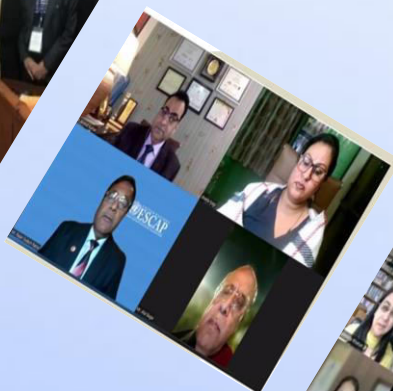




# INDIA WATER FOUNDATION

## ANNUAL REPORT

2022-2023





INDIA  
**Water**  
FOUNDATION

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# Foreword

The world is by and by wrestling with a huge number of interconnected and complex issues that present serious dangers to human prosperity, harmony and security, and natural manageability. Issues relating to water and environmental change are lasting with us for a long time, the mushroom development of a large group of different issues owing to human activities disguising under key, political, and financial pretenses have been instrumental in unleashing devastation against mankind related to the destruction previously being unleashed by water-related and ecological related fancies.



The world was all the while endeavoring hard to recuperate from the assaults of the Coronavirus pandemic when the trading of furnished threats broke out among Russia and Ukraine which is as yet continuing and has supposedly caused a large number of passings, a great many relocations, far-reaching common freedoms infringement, and extremely helpful and financial emergencies. The conflict likewise represents a gamble of an atomic showdown, as the two sides have atomic weapons and have taken steps to utilize them. The conflict has likewise expanded international pressures and flimsiness in Europe and then some.

Simultaneously, the world is encountering a flood in expansion and a typical cost for many everyday items' emergency, driven by different factors, for example, production network disturbances, work deficiencies, rising energy and food costs, financial boosts, money-related extension, and repressed request after the Coronavirus pandemic. The expansion has dissolved the buying force of customers, particularly poor people and defenseless, and has expanded social discontent and political distress.

Environmental change is influencing the world's water assets, biological systems, biodiversity, food security, well-being, and human improvement in perplexing and eccentric ways. Environmental change is causing more incessant and serious outrageous climate occasions, for example, floods, dry spells, heat waves, tempests, fierce blazes, and ocean-level ascent. Environmental change is likewise intensifying water shortage, water contamination, land corruption, desertification, deforestation, biodiversity misfortune, biological system breakdown, sea fermentation, coral fading, and zoonotic sicknesses. Environmental change is likewise expanding the gamble of struggles and dislodging over scant assets. Environmental change requires pressing and aggressive activity to decrease ozone-depleting substance emanations and adjust to its effects.

The world is turning out to be more reliant upon advanced innovations for correspondence, trade, instruction, amusement, medical care, administration, security, and different parts of life. In any case, these advancements additionally make new weaknesses and dangers from cyberattacks by state and non-state entertainers. Cyberattacks can target basic frameworks, for example, power

lattices, water frameworks, transport organizations, wellbeing offices, monetary foundations, government organizations, army bases, and atomic offices.

These issues are interrelated and require incorporated arrangements that include participation and coordination among different entertainers at nearby, public, local, and worldwide levels. These issues additionally require advancement, variation, and strength to adapt to vulnerability and intricacy. These issues likewise require mindfulness, instruction, and investment to encourage a feeling of obligation and fortitude among all partners.

The period under audit has seen the development of a few mechanical patterns that are set to bring inventive use cases to change the business and guarantee the reasonable administration of water and its accessibility. Environmental change and water shortage are difficulties that should be handled desperately. What's in store relies upon computerized change as a method for separating esteem from information and transforming data into business knowledge. Progressed Metering Foundation (AMI), advanced twins, smart resource the board, Geological Data Frameworks (GIS), 5G, and Computerized reasoning (simulated intelligence) have the water innovation patterns for 2022, which are set to bring creative use cases to alter the water business.

In reality as we know it where information is the most important resource, AMI is crucial given how much data it can deliver. This foundation can further develop all business cycles and assist utilities and purchasers with pursuing better choices, due to the enormous quantities of sensors conveyed on them contrasted with other IoT frameworks in the business.

Besides, computerized twins, characterized as a virtual duplicate of the water supply framework that reproduces how it acts, help to go with better choices because of the all-encompassing perspective they give of the framework and their capacity to recreate genuine and made-up situations. GIS has turned into a fundamental device for water utilities, assisting them with removing esteem from their information to further develop their business processes. These frameworks empower organizations to incorporate and address a consistently expanding stream of data.

Besides, Man-made reasoning Artificial Intelligence assists with giving more economical administration of water assets. Inside simulated intelligence, AI (ML) has gigantic expectations in the business. One of its fundamental benefits is that it mechanizes processes that are exorbitant to physically make due. This works on the precision of the outcomes, which are determined at high computational speed thanks to the foundation that supports them. In this way, utilities can go with better choices since they have continuous data about what's going on in the frameworks. Different parts of AI, which are additionally being applied to water, are voice and vision acknowledgment frameworks, master frameworks, Normal Language Handling (NLP), and robots.

At long last, 5G isn't simply one more new age of correspondence; all things considered, it starts up drastically new business potential open doors that were not already imaginable. Water utilities universally are changing their cycles as a way to accomplish more noteworthy water and energy effectiveness. This excursion incorporates safely utilizing the worth of information acquired from sensors to settle on better choices. Because of its low inactivity and its capacity to interface

a great many gadgets, 5G is set to turn into a vital partner for utilities. Besides, against a foundation of expanded straightforwardness, this innovation will assist with freeing and democratizing information, making it more open. The scope of accessible innovations will help all water utilities, no matter what their level of computerized change. These technologies are some of the must-have tools for ensuring the availability and sustainable management of water, in line with Sustainable Development Goal (SDG) 6. The digital transformation of processes is no longer an option; it is simply the road to follow in order to offer a quality service as demanded by 21st-century citizens.

Environmental change and water shortage we have been acquiring as a tradition of the past gazing at us consistently, and both are serious provoke that should be tended to desperately. Evidently, new advancements give a beam of trust in battling these difficulties; in any case, this ought not be considered as an end itself; however, as a method for investing our best amounts of energy to save humanity from the scourge of environmental change, and in this try it must be guaranteed that nobody is left behind.

At India Water Foundation, we are dedicated to absorbing fresh knowledge and best practices from global and local sources, integrating them into our strategies and implementation to maximize societal benefits. Our extensive range of reports, projects, and presentations serve as tangible evidence of this approach. As we strive to gain new insights from a wealth of open sources, our emphasis lies in acquiring up-to-date information and proven outcomes, aligning our own assumptions and findings with prevailing principles and standards.

With great honor, I present the annual report for 2022-2023 to our esteemed patrons, well-wishers, colleagues, and the wider public. We extend our heartfelt gratitude to those who have steadfastly supported us, providing encouragement that has been the bedrock of our strength. Their unwavering trust and affection have propelled us to overcome challenges and fulfill our responsibilities, undeterred by any obstacles. We aim to maintain their trust and continue nurturing their support. Seizing this opportune moment, I reaffirm India Water Foundation's unwavering commitment to fulfilling our mandate of providing invaluable services in the realms of water, climate change, and sustainable development. Our enthusiasm remains steadfast as we embark on this mission..

A handwritten signature in blue ink, appearing to read "Arvind Kumar", written over a horizontal line.

**(Dr Arvind Kumar)**

President

India Water Foundation

# O *verview*

The Sustainable Development Goals (SDGs) encompass 17 worldwide objectives with the purpose of eradicating poverty, safeguarding the environment, and establishing global harmony and well-being by the year 2030. The United Nations General Assembly orchestrated the acceptance of the SDGs in 2015, forming an integral component of the 2030 Agenda for Sustainable Development—a comprehensive and bold strategy directed towards the advancement of humanity, the planet, and economic prosperity.

Nonetheless, in this juncture of 2023, which stands as the midway point towards 2030, the advancement regarding the SDGs falls notably short of being satisfactory. As stated in the SDG Progress Report 2023, the world is not making the anticipated strides toward accomplishing the majority of the objectives within the designated timeframe. The emergence of the COVID-19 pandemic, Russia - Ukraine war and numerous natural disasters all over the world has further compounded the preexisting difficulties and disparities. The report highlights that these challenges have undone the progress achieved over decades in terms of poverty reduction, healthcare, education, gender parity, environment and climate change. The year 2020 alone witnessed an estimated 119-124 million individuals being thrust back into the depths of extreme poverty, while over 1.6 billion students bore the brunt of school closures. Moreover, the pandemic amplified the vulnerabilities of women and girls to violence, disrupted crucial healthcare services, and exacerbated the gap in digital access.

The planet is currently confronted with a climate crisis that imperils the well-being and livelihoods of countless individuals, particularly those in developing nations. The global mean temperature has surged by approximately 1.2°C above pre-industrial levels and is anticipated to reach 1.5°C by 2030. The consequences of this climatic shift are already evident through more frequent and severe extreme weather incidents, rising sea levels, the decline of biodiversity, and degradation of land.

The attainment of objectives concerning peace, justice, and robust institutions remains distant on a global scale. Persistent conflicts, violence, human rights transgressions, corruption, and frail governance systems persistently erode efforts for progress and jeopardize human security. By the close of 2022, over millions of individuals were forcibly displaced, and merely half of the global population enjoyed access to fair legal processes. The war and natural disasters introduced further complexities for democratic processes, civic freedoms, and the principles of law.

Before Russia invaded Ukraine, projections estimated global economic growth in 2022 would be around 5 percent. The war in Ukraine was a “massive and historic energy shock” to the markets, according to a November 2022 report by the OECD. The “shock” of the war was one of the main factors that had slowed economic growth in 2022 to just 3.1 percent, and why the OECD projected it to slow to 2.2 percent in 2023. These revelations underscore an uncertain and demanding path toward sustainable development goals. Nonetheless, they also offer prospects



for transformation and acceleration. The report proposes pivotal measures to facilitate the achievement of SDGs:

- Fortifying collaborative efforts and unity on an international scale to tackle worldwide predicaments and aid the most susceptible nations and communities.
- Harnessing the potential of science, technology, and innovation to discover resolutions for challenges encompassing health, societal, economic, and environmental realms.
- Rallying substantial and efficient development funds from all origins while guaranteeing the alleviation and stability of debts.
- Amplifying the accessibility and excellence of data to oversee advancements, detect deficiencies, and shape policies.
- Advocating for comprehensive and participatory mechanisms for decision-making that engage all involved parties while upholding human rights.

The SDGs embody not just objectives, but a glimpse into an improved global outlook. They demand united efforts and mutual accountability from all participants, spanning every tier of engagement. The pandemic and disasters illuminated our interlinked and interrelated existence, underscoring that safety is a collective endeavour. Until each individual is secure, no one truly is. Hence, the imperative to take action is immediate, whether we're to realize the SDGs by 2030 or risk forfeiting the chance to forge a lasting sustainable legacy for both our own generation and those to follow.

In order to expedite advancement toward attaining the Sustainable Development Goals (SDGs), several potential remedies have been recognized:

1. **User-Centric Design Approach:** By tailoring solutions for each goal with users at the forefront, progress can be propelled. This methodology involves comprehending the needs and outlooks of those impacted by the goals, culminating in inventive and user-focused solutions.
2. **Private Sector Collaborations:** Forging partnerships with the private sector can usher in added resources, proficiency, and innovation to tackle the SDGs. Public-private collaborations can leverage the strengths of both sectors to propel progress and accomplish sustainable development.
3. **Research and Action Strategies:** Identifying research priorities and enacting action strategies can expedite headway on the SDGs. Governments, non-governmental entities, philanthropic bodies, and academic institutions can cooperate to conduct research and execute solutions founded on evidence.

4. **Digital Public Technologies (DPTs):** Embracing digital technologies plays a pivotal role in hastening progress on the SDGs. DPTs like digital platforms, data analytics, and artificial intelligence can enhance the monitoring, evaluation, and execution of sustainable development undertakings.
5. **Global Partnership and Dedication:** The SDGs necessitate a worldwide coalition and unwavering commitment to their attainment. Governments, entities, and individuals must collaborate, exchange knowledge and resources, and pledge to undertake resolute and transformative measures toward sustainable development.

It's vital to acknowledge that these suggested approaches are not exhaustive; alternate strategies and methods to expedite SDG progress may exist. The concerted exertion and unwavering dedication of all stakeholders hold paramount importance in realizing the vision set forth by the 2030 Agenda for Sustainable Development.

## Momentous Developments

Significant advancements are often marked by fresh and inventive concepts and orientations that establish the mood and direction of emerging developments. These have the potential to chart a course for future actions, unburdened by past shortcomings. Against the backdrop of the persistent grip of the COVID-19 pandemic and its unfavourable consequences in 2021 and 2022, humanity's journey toward progress found partial expression in the release of exceptional reports by UN entities, as well as other international organizations and governments. Additionally, the outcomes of certain conferences have offered directives to navigate challenges and progress toward a sustainable future.

The U.S. Government's water strategy for 2022-2027 seeks to enhance health, prosperity, stability, and resilience by means of sustainable and equitable water resource management. This entails ensuring access to safe drinking water, sanitation services, and hygiene practices. The strategy outlines key objectives including integrating climate resilience, unified implementation across humanitarian, development, and peace building contexts, water supply forecasting, sustaining agricultural productivity, safeguarding groundwater and surface water availability, managing and restoring rangelands and forestlands, and responding to disruptions arising from catastrophic events. Collaboration with diverse stakeholders like government agencies, local communities, indigenous groups, and private sector entities is pivotal for leveraging resources, expertise, and knowledge to ensure effective implementation.

The State of the World's Drinking Water Report 2022, a joint effort by UNICEF, WHO, and the World Bank, furnishes data on the interconnections between water, health, and development. It also provides insights into the status of drinking water and offers actionable recommendations for accelerating safe drinking water accessibility. This report underscores the urgency of hastening progress in this regard, addressing governance, financing, capacity development, data, information, and innovation. It emphasizes the significance of partnerships and collaboration to effectively implement these recommendations. The report was unveiled during the Preparatory Meeting of the UN Conference on the Midterm Comprehensive Review of the Implementation of the Objectives of the International Decade for Action "Water for Sustainable Development," 2018-2028.

The World Economic Forum's Global Risks Report 2023 introduces the notion of a "polycrisis," where risks are intertwined and mutually detrimental. It underlines the immediate need to address the cost-of-living crisis, which could overshadow other risks. The report offers insights from experts on managing risks, enhancing resilience, and capitalizing on new opportunities across various sectors. It identifies key risks for the next decade, such as the energy supply crisis, cost-of-living crisis, rising inflation, food supply crisis, and cyberattacks on critical

infrastructure. The report underscores the necessity of partnerships and collaboration to effectively address these risks.

The Sustainable Development Report 2022 reviews annual progress on the Sustainable Development Goals (SDGs) and gauges advancement through the SDG Index and Dashboards. The report indicates that multiple global crises have halted headway on the universally adopted goals. For the second consecutive year, global progress on the SDGs has stagnated. The report puts forth actionable recommendations to expedite progress, focusing on governance, financing, capacity development, data, information, and innovation. It emphasizes the importance of partnerships and collaboration to effectively implement these recommendations. This report underscores that realizing the vision set by the 2030 Agenda for Sustainable Development relies on collective effort.

The UN 2023 Water Conference, hosted by Tajikistan and the Netherlands, occurred on March 22nd to 24th at the UN Headquarters in New York. This event aimed to mobilize Member States, the UN system, and stakeholders to take effective action and expand successful solutions globally. Through plenary meetings and interactive dialogues, the conference covered topics such as water for health, sustainable development, climate, cooperation, and the Water Action Decade. The conference resulted in agreements to establish a UN Special Envoy for Water and renewed political momentum. Over 700 voluntary commitments and pledges were made. The conference also sought voluntary commitments aligned with the Water Action Agenda, showcasing practical tools developed under the Protocol on Water and Health.

The World Water Development Report 2023, published by UNESCO on behalf of UN-Water, focuses on partnerships and cooperation for water, accelerating progress towards Sustainable Development Goal 6 (SDG 6) and realizing the human rights to water and sanitation. This report contributes to discussions at the UN 2023 Water Conference, highlighting the importance of partnerships and cooperation for holistic sustainable development. The report provides an overview of global freshwater resources, including availability, demand, and quality. It also evaluates the progress of each SDG 6 target. Decision-makers will find tools for implementing sustainable water use and management practices.

The 27th Conference of the Parties to the United Nations Framework Convention on Climate Change (COP27) took place from November 6 to November 20, 2022, in Sharm El Sheikh, Egypt. This conference aimed to address pressing climate change issues while building upon COP26 outcomes. Focusing on taking action against the climate emergency, COP27 convened heads of state, ministers, negotiators, climate activists, and other stakeholders. The objective was to enhance solidarity between countries and fulfill commitments of the Paris Agreement. This includes reducing greenhouse gas emissions, building resilience, adapting to climate change, and

financing climate action in developing countries. Notably, COP27 concluded with an agreement to provide funding for loss and damage to vulnerable countries affected by climate disasters.

These notable strides might cultivate optimism for gradual climate change advancements, particularly evident in the resolutions established during COP 27 and the commitment of UNFCCC member countries to genuinely enact its counsel. However, the continuous conflicts between Russia and Ukraine, coupled with strained relations among nations across various regions, have significantly contributed to the exacerbation of predicaments in energy, food, and diverse sectors. This has not only impeded progress toward sustainable development goals but has also cast a shadow over future prospects.

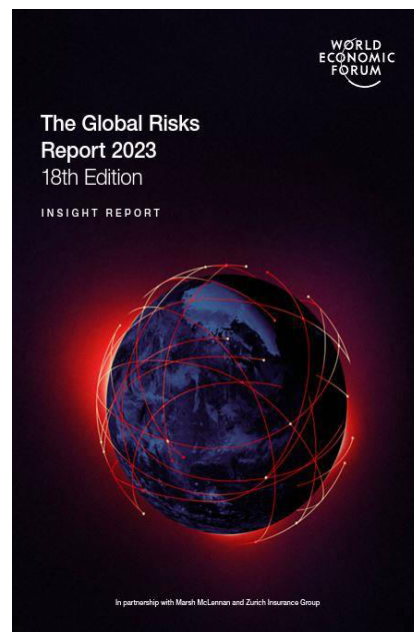


## World Risk Report 2023

The World Risk Report 2023 from the World Economic Forum (WEF) is an annual analysis of the most important risks. In the upcoming years, 10 global risks and 5 regional risks are most likely to have a significant impact, according to the report. Among the top 10 global risks in 2023 –climate action failure, extreme weather, biodiversity loss, livestock disease, air pollution, water scarcity, social cohesion erosion, income inequality, cyberattacks, and armed conflict – the first six risks pertain to climate change directly or indirectly.

The World Risk Report 2023 by the WEF presents a gloomy picture of the future of the world. The report emphasizes the rising risks brought on by environmental problems such as biodiversity loss, climate change, and others. A potential for social unrest and economic instability is also foreshadowed. The WEF's 2023 report notes that, due to the growing threat of pandemics, the risks of biodiversity loss and livestock disease have also increased. It also notes that the risks of climate action failure and extreme weather have increased significantly since the previous report in 2022.

In its conclusion, the report urges swift action to address these risks. It makes the case that money should be spent on fostering sustainable growth, increasing shock tolerance, and enhancing intergovernmental cooperation. The World Risk Report 2023 serves as an important reminder of the numerous problems the world is currently facing. It is a call to action for governments, companies, and people to collaborate in order to create a future that is more resilient and sustainable.



Picture Courtesy/Credit/Source: World Economic Forum

## World Water Day 2023

2023 marked the first World Water Day, a day of global awareness-building and action to address the water and sanitation crisis. "Accelerating change" was the day's theme, and it encouraged everyone to change how they use, consume, and manage water in their own lives. The Earth is a special planet with a lot of life because water is one of the most valuable resources on the planet. It is crucial for the environment, other economies, food security, nutrition, health, energy, and biodiversity.

Since agriculture uses 72 percent of the world's freshwater withdrawals, it is by far the biggest water user. In contrast, freshwater resources have been declining globally for the past 30 years,



and the availability and quality of water are both deteriorating at alarming rates. Climate change is making it more likely that there will be droughts and floods, which is stressing the world's water resources. Pollution and poor water resource management have exacerbated water stress and damaged water-related ecosystems, having a detrimental effect on human health, economic activity, the availability of food and energy, and the decline of aquatic biodiversity.

Picture Credit/Source/Courtesy: UNWATER

The promise that everyone would have safely managed water and sanitation by 2030 is Sustainable Development Goal (SDG) 6, which is a part of the 2030 Agenda. Currently, the world is significantly off-track. We must move beyond "business as usual" and quicken the pace of change. To meet SDG 6 on time, governments must work four times as fast on average, but they cannot resolve this issue on their own. Everyone must take action because water has an impact on them. The way that we use, manage, and consume water in our daily lives can be changed by individuals, families, schools, and communities. Businesses can also change how we use water in our factories and throughout the supply chain. The steps we take, no matter how small, have an impact.

The UN 2023 Water Conference (March 22–24, New York), a once-in-a-generation chance to bring the world together to address the water and sanitation crisis, began at the same time as World Water Day in 2023. A Water Action Agenda, a collection of voluntary commitments from governments, businesses, organizations, institutions, coalitions, and members of the public, will be produced as a result of the conference. This agenda is intended to deliver quick progress on the water and sanitation targets that have been set internationally.

## UN 2023 Water Conference

The United Nations 2023 Water Conference, also referred to as the 2023 Conference for the Midterm Comprehensive Review of Implementation of the United Nations Decade for Action on Water and Sanitation, was a historic occasion that took place at UN Headquarters in

New York from March 22–24, 2023. Governments, corporations, members of civil society, and other interested parties came together at the conference, which Tajikistan and the Netherlands jointly hosted, in order to scale up and accelerate collective action toward the accomplishment of Sustainable Development Goal 6 (SDG 6) and all other water-related targets and goals.



The urgent water and sanitation crisis that affects billions of people worldwide was the focus of the conference. According to the most recent statistics, 4.2 billion people lack access to adequate sanitation, 2.2 billion people lack access to safe drinking water, and a quarter of humanity lives in nations with extremely high-water stress. Climate change is making it more likely that there will be droughts and floods, which is stressing the world's water resources. In many areas, water also serves as a threat multiplier, igniting or escalating political conflicts.

The conference was held in conjunction with the International Decade for Action "Water for Sustainable Development" (2018–2028) midterm review. This initiative was introduced by the UN General Assembly in 2016 to aid in the implementation of the 2030 Agenda for Sustainable Development in relation to water and sanitation. The conference coincided with World Water Day 2023, which encouraged everyone to take action in their own lives to change how they use, consume, and manage water. The theme of the event was "Accelerating change."

The Water Action Agenda, a collection of voluntary commitments from governments, businesses, organizations, institutions, coalitions, and members of the public, was the primary output of the conference. Its goal is to deliver quick progress on internationally agreed-upon water and sanitation targets. More than 750 different commitments were included in the Water Action Agenda, covering a wide range of topics related to water management, including technology, data, knowledge sharing, finance, governance, innovation, education, awareness raising, capacity building, partnerships, and cooperation.

Individual actions, local actions, national actions, and global actions were used to categorize the commitments. The six thematic areas of water supply and sanitation, water resources management, water quality and wastewater, water-related disasters, water governance, and water cooperation were also covered by the commitments. The co-hosts of the conference presented the

Water Action Agenda during the conference's closing session, and the UN Secretary-General supported it.

By 2030, it is anticipated that the Water Action Agenda will help achieve SDG 6 and all other water-related goals and targets. The New Urban Agenda, the Sendai Framework for Disaster Risk Reduction, the Global Framework on Water Scarcity in Agriculture (WASAG), and the Global Acceleration Framework for SDG 6 are among the other international frameworks and initiatives related to water and sanitation that are anticipated to be supported by it. Through a variety of platforms and mechanisms, UN-Water and its partners will systematically monitor and review the Water Action Agenda. Additionally, the High-Level Political Forum on Sustainable Development (HLPF), the UN Climate Change Conference (COP26), the Food Systems Summit 2023, and the Biodiversity Conference (COP15) will all benefit from the Water Action Agenda.

To address the global water crisis and guarantee that everyone has access to clean water in the future, the UN 2023 Water Conference was a turning point. It showed a strong political commitment and a significant amount of stakeholder involvement to hasten change and address the water and sanitation crisis. Additionally, it featured cutting-edge fixes and top techniques from various nations and industries. To turn the commitments into tangible outcomes on the ground, more action is necessary. The Water Action Agenda's success will depend on how well it is put into practice, monitored, and followed up on. It will also depend on how well it is incorporated into other international frameworks and agendas for sustainable development. The UN 2023 Water Conference was just the beginning of a decade of action on water and sanitation, not its conclusion.

## World Water Development Report 2023

The annual and topical World Water Development Report (WWDR) offers a reliable overview of the condition, utilization, and management of the world's freshwater resources. The UN World Water Assessment Programme (WWAP) created it, and it is the result of the collaboration of the UN agencies and organizations that make up UN-Water.

The Sustainable Development Goal for Water and Sanitation (SDG 6) and the realization of the human rights to water and sanitation are both addressed in the WWDR 2023, which is titled "Partnerships and Cooperation for Water" and examines how creating partnerships and fostering cooperation across all dimensions of sustainable development are crucial to accelerating progress in achieving these goals. Water supply and sanitation, water resources management, water quality and wastewater, water-related disasters, water governance, and water cooperation are some of the topics covered in the report. The SDG 6 Global Acceleration Framework (GAF)'s five "accelerators"—capacity development, data and information, innovation, financing, and governance—are also in line with this.



The UN 2023 Water Conference, the organization's first significant water-related conference since 1977, will be directly informed by the WWDR 2023. The conference, which coincides with the mid-term comprehensive review of the International Decade for Action "Water for Sustainable Development" (2018-2028), focuses on progress toward goals related to water and sanitation. The Water Action Agenda, which represents voluntary commitments from nations and stakeholders to meet global water-related goals and targets, is intended to be adopted as a key outcome of the conference.

The report makes the case that collaboration and partnerships are crucial to achieving both the human rights to water and sanitation and the Sustainable Development Goal for Water and Sanitation (SDG 6). The report identifies five crucial areas where collaboration and partnerships are required:

- **Capacity development:** Building the capacity of water and sanitation professionals and institutions is essential to ensure that they have the skills and knowledge to deliver on SDG 6.



- **Data and information:** Good data and information are essential for decision-making on water and sanitation. Partnerships between data providers, users, and decision-makers can help to ensure that the right data is available to the right people at the right time.
- **Innovation:** Innovation is needed to address the challenges of water scarcity, pollution, and climate change. Partnerships between the public and private sectors, academia, and civil society can help to accelerate the development and adoption of new water technologies.
- **Financing:** Water and sanitation are essential services, but they are often underfunded. Partnerships between governments, donors, and the private sector can help to mobilize the resources needed to achieve SDG 6.
- **Governance:** Effective governance is essential to ensure that water and sanitation resources are managed in a fair and equitable way. Partnerships between governments, civil society, and the private sector can help to strengthen water governance.
- The UN WWDR 2023 makes a number of recommendations to policy-makers, including:
- **Invest in capacity development:** Governments should invest in the capacity of water and sanitation professionals and institutions.
- **Make data and information more accessible:** Governments should make data and information on water and sanitation more accessible to decision-makers and the public.
- **Support innovation:** Governments should support the development and adoption of new water technologies.
- **Mobilize financing:** Governments should mobilize financing for water and sanitation from a variety of sources.
- **Strengthen governance:** Governments should strengthen water governance through partnerships with civil society and the private sector.

The WWDR 2023 presents data, figures, and case studies to highlight the advantages and difficulties of partnerships and collaboration for water. Additionally, it offers advice on how to promote successful collaboration and partnerships for water at various levels and scales for policymakers and practitioners. The report emphasizes the importance of partnerships and cooperation in resolving the urgent, interconnected, and complex water issues that affect billions of people worldwide. The UN WWDR 2023 is an important tool for practitioners, policymakers, and the general public. It offers a thorough overview of the opportunities and problems related to water and sanitation as well as a number of doable suggestions to hasten the achievement of SDG 6.

## Sustainable Development Report 2022

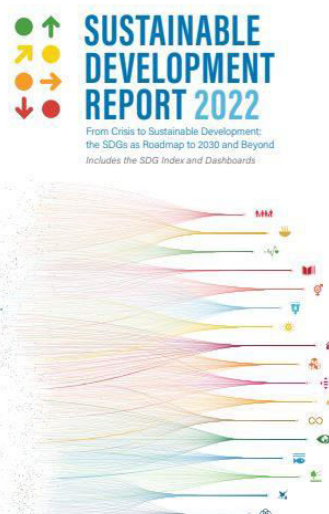
The 2030 Agenda for Sustainable Development, which consists of 17 interconnected goals and 169 targets to create a more peaceful, prosperous, and sustainable world for all, is assessed globally in the Sustainable Development Report 2022. The report tracks regional and global performance on each goal and indicator using the most recent data and estimates. It also examines how the COVID-19 pandemic, climate change, armed conflicts, and other crises have affected the SDGs' attainment.

The 2030 Agenda as well as the survival of humanity are in grave danger due to a confluence of cascading and interconnected crises, the report claims. The report emphasizes the seriousness and scope of the global challenges. It regrets that the disruption of crucial health services led to a drop in immunization coverage for the first time in a decade, a rise in tuberculosis and malaria deaths, and the eradication of more than four years' worth of progress on the fight against poverty. More than 24 million students, from pre-primary to university level, are at risk of never returning to school, according to the report.

A record 100 million people have been forcibly displaced globally, and one-quarter of the world's population now lives in conflict-affected areas. One of the biggest refugee crises in modern history is being brought on by the war in Ukraine. It also warns that in order to prevent the worst effects of climate change, global greenhouse gas emissions must reach their peak before 2025 and then decline by 43% by 2030. Greater ambitions are required to meet the 1.5 °C target as indicated by current national commitments, which predict an increase of almost 14 percent by 2030.

The report highlights areas that require immediate action in order to save the SDGs and deliver meaningful progress for people and the planet by 2030, while also noting that developing countries are struggling with pandemic recovery, record inflation, rising interest rates, and looming debt burdens. Several of these include:

- Peace, diplomacy, and international cooperation are fundamental conditions for the world to progress on the SDGs towards 2030 and beyond.



Picture Credit/Source/Courtesy:  
unsdsn.org

- A global plan to finance the SDGs is needed, especially for developing countries that face multiple constraints and vulnerabilities.
- At mid-point on the way to 2030, policy efforts and commitments supporting the SDGs vary significantly across countries, including among G20 countries.
- Investment in data and information infrastructure should be a priority of national governments and the international community, as data gaps hampers effective monitoring and decision-making.

Additionally, the report offers a user-interactive dashboard that enables users to investigate the data and trends for each nation, area, and objective. The 2030 Agenda as well as the survival of humanity are in grave danger due to a confluence of cascading and interconnected crises, the report claims. Additionally, the report offers a user-interactive dashboard that enables users to investigate the data and trends for each nation, area, and objective.

## COP 27 Conferences on Climate Change, November 2022

From November 6 to 18, 2022, Sharm el-Sheikh, Egypt, hosted the 27th Conference of the Parties (COP27) to the United Nations Framework Convention on Climate Change (UNFCCC). Over 190 countries, as well as representatives from business, civil society, and other stakeholders, attended the conference.

The main theme of COP27 was "Building Climate Ambition by Delivery." The conference focused on a number of key issues, including:

- **Mitigation:** Reducing greenhouse gas emissions in line with the Paris Agreement.
- **Adaptation:** Building the resilience of communities to the impacts of climate change.
- **Finance:** Mobilizing the financial resources needed to address climate change.
- **Loss and damage:** Addressing the impacts of climate change that have already occurred.

The conference made a number of progresses on these issues, including:

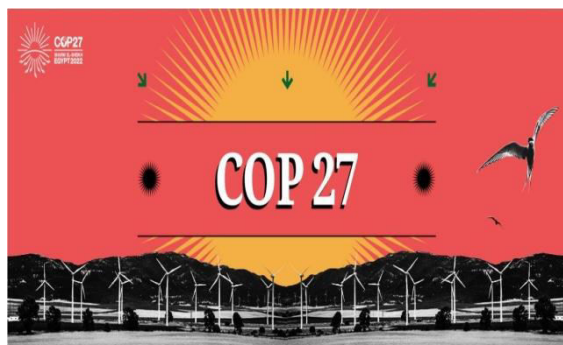
- **A breakthrough agreement on a loss and damage fund:** The conference agreed to establish a new fund to support developing countries that are already experiencing the impacts of climate change.
- **Progress on the Santiago Network:** The conference made progress on the Santiago Network, a platform for sharing knowledge and best practices on climate adaptation.
- **A commitment to accelerate the phase-out of coal:** The conference saw a commitment from 40 countries to accelerate the phase-out of coal.
- **A call for increased climate finance:** The conference called for increased climate finance, with a focus on supporting developing countries.

Many observers noted that the conference made significant progress on a number of important issues, which contributed to its success. Some people did, however, also point out that more needs to be done to address the problem of climate change.. Some of the key outcomes of COP27 are as follows:

- **Establishment of a loss and damage fund:** It was decided at the conference to create a new fund to assist developing nations that are already feeling the effects of climate change. The money for the fund will come from a new carbon trading system as well as voluntary contributions from developed nations.

- **Progress on the Santiago Network:** The conference made progress on the Santiago Network, a platform for sharing knowledge and best practices on climate adaptation. The network will be supported by a new secretariat and a fund to help developing countries access their resources.
- **Commitment to accelerate the phase-out of coal:** The conference saw a commitment from 40 countries to accelerate the phase-out of coal. This is a significant step forward, as coal is a major source of greenhouse gas emissions.
- **Call for increased climate finance:** The conference called for increased climate finance, with a focus on supporting developing countries. Developed countries have pledged to provide \$100 billion per year in climate finance by 2020, but this target has not yet been met.

The outcomes of COP27 are a step in the right direction, but more needs to be done to address the challenge of climate change. Developed countries need to increase their climate finance commitments, and all countries need to take action to reduce their greenhouse gas emissions.



1 The 27th Conference of the Parties to the United Nations Framework Convention on Climate Change, Paris Agreement, was held from 6 to 20 November 2022 in Sharm El Sheikh, Egypt

Picture Source : [un.org](https://un.org)

The conference aimed to build on the achievements of previous COPs, especially the Paris Agreement adopted at COP 21 in 2015, which set the goal of limiting global warming to well below 2°C, preferably to 1.5°C, compared to pre-industrial levels. The conference also aimed to pave the way for future ambition and action to effectively tackle the global challenge of climate change and its impacts.

The conference's theme, "Delivering for people and the planet," reflected the necessity of and chance for addressing the climate crisis in a way that benefits both people and the environment. Six main topics—mitigation, adaptation, finance, technology, capacity building, and transparency—were the conference's main emphasis. Cross-cutting issues like loss and harm, gender, youth, indigenous peoples, human rights, and health were also covered at the conference.

The historic decision to create and launch a loss and damage fund to aid vulnerable nations and communities affected by the unavoidable and irreversible effects of climate change, such as sea level rise, extreme weather events, desertification, and biodiversity loss, was one of the conference's major outcomes. The Warsaw International Mechanism for Loss and Damage will govern the fund, which will be financed by developed nations and other contributors. For initiatives like risk assessment, early warning systems, disaster preparedness and response, resilience building, relocation, and rehabilitation, the fund will offer grants, loans, and other



forms of assistance. UN Secretary-General António Guterres praised this choice as "essential," but he also emphasized that more must be done right away to drastically reduce emissions.

The Conference also established a roadmap for expanding climate finance after 2025 and reaffirmed developed countries' commitment to mobilize \$100 billion annually by 2025 to support developing countries in their climate actions. The importance of increasing adaptation financing to at least 50% of overall climate financing and improving access to financing for the world's most vulnerable nations was also acknowledged at the conference. The conference urged nations to phase out fossil fuel subsidies and align their financial flows with low-carbon and climate-resilient development pathways.

The Conference also exhorted all nations to submit long-term low greenhouse gas emission development strategies by 2025 and to update their nationally determined contributions (NDCs) by 2023. Additionally, the conference urged nations to increase their ambition and action in accordance with the 1.5°C goal, the principles of equity, common but distinct responsibilities, and respective capabilities. The conference applauded the more than 140 countries that submitted NDCs before COP 27 that covered more than 80% of global emissions. The importance of non-state actors like cities, regions, businesses, and civil society in advancing climate action was also acknowledged at the conference.

The Paris Agreement's Article 6 allows for international cooperation in achieving emission reductions through a variety of mechanisms, including emissions trading systems, carbon taxes, or offsets. The Conference called for the beginning of a global dialogue on carbon markets under this provision. The dialogue aims to find solutions to the unresolved issues surrounding the operationalization of Article 6, such as accounting standards, environmental integrity, protections for human rights, and sharing of adaptation proceeds. A high-level ministerial group, co-chaired by Egypt and Switzerland, will oversee the dialogue and report its results to COP 28 in 2023. The conference urged nations to enact carbon pricing laws as a powerful tool for reducing emissions.

The Conference considered a status report on the application of the Paris Agreement's Technology Framework, which offers recommendations for enhancing technology development and transfer for mitigation and adaptation. The Technology Mechanism, the Climate Technology Centre and Network (CTCN), the Technology Executive Committee (TEC), and the Global Stocktake on Technology were some of the initiatives that were highlighted in the report for their successes and shortcomings in advancing technology cooperation. The conference also approved a joint annual report on the activities of CTCN and TEC for 2022.

The Paris Agreement and the convention's capacity-building framework were reviewed at COP 27, which focused on the review's findings that identified the gaps and needs in capacity-building

and recommended actions to address them. These actions included strengthening institutional arrangements, improving coordination and coherence, mobilizing resources, and ensuring sustainability. In order to encourage climate action, the conference also decided to improve the application of education, training, public awareness, public participation, and public access to information.

The second cycle of the enhanced transparency framework mandated by the Paris Agreement, which requires all nations to report on their greenhouse gas inventories, progress toward implementing and achieving their NDCs, the impacts of and adaptation to climate change, support given and received, and any other pertinent information, was also launched as a result of the Conference. The conference decided on the modalities for the technical expert review and the facilitative multilateral consideration of progress and adopted common reporting tables and formats for the biennial transparency reports. The first biennial transparency reports will be required by 31 December 2024, the conference also decided.

A significant turning point in the international effort to address the climate crisis was the COP 27 climate change conference. It produced some significant results that will speed up the convention's and the Paris Agreement's implementation. However, it also left some open issues that will call for additional discussions and action in the upcoming years. The conference also emphasized the need to act quickly in order to keep global warming below 1.5°C and create a more resilient and sustainable future for both people and the environment.

## US Government Water Strategy 2022-2027

A comprehensive government strategy to address the global water crisis was announced in the U.S. Government Water Strategy 2022–2027 report, which was released in early October 2022. The Strategy is built upon four connected and complementary strategic goals:

- Strengthen sector governance, financing, institutions, and markets. This objective aims to improve the way water is managed in partner countries, by strengthening institutions, promoting market-based solutions, and providing technical assistance.
- Increase equitable access to safe, sustainable, and climate-resilient water and sanitation services, and the adoption of key hygiene behaviors. This objective aims to ensure that everyone has access to safe water and sanitation, regardless of their income or location. It also focuses on promoting hygiene behaviors to prevent waterborne diseases.
- Protect freshwater resources. This objective aims to conserve and protect freshwater resources, by addressing pollution, reducing demand, and increasing efficiency.
- Promote cooperation on shared water challenges. This objective aims to build international cooperation on water issues, by sharing knowledge and best practices, and working to resolve transboundary water disputes.

Although the Strategy is ambitious, it is doable. The U.S. government has a long history of being a leader on water issues, and it is dedicated to collaborating with allies to improve water security throughout the world. The Strategy aims to provide access to sanitation and safe drinking water to an additional 22 million people over the course of the following five years. The Strategy pledges to make investments in environmentally friendly approaches to resolving water issues, such as rainwater collection and watershed restoration. The Strategy places a strong emphasis on the value of gender equality and the empowerment of women in water management. In order to address water challenges, the Strategy calls for increased collaboration between the public and private sectors.

The U.S. Government's 2022–2027 Water Strategy represents a significant advancement in the global fight against the water crisis. Although the Strategy is ambitious, it is doable. The United States government can continue to lead the world in the direction of a future where there is greater water security.

## The State of the World's Drinking Water 2022

Over 2 billion people have gained access to safe drinking water in the past 20 years, according to the WHO's State of the World's Drinking Water Report, which was published in the last week of October 2022. Although encouraging, this progress is fragile and unfair because a quarter of the world's population has been left behind. Climate change is causing droughts and floods to occur more frequently and more intensely, worsening water insecurity, disrupting supplies, and wreaking havoc on communities. In the meantime, the capacity of cities to provide water to the millions of people residing in informal communities and slums is being put under more stress due to rapid urbanization.

“Providing greater access to safe drinking water has saved many lives, most of them children. But climate change is eating into those achievements,” said Dr Maria Neira, WHO Director, Department of Environment, Climate Change and Health. “We have to accelerate our efforts to ensure every person has reliable access to safe drinking water something that is a human right, not a luxury.”

The report offers a thorough analysis of the connections between water, health, and development, along with concrete recommendations for governments and partners. These recommendations are supported by real-world examples of how various nations are advancing the Sustainable Development Goal (SDG) goal of providing all people with access to safely managed drinking water by 2030.

“Investing in water and sanitation is critical to health, economic growth and the environment. Healthier children become healthier adults who then contribute more to the economy and society”, said Saroj Kumar Jha, Director, Global Director, of World Bank Group's Water Global Practice. “This principle is at the core of the World Bank’s Human Capital Project. Governments and the private sector must take critical action now to accelerate inclusive and sustainable water supply and sanitation services in both urban and rural areas.”

Governments and partners must dramatically increase political commitment to drinking water and quadruple investments if they want to guarantee universal access to safe drinking water by 2030. Even with modest budgets, the report offers detailed recommendations for implementing long-lasting changes to infrastructure, governance, finance, capacity development, data and information, and innovation. Some of the more general recommendations include:

- **Strengthen existing institutions** by filling gaps, facilitating coordination, establishing a regulatory environment supported by legislation and standards for service quality, and ensuring enforcement.
- **Increase funding from all sources dramatically**, with water service providers improving efficiency and performance, and governments providing a stable and transparent administrative, regulatory and policy environment.
- **Build capacity within the water sector** by developing a capable and motivated workforce through a range of capacity-development approaches based on innovation and collaboration.
- **Ensure relevant data and information are available** to better understand inequalities in drinking water services and make evidence-based decisions.
- **Encourage innovation and experimentation** through supportive government policy and regulation, accompanied by rigorous monitoring and evaluation.

“No child should be faced with the choice of drinking dirty water – a leading killer of children – or making dangerous journeys to collect water and missing out on school,” said Aidan Cronin, UNICEF Interim Director of Water, Sanitation, and Hygiene (WASH) and Climate, Environment, Energy, and Disaster Risk Reduction (CEED). “Accessible and reliable safe drinking water is fundamental to ensuring children are healthy, educated, and thriving.”



## Domestic Context

The harmonization of domestic activities with international initiatives in the realms of water and climate change offers numerous advantages. This alignment serves to amplify the efficacy and efficiency of actions taken in these domains, ensuring seamless integration, uniformity, and complementary efforts across various levels and stakeholders. To illustrate, when nations synchronize their domestic policies and strategies with the Paris Agreement, they sidestep redundancies, shortcomings, and clashes in their endeavors to curtail emissions and confront the consequences of climate change. Furthermore, aligning developmental financing with the Paris Agreement enables members of the International Development Finance Club (IDFC) to assist countries in executing their nationally determined contributions (NDCs) and long-term strategies (LTSs).

This alignment also cultivates innovation and cooperation by fostering synergies, collaborations, and avenues for knowledge exchange among diverse actors. For instance, active participation in international endeavors related to water and climate concerns, like the Coalition for Disaster Resilient Infrastructure (CDRI), the International Solar Alliance (ISA), the Leadership Group for Industry Transition (LeadIT), and the Global Commission on Adaptation (GCA), allows nations to disseminate best practices, access financial and technical resources, and capitalize on their unique strengths.

Furthermore, this alignment enhances the societal and environmental outcomes of actions undertaken to address water and climate challenges by encompassing the multifaceted dimensions and co-benefits associated with these issues. To exemplify, by adopting sustainable water management methodologies — including practices such as bolstering carbon sequestration, safeguarding natural buffers, advancing water efficiency, and championing nature-based solutions — countries can not only mitigate the effects of climate change, but also adjust to its impacts, and reinforce water security, conserve biodiversity, and uplift human well-being.

The water and climate change domains hold immense significance for India's comprehensive development, exerting influence over diverse facets of the nation's economy, environment, and society. Water stands as a fundamental pillar, indispensable for human well-being, food security, energy generation, and the sustenance of ecosystems. Given India's expansive and burgeoning population, reliance on water spans a spectrum of necessities. Nevertheless, the nation also grapples with the challenges of water scarcity, pollution, and the intricate interplay between climate change and water quality and availability. In this context, the prudent and sustainable management of water resources stands as a linchpin in propelling India's developmental journey.

Climate change, a global phenomenon, unfurls both perilous risks and promising openings for India. The nation remains exposed to the adverse consequences of climate change—escalating temperatures, unpredictable precipitation patterns, extreme climatic events, rising sea levels, and the retreat of glaciers. These repercussions bear the potential to cast adverse shadows on agriculture, public health, infrastructure, biodiversity, and livelihoods. As a result, the imperative of adapting to these climate shifts and enhancing the nation's resilience gains paramount importance in charting India's trajectory of development.

Simultaneously, the realm of climate change presents India with prospects to embark on a trajectory of low-carbon development, while contributing to global endeavors in emission reduction. India has committed to curbing its emissions intensity and augmenting the share of renewable energy within its energy mix. With a long-term aspiration to attain net-zero emissions, harmonizing this vision with the global transition remains a focal point. Consequently, steering toward a low-carbon economy and championing the principles of eco-friendly growth emerges as a boon in furthering India's developmental pursuits.

The synergy between the water and climate change sectors bears pivotal implications for India's holistic development. In 2022, India embarked on a multifaceted journey, initiating various missions and endeavors to navigate the complexities and opportunities entailed by these sectors. Notable among these are the National Action Plan on Climate Change (NAPCC), the Atal Bhujal Yojana (ABHY), and the International Solar Alliance (ISA). Nevertheless, there exists ample room for continued enhancements and innovative breakthroughs within these sectors, all aimed at realizing the nation's aspirations for sustainable development goals.

## Status of the Atal Bhujal Yojana (ABHY) in 2022

The Government of India, in collaboration with the World Bank, launched the Atal Bhujal Yojana (ABHY) in 2019 as a central sector scheme. This initiative is designed to enhance the management of groundwater resources in water-stressed regions within seven states: Gujarat, Haryana, Karnataka, Madhya Pradesh, Maharashtra, Rajasthan, and Uttar Pradesh. With a budget of Rs. 6000 crore, the scheme is funded equally by the Government of India and the World Bank and is slated for a five-year implementation period spanning from 2018-2019 to 2022-2023.

The ABHY scheme encompasses two key components: Institutional Strengthening and Capacity Building (ISCB), and the Incentive Component (IC). ISCB aims to reinforce the institutional framework for groundwater governance across national, state, and local levels. This involves creating a robust database, devising scientific tools and methodologies, enhancing community engagement, and nurturing both human and technical capabilities. On the other hand, the IC offers financial incentives to states based on achieving predefined benchmarks in groundwater management. These benchmarks are measured through five Disbursement Linked Indicators (DLIs), encompassing elements like public disclosure of groundwater data, community-driven water security plans, public funding of interventions via the amalgamation of ongoing schemes, the adoption of water-efficient practices, and improvements in the rate of decline of groundwater levels.



Picture Source/Credit/Courtesy: [ataljal.mowr.gov.in](http://ataljal.mowr.gov.in)

During the year 2022, the ABHY scheme achieved several noteworthy milestones and accomplishments:

- Implementation of the scheme was fully operational across all seven participating states, encompassing 8220 Gram Panchayats (GPs) in 229 blocks spanning 80 districts.
- The scheme facilitated the establishment of Water User Associations (WUAs) at the GP level, involving farmers, women, youth, and other stakeholders. These WUAs were

trained and empowered to oversee and manage their groundwater resources while developing and executing water security plans.

- Digital water level recorders (DWLRs) and water quality testing kits were deployed across all GPs. The data from these instruments were uploaded onto a web-based portal named Jal Shakti Abhiyan (JSA), providing real-time insights into groundwater quality, levels, and trends.
- The scheme actively promoted the adoption of water-efficient technologies and practices among farmers, including micro-irrigation systems, crop diversification, organic farming, and rainwater harvesting. Additionally, it endorsed the utilization of renewable energy sources like solar power for irrigation pumps.
- The scheme harnessed the convergence of various central and state initiatives linked to water and agriculture, such as Jal Jeevan Mission (JJM), Pradhan Mantri Krishi Sinchayee Yojana (PMKSY), Pradhan Mantri Kisan Urja Suraksha evam Utthan Mahabhiyan (PM-KUSUM), alongside corporate social responsibility (CSR) funds and private-sector partnerships.
- Remarkable strides were made in meeting the DLIs. The World Bank's latest report indicates the accomplishment of 100% public disclosure of groundwater data and information, 90% readiness of water security plans, 80% public financing of interventions via convergence, 70% adoption of efficient water-use practices, and 60% improvement in the rate of groundwater level decline.

The ABHY scheme stands as a pioneering effort, showcasing community-driven sustainable groundwater management in India. The program has yielded positive outcomes, elevating groundwater availability and quality, amplifying water utilization efficiency and productivity, bolstering farmer income and livelihood stability, and contributing to both climate change mitigation and adaptation. It has garnered commendation and acknowledgment from various national and international bodies.

## International Solar Alliance in 2022

The International Solar Alliance (ISA) stands as a visionary endeavor with the aim of harnessing the potential of solar energy to achieve universal energy security and sustainable development. India, a founding member and host of ISA, has been a driving force in promoting solar energy on a global scale.

Proposed by India's Prime Minister Narendra Modi and inaugurated by him at the UN Climate Change Conference in Paris, the ISA was established on November 30, 2015, in collaboration with the President of France. It unites over 120 signatory countries, primarily located either entirely or partially between the Tropic of Cancer and the Tropic of Capricorn, thus benefiting from abundant sunlight. The core goal of this alliance is to encourage the efficient utilization of solar energy, thereby reducing reliance on fossil fuels.



Picture Courtesy/Credit/Source: Asia One Magazine

Functioning as a treaty-based inter-governmental organization, the ISA endeavors to foster cooperation and innovation among its member nations in the domain of solar energy. To this end, the ISA has introduced diverse initiatives and programs such as the One Sun One World One Grid (OSOWOG) project, the Solar Risk Mitigation Initiative (SRMI), the Scaling Solar Application for Agriculture Use (SSAAU) program, and the STAR-C capacity-building initiative. Additionally, the ISA

convenes annual assemblies and produces analytical reports that shed light on the global solar sector.

India's pivotal role in ISA as a founding member and host is noteworthy. The country has been instrumental in championing solar energy adoption globally. India itself has set an ambitious target of achieving 450 GW of renewable energy capacity by 2030, of which 280 GW is slated to come from solar energy. The Indian solar sector has experienced remarkable growth, with an installed capacity exceeding 60 GW as of 2022. Furthermore, India is dedicated to nurturing its domestic solar manufacturing industry and cultivating a hydrogen economy.

**Key highlights of ISA's activities in India during 2022 include:**

- The Fifth Assembly of ISA was held in New Delhi from October 17 to 20, 2022. This assembly saw participation from leaders of 109 countries who discussed vital ISA initiatives concerning energy access, security, and transition.
- The Fifth Assembly witnessed the release of three analytical reports: the World Solar Technology Report, the World Solar Investment Report, and the World Solar Market Report. These reports provide valuable insights into global solar sector trends, opportunities, and challenges for ISA member nations.
- Technical sessions were organized during the assembly, focusing on strategic ISA initiatives such as OSOWOG, SRMI, SSAAU, and the STAR-C capacity-building program.
- ISA continued to offer support to member countries in the implementation of solar projects and programs through mechanisms like the Common Risk Mitigation Mechanism (CRMM), Project Preparation Facility (PPF), Solar Technology Application Resource Centre (STAR-C), and the Coalition for Sustainable Climate Action (CSCA).
- Collaborative efforts with partner organizations such as the World Bank, Asian Development Bank (ADB), International Renewable Energy Agency (IRENA), International Energy Agency (IEA), and United Nations Development Programme (UNDP) remained crucial in mobilizing resources and expertise for ISA's mission.

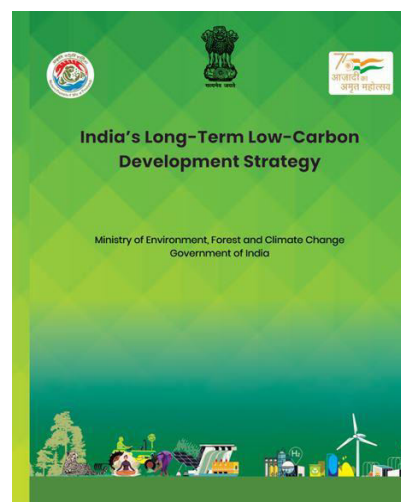
India's solar sector continues to surge, boasting an installed capacity exceeding 60 GW as of 2022. The nation is actively advancing its domestic solar manufacturing sector and spearheading the creation of a green hydrogen economy.



## India's Long-Term Low-Carbon Development Strategy (LT-LEDS) 2022

India's Long-Term Low-Carbon Development Strategy (LT-LEDS) was unveiled through a report submitted to the United Nations Framework Convention on Climate Change (UNFCCC) in early November 2022. This strategic framework is acclaimed for its forward-thinking nature, elucidating India's ambitions and strategies in pursuit of low-carbon development, aligning with its unique national context and developmental priorities. Anchored in principles of equity, common but differentiated responsibilities and respective capabilities (CBDR-RC), and climate justice, the strategy acknowledges the manifold advantages of low-carbon development, encompassing bolstered energy security, expanded energy access, employment opportunities, and resilience enhancement.

The crux of this strategy lies in the identification of seven strategic transitions. These transitions are deemed pivotal for steering India toward a low-carbon trajectory across multifarious sectors: electricity, transportation, urbanization, industry, CO<sub>2</sub> removal, forestry, and finance. These transitions find support from existing policies and programs, supplemented by elements of a long-term vision necessitating further research, innovation, and international collaboration. Noteworthy is the strategy's recognition of adaptation, resilience, and the significance of lifestyle changes and behavioral interventions in the quest to diminish emissions while enhancing overall well-being.



Picture Courtesy/Credit/Source:  
MoEFCC GOI

Nevertheless, while the strategy boasts a comprehensive and integrated approach to low-carbon development, with a pronounced focus on co-benefits and inclusive growth, it is not without challenges and limitations. Some of these challenges include:

- The absence of quantifiable emissions reduction targets or scenarios within the strategy. It only asserts that India's per capita emissions will not surpass the global average and that net-zero emissions will be achieved when the world does so. This lack of specifics makes it difficult to gauge the strategy's adequacy, ambition, and alignment with global climate goals.

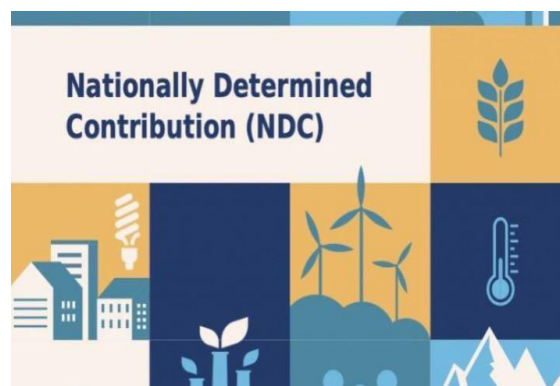
- A lack of a well-defined roadmap and timeline for executing the strategic transitions. While mentioning indicative actions and initiatives in the short, medium, and long term, it does not clarify the roles and responsibilities of various stakeholders, such as central and state governments, private enterprises, civil society, and international collaborators. This absence obscures the strategy's operationalization and monitoring process.
- Failure to address pivotal challenges and trade-offs associated with low-carbon development. This includes issues such as the social and economic costs of phasing out fossil fuels, potential environmental impacts of large-scale renewable energy deployment, feasibility and acceptability of CO2 removal technologies, governance and funding of forest conservation and restoration, and cultural and behavioral barriers to lifestyle alterations.
- The strategy's oversight in contemplating uncertainties and risks that could influence its implementation. Factors like climate change impacts, accessibility and affordability of low-carbon technologies, global geopolitical dynamics regarding climate action, and domestic political economy and public sentiment regarding low-carbon development are not thoroughly explored.

While India's LT-LEDS indeed constitutes a positive stride toward articulating a long-term vision for low-carbon development, congruent with the nation's circumstances and developmental priorities, further refinement and elaboration are requisite. More clarity, specificity, accountability, and robustness are needed. Additionally, it must be buttressed by more resolute and tangible actions in the near term to underscore India's resolute commitment and leadership in the realm of global climate action.

## Nationally Determined Contribution (NDC) Report, 2022

The 2022 report detailing India's nationally determined contribution (NDC) encapsulates the nation's revised climate objectives and strategies spanning 2021 to 2030. This updated NDC was presented to the UNFCCC in August 2022, emblematic of India's commitment to the Paris Agreement. Some key highlights from this revised NDC include:

- India has pledged to curtail the emissions intensity of its GDP by 45% by 2030 compared to the 2005 benchmark, a considerable advancement from the earlier target of 33-35% by 2030. Emissions intensity gauges the volume of greenhouse gas emissions per unit of GDP. This shift denotes India's aspiration to propel economic growth while concurrently diminishing emissions.
- A commitment has been made to amplify the proportion of the non-fossil fuel in India's energy mix to 50% by 2030, an enhancement from the preceding goal of 40% by 2030. This endeavor encompasses a target of erecting 450 GW of renewable energy capacity by 2030. Non-fossil fuels encompass sources like solar, wind, hydro, and nuclear that do not emit greenhouse gases.



Picture Courtesy/Credit/Source: [talentias.in](https://www.talentias.in)

The upswing in non-fossil fuel adoption signifies India's endeavor to meet escalating energy demands while progressively reducing reliance on coal and other fossil fuels.

- India restates its commitment to augment its carbon sink by 2.5-3 billion tonnes of CO<sub>2</sub> equivalent through additional forestation and tree cover by 2030. This commitment involves augmenting natural carbon sinks through initiatives such as reinvigorating degraded lands, fostering agroforestry, and conserving wetlands. Carbon sinks are reservoirs that absorb and store carbon dioxide from the atmosphere. Augmenting these sinks denotes India's move to offset a portion of its emissions by amplifying carbon sequestration in plants and soils.

- A long-term aspiration is unveiled, aiming for net-zero emissions by 2070, aligning with the global objective of constraining warming to well below 2°C and striving to limit it to 1.5°C. Net-zero emissions imply that any remaining emissions are counterbalanced by an equivalent removal of carbon dioxide from the atmosphere. This goal signifies India's contribution toward stabilizing the global climate and averting the severe ramifications of climate change.

India's updated NDC underscores its approach to pursuing low-carbon development harmonizing with national circumstances and developmental priorities. Principles such as equity, common but differentiated responsibilities and respective capabilities (CBDR-RC), and climate justice are integral to India's NDC. Additionally, India accentuates the supplementary advantages of its climate actions, spanning energy security, access, employment, and resilience augmentation.

## NEW PARTNERSHIPS

### Memorandum of Understanding with India Water Foundation and National Institute of Hydrology, Roorkee, Uttarakhand

Dr Arvind Kumar, President, India Water Foundation signed a Memorandum of Understanding (MoU) with Dr. J. V. Tyagi, Director, National Institute of Hydrology (NIH) which is a premier Research and Development organization on Hydrology under the Ministry of Jal Shakti, Department of Water Resources River Development and Ganga Rejuvenation, Government of India. Dr. Kumar also presented Dr. Tyagi his book -'United Nations at 75 and beyond'. We look ahead to a fruitful collaboration on various projects and leverage our respective strengths and contribute to a water secure nation. We take this opportunity to thank Dr. J. V. Tyagi, for his warm gesture and gracious hospitality. Also present were Shweta Tyagi, Chief Functionary, India Water Foundation and Dr. Sudhir Kumar Scientist G and Dr. Sanjay K. Jain Scientist G from NIH.



### Memorandum of Understanding with India Water Foundation and School of Planning and Architecture, New Delhi

Dr Arvind Kumar, President, India Water Foundation signed MoU with Dr P. S. N. Rao, Director, School of Planning and Architecture New Delhi on 10th August 2022. SPA is recognized as an Institute of National Importance by the Ministry of HRD, Government of India. Human habitat and environment being the basic concern of the School, the school has various research and collaborative projects on the same. IWF looks forward to global and regional projects with SPA in the realms of environmental planning and architecture and habitat improvement. Dr. Kumar also presented Dr. P. S. N. Rao his book -'United Nations at 75 and beyond'. Also present were Shweta Tyagi, Chief Functionary, India Water Foundation and Prof. Dr. Ashok Kumar, Dean (Academics), Dean (Students Affairs), Professor of Physical Planning, Prof. Dr. Sanjay Gupta, Dean (Research), Dean (Faculty Welfare), Professor of Transport Planning, Prof. Dr. Rabidyuti Biswas, Professor of Physical Planning and Prof. Dr. Meenakshi Dhote, Professor of Environmental Planning from School of Planning and Architecture, New Delhi.



## Memorandum of Understanding with India Water Foundation and WAPCOS Limited

India Water Foundation signed a Memorandum of Understanding with WAPCOS Limited in presence of CMD Mr. R K Agrawal and Dr Arvind Kumar, President, India water Foundation.. Mr R K Agrawal is also the chairman of NPCC. He has recently been awarded the global Indian of the year 2021-22 by 18th Edition Asia-Africa Business & Social Forum, The MoU was signed by Mr. Anupam Mishra Director Commercial and HRD and Dr. Arvind Kumar. Also present were other colleagues from WAPCOS Limited and Shweta Tyagi, Chief Functionary, India Water Foundation. WAPCOS Limited is a MINIRATNA-I and ISO 9001:2015 accredited Public Sector Enterprise under the aegis of the Union Ministry of Jal Shakti, Department of Water Resources, RD & GR. A global leader in consultancy and engineering, procurement & construction (EPC) providing integrated & customised solutions for sustainable development of water, power and infrastructure projects. With in-built capability to provide multi-disciplinary project teams comprising of its own core group of professionals and specialists from various organisations of Govt. of India, WAPCOS provides consultancy services in all facets of water resources, power and infrastructure sectors in India and abroad in more than 35 countries. India Water Foundation is looking forward to executing projects and programmes in collaboration for a sustainable future.



## Memorandum of Understanding with India Water Foundation and Mahatma Gandhi Institute for Combating Climate Change (MGICCC)

India Water Foundation signed a Memorandum of Understanding with Mahatma Gandhi Institute for Combating Climate Change (MGICCC) which is an autonomous institute under Government of NCT of Delhi mandated to organize training programs for Government, Public Sector and Private Sector officials in climate change and related areas and to conduct actionable research in key areas like pollution control, waste management, biodiversity, greening, energy efficiency, renewable energy, climate change and clean development mechanism, etc. on 2nd November 2022 under the aegis of 7<sup>th</sup> India Water Week. Both IWF and MGICCC recognize that there exists synergy between the two and both are concerned with tackling challenges relating to sustainable development and management of habitats and environment and there exists considerable scope for cooperation amongst them.





## Memorandum of Understanding with India Water Foundation and Network for Certification and Conservation of Forests (NCCF)

India Water Foundation (IWF) has signed a Memorandum of Understanding with Network for Certification and Conservation of Forests (NCCF) which is a registered society of experts and stakeholders of natural resources. The MoU has been signed in the fields of carbon credits, water credits, sustainable management, protection and utilization of water resources, hydrology, sustainable development, capacity building and research. NCCF is engaged in the development of India specific and globally bench marked sustainability standards as its core working area, apart from working for policy advocacy, training and capacity building through multi-stakeholder engagement. NCCF is the National Governing Body of PEFC in India and is the part of PEFC thematic task forces covering industries like Rubber, Textile, Furniture, Construction and Packaging. NCCF has developed the first ever Indian Certification Standard for Forest Management and that has been endorsed by the leading international certification organization, the PEFC, giving it global recognition. This scheme is being used by many states for forest certification. NCCF has launched its Trees outside Forests (ToF) Certification Scheme, which is the first of its kind and is currently under the process of endorsement by PEFC. Looking forward to jointly explore and identify projects in water and environment related Sectors.



## MEMBERSHIP & ACCREDITATIONS

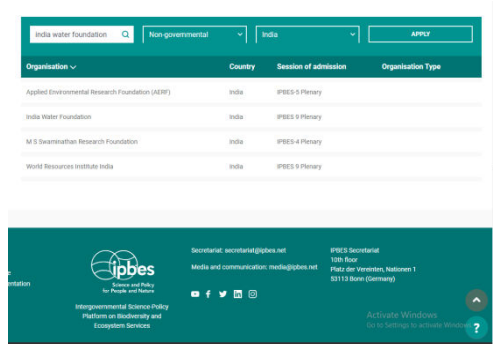
**MEMBER - WORLD WATER QUALITY ALLIANCE, UNEP:** India Water Foundation became member of the World Water Quality Alliance of the UNEP. The World Water Quality Alliance (WWQA) is a global effort to improve access to safe, clean water for everyone. The



Alliance is an informal network of members from local communities, NGOs, supranational and national administrations, farmers, fisheries, water authorities and other related stakeholders. WWQA serves as a platform to discuss and share information on various topics such as water quality science and technology, best practices, data collection and

analysis, among others. Through this platform, members are able to collaborate to influence policies and promote sustainable development.

**MEMBER - GLOBAL WATER PARTNERSHIP:** India Water Foundation becomes the partner of Global Water Partnership with GWP South Asia office in Sri Lanka as principal point of contact. We hope that our interaction with GWP Partners in the context of GWP country, regional, and global platforms will prove mutually beneficial and we would prove to be a reliable partner for GWP.



**OBSERVER- IPBES:** India Water Foundation has been accredited as an observer organization of the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services (IPBES). IPBES is an independent intergovernmental body established by States to strengthen the science policy interface for biodiversity and ecosystem services for the conservation and sustainable use of biodiversity, long-term human well-being and sustainable development. We are grateful to IPBES for approving IWF's candidature as an Observer. It will serve as an

opportunity for the IWF to engage at global, regional and national level to build capacities, strengthen knowledge foundations, communicate, advocate and push for policies. Looking forward to contributing towards better values-centred outcomes for people and the rest of nature.

# SURVEY ON INFORMATION COLLECTION OF WATER SUPPLY AND SANITATION IN URBAN SLUM AREAS

JICA mandated India Water Foundation and NJS to undertake a survey on the water supply and sanitation in urban slum areas in Delhi. Due to the expansion of novel coronavirus infection in India, the survey intended to

1. Analyze the achievements and lessons learnt in water supply and sanitation sector in urban slum areas through reviewing related policies, related activities by other development partners, and analyzing JICA's approaches adopted in representative projects in the sector.
2. Grasp the current status, identify the issues, analyze factors for better conditions of water supply and sanitation facilities in urban slum areas in NCT of Delhi by conducting field surveys.
3. Propose assistant policy/implementation plan and required facilities/activities of novel coronavirus prevention, water-borne diseases, and other infectious diseases for future project formulation in water sector

The survey team reviewed central and state government policies, other development agencies and JICA through telephonic and online conversations, e-journals, articles, reports on public portals by other agencies / organizations / think tanks, interviews/emails, correspondences etc. Survey team carried out data collection from 50 selected slums in Delhi by identifying the representative sample slums with/without government support categories. The team collected baseline data in the selected slums for accurate information about drinking-water, sanitation, hygiene related issues and other localized and associated vulnerabilities. This publication is an exhaustive study on centre and state policies and recommendations for providing equitable water and sanitation services to all.



## EXECUTIVE SUMMARY

The huge population growth and economic development in India over the past few decades has exacerbated the demand in clean water resources and has put huge stress on the country's natural water resources. The country's major cities faced problems in water supply due to high population of people and from the migration of people from rural areas into cities looking for a better source of livelihood. As the population of cities increased, the demand of water increased significantly but the development of water supply facilities has not kept to pace. City's water supply systems are constantly facing problems in terms of water quantity, water quality and services. Also, the population increase led to the increase in sewage discharge. The lack of proper sewerage facilities like sewage pipes and drains and proper treatment facilities have led to unsanitary conditions and untreated sewage being discharged into natural water bodies which pollutes them. This leads to development issues such as deterioration of living conditions for local residents and more so for the vast population of urban poor.

The COVID-19 pandemic has only amplified the situation especially for the populations living in slums. The lockdowns hindered access to clean water supply and sewerage services for people living in slums. The risk of contracting the virus and other infections is higher due to the lack of Water, Sanitation, and Hygiene (WASH) services. As India is slowly recovering from the pandemic and moving back to normalcy, there is a need to study the situation of water supply and sanitation in urban slums for the better implementation of projects and policies in the future. Hence JICA mandated India Water Foundation and NJS to undertake a survey on the water supply and sanitation in urban slum areas in Delhi.

**Final Report Link:** <https://www.indiawaterfoundation.org/final-report/>





## BOOKS AND REPORT LAUNCH

During the India Water Week Sh. Gajendra Singh Shekhawat, Hon'ble Union Minister, Ministry of Jal Shakti, Government of India, Shri Kailash Choudhary, Hon'ble Minister of State, Ministry of Agriculture and Farmers' Welfare, Government of India, Mr. Atul Bagai, Head, UNEP India office, Mr. Rajan Sudesh Ratna, Deputy Head and Senior Economic Affairs Officer, UNESCAP, SSWA Office and Dr Arvind Kumar, President, India Water Foundation launched three publications -

‘Ecosystem based Adaptation approaches to sustainable management of aquatic resources’ and by Dr. Arvind Kumar. This book **‘Ecosystem based Adaptation approaches to sustainable management of aquatic resources’** presents a close examination of the role of ecosystem-based adaptation in managing river basins,



aquifers, flood plains and their vegetation to provide water storage and flood regulation. To get your copy please go to (<https://www.elsevier.com/books/ecosystem-based-adaptation/kumar/978-0-12-815025-2>)



The publication **‘India at 75 and beyond’** has perspectives from policymakers, Ministers, bureaucrats, influencers and experts to analyze the achievements of India in the last 75 years especially in the last decade while looking forward to the goals we must now achieve in the coming decade and in Amrit Kaal. To get

your copy please go to <https://www.amazon.in/dp/B09R24JNKZ>

A report on ‘Information on water supply and sanitation in urban slums of Delhi’ by India Water Foundation in collaboration with NJS Engineers India private Ltd. for Japan International Cooperation Agency (JICA) was also released. This report on **‘Information collection of water supply and sanitation in urban slums of Delhi’** is a result of a one year long project in which India Water



Foundation and NJS undertook a survey on the water supply and sanitation in urban slum areas in Delhi. To read the complete report please go to <https://www.indiawaterfoundation.org/final-report/>

## ACTIVITIES OF INDIA WATER FOUNDATION (GLOBAL INPERSON)

Representing Asia Pacific region on behalf of UN ESCAP at the UN 2023 Water Conference Dr. Arvind Kumar landed in New York, a city of endless possibilities, high energy, great diversity and much to visit and explore whether you're a foodie, an art enthusiast, a theatre lover or just someone who loves a fast-paced life, New York City is the place for you. However for him all the roads in New York were leading to the United Nations Headquarters where the UN 2023 Water Conference was being held.



### NEW YORK - UN 2023 WATER CONFERENCE

The UN 2023 Water Conference was convened from 22-24<sup>th</sup> March 2023 after 44 years since 1977. The conference opened with energy and optimism for a true watershed moment and began with a clear diagnosis of the situation that progress has fallen severely short in achieving SDG 6 for universal access to WASH and actions that work, exist, but must be taken to scale. Some 10,000 participants gathered at UN Headquarters and online from 22 to 24 March 2023, to urgently scale up action to address the water crisis and ensure equitable access to water for all. Co-hosted by the Kingdom of the Netherlands and the Republic of Tajikistan, the Conference brought together world leaders, civil society, business leaders, young people, scientists, academics, the UN System and others from across sectors — agriculture, energy, environment and water — around a common goal: to urgently tackle the water crisis and set the world back on track to achieving SDG 6 – On Clean Water and Sanitation. It was almost an impossible task to cover such a huge agenda in just a span of three days but some concrete actions came out of it.





## INDIA WATER FOUNDATION AT THE UN 2023 WATER CONFERENCE

Being an ECOSOC accredited civil society organization India Water Foundation got several opportunities to organize events, speak at main sessions, plenary and other side events.

**1. OFFICIAL VIRTUAL SIDE EVENT-** India Water Foundation organized an official side event in collaboration with World Water Council on 18<sup>th</sup> March 2023 under the aegis of UN 2023 water conference to also commemorate India Water Foundation's 15<sup>th</sup> founding day. The high level policy dialogue on 'Accelerating SDG 6 Achievements through Cross Sectoral

Partnerships' was chaired by the Hon'ble Minister of Jalshakti Sh. Gajendra Singh Shekhawat and context setting by Dr. Arvind Kumar, President, India Water Foundation. Other Excellencies, dignitaries and speakers in the event were- Ms. Armida Salsiah Alisjahbana, Under Secretary General of United Nations and Executive Secretary



of UNESCAP, Mr. Loic Fauchon, President, World Water Council, Mr. Shombi Sharp, UN Resident Coordinator India, Mr. David Cooper, Acting Executive Secretary, Convention on Biological Diversity, Mr. Satya Tripathi, Secretary General, Global Alliance for a sustainable Planet, Mr. Saroj Kumar Jha, Global Director-Water, World Bank Group, Mr. Ruhiza Jean Boroto, Senior Land and Water Officer, FAO, Mr. Jun Watanabe, Senior Representative JICA India Office and Mr. Vishwaranjan Sinha, Programme Officer, Water and Wetlands for South Asia, IUCN. The event was hosted by Ms. Shweta Tyagi, Chief Functionary of India Water Foundation.

**2. SPECIAL EVENT** – Out of the four special sessions at the UN Water Conference 2023 was ‘**Regional Dialogue on Accelerating Implementation of the Water Action Agenda**’ and Dr. Arvind Kumar was panellist in this session. It was organised and had contributions by-



**Member States:** Federal Ministry for Agriculture, Forestry, Regions and Water Management, **Austria**; Ministry of Environment, **Dominican Republic**; Ministry of Water Resources and Irrigation, **Egypt**; Federal Ministry for the Environment, Nature Conservation, Nuclear Safety and Consumer Protection (BMUV), **Germany**; Government of **Tajikistan**, Ministry of Water, **Tanzania**



#### **United Nations Regional Commissions:**

Economic Commission for Africa (ECA), Economic Commission for Europe (ECE), Economic Commission for Latin America and the Caribbean (ECLAC); Economic and Social Commission for Asia and the Pacific

(ESCAP), United Nations Economic and Social Commission for Western Asia (ESCWA).

**CIVIL SOCIETY:** India Water Foundation (ESCAP region); African Civil Society Network for Water and Sanitation (ANEW) (ECA region); Bahr Alolom Forum, Iraq (ESCWA region); Latin America Youth Water Network (ECLAC region); Women for Water Partnership and Armenian Women for Health and Healthy Environment (ECE region)



### **3. On the eve of World Water Day on 23<sup>rd</sup>**

March 2023 at UN 2023 Water Conference in New York Dr. Kumar spoke at the side event ‘PPP Model for Rainwater Harvesting and Enhancing Native Biodiversity – Use Cases from India’ organised by HCL, The Nature Conservancy, ATREE, IIHS and Gorakhpur Environmental Action Group outside the UN headquarters at the Nature Hub, New York. I presented the talk on ‘Harnessing cross cutting nature of Water to achieve Agenda 2030.’

**4. BILATERAL MEETINGS-** Dr. Kumar had an opportunity to meet several dignitaries, experts and colleagues at New York. Had few bilateral meetings as well-

**A. MS. MUMBA MUSONDA-** Dr. Kumar met and interacted with Dr. Mumba Musonda, Secretary General, of The Convention of Wetlands. Their comprehensive discussions steered from the wetlands restoration and rejuvenation work carried out in India and how India Water Foundation and The convention can create a close partnership to strengthen and meet the objectives of the convention. They also discussed on the implementation of decade of ecosystem restoration and how we can contribute towards it by forging committed partnerships and tangible actions.



**B. DR. EDDY MOORS -** During the UN 2023 Water Conference in New York Dr. Kumar also had a bilateral meeting with Dr. Eddy Moors, Rector, IHE Delft Institute of water education under the auspices of UNESCO. In their comprehensive discussions they explored strengthening impacts by means of partnerships for co-creating knowledge and capacity development to strengthen individual and organizational performance and learning. To ensure that high-quality and up-to-date water programmes are accessible and affordable to those who need them and



support them in developing and implementing water education and research programme.

**C. MS. JANE MADGWICK-** Dr. Kumar also had the opportunity to briefly meet Ms. Jane Madgwick CEO of Wetlands International and exchanged thoughts on the wetland restoration and rejuvenation programmes in India.





**D. MR. LOIC FAUCHON-** The discussions with Mr. Loic Fauchon, President of the World Water Council ranged from the G20 events to the World Water Forum to take place in 2024 in Bali.

**E. MR. GIRIRAJ AMARNATH-** He also met Mr Amarnath, Principal researcher – Disaster Risk Management and Climate Resilience and Research Group Leader: Water Risks to Development and Resilience. Their discussions ranged on variety of topics and exchanged notes on technology, food and hot spots I New York.



MEETING WITH MR. LOIC FAUCHON



MEETING WITH MR. GIRIRAJ AMARNATH



MEETING WITH MR. SULTON  
RAHIMZODA, REPUBLIC OF  
TAJIKISTAN



MEETING WITH DG NMCG

## 10<sup>TH</sup> ASIA PACIFIC FORUM ON SUSTAINABLE DEVELOPMENT

Dr. Kumar travelled to Bangkok, Thailand to attend the 10<sup>th</sup> Asia Pacific Forum on Sustainable Development from 27-30<sup>th</sup> March 2023 organized by the Economic and Social Commission for Asia and the Pacific (ESCAP) and presented the learnings gathered from the UN 2023 Water Conference. The Tenth Forum was attended by more than 1,700 participants, including representatives of Governments, intergovernmental organizations, United Nations bodies, international organizations and major groups and other stakeholders.



### India Water Foundation at 10<sup>th</sup> APFSD

**1. SDG6 ROUNDTABLE** – Dr. Kumar as speaker attended the roundtable discussions on SDG6 profile at the 10th Asia Pacific Forum on Sustainable Development (APFSD) at Bangkok, Thailand. The round table on the review of SDG 6 was co-organized by the Food and Agriculture Organization (FAO) and the United Nations’ Children’s Fund (UNICEF) with UN ESCAP. The other country representatives in the discussion were from Indonesia, Australia, Kyrgyzstan and agencies like GWP, FAO and UNICEF. He presented the perspectives



from India and highlighted why programme like Amrit Sarovar is imperative because not only are we staring at depletion of groundwater and pollution of surface water but also vanishing water bodies like lakes, ponds, wetlands etc. due to encroachment and development works. As a member of the national wetlands committee of the Ministry of Environment, Forest and climate change of Government of India he made the provision of enumerating, geo tagging and making an inventory of water bodies to make encroachment difficult especially in urban areas

by making them part of the revenue records which is being implemented by the government now.



**2. SDG6 PLENARY-** In the SDG6 plenary Dr. Kumar presented the key takeaways and outcomes of the UN 2023 Water Conference. The commitments made by countries, private sector, international and UN agencies and NGOs. Also the main outcome was 708 and increasing water action agenda commitments registered on the water action website.

### 3. BILATERAL MEETING

It was of utmost honour and privilege for Dr. Arvind Kumar to have got an opportunity to meet Ms. Armida Salsiah Alisjahbana Executive Secretary ESCAP and Under Secretary General of United Nations. They discussed the priority areas of ESCAP in the SSWA region and she appreciated India Water Foundation’s work to



ensure proper management and adequate availability of water resource. She stressed why an integrated approach to SDG6 is essential to bringing the other Global Goals to fruition.



There have been events in the past as well but there is very little sign that these efforts have accelerated progress. Most countries remain off-track on targets for universal WASH. Most have made little progress on water security. And for those countries that have achieved transformational change, there’s no evidence that international commitments have been the trigger. If past summits have failed, what UN

undertakings would speed up progress on the SDG6? It’s not what happens during the conferences and forums, it’s what happens afterward?





**UN WATER SUMMIT ON GROUNDWATER:** Shweta Tyagi, Chief Functionary, India Water Foundation attended the UN Water Summit on Groundwater, which took place at UNESCO headquarters at Paris from 6-8 December 2022. The summit gathered more than 850 on-site participants, 3,500 online participants from more than 139 countries. The Summit was the



culminating event of the 2022 campaign “Groundwater-making the invisible visible”, implemented by the dedicated UN-Water Task Force, co-coordinated by UNESCO and IGRAC, on behalf of UN Water. In the joint message, Governments, the donor community, the private sector and civil society are called upon to declare voluntary commitments and announce accelerated action towards financing sustainable groundwater management. The summit culminated with passing the baton event from

the Government of Senegal who organized the 9th World Water Forum in Dakar, Senegal to the Government of Indonesia who would be hosting the 10th World Water Forum in Bali, Indonesia.

**80TH BOARD OF GOVERNORS MEETING:** 80th Board of Governors meeting of the World Water Council - Conseil Mondial de l'Eau was held in Paris attended by Chief Functionary Shweta Tyagi. It was followed by the 9th General Assembly that was held on 10<sup>th</sup> December, 2022 attended by both Dr. Arvind Kumar and Shweta Tyagi.



## REGIONAL (INPERSON)

**ISLAMABAD:** It was an overwhelming feeling to get an opportunity to bow in front of the statue of Mahatma Gandhi inaugurated by Gandhi ji himself at the Indian High Commission in Islamabad, Pakistan said Dr. Kumar during his visit to attend the Sixth South and South West Asia Forum on the Sustainable Development Goals organized by SSWA Office of UNESCAP from 5-8th December 2022. He availed the opportunity to present his latest publication on India at 75 and beyond to Sh. Dr Suresh Kumar, Charged'affaires at the Indian Embassy, Islamabad. He was deeply touched by the warm gesture of Dr. Suresh Kumar, Charged'affaires and Sh. Gaurav Thakur, First Secretary at India Embassy inviting me for lunch and spending a relaxed afternoon.

## Sixth South and South-West Asia Forum on the Sustainable Development Goals

At the Sixth South and South-West Asia Forum on the Sustainable Development Goals discussing Accelerating the recovery from COVID-19 and the full implementation of the 2030 Agenda for Sustainable Development at all levels from 5-7 December 2022 in Hybrid mode At Islamabad, Pakistan. Dr. Arvind Kumar made presentation on the report of SDG 6 progress and



implementation which he drafted for UN ESCAP for the South and South west Asia countries – India, Nepal, Bhutan, Afghanistan, Bangladesh, Pakistan, Srilanka, Iran, Turkey and Maldives. Accelerated actions are required to achieve clean water and sanitation (SDG 6) in the subregion as the progress towards the Goal is slow. Increasing water pollution, climate change impact, drought and desertification are worsening these trends. The contamination and low levels of water use

efficiency, lead to water scarcity if unmitigated. The session discussed, among other things: Status, trends, emerging issues, and interlinkages of implementing SDG 6; Good practices to facilitate inclusivity in access to clean water and sanitation including innovative technologies & Areas for subregional cooperation.

## Policy Dialogue on Regional Cooperation for Sustainable Development in South Asia – Role of the South Asia Network on SDGs (SANS)-ISLAMABAD

“Recent climate-related disasters in Pakistan, Nepal, Bangladesh and India are a reminder that policymakers must act now to protect their citizens and mitigate and reverse the signs of climate change to secure sustainable growth for the future. Regional cooperation and the SDGs are intrinsically synergistic and mutually reinforcing.” said Dr. Arvind Kumar, President India Water Foundation during the Policy Dialogue on Regional Cooperation for Sustainable Development in South Asia – Role of the South Asia Network on SDGs (SANS) organized by SSWA office UNESCAP on 8th December 2022. The session was moderated by Ms. Mikiko Tanaka, Head, ESCAP South and South West Asia Office, chaired by Mr Rana Ihsan Afzal, SAPM Coordinator for Commerce and Industries, Pakistan and opening remarks were by Ms. Cecile Fruman, Director, Regional



Integration and Engagement, South Asia, The World Bank Afghanistan. The presentation in the session was made by Dr. Arvind Kumar, Dr Posh Raj Panday, SAWTEE, Nepal and Prof Selim Raihan, South Asian Network on Economic Modeling (Online). The panelists in the discussion were Dr Hassan Daud Butt, Advisor, SDPI, Dr Omar Joya, Biruni Institute (Online), Dr Fahmida Khatun, CPD, Dhaka (Online), Prof Selim Raihan, South Asian Network on Economic Modeling (Online), Ms Sonam Pem, Tarayana Foundation Center, Bhutan (Online), Prof Sachin Chaturvedi, Research and Information System for Developing Countries, India (Online), Dr Arvind Kumar, India Water Foundation, Mr. George Cheriyan, CUTS, India (Online), Prof Nagesh Kumar, Institute for Studies in Industrial Development, India (Online), Dr Posh Raj Pandey, SAWTEE, Nepal, Dr Abid Suleri, SDPI, Islamabad and Dr Lakmini Fernando, IPS, Sri Lanka. Other special invitees in the session were Dr Güven Sak, The Economic Policy Research Institute of Türkiye (Online), Ms Tayaba Batool, Capacity Analytics, Dr Aishath Shehenaz Adam, Maldives National University (Online) and Ms Sofoora Kawsar Usman, Sustainable Development & Research Institute (Online).

### **Plenary on Strengthening Climate Diplomacy in South Asia: Together for Implementation'**

"Pursuit of climate diplomacy by the countries of South Asia entails the potential of enabling the concerned countries to prepare for appropriate risk assessment and risk management strategies at a regional and global strategic level" said Dr Arvind Kumar as panelist during the plenary on Strengthening Climate Diplomacy in South Asia : Together for Implementation' of SDPI's Twenty-fifth Sustainable Development Conference (SDC) & Sixth South and South West Asia Forum on the Sustainable Development Goals organized by SDPI and Ministry of Planning of



the host country on 5<sup>th</sup> December 2022. Other esteemed co-panelists in the session were Dr Abid Qaiyum Suleri, Executive Director, Sustainable Development Policy Institute, Mr Farrukh Iqbal Khan, Director General, Organization for Islamic Cooperation and Economic Diplomacy (OIC&ED), Ministry of Foreign Affairs, Mr. Mohammad Khosa, Senior Commercial Director, PepsiCo, Mr. Ahmad Rafay Alam, Environmental Lawyer, The session was chaired by Ambassador Shafqat Kakakhel, Chairperson, BoG, SDPI and guest of honour was H.E. Dr Riina Kionka, Ambassador, Delegation of the European Union to Pakistan.



## NATIONAL (HYBRID)

### High Level Policy Dialogue On Accelerating SDG 6 through Multi-stakeholder Partnerships

India Water Foundation organized a High level Policy Dialogue on ‘Accelerating SDG6 through Multi-stakeholder partnerships’ in collaboration with **United Nations Environment Programme** and supported by **UNESCAP SSSWA Office, World Water Council and Department of Science and Technology, Government of India** on 2<sup>nd</sup> November the second day of 7<sup>th</sup> India Water Week, 2022. The main objective of the session was to identify and find solutions on several bottlenecks impeding greater progress on SDG 6 acceleration.

#### Ministerial Plenary

The Policy dialogue was initiated by a Ministerial plenary which was chaired by **Sh. Gajendra Singh Shekhawat, Hon’ble Union Minister, Ministry of Jal Shakti, Government of India**, and had special addresses by **Shri Kailash Choudhary, Hon’ble Minister of State, Ministry of Agriculture and Farmers’ Welfare, Government of India**, **Mr. Atul Bagai, Head, UNEP India office**, **Mr. Rajan Sudesh Ratna, Deputy Head and Senior Economic Affairs Officer, UNESCAP, SSSWA Office** and **Dr Arvind Kumar, President, India Water Foundation**. The dignitaries

on the stage launched two books i.e. ‘Ecosystem based Adaptation approaches to sustainable management of aquatic resources’ and ‘India at 75 and beyond’ by Dr. Arvind Kumar. A report on ‘Information on water supply and sanitation in urban slums of Delhi’ by India Water Foundation in collaboration with NJS Engineers India private Ltd. for Japan International Cooperation Agency (JICA) was also released.

The publication ‘**India at 75 and beyond**’ has perspectives from policymakers, Ministers, bureaucrats, influencers and experts to analyze the achievements of India in the last 75 years especially in the last decade while looking forward to the goals we must now achieve in the coming decade and in Amrit Kaal. To get your copy please go to <https://www.amazon.in/dp/B09R24JNKZ>



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The report on ‘**Information collection of water supply and sanitation in urban slums of**

**Delhi**’ is a result of a one year long project in which India Water Foundation and NJS undertook a survey on the water supply and sanitation in urban slum areas in Delhi. This publication is an exhaustive study on centre and state policies and recommendations for providing equitable water and sanitation services to all. To read the complete report please go to <https://www.indiawaterfoundation.org/final-report/>



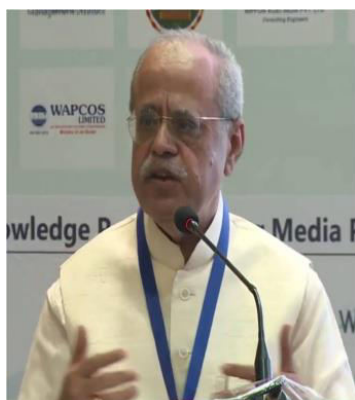
The event was hosted by Ms. Shweta Tyagi, Chief Functionary; India Water Foundation. She welcomed the dignitaries and gave a short brief of the session. She then invited **Sh. Kailash Choudhary, Hon’ble Minister of State for the Ministry of Agriculture and Farmers’ Welfare, Government of India** for his special address. Sh. Chaudhary in his crucial message mentioned that water is very crucial for humankind and gave a brief on the interlinkages between agriculture and water, complementing his statement with data from various public schemes such as Pradhan Mantri Krishi Sichayee Yojana (PMKSY) wherein he told that 70 lakh sq. hectare coverage was increased under sprinkler and drip irrigation systems at the national level to increase water efficiency in agriculture. He also said that such advance technologies in agriculture saves about 30-50% of water and produces more and better yield.



**Dr. Arvind Kumar, President, India Water Foundation** in his opening remarks mentioned the primary objective behind organizing this policy dialogue and said’ “We have gathered here organizations like UNEP, UNESCAP, World Water Council, FAO, Convention on wetlands, World Bank, UN Global Compact Network of India International Water management institute to come together and deliberate on this crucial subject. We have tried to bring multi agencies on this platform to understand best practices, policy recommendations, success stories, and implementation updates.” He further stated that water is a driving force and gateway to all SDGs and how fast it is becoming a pressing societal and geopolitical issue.

We need increasing awareness regarding freshwater resources and the need to protect them both in terms of quantity and quality. Therefore, we have to engage partner organizations for tangible

results and sensitize, incentivize, and galvanize stakeholders towards an overall circular and transversal approach to systematically integrate water in climate action and go beyond the vertical approach limitations of IWRM (Integrated Water Resource Management).



**Mr. Atul Bagai, Head, UNEP India office**, gave an insight on how twenty five years back in India people use to drink water from the taps and very recently when he visited Germany he could see the same there as well but unfortunately, presently in India the case is not the same due to excessive contamination and pollution of the resource. He delved on the triple

planetary crisis of climate change, pollution and biodiversity loss looming over our heads that needs to be addressed urgently which otherwise could become the cause of future world wars in a resource-deficit world.

**Mr. Rajan Sudesh Ratna, Deputy Head and Senior Economic Affairs Officer, UNESCAP, SSWA Office** highlighted few facts and figures about South and Southwest Asia in comparison to Pacific. He stated that Goal 6 of the SDGs is been taken seriously and collectively in the world only after a long negotiation at the 2015 Paris Agreement. He categorically made a statement that if India and South Asia do not achieve SDGs; the world wouldn’t be able to as well due to South Asia’s sheer size.





**Our Chief Guest, Sh. Gajendra Singh Shekhawat, Hon'ble Union Minister, Ministry of Jal Shakti, Government of India** shared his thoughts and anecdotes in a very balanced and captivating manner as always. He talked about multi-sectoral approach while giving an example from his very own ministry and its two visionary programmes of Hon'ble Prime Minister of India, Shri Narendra Modi Ji i.e. Jal Jeevan Mission and Swachh Bharat Mission. He confidently



said that if all the stakeholders work in sync and the same direction, India would certainly lead and steer the world towards achieving sustainable development goals. Further adding to it, he also shared his first experience as a representative of India at UN where to his utter dismay India was targeted and seen as culprit to every problem in the world due to its demography and size. But after 2014, under the leadership of PM Narendra Modi the tables have

turned and now India is seen as a torchbearer and inspiration due to its inevitable presence and contributions to the world in achieving autobahn of sustainable world. He also appreciated Dr. Arvind Kumar and India Water Foundation for coming up with such a platform concerning judicious water consumption and multi-stakeholder partnerships addressing the same.

**Mr. Loic Fauchon, President World Water Council** greeted India and its representatives with a Namaste and asserted that water is gradually becoming an expensive commodity due to scarcity and excessive hunger of resources by humans. Therefore, unity and joint efforts are the key and way-forward. Multi-stakeholder partnerships are a new paradigm shift towards an efficient, technologically advanced, integrated and extensive water management through cooperation, coordination, convergence. He also invited the Indian water lovers to the 10<sup>th</sup> World Water Forum which shall be organized in Indonesia in March 2024.



## TECHNICAL PRESENTATIONS

The Ministerial Plenary was followed by two technical presentations.

1. Overview of status and changes to freshwater ecosystems based on Earth observation and SDG monitoring and reporting - **Mr. Stuart Crane, Program Coordinator SDG 6, Freshwater Ecosystems Unit, Ecosystems Division, UNEP.** The presentation focused on how to leverage the best available science to track, monitor, and improve the health of freshwater ecosystems. He shared the data platform by UNEP which is also known as Freshwater Ecosystem Explorer, which converts satellite imagery into statistics and facilitates free access to information on freshwater ecosystems to track surface water



changes and also observe different aspects of ecosystems. He presented 20 year data from all over the world through illustrative maps, indicating river basins that experienced high levels of change far above the standard deviation. In addition to it, he mentioned that in India over 20 years, permanent water has increased by 20% and a substantial increase in seasonal water i.e. 50%; thus, strengthening water security of the nation. As a recommendation he laid emphasis towards the importance of local level at identifying changes in river basin and gave a way out on how to leverage the best available science to track, monitor, and improve the health of freshwater ecosystems with the help of latest and accessible data.

2. SDG 6 Progress in SSWA countries- **Mr. Rajan Sudesh Ratna, UNESCAP SSWA office.** He highlighted the statistics regarding South and Southwest Asia towards achieving SDGs. focused on the performance of SDG6 not only for India but also on other sub regions like Asia Pacific and South & Southwest Asia. He highlighted some statistics at glance regarding implementation in achieving SDGs, especially Goal6. He stated along with data that target Goal 6 of Pacific is slightly better than of South & Southwest Asia because of the unavailability of appropriate data with the latter. But in case of India, it has already achieved or crossed the same target way back in 2019; thus appreciating the different stakeholders in achieving the same. As recommendations he talked about few monad-nocks in SSWA i.e. major economic sectors dependent on natural resources such as water, water stress, negative change in the extent of water related ecosystem, erroneous and unavailability of data, and non-cooperation among different sectors.



## HIGH LEVEL PANEL DISCUSSION

The session then proceeded towards a **High Level Panel Discussion** which was **moderated by Dr. Divya Datt, Program Manager, and UNEP India**. She highlighted that building national capacity to monitor freshwater ecosystems health and water management is the need of the hour and for the same multi-stakeholder partnerships are the only way to address the different dimensions of water issues. She also mentioned five critical issues enveloping water in the achievement of SDGs i.e. inefficiency of water use, tackling water pollution at source and wastewater management, impact of climate change on hydrometeorology in India, health of ecosystems including wetlands, and inequity in availability and accessibility of water.



Among our eminent guest panelists, the first was **Mr. Satya Tripathi, Former Secretary General of UN and currently Secretary General, Global Alliance for Sustainable Planet**. He focused on cross-system thinking and regenerative agriculture and also gave an example of Andhra Pradesh, a state in India that is running quite successful programmes for the same. While



water health is vital to the nutraceutical industry, but accessing high quality water is increasingly challenging. “Polluted water in the ground actually washes the essential nutrients plants need out of the soil, making the nutraceutical industry’s work harder,” he added. “This water pollution makes the soil acidic and affects the solubility of nutrient ions like magnesium, potassium, iron, and calcium.” Therefore, as a way forward he talked on cross-system thinking and regenerative agriculture as a Low-Emission Development Pathway for Improved Resilience,

Soil Health, Livelihoods, rehabilitate water services and catalyze the transition to sustainable food systems in India and regarding the same gave an example of Andhra Pradesh, a state in India that is running quite successful regenerative agriculture programmes. He also requested all the stakeholders to think beyond boundaries and work in silos and collaboration regarding sustainable development goals.

## Mr. Jerker Tamelander, Director, Science and Policy, Secretariat of the Convention on



**Wetlands** congratulated the Government of India for adding 26 more wetlands under the Ramsar Convention of international importance and taking it to a total of 75 wetlands in India and appreciated India's efforts on implementing Ramsar Convention successfully. He stressed on integrated wetland policy as wetlands play an important role in functioning of the water cycle. As water moves through the surface or underground, it passes through wetlands, which in turn regulate the quantity, quality and reliability of water which is crucial to achieve

SDG agenda by 2030 and also talked about limited availability of data and limited exchange among sectors, lackadaisical monitoring and tracking of global targets. To conclude, he added that governments need to be more prudent at multi-sectoral collaborations in charting a roadmap to sustainable development.

The next panelist **Mr. Mark Smith, Director General, International water management Institute** highlighted that water resources management decisions are made by a multitude of actors working across various sectors and scales. Partnership and cooperation platforms are thus essential to ensure that these actors take coordinated decisions and work towards the same direction. Multi-stakeholder partnerships or such mechanisms unite stakeholders in a process to collaboratively solve problems and explore opportunities, as they play a role of catalyser and manager to deal with changes in complex situations across societies.



He also laid emphasis towards joint action and consensus building in achieving SDGs while bringing together local institutions to work collectively towards set targets.

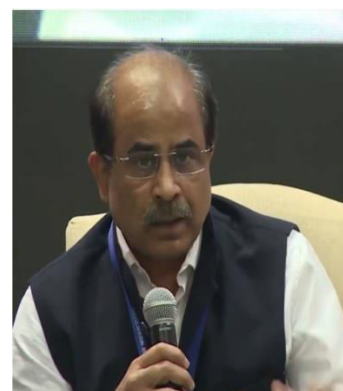


**Mr. Rajan Sudesh Ratna** shared his inputs and put forward a question towards other panelists that how significant is strengthening linkages among environment and other socio-economic sectors? He also talked about three pillars of sustainability i.e. Environment, Social and Economic factors. He called

on all the stakeholders to see SDGs through a multi-farious approach to make it more holistic and inclusive. In the end he concluded by stressing on efficient use of water through behavioral change and technological advancements in the sector.



**Dr. Satya Priya, Senior Water Resources Management, Specialist, World Bank** stated that water is a connector and crucial for mankind. No one policy, department and institutions can resolve the issue of water unavailability singlehandedly. Therefore, we need to focus on the source rather than the destination of water and concentrate on its forward and backward linkages. We should focus on how to make the source of water retainable and sustainable. He also talked about the role of communities that needs to be garnered when it comes to the implementation at the ground level and towards the end he also



asserted quote by former Prime Minister of Singapore Harry Lee Kuan Yew that ‘Every other policy has to bend on knees for our water survival.

**Mr. Ratnesh Jha, Executive Director, UN Global Compact Network India** firmly said that if we are to have any chance of success, some of the world’s oldest needs—moving clean water to communities and removing dirty water—must be met with the best that modern technology has to offer. Smart water technologies across sectors can detect anomalies and can provide capacity building capacity. He also mentioned about the most successful

initiatives on multi-stakeholder partnerships by UN Global Compact Network i.e. *UN Global Compact CEO Water Mandate* and the *Water Resistance Coalition* explaining that both these actions are industry-driven, co-led, which elevate global water stress to the top of the agenda and catalyze innovations and digitization for Safe, Sustainable, Resilient, and Inclusive Water Management.

**Ms. Patricia Meijas, Specialist Land and Water division, FAO** brought the perspective of agriculture in relation to water and its different dynamics such as inefficiency, over-consumption and pollution of an indispensable resource i.e. water. She mentions that even if agriculture may be biggest water-related challenge of all. Already today, 70 per cent of all freshwater withdrawals go to farming but that share needs to be significantly reduced. If we are to feed the 10 billion people estimated to live on our planet by 2050, agriculture must shift to much more water efficient crops and practices. She also requested all the stakeholders for their concerted efforts through willingness of different sectors, segregated data and evidence based informed decisions for multi-stakeholder collaboration.





**Mr. MP Singh, Chief of Development Operations, Japan International Cooperation Agency** gave a very different and unusual donor's perspective to the session wherein he laid importance towards neoteric knowledge exchange and relevant technology assistance towards achieving SDGs. He also readout few of the Japan's support to India through ODA loan in water and sanitation sector which accounts for more than 50,000 crores, through 38 ODA Loans, 4 Grant Aids and 12 Technical Cooperation Projects. A special mention of JICA's projects in water sector wherein water supply has reached to approximately 30 million people and 15 million people have received access to sanitation. He also quite assertively mentioned that JICA's assistance for the development of water and sanitation sector in India is noted as one of the largest amongst all the bilateral and multilateral development partners in India.

**Ms. Veena Khanduri, Executive Secretary-cum-Country Coordinator, India Water Partnership** as a guest speaker stressed on the need for an open and transparent dialogue on evidence based knowledge in the water sector. She also laid emphasis on SDG 6.5.1 for data collection and exchange among multiple sectors for better multi-stakeholder partnerships at local and global levels respectively. Therefore, embarking towards a more responsible and inclusive sustainable development of the world and specifically India.



Ms. Divya Datt gave the concluding remarks to close the discussion.



## MADHYA PRADESH WATER CONCLAVE:

Dr. Arvind kumar attended the one day Water Conclave organised by Madhya Pradesh State Policy and Planning Commission to present review and deliberate on the draft Integrated Water Policy for the state of Madhya Pradesh on 30th September 2022. It is an honour to be part of the Policy Drafting Committee and contributing in creating the Policy Framework and institutional creation. It's first of its kind policy which is taking shape in a proper way and would turnout as envisioned by the Hon'ble CM. The conclave was chaired by the hon'ble Chief Minister Sh. Shivraj Singh Chouhan who is a visionary leader and very vocal about turning water conservation into a priority issue. The conclave had the presence of Prof. Sachin Chaturvedi, Vice Chairman of Madhya Pradesh policy and planning commission, Sh. Tulsi Silawat, Minister of Water Resources MP, senior bureaucrats from the state, officials from line departments and multistakeholders for consultation.



## INAUGURATION OF THE 7<sup>TH</sup> INDIA WATER WEEK:

It was a glorious moment for all of us to witness the opening ceremony of the 7<sup>th</sup> India Water Week with the precise addresses of President of India H.E. Smt. Draupadi Murmu, hon'ble Governor of Uttar Pradesh Smt. Anandiben Patel, Hon'ble CM of UP sh. Yogi Adityanath,



Hon'ble Union Minister of Jalshakti Sh. Gajendra Singh Shekhawat and Sh. Pankaj Kumar, secretary Ministry of Jalshakti in presence of Hon'ble MOS Jalshakti Sh Tudu and Sh. Prahlad Patel. With her gracious presence and warm address the President Murmu officially opened the water week. All the galaxy of dignitaries very graciously and with warmth welcomed the delegates, international guests, organizations, water warriors. Sh. Shekhawat's address was especially excellent and very balanced on the achievements of India in water sector. His humble

demeanour and sartorial style is what makes him the leader of youth. He enjoyed the cultural programme with the delegates and opened the exhibition as well. It's very commendable that he was present for the whole day and was full of energy throughout. The valedictory session on 5h November shall be graced by HE Vice President of India and several other ministers.

## DST MEETING:

Dr Arvind Kumar, President India Water Foundation had a comprehensive fruitful meeting with Hon'ble Secretary, Department of Science and Technology, Ministry of Science and Technology GOI and had discussions on various issues and challenges and explored areas of future collaboration and cooperation between IWF and DST. The warm gesture of the hon'ble secretary is quite appreciative. Other senior officials present in the meeting were Mr S K Varshney, Head International Cooperation, Scientist G Department of Science and Technology, Dr. Neelima Alam Scientist F Technology Mission Division Department of Science and Technology GOI. Dr. Kumar also presented Dr. Srivari Chandrasekhar his latest publication on India at 75 and Beyond.



## TECHNICAL SESSION INDIA WATER WEEK:

Dr Arvind Kumar made a technical presentation on 2nd November 2022 in the Technical Session organized by Indo-German Bilateral Development Cooperation Project Water Security and Climate Adaptation in Rural India (WASCA-II), GIZ and convened also by GIZ India on Impact of Climate Change Adaptation Strategies as part of the 7<sup>th</sup> India Water Week. Dr. Kumar's presentation was titled 'Climate Change Adaptation via Cross Cutting Methods' and it delved on the cross-cutting role that climate change plays in varied sectors and how concepts like ecosystem based adaptation is a strategy that if adopted timely will address and fulfill achievement of all 17 Sustainable Development Goals by 2030. The sessions had various presentations from experts on climate change, case studies shown by Shri. Yogesh Kumar (IAS),



Additional Commissioner, MGNREGA, Department of Rural Development, Uttar Pradesh, Smt. Sufiyah Faruqui Wali (IAS), Commissioner, MGNREGA, Department of Rural Development, Madhya Pradesh, Dr Darez Ahamed (IAS) Commissioner, Department of Rural Development, Tamil Nadu, Smt. Shivangi Swarnkar (IAS), Commissioner, MGNREGA, Department of Rural Development, Rajasthan and Ms. Shilpa Nag C T (IAS), Commissioner, Department of Rural Development and MGNREGA, Karnataka

## Survey on information collection on water supply and sanitation in Urban Slum Areas

India Water Foundation had undertaken a study for Japan International Cooperation Agency (JICA) for information collection on water supply and sanitation in selected 50 representative slum samples out of around 5200 urban slum areas of Delhi in 2021-22 in collaboration with NJS Engineers India Ltd. The objective of the study was to analyze the achievements and lessons learnt in water supply and sanitation sector in urban slum areas through reviewing related central and state government policies, programmes and activities by other development agencies. Reviewing and analyzing various JICA funded representative projects in the sector and proposing assistant policy/implementation plan for future project formulation in the water sector. Although The survey was quite a challenge in itself, especially considering the COVID prevalence and restrictions, the enthusiastic study team addressed those challenges and conducted the survey, various outreach activities and came up with invaluable data which became the ground stone to draft synthesis indicators enabling interpretation of results obtained from respondents. This study will be helpful in planning for future project formulation in the water sector to achieve the targets of SDG6 and Clean India Movement.



**IUCN MEMBERS MEETING WITH DG:** "We have to chart out a proper annual road map and adopt an integrated approach for ecosystem conservation and restoration. This is a great opportunity for us to identify possibilities of engagement with IUCN. A platform like IUCN can



bring together the strengths of national and sub-regional members to complement each other's strengths and further vibrant engagement. Sustainable funding needs to be explored with conservation and restoration of sustainable wetlands, forests, river systems etc. as well" I said during a members hybrid meeting with the visiting IUCN Director General Mr. Bruno Oberle, Ms. Grethel Rojas Deputy Director General and IUCN regional Councillor Mr. Vivek Menon at IUCN India Country Office. We appreciate the warm gesture of the DG and DDG. The regional councillor Mr. Menon is very

proactive and deserves thanks from all the members for convening this meeting at such a short notice. I also presented the DG with my book India at 75 and beyond and had comprehensive discussions with other members.

**Y20 UNDER G20:** It was very exciting to be amidst youth and taking their perspectives on topics of environment, health, science etc. for the YASH project of India Water Foundation sanctioned by the Ministry of Science and Technology, Govt of India at the Netaji Subhash Technical University on 16th February 2023. The activities were aligned with the Neighborhood Youth Parliament organised by Nehru Yuva Kendra. There were various Departments involved covering diverse topics/ backgrounds such as Yoga, Environment, Health, International Year of Millets, Mission LiFE, Cultural etc. integrated with components of G20's Y20 working.



**Webinar Under Amrit Sarovar Initiative:** To commemorate the birthday of PM Modi and to augment the dream initiative of PM Modi, the Amrit Sarovar initiative under which 75 water bodies will be created in each district. India Water Foundation conducted a preliminary webinar in the series of webinars for the district magistrates of the country. The webinar was attended by the DMs and officials of more than 100 districts where experts from IWF had a discussion with them towards achieving an Integrated Approach. It was followed by an interactive rich discussion. We appreciate the excitement shown by the districts in achieving these targets.

**Van Mahotsav:** The objective behind Van Mahotsav will only be fulfilled if the saplings planted are nurtured throughout the year to transform them into trees because trees clean the air, reduce green house gas, reduce soil erosion, protect the ozone layer, prevent water pollution, conserve energy, save water, provide habitat, protect ecosystem and also provide economic opportunities. Whether you are planting another seedling to a forest or one in your garden, strategically planting trees is always a good idea. Watch the full video on India Water Foundation's YouTube channel(<https://youtube.com/shorts/tM9Uhu35eOk>).Link <https://fb.watch/eMvu8kWwG8/>



**4 July 2022:** Please find our SDG Accelerator action '**Amplifying SDG 6 towards people centric sustainability in the spirit of nexus approach**' published on the Actions page of United Nations Department of Economic and Social Affairs - Sustainable Development. It showcases how addressing holistic water management through SENSITIZE, INCENTIVIZE AND GALVANIZE model shall enhance realization of SDGs with 'No One Left Behind'. For detailed information click on- [https://sdgs.un.org/partnerships/amplifying-sdg-6-towards-people-centric-sustainability-spirit-nexus-approach?fbclid=IwAR1r1atkS2uZyW1n9j0wq5Fr0c8nyOHLIOTs2Iq0S2zXxd\\_2CFu7e\\_lf2QM](https://sdgs.un.org/partnerships/amplifying-sdg-6-towards-people-centric-sustainability-spirit-nexus-approach?fbclid=IwAR1r1atkS2uZyW1n9j0wq5Fr0c8nyOHLIOTs2Iq0S2zXxd_2CFu7e_lf2QM)



**NWDA MEETING:** India Water Foundation was fortunate to be given the privilege to be the Knowledge Partner of the Ministry of Jal Shakti, Department of Water Resources, RD & GR in preparation and organizing of 7th India Water Week. In a meeting with the National Water Development Agency at their office the Director General NWDA Mr. Bhopal Singh , Mr. R K Jain and Mr. K K Rao proposed the same which was heartily accepted by the Hon'ble Secretary Ministry of Jalshakti Sh. Pankaj Kumar and Additional Secretary Mrs. Debashree Mukherjee. Our team and partners made this event a gala success. Spearheading the need for stronger and unified water infrastructure the India Water Week brought all the key stakeholders on one platform-the people, the policy makers, the corporate, the agriculture community, UN and international agencies and deliberate on water in an integrated, unified, and holistic manner.



## Scientific Approach towards Bridging SCIENCE and HEALTH Divide in a Sustainable Way (YASH) supported by NCSTC, Ministry of Science and Technology, Government of India

**GAUTAMBUDH NAGAR:** 'Earth has experienced changes in climate and land use with practices like deforestation, intensive farming and Disruptions in Environmental Habitats which provide new opportunities for diseases. The integrated and multi-sectoral approach will galvanize support and commitment from key-stakeholders and seek for their contribution towards India's aim of becoming a net zero economy. To achieve that we need to have a synergy between various organisations working in a particular field and undertake a massive capacity building exercise to create a pool of trained manpower to achieve this mission" said Dr Arvind Kumar President, India Water Foundation at the final consultation workshop on 24/02/2023 at Bisrakh Block Development office, Gautambudh Nagar under the programme Year of Awareness on Science and Health supported by NCSTC, Ministry of Science and Technology, GOI. It was a follow up meeting to the earlier organised consultation on 09/02/2023. The meeting was chaired by Chief Development Officer of Gautambudh Nagar, Sh. Tejpratap Mishra and also present was the District Development Officer Mr. V K Tiwari. The consultation had multi-departmental participation and had presentations from experts of India Water Foundation like Dr Ajit Tyagi on



Disaster Risk Reduction, Dr D K Tyagi on Climate Change and Forestry and Mr. J K Bassin on water management. The flip chart activity was much appreciated by the participants and gave an opportunity to share their #perspectives. Both the workshops organised by IWF will go a long way in strategising proper resource mapping especially with the burgeoning population in Delhi NCR. During the workshop twenty five Champions of Change were identified and duly rewarded. All the participants received certificates. Dr. Kumar in his address gave suggestions and solutions identified during the consultation.

We need to have a shared vision of the importance of convergence in scaling up programs where the varying socio-cultural contexts, differential financing, planning approaches and varying competencies need to be considered. An integrated approach in building resilience towards climate related risks and cascading human health risks" said Dr Arvind Kumar, President, India

### मुख्य विकास अधिकारी गौतम बुद्ध नगर की अध्यक्षता में इंडिया वाटर फाउंडेशन द्वारा आयोजित बहुपक्षीय संवाद का हुआ समापन





Water Foundation at the consultation workshop in Gautambuddh Nagar, Noida under the programme Year of Awareness on Science and Health (YASH) supported by NCSTC, Ministry of Science and Technology, Government of India on 9th February 2023. The consultation was chaired by Chief Development Officer Gautambuddh Nagar who apprised the India Water Foundation of the challenges at the block level of the district and shared with us the best practices of the block. The programme was held in the Bisarakh block of Gautambuddh nagar under the aspirational block model Programme to implement and enable holistic development in those areas that require added assistance. The focus area will also be more specific thus ensuring greater attention to detail. The consultation had inter departmental participation from various departments like water resources, agriculture, women and family welfare, education, health, skill development etc. The Flip Chart activity was much gripping for the participants; it gave them an opportunity to share their prospective ideas and perspectives on various issues. The consultation organized by IWF also had presentation by Mr J K Bassin on water scenario of the district. This workshop will be an autobahn for strategizing, planning, implementation and monitoring of existing challenges in the district like sanitation, water efficiency etc. With the mushrooming population in Delhi-NCR that cuts across technical and programmatic boundaries it needs specific attention, particularly to address challenges with multiple determinants spanning several sectors, such as sustainable environment.

**EAST DELHI:** “For Building Back Better, an aspiration linked to the societal and development transition towards low to zero carbon development, among other objectives, the pandemic is a catalyst or opportunity for the urgently needed acceleration of the transformational changes required for an inclusive, resilient, and sustainable future world for all” said Dr Arvind Kumar President India Water Foundation at the final consultation workshop under the programme 'Year of Awareness on Science and Health' supported by NCSTC, Ministry of Science and Technology,



Government of India. The consultation was chaired by DM East District Sh. Anil Kumar Banka who made India Water Foundation aware of the existing challenges in the district like sanitation, bad roads etc. and sought support from IWF in charting out a proper district plan to address these challenges. There were two technical presentations by Dr Ajit Tyagi on Disaster Risk Reduction and early Warning System and by Dr J K Bassin on water resource management. There was participation from multi-departments and had in depth discussion on disaster risk reduction, water and sanitation, drainage, sewage etc. The flip chart activity was much appreciated by the participants and gave an opportunity to share their perspectives. The consultation organized by IWF will go a long way in strategizing proper resource mapping especially with the burgeoning

population in Delhi NCR. During the workshop twenty five Champions of Change were identified and duly rewarded. All the participants received certificates.

**BULANDSHAHR (First):** “We have to stress on the critical importance of coordination and cooperation, and call for a network to enhance integrated approach towards human health risk, and building resilience towards climate induced disasters “said Dr. Arvind Kumar President India Water Foundation at the final consultation workshop under the programme 'Year of Awareness on Science and Health' supported by NCSTC, Ministry of Science and Technology, Government of India. The consultation had multi-departmental participation and had in depth discussion on sustainable agriculture practices like water use efficiency and climate smart-agriculture. The flip chart activity was much appreciated by the participants and gave an opportunity to share their perspectives. Both the workshops organised by IWF will go a long way in strategising proper resource mapping especially with the burgeoning population in Delhi NCR. During the workshop twenty five Champions of Change were identified and duly rewarded. All the participants received certificates and winning school children in the painting competition were also rewarded. Dr. Kumar in his address gave suggestions and solutions identified during the consultation.



**(Second)** “Collaborative and multi-sectoral approach for designing and implementing programs



and policies and interdepartmental coordination is the key to tackle the most urgent planetary, human and animal health threats. It can be achieved by adopting the one health approach in an integrated manner” said Dr. Arvind Kumar at the multi-stakeholder dialogue organized by India Water Foundation and supported by NCSTC Division Department of Science and Technology, Ministry of Science and Technology, Government of India on 6th October 2022 at the DM’s

conference hall, Collectorate, Bulandshahr. The dialogue was chaired by Sh. Chandra Prakash Singh, District Magistrate, Bulandshahr in the presence of Sh. Abhishek Pandey, Chief Development Officer, Bulandshahr and attended by around 100 nominated officers from various departments. The experts present from India Water Foundation Dr. S K Sharma Principal Advisor IWF and Dr. D K Tyagi Former PCCF Maharashtra spoke about various indicators of development and gave expert opinion on queries. On this occasion the DM Bulandshahr Sh. Chandra Prakash ji spoke on how around 90% of the issues emerge from the administrative setup or otherwise and in order to address them, one must first priorities to ensure a change in

attitudinal mindset'. CDO Sh. Pandey in his address mentioned how global local experiences bring forth intense deliberations and discussions to ponder upon the #challenges and the quest for a positive solution.

The entire day was filled with multi-sectoral interactive brainstorming discussion to encourage people to become catalysts for change and development themselves by identifying challenges and using their realistic ambitions to raise a high bar of success. The two day activity was filled by discussions with political representatives, intellectuals and other stakeholders from the district on the challenges plaguing the grassroots level who reciprocated with a positive gesture. Various outreach programmes like signature campaign, street plays, painting competition, dialogues and debates etc.

**HAPUR: (First)** "Cooperation, Coordination and Convergence are the cornerstones for all inclusive sustained development of districts and should be aligned with an integrated approach." said Dr Arvind Kumar President India Water Foundation at the final consultation workshop under the programme 'Year of Awareness on Science and Health' supported by NCSTC, Ministry of Science and Technology, Government of India. The consultation was chaired by Chief Development Officer Ms. Prerna Singh. She highlighted that capacity building, IEC and convergence is the need of the hour. Both the workshops organised by IWF will go a long way in strategising proper resource mapping especially with the burgeoning population in Delhi NCR.



During the workshop twenty five Champions of Change were identified and duly rewarded. All the participants received certificates and winning school children in the painting competition were also rewarded. Dr. Kumar in his address gave suggestions and solutions identified during the consultation. He presented CDO with his publication India at 75 and beyond and also gave her the award of the champion of change for her proactive leadership.

**(Second):** "The roadmap to development is sustainable integrated approach and the problems of human development, resource crunch or funding issues may have caused the slow pace development of Hapur, but these problems can be reversed

by capacity building, awareness, network and coordination to bring success for community and the future generation" said Dr. Arvind Kumar at the multi-stakeholder dialogue organized by



India Water Foundation and supported by NCSTC Division, Department of Science and Technology, Government of India Ministry of Science and Technology Government of India on 7th October 2022 at Vikas Bhawan conference hall, Hapur. The dialogue was chaired by Ms. Perna Singh Chief Development Officer, Hapur and attended by around 80-90 nominated officers from various departments. The experts present from India Water foundation Dr S K Sharma Principal Advisor IWF and Dr. D K Tyagi former PCCF Maharashtra spoke about various indicators of development and gave expert opinion on queries. On this occasion the CDO Ms Singh provided a glimpse of local issues, appreciated her officers and highlighted how it becomes important to converge development at a single platform laying its focus on fulfilling the aspirations of people to make their life better’ The entire day was filled with multi-sectoral interactive brainstorming discussion to encourage people to become catalysts for change and development themselves by identifying challenges and using their realistic ambitions to raise a high bar of success. The two day activity was filled by discussions with political representatives, intellectuals and other stakeholders from the district on the challenges plaguing the grassroots level who reciprocated with a positive gesture. Various outreach programmes like signature campaign, street plays, painting competition, dialogues and debates etc.

## **Outreach Activities and Project Meetings**

Considering children as agents of change we communicated concerns and challenges all around related to Covid pandemic and how promoting community preparedness and sustainable health and hygiene culture will also affect the environment and eventually our planet under the project granted to India Water Foundation by NCSTC department, Ministry of Science and Technology, Government of India 2022-23. India Water Foundation celebrated World Earth Day with the students and teachers of Dewan Inter College Hapur where we conducted a painting competition. Several activities were undertaken under this project. This project is ongoing in the districts of Noida, Hapur and Bulandshahr in Uttar Pradesh and East Delhi District in Delhi. We also met the principals of government schools in Hapur and Bulandshahr.



As an initiation warming up for the project with Ministry of Science and Technology in the districts of Uttar Pradesh and Delhi, Ms. Shweta Tyagi, Chief Functionary India Water Foundation, had a project overview meeting with the district administration heads at Hapur, Bulandshehr, Noida and Delhi. To provide an overview of the project for a period of three days she had meetings with political representatives, district Magistrates and other officers in the districts. The warm positive gesture of the officers and political representatives, their enthusiasm and excitement for the project is commendable. This is what civil society organizations seek support and cooperation for their endeavors to reach the last man standing. She met Mr. Anuj Singh, DM Hapur, Ms Perna Singh CDO Hapur District and Mr. Puneet Kumar Patel ADM East Delhi District East Delhi, Mayor East Delhi Sh. Shyam Sunder Aggarwal, DM Noida Mr. Suhas LY DM Bulandshahar, Sh. Chandra Prakash Singh and CDO Bulandshahar Sh. Abhishek Pandey. The district heads met Ms. Tyagi cordially and had a comprehensive discussion on other areas of cooperation.







Cooperation among departments, convergence and coordination are the first few steps to be taken for the successful implementation of any initiative be it at national, state, or district level. Ms. Shweta Tyagi Chief Functionary India Water Foundation, under the project on 'Scientific Approach towards bridging SCIENCE and HEALTH divide in a sustainable way' supported by NCSTC Department, Ministry of Science and technology. India Water Foundation conducted a interdepartmental consultation in the district of Hapur on the occasion of tehsil diwas in the collectorate. The meeting was chaired by Chief Development Officer Ms. Perna Singh and had participation from departments of Health, #Agriculture, skill development, social welfare, water resources, pollution control, Panchayatiraj, rural development, Industrial development, women self help groups where they all enlightened us by the special efforts made by their departments during COVID. Looking forward to many more interdepartmental consultations.



<https://www.facebook.com/drarvind.kumar.3/posts/pfbid08CvEXFPXkFGKiSfkbDkDuhXP1VQXNJrVJx5g7evr1RC7FLjbWBFjdArWCTbAVAUrI>

Speaking on raising the echelons of 'Environmental Protection' at 'Tagore International School' East of Kailash as a chief guest Ms. Shweta Tyagi found it challenging yet interesting to infuse a sense of 'Eco ownership' among the students to knit together a social movement to embrace our Mother nature and work towards conserving the same.

An invite to become a part of IWF's JalMitra endeavor was appreciated with enthusiasm by the students and the teachers. Interactions with the school students galvanized the opportunity to disseminate environmental awareness, best green practices and Eco-education corroborated with moral responsibility to Act. At the outset, we attempted to nurture student's capacities, sustainability, morality, trusteeship among the students as we firmly believe 'Children are the future torchbearers of our society'.





## GLOBAL ONLINE

High Level Policy Dialogue

### Accelerating SDG 6 through Multi-stakeholder Partnerships At the UN 2023 ECOSOC Partnership Forum

The high level policy dialogue on Accelerating SDG 6 through Multi-stakeholder Partnerships was organised by India Water Foundation and supported by UN ESCAP. SDG 6 is to ensure availability and sustainable management of water and sanitation for all by 2030. However, SDG 6 goes far beyond water and sanitation services to cover the entire water cycle. Aside from domestic purposes, water is needed across all sectors of society, to produce food, energy, goods and services. These uses also generate wastewater which, if not properly managed, can spread diseases, and introduce excess nutrients and hazardous substances into rivers, lakes and oceans. Ultimately, as ecosystems provide water to society, a significant share of the water needs to stay within the ecosystems for them to remain healthy. Healthy ecosystems in turn safeguard the quantity and quality of freshwater, as well as overall resilience to human- and environmentally-induced changes.



There is need to increase investment in water-use efficiency, wastewater treatment, and reuse, while financing the protection of water-related ecosystems. Integrating our approaches with improved governance and coordination across sectors and geographical borders is an imperative to accelerate SDG6 achievements. The main objective is to identify and find solutions on several bottlenecks impeding greater progress on SDG 6 acceleration. Policy and institutional fragmentation between levels, actors and sectors means that decisions taken in one sector (e.g. agriculture, energy, health, and environment) often do not consider the impacts on water availability and water quality in other sectors. Funding gaps and fragmentation impede progress across levels, while data and information often are not available or not shared between sectors and across borders to effectively inform decision making.

Meanwhile, gaps in institutional and human capacity, especially at the level of local governments and water and sanitation providers, slows implementation of SDG 6 along with outdated infrastructure and governance models. Hence there is an urgent need to accelerating effective partnerships across all stakeholders to deliver on the SDG6 which in turn would contribute to a range of other SDGs including on climate action. Promoting sustainable use of resources and enhancing investments in sectors vulnerable to climate change, such as the water sector and water dependent sectors is a priority for India's climate adaptation action.

## 79<sup>th</sup> Board of Governors Meeting of the World Water Council

Dr. Arvind Kumar attended the 79<sup>th</sup> board of Governors meeting of the World Water Council held on 15<sup>th</sup> and 16<sup>th</sup> October in Egypt in hybrid mode. The meeting was held in Cairo, Egypt on the sidelines of the Cairo Water Week and was graced by Minister of Water Resources and



Irrigation, Hani Sweilam of Egypt. There were several presentations on taking the outcomes of the 9<sup>th</sup> World Water Forum to the next level and role at UNFCCC COP 27 which is also being organized in Egypt. Therefore we attended it virtually because we have to travel to Egypt again next month. Shweta Tyagi, Chief Functionary, India Water Foundation also attended the meeting. We are happy that the 10<sup>th</sup> World Water Forum is being organized in Bali, Indonesia, Asia and our support and cooperation is with the

Government of Indonesia in every way. I took this opportunity to invite the governors of the board to attend the 7<sup>th</sup> India Water Week as knowledge partner of the Ministry of Jalshakti, Government of India in organizing the water week. The World Water Council and the Government of Indonesia signed an agreement in a hybrid form to commence a formal collaboration for the organisation of the 10<sup>th</sup> World Water Forum. From the Government of Indonesia the agreement was signed by H.E. Basuki Hadimuljono, Minister of Public Works and Housing, Indonesia. Several other bilateral agreements were signed and we looking forward to an exciting year ahead full of new possibilities.

## 'Lead the Green Change/Biodiversity Means Life' Campaign under the 'Biodiversity means Business II: Greener EU-India Supply Chains & Technologies'

"Wetlands contribute to all of the 17 SDGs, either directly or indirectly and their conservation and wise use represent a cost-effective investment for governments." said Dr Arvind Kumar President India Water Foundation at the breakout session on Wetland Conservation of the closing event of the 'Lead the Green Change/Biodiversity Means Life' Campaign under the 'Biodiversity means Business II: Greener EU-India Supply Chains & Technologies' Organized by the EU Delegation to India along with Global Business In roads (GBI) on 2 June 2022 . Inputs from Experts and practitioners will be provided, collected, analyzed and summarized in a final end-of-campaign report which will be ready before the CBD, COP15 in 2022 Q3. This event gathered policymakers, stakeholders, organizations,



corporate, technologies and financial institutions from India and EU. It addressed the adaptation, promotion and enforcement of greener corporate and public policies, technology, innovation, and models at the national, state and city levels.

**INBO MEETING:** India Water Foundation and International Network of Basin Organizations - INBO had comprehensive discussions during a virtual meeting of our respective teams. The discussions focused on collaboration regarding organizing international events, project implementation plans, data management and sharing experiences gathered from our various projects on integrated water resource management and preparations of the 10th World Water Forum as colleagues in the board of World Water Council - Conseil Mondial de l'Eau. The meeting was attended by Dr. Arvind Kumar, President, IWF and Shweta Tyagi, Chief Functionary from India Water Foundation and Dr. Eric Tardieu, Mr. Alain Bernard, Ms Stephanie LARONDE and Mr. Edouard BOINET from INBO. We are looking forward to a mutually beneficial association in the near future.



**XV WORLD FORESTRY CONGRESS:** Dr. Arvind Kumar's full paper titled '**Enhancing Economic Agro-Forestry for Livelihood Opportunity via Ecosystem Restoration: A Case Study**' under sub theme 'Forests and Human Health: Revisiting the Connections' was accepted for the **XV World Forestry Congress** which took place at Seoul, Republic of Korea from 2–6 May 2022 on the theme of 'Building a Green, Healthy and Resilient Future with Forests'.

The congress was organized by FAO and Korea Forest Service, Government of Korea. The XV World Forestry Congress provided a crucial opportunity for the global forestry community to consider the state and future of world forestry, particularly in the context of recovery from the COVID-19 pandemic while striving to achieve the Sustainable Development Goals (SDGs) and identified key measures and recommendations for enhancing this role. Unable to make it to Seoul Dr. Kumar participated virtually. To access the abstract of his paper please click on [https://programme.wfc2021korea.org/en/session/abba1897-a9c1-ec11-997e-a04a5e7cf9dc?fbclid=IwAR2-uu6X6z7emC\\_VzU0HPXg7yy1iFrrBlmvPhUW59EAcoWYCqJRcUZhUfw](https://programme.wfc2021korea.org/en/session/abba1897-a9c1-ec11-997e-a04a5e7cf9dc?fbclid=IwAR2-uu6X6z7emC_VzU0HPXg7yy1iFrrBlmvPhUW59EAcoWYCqJRcUZhUfw)

**LEADERSHIP DIALOGUE-3:** In the session on 'Accelerating mobilization of finance' I emphasized on Embedding climate-aware sustainable approaches into risk management and incentives by ensuring that markets can obtain and use the data and disclosure that they need to assess risks, while taking advantage of breakthrough technologies. The intervention was made in the 2<sup>nd</sup> meeting of the Informal Working Group (IWG) on Leadership Dialogue-3 (LD3) - "Accelerating the implementation of the environmental dimension of Sustainable Development



in the context of the Decade of Action”, for Stockholm+ 50 under the aegis of UNEP organized on 26th April.

**LEADERSHIP DIALOGUE-1:** “Biodiversity loss, Climate Action and prosperity for all is something that needs urgent and immediate action and is only possible through multi-stakeholder action” said Dr Arvind Kumar while making an intervention in the Second round of Informal Working Groups for Leadership Dialogue-1- Reflecting on the urgent need for actions to achieve a healthy planet and prosperity of all for Stockholm+ 50 under the aegis of UNEP. His session was on Integrated and joint approaches where he stressed on reinvigorating the institutions set up to foster regional cooperation to focus on attaining the SDGs and ensure that no person or country is left behind.



## **GOVERNMENT OF INDIA-UNITED NATIONS SUSTAINABLE DEVELOPMENT COOPERATION FRAMEWORK (UNSDCF) FOR THE NEXT FIVE-YEAR PERIOD 2023-2027**

It was a privilege for Dr. Kumar to speak at the multi stakeholder consultation on Government of India-United Nations Sustainable Development Cooperation Framework (UNSDCF) for the next five-year period 2023-2027 as the current framework 2018-2022 is in the final implementation phase. I stressed that ecosystem restoration and reforestation sequester carbon in plants and soil, and can enhance biodiversity and provide additional biomass, but can displace food production and livelihoods, which calls for integrated approaches to land use planning, to meet multiple objectives including food security. Thanks to UN India Office and The Resident Coordinator Mr Shombi Sharp and Niti Aayog for these series of multi stakeholder consultations to receive feedback from key players (CSOs, think tanks and economic enterprises) on the outcomes of Health and Wellbeing’, ‘Nutrition and Food’, ‘Quality Education’, ‘Economic Growth and Decent work’, ‘Climate Action and WASH’, and ‘Empowering People, Communities, and Institutions’. and understanding their perspectives on furthering the localization of SDGs in India and ensuring that they are coherently articulated and well reflected in the UNSDCF.



## REGIONAL ONLINE

**SANS MEETING:** “The SANS network is getting more vibrant, focused and inclusive. Inter Regional Trade, Clean Green Energy play a significant role in robust climate Action and is possible through effective regional cooperation. The development gains of cooperation are immense, and in the face of extreme climate events and major long-term risks, a quest for resilience should not stop” said Dr Arvind Kumar, President India Water Foundation in the first 2023 SANS members brainstorming session on 15 February 2023, to discuss the short-term strategic deliverables for the sub-region, prepare an action plan for such delivery and how SANS members would contribute/deliver them. The meeting was organized by UNESCAP SSWA office following the discussions in the Regional Policy Dialogue on 8 December 2022 in Islamabad.



**ESCAP-CED:** "Our objective should be to share knowledge and experience on implementing Climate Smart Agriculture and harness regional level collaboration. To implement priority actions linking the CSA approach with agriculture-related investments, policies and measures in their transition to CSA; sharing and discussing mainstreaming and up-scaling of CSA good practices and case studies" I said during my intervention in the ministerial Session of The seventh session of the Committee on Environment and Development at ministerial level. This meeting was called for by the declaration adopted at the Seventh Session of the Ministerial Conference on Environment and Development in Asia and the Pacific. The Committee on Environment and Development (CED) is an intergovernmental body of the United Nations Economic and Social Commission for Asia and the Pacific (ESCAP). It is convened every two years to review regional trends, identify priorities for action, promote dialogue, consider common regional positions and promote a collaborative approach to addressing the development challenges of the region between Governments and civil society, the private sector and the UN System and other international organizations. The CED provides recommendations to the Commission as a body – made up of 53 members and 9 associate members. The Committee is organized on the theme of “Protecting our Planet through Regional Cooperation and Solidarity in Asia and the Pacific” from 29 November – 1 December 2022 at Bangkok, Thailand.

**SANS MEETING:** "As many of our challenges from air pollution, disasters to connectivity cut across borders, we have to push the importance of regional cooperation for the implementation of the 2030 Agenda and UNESCAP and SANS can play a key role in coordinating and supporting regional actions." is what Dr. Kumar highlighted during the preliminary meeting for the Policy Dialogue on Regional Cooperation for Sustainable Development in South and South West Asia (SSWA) – Role of the South Asia Network on SDGs (SANS) . The main meeting of SANS members shall take place on the sidelines of 6th South Asia Forum on sustainable development at Islamabad, Pakistan from 5-8th December 2022. It was a pleasure interacting with other members of the SANS network from Bangladesh, Pakistan, Nepal, Sri Lanka and Afghanistan.



**SANS MEETING:** Dr. Kumar attended the meeting of SANS as a member and deliberated on the focus areas of the 6th South Asia Forum to be held in Pakistan. He appreciated the efforts taken up by SSWA office of UN ESCAP to strengthen this network.

2022 Annual Strategic Meeting of South Asia Network on the Sustainable Development Goals (SANS) virtually held and members shared views on upcoming sixth South South West Asia Forum & next steps on expanding network.

### UNEP's International Methane Emissions Observatory (IMEO) Meeting:

Dr. Kumar spoke at the UNEP's International Methane Emissions Observatory (IMEO) meeting. It is a project to catalyze deep reductions in anthropogenic methane emissions worldwide. IMEO is a data-driven, action-focused initiative that takes an innovative approach to addressing the methane emissions problem by collecting, integrating, and reconciling methane data from different sources, including scientific measurement studies, satellites, rigorous industry reporting through the Oil and Gas Methane Partnership 2.0 (OGMP 2.0), and national inventories. Looking forward to be a part of the Advisory Council, and contribute through our experiences.

## PUBLISHED ARTICLES & BOOK REVIEW

**August 2022:** In his latest article on 'Rethinking Population Dynamics for SDG realization by 2030' published in #SMEWorld Magazine, Vol. XV, No. 08, Aug 2022 issue Dr. Arvind Kumar articulated how Population burst and reckless consumption habits put pressure on #biodiversity and #humancommunities, on governments to meet the demand and supply of essential services, exacerbating #food and #watershortages, reducing resilience in the face of #climatechange, and making it harder for vulnerable groups to rise out of intergenerational poverty". Click on the link ahead to read the complete article-

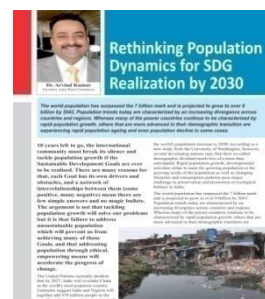
[https://www.indiawaterfoundation.org/wp-content/uploads/2022/08/SME-WORLD-AUGUST-2022-ISUUE\\_4.pdf?fbclid=IwAR1PT7sclhK4irvoxpT3nm-ED2gtTcNYEySsnK6\\_UJhJgolcbYVK6PpVOK](https://www.indiawaterfoundation.org/wp-content/uploads/2022/08/SME-WORLD-AUGUST-2022-ISUUE_4.pdf?fbclid=IwAR1PT7sclhK4irvoxpT3nm-ED2gtTcNYEySsnK6_UJhJgolcbYVK6PpVOK)

**July 2022:** Pleased to share the published review of Dr. Kumar's recent book with Elsevier publications on 'Ecosystem Based Adaptation: Approaches to Sustainable Management of Aquatic Resources'. To read the complete review please click on the link-

[https://theguardian.com/ecosystem-based-adaptation-garnering-international-traction/?fbclid=IwAR1fr5imYPTQqM8\\_Lz60nYWbz5Z2agzOFM4dQgosCzy6Tq1zN4kdIPwReTQ](https://theguardian.com/ecosystem-based-adaptation-garnering-international-traction/?fbclid=IwAR1fr5imYPTQqM8_Lz60nYWbz5Z2agzOFM4dQgosCzy6Tq1zN4kdIPwReTQ)

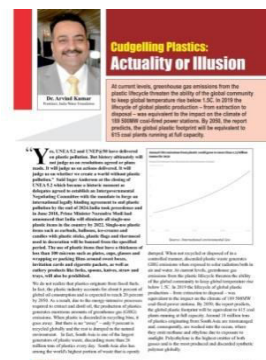
**July 2022:** India Water Foundation made the first official presentation for the Ministry of Petroleum and Natural Gas, Government of India, on 'Factoring Water in Production of Green Hydrogen'. This article published as a cover story is an excerpt of the presentation and discussions held with the officials. Green Hydrogen production will consume 1.5 ppm of Earth's freshwater or 30 ppb of saltwater each year, an amount smaller than what is currently consumed by fossil fuel-based energy production and power generation. Then what is the journalistic concern about the consumption of water in production of green hydrogen? Published in SME World Magazine, Vol. XV, No. 07, July 2022 issue. Click on the link ahead to read the complete article-

[https://www.indiawaterfoundation.org/wp-content/uploads/2022/07/SME-WORLD-July-2022-issue\\_AK.pdf](https://www.indiawaterfoundation.org/wp-content/uploads/2022/07/SME-WORLD-July-2022-issue_AK.pdf)





**May 2022:** India bans single use plastics from 1st July 2022. These particular plastics are the strongest threat to the environment, wildlife, and people. They contribute to rising #pollution levels, close to half of all plastics used worldwide end up in landfills or were dumped in the wild and are not #biodegradable. Instead, they break down into smaller fragments known as microplastics. The items banned include grocery bags, food packaging, bottles, straws, containers, cups, and cutlery. The choice for the first set of single-use plastic items for the ban was based on "difficulty of collection, and therefore recycling. Irresponsible individual behaviour is a major reason for single-use plastics cluttering up the environment. Reduce-Reuse-Recycle is the mantra to follow, also finding sustainable alternatives. Please find an article by Dr Arvind Kumar published in SME World magazine, May 2022 issue, for complete article please click here



[https://www.indiawaterfoundation.org/wp-content/uploads/2022/05/SME-WORLD-May-2022-Issue\\_1.pdf?fbclid=IwAR0O4uQyXjOcUQuKzbY-lQHgrwofoAg73WcPAMus-7v\\_gtSc1iKzya-ORM8](https://www.indiawaterfoundation.org/wp-content/uploads/2022/05/SME-WORLD-May-2022-Issue_1.pdf?fbclid=IwAR0O4uQyXjOcUQuKzbY-lQHgrwofoAg73WcPAMus-7v_gtSc1iKzya-ORM8)

**April 2022:** Dr. Arvind Kumar, President India Water Foundation's article 'Dakar 2022 : Turning Rhetoric into Action!' published in SME World magazine, April 2022, Vol XV No.04 issue. The 9th World Water Forum took place in Dakar, Senegal from 21-26 March 2022, under the theme: 'Water Security for Peace and Development'. It is the first time that an international event of this magnitude has been organized in sub-Saharan Africa. The location was aptly chosen as Africa faces acute challenges of universal access to water and sanitation while also battling the challenges of poverty and growing pressures related to climate change, rapid population growth, uncontrolled urbanization, pollution, etc.....Read more Click Here <https://www.smeworld.asia/PDF/SME%20WORLD%20April%202022%20Issue.pdf>



**'Sustainable Cities via Urban Ecosystem Restoration' a research article:** authored by Dr. Arvind Kumar published in The Palgrave Encyclopedia of Urban and Regional Futures edited by Dr. Robert Brears. To get your copy please click on the link

[https://link.springer.com/referenceworkentry/10.1007/978-3-030-87745-3\\_159?fbclid=IwAR1SnCNVzz3FcNPcODMMcAxR9OJZYbJWt4M9Q\\_ZbJw0IgpmlS22L9cfQRlc](https://link.springer.com/referenceworkentry/10.1007/978-3-030-87745-3_159?fbclid=IwAR1SnCNVzz3FcNPcODMMcAxR9OJZYbJWt4M9Q_ZbJw0IgpmlS22L9cfQRlc) to access the article and buy your copy from Springer Link

**Climate Emergency: Aren't we playing with Danger??**; The United Nations Climate Change Conference COP27 closed in November with a breakthrough agreement to provide "loss and damage" funding for vulnerable countries hit hard by climate disasters. This determines a way forward on a decades-long.....Click on the link ahead to read the complete Article – [https://www.focusglobalreporter.org/climate-emergency-arent-we-playing-with-danger/?fbclid=IwAR0wa3-6YJm2d\\_9yqtR\\_bq15g61x6oXnnwdd-N2Lwo29ww5UOLGngGWbLdY](https://www.focusglobalreporter.org/climate-emergency-arent-we-playing-with-danger/?fbclid=IwAR0wa3-6YJm2d_9yqtR_bq15g61x6oXnnwdd-N2Lwo29ww5UOLGngGWbLdY)



**Multi-sectoral Actions for Net Zero Transitioning:** Last year at the United Nations Climate Change Conference (COP26), Prime Minister Narendra Modi announced India's net-zero target as part of the ambitious "Panchamrit" pledge by 2070.....Click on the link ahead to read the complete write up-

<https://www.focusglobalreporter.org/multisectoral-actions-for-net-zero-transitioning/?fbclid=IwAR1slfgiQaCfgo4D8mQsVpXpfhXwrdeXpYnWWZRnNaz9s-oVHJffu4v9jc>

**Water Security for Sustainable Development with Equity'** published in SME World Magazine, Vol. XV, No. 11, November 2022 issue. Click on the link ahead to read the complete report –

[https://www.indiawaterfoundation.org/wp-content/uploads/2022/11/SME-november- Page-32-35.pdf?fbclid=IwAR3oWeYdt6OsuE81KdxwLwImUgDcYpenHEcXljlGTXhD0eKx-Gu\\_sf0F5As](https://www.indiawaterfoundation.org/wp-content/uploads/2022/11/SME-november- Page-32-35.pdf?fbclid=IwAR3oWeYdt6OsuE81KdxwLwImUgDcYpenHEcXljlGTXhD0eKx-Gu_sf0F5As)

**Progression to Prosperity from Poverty??** Unequal opportunities including access to services, and gender inequality continue to prevail along with income inequality registering a sharp rise and the gap between the rich and poor gets even wider each passing year.....Click on the link ahead to read the complete write up-

[https://www.focusglobalreporter.org/progression-to-prosperity-from-poverty/?fbclid=IwAR0GSYmZet08J9wFyNqNw3akiC6D\\_Q7A17qhh4r6-zobbJdu2NRx1DkJsG0](https://www.focusglobalreporter.org/progression-to-prosperity-from-poverty/?fbclid=IwAR0GSYmZet08J9wFyNqNw3akiC6D_Q7A17qhh4r6-zobbJdu2NRx1DkJsG0)

**UNGA: Piecemeal of an Emerging World:** The idea of the UN emerged over the philosophy of the fundamental role of preserving peace and security for a stable and peaceful international community. The UN was established as a global organization following the.....Click on the link ahead to read the complete write up-

[https://www.focusglobalreporter.org/unga-piecemealofan-emerging-world/?fbclid=IwAR0GSYmZet08J9wFyNqNw3akiC6D\\_Q7A17qhh4r6-zobbJdu2NRx1DkJsG0](https://www.focusglobalreporter.org/unga-piecemealofan-emerging-world/?fbclid=IwAR0GSYmZet08J9wFyNqNw3akiC6D_Q7A17qhh4r6-zobbJdu2NRx1DkJsG0)

**Testing Times for Indian Diplomacy:** Assumption of the Indian presidency of the G20 and Shanghai Cooperation Organization (SCO) in 2023 and that of the UN Security Council in December 2022 takes place at a moment of unprecedented change and challenge.....Click on the link ahead to read the complete write up.

[https://www.focusglobalreporter.org/testing-times-for-indian-diplomacy/?fbclid=IwAR0em4abD9SIqBRh5FV\\_HXnlH0K47ZUDeH4sFd9s8xgFxNu6PWTyveckasw](https://www.focusglobalreporter.org/testing-times-for-indian-diplomacy/?fbclid=IwAR0em4abD9SIqBRh5FV_HXnlH0K47ZUDeH4sFd9s8xgFxNu6PWTyveckasw)

**Metamorphosing into a net zero Economy?:** Dr. Arvind Kumar's article on 'Metamorphosing into a net zero Economy?' published in SME World Magazine, Vol. XV, No. 09, September 2022 issue. Please feel free to share your comments and suggestions for improvement. Click on the link ahead to read the complete article-

<https://www.facebook.com/drarvind.kumar.3/posts/pfbid035ziNcqjyL1KWdF6hub56nTwgZCYWBV8zKiWYWvgssmCUiQkso1jQoXjt7RrFkm uHI>

**India's G20 Presidency: Challenges and Opportunities:** India dons the mantle of G20 presidency at a time when the entire world is grappling with geopolitical tensions along with global economic slowdown. The G20, since its emergence in 1999, has played a crucial role .....to read more click on the link

<https://www.focusglobalreporter.org/indias-g20-presidency-challenges-and-opportunities/?fbclid=IwAR39nYFp4u7iXBQE9l2POUZXDW7vNs6q0c2u2WLXMCrR88cwsu9-384301Q>

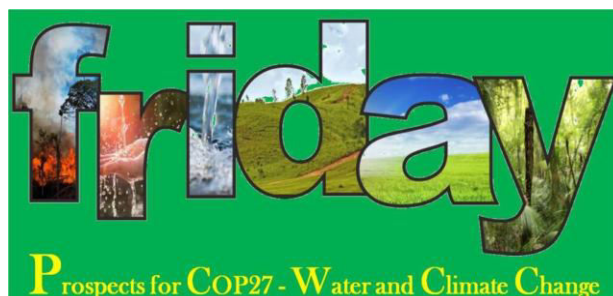
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## FRIDAY BLOGS

### Friday Prospects for COP27- Water and Climate Change

Water scarcity has particularly emerged as a highly critical and contentious issue within South Asia, one of the world’s most dynamic regions and home to nearly 1.9 billion people. It sits precariously on the front lines of the global climate crisis. Partway through 2022 and this is already shaping up to be a year of devastating climate impacts affecting lives and livelihoods around the world from disastrous flooding in Bangladesh to Pakistan, scorching heat waves in South Asia and Europe. As per UNDP estimates, around 2.5 billion people in South Asia alone, will be affected by water stress & scarcity by 2050.....read more

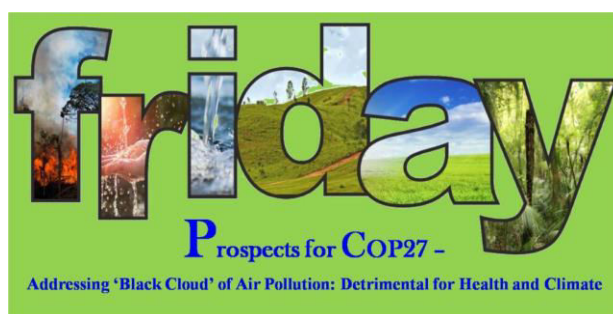
<https://www.focusglobalreporter.org/prospects-for-cop27-water-and-climate-change/>



### Prospects for COP 27-Addressing ‘Black Cloud’ of air pollution: Detrimental for health and climate

Air pollution harms our health, economies and the planet and is a global scale problem and one of the biggest contributors to climate change. The Climate crisis gets attention whenever people experience extreme weather conditions or face natural calamities. This year, the scorching heat in Europe with rivers drying up, wildfires and flash floods in South Asia have brought more global discourse.

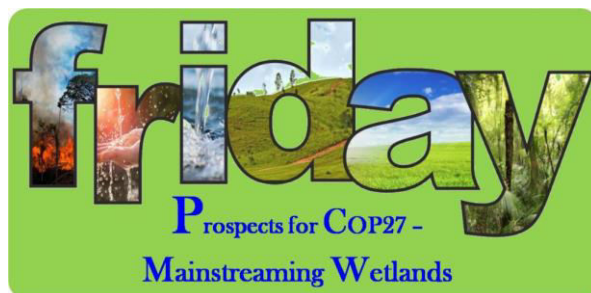
South Asia is home to some of the world’s countries most vulnerable to climate change. It is also at the epicenter of ambient air pollution—pollution people are exposed to outside their households. According to the latest World Air Quality Report, 2021, of the top 40 most polluted cities in the world, 37 are in South Asia. Air pollution in the region is a health hazard and represents the third-highest risk for premature death, as compared to the ninth highest cause in Western Europe. South Asian governments are beginning to realize the benefits of resilience; but to become climate resilient, the region needs to adopt ambitious policies and strengthen planning.....read more <https://www.focusglobalreporter.org/prospects-for-cop-27-addressing-black-cloud-of-air-pollution-detrimental-for-health-and-climate/>



## Friday Prospects for COP27: Mainstreaming Wetlands

The world has witnessed climate change impacts in the form of rising temperatures, receding glaciers, drying rivers, reduction in wetlands and aberrant and untimely weather conditions causing natural calamities and loss of biodiversity. Scientists worldwide are looking at the ecological and hydrological impacts resulting from climate change and this in turn has amplified the need for awareness about conservation of nature and wetlands in particular. Wetlands include mangroves, peatlands and marshes, rivers and lakes, deltas, floodplains and flooded forests, rice-fields, and even coral reefs; they exist in every country and in every climatic zone. Wetlands are the primary sources of freshwater, buffers of floods and droughts, recycler of nutrients and chemicals, and inextricably intertwined with our culture and identity. The wetlands are “biological super systems” producing great volumes of food and supporting remarkable level of biodiversity with myriad species of birds, fish, amphibians, shellfish, and insects.....read more

<https://www.focusglobalreporter.org/mainstreaming-wetlands/>



## Will Mission Green Energy alchemize India into a Global low Carbon Economy?

The main asset in the modern period is energy and unquestionably necessary for a developing economy like India because it is the backbone of production, transportation, construction, communication, and mobility. India has the chance to direct the G20's discussion on the energy transition on its own terms. The Prime Minister's personal commitment to the Lifestyle for Environment (LiFE) principle may serve as a solid foundation for India to persuade the other G20 members of the legitimacy of a transition that is fair to both the present and future generations. A Bloomberg report recently predicted that hydrogen could meet up to 24 per cent of the world's energy needs by 2050, creating a market worth \$ 600 billion.....read more

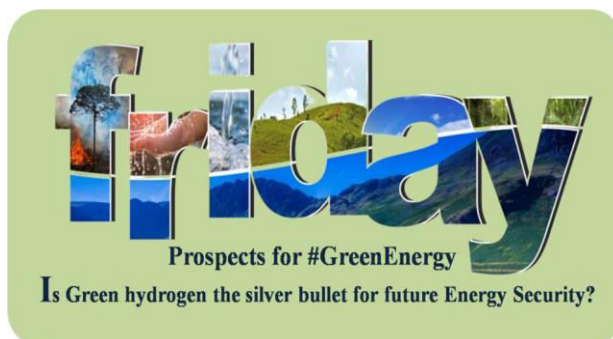
<https://www.focusglobalreporter.org/will-mission-green-energy-alchemize-india-into-a-global-low-carbon-economy/>



## Is Green hydrogen the silver bullet for future Energy Security?

With the announcements coming from the European Union, Kazakhstan, Namibia, Egypt, Oman, and Kenya, green hydrogen took a centre stage at COP 27 last year. A green hydrogen revolution has begun to take shape as more and more nations have unveiled roadmaps, policies, and incentives. The Union Cabinet of India approving a ₹19,744 crore National Green Hydrogen mission that aims to make India a ‘global hub’ for using, producing and exporting green hydrogen. This is undoubtedly a challenging feat to achieve. India’s economy is projected to grow to \$20-30 trillion over the next three to five decades and this growth coincides with our net zero commitments.....read more

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## Millet: An environmentally sustainable super food?

The world is currently experiencing the disastrous effects of climate change, including storms, floods, heat waves, wildfires, cyclones, and sea level rise. Another issue that has arisen as a result of climatic disruptions and is demanding our immediate attention is global food security. World is facing agrarian as well as nutritional challenges. Agricultural lands with irrigation facilities have been exploited to maximum, and hence we need to focus on further increase grain production. The majority of our food crops now require a lot of water which rely significantly on irrigation and rainfall. Sustainable crop substitutes are needed to meet the world hunger (cereal demand) and to improve income of farmers. ....read more



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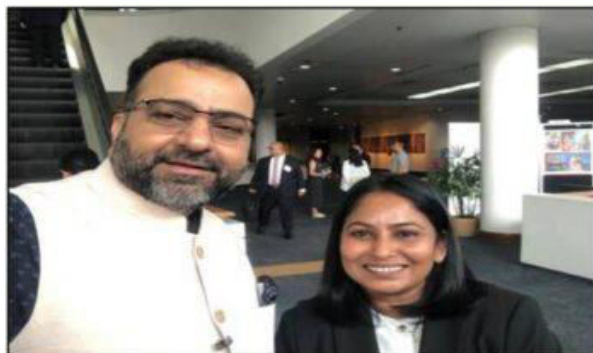
## PHOTO GALLERY

### NEW YORK - UN 2023 WATER CONFERENCE IMAGES

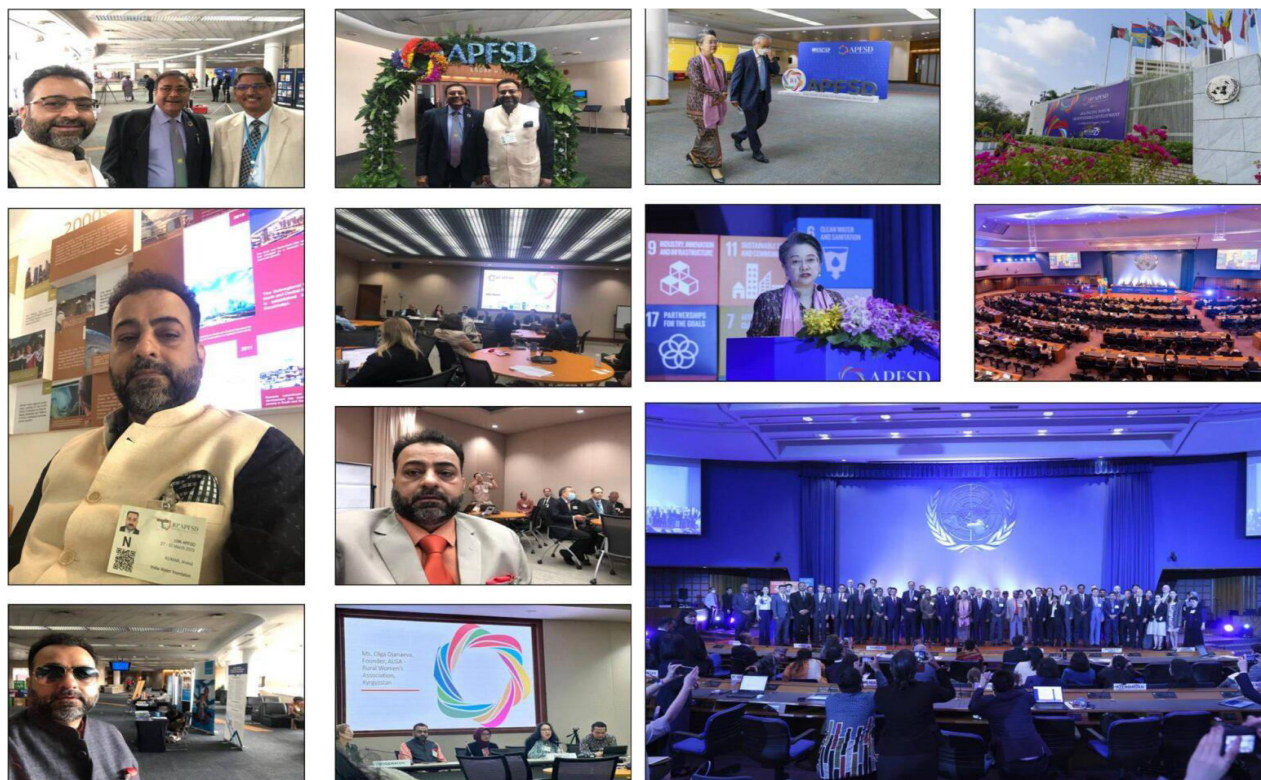




## 10<sup>TH</sup> ASIA PACIFIC FORUM ON SUSTAINABLE DEVELOPMENT IMAGES







## ACCELERATING SDG 6 ACHIEVEMENTS THROUGH CROSS SECTORAL PARTNERSHIPS' A HIGH LEVEL POLICY DIALOGUE





## 7<sup>TH</sup> INDIA WATER WEEK





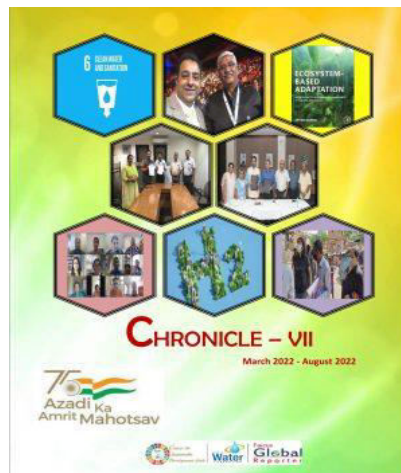
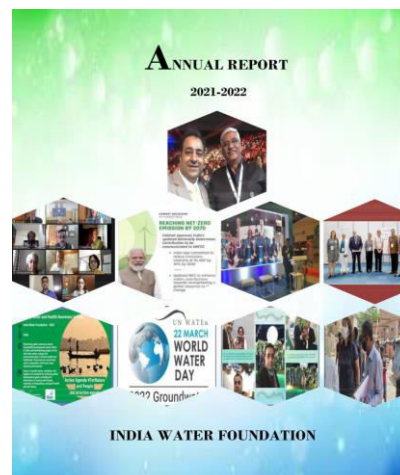
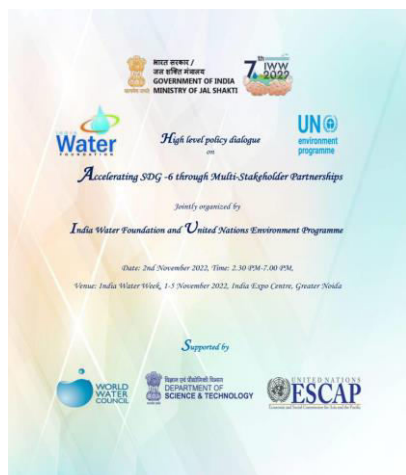
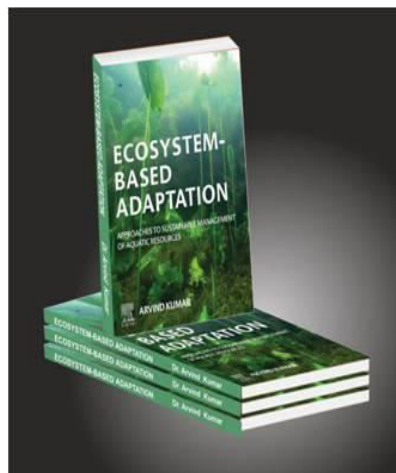
## YEAR OF AWARENESS ON SCIENCE AND HEALTH (YASH 2022-23) SUPPORTED BY NCSTC, MINISTRY OF SCIENCE AND TECHNOLOGY, GOI



### चुनौतियों का सामना करने के लिए करनी होगी स्मार्ट प्लानिंग : प्रेरणा सिंह



## REPORTS & BOOK IMAGES





## FORTHCOMING EVENTS

### IWF's Water Transversality Global Awards and Conclave

India Water Foundation's Water Transversality Global Awards and Conclave was announced in January supported by the Ministry of Jal Shakti, Department of Water Resources, RD & GR Govt. of India to be held on **2-3<sup>rd</sup> February 2024**. These awards are to felicitate leaders in transversality. Considering the fact that sustainable Environment is an integral part of the life's existence on earth, it was felt necessary to institute world's first of its kind



globally the IWF's Water Transversality Global Awards and conclave is the first of its kind awards in the globe which celebrates the commitment to excellence in multisectors, encouraging all the actors in the water and related sectors, to adopt holistic approach, and to bring in synergy towards sustainability, environment conservation and management. Entries are open to become partners, sponsors and apply for the award. To apply click on - <https://lnkd.in/djWvNtb3>





For more information.....  
**[www.indiawaterfoundation.org](http://www.indiawaterfoundation.org)**

**Ms. Shweta Tyagi**  
Chief Functionary  
India Water Foundation  
TEL. NO. 91-11-26349533

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