

2023: Year of International Water Commitments and What it Means for Rural India



India has been proactive in making commitments and negotiations on global platforms around sustainable and climate resilient water management. The goals and vision, which Government of India intends to achieve with regard to water, have been endorsed by it on several international and national forums this year.

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The year 2023 is an important year nationally and internationally for the world's water-related goals. In 2017, the United Nations (UN) adopted a resolution declaring 2018-28 as the International Decade for Action on Water for Sustainable Development. The year 2023 is the mid-year to the decade for action on water and also for the Sustainable Development Goals (SDGs). Goal 6 of the SDGs focusses on the availability and sustainable management of water and sanitation for all. In this context, the alignment of SDG 6 and SDG 13, which emphasises urgent action to combat climate change and its impact is very important.

The Sixth Assessment Report from the Intergovernmental Panel on Climate Change (IPCC) was launched in 2021, which highlights that the water cycle is more sensitive to global warming, causing an increase

in droughts, floods; and cyclones even with one-degree temperature rise. With rising temperatures, the increasing frequency and intensity of extreme weather events will make it challenging to access freshwater, grow food, and produce energy. The same report points out that these issues impact nearly 40 per cent of the global population or approximately 3.5 billion people, and this number is projected to rise dramatically over the coming decades.

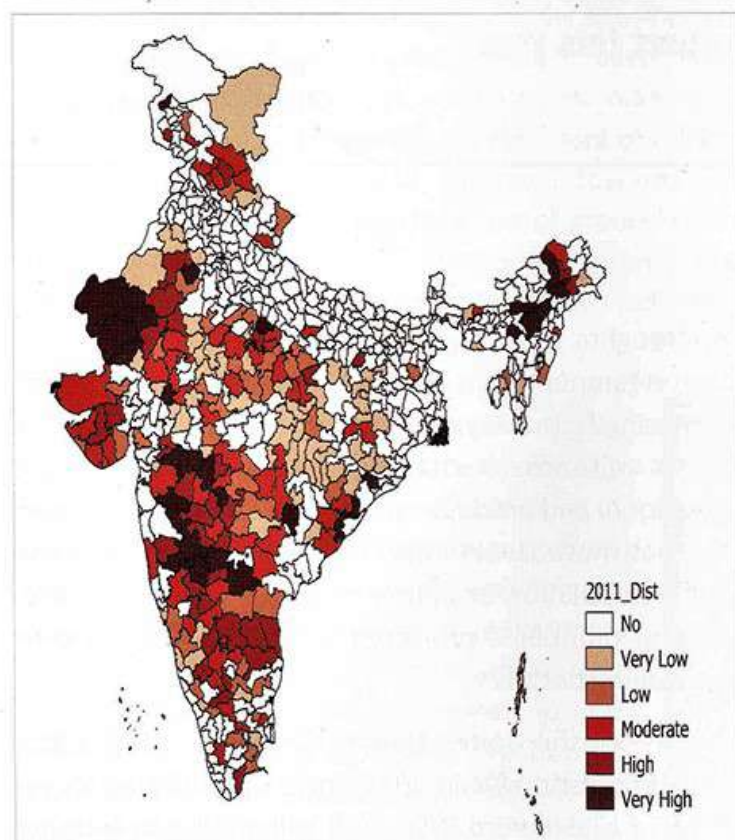
As per the United Nations Office for Disaster Risk Reduction estimates in 2019, India had suffered losses of Rs 5.61 lakh crore (USD 79.5 billion) due to extreme climate events in the previous two decades. According to a study by the Council on Energy, Environment and Water (CEEW) in 2020, India experienced an exponential increase in extreme events during the period 1970–2019, with a marked acceleration during

2000–2019. Another study by CEEW in 2021 shows that more than 75 per cent of India’s districts are extreme event hotspots, and more than 80 per cent of India’s population resides in districts highly vulnerable to extreme hydromet disasters, i.e., floods, cyclones, and droughts. Water scarcity, water quality degradation, infrastructure damage, and an increased spread of waterborne diseases are some of the impacts that occur due to climate change.

Water Matters for Rural India

Our analysis based on the Census 2011 data finds that 53 per cent of districts in India are rural. Out of these districts, 37 per cent are vulnerable to the impacts of extreme hydromet disasters. These districts are also home to one-third of India’s population. Thus, there is an urgent need to ensure water security in rural areas to mitigate the impacts of droughts, floods, and cyclones.

Figure 1: 37 per cent of Indian rural districts are vulnerable to the impacts of extreme hydromet disasters



* The districts with density of population less than 400 per sq km are categorised as rural based on the criteria given by <https://www.india.gov.in/content/rural-indian>

Source: CEEW | Authors’ analysis based on Mohanty and Wadhawan 2021 and Census 2011 data set.

The Government of India (GOI) has been delivering schemes and policies in the water sector to increase its adaptive capacities to climate change. India has about 18 per cent of the world's population and only 4 per cent of global freshwater resources. Two of the major sectors competing for water in India are agriculture and WASH (water, sanitation, and hygiene). While the latter accounts for a much smaller share of water demand, with respect to agriculture (80 per cent), it is important from the point of view of public health. Considering that occurrence of climate extremes will further exacerbate in the future, climate-proofing of WASH infrastructure and services are crucial for building the resilience of communities.

The adverse impact of climate variability and change on hydrology has also increased the dependence on groundwater for meeting sectoral water demands. As per CGWB analysis in 2022, about 30 per cent of the assessment units in the country were semi-critical, critical, or over-exploited, i.e., they are annually extracting more than 70 per cent of how much groundwater can be extracted. Considering more than 80 per cent of the rural water supply schemes in India are based on groundwater based sources, non regulation of groundwater use in such areas can be a matter of concern in the future.

The year 2023 began with India announcing the formation of its ‘Water Vision’ as a part of Prime Minister’s Vision India @2047 plan. The goals and vision, which Government of India intends to achieve with regard to water have been endorsed by it on several international and national forums this year. We discuss some of them in the subsequent section, which are intended to ensure equitable, sustainable and climate resilient development, and management of surface water and groundwater resources.

Major International Commitments and Outcomes

Group of Twenty (G20)

The G20 was formed in 1999 and India is leading the G20 presidency for the first time this year. A dedicated global water dialogue is being held as a part of the Environment and Climate Sustainability Working Group (ECSWG). The focus is on prioritising water action towards achieving sustainable water resources management in alignment with the SDG6 by 2030.

During the second G20 ECSWG meeting held in March 2023, the Ministry of Jal Shakti (MoJS) emphasised on the importance of climate-sensitive development for ensuring water security, while highlighting India's two flagship missions - Jal Jeevan Mission and Swachh Bharat Mission. The intended outcomes of these dialogues on sustainable water resources management focus on but are not limited to: a) universal access to safely managed drinking water and sanitation services; b) participatory groundwater management, especially highlighting the role of local stakeholders in groundwater recharge and its efficient use; c) climate-proofing of water infrastructure and services and disaster risk reduction

United Nations Water Conference (UNWC)

The UN 2023 Water Conference was co-hosted by Tajikistan and the Netherlands in March 2023 at UN Headquarters in New York. The main output of the conference is a document on voluntary and non-binding commitments to accelerate progress to meet the global water and sanitation related goals and targets in the second half of the Water Action Decade and 2030

agenda. About 700 commitments aimed at driving transformation towards a water-secure world were made by governments, the United Nations system, other intergovernmental organisations, international and regional financial institutions, NGOs, academic institutions, the scientific community, the private sector, and philanthropic organisations.

India under the action agenda has announced that it allocated USD 50 billion to provide safe and adequate drinking water to all rural Indian households by 2024, which is well before 2030. In addition to drinking water, this conference also saw substantive linkages being acknowledged in climate action and water action. In the closing assembly of UNWC, the current president of United Nations General Assembly, Mr. Csaba Kőrösi summarised the game changers that can drive the world in achieving the Water Action Agenda. Many of those game changers talk about addressing climate change and integrating climate action with water action. Some of those game changers could be an integrated water and climate policy at national and global levels by 2030 and early warnings for all to help people safeguard their lives and property.

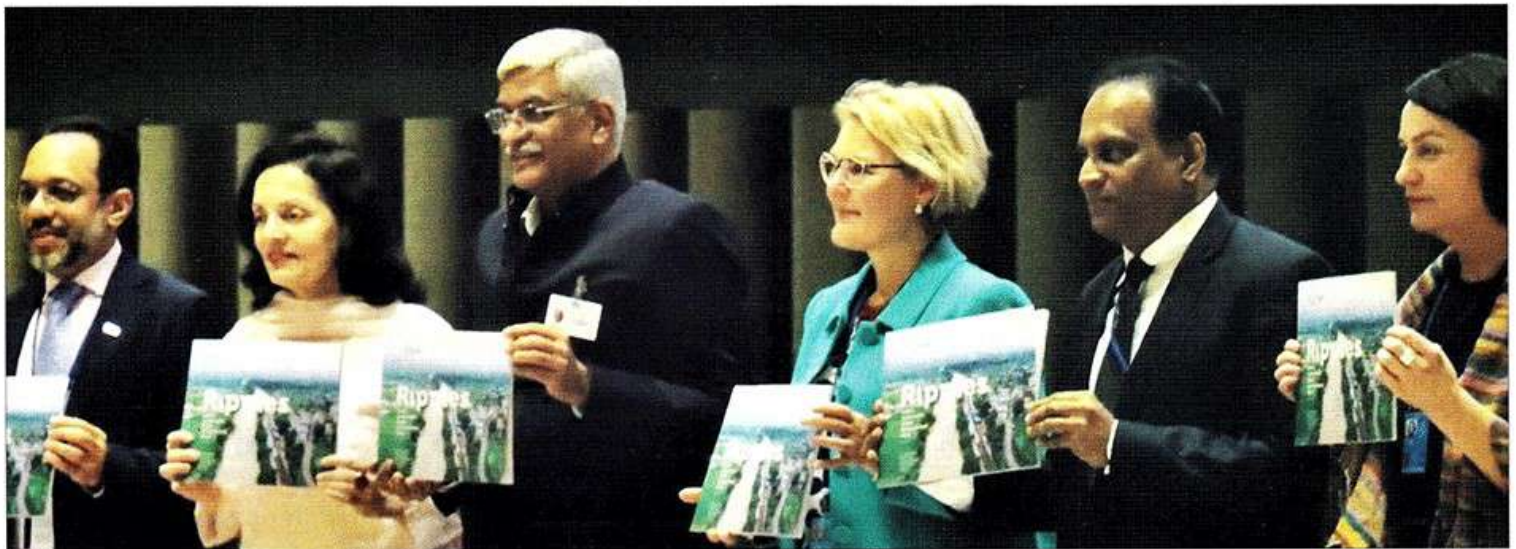


Image showing launch of CEEW publication by Hon'ble Minister of Jal Shakti, Shri Gajendra Singh Shekhawat at UN Water Conference, New York, March 2023

Source: UN Water Conference 2023

Conference of the Parties (COP)

The Conference of Parties (COP) is an annual meeting organised by the United Nations Framework Convention on Climate Change (UNFCCC) where countries come together to discuss and address global climate change issues. Negotiations around the water

sector have become increasingly important at COP. The Water Action Track was launched at COP25 in 2019 to mobilise stakeholders from across the water sector to increase ambition and action on climate change adaptation and mitigation, with a particular focus on achieving SDG 6. COP26 came as a breakthrough and saw the establishment of the Water Pavilion, which

provided a platform for stakeholders to share knowledge and experiences on water management in the face of climate change. Finally, in 2022, water and sanitation were also introduced for the first time in agendas, and the COP committee emphasised the importance of the water and climate nexus. At COP27, India also emphasised the need for a 'bottom-up approach' to address water management challenges and highlighted the importance of community participation in decision-making.

Some Relevant Schemes and Policies by the Government of India

India has been proactive in making commitments and negotiations on global platforms around sustainable and climate resilient water management. The conviction in these commitments is backed by various national level policies that Government of India is delivering to achieve sustainable management of water resources and to safeguard its water resources in the face of climate change. We discuss some of those policies in this section.

1. Jal Jeevan Mission (JJM)

The Jal Jeevan Mission (JJM) was launched in 2019 with the aim to provide a functional tap connection within the premises of each rural household in India by 2024. The mission addresses SDG 6, with the aim to achieve target 6.1 which focuses on achieving universal and equitable access to safe and affordable drinking water for all by 2030. As per the JJM dashboard, as of May 2023, over 87 million rural households have been provided with tap connections within their premises, accounting for 61 per cent of total rural households in the country as compared to 17 per cent in 2019 when the mission was launched.

According to a CEEW study in 2023, USD 120.86 million was the savings from JJM, which is estimated as the income lost per annum on account of workdays spent by women in collecting water from distant sources. Additionally, by ensuring access to clean drinking water, India can save an estimated USD 1.34 billion per annum from reduction in medical expenditure on the treatment of water-borne diseases. The JJM also has tremendous potential to create various kinds of jobs in rural areas, such as in plumbing, water quality testing, community mobilisation, and water supply, and wastewater treatment operations.



2. Swachh Bharat Mission - Gramin (SBM - G)

The first phase of the flagship SBM - Gramin was successfully implemented, with all villages of India declaring themselves open-defecation free (ODF) in 2019. The mission has entered its second five-year phase (2020 - 25), moving from ODF to ODF-Plus with the objective of sustaining the ODF status and ensuring the safe management of solid and liquid waste in all villages of India. The country is steadily moving towards ODF-Plus, with almost 3,00,000 villages (out of 6,00,000) in the country declaring themselves ODF-Plus as of May 2023.

As a result, India has contributed to reducing global open defecation by over 50 per cent, according to the Ministry of Jal Shakti. This has progressed the country towards achieving SDG 6.2, that aims to achieve adequate and equitable sanitation access for all and ending open defecation by 2030, with a focus on women and girls and other vulnerable groups. Similar to JJM, the Swachh Bharat Mission Gramin has led to job generation in rural India as well as substantial household savings on account of improved public health due to access to latrines.

3. Atal Bhujal Yojana (ABY)

ABY has been implemented since April 2020 in 229 water-stressed blocks of seven Indian States for a period of 5 years. The aim of the scheme is to improve the management of groundwater resources in such areas, which accounts for about 37 per cent of such blocks in the country. Encouraging community participation and inculcating behaviour change towards water conservation are the pillars of this scheme. It

thus has the potential to provide the country with necessary data for planning of water resources and for climate action through community participation. It can fill a major data gap by providing data with increased frequency and better resolution. It can do this for the data on current and future water demands, and for rainfall and groundwater level data.

The community at gram panchayat level has to prepare and annually update gram panchayat water budgets where they assess surface and groundwater resources and identify current and future needs as a basis for planning. The community also has to prepare water security plans in which they identify sources of investments for interventions needed in the next five years to meet their water demands identified in water budgets. Similarly, the community also has to measure groundwater levels and rainfall. The making of these plans and disclosure of groundwater information are prerequisites for finances of the scheme to be released to states. As per a CEEW publication in March 2023, the scheme has initiated or completed the formation of water security plans for more than 8,000 gram panchayats, 3,500+ piezometers, 1,900+ digital water level recorders, and 2,500+ water flow metres have been installed to strengthen groundwater monitoring in villages and data from these has been put in public domain from 8000+ gram panchayats.

Another significant scheme is the National Aquifer Mapping and Management Programme (NAQUIM). Under NAQUIM, groundwater aquifers have been mapped and management plans have been made for 80 per cent of the country. As per our analysis in 2023, about 9 per cent of gross value added to the Indian economy in 2018-19 came from use of groundwater irrigation in agriculture. With renewed focus on data in international commitments, the stage for launch of more such schemes has been set. The rural economy stands to benefit from this data both in terms of planning for agriculture and WASH services and in reducing vulnerability to climate change.

Way Forward

India is already on its mission to achieve SDG6 targets through various national missions and water-related interventions it is undertaking, which are in alignment with the major international commitments. The way forward for India should be to synergise and leverage on its existing programmes and commitments.

Knowledge Transfer from International Collaboration

Delegates and experts from India who attend various international forums like COP, UN Summits, and G20 can play a critical role in pooling their knowledge and building a collective strategy to combat climate change. India can leverage the collective knowledge and experience gained at these forums to strengthen the existing policies and strategies to address climate change and build resilience in the water sector.

Data Production by Leveraging Traditional Knowledge

Leveraging traditional knowledge and increasing community involvement in data governance and management will lead to the collection of more granular on-ground data, as emphasised by various international commitments and targets. Community-based monitoring and data collection programs as initiated under the ABY will enable sustainable and equitable management of natural resources while providing opportunities for community engagement and decision-making. Further, such participatory research will facilitate effective early warning systems, that will play a crucial role in reducing the disaster risks.

Better Reporting of Data on Safely Managed Drinking Water Services

CEEW 2022 analysis highlights that the data reported by different agencies on the progress with the safely managed drinking water services in India needs to be strengthened to include all its components, i.e. access, reliability, and safety (potable water quality). This calls for increased collaboration between various agencies incharge of such reporting and developing synergies in their approach and instruments and tools used for data collection.

Learnings from Experience

India can learn from the experience of its own existing policies and programmes in the WASH sector and ensure that they are able to improve resilience to climate extremes. In 2021, CEEW developed a climate vulnerability index that can be used to determine the areas where the rural population is more vulnerable to the impacts of the climate extremes. Such areas might need additional targeted interventions to ensure that the early gains in terms of improvement in access to WASH services remain sustainable. □