstances and her earnest desire to sustain her family. The Gaon Panchayat Uttar Dakhin Bongaon recognised her commitment and resilience, appointing her as a Pump Operator for the scheme in 2022 under Jal Jeevan Mission's umbrella.

Brimming with enthusiasm and fortified by the opportunity, Bhabani dove into her role with unwavering dedication. She underwent training from CML Tata Trust (ISA) and is managing the entire scheme with remarkable proficiency. These training sessions equipped her with the knowledge of pump operation, maintenance, and water quality testing using Government Field Testing Kits, transforming her into an expert in the field.

Bhabani's influence extended beyond the scheme's machinery. With a heart dedicated to her community's welfare, she actively participated in awareness meetings orchestrated by CML Tata Trust. Her voice became an advocate for safe drinking water, echoing the importance of this vital resource. In the face of challenges like pipe leakages or damaged machinery, Bhabani employed her interpersonal skills,





motivating the community to contribute towards repairs.

Her astute management ensured the scheme's sustainability and longevity. The depth of Bhabani's commitment is mirrored in her meticulous record-keeping, documenting cash flows, costs, and savings in a diligent record book. Above all, she continuously participated in the tariff collection drive from the community, whenever any maintenance issues arose. Also, the bank account opening process was underway, ensuring that the treasurer of the Water User Committee undertook all the tariffs towards maintenance and operation.

Bhabani's collaborative spirit shone as she maintained open lines of communication with the Water User Committee's president and secretary, fostering a harmonious synergy. Her efforts were gradually transforming the community, instilling a habit of contribution through active participation in the maintenance drive under the supervision of WUC members. Her story became a beacon of hope, inspiring others to believe in the transformative power of determination and community cooperation.

Bhabani Boro's journey, from a life shadowed by adversity to a position of empowerment and influence, stands as a testament to her unyielding spirit and the transformative potential of determination. Her story is one of triumph against the odds, a true success story that illuminates the path to progress, not just for herself but for her entire community.

"The active engagement and empowerment of women across diverse spheres, encompassing social, political, cultural, and technical domains, constitute essential pillars for achieving sustainable development in our society. Bhabani Boro, serving as a female pump operator at Choudhuripara PWSS in Choudhuripara Village within the Bongaon Development block, stands as a beacon of inspiration, illustrating that a strong desire to contribute to society can surmount any obstacle.

Bhabani's story is genuinely inspiring, as she has emerged gloriously from a challenging background, bravely shouldering the responsibility of maintaining and operating the water supply scheme. She has played a pivotal role in mobilising community contributions for repairing pipe

leakages and damaged machinery. Furthermore, she has been instrumental in raising awareness among villagers about the crucial significance of safe drinking water. Additionally, Bhabani has actively participated in various water-related training programmes organised by CML Tata Trust.

In my capacity as a Subdivision Officer, I take immense pride in having individuals like Bhabani within our community. Not only does she manage her family adeptly, but she also oversees the operation of a Public Water Supply System (PWSS), ensuring the provision of safe drinking water to the entire village. This remarkable achievement has been made possible through the active cooperation and support of the Gaon Panchayat members of 6 No. Uttar Dakshin Bongaon, the Public Health Engineering Department (PHED), and the ongoing efforts of CML Tata Trust, serving as the Implementation Support Agency for the Jal Jeevan Mission in Assam." says Mukut Kumar Barman, SUB-Divisional Officer, Boko Division, PHED Assam. ■



A Journey from Scarcity to Unity through Clean Water

PHED, West Bengal | Amit Ranjan, NJJM

In the state of West Bengal, in Purba Bardhaman district, a vibrant community lives in Amarargarh village. Smt. Rakhi Bagdi, a mother of two children from this village, is a symbol of unwavering strength and resilience. Aged 45, Rakhi embodies the love and dedication that binds her to her two children, aged 10 and 13. Her husband's hard work as a daily labourer, earning a modest income of Rs 8,000 per month, forms the cornerstone of their household's sustenance.

The tight-knit community of around 50 families in Amarargarh faced a daunting challenge when their primary water source, a tubewell, dried up during the harsh summer months. This predicament was compounded by the prejudices of neighbouring higher caste families, who looked down upon Rakhi and her

lower caste community, exacerbating the struggle to access water and instilling a fear of further ostracisation.

Rakhi emerged as a guiding force amid this adversity. Her unyielding determination led her and the fellow lower caste families to appeal to the panchayat for a lasting solution to the water crisis. Their collective plea found resonance in the corridors of power and manifested in Jal Jeevan Mission, a beacon of hope promising tap water for every household in the village, transcending the boundaries of caste-based discrimination.

The ensuing transformation was nothing short of miraculous. The gush of clean water from taps symbolised more than a physical resource; it signified unity, equality, and dignity for the entire village. Laughter, once stifled by hardship,

now echoed through the lanes, marking a historic moment in Amarargarh's narrative.

Residing in the heart of Ausgram 2 block within the Bhalki Gram Panchayat, Rakhi became a symbol of resilience and courage. Her tenacity, combined with community efforts, heralded not only water but also a renewed sense of empowerment and pride.

Now, Rakhi's children have access to clean water, relieving them off the burden of fetching water and allowing them to focus on their studies. Education, once overshadowed by water scarcity, now gleams brightly as a beacon of hope for their future. Rakhi herself, a nurturing figure, continues to inspire her family and community with unwavering strength and a vision for a brighter tomorrow.

The success story of Rakhi Bagdi isn't confined to the flow of water; it's a testament to resilience, unity, and the transformative power of collective action. Every drop of water symbolises not just sustenance but also the triumph of equality and dignity. ■



"As a mother, seeing my children finally have access to clean water is a weight lifted off my shoulders. No longer do they need to worry about trekking miles for a basic necessity.

Their studies are no longer interrupted by the urgency of fetching water." Rakhi signs off.



Water for All: Jal Jeevan Mission Safeguarding the Right to Safe and Clean Drinking Water

75 Years of Universal Declaration of Human Rights,
JJM meandering safe and clean water to Rural India

Utkarsha Rathi, NJJM

On 10th December 2023, the Universal Declaration of Human Rights (UDHR) 75th anniversary was celebrated, which is also celebrated as National Human Rights Day in India, reflecting on the advances made in preserving basic human rights in the seven decades. With contemporary challenges, the Jal Jeevan Mission offers a contemporary solution that resonates with the Universal Declaration of Human Rights (UDHR). Water is quintessential to the very existence of life, and

indeed the inseparable part of Human Rights. The mission of providing clean, accessible water through functional household tap connections (FHTCs) to India's rural households, not only accomplishes a vital human need but advances human rights, especially for women and children, as well as addresses global challenges.

The UDHR, a monumental global pledge, emphasises the entitlement of every person to certain rights,

regardless of diverse backgrounds. Article 21.2¹ of the UDHR states, "...Everyone has the right of equal access to public service in his country..." and, Article 25.1¹ reiterates the basic human rights stating, "...Everyone has the right to a standard of living adequate for the health and well-being of himself and of his family..." Additionally, in 2010 the United Nations General Assembly through Resolution A/RES/64/292² declared 'safe and clean drinking water and sanitation' a human right essential to the full enjoyment of life and all other human rights. Thus, entitlement to these basic facilities unequivocally became synonymous with the basic right to live.

Nationally as well, India safeguards this basic right by various provisions, which apropos this basic human right. In India, the right to water is considered a human right, derived from constitutional provisions such as the 'right to life' under Article 21³. It is intertwined with the right to food, a clean environment, and health. Legal protection emphasizes the negative right of water sources not to be polluted. Moreover, constitutional mandates in Article 39(b)³ and Article 47³ highlight the



¹ <https://www.un.org/en/about-us/universal-declaration-of-human-rights>, accessed on 12 Dec,2023

Everyone has the right to a standard of living adequate for the health and well-being of himself and of his family, including food, clothing, housing and medical care and necessary social services, and the right to security in the event of unemployment, sickness, disability, widowhood, old age or other lack of livelihood in circumstances beyond his control.

Motherhood and childhood are entitled to special care and assistance. All children, whether born in or out of wedlock, shall enjoy the same social protection.

² https://www.un.org/waterforlifedecade/pdf/human_right_to_water_and_sanitation_media_brief.pdf, accessed on 12 Dec,2023

³ <https://nhrc.nic.in/sites/default/files/Right%20to%20water.pdf>, accessed on 12 Dec,2023

state's responsibility to distribute material resources for the common good and to improve public health, respectively.

JJM Bridging Gaps and Ensuring Human Rights

It has been over 75 years, since India became independent from colonial shackles and has worked tirelessly to ensure equality and universal human rights in every aspect of its citizens in this new age, developing India, where we are experiencing *Azadi ka Amrit Kaal*, the ideal moment to start the new-endeavours. India's flagship mission, the Jal Jeevan Mission is a revolutionary journey, contributing to reducing the gap between haves and have-nots among its population, strengthening the basic human right of access to clean water. The Jal Jeevan Mission (JJM) aligns seamlessly with the United Nations' Sustainable Development Goal 6, aiming to ensure universal access to safe and affordable drinking water and sanitation by 2030. This goal includes improving water quality, wastewater treatment, water-use efficiency, integrated water resources management, and protecting water-related ecosystems. It lays the foundation for fulfilling these human rights by virtue of the equity in terms of public services and availability of livelihood, basic needs, fulfilling the socio-economic equity and narrowing the gap of this urban-rural divide.

The soul and embodiment of this mission lie in the sole purpose, and vision of our honourable Prime Minister, Shri Narendra Modi, i.e. ensuring equity to the citizens and ensuring no one is left behind.

Access to clean and potable water is not just a basic necessity but a fundamental human right. The



mission's objective is to provide tap water connection to every rural household, ensuring the availability of safe water for drinking, cooking, and other domestic needs.

The correlation between the JJM and human rights, especially of women is particularly profound. Women, often burdened with the responsibility of fetching water, face numerous challenges, including safety concerns and limited opportunities for personal and economic development. With improved water accessibility, today, women, in nearly two lakh villages, can escape the shackles of water scarcity, empowering them to pursue education, engage in economic activities, and contribute more meaningfully to society.

Several impact studies⁴ highlight the positive changes brought about by JJM in the lives of women. Increased access to clean water reduces the time spent on water collection, enabling women to focus on education and income-generating activities. Furthermore, it contributes to

improved hygiene and health, reducing the burden of waterborne diseases that disproportionately affect women and children. Children, too, are significant beneficiaries of JJM, and their rights are intricately linked to this initiative. The mission ensures that children have access to clean water, promoting their overall well-being and development. Beyond the immediate health benefits, clean water is essential for maintaining proper hygiene in schools and reducing the risk of illnesses and absenteeism. By addressing water-related challenges, the mission contributes to creating a conducive atmosphere for the realisation of children's right to education, health, and overall development, thereby creating a conducive atmosphere for their overall growth and development.

Water quality under JJM is a critical aspect that underlines its significance in ensuring human rights, particularly for women and children. The mission not only focuses on providing access to water but places a strong emphasis on the quality of the water supplied.

⁴ <https://jaljeevanmission.gov.in/impact-studies>



Addressing issues of microbial contamination and the presence of geogenic contaminants like arsenic, fluoride, and nitrate, the JJM recognises that access to safe and clean water is not just a convenience but a basic human need.

Before the initiation of JJM in 2019, only about 16% of the rural population in India had access to safe drinking water, exposing the rest to significant health risks, like microbial contamination, leading to waterborne diseases. During those years, contaminated water was a pervasive concern and posed a substantial threat to human health. Diarrhoea, primarily attributed to waterborne pathogens, stood as the third leading cause of under-five mortality in the country. In this context, JJM's commitment to addressing water quality issues emerges as a crucial step in safeguarding the right to health as articulated by the United Nations General Assembly through Resolution A/RES/64/292. With this mission, as of December 2023, a little over 72% of rural households have access to potable water, which directly translates to safeguarding the human rights of all these people.

A cornerstone of protecting human rights is the provision of microbiologically uncontaminated water, especially for women and children who are more vulnerable to poor water quality. Health implications aside, JJM's attention to water quality has far-reaching effects on community development and well-being as well. By averting waterborne diseases, the mission contributes significantly to reducing child mortality, with an estimated annual impact of averting about 1,36,000 under-five deaths.⁵

In essence, JJM goes beyond the basic provision of water and encapsulates the broader vision of securing the

inalienable rights of individuals to a healthy and dignified life. Through its commitment to ensuring water quality, the mission becomes a powerful instrument in upholding the principles enshrined in the Universal Declaration of Human Rights, particularly in the context of the rights of women and children who stand to gain immensely from the improved accessibility to safe and clean water.

Water is one of the basic human rights. It's not an understatement to say it is vital for living. JJM has been on this journey of ensuring this basic human right to even the most remote

part of India, ensuring an adequate supply of drinking water, with an emphasis on improving water quality and promoting sustainable water management practices. This transformative initiative is reshaping countless lives, steering them away from the arduous task of fetching water from distant sources. This rather strikes a great contrast, to the earlier embarked gloomy journey of fetching water from far, covering extensive distance carrying a load of sustenance day in and day out. Now, so many lives are touched and will be reformed for good, meandering their way to success and development in the coming years. ■



⁵ <https://jaljeevanmission.gov.in/sites/default/files/2023-07/potential-reduction-in-child-mortality-through-expanding-access-to-safe-drinking-water-in-india.pdf>

Unveiling the Importance of Water Quality

Shailika Sinha, NJJM

Clean water is the essence of life. Its significance lies not only in satiating our thirst but in shaping the very foundation of human well-being. As we turn on a tap or draw water from a well, it is easy to take for granted the purity of the liquid that sustains us. The apparent clarity of water can be deceptive; it is the invisible contaminants that pose a significant threat. As we delve into this month's issue of our newsletter, we focus on precisely this thematic area — Water Quality Management.

One of the primary reasons to emphasise water quality management is the direct correlation between contaminated water and the prevalence of waterborne diseases in rural India. Access to clean water is not just a matter of convenience; it is a need that directly impacts the health of individuals and the community at large. Contaminants such as bacteria, viruses, and pollutants can lead to a myriad of diseases, jeopardising the very nature of rural life.

Clean water means healthier communities, which in turn leads to increased productivity. When people

are not burdened by waterborne illnesses, they can actively contribute to the economic growth of their communities. Children can attend school regularly, adults can engage in productive work, and the overall quality of life sees a significant improvement.

As we explore the dimensions of water quality management in this issue, we unravel the intricate web of challenges and solutions. From the testing of water sources to the implementation of effective purification methods, each step plays a crucial role in ensuring that the water reaching households is not just abundant but also safe for consumption. We delve into the technological innovations and community-driven initiatives that have proven successful in enhancing water quality in various regions.

In our pursuit of comprehensive coverage, we extend our gratitude to our partner, INREM Foundation, for their invaluable contribution to this

issue. INREM Foundation has played a pivotal role in coordinating and collecting articles on water quality from our other RWPF partners. Their dedication to the cause of water quality management reflects in the diverse perspectives and insights shared in this edition.

As we navigate an era marked by environmental changes and population growth, the importance of clean water becomes even more pronounced. This issue serves as a call to action—a reminder that the journey towards ensuring clean and safe water is ongoing. It is not just about addressing immediate concerns but shaping a sustainable approach that will safeguard the well-being of future generations. Through collaboration, innovation, and community engagement, we can pave the way for a future where water quality is a cornerstone of prosperity, health, and overall well-being.

In the following pages, we invite you to explore the various facets of water quality management, to gain insights into the challenges, triumphs, and ongoing initiatives that shape the landscape of clean water access in rural India. ■



Emerging Trends & Innovations in Water+Data to achieve Clean Water Access to All

Nandakumar E, IIT Madras (ICCW) | Kiran Kumar Sen, INREM Foundation

Water is a life sustaining resource, but lack of information about its availability and quality has posed enormous challenges to water utilities and immense hardships to citizens. In recent times, several innovations have come up that promise to address this issue systematically.

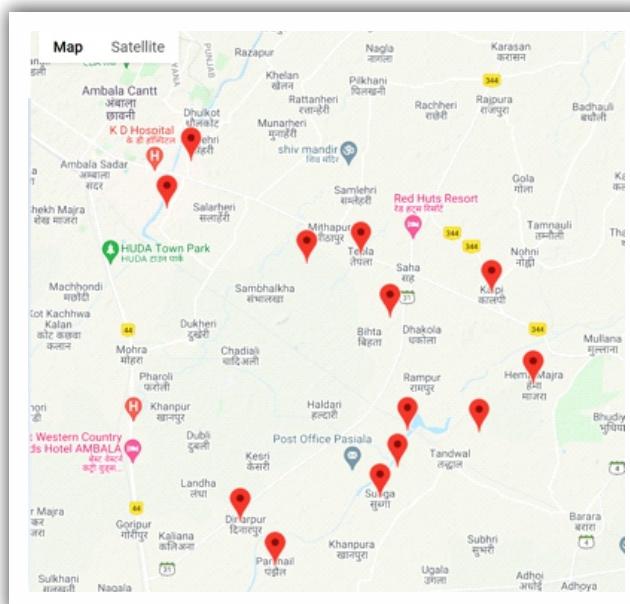
Monitoring Water Supply through Effective Measurement

Carly Fiorina, former CEO of Hewlett-Packard, once said¹: “The goal is to turn data into information, and

information into insight.” She was correct. The Public Health Engineering Department (PHED) of the district of Ambala² in the Northern state of India are beginning to experience insights from an innovative system - helping them to monitor the water supply system at ease in the office. This system was made possible through a response to a *Grand Challenge* launched by the Ministry of Electronics & Information Technology (MeitY) in partnership with National Jal Jeevan Mission (NJJM) in late 2020. International Centre for Clean Water (ICCW), an initiative of IIT Madras, through an

incubated start-up – Eyenetaqua Solutions implemented this system on “smart water supply measurement and monitoring system” in 13 villages in Ambala District, Haryana.

This system enabled the PHED to monitor real-time, the quantity and quality of water at the source, distribution and one tail node in two villages as an experiment. The live data and trends were made available on the eJalShakti dashboard accessible to the Department. Initial insights from the data showed an average supply of >250 LPCD – almost 5 times the prescribed standard of 55 LPCD under the JJM programme.



PHED officials at one of the villages where the system is operating. Source - ICCW

¹ <https://www.hp.com/hpinfo/execteam/speeches/fiorina/04openworld.html>

² <https://ambala.gov.in/>

SPECIAL FEATURE – WATER QUALITY MANAGEMENT

This system is helping local PHED authorities to understand the trends on a real-time basis for excess supply and manage for better regulation and to provide equitable distribution across all the villages of the district. If the dashboard is shared with the citizens, they can be encouraged to use water more responsibly. Over a period, the data captured lends to analytics and modelling generating insights for proactive measures in water security. Like the system in Ambala, similar innovations to address challenges in the water sector are developed by ICCW.

The Need for Innovations

Jal Jeevan Mission will transform the lives in 0.64 million villages by providing access to functional household tap connections (FHTC) with clean water. To provide services at such a large scale, it is crucial to leverage the disruptive technologies in order to achieve this goal. To succeed in its mission, JJM is working on ensuring flow of adequate quantity of appropriate quality water through every tap connection. -

In this age of digital information, a lot of data is being consumed and produced. JJM is giving a major thrust

on testing water quality. As of December 2023, above 14.5 million samples have been tested in labs and using Field Testing Kits. It is important to understand the complex relationship between water, data, and value of information. This involves bringing all the information into one place, creating analytics to provide insights, and understanding water's relationship with health, energy, and climate to help make decisions.

The task before us is humungous considering the spread of our country, the different contaminants present and the seasonal variations. Laboratory testing is costly and time consuming, Field Test Kits require skill and reagents, but their results are binary (OK/Not OK in terms of safety). One needs a reliable, scalable model for rapid water quality assessment across geographies that can be repeated several times a year. To succeed at such a large scale sustainably, it is crucial to leverage disruptive technologies.

Innovations to Solve Challenges in Water by ICCW

ICCW, with its mission to ideate, nurture, and translate disruptive technologies for sustainable clean

water, has been developing sensors and kits that enable rapid water quality and flow measurements across geographies with minimum skill and no reagents.

1. Lab-on-call – A Reagent-Free Mobile Water Quality Monitoring Unit

ICCW incubated startup EyeNetAqua, developed a Lab-on-call SIM-enabled device that can measure upto 10 water quality parameters – pH, TDS, Fluoride, Free Residual Chlorine, Hardness as Calcium, Nitrate, Chloride, Ammonia, Turbidity and Dissolved oxygen. Additional parameters that can be integrated are Flow, Pressure, Nitrite, Sulphide, ORP, Dissolved ozone, Chlorine dioxide, optical BOD, COD, TSS and Soil NPK.

The device democratises water quality measurement and mapping by enabling users to rapidly measure and map ground and surface water quality, contributing to an empowered citizenry. For e.g. in Ambala, continuous data is generated at the source node and one tail node only as the cost of putting quality sensors in every household is prohibitive. But if someone uses the Mobile Lab, it can

Status of testing of drinking water samples in 2023-24 (as on 28/12/2023)

Lab Testing Status

No. of laboratories  2,113	Samples tested in laboratories 3,929 55,37,780	Villages where test has been done 5,12,539	Samples found contaminated in laboratories 54 5,16,095
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FTK Testing Status

Women trained for testing water samples using Field Testing Kit (FTK) 23,55,832	Villages where women trained for testing water samples using Field Testing Kit (FTK) 4,97,805	Samples tested using FTK 53,497 89,61,270	Villages where FTK test done 3,70,088
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Dashboard on Water Quality Testing - Source - <https://ejalshakti.gov.in/WQMIS/>





Mobile Lab stagnant water

measure the quality of every household repeatedly to get deep insights into the service levels of every consumer. By making the information available on a mobile app, consumers can be apprised of the water quality allowing them to actively participate in water quality management.

Benefits of the device

- Allows access to information to citizens on a real time basis;
- requires no reagent;
- can be used by anybody; and
- the results are comparable in accuracy to laboratory tests.

The time taken to measure one sample is 5-6 minutes during which

time the data is simultaneously uploaded onto the cloud with the geo-coordinates.

2. Hydroinformatics

ICCW is developing low-cost sensors for advanced detection of new age contaminants that exist at parts per billion or trillion levels. Online sensor for fluoride has been developed and ready for deployment. Also, microfluidic devices for the data analytics based multiparameter prediction of trace elements, heavy metals and microplastics.

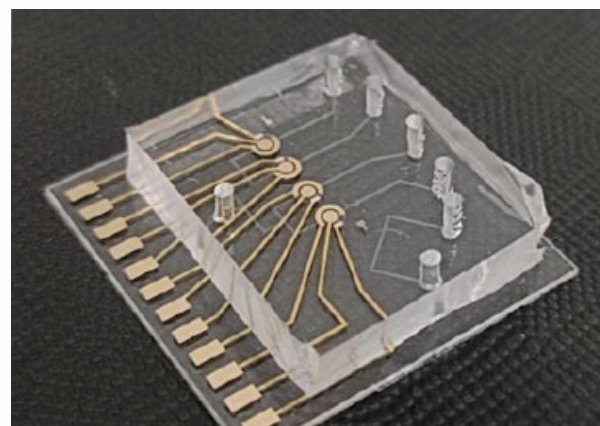
These innovations aim to provide more accessible, accurate, and cost-effective means of monitoring water quality. Through these, ICCW is

building a Hydroinformatics platform that correlates water data with health, environment, and socio-economic parameters. This platform enables consensus building among stakeholders and provides evidence for policy inputs. The platform also enables simulation of potential remedial actions before investing in pilot solutions.

These innovations are helping add value to the data and generate models to benefit the rural communities. Potential to create digital twins of communities to understand the cause-effect of problems with evidence for taking appropriate remedial action.



Stakeholder engagement



Multiparameter microfluidic device



SPECIAL FEATURE – WATER QUALITY MANAGEMENT

3. Wastewater-Based Epidemiology

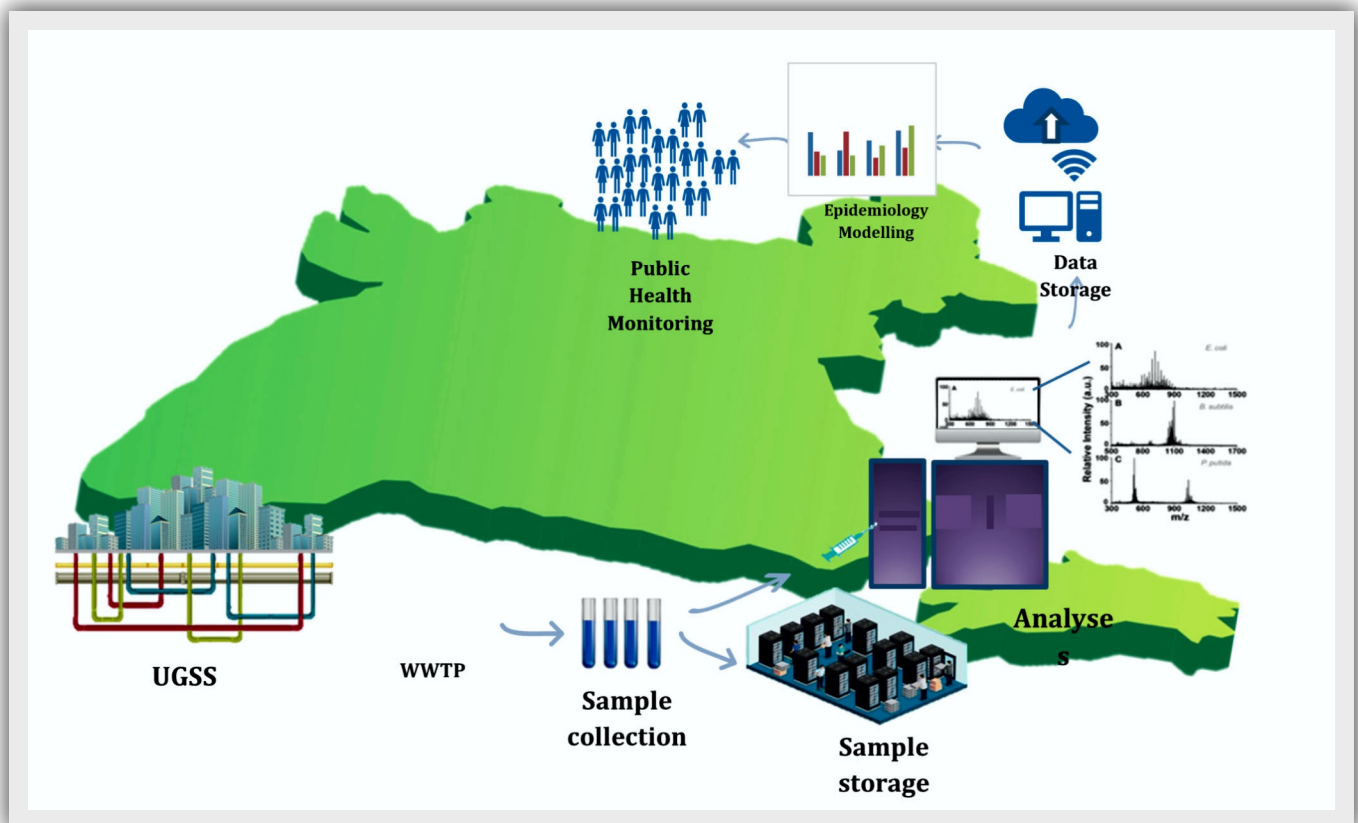
In an innovative approach to public health monitoring, ICCW is exploring wastewater-based epidemiology (WBE) to support better governance of societies by the administration. Almost every action performed by people is reflected in the wastewater through chemical and bio markers. Using mass spectrometry, these markers are mapped to detect any sudden spike or deviation that can give early warning signals of new diseases, drug usage etc. WBE provides a non-invasive way to

understand the health of a population, analyse the percentage of say, diabetic people in a society, the impact of personal care products on wastewater, and the dynamics of viruses like SARS-CoV-2 in communities.

Way Forward for Wider Adoption

ICCW's approach to addressing water challenges is multifaceted, involving cutting-edge research, community engagement, policy advocacy, and technological innovation. By focusing on the interplay of water, data, and

value, ICCW is not only solving immediate water quality and scarcity issues but also paving the way for sustainable water management practices globally. By increasing the demand and adoption at different levels and scale, costs could be reduced significantly, making these technologies more accessible and affordable. The centre's initiatives in sensor technology, hydroinformatics, and digital twins represent the future of water management, where technology, data, and community engagement converge to benefit programs like Jal Jeevan Mission and beyond.



How Valuable is a Water Data Point

Sunderrajan Krishnan, INREM | Manu Srivastava, Arghyam¹

House-to-house surveys were undertaken in Rourkela during December end, 2023. Faecal coliform tests were done on drinking water samples. People were being tested for early-stage diarrhoeal symptoms. Already six people have died, and hundreds of lives are being saved from a water and food contamination outbreak in Rourkela and nearby areas.

Every Water Data Point being measured here in Rourkela during December 2023 is precious. It can save a human life. Is there a specific value that one can put to this precious data point?

The Jal Jeevan Mission shows the status of testing of drinking water samples in 2023-24 (as on 27th December 2023), giving 55,04,486 water samples tested in laboratories, and 89,07,773 water samples tested with Field Testing Kits (FTK). Put together, 1,44,12,259 i.e. 1.44 crore water samples tested in 2023-24. These samples have been tested in around 5,11,000 villages, with an average of 28 water samples tested per village.

We probe these questions in this article:

- 💧 How valuable are the entire data set of 1.44 crore Water data points
- 💧 How long does this value last i.e. can we almost think of an expiry date to the Water data point
- 💧 Is this data value place dependent i.e. higher with greater

population density; where and when contamination risk is higher

Putting data in analytical framework is important as the outcome provides lot of facts. The lives that can be saved and public health burden that can be prevented by putting such data to use and taking action on it, far outweighs potentially the cost of such data collection, storage, and communication. As reported by Gardner (2017)², the benefit-cost ratio of Water data can vary from 2.0 to greater than 21.5, with a median of around 4.0, which means that the value accrued from each Water data point is 4 times (median value) the cost of such data collection.

This value generation from Water data depends on a lot of factors, such as data accessibility, communication, and very importantly, how it is put to action. For example, whereas Water supply services can create a value amplification of 4 as compared with Data costs, this same ratio is much higher in say, tourism, where the same ratio has a median score of around 13. In terms of lives saved, water supply would score higher, but in terms of direct economic value, other sectors score much higher, also because of the attention given to deriving value out of each Water Data Point.

The JJM water supply schemes rely heavily on groundwater aquifers as water sources (60%-75% are groundwater-based schemes). Apart from that, there are medium to large sized reservoirs that are also tapped. As water requirements increase, with seasons, climate change and urban-rural requirements, the sources either run dry, or in the case of groundwater, there comes a need to go deeper and explore. Water data becomes precious in above situation because of the nature of Fluoride, Arsenic and other contamination such as Uranium which affect aquifers across India. In the case of short-term outbreaks as in Rourkela now, the expiry date for the value of Water data, becomes much more short-term and of high value, whereas the value of Water data in aquifers for chemical contamination, might be more long term, with the value distributed over years.

1.44 crore+ Water data points within 9 months of this current financial year unfolds the truth that the volumes of data are growing rapidly. If used appropriately, the value that one can potentially derive from this data over the next decade, could be much more than the cost incurred to make this process possible. However, one can see some critical challenges to overcome so that the value of each water data point is realised:

¹ Arghyam is a public charitable foundation with a Vision & Mission for "Safe, sustainable water for all" and "to strengthen the ability of the ecosystem" to enable water security. Working on India's water quality and scarcity issues using science and community participation.

² Gardner, J., Doyle, M., & Patterson, L. (2017). Estimating the Value of Public Water Data. Nicholas Institute for Environmental Policy Solutions, Duke University.

SPECIAL FEATURE – WATER QUALITY MANAGEMENT

Trust

The process of water data collection, transmission and storage makes a big difference to the trust factor for the target audience. One can argue that more than the volume of data, what matters is low-volume & high trust. Participation is one means of increasing trust i.e. getting more eyes becoming visible into the process of the data journey, but broadly, investing on trust will convert towards much greater value for every data point.

Accessibility

While a broad picture of dashboard-based statistics is now accessible with the WQMIS (Water quality Management information system), getting the local picture is still in its early stages.

The Citizen Corner

(https://ejalshakti.gov.in/jjm/citizen_corner/villageinformation.aspx) of JJM offers good opportunity, catalysing water data-ecosystem, one

needs open APIs that are catered to a wider need of solution providers, and provide a vital linkage between the Data warehouses (NIC) and Data consumers (state governments, NGOs, businesses, citizen groups and researchers).

Communication

The 5-women in each village for Water testing has started as a great idea, but it needs strategic thinking in order to sustain and turn into a long-term impact. Community service providers and citizen volunteers will need incentives to continue their action, and the role that they play in communicating water data is invaluable. New innovations in digital communication can help here, but the first problem to fix is that of the people who have the right incentives to be the community interface on Water data. One possible solution is that of involving health workers, and making sure they have the mandate, capacity and incentives for the role.

Action taken

The cycle of grievance redressal on water solutions such as water treatment plants, leaky pipes and dry taps, is something that needs closer attention, so that water data becomes more valuable. From the benefit-cost ratio of 4 to that of 21.5, one can see a range of sectors that are deriving much value from water data. Making data more accountable is the key from which one can learn from water supply service providers.

It is an era in which water data is going to become more and more precious, much of the derived value from data is going to be of increasing importance in public health domain. Instead of more reactive data collection in context to Rourkela, how much can a much more proactive, accessible, and accountable water data system be made possible. The researchers may perhaps need to work towards such a system and invite collaborators to join hands.



2,113 water quality testing laboratories opened to public to test their water samples

Scan the QR code to locate the labs near you

Learnings from Complexities

Case Study of Gharbar Panchayat in Baliapur Block of Dhanbad District

Eklavya Prasad, Megh Pyne Abhiyan¹ | Rashika Pullam Chetti, INREM Foundation

Point of Concern

The presence of one or more contaminants in groundwater creates a complex drinking water scenario at the habitation-level, especially when groundwater is the source from which drinking water is drawn. This article uses the case of Gharbar panchayat in Baliapur block of Dhanbad district in Jharkhand to articulate the seriousness of acknowledging diverse issues as a way to ensure safe drinking water in a fluoride-affected panchayat.

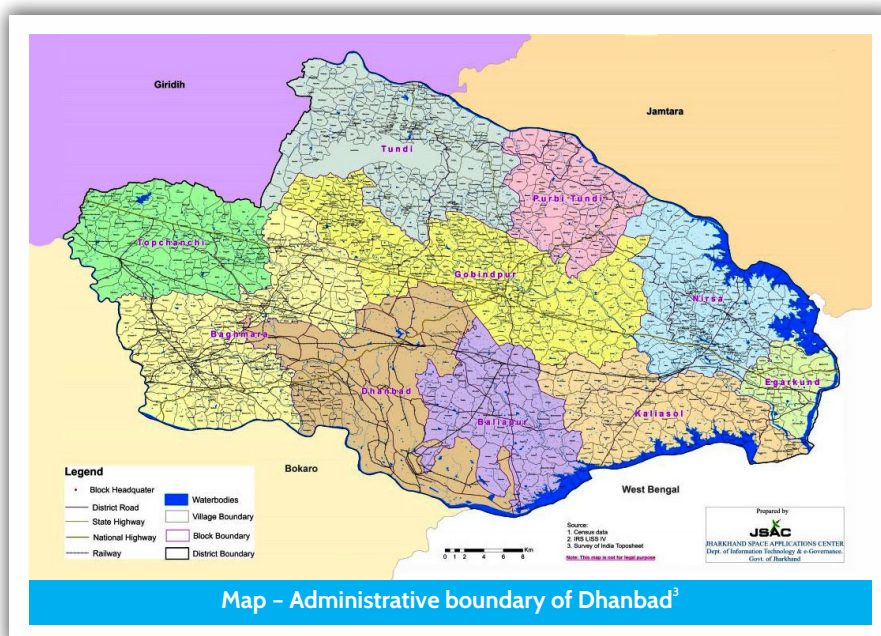
Showcasing Fluoride Problem in Baliapur Block and Gharbar Panchayat

Baliapur is one of the 10 community development (CD) blocks in Dhanbad district with a total population of the 1,05,613 persons in 23 panchayats². It is located in the southeast part of the district (see map 1).

On 2nd February 2016, a Mega Rural Water Supply Program (MRWSP) was launched by the Department of Drinking Water and Sanitation of the

Government of Jharkhand and supported by the National Bank for Agriculture and Rural Development (NABARD) at a cost of Rs 719.6 million. This was in response to a campaign spearheaded by villagers from Brahman Tola in Gharbar panchayat for fluoride-free drinking water.

In the first phase of MRWSP, piped water was to be provided to 41 villages in 15 panchayats. Because implementation was extremely slow, people had no option but to depend on groundwater for water in 15 panchayats, irrespective of its quality. This prompted Megh Pyne Abhiyan (MPA)⁴ to conduct water testing in 14 panchayats of Baliapur block through field testing Kit (FTK) to detect the presence of fluoride contamination in groundwater. The test indicated presence of fluoride above the permissible limit (1.5 ppm) in seven panchayats. Villagers in these panchayats continued to consume the contaminated groundwater. District-level officials were made aware of the fluoride contamination to explore possibilities of ensuring fluoride free drinking water in affected panchayats of Baliapur block. Subsequently, in January 2020, the option of developing an



¹ Megh Pyne Abhiyan (MPA) is a Public Charitable Trust that works on issues of water distress in East India. The primary focus of MPA is on safe and secure drinking water processes and technologies, participatory groundwater management, and hygienic & contextual sanitation management. MPA is committed towards resilience and adaptability of local rural communities, particularly in natural hazard prone regions.

² Dhanbad district (2024); Dhanbad district's official website; Baliapur; Accessed on January 3, 2024 - <https://dhanbad.nic.in/baliapur/>

³ Dhanbad district (2024); Dhanbad district's official website; Administrative boundary of Dhanbad district; Accessed on January 3, 2024 - <https://cdn.s3waas.gov.in/s337f0e884fbad9667e38940169d0a3c95/uploads/2023071459-1024x725.jpg>

⁴ Megh Pyne Abhiyan is a non-governmental organization working in the water quality stressed areas of east India – Bihar, Jharkhand, and West Bengal.

SPECIAL FEATURE – WATER QUALITY MANAGEMENT

integrated fluorosis mitigation (IFM) framework for Baliapur block was discussed with the district-level official.

In July 2022, MPA focused on working on fluoride contamination in Gharbar Panchayat due to the widespread problem of skeletal and dental fluorosis in adults and children respectively as well as the dismal status of MRWSP in the panchayat. Gharbar is a multi-cultural panchayat consisting of six revenue villages and 20 hamlets. There are 1275 houses with an estimated population of 6,375 persons. MPA conducted a panchayat-wide detailed study on the status of drinking water. Simultaneously, MPA collaborated with School of Environmental Studies (SOES), Jadavpur University (JU), Kolkata to test all water sources in Gharbar panchayat using ion selective electrode (ISE) in direct potentiometry. A total of 308 water samples were tested to assess the extent of fluoride presence in groundwater. The testing established the presence of fluoride contamination above 1.5 ppm in 37 percent of the total tested water samples. The results of the tests were shared with various district-level officials between 2022 and 2023, for timely action to ensure quality drinking water to the people of Gharbar Panchayat.

MPA began to focus on streamlining the MRWSP in Gharbar panchayat. *Aapki Yojana, Aapki Sarkar, Aapke Dwar* programme of the Government of Jharkhand was used to draw the attention of district level officials towards the poor piped water supply system in the panchayat. Water supply started in 10 out of 11 hamlets, but remained intermittent, irregular, with insufficient volume and low pressure. As a result, water supply in the panchayat was monitored with the help of villagers for one week every month between

November 2022 and May 2023. The inputs were documented and shared with district officials. This practice ushered a change, but they remained largely ad hoc. Thus, it made sense to simultaneously focus on developing alternative drinking water arrangements. A comprehensive plan for alternative drinking water security for Gharbar panchayat. MPA mobilised funds for the district administration of Dhanbad for the implementation of drinking water safety pilot in Gharbar panchayat by Drinking Water and Sanitation Division 2 in Dhanbad.

Learnings from Complexities

Is assuring safe drinking water all through the year, a possibility?

It is often seen that either intermittent piped water supply, poor quality of water supplied, or both, leads people to return to contaminated groundwater sources to meet their drinking and domestic water needs. Therefore, it is essential to identify and develop safe sources for vulnerable communities to access safe drinking water by adopting multiple strategies.

Do peoples-centric and inclusive water surveillance mechanism work?

Responsible sharing of information and knowledge regarding the presence of fluoride in groundwater must always remain the cornerstone. Formation of a village-level committee supported by a redressal mechanism at the panchayat level to monitor piped water supply will facilitate people-centric surveillance.

Why building trust amidst the water users critical?

For continued access to safe water, trust on the drinking water services is imperative. This can be either through continuous safe water supply and alternative drinking water

options, or both. It is a known fact that the problems of vulnerable communities increase due to many factors, which result in the development of mistrust. Therefore, there is a need to develop a process through which the problems and needs of vulnerable communities in the affected area can be understood and addressed. Trained local cadres such as Jal Doots and five women's groups engaged in regular monitoring of groundwater quality and sharing of results will help develop trust not only in the source but also in the system being introduced.

Why a need to contextualise West Bengal's *Jal Bandhu* initiative?

Jal Bandhu (Friends of water), an initiative of the West Bengal Public Health and Engineering Department (WBPHED) is an exemplar of the capacity of extension workers of laboratories at the Gram Panchayat (GP) level. *Jal Bandhus* are responsible for collecting water samples from the villages and taking them to the assigned laboratory for testing contamination. They follow a structured collection regime, which enables them to collect the listed water samples from the designated GP for water testing. The presence *Jal Bandhus*, enhances the potential to test, assess, inform, and address the issue of groundwater contamination. A similar system should be made contextualised in the fluoride sensitive habitations of Baliapur block, which later might be replicated in the fluoride affected habitations of 17 districts of Jharkhand.

Decentralised Operational Framework – A Way Forward?

A comprehensive approach is needed to streamline drinking water safety in fluoride affected habitations. Apart from technology, other components such as processes, alternatives, nutrition, lifestyle, and functional



partnerships are critical to facilitate access to safe drinking water. The goal can be attained only when its functioning is decentralised and as a collective. This multi-layered strategy can also utilise participatory canvas by bringing together various govern-

ment and non-government stakeholders. Thus, a decentralized operational framework to work on fluorosis mitigation will get developed. Establishing partnerships at the local level is extremely important and productive. Therefore,

process of identifying individuals at the village level and training them to compile information on various factors related to drinking water, habits, and usage must remain mandatory for safe drinking water throughout the year. ■

*Congratulations to all
citizens of*
Arunachal Pradesh

Upper Siang has become
the '**Har Ghar Jal**'
certified district in
Arunachal Pradesh



All 112 villages declared
'Har Ghar Jal' by Gram Sabhas.



All 5,606 rural households in
Upper Siang district have water through taps.



All rural women and girls in Upper Siang district
are now free from the drudgery of collecting water.



Community-Led Water Quality Surveillance A Path to Empowerment and Sustainability

Satyajit Ghosh, WaterAid India | Suneetha Sapur, INREM Foundation

The Changemaker

Do you remember the tale of 'The Pied Piper', a mysterious figure who lead an entire village with his music. Yet, when it comes to mobilising communities for safe water protection, there's no magic pipe. Instead, there are individuals like Babita Siroliya, a changemaker in Bagli block, Dewas district, Madhya Pradesh, who, without any magical abilities, has played a transformative role in ensuring water quality for her community.

Babita, initially hesitant about understanding water quality, she had a straightforward approach – if the water looks muddy, filter it with cloth; if not, it's safe to consume. However, the invisible challenge of water quality extends far beyond appearances, impacting health, well-being, and livelihoods.

Jal Jeevan Mission (JJM), embarked upon providing safe and adequate water supply through individual household tap connections to all rural households. It also promotes voluntary ownership among local communities through contributions in cash, kind, or labour, as well as voluntary labour (*shramdaan*) to assist in the implementation of the mission.

WaterAid in Madhya Pradesh supports JJM by demonstrating how community-led efforts, particularly led by women like Babita, are pivotal in the implementation of JJM.

Leading a Way

In 2019, Babita participated in a WaterAid programme focused on triggering discussions about water-related issues, emphasising the need for water security plans, and empowering communities to make collective decisions. Through these sessions, Babita not only understood the crucial role of water in daily life but also actively engaged in discussions, becoming a catalyst for change in her village. As a local leader, Babita grasped the concept of inclusive discussions and active participation during the training sessions.

Babita led the water source mapping of Nayapura village with support from like-minded individuals. She emphasised the importance of water quality considering all aspects and linking them to safe water for better health outcomes. Despite initial challenges Babita and her team successfully mapped most water sources through participatory discussions, showcasing the effectiveness of community engagement.

Mapping and Actionable Plans

Participatory source mapping offered a clear and open view of the sources' locations across the village's geographic area. Participatory resource mapping led by Ms. Babita also highlighted the challenges in accessing drinking water due to social marginalization. It allowed villagers to have a comprehensive under-

standing of where water sources are and which households accessed contaminated or safe water. It projected households belonging to excluded and marginalised communities to have access to contaminated water.

This awareness prompted reflections among villagers, leading to the creation of actionable plans, through a Water Calendar. For e.g., Babita led the team able to understand the source of water contamination is due to the seepage of waste water. This knowledge helped them to mobilise the community for construction of a soak pit.

The mapping process established a foundation for regularly monitoring the sources, including testing and creating preventive measures. Highly contaminated sources were marked in red, while safe sources were marked in green to easily inform the community. These maps were instrumental in supporting the Public Health Engineering Department (PHED) in implementing piped water supply on identified safe sources. Based on the mapping a water calendar was developed and displayed in panchayat office. The water calendar consists the status of water sources, the preventive and mitigative actions, water testing schedule and measures to sustain the water source.

The community actively engaged in monitoring actions displayed on the Water Calendar to sustain source quality. This involved regular water



quality checks and collaborative planning with PHED and the Panchayat to enhance contaminated sources.

Monthly Meetings and Collaboration

Babita's dedicated efforts have cultivated a unique collaborative space in her village, revolving around impactful monthly meetings with approximately 20 group members. In these meetings Public Health Engineering department also participated and created awareness on water quality guidelines of JJM.

Remarkably, Babita and her team have transformed these monthly meetings into pivotal points of convergence, drawing the participation of various departments. This convergence serves as a dynamic platform for the formulation of strategic action plans aimed at preventing and mitigating issues related to contaminated water sources.

When laboratory reports indicate contamination in a water source,

representatives from the health department, Public Health Engineering department (PHED), and the Panchayati Raj Department join one of Babita's monthly meetings. Their collaborative efforts are dedicated to communicate the community about the repercussions of accessing contaminated sources, engaging in health-related discussions. Facilitated by Babita, these meetings spark valuable dialogues between different departments and the community.

Crucially, the safe sources mapped by Babita and her team serve as a foundational resource for JJM, aiding in the efficient planning of piped water supply schemes in villages. This not only optimises resource allocation but also streamlines the planning process, showcasing the strategic impact of Babita's leadership and the collaborative spirit within the community.

Leadership of Babita have inspired 198 volunteers to take part in mapping water sources in 30 villages of five district in Madhya Pradesh. Initiatives of all these volunteers gave rise to new thought on participatory

source mapping as potential tool to trigger discussion around Water Quality through collective reflections.

Takeaways

Nevertheless, as we navigate the intricate path toward sustainable water quality, significant financial and technical challenges cast shadows on our journey. The key to long-term success in managing water quality lies in fostering self-reliance within communities and their collaborative partners. Empowering these communities to adeptly handle the complex economics tied to the operations and maintenance of water systems becomes indispensable for ensuring a lasting impact on water quality.

In essence, the pursuit of sustainable water quality is not a magical illusion; it is a collective effort. Individuals like Babita Siroliya emerge as guiding lights, leading the way toward empowerment, enhancing community well-being, and envisioning a future where safe and accessible water is not just an aspiration but an essential reality for every individual. ■



Water Calendar

Confronting Fluoride Contamination

A Journey Through Challenges and Solutions in West Bengal

Sumanjita Barman, INREM Foundation

Journey of Working on Drinking Water Quality, Especially Fluoride

A journey began in the early 2000s when Dr Kunal Kanti Majumdar attended a workshop at Santiniketan in Birbhum district on arsenic and fluoride. After the workshop, when he visited one of the fluorides affected districts, he saw children and adults affected by dental and skeletal fluorosis. Before the workshop, he was largely concerned with the issue of arsenic but later it included fluoride also due to its prevalence in West Bengal. Since expanding his area of concern, he has been deeply involved in field studies, identifying affected areas and populations, and implementing interventions such as household filters and community education programmes in fluoride-affected areas.

27 Years of Fluoride in West Bengal – Addressing the Problem

Over the past 27 years, various strategies have been employed to tackle fluoride contamination, including public health interventions, technological solutions like water purification systems, and community awareness programmes. Dr Majumdar acknowledges the progress but also notes the persisting challenges due to the chronic nature of fluorosis, the need for sustained efforts, and the adaptation of

communities to safer water practices. As fluorosis is a preventable disease, being diagnosed at an early stage is crucial. Also, inter-sectoral coordination between various department is utmost important to address the problem of fluorosis.

Assessment of Efforts to Address Health Impacts

Dr Majumdar assesses that while substantial efforts have been made to address the health impacts of fluoride, challenges remain in terms of consistent water quality monitoring, health care accessibility, and community engagement. He emphasises the need for an integrated approach involving health, water supply, and community participation. In-depth studies are still needed to assess the disease burden in relation to fluoride. Along with this there is a need to standardise routine monitoring, reporting and referral system starting from sub-centre level in fluoride vulnerable areas.

Comprehensive Solution at the National Level

For a comprehensive solution, Dr Majumdar suggests establishing a functional framework that includes a robust monitoring and surveillance system for water quality and health, community involvement, and a referral system for affected individuals. He stresses the importance of political commitment, intersectoral coordination, and sustainable infrastructure development.

Main Learnings and Takeaways

After years of involvement in fluoride issues, Dr Majumdar has learned the importance of early detection, community engagement, and continuous education. He highlights that despite the challenges, effective management of fluoride contamination is possible through a sustained, multi-faceted approach involving all stakeholders, from government to local communities. He also acknowledges the need for better integration of environmental health into medical and public health education to equip future generations with the knowledge to address such issues.

These responses reflect Dr Majumdar's extensive experience and deep insight into the issues of water quality and public health, particularly concerning fluoride contamination in West Bengal and potentially other affected regions.

It would be great to highlight some of his inputs:

1. Training of medical and para-medical officers is essential to identify the cases at an early stage and treatment can be started.
2. A functional framework that includes a robust monitoring and surveillance system for water quality and health, community involvement, and a referral system for affected individuals. ■



Pradhan Mantri- Janjati Adivasi Nyaya Maha Abhiyan (PM-JANMAN) to Empower Particularly Vulnerable Tribal Groups (PVTGs)

Sectoral brainstorming session during PM JANMAN Manthan Shivir held by
Ministry of Tribal Affairs, Government of India at Bharat Mandapam 15th December 2023

The Union Cabinet, chaired by the Hon'ble Prime Minister Shri Narendra Modi, has approved Pradhan Mantri Janjati Adivasi Nyaya Maha Abhiyan (PM-JANMAN) in November 2023, with a financial outlay of around Rs 24,000 Crore (Centre Share: Rs 15,336/- crore and State Share Rs 8,768/- crore) that aims to saturate PVTG households and habitations with 11 critical interventions. The Abhiyan was launched on Janjatiya Gaurav Diwas from Khunti, Jharkhand.

India has a Schedule Tribe Population of 10.45 crore as per Census 2011. Out of this, 75 communities located in 18 States and the Union Territory of Andaman and Nicobar Islands have

been categorised as Particularly Vulnerable Tribal Groups (PVTG). These PVTG continue to face vulnerability in social, economic and educational fields. It was announced in the Budget Speech 2023-24, "To improve socio-economic conditions of the Particularly Vulnerable Tribal Groups (PVTGs). Therefore, PM-JANMAN was launched pertaining to 11 central sponsored scheme.

1. Provision of pucca houses
2. Connecting roads
3. Piped water supply
4. Mobile Medical Units with medical cost
5. Constructions of Hostels

6. Construction of Anganwadi Centers
7. Construction of Multipurpose Centers (MPC)
8. Energisation of HHs (Last Mile Connectivity)
9. Solar lighting in streets & MPCs
10. Setting up of VDVks
11. Installation of mobile towers.

As a part of the Pradhan Mantri Janajati Adivasi Nyaya Maha Abhiyan (PM-JANMAN) Manthan Shivir by Ministry of Tribal Affairs (MoTA), Government of India (GoI) on 15th December 2023, a sectoral brainstorming session was held under the co-chairpersonship of Secretary, Department of Drinking Water and Sanitation (DDWS), and Secretary, Ministry of Tribal Affairs (MoTA) to discuss the action plan for provisioning access to safe drinking water for 75 number of Primitive Vulnerable Tribal Group (PVTG) habitations residing in 18 States and One UT of the country on the following agenda points: State wise targets and Action Plan, issues (challenges & success) emerging from States/UT, road-map to be planned by NJJM for saturation of PVTG habitations. The session was attended by the Principal Secretaries, Secretaries, Mission Directors, Engineer in Chiefs, Chief Engineers and Superintending Engineers of the Rural Water Supply (RWS)/ Public Health Engineering (PHE) departments of these 18 States/ 1 UT.



National Workshop on Water Quality Sustainability in Water Supply Programmes

With an attention towards contributing to current national programmatic focus on Jal Jeevan Mission (JJM) and Water quality improvements, and also to bring a wider attention on Water data and Infrastructure sustainability, INREM organised a one-day workshop at SPM-NIWAS, Kolkata, on 21st December, 2023, whose suggestions will help the Rural WASH Partners Forum (RWPF) in its dialogues with states and centre, and towards sustaining safe water programmes.

Mr Pradeep Singh, Director JJM, offered the keynote address to initiate this conference. He came up with a set of recommendations and a call to action for various stakeholders involved in water quality management

- ◆ Strengthening testing and reporting mechanisms
- ◆ Community engagement and education
- ◆ Develop and enforce strict water quality standards and regulations
- ◆ Encourage innovation and research in water testing technologies and treatment methods

Mr Pradeep Singh also requested for inputs into the newly formed committee for “Standard Operation Procedure for quality testing of drinking water samples at sources and delivery points” that has two working groups on Technical and Community aspects. The MP JJM presentation by Ravindra pare

(Consultant SE, MP PHED), Jitendra Mavi (EE, MP PHED, Jhabua) and Atul Shrivastava (SE, MP PHED) outlined the key findings and best practices from a pilot project aimed at strengthening water quality monitoring and surveillance in Madhya Pradesh. The presentation also emphasised community empowerment with Community Health Officers (CHOs) and innovative solutions like the WhatsApp based OurWater Bot to facilitate water quality management and surveillance.

Deputy Director, JJM Assam, Mr Biraj Boruah, and Mr Hemant Sarma, Assam PHED, outlined the digital transformation initiative for holistic water governance in Assam through the JJM Brain, a comprehensive



software platform for Pipe Water Supply Schemes (PWSS). Mr E Nandakumar, ICCW, IIT Madras delved into the emerging trends in water data, digital twins, and sensor innovations. Presentations by RWPF Partners: Water Aid, Piramal Foundation, AKRSP(I), Water for People and Megh Pyne Abhiyaan (MPA), emphasised on community based

approached for water quality monitoring and surveillance.

INREM Foundation, in its coordination role for the Jal Jeevan Mission (JJM) on Water Quality Management for the Rural WASH Partners Forum (RWPF), and with support from European Union (EU) and Arghyam sees this workshop as a critical turning point for dialogues on Water

Quality Data, especially with respect to Water supply programmes. Data quality, transparency, access, community participation and most importantly, follow-up action on water quality improvements, are key areas requiring much change, and the suggestions here going towards policy formulations will help in bringing increased sustainability to water supply programmes.

This permanent link: <https://waterquality.network/published-page/events?id=658a5f09ab3dc2000cfbf1a7> will host presentations, videos, reports and future follow-up directions for this workshop.

*Congratulations to
Citizens of*

Tripura

Tripura has crossed
75% coverage under
Jal Jeevan Mission



Tracking the Success Path

Rajeev Chandrasekhar Reviews Jal Jeevan Mission in Rewari District, Haryana

Haryana marked a momentous milestone last year by achieving 100% Water Tap Connections coverage. This remarkable achievement was appreciated by Honourable Minister Shri Rajeev Chandrasekhar, Hon'ble Union Minister of State for Electronics and Information Technology and Union Minister of State for Skill Development & Entrepreneurship, Govt. of India. Dr. Banwari Lal, Hon'ble Minister-in-Charge, Public Health Engineering Department, Govt. Haryana was also present to welcome the Hon'ble Minister, Govt. of India. During his visit he conducted a 'Jal Shodhan' or inspection of Jal Jeevan Mission (JJM) work in Bavalkhand village of Rewari district.

Minister Rajeev Chandrasekhar interacted with members of the Village Water & Sanitation Committee, and visited the homes of several residents. The minister applauded the significant success of JJM in Haryana, particularly in model villages like Raghunathpura and Chanduwas, which achieved the milestone of 100% water connectivity to all households.

During his interactions, the Minister expressed, "PM Narendra Modi ji's vision of *Har Ghar Jal* is deeply impacting the lives of Indians. It was wonderful to meet with the people of the villages Raghunathpur & Chanduwas in Rewari today and learn about their transformation story."

For several decades, women in these villages endured the hardship of trekking miles to fetch water, standing in long queues for hours every day for a mere drop of water. With Haryana achieving its targets, this long-standing hardship came to an end. He further added that, the double engine government under the leadership of Hon'ble Prime Minister, Shri Narendra Modi and Hon'ble Chief Minister, Shri Manohar Lal is bringing changes in the lives of the people of the state by prominently implementing public welfare schemes in Haryana. Praising the work done in Haryana under Jal Jeevan Mission, he said that this will provide inspiration to other states also.

The Minister also inspected the water supply management system in the Bavalkhand & Raghunathpura villages, which efficiently facilitates water supply. Several women from these villages thanked the Narendra Modi Government for resolving the persistent water problem that plagued their communities for decades.

During the interaction, one of the beneficiaries highlighted the shift from enduring the drudgery of fetching water to now having piped water of adequate quality at their doorsteps. She further emphasized that the pipelines are inspected at regular intervals, ensuring both delivery and quality of water. A notable aspect emerged during the



interaction: women in the region elaborated that they are equipped with Field Testing Kits (FTK), allowing them to independently monitor water quality. This empowerment, coupled with a swift grievance redressal mechanism, has transformed the water distribution system landscape beyond their imagination. The beneficiary expressed heartfelt thanks to the Minister and extended gratitude to the honorable Prime Minister, Narendra Modi, for envisioning a future brightened by tap connections.

The Jal Jeevan Mission, operating with speed and scale, has increased rural tap connection coverage from 3.23 Crore households in August 2019 to an impressive 13 crore in just four years. Embodying the motto of Sabka Saath, Sabka Vikas, Sabka Vishwas aur Sabka Prayas, the Jal Jeevan Mission is advancing towards achieving Sustainable Development Goal 6 of United Nation providing safe and affordable water to all by delivering safe water through taps to households, schools, anganwadis, and other public institutions in rural areas.

Minister-in-Charge, Public Health Engineering Department, Govt. Haryana, Dr. Banwari Lal, emphasised



the success of the Double Engine Government, drawing parallels with Uttar Pradesh's developmental strides. He applauded the people of Haryana for their active participation, which led to the 100% coverage achieved under JJM. Initiatives like Ujjwala Scheme and JJM, delivered with speed and scale, are reshaping the developmental landscape. Delegates from Water & Sanitation Support Organisation (WSSO), Sarpanch of all the GPs, and other dignitaries marked the occasion,

recognising this achievement as a monumental step toward a better tomorrow.

The success of the Jal Jeevan Mission in achieving 100% coverage in Haryana stands as a testament to the power of community participation and government initiatives. This accomplishment not only provides access to clean water but also opens up new opportunities for a brighter and more sustainable future for the people of Haryana. ■



Department of Drinking Water & Sanitation at COP28, Dubai

The COP 28 is the annual United Nations (UN) climate meeting, where governments discuss how to limit and prepare for future climate change. The theme of 28th Meeting was 'Women & Water' held in UAE-Dubai from 30th November to 12th December 2023.

In this meeting, the Department of Drinking Water and Sanitation (DDWS) had an opportunity to present its work related to Jal Jeevan Mission (Clean tap water to every rural households) and Swachh Bharat Mission Grameen (SBM-G), fostering discussion on key issues of WASH, and highlighting the achievements and impact of both the flagship programmes in the lives of women in India.

The theme of the session was to depict success stories - Gender responsive climate action plan.

The panelists had a fruitful discussion about the importance of WASH services for women, leadership roles for women, and achievements of flagship programmes JJM and SBM by Govt. Of India. The United Nations (UN) annual climate change conference, also known as the 'Conference of the Parties' or 'COP', brings together world leaders, ministers and negotiators to agree on how to address climate change. The negotiating parties include governments that have signed the UN Framework Convention on Climate Change (UNFCCC), the Kyoto Protocol and/or the Paris Agreement. The COPs are also attended by thousands of representatives from civil society, the private sector, international organizations, and the media. COP28 is a critical opportunity to put the world on a more sustainable path given the temperature records being repeatedly

broken and climate impacts felt in unprecedented wildfires, floods, storms, and droughts worldwide. An interactive session was also conducted to answer questions and address the queries of participants/delegates.

Speaking at the event, Shri Jitendra Srivastava, Joint Secretary and Mission Director (JS&MD), stated, "JJM has played a pivotal role in empowering women as decision-makers in the water sector, aligning with COP28's goals of climate resilience."

"The discussion and outcome of JJM includes: improved health, time saved in fetching water, opportunity for education of girl child, ease of life, self-confidence development, increased participation, adequate training in water quality testing, and newfound economic opportunities."

JS&MD(SBM-G) highlighted different positive feature related to JJM: 10 Women are stepping into the roles of decision-makers and change drivers within their communities through active involvement in water management, capacity building and training, and awareness campaigns etc. He also mentioned that women are heralding a social revolution that elevates their status, ignites leadership, and propels their journey towards empowerment and equality.

Read more about
COP28: UN Climate
Change Conference -
United Arab
Emirates | UNFCCC



Meetings and Events

Visit of MoS to Haryana

Shri Rajeev Chandrashekher, MoS for Jal Shakti visited Haryana to see the progress and implementation of Jal Jeevan Mission. Haryana is 100% Har Ghar Jal State. During his visit, he said “PM Narendra Modi ji's vision of *Har Ghar Jal* is deeply impacting the lives of Indians! It was wonderful to meet with people of village Raghunathpur & Chanduwas in Rewari today and know about their transformation story.”

For 7 decades, women in these villages endured the drudgery of trekking miles to fetch water for their household needs, standing in long queues for hours every day for a mere drop of water. With Haryana achieving its targets in 2022, this longstanding hardship came to an end in just 3 years. Women now spend more time with their families as they get clean drinking water of prescribed quality.

Haryana has set an example of how the Centre and State Govt can work towards achieving the unprecedented feat of connecting all rural households with water in just 3 years, something that couldn't be achieved over decades, he added.

Review Meetings

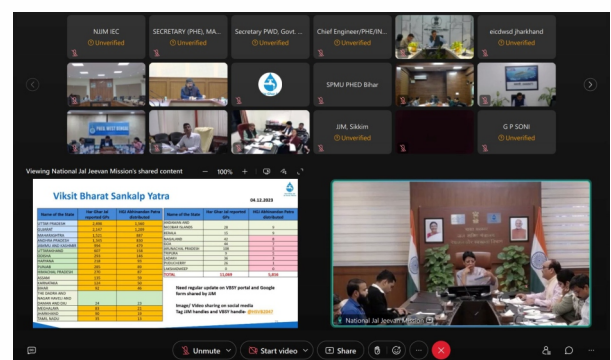
State's review meeting

The Secretary of the Department of Drinking Water and Sanitation (DDWS) chaired a review meeting for the Jal Jeevan Mission on December 4, 2023, via video conference. The purpose of the meeting was to evaluate the progress and implementation status in various States/UTs.

During the meeting, a presentation was delivered addressing issues and challenges in implementation, pending approvals and awards of work, coverage in schools and Anganwadi Centers (AWCs), saturation plan, HGI certification, water quality monitoring, financial progress, operations and maintenance (O&M), Jal Jeevan Mission (JJM) in aspirational blocks, geo-tagging, and Information, Education, and Communication (IEC) activities.

The participants included Special Chief Secretaries, Additional Chief Secretaries, Principal Secretaries, Secretaries, Mission Directors, Joint Secretaries, Engi-

neering-in-Chiefs, and other senior officials from all States/Union Territories. Representatives from the National Jal Jeevan Mission (NJJM), including the Additional Secretary and Managing Director (AS&MD-NJJM), Directors, Deputy Secretaries, Additional Advisors, among others, were also in attendance.



Meeting with Secretaries of three Ministries for convergence

Secretaries of DDWS, Ministry of Panchayati Raj, Government of India, Ministry of Skill Development co-chaired a joint-review meeting of 'Nal Jal Mitra Programme' on 8th December, 2023 at CGO Complex, New Delhi. This program aims to create multi-skilled workforce in all villages to manage the schemes created under JJM. During the meeting, AS&MD-NJJM made a brief presentation on objective of NJMP, progress made so far, challenges and way forward.

The meeting was attended by senior officers from Rural Water Supply departments, Skill Development Missions and Panchayati Raj departments of all States/ Uts. ■



Meeting on PVTG

Secretary, DDWS chaired a review meeting to assess provisioning of adequate water supply in all PVTG households in 18 States & 1 UT under Jal Jeevan Mission and PM-JANMAN for development of Particularly Vulnerable Tribal Groups (PVTG) on 14th December, 2023. During the meeting, Smt. Vini Mahajan, Secretary, DDWS emphasised on tagging of PVTG habitations, expediting approval of schemes, awarding of works and pace of implementation, & utilising the opportunity to work towards empowering the most disempowered section of the society. The VC was attended by senior officers from 19 States/ UT. From NJJM, AS&MD-NJJM, Directors, DS, and other officers were present. ■



Meeting on effective utilisation of 15th Finance Fund

A joint review meeting chaired by Secretary, DDWS; Secretary, Ministry of Rural Development; and Secretary, Ministry of Panchayati Raj, Gol held on 18.12.2023 to discuss the convergence issues of 15th Finance Commission in RLBs', MNREGS and other schemes of Central/ State Govt. in the implementation of SBM(G) 2.0 and JJM.

JS&MD, SBMG, made a detailed presentation regarding SBM(G) followed by a brief presentation on JJM by AS&MD, NJJM covering different important aspects. In the meeting, emphasis was given on the importance of convergence and necessary instructions were given to the concerned for effective implementation. From State and UTs officials of Rural Sanitation/ Rural Water Supply/ Rural Development Departments/ Panchayati Raj Department, PHED joined the meeting virtually. From DDWS, Directors, DS and other officials have joined the meeting. ■



Viksit Bharat Sankalp Yatra

Facilitating Development through Dialogue and Progress



In a nation as diverse as India, where development is an ongoing process, effective communication and understanding of ground realities play a pivotal role. The Viksit Bharat Sankalp Yatra, launched with the mission of fostering direct communication between the government and its citizens, stands as a evidence to the commitment towards inclusive and sustainable development. This article delves into the objectives, launch details, and key events under the Viksit Bharat Sankalp Yatra.

The Viksit Bharat Sankalp Yatra, initiated to bridge the gap between policy-makers and beneficiaries, was launched and the IEC vans are flagged off on 15th November, 2023 by Hon'ble Prime Minister Sri Narendra Modi from Khunti in Jharkhand. The primary objective of the campaign is to facilitate a two-way communication channel, allowing the government to better understand the needs and challenges faced by the citizens and ensuring that the beneficiaries of various development schemes reach the intended beneficiaries effectively ensuring no one is left behind.

Virtual Connect of Prime Minister with beneficiaries

Central to the Viksit Bharat Samvad Yatra is the PM's virtual connect (VC) with beneficiaries of various schemes. A series of live interactions conducted by the Prime Minister himself on 30th Nov, 9th Dec, 16th Dec and 27th Dec 2023. Through these virtual sessions, the PM engaged with citizens from different parts of the country, discussing their experiences with various government schemes, how they are shaping up their lives.

The most notable aspect of the Sankalp Yatra is the direct interaction with beneficiaries of different schemes. This yatra provides a platform for beneficiaries to share their stories, challenges and successes. This grassroots-level feedback provided instrumental in refining existing policies and shaping future initiatives.

Prime Minister Sri Narendra Modi interacted with the JJM beneficiary Smt. Nazia Nazir from Jammu & Kashmir on 9th December 23. In her Samvad with Hon'ble PM Nazia shows her gratitude for getting tap





बीते 4 वर्षों में 11 करोड़ से अधिक नए ग्रामीण परिवारों तक नल से जल पहुंचा है, पानी का नल आगया है। इतने तक हमें सीमित नहीं रहना है, अब पानी के बेहतर प्रबन्धन, पानी की गुणवत्ता जैसे विषयों पर भी हमें बल देना है।

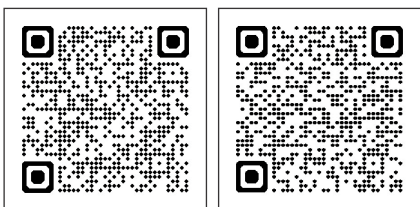


Prime Minister
Narendra Modi

in his address on
27th December, 2023.

water at her house under JJM. She mentioned that before getting tap connection under JJM she used to fetch water from well but now with tap water she has more time and relief. She is now spending quality time with family.

Detail Samvad may be watched here:



Meri Kahani Meri Zubani

An essential segment of the VBSY is the 'Meri Kahani Meri Zubani' series, where individuals from diverse backgrounds narrates their personal experiences, journeys and the

transformative impact of the government schemes on their lives. These anecdotes not only showcasing the positive changes on the ground but also inspiring others to actively participate in the development process. As of December end more than 7000 Jal Jeevan Mission beneficiaries shared their experiences during VBSY events.

Activities during VBSY for Har Ghar Jal and ODF Plus at GPs

The Department of Drinking Water and Sanitation, Ministry of Jal Shakti took active part in the Yatra. The two flagship programs (Har Ghar Jal – Jal Jeevan Mission & Swachh Bharat Mission 2.0) to ensure drinking water and sanitation facilities to the rural population of the country are included in the campaign by PMO. The Yatra also focuses on highlighting

the progress made under Jal Jeevan Mission and Swachh Bharat Mission (G).

Distribution of Abhinandan Patras

Abhinandan Patras for Har Ghar Jal reported GPs and ODF Plus model GPs are designed and after due approval from Ad Approval Cell of PMO Open files of the templates are shared with States. States are instructed to translate it into regional languages and handover it to Gram Pradhan/ VWSC Chairman during the celebration of VBSY event at respective GPs.

States are distributing Abhinandan Patras in regional languages to the GP functionaries during the VBSY event. The same are being reported in VBSY portal.





Gram Panchayat Profile

A GP profile link is created on JJM Dashboard under JJM Reports. States are asked to generate a printed copy of the GP profile. The detailed status of the GP is to be shared with the gathered community and the same is to be handed over to the GP functionaries during the celebration event at respective GPs. States are also intimating the expected saturation date to the gathering. This transparent sharing of GP status aimed to build trust and confidence of people in the government's commitment to inclusive and holistic development.

Other Events

The Viksit Bharat Sankalp Yatra encompassed a range of events and activities aimed at fostering

community engagement and awareness. Exhibitions, discussions, health camps, screening of films are being held to disseminate information about various government schemes and encourage citizen participation.

The VBSY IEC Vans have been branded and customised to enable dissemination of information through audio visuals, brochures, pamphlets, booklets and flagship standees in Hindi and state languages showcasing the major schemes, highlights and their achievements at national, state and district level.

Various *Jan Bhagidari* events like experience sharing by beneficiaries of the schemes, interaction with progressive farmers, celebration of achievements of Gram Panchayats

achieving 100% saturation of schemes like Ayushman Card, Har Ghar Jal - Jal Jeevan Mission, Jan Dhan Yojana, PM Kisan Samman Nidhi Yojana, ODF Plus status, on the spot quiz competitions, Drone demonstration, health camps, Mera Yuva Bharat volunteer enrolment etc. would form part of the ground activities.

As the Viksit Bharat Sankalp Yatra continues its journey, it stands as a beacon of participatory governance and an embodiment of the government's dedication to building a developed and empowered India. By fostering direct communication and understanding the ground realities, this initiative serves as a dynamic platform for shaping policies that resonate with the needs and aspirations of the diverse Indian populace. ■



Potential Impact of Jal Jeevan Mission

Potential reduction in child mortality
through expanding access to
safe drinking water in India

Estimating i) health gains,
ii) associated economic savings
iii) time saved from increased access
to safely managed drinking-water services

Assessment of employment generation
potentials of Jal Jeevan Mission



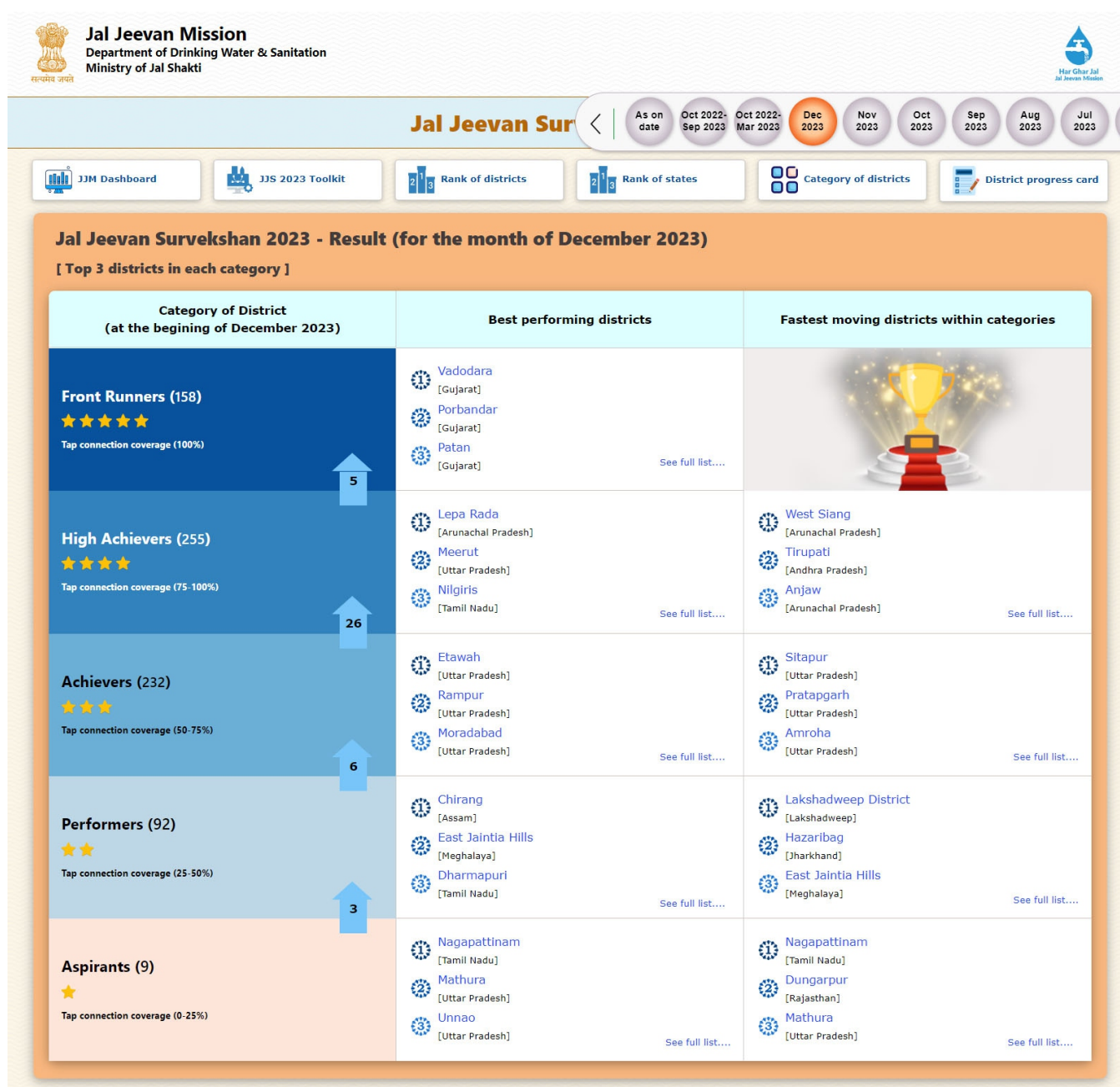
To read the JJM Impact Studies
Scan the QR Code



Jal Jeevan Survekshan

In the month of **December-2023**, Nagapattinam from Tamil Nadu, Chirang from Assam, Etawah from Uttar Pradesh, Lepa Rada from Arunachal Pradesh & Vadodara from Gujarat have secured first rank in Aspirants, Performers, Achievers, High Achievers, and Front Runners sub-categories respectively under “Best Performing Category”.

Followed by Nagapattinam district from Tamil Nadu, Lakshadweep District from Lakshadweep, Sitapur from Uttar Pradesh, and West Siang from Arunachal Pradesh have secured first rank in Aspirants, Performers, Achievers, and High Achievers sub-categories respectively under “Fastest Moving Category”



National WASH Experts' visits

In the month of December-2023, National Wash Experts' Visits were conducted in 10 Backward blocks, 6 states of JJM travelogue villages, and 8 teams visited villages of priority states to observe the ground-level situation and provide suggestions to improve the quality of work done in the villages, total 24 teams consisting of two wash experts visited 14 States to evaluate the quality of work done/ on-going in 319 villages. Star rating of villages visited by them is attached herewith.

S. No.	States	No. of villages rated under				
		1 Star	2 Star	3 Star	4 Star	5 Star
1.	Andhra Pradesh	0	0	0	10	0
2.	Assam	1	5	7	2	0
3.	Haryana	0	0	6	10	1
4.	Jharkhand	0	11	32	0	0
5.	Karnataka	0	0	0	29	3
6.	Madhya Pradesh	0	0	16	0	16
7.	Maharashtra	0	0	1	2	0
8.	Meghalaya	0	3	13	11	5
9.	Odisha	0	0	3	13	0
10.	Rajasthan	1	0	22	12	0
11.	Tamil Nadu	0	0	18	14	0
12.	Uttar Pradesh	0	0	0	13	0
13.	Uttarakhand	0	0	0	1	0
14.	West Bengal	0	0	2	35	1





Har Ghar Jal
Jal Jeevan Mission

Jal Jeevan Samvad



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