



WORLD SUSTAINABLE DEVELOPMENT SUMMIT 2022

TOWARDS A RESILIENT PLANET:
ENSURING A SUSTAINABLE AND EQUITABLE FUTURE



VIRTUAL CURTAIN RAISER TO WSDS 2022 AND DISCUSSION ON SUSTAINABLE, EQUITABLE AND RESILIENT WATER USE

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THE ENERGY AND RESOURCES INSTITUTE

The Energy and Resources Institute (TERI) is an independent, non-profit organization, with capabilities in research, implementation and outreach. TERI has multidisciplinary expertise in the areas of climate change, natural resources, environment, energy, and sustainable development goals. TERI's research and research-based solutions have had a transformative impact on industries and communities. It has fostered international collaboration on sustainability action by creating a number of platforms and fora. Research gets translated into technology products, technical services, as well as policy advisory and outreach. Headquartered in New Delhi, TERI has regional centres and campuses in Gurugram, Bengaluru, Guwahati, Mumbai, Panaji, and Nainital.



WORLD SUSTAINABLE DEVELOPMENT SUMMIT

The World Sustainable Development Summit (WSDS) is the annual flagship event of The Energy and Resources Institute (TERI). Instituted in 2001 as the Delhi Sustainable Development Summit (DSDS), the Summit series marked 20 years in its journey of making 'sustainable development' a globally shared goal. Over the years, the Summit platform has brought together thought leaders, heads of state and government, scholars, corporates, youth groups, and civil society representatives from across the world. The Summit series has established itself as a responsible and an effective platform for mobilizing opinion-makers to identify and advance pioneering actions to address some of the most relevant issues concerning sustainable development. Perhaps the only Summit on global issues taking place in the developing world, WSWS now strives to provide long-term solutions for the benefit of global communities by assembling the world's most enlightened leaders and thinkers on a single platform. The 21st edition of WSWS will be held between 16-18 February 2022, under the theme: Towards a Resilient Planet: Ensuring a Sustainable and Equitable Future.

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BACKGROUND AND RATIONALE

World Sustainable Development Summit (WSDS) over the past 20 years has become a flagship Track II event to connect policy makers, corporates, civil society, and citizens to bridge the gap between ambition and action on sustainable development and climate change. The 21st edition of WSDS will be held between 16-18 February 2022, under the theme: Towards a Resilient Planet: Ensuring a Sustainable and Equitable Future. The next edition of WSDS will focus on meeting the needs of planetary health in an equitable and a sustainable manner. The ongoing global COVID-19 pandemic has brought to the forefront on how human health and the health of our planet are inextricably linked, requiring wise stewardship of natural resources across all levels. Already in 2021, we are in the decade of action with more than five years gone

since the adoption of the Paris Agreement and the Sustainable Development Goals, both which set forth ambitious agendas. TERI is also preparing the '*COP26 Charter of Actions*' which will be a document that will propose a global framework for equity and climate justice while highlighting sector-specific needs and solutions to address climate change.

The year 2021 started on an optimistic note with the United States taking steps to rejoin the Paris Climate Agreement and pledging to cut carbon emissions by 50-52% below 2005 levels by 2030. Thirty two countries have net zero targets set or proposed in law and existing policies, while other countries are discussing their own net zero targets. The renewed momentum on 'net-zero emissions' is seen not only at the national policy level but also at sub-national levels and in companies.

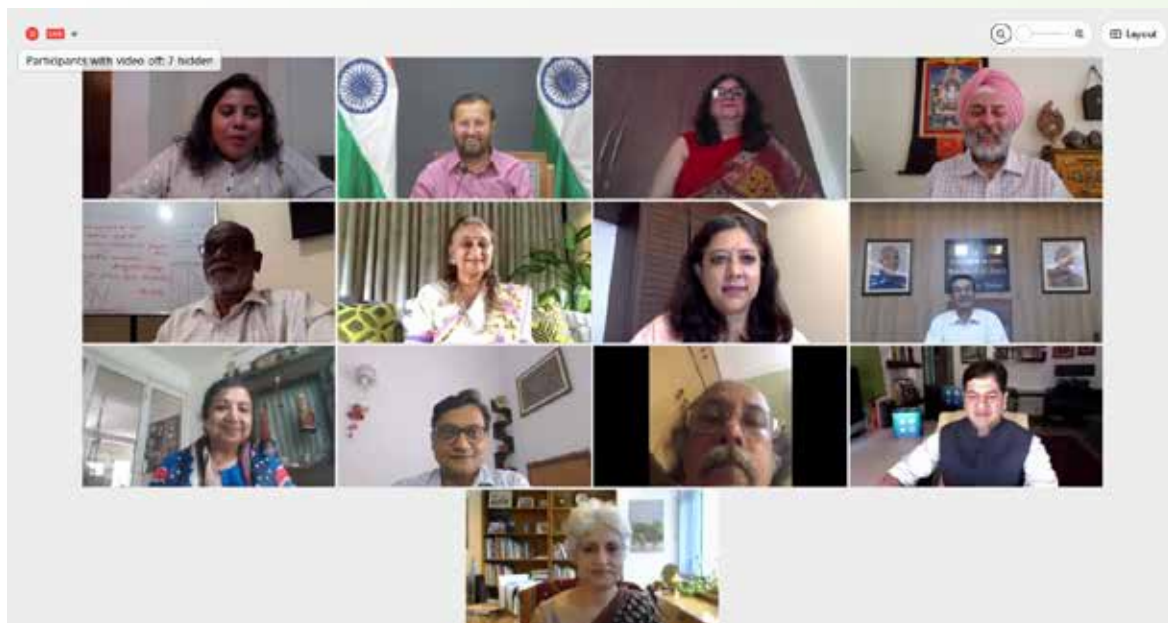
However, safeguarding planetary health in the Anthropocene epoch needs more than climate change mitigation such as better mainstreaming of environment into political and economic frameworks to improve planetary boundary markers such as biodiversity, atmosphere, ocean acidification, biogeochemical flows, freshwater use, land-use, and those markers that have not yet been quantified. The humanitarian crisis unleashed by the COVID-19 pandemic and the devastation caused by Cyclone Tauktae and Cyclone Yaas reveal socio-economic vulnerabilities as well as highlight the need for resilience. The COVID-19 pandemic reminds not only the world of declining planetary health but also of the deep inequalities prevailing across the world and busts the myth that ‘everyone is in the same boat’. The impact of the pandemic, when felt most strongly by the more vulnerable sections of the society clearly highlights inequity in our society.

The curtain raiser event to WSDS 2022 was held on 4 June 2021 to commemorate the World Environment Day and bring together perspectives on the theme of ‘**Sustainable, Equitable and Resilient Water Use**’.

The objectives of the curtain raiser event were:

- ◆ Underscore perspectives on the issue of water use from the perspective of resilience, equity, and sustainability.
- ◆ Public sensitization on World Environment Day on the need to conserve water and preserve water-based ecosystems by involving communities, policymakers, researchers, and civil society.

The theme of ‘water’ is crucial to the overall WSDS 2022 theme. Using the lens of water can help provide perspectives on local, sub-national, national, transnational and global environmental and social issues.



POLICY RECOMMENDATIONS

Policy recommendations that can be derived from the discussions are summarized here in brief.



There is a need for greater people-centered regulation of the industries that are polluting water bodies. Apart from water quality, there needs to be stronger mechanisms to involve people so that water availability and access can be ensured to communities. Real-time GIS-enabled data systems can be designed so that communities can also play a role in monitoring water quality, availability, and access.



From an ecosystem perspective, upstream measures need to be taken to ensure that a river maintains a 'minimum flow' or 'Aviral Dhara' which is required for all water bodies. A greater focus needs to be on a non-anthropocentric view of water, which has the right to exist as it is and not just for human use. There should be a greater consideration for other species whose survival is dependent on water.



There is a need for greater engagement with communities and consumers who depend on water for various reasons. Policies should enable greater agency for them, and not just see water as a commodity, but take into consideration the sociology, the environment, and the economics linked to it.



While rooftop water harvesting is important, it is not enough to achieve self-sufficiency in terms of water availability. Steps should be taken to ensure charging all four kinds of water: surface, sub-soil, deep soil, and groundwater. Grey water harvesting needs to be a greater focus than what it is now.



Training and education of farmers needs to be undertaken regularly in safe methods of grey water harvesting and use.



Government policies have to be in place for water harvesting systems for farmers and communities so that the most can be made of rainwater harvesting in the monsoon season to allow water to seep into the Earth, and recharge the bore-wells and rivers. Schemes can be designed to incentivize farmers and communities to adopt rainwater harvesting practices.



Government should also have a policy to remunerate farmers for growing trees that remain standing for decades; this mechanism can be designed around the concept of payment for ecosystem services.



Steps should also be taken to transfer power to the communities whose lives depend on water, especially, to women. They need the power to spend this money, so that they can take up leadership roles because for women to come up, they need an enabling environment. There is a greater need to empower and listen to women in villages along with women-led interventions on rainwater harvesting.



Techniques for groundwater recharge needs to be implemented in the urban areas with a strong involvement of the third tier of government. Considering space constraints, there is a need to adopt a more scientific approach in urban areas which involves the use of latest tools and technologies.

DISCUSSIONS

Welcome Remarks and Curtain Raiser	Vibha Dhawan , Director General, The Energy and Resources Institute
Summary 	<ul style="list-style-type: none">• Since its inception in 2001, World Sustainable Development Summit has become a flagship Track II initiative to connect policymakers, corporate, civil society, and citizens in an attempt to bridge the gap between ambition and action on sustainable development and climate change.• Climate change will add further stress and uncertainties to water supply and water-based ecosystems. Hence taking an ecosystem-based approach to water will be the key.

It has been almost 50 years since the inception of TERI and it is a leading institute working on cutting-edge research and policy recommendations in the field of energy, environment, and sustainable development. In the 20 years of its inception, the World Sustainable Development Summit – earlier,

Delhi Sustainable Development Summit – has become a flagship Track II initiative to connect policymakers, corporate, civil society, and citizens in an attempt to bridge the gap between ambition and action on sustainable development and climate change. Dr Dhawan reminded that



TERI was one of the first institutions that had started talking of climate change and sustainability, well before they became the buzzwords for the world. So, in a way, TERI was ahead of the knowledge curve. The vision behind establishing this think tank was to highlight emerging issues and find solutions to them not just at the national level but at the global level as well.

Dr Dhawan took this opportunity to announce the dates for the 21st edition of the Summit, which will be 16-18, February 2022. The upcoming Summit will seek to focus on meeting the needs of planetary health. The world should survive including this and avoid future pandemics for which environmental health is the key. In terms of the question of equity for present and future generations, the upcoming edition will also see a greater engagement with youth, because after all, intergenerational equity cannot be possible without greater engagement with youth. On World Environment Day, TERI will announce GO4Youth examination, which is an initiative under TERI'S Green Olympiad for evaluating environmental consciousness, behaviour, and attitude of undergraduate and postgraduate students. The younger generation is far more sensitive towards environment than perhaps the previous generation.

Dr Dhawan also shared that TERI will be entering into a long-term engagement with Editorji to promote water conservation. In an era dominated by the problem of fake news on social media platforms and TRP-dependent news channels, a reliable, personalized news feed application by journalist stalwart like Mr Vikram Chandra, Founder, Editorji is the need of the hour. Mr Chandra is the former CEO of the NDTV group and an award-winning former anchor of the 'Big Fight'. TERI is honoured that he has agreed to moderate the panel discussion and Dr Dhawan expressed hope for a long and fruitful relationship between the two organizations.

According to UN Water, 2.2 billion people do not have access to safely managed drinking water and 4.2 billion, or that is 55% of the world population are without safely managed sanitation. Climate change will add further stress and uncertainties to water supply and water-based ecosystems. Water has strong linkages with all the three pillars of sustainable development: environment, social, and economic. With this as a rationale, and considering the overall theme of World Environment Day, ecosystem restoration, the team chose the theme of 'water' for the discussion today. Water is a component which cannot be generated as it is part of nature which needs to be conserved and preserved. On behalf of TERI, Dr Dhawan extended a very warm welcome to **Shri Prakash Javadekar**, Hon'ble Minister for Environment, Forest, and Climate Change, Government of India. She thanked him for his constant support and encouragement which ensures that the teams at TERI remain motivated and they perform best to their abilities. In her introductory remarks, Dr. Dhawan also mentioned about his keen interest in the subject and commitment to take India to the next level of consciousness as not just talking about it, but also in terms of performance. Last but not least, **Dr Dhawan** also thanked all her colleagues in TERI who worked to organize this session, hoping that all those who have joined will find it very useful.

TERI looks forward to the Ministry's continued support and encouragement for TERI programmes. She concluded the session on the hope that next time when the world celebrates World Environment Day, the world is out of the pandemic as well as have a clean environment. She said that this pandemic has shown us one thing - what a good environment means. During the lockdown, especially last year when everything was totally closed, everyone enjoyed the good air and blue skies, and that is what the aim should be.

Keynote Address by Chief Guest	Prakash Javadekar , Hon'ble Minister for Environment, Forest, and Climate Change, Government of India
Summary	<p>Key concepts guiding the government's approach to water conservation and augmentation include:</p> <ul style="list-style-type: none"> • Role of an ecosystem-based approach for water recharge and augmentation using forests, agro-forestry, and watershed management. • Demand-side measures in the agriculture sector in terms of growing less water-intensive crops and irrigation technology such as sprinkler and drip irrigation. • Demand-side measures in the domestic and housing sector for water savings such as the use of aerator fixed to water taps, water harvesting and re-use of domestic wastewater. Changing of habits is also one of the keys. • Supply-side measures such as augmenting water-deficit rivers to get additional water from water surplus rivers.

Supporting Partner for WSDS 2022



Shri Javadekar underscored that the World Sustainable Development Summit has become known globally. He was hopeful that the Summit would be in a physical format and not virtual. He highlighted that as India has 18% of the world's human population and also 18% of the world's cattle population, so, both require land, feed, and water. In terms of water, India only has 4% of the fresh rain water resources of the world. Hence, there is a basic necessity to save, reuse and repurpose. When India became independent, the water available was 5000 litres per capita. Now it has become 1100 litres. So, this is a basic decline of availability because of population growth, cattle population growth, and various uses. Agriculture consumes nearly 85% of the water. The CAG report has also flagged water wastage in the agriculture sector. So, it is essential that water is conserved by the sector. This can be achieved by adopting new technologies such as sprinkler, drip irrigation, and others. The Prime Minister of India has also been advocating agroforestry as it would help in percolation of water for agricultural purposes.

Shri Prakash Javadekar in the need for augmenting river waters underscored the role of forests. He spoke about 'LIDAR survey' for which one forest campus in each state is selected and surveyed. After the completion of the survey, DPRs are made ready and after the rainy season work on watershed development will start in all the states. This survey is funded through CAMPA, or Compensatory Afforestation Fund Management and Planning Authority. The government has already given Rs 40,000 crore through the programme. The money allocated through CAMPA remained unused for 15 years and now because of the Supreme Court decision, the government has distributed the money to all the states. States kept this money in their consolidated account, but it actually remained reserved. The finance commission has given more money for tree cover and water which has to be earmarked and used for this specific purpose.

He emphasized that everyone has to be conscious that water is a scarce resource which must be used judiciously without which sustainability cannot be achieved. Moreover, changes in the domestic usage can also save 50–60% of the daily water use. Limiting water use and changing everyday habits hold the key. In addition, a simple aerator fixed to water taps in houses will reduce the water flow and hence the water quantity consumed.

More importantly, every housing society and household should compulsorily adopt rooftop water harvesting. He also emphasized that water wasted through reverse osmosis (RO) can be collected and used for gardening or similar activities. The government has also issued new criteria for building approvals where double piping has to be provided. One of these pipes will be for reused water that is recycled through CTP at the local housing society and stored in a separate storage tank. This reused water can be used in the flush.

There are other ways to save water. At the micro-level, businesses also, mainly power plants, have reduced their water consumption and are doing many sustainable practices, including reusing water which will help in water conservation.

On the domestic front, in last 2.5 years under the Prime Minister's guidance, 4.5 crore houses have been provided with taps. As a result the tap water now reaches practically every house and the remaining work is expected to be completed in the next three years. At micro-level, we are happy to announce the Ken-Betwa agreement between Uttar Pradesh and Madhya Pradesh, which will help in deficit rivers getting additional water from overflowing rivers. In Gujarat also, water resources are exchanged between two local rivers. Similarly in Andhra Pradesh, there are many new projects coming up and a dedicated ministry created by the Modi government, Jal Shakti Mantralaya, will definitely take up new projects as these are environmentally also very important.

Preserving trees is important for aquifers and groundwater recharge. In the last seven years, the tree cover in India has increased by 15,000 sq. km. This could be achieved only through determination, programmes and definite participation of the states and the people.

Shri Prakash Javadekar highlighted water programmes of the government including urban water management, urban water security, waste water productive use, optimum technology for water use, effective water governance, smart cities and Swachh Bharat Mission, National Mission on Clean Ganga, Jal Shakti Abhiyan, Jal Jeevan Mission,

Pradhan Mantri Krishi Sinchayee Yojana, Repair, Renovation and Restoration (RRR) of Water Bodies and National Water Mission. He underscored that the government is incentivising farmers to take up crops that require less water. Another consideration is the generation of renewable power through water resources.

These are the basic concepts that the government is considering for providing water security to the nation. He emphasized that everyone should start doing their own bit from today and then this conference can be a success.

Announcements

- Soft Launch of Editorji -TERI Campaign on Water
 - Release of TERI Study & Factsheet on Water
-

A campaign on water was announced, which would involve a partnership of TERI with Editorji, the digital media platform led by Mr Vikram Chandra. This campaign would focus on mass awareness about water conservation and all aspects of water. Both the organizations would work on raising resources

for the campaign and then implementing the same. Mr Vikram Chandra, Founder of Editorji and Dr. Vibha Dhawan, DG of TERI shared their expectations in terms of working together on various facets of water.

The image is a screenshot of a social media post with a blue background. At the top, it says "Viewing 1 love's application...". The main title is "Editorji-TERI Campaign on Water" in white text. Below the title, there are two logos: the Editorji logo (a blue square with a white play button and a menu icon) and the TERI logo (the word "teri" in red and orange, followed by "THE ENERGY AND RESOURCES INSTITUTE" in black, and the tagline "Creating Innovative Solutions for a Sustainable Future" in a smaller font). At the bottom, there are three small images: a beach with waves, a sunset over water, and a person using a hand pump to draw water from a well.



A report titled *Sustainable Groundwater Management in Lucknow City* was released. TERI in collaboration with the Department of Geology, University of Delhi undertook a study which was sponsored by Uttar Pradesh Groundwater Department, and supported by The World Bank.

A factsheet on water titled, 'Water – Key Facts for Its Sustainable Management in India' was also released which highlighted key aspects of water supply, demand, climate change, equity, and policy recommendations.



Release of TERI Study

<p>Policy Perspective</p>	<p>Policy Perspective on Jal Jeevan Mission</p> <p>Mr Bharat Lal, Additional Secretary & Mission Director, Jal Jeevan Mission, Department of Drinking Water & Sanitation, Ministry of Jal Shakti, Government of India</p>
<p>Summary</p>	<ul style="list-style-type: none"> • In the coming years, as population will grow and economic activity expands, apart from groundwater depletion, water-use efficiency, water storage capacity, and water management will become even more important than it is today. • Water management and conservation are the key to achieving equity in terms of water availability, because during drought or water scarcity, it always the marginalized communities that suffer the most. • Jal Jeevan Mission, which started in 2019, tackles the supply side aspects of water management by providing tap water connected to households across the country, ensuring better quality, enough quantity, and regular flow of water. • The Mission also deals with demand side measures of water-use efficiency by giving Pani Samitis, consisting of gram panchayat members and 50% women members, the power to create plans in incorporating water resource management, drinking water supply, and grey water management in each village. • Steps should be taken for faecal sludge management so that water is not used as a carrier for transporting faecal matter.



Mr Lal began his remarks by highlighting a few important points. He said that the present pandemic has made everyone aware of the value of oxygen. Everybody has in one way or the other been looking for oxygen and nature has made that arrangement: plenty of oxygen can be made available by protecting the ecosystem, the nature, the trees. This does not require any kind of a crisis to look towards a better water management, better water security, and long-term water security in the context of public health. He add that as Shri Prakash Javadekar, the honourable minister, has already said that under this government, water has been brought into a single umbrella in the form of Ministry of Water Resources and a number of initiatives have been taken up in the last two years. Water has to be managed both at demand side and at supply side. One thing to be understood is that, because of population growth and expanding economic activities, the per capita fresh water availability has been declining drastically. Secondly, depleting groundwater, which is a major source in India, is also a major cause of concern. Thirdly, on average, the country receives 20–25 rainy days in a year, and whatever amount of water is received from this rain, it has to be managed for a minimum for 365 days, sometimes 2 years, or in some parts for 3 years. So, this means water conservation, rainwater harvesting, and water storage are the keys to achieve water security.

Two years ago, the Green Tribunal had imposed restrictions on groundwater exploitation in drought-prone, desert areas and water-scarce areas. Owing to this, all economic activities got impacted and then new rules came in. The basic point is water-use efficiency and water management are going to be the key, and if water is not managed properly, the world will face the consequences.

One more aspect is that the poorest of the poor and the most vulnerable communities suffer the worst. In the case of drought, water scarcity and safe drinking water paucity, these communities suffer the most.

As a result, from the equity point of view, better water management is certainly more beneficial to the marginalized section of the society.

Jal Jeevan Mission was launched in August 2019, and the basic objective is that every rural household in the country as well as all public institutions in rural areas, such as schools, anganwadi centres, community centre, health centres must have assured water supply in terms of quantity, quality, and regularity. This is at the rate of minimum 55 litre per person per day, of potable water quality, and the mission is aspiring that the supply should cater minimum needs, and in the long-term, the vision is of 24/7 supply, but there is still a long way to go.

Under the Jal Jeevan Mission, the most important aspect is that no one is left out. Village is the unit and every household in the village has to be provided with tap water connection and assured supply.

In a nutshell, out of 6 lakh villages, the mission has been able to make a modest achievement.

Roughly, 7.5 crore out of 19 crore households or 39% households get tap water supply. When the programme was started 1.5 years back, it was 17%. So, 22% more households have been covered.

As part of the inclusiveness agenda, every household in 90,000 villages have tap water supply. Similarly, 62 districts and 4 states and Union Territories (UTs) have 100% household coverage.

The most important aspect about Jal Jeevan Mission is that gram panchayat is its subcommittee, in the form of Water and Sanitation Committee or known in some parts of the country as Pani Samiti. This village committee, which is under implementation in many parts of the country, is a 12–15-member committee with 50% women members, and suitable representation of weaker sections of society. It has the power to plan, implement, operate, and maintain and manage water supply, system,

sanitation, and hygiene. In fact, the 15 Finance Commission has recommended grants for water and sanitation to these panchayats. Every year, roughly Rs. 30,000 crore will be devolved to panchayats for operation and maintenance of the system.

Five people in the village, preferably women, like ASHA workers, health workers, school teachers and others, can be trained and provided with water quality testing devices, so that they can test the quality of water and develop systems where they can upload the information.

Under this programme, partnership is the mainstage. At the national level, there are sector partners who are basically NGOs, trusts, foundations, and UN agencies. At the state, district and ground levels, NGOs can participate in the programme as implementation support agencies. Hence, this is a very participatory form of a programme, where every partner can contribute in ensuring sustainable water supply and sustainable water resource management.

At the end of the day, in every village, people have to prepare the five-year village action plan which essentially has water resource management component, drinking water supply, and grey water management component, and operation and maintenance. So, what the Jal Jeevan Mission is trying to do is ensure that is a sustainable, long-term solution to all our drinking water problems.

The Mission has also put sensor-based IoT solution. In fact, a pilot study is being carried out where in the first phase, 11 villages have been covered. Now, the second phase is being carried out in 100 villages, and then it will be universalized, where basically for quality, quantity and regularity, data will be picked up using this sensor-based IoT, and then displayed on a dashboard, which will be available on public domains. While closing his remarks, Mr Lal highlighted certain points. He said if we want sustainable water supply and long-term water

security, especially in the backdrop of increasing demand, it means:

- Water storage capacity has to be improved. This water storage capacity can be underground or over the ground, including artificial aquifer recharge or over overground small reservoirs, deepening of ponds, etc.
- The second area that is to be focused on is water-use efficiency. In the agriculture sector, promotion of micro irrigation system can solve this problem. In fact, in Gujarat, 20% irrigation system is based on micro irrigation. So, there is scope for expanding the micro irrigation system.
- The third area that is very important is faecal sludge management, especially in urban areas. In Delhi, faecal matter is transported through water out of the city, then treated, and sometimes not treated during monsoon mix-up, and then releasing into the water. So, in cities, it creates a public health issue and is a major cause of concern. Today's sewage system is 100 years old. No new system has been developed on a mass scale where faecal matter can be collected locally with minimum water. For example, in aircraft or in trains, it is treated and disposed of, so water is not used as a carrier for transporting faecal matter. The time has come where the sewage system has to be changed to accommodate new technology, new area and new ways.
- At the end of the day, it is all about sensitizing local people, especially in rural areas. Today, farmers think that for drinking water, the government is responsible. So, it is necessary that the village community is sensitized and they take responsibility for management of drinking water as well as irrigation. Public money is invested in drinking water, but the same drinking water source is used for irrigation and other purposes. As a result the drinking water supply system becomes defunct and then one is forced to resort to tanker, train or other means.

Panel Discussion	Sustainable, Equitable and Resilient Water Use
Moderator	Vikram Chandra, Journalist and Founder, Editorji
Summary	<p>The main questions asked by the moderator which steered the discussion were:</p> <ul style="list-style-type: none"> • While water conservation is important, how do we effectively manage it? • How do we ensure that the poorest of our poor get pipes into their homes so that they are not spending so much time every day trying to get water from somewhere? • How do we bring more attention to the issue of water management, especially media attention since there are no TRPs in this issue? • While the problems on the ground are often talked about, what do we do about it? What could be the potential solutions to this multitude of problems?



Mr. Chandra began his remarks by highlighting the importance of Jal Jeevan Mission. He said if there is one ministry that is perhaps going to be the most crucial over the next 2-3 years, it is Jal Jeevan Mission, which could transform billions of peoples' lives. Looking at the last five or six years, when the Prime Minister had talked about toilets and Swachh Bharat Abhiyan in August 2014, many people were wondering why so much attention has been given to that. It seemed like an esoteric issue: why toilets, and why should we spend so much time thinking of toilets. Speaking from his experience, Mr Chandra said that when he asked around in rural areas and talked to people there, the way those toilets transformed peoples' lives, especially for women, were massive. The Jal Shakti ministry, and the Jal Jeevan Mission and other such campaigns along with the spread of awareness, can have exactly the same impact on water. We can do without a lot of other things, but how can we manage without water and how do we look at our water?

In discussions about water, it is quite often about conserving water, but managing that water effectively is also a very important thing. How do

we deal with issues like disposal of waste water or rainwater harvesting and how do we use it? How do we ensure that the poorest of our poor get pipes into their homes, into their huts, so that they are not spending so much time every day going out with their matkas and trying to get water from somewhere?

So, this is one of the essential questions before the nation today. Mr Chandra expressed his happiness that the question of water is at the centre of the agenda. It is rare to see too much of this issue in mass media, in the newspaper or television, because unfortunately there are not TRPs in water, faecal sludge management, or water-use efficiency. But that does not mean it is not the single most important issue which is before the humankind right now. He also expressed his pleasure to be working on this issue with TERI, and looked forward to working very closely with the Jal Shakti Ministry, the Environment Ministry and others in trying to bring awareness to people on what is that the government and people can do.

He introduces the panel which included some of the top experts in the field.

Speaker	Yasmin Ali Haque, UN Resident Coordinator and UNICEF Representative, India
Summary	<ul style="list-style-type: none">• Importance of access to clean water became elevated after the pandemic hit: most of the COVID-19-appropriate behavior, including hand-washing and sanitation, involve proper water management.• It is important to consider water management, not as a top-down approach, but with greater engagement with communities especially in areas where local governments need to be geared up to take appropriate measures.• The UN agencies have partnered with the central government on various initiatives involving the communities on the ground, including<ol style="list-style-type: none">a. Design and implementation of Jal Jeevan mission,b. Jal Shakti Abhiyan providing capacity development of about 250,000 gram panchayats, andc. Pani Samitis where women are brought into leadership roles, and not just for collection of water, thereby giving them more agency.• Other areas of collaboration with both the state and central governments can be water quality monitoring and surveillance.



Ms Haque said that when this pandemic first arrived, it exposed the vulnerabilities and gaps in the county's preparedness and really when the agencies started looking at what are the life-saving interventions that need to be put in place and, strongly support the government and front-line workers on it, water came up whether it is for handwashing, for sanitation, for covid-appropriate behaviour, the hygiene element that is required means, people need safe, drinking water.

The water report outlines and UN colleagues have also talked about how the decline is going to be so frightening for our vulnerable populations, which really include children also and some of them who are living in parts of the world, in most water-stressed areas. So, it is really timely for us to be focusing on this issue.

Water quality is important as water-borne diseases can spread. If there are no adequate toilets, especially for girls in schools, their school attendance and education related outcomes will suffer. If there is no water for facilities that help with menstrual hygiene management, then again that adds another layer of barriers to girls getting to school. Who bears the burden of water management in the household? It is the woman and the girls who have to, at times forego many other activities, because they have to go and collect water. For the UN, this partnership with Jal Jeevan Mission is crucial because it definitely addresses the need of the hour and of the future and it is important that everyone concertedly come together. She added that the UN agencies have really continued to be a proud partner of the government in the design and implementation of Jal Jeevan. The UN is focusing a lot on the capacity-building and partnerships of local communities in the management of water supply and water schemes in villages. That is going to be crucial as is the water quality monitoring and surveillance which are important areas of collaboration with both the central government and the state governments.

The UN was very privileged to support the national effort for water conservation with the Jal Shakti Abhiyan which really took this capacity development of about 250,000 gram panchayats, to roll out a campaign in over 250 water-stressed districts. So, clearly the UN's focus is to support the government, get it down to the last mile, especially communities where water management means the local government's process has to be geared up to meet that need.

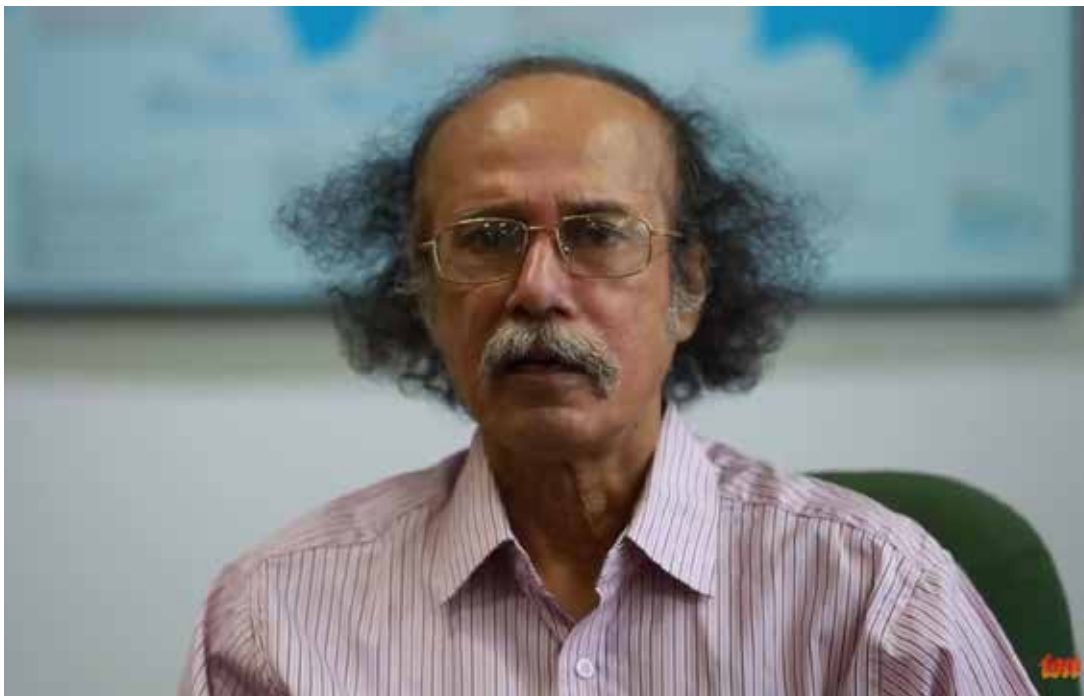
It is particularly interesting that a great model is coming out of India: the Paani Samitis in the village level where half of the members are women and bringing women into this discussion around water management, and for them to play a role in the management, and not just in the water collection. Five women in every village have been, additionally, taking on the role of testing water quality. It is also interesting to see them going into a sphere that is seen to be 'technical', but the village women are really taking it forward.

The role of working with communities and the consumers of water, and how they see water is important. As it was seen during the Swachh Bharat Abhiyan, the construction of toilets was an important part of it, yet along with that there was Jan Andolan which made a significant contribution. How organizations work with the communities to increase their agency, and for them to be able to take on this role, is a very important aspect. So, it is really about looking at water not just as a commodity, but the sociology that goes around it, the environment that goes around it, and the economics that are linked to it. It is really important to see it not from a top-down approach and not just a provision of service, but to be working with the communities and those who consume water for various reasons as part of the solution. This is because they have the solution in hand and they have been doing it. What organizations need to do is learn from them, and take back to scale.

He introduces the panel which included some of the top experts in the field.

Speaker	Syamal Kumar Sarkar, Distinguished Fellow, TERI; Former Secretary, Ministry of Water Resources, Government of India¹
Summary	<ul style="list-style-type: none">• Water-use efficiency in agriculture, industrial, and domestic sectors is low as compared to developed countries' standards. While the National Water Commission mandates increasing efficiency by 20%, this is not currently being implemented.• Due to the impact of global warming and climate change on water, the intensity and availability of rain will get affected, thereby increasing the vulnerabilities of drought-prone areas.• While creating dams can help in storage and reuse of water, restricted land availability, and climate change impacts can limit the construction of dams.• With groundwater as our only option to tackle the impact of climate change on water, there is a need to look at ways to recharge good quality groundwater through various governmental programmes.

¹ These inputs were provided through a recorded video.



Mr Sarkar said that water security is a challenge in the 21st century in India. Estimates say that by 2050, the water demand will be much more than the limited water supply in India. The sector which consumes water most is the agricultural sector, followed by industrial sector and domestic sector.

In the agricultural sector, he added, the water-use efficiency is low compared to the developed countries' standard. Same is the case with the industrial sector and also the domestic sector. So, there is a need to improve the water use efficiency in all these sectors. Mr Sarkar elaborated that the National Water Commission in India mandates that all the sectors should achieve 20% water-use efficiency in India. However, this is not being seen to be implemented in Indian context. So, there is an urgent need for improving the water use efficiency in all these hub sectors. Secondly, the human-induced climate change is now a reality. The IPCC report talks about this aspect and the Paris agreement talks about global warming, to the extent of 1.5°C–2°C depending on the measures being taken by the member states.

The impact of the global warming is adverse in the hydrological cycle in the water sector. As a result of the global warming, the frequency or the intensity of rain will be very high, and the exposure of the drought areas in India will be more imminent.

Mr Sarkar said as we know 68% of the area in India is exposed to drought-prone activities. Therefore, the climate change impact on the water variability is a cause of concern.

Now how to improve the water variability or water availability? He emphasised that one way could be that we create more storage through construction of dams. But because of land restrictions and other problems the quantum of storage in India is limited.

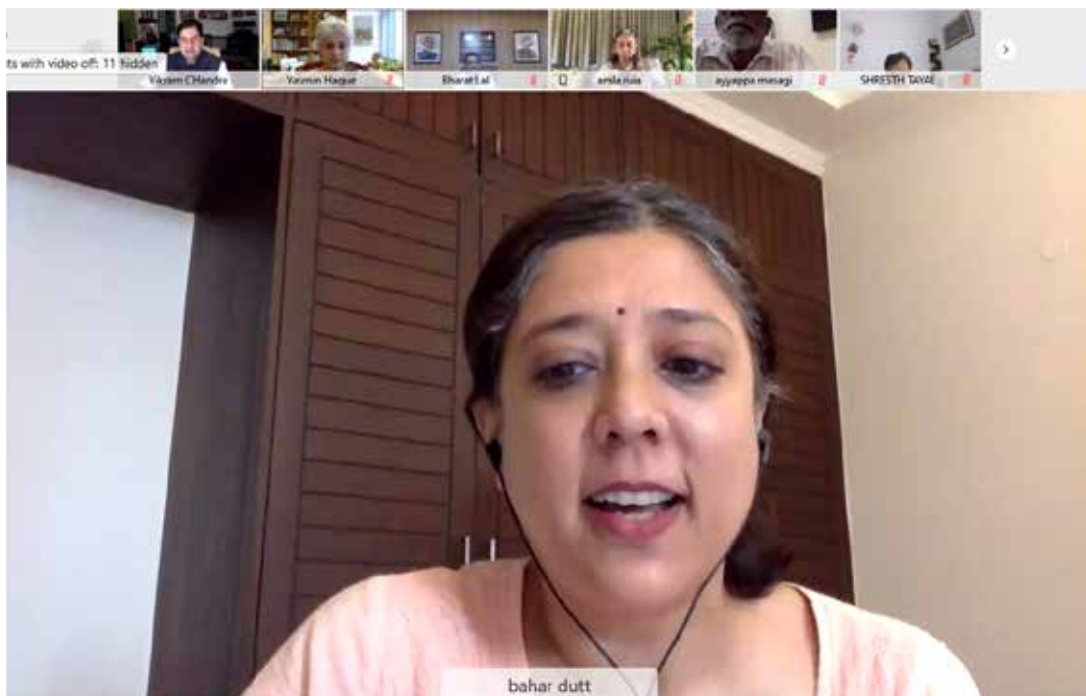
As a result, pressure should be given to the groundwater. It will be the best option to meet the adverse impact of climate change.

In groundwater, the main issue is how to recharge the water, and how to ensure that the water is of good quality which is going to be the groundwater.

The governmental programme on groundwater management is praiseworthy. The auto-visual programme in groundwater is in the right direction. Dr Sarkar ended his remarks with the hope that groundwater management is carried out by mapping through various government programmes, and it sees participation from all stakeholders in the states as well as local bodies.

He introduces the panel which included some of the top experts in the field.

Speaker	Bahar Dutt, Environmental Journalist; Associate Professor, Shiv Nadar University
Summary	<ul style="list-style-type: none">• Water should not be looked from anthropocentric/ human-centric approach which is heavily focused on aspects like supply–demand. Water bodies have a right to exist as much as humans do.• Steps needs to be undertaken to maintain a minimal flow, or the concept of ‘aviral dhara’.• Water is an essential component for ecosystem health and biodiversity and freshwater is needed not only for human survival but also for the survival of various creatures that play a role in the ecosystem.• In terms of equity, both water-dependent creatures and human beings need to be the focus. Industries using and polluting water resources need to be regulated more strictly.



It is a struggle in the middle of a pandemic to be talking about issues like water and the environment, but they are as important, and as everybody has highlighted, including the minister, how it is a circular issue, right from oxygen to water. And yes, we cannot survive without it. In addressing the moderator's question, Ms Dutt took a non-anthropocentric view of water today. Any discussion on water usually takes place from the point of view of human use, from the point of view of industrial use. But what about water being qua being? That is water for the sake of water. Water as a river that has the right to exist as much as humans do.

Ms Dutt's engagement with water started from following the river Ganga for almost 6 months, following it from source to sea. She has had close encounters with the river in all its forms— from the time you see it at the Gangotri glacier to the point it empties into the sea. As a result, she has seen all kinds of issues along the way, whether its climate change, or hydropower dams, or pollution.

One aspect that human beings tend to forget of water is the dependency of non-humans on it. There are also different types of biodiversities that rely on water, and humans tend to forget this. Yes, human beings need freshwater system for their own survival, but they also need it for all these creatures to survive. Whether it is World Water Day, or World Environment Day, human beings need to

remind themselves, that there is need to move away from this anthropocentric view of water, and also remember that there are other creatures whose survival is ensured by water.

It is important to consider the issue of equity, because it is as central to the use of water. Equity is essential not just to biodiversity but human beings as well. People who live along the river, do they have access to water? Ms Dutt shared a very touching story wherein while trekking through the mountains of Uttarakhand, looking at all the hydropower dams, she met a lady who lives on top of the mountains and recently had lost her uncle and wanted to immerse the ashes in the river. In areas where the hydropower companies decide when and where the river is to flow, this lady actually had to request the hydropower company to release the water, so she could immerse the ashes because the Ganga at that stretch was just a dry riverbed. When the discussion is about equity, it is not just in urban areas, but equity where the rivers are and where people live next to the rivers.

In terms of solutions, she highlighted the need for greater enforcement for the industries that are polluting, as that enforcement is not happening.

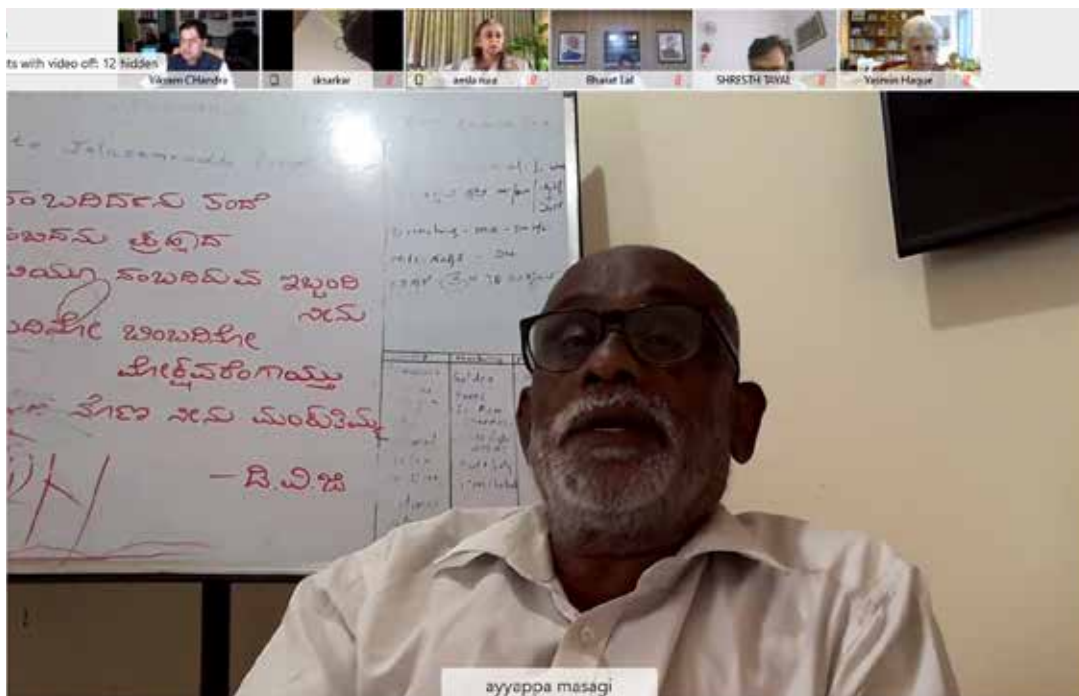
Aviral Dhara is a concept which says that the river must have a minimum flow. Let us give the river at least a minimal flow.

Thirdly, a callout for the creatures who are also dependent on this river.

Speaker	Ayyappa Masagi, Founder and Director, Water Literacy Foundation (popularly known as 'Water Warrior')
Summary	<ul style="list-style-type: none">• While rooftop water harvesting is important, it is not enough and should be combined with grey water harvesting where possible and considering safety aspects.• Of the total water used in our houses, 90% is thrown out. This water can be effectively used for not just daily use but also for subsoil charging, which in turn, can be used in agriculture. The soap in the bath water can be used as manure by trees, and need not be wasted as such.• Through Jal Samridhi Centres, his organization promotes training and capacity building of other farmers and to spread awareness about grey water harvesting.

Mr. Masagi represented Water Literacy Foundation (WLF) and Rain Water Concepts. The organization's message is: 'rain or water is not a problem, the only problem is attitude'. Based on his 30-40 years of journey, he has found that attitude is the main constraint in solving a lot of water problems, whether it is community attitude, political attitude, the government's attitude.

WLF is working towards the restoration of natural, hydrological balance while working on all four sectors: urban, industry, rural, and agriculture. Actually, WLF is a service provider, and deal with four kinds of water: surface water, sub-soil water, deep-soil water, and groundwater, and through his research he found that we have to charge all four kinds of



water, only then can we become self-sufficient. Today, people do come forward to lend their hand in water conservation. However, in the name of water conservation, they will only do rooftop water harvesting, this is not enough. During our forefathers' time, they adapted the concepts of rainwater conservation in their day-to-day life. For example, they did not throw away the grey water or the water from bathrooms, and instead used it to recharge the sub-soil water. Suppose there is a village with 100 houses, all of these houses will be equipped with grey water pits which are used to charge the sub-soil. This is called sub-soil charging.

What happens today, in the name of development, all grey water pits have been encroached. Suppose you are taking 100 litres from tap, out of which you will only use 10% for cooking, rest 90% is thrown out. Of the latter, 50% comes from bath water. There is a misconception that bath water is usually bad, but it is not true. It is as good as any other. There is only one constraint is how much soap is used. An average person uses 25 litres for one bath, and compared to that, soap is used in milligrams, which is a negligible amount. Secondly, soap is nothing but phosphate, which is absorbed by the nearby trees such as tamarind trees, or banana plantations. The trees absorb and use it as manure. The soil is the greatest filter, which filters and sends it to the nearby wells. This is the concept of sub-soil charging. That is why earlier, all the village wells were full of water. Mr Masagi adapted this concept to thousands and thousands of houses—each house had one grey water pit. In all his four houses, he constructed grey water pits in 1986 and since

then has been optimally utilizing water. In his words, “I am surviving only through grey water in all my four houses and rainwater harvesting.”

To spread this message, in 22 acres, he started ‘Jal Samridhhi Centre’. His aim is to train more and more water warriors and educate farmers. This is because a single man or a single foundation cannot help the whole country. So monthly, the Foundation conducts two programmes of ‘four hours of in-house training’. In these 22 acres, he put up a live demonstration model. In his own borewell, it is possible to water manually during rainy season. He has also up a system of tree-focused agriculture where about 40% of the plants do not require any water. Last year, Mr Masagi harvested 6 crore litres of rainwater. More than drip or sprinkler irrigation system, farmers should go and harvest water, and ‘store it in the stomach of Mother Earth’. According to him, soil is the greatest reservoir.

In his own borewell, four years have passed and not even one inch has risen, which means Mother Earth is storing any excess water coming from rainwater or grey water. In 3.5 acres, he constructed 189 pits, 3 compartments, 27 infiltration wells, 3 borewell recharge, and on a 300-acre neighboring land, he has done rainwater harvesting. His concept was, “If I want to be happy, my neighboring trees must be happy.” In addition, he also constructed level lakes in 22 acres. He stated, “Lakes are just like our hearts: they collect it, filter it and send it to nearby wells or borewells. Today, because of deforestation, there are more water uncertainties than certainties. But in my farm and neighboring land, I have proved that you can survive with rain water, and you can get certain rain.”

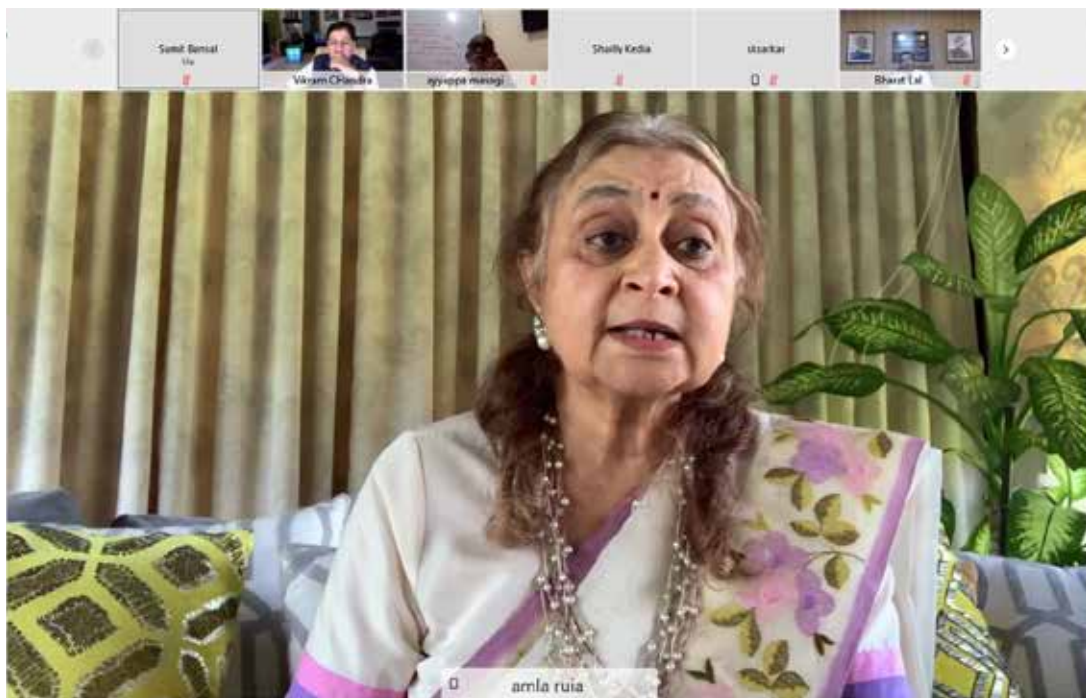
So while concluding, he reiterated that rain is not a problem, water is not a problem. The only problem is the attitude.

Speaker	Amla Ruia, Water Activist, Aakar Charitable Trust (popularly known as ‘Water Mother’)
Summary	<ul style="list-style-type: none">• Ms Ruia emphasized on the role of check dams or khadeen structures in harvesting rainwater, storing it, and then allowing it to seep into the soil. It also prevents flooding, thereby cutting down farmers’ losses in agriculture.• Proper rainwater harvesting mechanisms have helped villages in bringing about a rise in income. So, government policies should be in place to incentivize and train farmers and communities in using water harvesting systems.• Policies should also seek to promote planting long-standing trees which remain for decades, and play an important role in ecosystem services.

Ms Ruia began by highlighting the role of check dams and how our ancestors had used these structures to deal with these calamities. A series of check dams, or more correctly, khadeen structures, can harvest rainwater all through the monsoon, hold it in pockets, allow it to seep into the Earth, alleviate the thirst of Mother

Earth, recharge the borewells, recharge the underground rivers and their own wells.

This is the role a check dam plays. It prevents the flooding of low-lying areas, and it also brings about tremendous bounty upon the land and its people. In her work, she has seen the worst



economic sections of the society who are in abject poverty, come out of it. They are well developed and they have all that is required to lead a prosperous life in villages.

Aakar Charitable Trust has built 451 check dams, and transformed the lives of 7.5 lakh people. Aakar has also created 451 lakes and given rise to 451 streamlets during the monsoon which carry the water a long distance: after the village requirement has been fulfilled, the water keeps on going downwards. In a very small, meagre amount of Rs 30 crore, this organization in the last 16 years has managed to improve the lives of 7.5 lakh people.

Ms Ruia appealed to the corporates in the country to include rainwater harvesting in their corporate social responsibility (CSR) initiatives, and bring the dream of the Prime Minister a little closer to making the nation water sufficient instead of water deficient. She has witnessed the transformation: after the very

first year, from zero income, the villagers are able to bring about a total net income of Rs 2 crore. Thus, each village has become a crorepati village. This is the transformation that happens with judicious water harvesting in each and every village.

She brings this hope to the event, and hoping to make a difference in the mindset of people to hear these words.

She urged everyone to put their best foot forward to do the maximum for rainwater harvesting. She also emphasized that government policies have to be in place. When there is water which seeps down through the channels of the root system into their wells, they can plant lots and lots of trees. One-third of their land can be converted into horticulture with a little support from the government. The government should have a policy for timber forests also, which will remain standing for decades, and also provide the farmer the necessary income when he needs it for specific purposes.

Speaker	Nafisa Barot, Founder Member, Utthan
Summary	<ul style="list-style-type: none"> • Ms Barot’s work with Utthan considers water as a value which brings dignity, equity and justice, especially in the lives of women, whose depend on it. They want transfer of power and more agency in making important decisions in water use. • Through her work, she has talked to communities who reiterate their willingness to learn new technology, new innovations and adapt themselves to the changing environment, but what they want is water security closer to home. Women and the communities also appeal for greater protection of water resources through investment and policies. • What the civil society or organizations do is important, but not enough. Government needs to invest more and create an enabling environment which will help women to take up more leadership roles.

Utthan, which started in 1981, works across four– five districts in Gujarat on gender and justice, and livelihood security and water, sanitation and hygiene (WASH). In the parched saline lands in Gujarat, Ms Barot was really shocked to see the injuries caused to women and girls who were trying to collect water. This is what

shook her and her colleagues at Utthan and motivated them to work on water. Not just water as a commodity, but as a value to bring dignity, equity, and justice. The team talked to women and communities to find out why are they so dependent on water. This was the situation 40 years back, and unfortunately, some of these



things are still in the tail-end villages and remote villages in Gujarat.

Everyone on the panel talked about the need for rainwater harvesting and water conservation. But the communities have been saying decades after decades that there are solutions. What these women and the communities want is to restore and conserve water closer to their huts in their villages which gives them greater security. Ms Barot rightly pointed out this is what is needed to be done: listen to them. Ms Barot, through her presence in the panel, is trying to bring these voices from the ground. People are aware of these new technologies, especially women, they are open and can also take lead in innovation in terms of technologies. In terms of rainwater harvesting, and learning new things like climate change, behavioural sanitation, hygiene, and behavioural change, these communities are willing to learn. The only request they are making is to transfer power to hands of communities whose lives heavily rely on water.

Ms Barot highlights that it is not important what Utthan does, or any organization or the civil society, but it is what the government does in terms of listening to these women, and investing in this rainwater harvesting system. Women need water security closer to their homes. There are pipelines in so many houses, but there is no water, and even if water is available, it is of inferior quality. As an instance, she pointed how in one single village in Gujarat, she saw four-coloured waters.

These women are also appealing to the government to protect their water resources and invest in it. Only if they are given power to spend this money, these women can take up leadership roles. For women to come up, they need enabling environment to take up leadership. This is a fight against patriarchy, this is a fight against policies to say that there needs to be an alternative to just bulk water supply from outside. There has to be investments. Intentions can be good, but what about the money?

Speaker	Shresth Tayal, Senior Fellow, The Energy and Resources Institute
Summary	<ul style="list-style-type: none"> • While the country receives plenty of rainfall and snowfall, continued population growth and migration is creating huge demand for water, especially in the cities, which has become hotspots for acute shortages in water. • As municipal bodies and government authorities fail to tackle supply constraints, they continue to extract groundwater, putting tremendous pressure on aquifers and disrupting water tables. • The ultimate solution is groundwater recharging, and harvesting other sources of freshwater through rainwater. In urban areas, unlike rural, there is a space constraint to have massive rainwater and greywater harvesting techniques. New technologies and tools need to be put in place to address this issue. • The study, released during the event, looked at various sources of inflows of water into aquifer, sources of outflow from aquifer using technologies such as geographical information systems, groundwater models and surface water models, and remote sensing.



Groundwater is at the heart of many government programmes like Jal Jeevan Mission and Har Ghar Jal. Groundwater aquifers are the natural reservoirs available to us. If steps are taken to look after the natural reservoirs, water problems can be reduced significantly. As the panellists and activists have talked about construction of lakes, rainwater harvesting or groundwater recharge – all these contribute to groundwater recharging and availability, as well as increasing the storage of water. With reference to the study, it is often a repeated fact that India receives almost 4000 billion cubic metres of water from the sky every year, in terms of rainfall and snowfall. India has been receiving this amount of rain for the past 100 years, and will continue to receive similar amount in the future also. But water scarcity in the country is increasing, and often there is acute shortage of water during the peak demand season in the summer.

So, while the water received is the same, and it is of sufficient amount, and still is not sufficient enough to meet the demands throughout the year. In such a case, groundwater becomes a natural choice, as it is available in our aquifers throughout the year. Without realizing how much water is available, humans keep exploiting this invisible resource.

In the light of these facts, it can be established that the groundwater has become the main source of water in cities, making India the largest consumer of groundwater in the world. The cities will be in the future, just as they are currently, the hotspots of water scarcity, where there is acute shortage of water, especially during the peak summer season. The municipal bodies and government authorities are not able to maintain a continuous supply of clean water to the households. So, all this continued extraction of water is putting tremendous pressure on our aquifers and resultantly declining water table has become a significant cause of concern.

The ultimate solution is recharging our groundwater resources, to harvesting our other important

resources, mainly through rainwater. However, it is extremely important to bring some remarkable changes in our approach towards rainwater harvesting and groundwater recharge, particularly, urban areas, where the demand is extremely high.

While that kind of space maybe available for groundwater recharge in rural areas, in urban areas space is not available because of the continuous sprawl, continuous growth, and the increase in urban population density. As a result, there is a need to adopt a more scientific approach which involves the use of latest tools and techniques.

The study, as a test case, looked at the groundwater resources of Lucknow, the capital city of Uttar Pradesh, with the support of Uttar Pradesh groundwater department, and the World Bank. The team conducted the auditing of groundwater resources at the level of a metropolitan city. Water auditing is very common for closed systems such as water flow in a factory or thermal power plants. So, a lot of water auditing is done by companies at their own level. But the team attempted auditing for open system, i.e., at the city level in an urban area. Just like the financial auditing which looks at the balance of inflow and outflow of financial reserves, the study considered the groundwater aquifers for the city of Lucknow as the water deposit. The team conducted the study by carefully considering each stream of income of water to the city's reserves, each stream of expenditure of reserves, and the total reserves already available within the city.

Simultaneously, alternate sources of water, for instance, surface water were also considered to meet the growing outflow of water. Then the team used various tools like groundwater models and surface water models, water demand models, geological information system (GIS), which helped in understanding the changes in the land use and land cover in the city, and remote-sensing imagery. All these tools were to develop the strategies for sustainable management of groundwater for the city.

MODERATOR: HOW ARE YOU SPENDING THE WATER, AND HOW WE ARE UTILIZING THE WATER IS REALLY A QUESTION FOR ALL OF US: WHETHER IT IS AN INDIVIDUAL, THE GOVERNMENT – STATE OR CENTRAL, FARMERS. THAT IS ONE QUESTION THAT NEEDS TO BE ADDRESSED ON THE EXPENDITURE SIDE.

The approach was not to take the city as a single unit. The study divided the city into micro zones, because within a city, there is a high variability in terms of water scarcity. There are some areas with high-population density and hence high demand for water. There are other areas which are suitable for recharge and augmenting groundwater aquifers. There are some areas which are closer to the waterbodies, where demand can be met by using surface water. So, strategies were developed which are specific to each micro zone of the city.

On the demand side, India receives water, but how are we utilizing it and how are we able to harness it, and how are we able to store it correctly are to be answered correctly.

In finding the correct answer to it, the country can hopefully move away from a water scarce or deficit situation. That is what governments are trying to do, and the organizations on the ground are try to do, and what collective efforts will be also in try and spread awareness, and find solutions so that we can move from a deficit to a situation of abundance.

Closing Remarks	Manjeev Singh Puri, Honorary Distinguished Fellow, The Energy and Resources Institute; Former Diplomat
Summary	<ul style="list-style-type: none"> • From a foreign policy perspective, there is a need to look at partnerships since most rivers originate from other countries. • As countries try to bring down carbon emissions, hydrogen, which is a component in water, can be an important source of energy.

Ambassador Puri began his remarks by thanking all the panellists for the wonderful discussion. From the perspective of foreign policy and the world, this is SDG 6, one of the very important goals that the world has set for itself to achieve for the coming decade, which is clean water. While it is known that water is life-giving, a discussion on access is imperative and timely.

In terms of water use and conservation, he said from a foreign policy perspective, there is a need

to look at collaboration between countries. In Northern India, most of the rivers receive water from the Himalayan range in Nepal. This brings the two countries together.

On climate change, he said it is quite possible that in the future, water may also par our growth and development. Let us remember water is hydrogen plus oxygen. Hydrogen might just be the fuel for the future without carbon.



He again thanked everyone on the behalf of TERI and Director-General Dr Vibha Dhawan. Starting with the honourable minister, who has always been there, in his own manner, to be actively involved in the events that are undertaken at TERI. The Minister's influential presence is expected at TERI's flagship event, WSDS 2022, which will focus on the resilient planet, and also on equity, climate justice and issues of that kind, particularly relevant for the current times.

Next, he thanked Mr Lal for coming as he brought a huge, substantive element to this entire discussion. He thanked United Nations, United Nations Children's Fund representatives in India, for bringing a global perspective. What they do in India, adds to the local perspective.

He remarked on the fortuitous collaboration with Mr Chandra and Editorji. Mr Puri hoped to take some of the things discussed forward in a speedy

manner. He looks forward to cooperating with Mr Chandra, not only in terms of moderating any such discussions in the future, but in terms of the water campaign, because getting the message on water and sustainability to the people is what is particularly important.

He expressed his gratitude to Bahar Dutt, Amla Ruia, Nafisa Barot, and Ayyappa Masagi, as they are the people who really build consciousness, build ideas, and bridge them from grassroot levels to all of the think tanks, and then to the government. It is them and their presence in the discussion that are particularly important. They reached out on in the discussion on all of these important elements.

He ended his remarks by urging everyone to remember that water is life-giving and we have only one planet. Its resilience is particularly important to us as water is a critical element of all processes on our planet.

AGENDA

Virtual Curtain Raiser to WSDS 2022 and Discussion on Sustainable, Equitable and Resilient Water Use

Date	4 June 2021 (Friday)
Time	11 AM to 12:30 PM (IST)
11.00–11.05 a.m.	Welcome remarks and WSDS 2022 Curtain Raiser Vibha Dhawan , Director General, The Energy and Resources Institute
11.05–11.15 a.m.	Keynote Address by Chief Guest <ul style="list-style-type: none"> • Prakash Javadekar, Hon’ble Minister for Environment, Forest, and Climate Change, Government of India
11.15–11.17 a.m.	Announcements <ul style="list-style-type: none"> • Soft Launch of Editorji-TERI Campaign on Water • Release of TERI Study & Factsheet on Water
11.17–11.22 a.m.	Policy Perspective on Jal Jeevan Mission <ul style="list-style-type: none"> • Bharat Lal, Additional Secretary and Mission Director, Jal Jeevan Mission, Department of Drinking Water and Sanitation, Ministry of Jal Shakti, Government of India
11.22 a.m. – 12.25 p.m.	Panel Discussion: Sustainable, Equitable and Resilient Water Use Moderator: Vikram Chandra , Journalist and Founder, Editorji Panelists* <ul style="list-style-type: none"> • Yasmin Ali Haque, UN Resident Coordinator a.i. and UNICEF Representative, India • Syamal Kumar Sarkar, Distinguished Fellow, The Energy and Resources Institute; Former Secretary, Ministry of Water Resources, Government of India • Bahar Dutt, Environmental Journalist; Associate Professor, Shiv Nadar University • Ayyappa Masagi, Founder and Director, Water Literacy Foundation (popularly known as ‘Water Warrior’) • Amla Ruia, Water Activist, Aakar Charitable Trust (popularly known as ‘Water Mother’) • Nafisa Barot, Founder Member, Utthan • Shresth Tayal, Senior Fellow, The Energy and Resources Institute
12.25–12.30 p.m.	Closing Remarks Manjeev Singh Puri , Honorary Distinguished Fellow, The Energy and Resources Institute
Facilitator	<ul style="list-style-type: none"> • Shailly Kedia, Fellow and Lead, World Sustainable Development Summit, The Energy and Resources Institute

Rapporteur: Nivedita Cholayil, Researcher, The Energy and Resources Institute

MEDIA COVERAGE OF THE EVENT

#	Date	Publication	Global/National	Language	Headline
1.	4 June 21	Editorji	National	English	WSDS 2022 Prakash Javadekar: Saving water must be a basic priority for all
2.	4 June 21	Editorji	National	English	WSDS 2022 TERI and editorji announce joint campaign on water
3.	4 June 21	Editorji	National	Hindi	पानी की बचत हर शरूख की बुनियादी प्राथमिकता हो: प्रकाश जावडेकर
4.	4 June 21	Editorji	National	Hindi	WSDS 2022: TERI और editorji ने पानी पर संयुक्त अभियान का किया ऐलान
5.	4 June 21	ANI	National	English	Javadekar urges agriculture sector to save water amid declining availability
6.	4 June 21	ZEE 5 News	National	English	Javadekar urges agriculture sector to save water amid declining availability
7.	4 June 21	LatestLY	National	English	Javadekar urges agriculture sector to save water amid declining availability
8.	4 June 21	Madhyamam	National	English	Javadekar urges agriculture sector to save water resources
9.	4 June 21	Delhi News	National	English	Javadekar urges agriculture sector to save water
10.	4 Jun 21	Big News Network	National	English	Javadekar urges agriculture sector to save water
11.	4 June 21	Cambodian Times	Global	English	Javadekar urges agriculture sector to save water
12.	4 June 21	Lokmat English	National	English	Javadekar urges agriculture sector to save water amid declining availability
13.	4 June 21	ETV Bharat	National	English	Javadekar urges agriculture sector to save water amid declining availability
14.	4 June 21	Since Independence	National	English	Javadekar urges agriculture sector to save water amid declining availability
15.	4 June 21	Sify	National	English	Javadekar urges agriculture sector to save water amid declining availability
16.	4 June 21	Web India 123	National	English	Javadekar urges agriculture sector to save water amid declining availability
17.	4 June 21	Yahoo India	National	English	Javadekar urges agriculture sector to save water amid declining availability
18.	4 June 21	New Kerala	National	English	Javadekar urges agriculture sector to save water amid declining availability

#	Date	Publication	Global/National	Language	Headline
19.	4 June 21	Malaysia Sun	Global	English	Javadekar urges agriculture sector to save water
20.	4 June 21	The Print (Hindi)	National	Hindi	‘शहरीकरण, जलवायु परिवर्तन, जनसंख्या वृद्धि’- क्यों 2031 तक लखनऊ में गहरा सकता है पानी का संकट
21.	4 June 21	DD News	National	English	Agriculture, forest and river conservation, domestic water use efficiency key to India's water security: Prakash Javadekar
22.	4 June 21	The Hindu Business Line	National	English	Centre to mandate double piping in housing societies for use of recycled water
23.	4 June 21	Business journal	National	English	Centre to mandate double piping in housing societies for use of recycled water
24.	4 June 21	DD News	National	English	Union Environment Min Prakash Javadekar addresses World Sustainable Development Summit 2022
25.	4 June 21	All India Radio News (News ON AIR)	National	English	Prakash Javadekar addresses TERI's World Sustainable Development Summit; stresses on water conservation
26.	4 June 21	All India Radio News (News ON AIR)	National	Hindi	पर्यावरण मंत्री ने जल संरक्षण प्रौद्योगिकी को आवश्यकता के अनुकूल बनाने और पानी का दुरुपयोग रोकने का आह्वान किया
27.	4 June 21	IND Forums	National	English	Prakash Javadekar addresses TERI's World Sustainable Development Summit; stresses on water conservation
28.	4 June 21	Top Ten News	National	English	Prakash Javadekar addresses TERI's World Sustainable Development Summit; stresses on water conservation
29.	4 June 21	Mint	National	English	Decline in water availability due to rise in human, cattle population: Javadekar
30.	4 June 21	The Economic Times	National	English	Decline in water availability due to rise in human, cattle population: Javadekar
31.	4 June 21	Deccan Herald	National	English	Decline in water availability due to rise in human, cattle population: Javadekar
32.	4 June 21	Newsdig	National	English	Water availability decline due to increase in human, cattle population: Javadekar
33.	4 June 21	The Times of India	National	English	Decline in water availability due to rise in human, cattle population: Javadekar

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34.	4 June 21	The Meabni	National	English	Decline in water availability due to rise in human, cattle population: Javadekar
35.	4 June 21	While News	National	English	Decline in water availability due to rise in human, cattle population: Javadekar
36.	4 June 21	Live News india	National	English	Decline in water availability due to rise in human, cattle population: Javadekar
37.	4 June 21	Newsking24	National	English	Decline in water availability due to rise in human, cattle population: Javadekar
38.	4 June 21	News Ne india	National	English	Decline in water availability due to rise in human, cattle population: Javadekar
39.	4 June 21	Big Newz	National	English	Decline in water availability due to rise in human, cattle population: Javadekar
40.	4 June 21	Ub 24 News	National	English	Decline in water availability due to rise in human, cattle population: Javadekar
41.	4 June 21	Knowledia	National	English	Decline in water availability due to rise in human, cattle population: Javadekar
42.	4 June 21	Hindustan Times	National	English	Decline in water availability due to rise in human, cattle population: Javadekar
43.	4 June 21	World Newz Info	Global	English	Decline In Water Availability Because Of Improve In Human, Cattle Inhabitants: Prakash Javadekar
44.	4 June 21	India Live News	Global	English	Decline in water availability because of improve in human, cattle inhabitants: Prakash Javadekar
45.	4 June 21	TV 9 Kannada	National	Kannada	Prakash Javadekar talks at World Sustainable Development Summit organized by TERI
46.	4 June 21	The Hindu	National	English	Decline in water availability due to increase in human, cattle population: Prakash Javadekar
47.	4 June 21	Your Story	National	English	Decline in water availability due to increase in human, cattle population: Prakash Javadekar
48.	4 June 21	NDTV	National	English	Increase In Human, Cattle Population Causing Water Decline: Minister
49.	4 June 21	Halcom News	National	English	Increase In Human, Cattle Population Causing Water Decline: Minister
50.	4 June 21	Indian Lekhak	National	English	Increase In Human, Cattle Population Causing Water Scarcity: Minister

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51.	4 June 21	IGN 24	National	English	Increase In Human, Cattle Population Causing Water Scarcity: Minister
52.	4 June 21	The US Express News	National	English	Increase In Human, Cattle Population Causing Water Scarcity: Minister
53.	4 June 21	The Indian Awaaz	National	English	Javadekar calls for adopting water conservation technologies
54.	4 June 21	Make Digitally	National	English	Prakash Javadekar addresses TERI's Earth Sustainable Enhancement Summit stresses on h2o conservation
55.	4 June 21	Inext Live	National	Hindi	कृषि क्षेत्र में पानी को बचाना जरूरी, केंद्रीय मंत्री प्रकाश जावड़ेकर ने की अपील
56.	4 June 21	Bizntec	National	English	Agriculture, forest and river conservation, domestic water use efficiency key to India's water security: Prakash Javadekar
57.	4 June 21	Gaan Connection	National	English	Lucknow's groundwater exploitation is 17 times more than the rate of recharge: TERI
58.	4 June 21	EHEMAAD	National	English	Environment minister Prakash Javadekar calls for adopting water conservation technologies and changing water use habits
59.	4 June 21	In Samachar	National	Hindi	केंद्रीय मंत्री प्रकाश जावड़ेकर ने पानी के समुचित उपयोग और संरक्षण पर बल दिया
60.	4 June 21	Doon Horizon	National	Hindi	पानी को बचाना हमारी प्राथमिकता है: प्रकाश जावड़ेकर
61.	4 June 21	Navbharat Times	National	Hindi	मानव और पशु आबादी बढ़ने से पानी की उपलब्धता कम हुई: जावड़ेकर
62.	4 June 21	Lokmat Hindi	National	Hindi	मानव और पशु आबादी बढ़ने से पानी की उपलब्धता कम हुई: जावड़ेकर
63.	4 June 21	LatestLY Hindi	National	Hindi	मानव और पशु आबादी बढ़ने से पानी की उपलब्धता कम हुई: जावड़ेकर
64.	4 June 21	Bharat Times	National	Hindi	मानव, पशु आबादी में वृद्धि के कारण पानी की उपलब्धता में गिरावट: प्रकाश जावड़ेकर
65.	4 June 21	Newsing	National	Hindi	मानव, पशु आबादी में वृद्धि के कारण पानी की उपलब्धता में गिरावट: प्रकाश जावड़ेकर
66.	4 June 21	Sari Khabare	National	Hindi	मानव, पशु आबादी में वृद्धि के कारण पानी की उपलब्धता में गिरावट: प्रकाश जावड़ेकर

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67.	4 June 21	Raftaar News	National	Hindi	पानी को बचाना हमारी प्राथमिकता है: प्रकाश जावड़ेकर
68.	4 June 21	UP Kiran	National	Hindi	पानी को बचाना हमारी प्राथमिकता है: प्रकाश जावड़ेकर
69.	4 June 21	NCR Media	National	Hindi	पानी को बचाना हमारी प्राथमिकता है: प्रकाश जावड़ेकर
70.	4 June 21	Hindusthan Samachar	National	Hindi	पानी को बचाना हमारी प्राथमिकता है: प्रकाश जावड़ेकर
71.	5 June 21	Dainik Jagran	National	Hindi	World Environment Day 2021: अगर अभी नहीं चेते तो आने वाली पीढ़ी बूंद-बूंद के लि, होगी परेशान
72.	5 June 21	Mid-Day	National	English	Water depleting due to rising population of humans, cattle: Prakash Javadekar
73.	5 June 21	Daily Excelsior	National	English	Decline in water availability due to increase in population: Javadekar
74.	5 June 21	The Pioneer	National	English	Decline in water sources due to rise in human, cattle population
75.	5 June 21	AB Star News	National	Hindi	World Environment Day 2021: Corona Is ज्यादा खतरनाक होगी पानी की किल्लत
76.	5 June 21	Amar Ujala	National	Hindi	जल संरक्षण: पानी के लिए तरस जाएगी नवार्बों की नगरी लखनऊ, 25 मीटर तक गिर सकता है जलस्तर

ABOUT

World Sustainable Development Summit (WSDS) over the past 20 years has become a flagship Track II event to connect policy makers, corporates, civil society, and citizens to bridge the gap between ambition and action on sustainable development and climate change. The next edition of WSDS will focus on meeting the needs of planetary health in an equitable and a sustainable manner. Safeguarding planetary health in the Anthropocene epoch needs better mainstreaming of environment into political and economic frameworks to improve planetary boundary markers related to climate change, biodiversity, atmosphere, ocean acidification, biogeochemical flows, freshwater use, and land-use.

The 21st edition of WSDS will be held between 16-18 February 2022, under the theme: Towards a Resilient Planet: Ensuring a Sustainable and Equitable Future. The curtain raiser event for the 21st edition of the World Sustainable Development Summit (WSDS) was held virtually on the eve of World Environment Day on June 4, 2021, which focused on 'Sustainable, Equitable and Resilient Water Use'. The event was addressed by the Hon'ble Minister for Environment, Forest, and Climate Change, Government of India, Shri Prakash Javadekar—who was the Chief Guest for the event. The event was hosted on WebEx and streamed live on YouTube, and saw the participation of over 2000 attendees. The present document highlights the discussions at the curtain raiser event.

CONTACT

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