Today the country is rapidly providing 'water from tap' to the homes of lakhs of families.

Prime Minister's address from the ramparts of Red Fort on 76th Independence Day
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Economic success is leading to an ease in living too. Economic reforms are rightly accompanied by innovative welfare initiatives.

A home of one’s own is no longer a dream for the poor, but a reality for more and more people, thanks to the ‘Pradhan Mantri Awas Yojana’. Similarly, under the ‘Jal Jeevan Mission’, tap water connection is being provided to every household since the launch of the ‘Har Ghar Jal’ scheme.

The aim of these and many other similar efforts is to provide basic amenities to all, particularly the poor.

Address to the Nation by Hon’ble President of India, Smt. Droupadi Murmu on the eve of the 76th Independence Day, 14th August, 2022
Prime Minister

on Jal Jeevan Mission

“Jal Jeevan Mission is connecting every house in the country with piped water supply, which Tharman ji talked about, and I worked very prominently regarding this in Gujarat. Water is not only available from taps, but it also saves time and resolves people’s problems. Water plays an important role in the health of people. Keeping these things in mind, this mission is playing an important role in social life.

Pure drinking water is also an important issue of nutrition for children and our ‘Nal Se Jal’ (water from tap) Abhiyan is a part of a bigger campaign to address that issue as well. In just three years, this mission has connected more than 6 Crore households with water connections.

PM Modi’s address at the First ‘Arun Jaitley Memorial Lecture’ on 8th July, 2022, New Delhi

Our government is working continuously to mitigate another hardship of Bundelkhand. We are working on the Jal Jeevan Mission to provide piped water to every household. Under this mission, water connections have been given to lakhs of families of Bundelkhand. Our mothers and sisters have benefited a great deal because of this and their hardships have reduced. We are constantly making efforts to take the water of rivers in Bundelkhand to as many people as possible.

PM’s address at the inauguration of Bundelkhand Expressway at Jalaun in Uttar Pradesh, 16th July, 2022

The completion of the Hathmati Canal’s beautification project has enhanced the beauty of the entire area. Crores of rupees are also being spent under the Har Ghar Jal Abhiyan to meet the water needs of the cities.

PM’s address at the inauguration of multiple projects at Sabar Dairy in Sabarkantha, Gujarat on 28th July, 2022

Narendra Modi
Prime Minister
As the whole country celebrates Azadi Ka Amrit Mahotsav, India achieved the landmark of providing household tap water connections to over 10 Crore (52.25%) rural households on 19th August, 2022. This is a landmark achievement by any measure. These rural households now have access to clean drinking water in their homes bringing ease of living for people. On 15th August, 2019, when the Prime Minister, Shri Narendra Modi launched Jal Jeevan Mission (JJM) from the Red Fort, only 3.23 Crore (16.90%) of the households in villages had access to tap water supply. Since then, more than 6.86 Crore rural households have been provided with tap water connections in last 3 years, more than double of the connections provided in the first 70 years of our independence. As on date, out of total 19.14 Crore rural households in the country, more than 10.10 Crore households are getting potable tap water supply in their homes. This could be achieved with the concerted efforts of all stakeholders despite the challenges posed by the COVID-19 pandemic.

Goa and Dadra & Nagar Haveli and Daman & Diu (D&NH and D&D) have become the first ‘Har Ghar Jal’ certified State and UT in the country, respectively, where people from all the villages have declared their village as ‘Har Ghar Jal’ through a resolution passed by Gram Sabha, certifying that all households in the villages have access to adequate and safe drinking water through taps on a regular basis.

‘Building Partnership, Changing Lives’ is the motto of Jal Jeevan Mission. The mission is working in partnership not only with States/ UTs, but also with local communities, NGOs, trusts/foundations, experts working in the water sector to make water ‘everyone’s business’. Local communities are involved at all stages, from planning to operations and maintenance. All these efforts are being made to make Jal Jeevan Mission, a ‘Jan Andolan’- people’s movement. Taking this spirit forward, the first meeting of the Rural WASH Partners’ Forum was organized in Delhi on 22.08.2022. We hope to achieve much more at a much faster pace through active collaboration with all our Partners.

JJM provides a golden opportunity for the local village community to take up water quality surveillance in their villages. In every village, five persons especially women are being trained on the use of Field Test Kits (FTKs) to test quality of water supplied, conduct sanitary surveys, and upload the data on the JJM portal. States need to give further push to water quality testing by FTKs.

Ensuring long-term sustainability of drinking water sources is crucial for the success of JJM. Groundwater is depleting at an unprecedented rate in most areas of the country except the Indo-Gangetic belt. Water conservation measures like rainwater harvesting, aquifer recharge, renovation and repair of traditional water bodies, watershed development, afforestation, etc. are vital for increasing groundwater availability. Hilly states like Uttarakhand, Arunachal Pradesh, Sikkim, Tripura, etc. are making noteworthy efforts for spring-shed management to protect springs from drying up. All States need to take up measures for groundwater development and recharge parallelly with water supply schemes to ensure sustainability.

To realize the vision of the Prime Minister - ‘Sabka Saath, Sabka Vikas, Sabka Viswas, Sabka Prayas’, the mission is making all out efforts for provision of tap water supply. By following the principle of ‘no one is left out’, provision of tap water supply in every home is now reported in 114 districts and 1.6 lakh villages of the country. This is the ‘speed and scale’ with which works under JJM are carried out with the focus to improve lives of people living in rural areas.

As the Prime Minister said in his 19th August, 2022 video message during the “Har Ghar Jal Utsav' held at Goa that the reason for the success of Jal Jeevan Mission is its four strong pillars i.e. People’s Participation; Partnerships i.e., partnerships of every stakeholder; Political Will; and Optimum Utilization of Resources, let's work together with renewed vigour and make sustained efforts to translate the vision of the Prime Minister into reality and fulfil the aspirations of rural families to be provided with clean tap water in their households in a time-bound manner.

[Vikas Sheel]
Progressive coverage - Functional Household Tap Connection (FHTC) (as on 31.08.2022)

Comparative FHTC coverage status of States/UTs (as on 31.08.2022)
### As on 31st August, 2022

**India | Status of tap water supply in rural homes**

<table>
<thead>
<tr>
<th>Description</th>
<th>31st Aug 2022</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Total number of households (HHs)</strong></td>
<td><strong>19,14,65,869</strong></td>
</tr>
<tr>
<td><strong>Households with tap water connections as on 15th Aug 2019</strong></td>
<td><strong>3,23,62,838</strong> (16.90%)</td>
</tr>
<tr>
<td><strong>Households with tap water connections as on date</strong></td>
<td><strong>10,10,14,513</strong> (52.76%)</td>
</tr>
<tr>
<td><strong>Households provided with tap water connection since launch of the Mission</strong></td>
<td><strong>6,86,51,675</strong> (35.86%)</td>
</tr>
</tbody>
</table>

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

- **100% FHTC States/UTs**
  - Goa, Telangana, A & N Islands, Puducherry, D&NH and D&D, Haryana
- **100% FHTC Districts** | **114**
- **100% FHTC Blocks** | **1,284**
- **100% FHTC Panchayats** | **75,096**
- **100% FHTC Villages** | **1,57,390**

#### As on 15th August, 2019

**Total number of households (HHs)** | **19,14,65,869**

**Households with tap water connections as on date** | **3,23,62,838** (16.90%) + **41,289**

**As on 31st August, 2022**

**Total number of households (HHs)** | **19,14,65,869**

**Households with tap water connections as on date** | **10,10,14,513** (52.76%)
Progress of coverage of tap water supply in schools and anganwadi centres

Progress of piped water supply in schools

<table>
<thead>
<tr>
<th>Number of schools</th>
<th>2nd October, 2020</th>
<th>31st August, 2022</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of AWCs</td>
<td>48,772</td>
<td>8.68 lakh</td>
</tr>
<tr>
<td>Number of schools</td>
<td>25,092</td>
<td>8.97 lakh</td>
</tr>
</tbody>
</table>

Progress of piped water supply in anganwadi centres (AWCs)

<table>
<thead>
<tr>
<th>Number of AWCs</th>
<th>2nd October, 2020</th>
<th>31st August, 2022</th>
</tr>
</thead>
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<tr>
<td>Number of AWCs</td>
<td>25,092</td>
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</tr>
</tbody>
</table>

Prime Minister hails the milestone achieved by Jal Jeevan Mission as a great example of ‘sabka prayas’

Adding yet another glow to the glorious radiance of Azadi Ka Amrit Mahotsav, India achieved the landmark of providing household tap water connections to over 10 crore (52.50%) rural households on 19th August, 2022. These rural households now have access to clean drinking water within the confines of their homes - an equalizing facility that adds to the quality of life and enhances the ease of living of rural people. On 15th August, 2019, when the Prime Minister, Shri Narendra Modi launched Jal Jeevan Mission (JJM) from the ramparts of the Red Fort, only 3.23 crore (16.90%) of the households in villages had access to tap water connection.

This too happened during that phase when India and the world faced one of the most harrowing messes of all – the COVID-19 pandemic! Hailing this massive achievement as a moment of national pride, and a great example of ‘sabka prayas’, Prime Minister, Shri Narendra Modi congratulated the nation through his video message to the ‘Har Ghar Jal Utsav’ being held in Goa to celebrate another achievement of Goa:

“Today we have crossed three important milestones related to the huge goals that India is working on in the ‘Amrit Kaal’. The first milestone is that today 10 crore rural households of the country have been connected with piped clean water facility. This is a huge success of the government’s campaign to supply water to the households. This is also a great example of ‘Sabka Prayas’ (everyone’s effort). I congratulate every countryman and especially mothers and sisters for this achievement.”

Goa has become the first State in the country to become ‘Har Ghar Jal Cerfified’ State. As of August 2022, 3 States (Telangana, Goa and Haryana) and 3 Union Territories (A&N Islands, Puducherry and D&NH and D&D) have reported that they have become ‘Har Ghar Jal’ i.e. every household in each of their villages has an FHTC to provide them clean, safe and potable water in their own homes on regular and long-term basis. However, till August 2022, only Goa and D&NH and D&D have got themselves fully ‘cerfified’ and fit to be declared as ‘Har Ghar Jal Cerfified’. For this to happen all the villages of that State/UT have to organize a ‘Gram Sabha’ and pass a resolution standing that all the (100%) households of the village have been provided with FHTC. To emphasize the importance and facilitate the obtainment of ‘Har Ghar Jal Cerificates’ by the States/UTs, Department of Drinking Water & Sanitation, Ministry of Jal Shakti, had organized special ‘Har Ghar Jal Utsav’ celebrations across the country during July-August, 2022.

Highlighting this achievement of Goa, the Prime Minister, Shri Narendra Modi said, “The country, and especially Goa has achieved a milestone today. Today Goa has become the first Har Ghar Jal cerfified State in the country where every household is connected to piped water. Dadra Nagar Har Ghar Jal Utsav Utsav Har Ghar Jal Utsav.”

Tap water connections in Aspirational districts

<table>
<thead>
<tr>
<th>No. of households with tap water connections (in lakh)</th>
<th>15th August, 2019</th>
<th>31st August, 2022</th>
</tr>
</thead>
<tbody>
<tr>
<td>No. of households with tap water connections (in lakh)</td>
<td>24.32 lakh</td>
<td>1.55 Crore</td>
</tr>
<tr>
<td>No. of households with tap water connections (in lakh)</td>
<td>48.39%</td>
<td>48.39%</td>
</tr>
</tbody>
</table>

Tap water connections in JE-AES affected districts

<table>
<thead>
<tr>
<th>No. of households with tap water connections (in lakh)</th>
<th>15th August, 2019</th>
<th>31st August, 2022</th>
</tr>
</thead>
<tbody>
<tr>
<td>No. of households with tap water connections (in lakh)</td>
<td>8.02 lakh</td>
<td>1.37 Crore</td>
</tr>
<tr>
<td>No. of households with tap water connections (in lakh)</td>
<td>47.52%</td>
<td>47.52%</td>
</tr>
</tbody>
</table>
Prime Minister hails the milestone achieved by Jal Jeevan Mission as a great example of 'sabka prayas'

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"This event is being held in Goa. But today I want to share three big achievements of the country with all the citizens. And I want to say this for the entire country. When my countrymen learn about these achievements of India, I am sure they will be very proud, especially our mothers and sisters. Today we have crossed three important milestones related to the huge goals that India is working on in the 'Amrit Kaal'. The first milestone is that today 10 crore rural households of the country have been connected with piped clean water facility. This is a huge success of the government’s campaign to supply water to the households. This is also a great example of 'Sabka Prayas' (everyone’s effort). I congratulate every countryman and especially mothers and sisters for this achievement."

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Haveli and Daman and Diu have also become Har Ghar Jal certified Union Territories. In the last few years, Goa has been playing a leading role in every major mission of the country. I convey my best wishes to the people of Goa, Pramod ji and his team, the Government of Goa and the local self-government institutions in this regard. The way you have taken forward the Har Ghar Jal Mission, it is going to inspire the whole country. I am happy that many more States are going to be added to this list in the coming months.”

’Sabka Prayas’: the key to success of Jal Jeevan Mission

As pointed out by the Prime Minister, achieving such gigantic goals – requiring a certain scale and speed – under Jal Jeevan Mission needs the involvement of various stakeholders. The motto of JJM being ‘Building Partnership, Changing Lives’; Bottom-Up approach, inclusion of the village people in all aspects of the Mission, and special roles and responsibilities to the women of the villages have been included into the entire mechanism of ensuring long-term water supply to the rural people. As the Prime Minister said in his 19th August, 2022 video message:

“The reason for the success of Jal Jeevan Mission is its four strong pillars. First - People’s Participation; Second - Partnership i.e., partnership of every stakeholder; Third - Political Will; and Fourth- Optimum Utilization of Resources.

The way Panchayats, Gram Sabhas, local people of the villages have been included in the Jal Jeevan Mission and entrusted with many responsibilities, it is unprecedented in itself. The cooperation of the people of the villages is sought while supplying piped water to every house. Villagers themselves are preparing Village Action Plans for water security in their villages. The price of water is also being decided by the people of the villages. The people of the villages are also involved in the testing of water. More than 10 lakh women have been trained for this. At least 50 percent women have been included in the water committees. Priority is being given to the tribal areas where work should be done rapidly. The second pillar of the Jal Jeevan Mission is partnership. Everybody, be it state governments, panchayats, voluntary organizations, educational institutions, various departments and ministries of the government, are all working together. It is getting huge benefits at the grassroots level.”

Prime Minister very succinctly put this in right perspective when he said, “Jal Jeevan Mission is also a good example of true democracy, the Gram Swaraj, dreamed by revered Bapu. I remember mothers and sisters in Kutch district were entrusted with the responsibility of water develop-

ment works when I was in Gujarat. This experiment was so successful that it also got the award at the international level. Today the same experiment is also an important inspiration of Jal Jeevan Mission. Jal Jeevan Mission is not just a government scheme, but it is a scheme run by the community for the community.”

JJM: Striving to ensure water security

Jal Jeevan Mission has been conceptualized with a holistic, humanitarian and futuristic approach, where water is not treated as a mere commodity but as an invaluable resource which needs to be sustained and preserved not only for achieving water security for the nation, but also for all the generations to come. Prime Minister too pointed out towards this aspect of JJM:

“Today, major organizations of the world are saying that one of the biggest challenges of the 21st century will be water security. Lack of water can also become a big obstacle in the fulfillment of the resolve of a developed India. Common human beings, poor, middle class, farmers and industries, everyone suffers without water. To deal with this big challenge, there is a need to work round the clock with a sense of service and duty. Our government has been engaged in completing the works of water security with this spirit for the last eight years. It is true that one does not have to work hard to form a government, but to build a country one has to work hard. And it happens with everyone’s effort. We all have chosen the path of developing the country, and therefore, we are constantly solving the present and future challenges of the country. Those who do not care about the country, it does not matter whether the present or future of the country is ruined. Such people can definitely make tall promises for water, but can never work with a grand vision for water.

During the ‘Amrit Kaal’ of independence, water security has been given special emphasis in the last eight years so that it does not become a challenge to India’s progress. Be it Catch the Rain, Atal Bhujal Yojana, construction of 75 Amrit Sarovars in every district of the country, interlinking of rivers, or Jal Jeevan Mission, the goal of all these schemes is ensuring water security for the people of the country. A few days ago, news came out that now the number of Ramsar sites i.e. wetlands in India has also increased to 75. Out of these, 50 sites have been added in the last eight years only. That is, India is making all-round efforts for water security and it is getting results in every direction.

The same commitment towards water and environment is also reflected in the milestone of the Jal Jeevan Mission under which 10 crore people have been provided with piped water.”
**JJM: Where there is a will, there is a way!**

Providing clean and safe drinking water to crores of left out rural people in a time-bound manner, and on such a scale and speed requires a vision, unwavering commitment, firm determination, and the will to achieve the goals against all odds. JJM is an embodiment of all this. The Prime Minister highlighted this unique aspect of JJM, when he said:

“Political will is the third main pillar of the success of the Jal Jeevan Mission. What could be achieved in the last seven 70 years, we have to complete many times more than that in less than seven years. It is a difficult goal, but there is no such goal which the people of India cannot achieve once they are determined. The Central Government, State Governments and Panchayats are engaged in completing this campaign expeditiously. Jal Jeevan Mission is laying equal emphasis on the Optimum Utilization of Resources. Help is also being sought from schemes like MNREGA, which give impetus to the Jal Jeevan Mission. The work being done under this mission is also creating new employment opportunities in the villages on a large scale. One benefit of this mission will also be that when every house will get piped water, there will be saturation and the scope of favoritism and discrimination will also end.

There couldn’t have been a better start than this for ‘Amrit Kaal’. Within just three years, seven crore rural households have been connected with piped water facilities under the Jal Jeevan Mission. This is no ordinary achievement. Only three crore rural households in the country had access to piped water in the last seven decades of independence. There were about 16 crore rural households in the country, who had to depend on outside sources for water. We could not leave such a large population of the villages struggling for this basic need. That’s why I had announced three years ago from the Red Fort that every house would be provided with piped water. After the formation of the new government, we made Jal Shakti, a separate ministry. About 3.60 lakh crore rupees are being spent on this campaign. Despite the problems caused by the biggest pandemic in 100 years, the pace of this campaign did not slow down. The result of this continuous effort is that the country has done more than double the work in the last three years compared to seven decades. This is an example of the same people-centric development, which I mentioned this time from the Red Fort. When water reaches every house, our sisters and future generations benefit the most and our fight against malnutrition gets stronger. Our mothers and sisters suffer the most due to every water related problem, and therefore, our sisters and daughters are also at the center of this mission. The time of sisters is now being saved in the houses where pure drinking water has reached. The diseases caused by contaminated water to the children of the families have also reduced.”

**Harnessing technology**

JJM is not only bringing together the crores of common people residing in our myriad villages by helping them get organized into Village Water & Sanitation Committees (VWSCs)/ Pani Samitis/ Use Groups for planning, executing, managing and O&M of the in-village water supply infrastructure created under JJM but is also harnessing the latest technologies to ensure the people are benefitted to the maximum. Prime Minister has lauded these aspects of JJM:

“During this campaign, new sources of water, tanks, water treatment plants and pump houses are also being geo-tagged. The use of modern technology i.e. Internet of things solutions, has also started for monitoring the water supply and quality. That is, the power of manpower, women power and technology together are empowering the Jal Jeevan Mission. I have full faith that the way the whole country is working hard we will definitely achieve the goal of water for every household.

... I also assure the countrymen that the dream from the Red Fort three years ago is being realized with the help of all the institutions starting from Gram Panchayats. I once again wish a very happy Krishna Janmashtami and end my speech. Thanks a lot.”
Drinking Water has been recognized as a basic human right as a part of Article 21 (Right to life) of the Constitution. Readily available potable drinking water to the community sustains and improves public health. The drudgery in collection of water is eliminated and the saved time and effort of the people, especially women and girls, translates to enhanced economic productivity. Improved water supply and sanitation, tied with better management of water resources, can boost the countries’ economic growth and can contribute greatly to poverty reduction.

In 2010, the UN General Assembly explicitly recognized the human right to water and sanitation, i.e., everyone has the right to sufficient, continuous, safe, acceptable, physically accessible, and affordable water for personal and domestic use. Further, the Sustainable Development Goal (SDG) target 6.1, calls for universal and equitable access to safe and affordable drinking water by 2030. The progress on this front is tracked with the indicator of "safely managed drinking water services" – drinking water from an improved water source that is located on-premises, available when needed, and free from any kind of contamination.

The WHO has assessed in 2020 that 74% of the global population (5.8 billion people) used a safely managed drinking-water service. This situation is far from ideal given that presently, over 2 billion people live in water-stressed countries and there are inherent risks to drinking water supply systems from climate change, demographic changes, urbanization, source contamination, etc.

Given this, there are enough compelling reasons for the international community to collaborate and contribute to meeting the challenges in the water resource management and drinking water availability. Water has emerged as a catalyst for cooperation at multilateral and bilateral forums. Through Jal Jeevan Mission, a very bold and ambitious drinking water sector reform programme is being implemented. It is probably the world’s largest central government-supported rural drinking water supply programme, which is anchored in both demand and supply side management. The speed and scale of the intervention is unparalleled and this has been amplified on international platforms.

The implementation of the mission has pride of place in the recent achievements by the country. The Prime Minister, in his address to the United Nations General Assembly said,

“Polluted water is a big problem not only in India but in the whole world and especially for poor and developing countries. To tackle this challenge in India, we are running a huge campaign to provide piped clean water to more than 170 million households”. 

Hon’ble Prime Minister Shri Narendra Modi addressing the United Nations General Assembly on 25th September, 2021
The Minister of Jal Shakti (MoJS) has on various international forums highlighted India’s commendable programmes and achievements in recent years on universalizing access to sanitation and water and water conservation in India. MoJS inaugurated ‘Water Week’ at the India Pavilion in Expo 2020 Dubai on 23rd March, 2022. As part of Water Week, a delegation was led by the Minister and had representations from politicians, bureaucrats, water entrepreneurs, and influencers to showcase India’s vision and commitment to sustainable water management and explore global investment opportunities in the sector. He highlighted various schemes of the Government of India (GoI) like Best Irrigation Management, Ganga Rejuvenation, Groundwater Management, Dam Rehabilitation, Water Supply for Every Household under Jal Jeevan Mission, Clean India under Swachh Bharat Mission, Water Data Management and Flood Forecasting, and Rainwater Harvesting.

The 9th World Water Forum was jointly organized by the World Water Council (WWC) and the Government of Senegal from March 21-26, 2022, in Dakar, Senegal. The World Water Forum is the world’s biggest water-related event, held every three years, and provides a unique platform for the water community and key decision makers to collaborate and make long-term progress on global water challenges. MoJS participated in the 9th World Water Forum and made a presentation on the ‘Water for Peace and Development’.

The efforts of the mission in creating a salutary public health impact have found international resonance and recognition. In an interaction held between Nobel Laureate Prof. Michael Kremer and the Department of Drinking Water & Sanitation, he stated that he and his team had undertaken a study, where it was noted that 1 in every 4 deaths, pertaining to children can be prevented with provision of safe water. The chlorination and filtration ensure safe water access to the families can result in reduction of nearly 25-30% infant deaths. He appreciated JJM through which GoI has prioritized access to clean water, ensuring every rural household in the country gets clean tap water of prescribed quality which will reduce the risk of water borne disease drastically.

With the implementation of JJM, various challenges have emerged that need to be addressed in order to achieve the goal of the sustainability of water supply systems. Some of the immediate challenges to be addressed are:

i) the functionality of water supply, source capacity and mapping of source & its augmentation in the local context;

ii) optimal and cost-effective way for O&M, source identification/ sustainability/ strengthening, water quality challenges;
iii) Non-Revenue Water (NRW);
iv) energy conservation;
v) sensor-based monitoring of water supply systems;
vi) cost-effective technologies;
vii) low cost less energy-intensive desalination plants and rainwater harvesting techniques;
viii) capacity building of village water & sanitation committees as public utilities;
ix) greywater management; and
x) health challenges related to water-borne diseases, etc.

These focus areas of interest present new opportunities of collaboration with domestic as well as international institutions. The ongoing efforts in international collaborations by NJJM are highlighted below:

**Denmark:** A three-year work plan (2021-23) for cooperation between NJJM and the Danish Environmental Protection Agency (DEPA) has been finalized in the areas of collaboration, including a reduction in system leakages, metering of water supply, sustainable water tariffs, energy optimization, and increased resource efficiency in drinking water supply, affordable water treatment, grey water management. Under this workplan, India and Denmark will co-create solutions in the fields of policy, planning, regulation, and implementation, as well as technology, research and development, and skilling. A Steering Committee with high-level representatives of the NJJM, DEPA, and the Embassy of Denmark to India has been constituted to implement the work plan and review the progress on a regular basis. Further, a Memorandum of Understanding has also been proposed to be signed between Danish Government, DDWS, and DoWR.

**Israel:** The NJJM and MASHAV (The Agency for International Development Co-operation in the Ministry of Foreign Affairs of Israel) have discussed issues related to the organization of India-Israel G2G water seminar, promoting the India-Israel Bundelkhand water project, and conducting water management academic studies in Israel were discussed. Further, NJJM is in the process of identifying suitable Institution or Agency in Israel to take up leadership development programmes/ training, etc.

**Hungary:** NJJM is in the process of collaboration with the Hungarian institutions to conduct the 'Leadership Development Programme.' Considering the expectation of the Indian side, some of the Hungarian partners have quoted offers and details on programs which is under consideration of NJJM.
Finland: A meeting was held between NJJM and representative of Embassy of Finland in India on 27th July 2022, at NJJM Headquarters to develop a partnership in the water sector. It was noted that the Finland Embassy had partnered with Govt. of Gujarat recently regarding their water supply sector and they are keen to collaborate with the Jal Jeevan Mission for providing support to various States in areas pertaining to raw water supply, digital solutions for monitoring of water supply, river restoration and source strengthening, aeration to improve the water quality, etc. Possibilities of cooperation with Finland in the areas of digital tools and technologies for measurement and monitoring of water supplies; spring shed restoration for sustainable water supply in hilly regions; and raw water supply technologies is being explored.

Singapore: NJJM is in the process of identifying suitable Institution or Agency in Israel to take up leadership development programmes/training, etc. Also, a meeting was held between Enterprise Singapore, EnviroSens, and NJJM for discussion on possible intervention areas.

Oxford University: Mr. Rob Hope, Professor of Water Policy, School of Geography and the Environment & Smith School of Enterprise and the Environment, University of Oxford, has shown interest in entering into an MoU with DDWS relating to academic activities in the field of Rural Water Service Delivery models, for possible collaboration between the University of Oxford and DDWS. The MoU is expected to involve activities such as student or staff exchanges or visits, sharing publications, attending conferences, and discussing opportunities for research collaborations. National Centre for Drinking Water, Sanitation & Quality (NCDWSQ), Kolkata, has been entrusted with the task of collaborating with the University of Oxford.

In the near future the presence of Jal Jeevan on international fora is going to be more pronounced. Department of Water Resources, River Development & Ganga Rejuvenation, Ministry of Jal Shakti, GoI is organizing the 7th India Water Week – 2022 (IWW-2022) during 1-5 November 2022 at India Expo Center, Greater Noida. The theme for IWW-2022 is “Water Security for Sustainable Development with Equity” focusing on various aspects of water security and related challenges for equitable development. DDWS will be the partner department in the said event, where it would interact with national and international level experts to explore the exchange of knowledge, skills, and technology. DDWS will also showcase the skills, products, services, and technologies related to rural drinking water through technical sessions/exhibitions or by organizing side events related to theme/sub-themes.

India will assume the presidency of the G20 from 1st December, 2022 to 30th November 2023 which would be an excellent opportunity for our country to showcase our national achievements in socio-economic and scientific developments. Under the guidance of the Hon’ble Minister of Jal Shakti, the opportunity of G20 India’s Presidency shall be explored to its fullest capacity through creating awareness, nudging policy changes through deliberations, and reviewing MoUs/ MoCs, projecting India’s water sector reforms on a global scale, etc. A calendar of events and activities during the G20 Presidency is being prepared in coordination with MEA/G20 Secretariat.

The network of institutions anchored by National Centre for Drinking Water, Sanitation and Quality (NCDWSQ), Kolkata, Professor Chairs at IIT Kanpur, IIT Guwahati, IIT Madras, IIT Jodhpur, TISS, Mumbai and proposed Centres of Excellence (CoEs) will also sustain and deepen the international collaboration efforts. These institutions have well-developed efforts in the WASH sector that can enable them to engage with global R&D institutions in the sector. This network of spoke and hub institutions is being developed and sustained by JJM.

As has been mentioned previously, already several countries have evinced keen interest for collaborating in the WASH sector in the country. The achievements and the road-ahead under JJM will create many more collaborations and knowledge sharing arrangements with countries and institutions around the world.
E ven as the entire world was tackling with CoVid-19, a revolution was taking place in India during the years 2021-22. As the second wave of the pandemic swept across India, Aryama Kumari from Garhwa, Jharkhand, was one amongst many of the growing number of women in villages wearing masks, hesitantly keeping distance from each other, and undergoing training on ‘seeing’ water quality beyond what we sense.

Numbers don’t lie; some 38 lakh water testing results have been contributed from villages across India; more than 10 lakh women have been trained in the usage of field-testing kits (FTKs) to check water quality and more than 1 lakh villages are already contributing to this massive effort at ‘citizen science’ democratizing the way we ‘see’ water beyond its taste, sight and smell.

Having a large population, India as a country is bound to have massive experiments at a population scale of tens of Crores. But, imagining something like 14 dimensions of water quality being recognized at a village level by Aryama from Garhwa was, until the implementation of the Jal Jeevan Mission, totally unthinkable for an average Indian citizen. Today, it is happening and contributing to the country’s progress in health and access to basic amenities.

Two things we learn from the above while thinking of the future. One, how do we bring more trust into this process so that the water data is considered more reliable. Secondly, and relatedly, how does one recognize the enormous skilling capital created through this process and reap the benefits for the long-term.

Before we go there, a small detour. We also know that around 15 Crore people in India are affected by some water contamination problem and that the staggering economic cost of the problem from health, agriculture and industry is a significant chunk of the country’s GDP - USD 6.7-8.7 Billion. Did we know that 2 Crore hectares of arable land in India is already left infertile just through salinity from water and that recent informal estimates of around 1 Crore further hectares of land are getting toxified by two contaminants in irrigation water - Fluoride and Arsenic, and thereby landing into the food chain?

Reaping the benefits of skilling from water testing

- Sunderrajan Krishnan, Executive Director, INREM
In an era of carbon-reducing agriculture, low-chemical foods and more responsibility towards land, soil and water, we find testing the quality of water, as being absolutely essential and it becomes an enormous skilling outreach, benefitting not just JJM, but also potentially, National Health Mission (NHM), Anemia Mukt Bharat (AMB), doubling farmers income, and also programmes for protecting soil and preventing climate change. Given that food quality is going to be increasingly valued, and that contaminant persistence is now being overlooked, water quality testing for irrigation in agriculture will be a rising need in every village of the country.

The lakhs of women trained by JJM in water testing have a very bright employable future, if we look at the above scenario of what benefits it could bring to many sectors. Let us also look at what are the key challenges here and how can we overcome them.

The trust challenge
Trust is always very subjective and tricky feeling. How does someone sitting in Bandra, Mumbai, trust the water data contributed by Aryama? Who is trusted here, the person, the process behind it, or the platforms that enable it to happen? At INREM, we look at this problem as a matter of mutual participation. In our programmes of Water Quality Management (WQM) aiming at enabling the first million Water Quality Champions across India, we leverage the power of emerging technologies with a process called, Participatory Digital Attestation (PDA) that helps make interactions and people more visible, thereby leaving a trail of trust, bringing more accountability and value to the process. By means of PDA, we are able to now say that the person, process and platforms can be trusted and water data that Aryama contributes can be really used for a water supply programme. Much work is needed further in this direction, and PDA is just a beginning towards that. Certifications at village level, to help recognise individual water testers for their ability may also bring trust in the process.

The employability challenge
JJM is trying its best to account for the time involved in water testing by means of a 2% allocation for Water Quality Monitoring and Surveillance (WQM&S) and possibly some incentive for the water testing woman in the village. However, here, what is perhaps being missed is the potential of this skill towards so many other critical needs and therefore a mix of employability opportunities for Aryama. Apart from different verticals such as Health, Nutrition, Agriculture and Livelihood programmes that can occupy bits of Aryama's time for water testing, she will also tomorrow be generating much value to the agri-supply chain that is growing fast with new agri-tech. Essentially, by bringing more trust into her water testing skills, and by connecting this as a basic infrastructure need towards a wider water input programme and industry, we can enhance her employability and thereby community incentives at water testing.

Coming back to JJM, the mission till 2024, at this midway stage, let us pat our backs as this was something earlier unthinkable and even right now, extraordinary for any country across the world to conduct a population scale citizen science experiment of water testing leading to safer water supply. We have our challenges here, in terms of financing Aryama's time and ensuring more trust into the data that she contributes. But the answers will gradually develop and lay the base for more than a million jobs on water testing contributing to a wider infrastructure built on safe water quality.
Burhanpur also known as the 'Darwaza of Dakhin' in Madhya Pradesh became the first 'Har Ghar Jal' certified district in the country.

Only 37,241 rural households (36.54%) out of a total of 1.01 lakh households in Burhanpur had access to potable drinking water at the time of the announcement of Jal Jeevan Mission on 15th August, 2019. Despite disruptions during Covid-19 lockdown, the consistent work carried out by district administration of Burhanpur has resulted in coverage of functional tap water connections to all its 1.01 lakh rural households within a span of 34 months. In addition, all 640 schools, 547 anganwadi centres and 440 public institutions also have access to potable water. The 440 public institutions include 167 Gram Panchayats, 50 healthcare centres, 109 community centres, 45 ashramshala, 2 community toilets and 67 government offices.

Burhanpur is the first district in the country where people from all 254 villages have passed a resolution in the Gram Sabha and certified that all the people have access to safe drinking water through tap. The process of certification is important as the community comes forward and confirms that all households even those at the tail end of the habitation are getting regular water supply thereby ensuring 'No One is Left Out'. It also provided the administration an opportunity to revisit the water supply system and ensure that everyone is covered and in case any concern is raised during the Gram Sabha meeting, the same could be rectified before declaring it 'Har Ghar Jal' certified.

The protocol of certification has been detailed by National Jal Jeevan Mission. First of all, the field engineer will submit a completion certificate regarding water supply scheme to the Panchayat during Gram Sabha meeting. The community will confirm that every household is getting regular supply of water daily of prescribed quality. The PHED official
have provided 100% tap water coverage. Now, States/UTs are impressed upon to conduct Gram Sabha through campaign mode for certification of all these villages reported to have 100% households with tap water supply.

will second that there is no leakage from the distribution pipeline in the village, all the roads dug up to lay the water pipeline are restored upon completion of the water supply works. The whole process gets videographed. The certificate along with Gram Sabha resolution and video gets uploaded in the JJM-IMIS, which is in public domain. Subsequently, all the in-village water supply system will be handed over to the Panchayat and the community as they are the ultimate custodian of the water supply system.

Village Water & Sanitation Committees (VWSC) have been formed in all the 254 villages. VWSC is responsible for operation, maintenance and repair of water supply infrastructure developed under ‘Har Ghar Jal’ programme. It is this sub-committee which also has the responsibility to collect user charge which will be deposited in the bank account and shall be used to pay salary of the pump operator and carry out minor repair work from time-to-time.

As on date, 111 districts, 1,266 blocks, 75,007 Gram Panchayats and 1,57,053 villages are reported to have become ‘Har Ghar Jal’ in the country. Three States – Goa, Telangana and Haryana and three UTs – A&N Islands, D&N Haveli & Daman & Diu and Puducherry
Chhattisgarh

Jal Gunwatta Pakhwada

15 days campaign for water quality control measures

- Kailash Madhariya, PHED, Sweta Patnaik, UNICEF and Charmi Patel, UNICEF

Chhattisgarh is committed to the vision of Jal Jeevan Mission and working extensively to realise the goal of ‘Har Ghar Jal’ by 2024. By making all-out efforts at field level, Government of Chhattisgarh is implementing each component of JJM, viz; water quality monitoring & surveillance (WQMS), setting up and appointing DPMUs and SPMU experts, engaging KRCs, training and orienting engaged ISAs, community mobilisation, setting up monitoring architecture and piloting IoT based monitoring system, and proactively engaging with sector partners. Since the beginning of FY-2021, with strong leadership and good governance, the State has successfully created a highly productive and collaborative working environment for partners.

As recommended in the JJM operational guidelines for community mobilisation under the support activity component, a customised social behavioural change campaign ‘Jal Gunwatta Pakhwada’ was planned with the objective of developing ‘WASH enlightened villages. The campaign focussed on bringing mass awareness for judicious use of water as also to build capacity of the local community to provide long-term assured water supply with prescribed quality.

PHED Chhattisgarh rolled out a 15-days campaign from 1st to 15th July, 2022 on the onset of monsoon season and circulated suggestive action points/ guidelines of the campaign to support the key stakeholders in collaboration with UNICEF, Chhattisgarh. UNICEF team has also been key in capacity building of stakeholders of the State.

Pakhwada campaign in Gariyaband
system, and proactively engaging and piloting IoT-based monitoring setting up monitoring architecture ISAs, community mobilisation, setting up and appointing DPMUs monitoring & surveillance (WQMS), component of JJM, viz; water quality Chhattisgarh is implementing each at field level, Government of Jal by 2024. By making all-out efforts piously to realise the goal of ‘Har Ghar C

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Jal Gunwatta Pakhwada

Kailash Madhariya, PHED, Sweta Patnaik, UNICEF and Charmi Patel, UNICEF

campaign focussed on bringing mass ‘WASH enlightened villages. The activity component, a customised mobilisation under the support national guidelines for community leadership and good governance, the State has successfully created a leadership and good governance, the

Pledge taken by students to conserve water, Narayanpur

Through this campaign 1,00,000 Jal Bahinis, 273 empanelled ISAs, and 19,000+ VWSCs will reach out to 19,676 villages of the State to spread awareness regarding control measures pertaining to water quality, storage, safe water handling & management. Three major envisioned outcomes of the campaign are;

i.) to ensure functionality of chlorinators in implemented piped water supply systems;

ii.) disinfection through chlorination at household level; and

iii.) water quality testing through FTK especially for bacteriological parameters and residual chlorine.

Following action points are being promoted during the campaign:

i.) Disinfection: Chlorination is universally accepted as a disinfecting agent for public water supplies. Major advantage of Chlorine is that it is very economical, easy to handle, easy to apply, dosage can be controlled precisely, and capable of providing disinfecting effects for a long time. It also can protect further recontamination of water in the distribution system.

ii.) Ensuring fast track installation of chlorinators: For schemes which have already been operational, it is recommended to install and maintain installed chlorinators on a regular basis.

iii.) Water quality testing: Ensuring regular drinking water quality tests at source at least twice a year, i.e., before and after the monsoon for bacteriological parameters and at least once in a year for chemical parameters. It is imperative to conduct bacteriological testing near infected sources without fail.

iv.) Strictly avoiding water from quality-affected sources and guiding the community for house-level remedial measures.

v.) Water storage: Sometimes water may also get contaminated at the end-user due to poor hygiene or improper storage. Thus, focus to also be on raising awareness on water storage and safety.

vi.) Home remedies to purify water from bacteriological contamination.

ISAs and Jal Bahinis have stressed upon health impacts due to contaminated water such

A) Vector-borne diseases i.e., Malaria, Dengue, etc. caused due to stagnant water;

B) Chemical contamination: Arsenicosis, a type of skin cancer caused due to excess Arsenic; Fluorosis – skeletal/dental/non-skeletal caused due to excess Fluoride; and

C) Bacteriological contamination can cause diarrhoea, vomiting, cramps, nausea, headaches, fever, fatigue.

Special trainings have been rolled out for undertaking home remedies to purify water from bacteriological contamination. Whether hand pump or tap water connection – it is suggested to conduct water quality test through H,S vials and to ensure disinfection through Chlorine tablets and boiling water.

All 28 districts have shown remarkable enthusiasm by participating actively in the campaign. Districts such as Sukma, Gariyaband, Rajnandgaon, and Narayanpur have reached out to schools, anganwadi centres, and ashramshals and conducted training to generate awareness on waterborne diseases, health impacts of contaminated water, safe handling and storage of water, water quality and its importance.
Arunachal Pradesh

Reviving drying springs

With an estimated 3.19 billion cubic meters of groundwater resources (CGWB, 2020) and more than one-third of India's hydropower potential, Arunachal Pradesh is blessed with abundant water resources. Numerous major rivers like Kameng, Siang, Subansiri, etc. and several wetlands like Bhagajang, Nagula, etc. nourish its rich biodiversity. In spite of such vast water resources, Arunachal Pradesh is staring at a drinking water scarcity.

Perennial natural springs and small rivulets are the main sources of potable water in the State. They are, however, drying up at an alarming rate. In 2018 alone, more than 200 natural springs were reported to have dried up. In many districts like Changlang, Longding, water scarcity has become a part and parcel of life. Especially with the arrival of winter, people have become used to facing water shortages. With each year passing the problem becomes grimmer.

Experts mainly blame large-scale deforestation, mining and the slash and burn system of farming (jhum cultivation) for the drying up of springs. In spite of strict government prohibition, the problem of unregulated logging remains a worrying issue, rapidly degrading the forest cover. Climate change is worsening the problem. The rising temperatures, high intensity short duration rains and a marked decline in winter rains have diminished the State's water sources.

To address the rising drinking water scarcity, the SWSM has undertaken a pilot project on 'Springshed Management for Drinking Water Source Sustainability'. In this project, People's Science Institute (PSI) is working closely with the State Public Health and Engineering Department (PHED) to implement springshed management throughout the State. The main focus of this project is to build the capacities of stakeholders through preparation and implementation of a model springshed development plan in one village.

An experienced team from PSI initiated the programme in September, 2020 with a 14-day virtual orientation workshop. During the workshop, 30 participants were given basic training in hydrogeology, social survey methodology, testing water quality, treatment measures and institution building. However, due to...
the pandemic and frequent travel restrictions, field-based training could not be conducted. Subsequent to the virtual workshop, the trained officials identified critical springs and streams which were drying up in almost 650 villages in the entire State. Among these identified villages, Miao Singhpo in Changalgang district was selected as a model site.

Every year Changalgang district faces severe water shortages during the winter month, mainly due to rampant deforestation and illegal mining activities. In November, 2021, PSI conducted a 7-day hands-on training in Miao, to study the socio-economic and hydrogeological conditions of the village and most importantly the villagers’ perspective with respect to water. During the community meetings, the lack of water supply through the pipelines emerged as a major concern of the villagers. “We have to call tankers or fetch water ourselves from the Noa-Dihing in January and February,” said one woman in the village. Villagers have to rely on the Noa-Dihing river (tributary of Brahmaputra) to meet their water needs during the lean season. The Maithong stream tapped by PHED had enough discharge to cater to the needs of the village. But in the recent years, the discharge had reduced drastically, creating water shortages.

Based on the information gathered through community meetings, one stream and four springs in the village were deemed critical, i.e., they needed to be recharged to meet the water demands especially during winters. Detailed hydrogeological surveys were conducted to delineate the recharge area, followed by an engineering survey to identify the treatment measures. These surveys were conducted simultaneously with field training of the PHED officials. A detailed water security plan was then developed by PSI on the basis of the field surveys. The on-field training proved to be very useful, as a majority of the trained officials were able to undertake hydrogeological and social surveys in their respective villages. PSI is currently facilitating the implementation of this model springshed management plan in Miao Singhpo village.

The community interaction in Miao has helped identify community mobilization as a major challenge. The completed JJM scheme is complex for the community to understand as they are also skeptical of new programmes. One of the main aims of springshed management is also to make the community understand that their water source is a common pool resource. This not only gives the villagers a sense of ownership but also ensures sustenance of the springshed management system. The community needs to be included in the decision-making process, which is the backbone of JJM. Building the capacity of the Village Water & Sanitation Committee is also key.

Miao is now a 'Har Ghar Jal' village, and springshed management will ensure source sustainability is ensured in the village. Presently, the rate at which the water sources in the State are declining is much faster than their revival. Therefore, while the government has succeeded in laying pipelines and installing water supply taps equivalent efforts must be put in for ensuring source sustainability because without water all other efforts are futile. Therefore, we not only want 'Har Ghar Jal', but must make sure that there is 'Har Ghar Jal', today and in the long-run. Spring revival can play a vital role and save our springs and streams from drying and ensuring long-term sustainability.
Pathalghutva tola (habitation) of Mayal village, which falls under Chitarpur Block of Ramgarh district in Jharkhand State is mainly inhabited by the Mahato people whose main occupation is agriculture. Until recent past, this tola lagged behind in most of the parameters pertaining to ease of living, be it a road or safe drinking water. At that time there was only one solar-powered overhead water tank situated at one end of these cluster of houses. All the people of Pathalghutva tola had to fetch water from this source of water, which was few hundred meters away from the farthest house. This led to wastage of time and caused inconvenience and drudgery, especially to the women-folk of the tola.

Around 3 years ago, Sarita Kumari from Hazaribagh was wedded in to this tola to Santosh Mahato. Like other women of the tola, she too had to trek all the way to the public stand post situated below the overhead water tank at the other end of the habitation. If she needed water for the house during the nights, she would not dare go alone to fetch it, especially during winters or rainy season. Some other elderly woman of the house had to be woken up to accompany her. And, this would happen with almost all the women of Pathalghutva tola. Thus, the women of the tola couldn’t sleep on all such days.

However, all that changed with the announcement of Jal Jeevan Mission by the Prime Minister of India, Shri Narendra Modi on 15th August, 2019. The announcement brought a ray of hope to the women of this tola, as this would bring direct water supply in to their homes! So, the women put forth their problems to the officials of the Department of Drinking Water & Sanitation, working at the district level, who responded rather quickly to their needs. The officials helped the people of Mayal village in preparing the Village Action Plan that incorporated the needs of Pathalghutva tola too.

As per the Village Action Plan, an overhead storage tank of 4,000 liters capacity was constructed for Pathalghutva tola and tap connections were installed in all the 18 households of the habitation. This has brought broad smiles to the faces of women of this tola, as it is a fulfilment of their dreams of having potable water within the confines of their homes. Now they need not go out to fetch water, thereby saving them time, energy which they can use to look after themselves and lend a helping hand to the male members of the family in augmenting the family income.

“A jubilant Sarita Kumari chuckles in happiness,

“Three years ago, when I entered this village as a new bride, I had to suffer the drudgery of going out to the public stand post every day and every time whenever there was need for water. Due to this I couldn’t do certain things, like cooking food, etc. at will. But now that we have fresh water in our households, we are able to do so many things simultaneously – without stepping out of the house. This is not only saving my time, but has also enhanced my safety and dignity. The women of our tola are so happy now and are thankful to the JJM. Jal Jeevan Mission has really brought a new ray of hope in our lives”
Assam

Drinking water supply during floods

- PHED, Assam

The Bajali District is the 34th district in Assam established in 2021 and has a total population of nearly 3 lakh, across 173 villages. The district covers an area of 418 sq. km, which was heavily inundated this monsoon season since 15th June, due to heavy rainfall. The flood occurred due to breaching of the embankment of Pohumora and Kaldia rivers. The dwellings of the inhabitants nearby the embankments were totally washed away and the people had to take shelter in Relief Camps.

The flood caused major infrastructure damage particularly of roads, a total of 99 roads including approaches of 33 RCC bridges as also 24 PWS schemes, especially their distribution network. Three human lives including numbers of livestock were lost. Many poultry firms were washed away.

Public Health Engineering Department (PHED), Assam ensures provision of safe drinking water to the people of Assam on regular days as well as in the face of adverse circumstances like disasters including floods, cyclones etc. The PHED also ensures safe hygiene through proper disposal of solid and liquid waste in rural areas.

Before the occurrence of flood, the Department pre-identified by the concerned District Administration. Installation of handpumps and temporary toilets in relief camps is done with proper instruction and financial assistance from district administration.

During occurrence of flood, when various sources of safe drinking water like water supply schemes, spot sources like tube wells, handpumps etc. get disrupted or submerged under water and the victims are immediately shifted to safer highlands. Bajali (PHE) Division put in all-out efforts to provide safe drinking water and sanitation facilities to the flood affected people. And the Civil Administration set up 49 relief camps at different locations and about 6,900 people took shelter in the camps. Initially installation of tube wells or handpumps were not possible here, so the victims were provided with disinfecting chemical packets i.e., Bleaching Powder hydrated Lime and Ferric Alum mixed together which are to be used for treating flood water. The turbid flood water may directly be treated with these chemicals in prescribed quantity to make it safe for drinking purposes. When there is no turbidity in the water extracted from tube well or handpumps whose platforms are broken or inundated with water, the water may be treated with halogen tablets for disinfection of the extracted water, making it safe for drinking purposes. One tablet of Halogen may be used to purify 20 liters of water. The PHED distributed 1.4 lakh packets of disinfecting chemicals comprising of Lime, Bleaching Powder & Alum in 1:8:16 proportion respectively, 1.65 lakh Dichloroisocyanurate (NaDCC) tablets for treating water, 70 thousand pouches of water and 1.4 lakh bottles of packaged drinking water. Apart from these, leaflets were distributed to create awareness among the people to take immediate measures in respect of drinking water. Temporary toilets were also built for the camps. Later on, the PHED installed 37 hand pumps in relief camps as well as in habitations.

After the floods receded, the department took a massive drive for sanitation with Sodium Hypochlorite solutions in relief camps as well in village area as also disinfection of spot sources by pouring bleaching powder solution into the hand P-pumps of the affected villages.

In such situations when severe situation persists for several days, flood victims are provided with water pouches each containing 250 ml of safe drinking water prepared through Mobile Water treatment Plants (MWTP) owned by the department. Presently, PHED Assam has 63 MWTPs as first response.

The department has so far done well at disaster response, but going forward needs an adaptation plan to minimize the damage caused by floods every year.
Damchok village gets household tap connections

- Lopamudra Panda, WASHi

Getting free-flowing water from the tap at home is no more a dream for villagers of Damchok, the last Ladakhi village before the international border, in Leh district. No extra morning trudge by the villagers for fetching water in this zero-border village as they are now getting tap water at their homes.

While expressing his gratitude for the government, the village head and Numberdar of Damchok, Shri Karma Eshay says, "earlier we had to bring water from far-off streams and Army tankers would be of great help occasionally, in winters. But today the water connection at every doorstep under Jal Jeevan Mission is like a dream come true and life-altering freedom for us. I want to thank the Government and all officials for this noble step."

Damchok is located 325 kilometers away from Leh, at an altitude of 13,800 feet. The inhabitants used to depend on perennial groundwater sources that flow in the form of streams. Most part of their time especially of women and girls was spent in fetching water to meet their daily needs. After 75 years of independence, under the Jal Jeevan Mission, each and every one, of the 38 households of Damchok village are now getting quality tap water making it a 'Har Ghar Jal' village.

Making this dream into reality was not an easy task for the administration. Ferrying men and equipment to locate a sustainable water source and lay the pipeline network was an arduous task as there was no motorable road. The UT’s Jal Jeevan Mission team opted for High Density Polyethylene (HDPE) pipes instead of metal as HDPE pipes are durable and operate effectively in harsh temperatures thus it prevents the supply water from freezing. Supply pipes were laid below the frost line. Exposed pipes were insulated with glass wool and Aluminium jacketing. Mostly gravity was used for the flow. Solar pumps are being installed where groundwater is the source for the water supply scheme. The administration has also used choppers to carry men and materials to the remote sites.

“Our main challenge was to keep water flowing during winter. The second was to identify perennial sources of potable water. Carrying pipes and other equipment to villages without road access was another challenge. They needed out-of-the-box solutions,” says Shri Shrikant Balasaheb Suse, DM, Leh. He further said, “Our focus is on the use of solar pumps, eight solar submersible pumps have been installed in the village to sustain the regular and uninterrupted supply. The special focus is on the insulation of pipelines. Here we strived hard to install pipelines laid below the frost line.”

Indian Army’s Uniform Force deployed in eastern Ladakh had helped the UT administration by providing air stories for carrying labour, engineers, equipment, and material to mountainous sites for the speedy progress of water supply schemes.

The UT administration makes sure that the pipes reaching the village are insulated, so that the water doesn't
freeze during winter, considering the extremely cold temperatures going down to around -40 degrees. The Leh administration is now focusing on water supply work in other villages such as Phobrang, which guards the access road to the Gogra-Hot Spring area, which is progressing at a trot. So far, more than 11,000 rural houses have been connected with tap water in the Leh district marking a saturation of more than 50%, which was a mere 5% at the time of the launching of the 'Har Ghar Jal' program in August 2019. This is a noteworthy achievement, given the mountainous geography, isolated habitations, including those without road access, and extreme weather.

Narendra Modi
Prime Minister

Country started a nationwide campaign like Jal Jeevan Mission 3 years ago.

In these three years, 7 crore rural households of the country have been given piped water supply.

Notably, the Haryana government has also done an effective job in this campaign.

Extract from PM’s address at the inaugural event of Amrita Hospital in Faridabad, Haryana on 24th August, 2022
The state of Sikkim lives up to its depiction as the land of peace and tranquillity, as it is blessed with Himalayan spring sources which provide good quality and abundant quantity of water. This former Himalayan Kingdom awarded as the 'Cleanest State' in India in 2016 and 2018, is also one of the leading states towards achieving 'Har Ghar Jal'. As on date, Sikkim has a total of 1,31,880 households (HHs), out which 90,626 HHs (68.72%) have tap supply. Sikkim has a total of 439 villages, with 84 villages having 100% HH tap connections and 19 villages are 'Har Ghar Jal' certified. This article tries to gain the stakeholder perspectives about what they think of JJM as a mission and its impacts on their lives. JJM is not just an infrastructure development program but also a social mission, thus a techno-social approach of the implementation and O&M is indirectly highlighted here.

Household
Villager, Mrs. Pema Choden Lepcha who lives in Labi – a Har Ghar Jal Certified village, in Phensong GP, District Mangan, says that before September 2021, when tap water connections were installed in Labi, water was fetched from ponds in the nearby forests. Pond-water was contaminated by animals raising turbidity drastically. After receiving the tap connections, it saved time, efforts and minimised risks in fetching water. Earlier Mrs. Pema mentions they assumed visually clear water was clean and free of contaminants, but now she understands the value of water quality testing, which has profound impact on reduction of water-borne diseases. She added that she actively participates in Gram Sabhas for village water and sanitation related activities. Anganwadi staff, mostly women are trained for water quality testing via field test kits. She expressed her gratitude towards the Mission and the Department for providing a reliable water supply scheme.

Village Water & Sanitation Committee (VWSC)
VWSC member Mr. Tengay Lepcha, Labi village, shared that the VWSC of his village is fully functional with 16 members. They had prepared a Village Action Plan (VAP) which is approved by the Gram Panchayat and the village community. They plan to setup the water tariff, which the villagers have shown a willingness to pay, which will bring a sense of ownership among the beneficiaries. He was aware of routine water quality testing being carried out in the village and attributed its success to the barefoot engineers

Barefoot Engineer (BFE)
Mr. Duknam Lepcha, an enthusiastic barefoot engineer shared that it's hard work for barefoot engineers, as the Gram Panchayat is an enormous area spread over multiple hills. The VWSC is dependent on them for the on-ground works related to JJM. He exclaimed that JJM scheme is a...
gamechanger in the rural areas especially in Sikkim where water must be fetched from distant sources and dense forest areas. The availability of fresh consumable lab tested water at the doorstep saves time and energy. Water borne diseases in general public opinion have dropped since last year when the scheme became functional. He acknowledged a robust O&M mechanism should be put in place so that JJM plumbing appurtenances last for a long time.

Junior Engineer (JE)
Mr. Passang Lepcha shared that all villages have prepared Village Action Plans (VAPs), which have been converted successfully to Detail Project Reports (DPRs) with subsequent implementation. The JE updated that the earlier schemes were not household specific and thus JJM is a gamechanger in the rural areas. The motivation to have Asha and Aanganwadi workers for water quality testing has contributed to women empowerment. The JE claimed they have good momentum to make sure that 100% coverage is achieved in time. He also highlighted that they have implemented a greywater management system which consists of individual household soak pits being constructed in convergence with Swachh Bharat Mission—Grameen (SBM-G).

Chief Engineer (Project Director)
As informed by the Project Director Mr. Sanjeev Rai (Chief Engineer), Govt. of Sikkim has 6 defined districts with District Action Plans (DAP) prepared. He stated that NABL accreditation will bring more reliability and their State lab at Gangtok is fully functional and will soon achieve accreditation, while district lab from Namchi has already acquired it. He added that JJM has brought in transparency and accountability through real-time data in the IMIS. He added that in future the O&M will be taken up by skilled villagers like masons, carpenters, plumbers, electricians etc. for which trainings are being conducted by SIRD, thus, making the villages self-reliant for their own O&M. He added that a web-based portal for grievance redressal is ready and very soon will be accessible to general public.
The inaugural meeting of 'Rural Wash Partners' Forum (RWPF) was held on 22nd August, 2022 at India Habitat Centre, New Delhi with over 32 Partners from WASH Sector.

The forum is a platform for easy exchange of ideas in WASH sector between Government and development partners which was anchored by Department of Drinking Water & Sanitation, Ministry of Jal Sahkri.

The Forum aims to supplement department’s efforts in the implementation of Swachh Bharat Mission Grameen (Phase-II) & Jal Jeevan Mission through innovation, knowledge products, financing and capacity building, leading to impact-driven outcomes.

At the beginning, Shri Nilachal Mishra, Head Government Advisory, KPMG (platform coordinator) welcomed the delegates at the meeting.

While setting the context, Shri Vikas Sheel, AS&MD, NJJM said "The forum is the need of the hour and through it we hope to build partnerships to sustain rural WASH systems". During his presentation, AS&MD, NJJM also highlighted the major focus areas of Jal Jeevan Mission (pre, during, and post), the status of SBM-G and ideas behind the Rural Wash Partners Forum.

During the meeting, Shri Arun Baroka, Special Secretary & MD, Swachh Bharat Mission-Grameen shared the learnings drawn, challenges overcome & how this forum can support attaining the status of ODF & 100% tap water coverage in every rural household.

Further, Smt. Vini Mahajan, Secretary, DDWS outlined the opportunities for collaboration under Rural WASH Partners’ Forum.

"Whatever the infrastructure we have to create, it is to be done now with the adequate budget available, and one must not miss the once-in-a-lifetime opportunity."- she said while delivering the keynote address at the forum.

The meeting was attended by around 100 participants from 32 partner agencies.

Dignitaries on the dias at the first inaugural meeting of RWPF, New Delhi
JJM: action on the ground

Jharkhand

Two NLM experts along with two NJJM Team members visited 12 villages in Gumla and Simdega districts of Jharkhand during 20th-23rd July. It was observed that the villagers have an overall good opinion about the quality and quantity of water received. The VWSCs were formed and VAPs formulated. The members and the village community need to be sensitized about JJM, and their roles and responsibilities.

The SVSs are largely solar power-based and provide continuous supply throughout the day, but there is a need for provision of disinfection in these schemes along with some control measure to ensure sustainability of sources. The connections at household levels are supported with adequate pedestal and platform. Jal Sahiyas, overall, seemed well trained and equipped with local information, especially trained in water quality testing using FTKs. However, this is at the GP level, local women, 5 in each village, also to be trained. Currently, the O&M of schemes is carried by the contractors, who have contracts for five years post completion of scheme. There is a need to train local people and equip them to own, operate & maintain their in-village water supply system. A toll-free number for grievance redressal exists but awareness regarding the same to be increased.

Chhattisgarh

A four-member team comprising of two sector experts and two technical experts from NJJM visited 16 villages in 2 districts (Surjapur and Koriya) of Chhattisgarh during 19th-23rd July, 2022, for ground truthing and technical assistance to the State in implementation of JJM.

It was observed that many quality-affected habitations are yet to be covered through schemes from safe water sources. Tap water connections, handwashing facilities, running water facilities with soak pits in schools and anganwadis have been installed through JJM in convergence with 15th Finance Commission tied grant. ‘Jal Bahinis’, 5 women members, have been identified and trained in every village for training on water quality testing through FTKs. The team suggested that the district team must prioritise the constitution of VWSCs and preparation of VAPs as per JJM guidelines as community ownership is the cornerstone of the programme. Capacity building of VWSCs and O&M staff by utilising ISAs to be expedited. Engagement of TPIAs also to be ensured for quality control. The team also suggested that IEC activities including wall paintings/ posters etc. and PRA activities must be taken up on priority. The quality of works was evidently commendable, including the tap connections with RCC platform which is of good quality. IMIS data reconciliation based on actual field condition also must be ensured.
“Clean, filtered water, makes its way to every single home in Goa as the state becomes the first to have 100% homes with FHTC in our journey of 10 Crore Har Ghar Jal.”

Union Minister, Jal Shakti at Har Ghar Jal Utsav held in Goa, 19th August, 2022