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Foreword

he world is by and by wrestling with a huge number of The world still faces a raft of highly interlinked, complex issues that continue to threaten human welfare, stability, and environmental sustainability. Water- and climate-related challenges remain a thorn in the side, driven by a raft of human activities masked under political and economic pretences that result in lethal blows to our natural systems and communities.



While the global community is striving to recover from the residual effects of COVID-19, the smouldering conflict between Russia and Ukraine only worsens. There have been massive losses and displacements; gigantic human rights violations and huge humanitarian crises have also occurred. There is also an economic crisis. This nuclear engagement threat is real for both sides are nuclear powers, and several threatening statements have come out from both sides. Thus, it increased tension and instability in international relations and all over Europe.

The world is now witnessing an outbreak of inflation and a crisis in the cost of living. It is driven by supply-chain breaks due to the health crisis and labour shortages, along with rising energy and food costs. Economic stimulus measures and monetary expansion from governments have been continuously pumping up pent-up demand after the pandemic. In this way, inflation has been sapping purchasing power, hitting the populations of lower social classes, resulting in increasing social unrest and political instability.

The impacts of climate change on the water and all its resources, ecosystems, biodiversity, food security, human health, and development at the global and local levels are already erratic and ruthless. The frequencies and intensities of such weather events as flooding, drought, heatwaves, storms, wildfires, and sea-level rise seem to be on the increase. Climate change worsens the already ongoing crisis of scarcity of water, water pollution, desertification, deforestation, biodiversity loss, ecosystem collapse, ocean acidification, coral bleaching, and zoonotic diseases. This would increase, at the same time, the possibilities of conflict and displacement due to scarce resources. The world needs to urgently take such robust measures both in reducing greenhouse gas emissions and adapting to these impacts.

The growing dependencies on digital technologies for communication, trade, education, entertainment, healthcare, governance, and security have brought new vulnerabilities and threats from state and non-state actors into the world through cyberattacks. Critical infrastructures stand as prime targets of cyber threats, including power grids, water systems, transportation networks, healthcare facilities, financial institutions, government agencies, military bases, and nuclear facilities.

These are very interlinked issues that require integrated solutions, including cooperation and coordination with a diversity of actors at local, national, regional, and global levels. The idea is to foster innovation, adaptability, and resilience while considering how to deal with uncertainty and complexity. This also calls for raising awareness, education, and engagement for responsibility and solidarity.



This period has further accelerated a range of technological trends that are going to revolutionize the industry and support the sustainable management of water resources. Ranging from the pressing issues of climate change to water shortage, immediate actions are required. The future is banking on digital transformation as a route to extract value from data and convert it into actionable business intelligence. Water technology in 2023-2024 included technologies such as AMI, digital twins, smart asset management, GIS, 5G, and AI—all holding out some truly transformative applications.

With data being a critical asset in the digital era, AMI stands out due to its huge data streams. Such infrastructure would refine the business processes, hence helping utilities and consumers to make informed decisions due to the greater number of sensor networks compared to any other IoT system. Digital twins represent the digital replica of water systems and provide detailed knowledge with scenario simulations that enable better decision-making. GIS has become business process improvement machinery for water utilities in harnessing their power of data to knit together ever-more complex streams of information. AI, more precisely ML, is among those technologies holding a lot of promise for efficient water management. It automatizes time-consuming manual procedures, enhancing accuracy and speed through advanced computational infrastructure support. AI techniques in water management can also include voice and vision recognition systems, expert systems, NLP, and robotics.

5G doesn't only mean a new generation of communication technology; it also unlocks new business opportunities. Around the globe, utilities in the water sector are remaking their businesses for larger water and energy efficiency based on sensor data as a basis for decision-making. With the ultra-low latency and ability to connect many devices, the 5G network shall be a critical enabler for utilities to realize data democratization and accessibility, spiralling into a smart information denominator.

These technologies are at hand to help all water utilities, regardless of the level of digital transformation. Delivery of access to safe water and proper sanitation and hygiene while promoting sustainable management in water use is critical with these tools—all this aligns with SDG 6. Digital transformation in the modern day and age is no longer an option; rather, it is a must-be pathway in the delivery of quality services in this 21st century. Climate change and the legacy of water scarcity are still with us, and this is a time to redress those issues. While new technologies give us hope for fighting against such issues, they are tools to help bring out the best efforts in mitigating the impacts of climate change so that no one will be left behind.

The India Water Foundation is devoted to tapping some of the most cutting-edge knowledge and best practices globally and locally into policy and programs for socio-outcome betterment. We have evidence-filled reports, projects, and presentations. This we do by keeping ourselves abreast with current information in the pursuit of new insights from the various sources at our disposal while ensuring that our findings are in conformance with set standards.



This is my great pleasure to present the annual report in front of our most valued patrons, supporters, colleagues, and the greater community for the 2023-2024 year. We are also deeply thankful to all those people who stood by us throughout, continuing to show encouragement, thereby helping in strengthening our belief and purpose. Their trust and support have empowered us to fight every obstacle and to strive to complete the set tasks.

Again, we at the India Water Foundation wish to reiterate our commitment to this mission of provisioning basic services in the areas of water, climate change, and sustainable development. Our enthusiasm remains very strong while carrying on this very important initiative.

(Dr Arvind Kumar)

President

India Water Foundation



Overview

With the effects of climate change rising and the critical call for proper water management, the necessity of a critical review of developments in the environment, climate change, and water sector for 2023-2024 is so obvious. These are defining moments within the period being reviewed, including but not limited to the 2023 report by the World Meteorological Organization, which disclosed that greenhouse gas emissions maintained their record, the rising heat content of oceans, and a rising sea level. These developments underline the interrelationship between climate and water issues, their prerequisite nature regarding policy interventions, and innovative modes by which such environmental challenges should be approached. On these trends, it would be clear that understanding alone would eventually lead policymakers, researchers, and the public to promotion about environmental sustainability and resilience to the adverse effects of climate change.

Of interest, however, are the huge strides made in the Environment, Climate Change, and Water sectors during the year 2023—huge sectors that have been greatly influenced by these geopolitical dynamics and carry far-reaching implications for SDGs. Specifically, in the environmental sector, drivers such as continuing deforestation, habitat destruction, and rising pollution further pushed what was already an accelerated decline in biodiversity. Political instability and conflicts, particularly in high-biodiversity areas—the Amazon rainforest and much of Africa—marked the last mile, binding conservation efforts and the institution of environmental safeguards. Such continued destruction of biodiversity directly activates SDG 14 (Life Below Water) and SDG 15 (Life on Land), which imperils protection attempts where ecosystems and species majorly primary for the continuity of environmental health and resilience are preserved. Further, global air pollution levels worsened still, with the major contribution from industrial operations and vehicle emissions. Serious smog and public health crises occurred in big urban centres, especially in developing countries. Geopolitical conflict and trade wars dampened collaboration internationally on pollution management and the diffusion of clean technologies, firmly putting at risk the prospect of dealing effectively with this rising challenge. Decreasing air quality underpins negative impacts on both SDG 11, Cities, and SDG 3, Good Health and Well-being, increasing health risks and decreasing quality of life for many.

During this period, increasing climate change was associated with growing displays and intensities of extreme weather events; record heatwaves were seen in Europe and Asia, and fierce hurricanes hit North America. This was exaggerated by geopolitical tension and economic sanctions, which impeded international outreach and cooperative efforts in terms of climate adaptation and disaster relief for those parts of the world. These extreme weather conditions naturally underline the urgency of acting now for both Sustainable Development Goals 13 and 11: Climate Action and Sustainable Cities and Communities. It is the infrastructure, coupled with increasing vulnerabilities, that now leads to the displacement of the population. There was also the key turn in the global policy toward the climate, with some states accelerating their shift to renewable energy while others suddenly decelerating, probably because of economic constraints or political opposition reasons. Another event that devastated the world energy market was the geopolitical conflict—the Russia–Ukraine confrontation, which had its effect on world energy prices and availability. Such policy turns and market instabilities directly influence these SDGs:



7—Affordable and Clean Energy, and 13—Climate Action—through reduction of greenhouse gas emissions and promotion of wider sustainable energy solutions.

The water sector cannot say anything against the emerging face of water shortage, taking into account the fact that wide areas have of late been affected by vast droughts and shortages. Moreover, the risk of contamination persisted in tainting drinking water sources and thus brought concerns about water quality. Geopolitical tension spiralled during contestations over transboundary water resources among nations sharing the same river basins due to disputes and competition for the resources. Indeed, such challenges do not emerge to only challenge the achievement of SDGs 6 and 2 but truncating access to safe water and sanitation means truncating agricultural productivity, and this will further translate into food insecurity. On a brighter note, numerous breakthroughs and investments are being made in technologies, especially innovative desalination approaches and water recycling processes under design, to fight off the danger of water scarcity. However, this has been impinged on by the geopolitical factors of trade restrictions and sanctions that affect the technological resource availability and cost needed for effective water management. Even when they stand relevant and positive toward SDG 6—Clean Water and Sanitation and SDG 9—Industry, Innovation, and Infrastructure, they show just how technical the developments of technology are.

In general, the trends witnessed in 2023 epitomize the new reality faced, with the interdependencies of global challenges and the strong influence that geopolitical settings have on the realization of the SDGs. The Sustainable Development Goals (SDGs) encompass 17 global objectives aimed at eradicating poverty, protecting the environment, and fostering global peace and prosperity by 2030. Adopted by the United Nations General Assembly in 2015, the SDGs form a central component of the 2030 Agenda for Sustainable Development—a comprehensive framework designed to advance humanity, the planet, and economic growth.

As we reach the midpoint of 2024, the progress toward achieving the SDGs remains challenging. According to the SDG Progress Report 2024, the world continues to fall short of meeting many of the targets within the allotted timeframe. The lingering impacts of the COVID-19 pandemic have exacerbated preexisting challenges and inequalities. The report highlights that the pandemic has reversed decades of progress in poverty reduction, healthcare, education, and gender equality. In particular, it has been reported that around 120-130 million people were pushed back into extreme poverty, and educational disruptions affected over 1.7 billion students globally. The pandemic also intensified vulnerabilities for women and girls, disrupted essential healthcare services, and widened the digital divide.

Climate change presents a critical challenge, jeopardizing the well-being and livelihoods of millions, especially in developing regions. The global average temperature has increased by approximately 1.3°C above pre-industrial levels and is on track to exceed 1.5°C by 2030. The effects of this warming are already visible in more frequent and severe extreme weather events, rising sea levels, diminishing biodiversity, and worsening land degradation.

The goals related to peace, justice, and strong institutions remain elusive on a global scale. Ongoing conflicts, violence, human rights abuses, corruption, and weak governance continue to undermine progress and threaten human security. By the end of 2023, over 80 million people were forcibly displaced, and less than half of the global population had access to fair legal



systems. The pandemic has further complicated democratic processes, civic freedoms, and the rule of law.

Financial constraints are another significant barrier to achieving the SDGs. The pandemic has led to decreased public revenues, increased expenditures, and widening fiscal deficits across many nations. In 2023, the global economy grew by just 2.5%, while global trade saw a modest 1.2% increase. Official development assistance (ODA) experienced a real-term decline of 2.8% in 2023, and foreign direct investment (FDI) rose slightly by 5% but remained below pre-pandemic levels. Concerns about debt sustainability continue to challenge many countries.

These challenges underscore a complex and demanding path toward sustainable development. However, they also present opportunities for transformation and accelerated progress. The report suggests several key measures to advance the SDGs:

- *Enhancing international cooperation to address global issues and support the most vulnerable nations and communities is crucial.
- *Utilizing innovations in science, technology, and research to address health, social, economic, and environmental challenges.
- *Securing substantial and effective funding from diverse sources while ensuring debt relief and sustainability.
- *Enhancing the availability and quality of data to monitor progress, identify gaps, and inform policy decisions.
- *Ensuring participatory and inclusive mechanisms for decision-making that engage all stakeholders and uphold human rights.

The SDGs represent not just targets but a vision for a better global future. They require collective effort and accountability from all sectors and levels of society. The COVID-19 pandemic has highlighted our interconnectedness and the need for a unified approach to ensure global safety and well-being. Until every individual is secure, none of us are truly safe. Therefore, the urgency to act is critical, whether we aim to achieve the SDGs by 2030 or risk losing the opportunity to build a sustainable legacy for current and future generations.

To accelerate progress toward the SDGs, several promising approaches have emerged:

- **1.User-Centric Solutions**: Designing solutions with a focus on the needs and perspectives of those affected by the SDGs can drive progress. This approach involves developing innovative, user-focused solutions tailored to specific challenges.
- **2. Private Sector Engagement**: Collaborating with the private sector can bring additional resources, expertise, and innovation to address the SDGs. Public-private partnerships can harness the strengths of both sectors to advance sustainable development.
- **3.Research and Evidence-Based Strategies**: Identifying research priorities and implementing evidence-based strategies can facilitate progress on the SDGs. Governments, NGOs,



philanthropic organizations, and academic institutions should work together to conduct research and apply solutions grounded in evidence.

- **4. Digital Technologies**: Embracing digital technologies, including digital platforms, data analytics, and artificial intelligence, plays a crucial role in accelerating SDG progress. These technologies enhance the monitoring, evaluation, and implementation of sustainable development initiatives.
- **5. Global Commitment and Cooperation**: Achieving the SDGs requires a global coalition and unwavering commitment. Governments, organizations, and individuals must collaborate, share knowledge and resources, and commit to bold and transformative actions for sustainable development.

This is not an exhaustive list of strategies, and such avenues would always help bring developments along the paths toward progress in the SDGs. Although no doubt most problems can be mitigated only through enhanced international cooperation, good policy action, and creativity in arrangements to minimize adverse impacts and promote development sustainability, a fact remains that attainment of the vision set by the 2030 Agenda for Sustainable Development will elude without collective efforts and dedicated engagement at every level by all stakeholders.



Momentous Developments

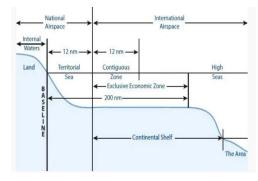
The world is witnessing phenomenal upgrades that have taken place as a result of innovative and insightful ideas that are changing the course of our future direction. Such momentous developments point to a clear departure from historical problems and therefore prepare the way forward for a radical new agenda for global engagement. In the background of such complicated geo-political drama and amid convoluted legacy after-effects of previous crises, we find this age in which laudable and epochal achievements have been recorded toward the addressing of very timely and appropriate matters at hand. Influential reports by UN agencies and important international organizations, showing new angles and practical suggestions, laid out the way forward. The reports provided the capacity to deal with modern challenges and take a walk toward a future that is more sustainable and fair. The high-level conferences have further invigorated global commitments with strategic frameworks and cooperative solutions through the new world commitment to defeating challenges with results that ensure sustainable development.

Finalization of the High Seas Treaty, incidents of heatwaves and extreme weather events, incidents of water scarcity and droughts coupled with international agreements on transboundary water sharing, G7 Summit, conclusion of COP 28, G20 Summit, WMO's report on Greenhouse Gas Concentrations, World Risk Report 2024, observance of World Water Day and release of the 2024 World Water Development Report, etc., were remarkable developments that proved instrumental and wielded tremendous impact on the policy-framing and decision-making processes across the world by suggesting remedial and innovative solutions to problems confronting humankind, especially in the environment, climate change, and water sectors. These are briefly appraised below.

High Seas Treaty:

The High Seas Treaty finalized by the United Nations in March 2023 is indeed of critical importance if marine biodiversity over international waters is to be saved. Officially, it is the

agreement under the United Nations Convention on the Law of the Sea on the conservation and sustainable use of marine biological diversity beyond the limits of national jurisdiction. It is this very treaty that has set out to deal with the long historical governance failures affecting the high seas. These areas—including almost two-thirds of the world's oceans and almost half of the Earth's surface—have gone almost unregulated by international law, and therefore are easily overexploited and polluted. The agreement puts in place a



comprehensive global legally binding framework that protects biodiversity at high seas, filling in the lacunae left by the United Nations Convention on the Law of the Sea (UNCLOS).

It is foreseen that the High Seas Treaty will establish a legal framework supported by explicit procedures for the establishment of networks of MPAs beyond national jurisdictional waters. There could not be a more critical initiative in achieving the Kunming-Montreal Global Biodiversity Framework goal of at least 30% of the ocean being conserved by 2030. Moreover, it



envisages provisions for the equitable sharing of benefits from marine genetic resources; it thereby underlines that their use has to be sustainable and only for the benefit of humankind as a whole.

The participating states finally adopted the treaty under the United Nations on 19 June 2023. For this treaty to be enacted, a minimum of 60 nations need to ratify it. Once that condition is met, there will be a countdown of 120 days until it becomes established under international law. The High Seas Alliance is also working on its part to try to get the treaty ratified by at least 60 countries before the June 2025 UN Ocean Conference.

The High Seas Treaty is likely to make huge contributions towards the protection of marine life in areas beyond national jurisdiction—areas that so far have been barely regulated by different regulatory bodies with little success. Within these would be established MPAs and monitoring and evaluation of these regions will be conducted to ensure the protection and management of the areas are effective. The idea behind this move is trying to reduce the impacts of climate change, overfishing, and pollution on marine ecosystems. The High Seas Treaty is eventually a landmark step toward the preservation of marine biodiversity and sustainable use of ocean resources. It provides an elaborate framework for the protection of the high seas, filling governance gaps that have made them vulnerable, and promotes fairly the sharing of benefits from marine genetic resources.

Global Heatwayes and Extreme Weather:

In 2023, extraordinary temperature heat waves in the Northern Hemisphere took note over very vast areas. The records of temperature extremes were extremely intense in large parts of Europe, North America, and in places in Asia which, to that point, had never been recorded. These malevolent heat waves caused very important alerts to public health, increasing diseases and mortality. This was so in urban centres with high populations, which retained heat beside infrastructural heat retainers that only magnified the situation for old people and those with weakened health conditions. Resultantly, the downwelling effects from heatwaves stretched far into agriculture, water resources, and ecosystems.

These effects caused crop cessation in overworked areas and resulted in the deterioration of princely food securities in most parts of the world. However, over-exploited and polluted water bodies faced more threatening effects as high scales of evaporation rates were experienced. This was more than a threat, majoring especially in the Horn of Africa characterized by major drought conditions. The extended dry seasons of this part of the world resulted in insufficiencies of water that finally impacted millions of people and therefore their livestock and surplus food insecurity and malnutrition.

The heat waves posed very serious environmental consequences. The forests and grasslands became highly inflammable zones from which huge wildfires emerged, scorching vast lands and displacing a lot of wildlife while releasing huge amounts of carbon dioxide into the atmosphere. Such fires enhance the cycle of global warming, which in turn is a feedback process strengthening climate change. This self-reducing potential of vegetation for absorbing carbon dioxide further deteriorated the situation. It was an indication through these weather conditions that such events were increasing in terms of frequency and intensity due to climate change.



Scientists long have warned that rising global temperatures would lead to an increase in both the frequency and intensity of heatwaves and the 2023 events have been the strongest proof of this upward trend. These continuous weather patterns and events of extreme weather conditions result from rising temperatures across the globe due to continuous human activities in the course of fossil fuel burning and deforestation. The increase in heat waves and droughts in 2023 more clearly elucidated the need for adaptation and mitigation measures.

The governments and the community as a whole were driven to the realization of climate change and its impacts on daily life. Options of paramount importance included enhancing preparedness for heatwaves, sound practices in water management, and resilient infrastructure. These events underlined a critical point for the necessity of GHG emissions reduction to alleviate climate change in the future and avert even more harmful weather occurrences.

The record-breaking heatwaves and droughts in 2023 have had a consequent impact on socio-economics at a broad scale. Indeed, in so many places, the elevated temperatures did drive energy use up to greater heights; there has been a greater reliance on air conditioning and cooling systems. This increase in energy requirements has been stressing power grids, leading to blackouts and energy shortages in some places. The financial impacts of the same were overwhelming since they affected agriculture, tourism, and manufacturing. Crop failure and poor agricultural production translated to high food prices thus exacerbating food insecurity levels and economic challenges facing many communities. Indeed, these droughts have so been depressing especially in the Horn of Africa. Water turned out to be a condition for human beings, livestock, and wildlife. This has led to resource-based conflicts between communities and even nations in a fight for this valuable but limited supply of water. The humanitarian situation was at a sore state, with millions of people facing the brutal effects of hunger, displacement, and related health problems under such conditions of extended periods of drought.

The heatwaves and droughts had huge environmental impacts. Due to high temperatures and lack of water, vegetation started dying at alarming rates, reducing Earth's absorptive ability of carbon and thus feeding into global warming. Moreover, the wildfires razing huge areas not only destroyed whole ecosystems but also released enormous volumes of carbon dioxide and other hazardous gases into the air, thus leading to worse air quality and stronger climate change. Such events thus underlined the sharp need for full-scale climate action at both national and international levels. In that respect, governments should be obliged to take on board and scale up such policies that prove to decrease GHC emissions, enhance resilience given the changing climate, and protect vulnerable groups. Lastly, cooperative actions by governments at the global level are enshrined as part of the solution to global warming; they have been identified as a challenge of global proportion.

An important discussion in the strategies to adapt, including construction of resilient infrastructure, improvement in water management techniques, and early warning systems for severe weather events, is center-stage. It has further regarded investment in renewable energy and energy efficiency as two major steps toward reducing dependence on fossil fuels and mitigating future climate impacts. More public awareness and participation are called for to enable actions on climate change. The extreme weather incidents of 2023 have been a major wake-up call to so many people and communities by exposing how climate change has affected their daily lives directly. It has been grass-roots efforts, advocacy organizations, and education that have further driven awareness about the importance of sustainable practices and urgent



action in this war against climate change. The unprecedented heatwaves and severe droughts in the Northern Hemisphere and, in 2023, parts of the Horn of Africa have set the distinct tone for rising frequencies and intensities of extreme weather events driven by a changing climate. These have had far-reaching socio-economic, environmental, and public health implications and thus require comprehensive and coordinated actions on climate. The events of the year 2023 have served to again highlight all that has been written about the challenges posed by climate change and the pressing need for strong measures of mitigation, to work toward a resilient future.



Water Scarcity, Innovative Solutions, and International Agreements.

In this period, there were repeated episodes of water scarcity and drought in the Horn of Africa, remarkable innovative solutions in the water sector, and the signing of international agreements in the water sector. The Horn of Africa has had to cope with its worst drought in 40 years—a crisis killing millions of people across the region. This is the drought that has spanned successive rainy seasons, causing severe water shortages, crop failures, and death of livestock, which worsened food insecurity and malnutrition. The worst-hit countries are Somalia, Ethiopia, Kenya, and Djibouti, where rainfall failure has wiped out agricultural production and placed a heavy strain on already scarce water resources. Indeed, the humanitarian crisis resulting from this drought has been deep. In search of water and food, millions of people have been displaced, increasing competition for the few available resources and, as a result, tension both within and between communities. Health issues have surged with a lack of clean water and proper sanitation as malnutrition and waterborne diseases spiral. The worst hit among these include children and the aged, some of whom are in life-threatening situations owing to the prolonged drought.

Equally damaging have been the economic effects of the drought. The backbone of the economies of many countries in the Horn of Africa has been agriculture, and this is what has been struck hard. Crop failure translated into considerable farm income losses, while the death of livestock had devastating effects on the pastoralist communities. This dilution in agricultural output translated into expensive food, squeezing further the ability of families to afford the basics. This continues heaping strain on the humanitarian crisis as more people fall into poverty and struggle to meet daily needs. The Horn of Africa drought underlines the urgent need for improved water management and resilience to climate change strategies. It will also advance the importance of working on sustainable water management practices that may reduce the impacts of future droughts given the immense challenge posed by climate change and extreme weather events. These will include infrastructural investments in dams, reservoirs, and irrigation systems for effective storage and distribution of water. This will further call for policies that ensure efficient use of the available water resources, including water conservation techniques and the adoption of drought-resistant crops.

Building resilience to climate variability in the Horn of Africa calls for a fully multi-faceted approach if it has to address the root causes of vulnerability. It is firmly establishing the social safety nets that help people hardest hit by this drought, increasing access to health and education, and facilitating economic diversification to reduce overreliance on agriculture. This would also call for international cooperation and support since the scale of the crisis calls for coherent efforts by the government, NGOs, and international agencies. It has also brought to the fore the issue of early warning systems and disaster preparedness. This, if improved in terms of predicting and responding to such drought conditions, will enable governments and communities to be proactive about the reduction of such impacts. These may involve developing contingency plans, forward deployment, and community-based adaptation strategies that enhance resilience at local levels.



Considering that the worst drought in 40 years to have hit the Horn of Africa has devastated millions of people, there are pressing need for better water management and climate resilience strategies. Indeed, it illustrated just how exposed this region is to a changing climate, and why sustainable practices ought to be developed to mitigate the impact of any subsequent droughts. This challenge will be overcome with an approach that encompasses multi-faceted investment in infrastructure and policy reform while at the same time developing social safety nets and cooperation on the international level to drive resilience and sustainability in the Horn of Africa.

Innovative Water Solutions:

Many of the countries under increasing pressure from water scarcity, which climate change only exacerbates, have invested heavily in high-tech water solutions. In the lead of technologies being adopted is desalination—a process of removing salt and other contaminants from seawater to produce fresh water. Arid-region countries have been at the forefront of building large-scale desalination plants; these include Saudi Arabia, the United Arab Emirates, and Israel. These plants utilize advanced technologies, such as reverse osmosis and multi-stage flash distillation, which aid in tapping drinking water from seawater to provide a reliable supply of fresh water for drinking, agriculture, and industry. Overall, desalination has, therefore, been imperatively essential to all such countries that have meagre resources of natural freshwater with increasing demand.

Along with the process of desalination and irrigation, advanced irrigation methodologies have been developed and taken up in using the available water judiciously on agricultural fields. For instance, in drip irrigation, the water is directly supplied to the bases of plants via a network of tubes and emitters, and hence minimal evaporations and runoff of water occur. This method has been popularized in countries like India, China, and the United States of America, where farming forms a high percentage of water consumption. By improving the accuracy of the supply of water, drip irrigation saves water, promotes better productivity of crops, and reduces the environmental impact caused as a result of farming. Other innovative irrigation practices involve the use of soil moisture sensors and automated irrigation systems so that farmers can measure more precisely the required water for a crop type.

The reason for the efforts to invest in innovative water solutions is the necessity of ensuring that there is a sustainable supply of water given the challenges engendered by climate change. Rising temperatures and unpredictable patterns of weather increase the rate at which serious droughts hit most parts of the world, hence reducing freshwater resources. Against the backdrop of the challenges described above, several countries are considering a very wide range of measures that can enhance water security and resilience. For example, Australia implemented an integrated water management plan that includes developing plants for the desalination of seawater, encouraging water reclamation and reuse, and implementing policies aimed at encouraging water conservation. Similarly, there is Singapore's very own diversified approach to water supply: the "Four National Taps," involving local catchment water, imported water, desalinated water, and recycled water.

Applicability of such state-of-the-art water solutions requests high levels of R&D on the improvement of efficiency and sustainability regarding water technologies. For example, advancement in membrane technology has fostered the development of highly energy-efficient desalination methods, thus reducing the comparatively lessened environmental footprint of



desalination plants. Other than that, this could be used for desalination and for operating irrigation systems, leaving a minimal environmental footprint and more sustainable energy from these two major sources, the sun and wind. Meanwhile, digital technologies such as remote sensing, data analytics, and artificial intelligence are also enabling better water management and informed decision-making. In general, commitments to innovative solutions concerning water, including the construction of desalination plants and sophisticated irrigation by some countries, are taken as proactive approaches used by regimes to curb issues of water scarcity in securing sustainable water supply. Such initiatives are so important in enhancing water security, agricultural productivity, and resilience against climatic changes. It will help improve the investment in research, development, and the application of advanced water technologies further to help manage water resources and reduce related risks that may impinge on the health of the populace or the environment.

International Water Agreements:

Individual international agreements in recent times have been arrived at to better manage the transboundary water resources, which are clear steps on the way to solving complicated issues surrounding shared water basins. The objective of these agreements is to allocate water distribution equally and help in resolving possible disputes between countries that share the same rivers, lakes, and underground aquifers. They recognize the interdependence of water resources and point to the need for joint management to ensure long-term use without conflict. One of the main features of these agreements is a general provision calling for the creation of joint management mechanisms that bring aboard all the riparian countries. They provide a very critical institutional setting that allows communication, information sharing, and coordinated decision-making in ensuring that the different parties involved have a say in the management of shared water resources. These frameworks encourage cooperation and transparency to ensure that possible conflicts relating to the allocation and use of water are mitigated.

These agreements realize the need for fair distribution of water, while fully being cognizant of the needs and rights of each one of the nations participating in the agreement. This shall include consideration of historical uses, current needs, and future projected requirements, together with the socio-economic and environmental impact of water management decisions. This approach aims to create a base for promoting equity and fairness to ensure all the countries benefit from shared water resources, yet the sustainability of these critical ecosystems is ensured. Another important element in the new agreements is that of mechanisms of conflict resolution. These mechanisms give ordered processes for the settlement of disputes over the allocation, quality, or use of water that could arise. They include mediation, arbitration, and adjudication provisions that provide countries with opportunities to deal with conflicts peacefully and constructively. The agreements help avoid escalation and add to long-term stability in how transboundary water resources are managed by clearly spelling out mutually accepted procedures for the resolution of conflicts.

The agreements underscore that IWRM is an integrated process for the management of water resources. IWRM recognizes the interaction between water, land, and ecosystems with a view of sustainable use and coordinated management. In trying to enhance resilience to climate change and any other disturbance of water systems, making them continue to have the ability to satisfy both human and ecological needs, the agreements embrace the IWRM principles. Technical assistance and capacity-building will permit countries to implement the Agreements



successfully, and develop infrastructure, institutions, and expertise in sustaining water management. This may be delivered through international organizations, donor agencies, and stakeholders to increase the capability of countries to manage shared water resources.

The recent international agreements are developments that construed a positive tidal wave of change in the governance of transboundary water resources. These provide the equity, conflict resolution, and holistic management that is currently used as a strong framework in the handling of issues arising from shared water basins. These agreements outline the need for cooperation and collaboration in the sustainable and equitable management of water resources, so as not to prejudice the health of the ecosystems depending on them, while all nations exploit the various benefits from these vital resources. Furthermore, new international agreements put an even greater emphasis on environmental sustainability in the management of transboundary water resources. Noting the value of healthy ecosystems in both maintaining water quality and quantity, the agreements contain provisions for the protection and restoration of aquatic habitats. This includes initiatives to avoid the effects of pollution, control land-use practices that affect these water bodies, and preserve biodiversity. Any concern for the environment has thereby been inserted into the management strategy of water resources so that it will be able to satisfy human needs as well as the requirements of the ecosystem.

The other key aspect is that the agreements consider the variability of climate change. In altering precipitation patterns, the frequency of extreme weather events, and the general availability of water, climate change poses a few risks to the management of transboundary water resources. Agreements appeal to countries to develop and put in place strategies for adaptation to enhance resilience in the water systems, especially about the climate-related impacts. This includes the resilient infrastructure that can support such disasters, better water storing and transmission systems, as well as introducing technologies and practices for water efficiency. Another element in the new agreements is public participation and stakeholder involvement. The new agreements consider the imperative for participatory management for effective management of water resources and promote decision-making processes in a participative manner, with full involvement of local communities, civil society organizations, and the private sector. This shall ensure that through this great variety of stakeholders, decisions related to water management take into account various viewpoints and also that the needs and rights of all water users are duly recognized.

These agreements spell out the need for monitoring and data sharing. Timely, accurate information on the availability, quality, and use of water is central to any effective management of water. It establishes mechanisms for joint monitoring and information exchange in a manner that assures countries to make informed decisions based on shared insights into data management. These cooperative agreements, breed trust and openness among the countries and pave the way for the implementation of such agreements. The agreements further acknowledge that appropriate financial means need to be available to fund activities related to the management of transboundary waters. They appeal for the identification of sources of funding from national budgets, international donors, and private-sector investments. By providing adequate financial means in this way, such agreements would have empowered countries to develop and sustain the infrastructure, institutions, and capabilities needed for sustainable water management.



The international accords signed recently on transboundary water resources reflect a fairly broad and far-reaching approach to the governance of shared water basins. These agreements provide for provisions respecting equitable distribution and adequate representation on the part of signatory countries, mechanisms for conflict resolution, environmental sustainability, climate adaptability, public participation, information sharing, and other important considerations for rendering a sound platform for these very complex issues at hand in the management of transboundary waters. They underline that in managing water resources, cooperation and collaboration are necessary so that human populations, together with ecosystems, meet their minimum water needs equitably. Therefore, while working together to implement these agreements, countries are putting in place the conditions necessary for greater security and sustainability concerning transboundary water resources. The new international agreements also mark an increased emphasis on capacity-building and technical assistance. They have also provided training and education in water management, recognizing that specialized expertise and skills are required for effective water management. These types of initiatives raise the capacity of water managers, institutions framing policies, and local communities regarding best practices in the field of water conservation, sustainable agriculture, and integrated water resources management.

The agreements also allow for new technologies and practices in the use of water to be more efficient and sustainable, such as incentivizing water-efficient irrigation technologies, using renewable energy sources for water treatment and distribution, and instituting monitoring and advanced forecasting systems. These are some of the technological innovations that can help countries get the right mix of water management strategies, hence offloading pressure from these common resources. These agreements also underscore the need for consideration of the social and economic dimensions of water management. The policies to be formed will ensure that access to water and sanitation services is accorded equitably to the depressed and vulnerable sectors of society. Initiatives to keep water tariffs at an affordable rate, accessibility of water infrastructure, and equitability in accruing benefits from water projects shall be maintained. The social and economic aspects of the communities are tackled by these agreements, hence reducing the likelihood of water-related conflicts; therefore, they try to enhance the general welfare of communities.

Parallel to these, the agreements also open up continuous research and development in water resources management. They encourage countries to commit finances to scientific research that enlarges the understanding of the water systems, allows the creation of new technologies, and informs policymaking. This includes research into climate change impacts on water resources, the effectiveness of different modes of managing water resources, and the socio-economic impacts of water policies. The stimulation of innovative culture and continuous improvement within the agreements ensures that the approaches to water management are effective and resilient to changing circumstances. A variety of international bodies and partnerships support the implementation of these global agreements. The United Nations, the World Bank, and the regional institutions are instrumental in building cooperation, delivering technical assistance, and mobilizing finance. These organizations coordinate, disseminate best practices, and provide relevant support to ensure that countries can implement these agreements.

New international agreements on transboundary water resources have detailed approaches to cooperation in managing shared water basins, ensuring equitable distribution, providing



mechanisms for conflict resolution, environmental sustainability, and climate resilience; the involvement of stakeholders; data sharing; capacity building; and innovation that leaves no stone unturned in these intricate issues of transboundary water management. They strongly put across that cooperation and collaboration in the use of water resources are necessary for long-term management with benefits to both people and ecosystems. As countries work together to put these agreements into effect, they form a base for greater security and sustainability regarding transboundary water resources.



Record Greenhouse Gas Concentrations

The World Meteorological Organization published an enhanced report in March 2024, referring to the trends that were alarming regarding levels of greenhouse gas, ocean heat content, sea levels, and the extent of Antarctic sea ice. It indicated an ever-increasing level of GHG that reached a new unprecedented concentration; it is mostly related to human activities, particularly the combustion of fossil fuel and land-use change related to deforestation and some industrial processes. It is the enhanced carbon dioxide, methane, and nitrous oxide in the atmosphere that exacerbates the greenhouse effect to finally increase global warming and climate change. Added to this, the report said the ocean heat content reached all-time highs. Indeed, more than 90 per cent of the excess heat produced as a result of greenhouse gas emissions is currently being absorbed by oceans and causing their temperatures to rise significantly. Of greatest concern is the warming of the weather patterns, changes in sea levels, and alteration of marine habitats. This rise in sea temperature increases melting from polar ice caps and glaciers, which are therefore raising sea levels. It further indicates that the global sea level remained as striking increases, maintaining among the most serious short- and long-term risks to low-lying coastal communities and ecosystems. It increases the levels of risks from flooding, erosion, and salinity intrusion into



Heat-trapping greenhouse gases in the atmosphere

freshwaters that can have disastrous impacts on human settlement, agriculture, and natural habitats.

Of most concern to us all is perhaps the revelation that sea ice in one of the poles has hit its lowest ebb, as the WMO report shows. The sea ice extent has authoritative effects on balancing the Earth's energy and affecting temperature patterns and weather in other parts of the world. Low sea ice extent is proof of hard knocks and fast changes happening in polar regions due to global warming. It is not only causing the rise in sea level but also

deforming marine ecosystems, and it could affect worldwide weather patterns. However, views on the causes of the decline in the extent of the Antarctic sea ice generally have been related to the steady rise in ocean temperatures, gradual change in atmospheric circulation, and natural variability. The WMO report emphasizes that climate action needs to be tackled jointly based on taking steps towards mitigation of the effects of climate change and the reduction of GHG emissions. It also incited more effort into the promotion of renewable energy, the advancement of technology in energy conservation, and the realization of the concept of sustainable land use. On the international front, it also appealed for cooperation as well as policy steps to fight back the challenges emanating from climate change.

The report of the WMO continued to underline the linkages of these climate change indicators and their broader consequences. Rising ocean heat content increased sea level but also had negative impacts on aquatic life. Corals could suffer from bleaching with warmer waters, thus destroying coral reefs along with many other connected ecosystems. Furthermore, this warming might change the balance of migrations and breeding seasons of marine species and eventually threaten marine biodiversity and the livelihood of people based on fishing. As stated by WMO, increasingly record sea levels are especially worrying for coastal areas that are low-lying and island nations. These areas are already experiencing increased flooding and erosion, which may



further be associated with population dislocation and a decrease in arable land. Among the huge economic costs were those covering areas in infrastructure, housing, and agriculture. It underlined those adaptive purposes—resilient infrastructures, reparation of natural coastal barriers of mangroves and wetlands, and creation of early warning systems against extreme weather events—will become necessary.

Besides, the decrease in the extent of sea ice in Antarctica will hold worldwide climate consequences. This is because albedo—the reflecting of solar radiation back into space by the ice—tends to cool our planet. A warmer ocean absorbs more solar energy, which further reinforces global warming through the vicious cycle. This forms a positive feedback loop called sea level feedback, where the more ice and snow are melted, the faster mount in sea level is realized. The loss of sea ice will also affect the atmospheric circulation patterns, increasing the intensity of weather and climate-related stress and extremities, e.g., heatwaves, storms, and precipitation pattern changes. The loss of sea ice will also impact the atmospheric circulation patterns, leading to increasingly extreme weather events such as heatwaves, storms, and a change in precipitation. A WMO report has recently urged immediate, cohesive global action vis-à-vis this challenge, emphasizing the reduction of greenhouse gas emissions through a switch to renewable energy sources like wind, solar, and hydroelectric power. Similarly, energy efficiency must also be improved in industries, transport, and buildings. The report indicated that reforestation and afforestation would remove carbon dioxide and restore these systems. It has advocated further for sustainable agricultural practices that would curb emissions and improve soil health.

Thus, the issue of international cooperation in combating climate change is very timely. WMO stressed that countries should live up to their commitments under the Paris Agreement and further enhance their respective national climate action plans. More financial support was asked for developing countries, which are usually highly impacted by climate change and, at the same time, have minimal resources for adaptation. This, therefore, includes funding towards projects on building climate resilience, technology transfer, and capacitation. Lastly, public awareness and opportunities for people to interact peacefully are vital for the global response to climate change. The WMO report noted the role of responsibility that it shared between governments, businesses, and civil society in light of the urgency that the climate crisis held, promoting sustainable practices. Education and Outreach can enable and empower ordinary individuals and communities to effect change in meaningful ways—whether on an individual or regional level—by reducing personal carbon footprints or lobbying for better climate policy.

The WMO March 2024 report gives a very cautionary evaluation of the present status of the climate on a global scale. This would be underscored by the continued increase in greenhouse gas concentration, new record-high ocean heat content and sea levels, and record-low Antarctic sea ice extent—nevertheless redoubling the need for sustained efforts and coordinated action to attenuate its impacts. This report therefore calls for all members and sectors in the society, who therefore must lock hands in unison in the protection of the planet toward a sustainable future.



COP28

The 28th Conference of the Parties of the United Nations Climate Change Conference, COP28, held in Dubai in November 2023, formed another proud milestone the international community inputs to consider as part of concerted efforts on how to respond to climate change. Indeed, it was one such conference that witnessed coming together delegates from nearly 200 countries, leaders from the private sector and civil society, and scientific experts to discuss and bargain measures that would help to accelerate climate action. COP28 needed to ensure and take a stronger global pledge with reduced carbon emissions and increased financial commitment to climate adaptation. However, it is very necessary to work at the roots regarding the causes and effects of climate change.

One significant outcome of COP28 was a rededication to ensuring that global warming does not exceed significantly over 1.5 degrees Celsius from pre-industrial levels, as agreed upon in the Paris Agreement. They agreed that the nations of the respective parties needed to scale up their nationally determined contributions to reduce greenhouse gas emissions. Major economies pledged renewed and more ambitious carbon reduction targets, which would increase the share of renewable energy, enhance energy efficiency, and phase out the use of fossil fuels. Such commitments would be vital in producing the required global cuts in emissions that would help offset the most extreme impacts of climate change.

In addition to the mitigation goals, one thing that COP28 did was emphasize the need to accelerate finance for climate adaptation. It was understood that already many countries, especially those from the Global South, were suffering gravely due to climate change. As such, it said, massive financial support would be needed for building their resilience. Developed countries had pledged to make \$100



billion per year available to developing countries to address climate change, and a large portion of that was for adaptation alone. This would mean resilient infrastructure investments, water and food security enhancement projects, and measures protecting human life from adverse consequences. Another key outcome of COP28 is the establishment of a new international framework on climate finance that shall enhance the transparency, accessibility, and efficiency of climate monies. The mechanism incorporates monitoring flows of finance to ensure resources are spent well and directed into the communities that need them most. This, in addition to innovations in financing mechanisms like green bonds and climate resilience bonds, aims to inject private sector investment into climate-related initiatives. It is expected that this would be a leap toward mobilizing enough resources through a solid financial architecture for climate action—both for mitigation and adaptation strategies.

COP28 strongly underlined the need for nature-based solutions, which inherently and naturally leverage the abilities of natural ecosystems to reverse climate change. The delegations underlined that forests, wetlands, and oceans play a vital role in absorbing carbon, regulating the climate, and providing basic ecosystem services. Many countries announced programs and initiatives to protect and restore natural habitats, fight deforestation, and promote sustainable land-use practices. Such efforts are being developed within the scope of climate-related challenges, which underpin biodiversity, local economies, and ecosystem resilience. The



conference has, once more, indicated that inclusive and participatory approaches need to be at the forefront of effective climate action through the active involvement of indigenous peoples, local communities, women, and youth in the decision-making process on climate change. These are the groups that have been hit the hardest by climate change, yet are managing sustainable natural resources rich in invaluable knowledge and expertise. COP28 hoped to make sure not only that their voices were amplified in these decision-making processes, but also safely guarded about climate solutions.

The sheer inability of technology and innovation to catch up with climate action was the COP28 conference. Many cutting-edge technologies and solutions were on display with the view of reducing emissions across the board by enhancing climate resilience. Key breakthroughs put forward in renewable energy sources, such as solar, wind, and geothermal power, are now more cost-effective and scaled up. Discussions also captured new developments in the area of energy storage and grid management, with a focus on the potential for integrating renewable energies into national grids en route to stable and reliable energies. In addition, contributions to efforts on climate were put across strongly at the digital technologies conference. The delegation talked about the role played by data analytics, artificial intelligence, and the Internet of Things in enhancing climate monitoring for early warning systems and resource management. For instance, improved prediction of weather and climate impacts by AI models will provide more credible plans and response strategies. The Internet of Things devices allow for real-time monitoring of environmental conditions, generating important data in the management of water, agriculture, and urban infrastructure.

This, in other words, means that COP28 had called for just transitions, meant to imply terms that are not only fair but inclusive, towards an integrated movement to the low-carbon economy. Inherent in this will be support to workers and communities who will lose out with the shift away from fossil fuel sources, with retraining opportunity programs to work in sustainability-oriented industries, and sharing all benefits arising out of climate initiatives equitably. Many countries pledged just transition programs with finance for re-skilling, investment in sustainable infrastructure, and workers' rights protection policies. There were pointed calls at the Conference for more cooperation on international dimensions of the climate crisis. It asked for much more cooperation on research and development, technology transfer, and capacity building, particularly for developing countries. It, in turn, underlined the multilateral agreements and frameworks necessary, not least the Paris Agreement. It had to underline that through implementation, it would take care that all states delivered.

Youth engagement was, in fact, a major focus of COP28. That just drove home the point that young people are so instrumental in this march towards progress on climate action. Those who had come from all corners of the world convened to discuss how they could help shape new, ambitious climate policies. Other sessions and special events throughout the conference were focused on youth-led city initiatives that capture innovative solutions and efforts of advocacy by youth in leadership about city climate issues. In squaring the youth square, hence, COP 28 was to provide greater partnership across generations to ensure that the concerns and aspirations of tomorrow are part and parcel in making decisions on climate.

In short, COP28 seeks to raise ambition on climate by further enhancing commitments to carbon reductions and funding for climate adaptation. Some of the rigorous actions in place towards the reinforcement of global climate targets through heightened mobilization of financial resources



include nature-based solutions as incentives for inclusive approaches in climate governance and harnessing technology and innovation. These results once more have pronounced the fact that concerted and ambitious actions are necessary to fight a climate crisis and enable a sustainable and resilient future for all. As countries roll out the realization of these commitments made at COP28, it shall remain a memorable reminder of our collective duty to protect the future of the planet and give future generations a chance to live in a world they may call home.



G7 Summit

The 2023 G7 Summit reaffirmed multilateral cooperation in the fight against climate change and for environmental sustainability. It took place from 19 to 21 May 2023 in Hiroshima, Japan, while the heads of state of the seven largest developed economies were called upon to discuss and readjust their efforts against acute global issues. One of them stood out in front: climate change. It was underscored by the fact that collective actions towards reducing the effect of the changes in humanity and a sustainable approach to the future were already due. One of the deliverables of the high-level conference in this regard was a commitment from the heads of state to increase renewable energy investments.

Since clean energy is to form the larger slice of GHG mitigation, the G7 committed itself to increasing financial and technological support to renewable energy projects. This also includes solar, wind, hydro, and geothermal energies, with possible advanced energy storage solutions that would guarantee that clean energy supplies are both steady and reliable. The leaders thus recognized the accelerated need to deploy renewable energy technologies with the objective that the world achieves the climate goals through a lessened degree of dependence on fossil fuels.

The major concern of the G7 leaders had to do with the fact that investments in renewable



energies can be boosted. In the meantime, the G7 leaders have emphasized the importance of support for the developing world about climate activities. By agreeing that most developing countries suffer the worst consequences of climate change due to a lack of resources to enjoin effective response, the G7 countries pledged to extend more financial and technical assistance. The declaration focused on making the developing nations resilient to climate,

adoptinglearnedbehaviour and moving towards a low-carbon economy. The climate leaders emphasized fairness and inclusiveness in actions taken on the climate that would ensure the participation and benefit of every state in the global transition to sustainability.

Also on the table was climate action through the protection and restoration of natural ecosystems. The G7 leaders concurred that healthy ecosystems are vital in absorbing more carbon dioxide, regulating the climate, and supplying clean water and air. Further, they reiterated their commitment to continue supporting biodiversity conservation and efforts for the prevention of deforestation and sustainable land management. This is, therefore, important in the maintenance of the resilience of the natural systems and building their mitigation and adaptation capacity concerning climate change.

Other key themes of the summit were innovation and the technologies that power climate change solutions. Another agenda item for the G7 leaders was promoting research and development of technology likely to result in low-emission climate solutions, particularly in the areas of energy efficiency, carbon capture and storage, and green transportation. They called for increased cooperation between governments, the private sector, and research institutions with the view of accelerating innovative solutions that may help contain the climate crisis. G7 countries utilize



technological development to leverage the creation of new economic growth and job opportunities with reduced environmental footprints.

It was thus only a question of increasing international cooperation and multilateralism in controlling climate change. The G7 leaders thus renewed their commitments to the Paris Agreement and called on the rest of the world to work harder to attain its goals. It went on to show that coordinated action and solidarity with all nations in dealing with this shared threat means scaled-up finance mechanisms for adaptation and mitigation; transparent and accountable climate governance; and support for the implementation of country climate plans.

During the 2023 summit, it could not be stressed enough that international collaboration needs to include climate change and sustainability of the environment, the leaders said. Some of the things they pledged to do, followed by more significant investments in renewable energy, aid developing countries, thereby attaining their climate goals; natural ecosystem protection and promoting of innovation and technology with the responsibility of these issues. These are commitments that show how dire the situation at hand is in terms of working together to ensure the severity of the impacts of climate change is minimized and also ensuring a sustainable future for all. Summit's conclusions: It has been well stipulated how international cooperation remains the pillar behind the realization of global climate objectives and driving a resilient but low-carbon and fair economy.



G20 Summit

The recent G20 Summit was in New Delhi, India, from 9th to 10th September 2023, and in its final communiqué, realized the fact that the global community has to work together to fight climate change and ensure environmental sustainability. World leaders of the largest economies came together to tackle, in unison, responses to the most formidable challenges the world faces. That was the time when it made climate change one of the central themes. The leaders feel that climate change has global ramifications and therefore, efforts have to be pooled together and coordinated to effectively mitigate as well as adapt to these challenges.

Of huge importance was the pledge by the leaders to increase investments in renewable energy. In full awareness of the critical role played by clean energy in bringing down greenhouse gas emissions, G20 countries pledged to sharply scale up financial support and technological assistance to renewable energy projects. It has seen investments in solar, wind, hydro, and geothermal energy along with advanced energy storage systems for the stability and reliability that are to be put in place for its clean power. As such, the deployment of renewable energy technologies needs to be accelerated if global climate targets are to be achieved by breaking up dependence on fossil fuels.

The leaders of the G20 further expounded their views on supporting nations in the south to initiate increased investments in renewable energy. Keeping in mind that most developing nations are more at risk from climate change, and lack resources to provide an optimal response, the G20 countries pledged to increase financing and technical support. This commitment was supposed to help developing countries improve their climate

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resilience, adopt sustainable practices, and eventually make the transition to a low-carbon economy. Employed was the necessity for fair and inclusive climate action to ensure that every country would be involved in and benefit from the transition of sustainability that takes place worldwide.

The summit also focused on the conservation and restoration of natural ecosystems as a core part of climate action. G20 leaders committed to the support of healthy ecosystems for sequestration of carbon, climate regulation, and providing critical services such as clean water and air. They committed to support efforts on biodiversity conservation, forest protection, and sustainable land use. These are important efforts to keep the resiliency of natural systems and enhance the capacity for the mitigation and adaptation of climate change.

Another important theme at the summit is the role of innovation and technology as a driving force for climate solutions. That is, leaders at G20 reiterated the need to incentivize research and development in low-carbon technologies, particularly about energy efficiency, carbon capture, storage, and transportation. They pitched for greater collaboration across governments, the private sector, and research institutions in fast-tracking cutting-edge solutions with the capacity to reverse the climate crisis. By technological means, G20 countries would aim to open up new avenues of economic growth with job creation while bringing down respective ecological footprints.



The summit also put forward the importance of multilateralism and international cooperation in fighting climate change. G20 leaders reaffirmed the commitment to the Paris Agreement and called for stronger global efforts to meet its goals. It emphasized more the need for coordinated action and solidarity between nations in responding to a common challenge to all of them. It includes the enhancement of mechanisms for climate finance, the promotion of transparent and accountable climate governance, and support for the implementation of national plans on climate.

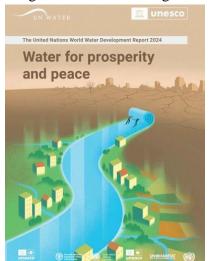
On that note, the 2023 summit reaffirmed world cooperation on matters associated with central topics like climate change and general environmental conversation. These commitments included more investment in renewable energy, like assistance to developing countries in their efforts regarding the climate, protection of natural ecosystems, innovation, and technology fostering, among others. Among others, these are the commitments made above, preceding the people's outcry to the global need for the same, to avert the disastrous consequences of climate change and in the creation of a sustainable future. Outcomes of the Summit: The outcome of the Summit underlines how international cooperation may act as a powerful driver for such efforts to realize climate goals worldwide and create a resilient and fair pathway for transitioning toward a low-carbon economy. Well, if countries are really to take the commitments of the G20 Summit back home, then at least for this reason, the conference has made a very vital reminder: of our collective responsibility to protect this lonely planet and create a livable future for generations yet to come.



World Risk Report 2024

The 2024 edition of the World Risk Report was prepared in cooperation with the World Economic Forum, Marsh McLennan, and Zurich Insurance Group. It provides an improved analysis of the most intense risks likely to be faced globally in the coming decade. Mapped against fast-paced technological change, economic uncertainty, a warming planet, and ongoing conflicts, this report assesses global risks from this year to the next decade. More importantly, however, it underlines how all these factors are coming together to create an increasingly complex and volatile global risk landscape, where a small shock might be enough to push a weakened economy or society above the threshold of resilience.

This general message of the report is that climatechange is still the top risk that, at its core, brings an accelerated logarithmic rise in the number and severity of extreme weather events,



breaking new records, further increasing vulnerabilities of the societies and economies; it has voiced apprehensions of failed adaptation and the lack of resources to deal with the scale and intensity of climate-driven events. It warned that without drastic action, the world could shoot over rises of more than 3°C in global temperatures—contexts in which the very foundations of planet Earth and the conditions under which life exists would be changed.

The other area of great focus by the report is on economic risks. High inflation and interest rates, among other continuing economic uncertainties, have been bearing heavy on the cost-of-living conditions in most countries around the world. Deteriorating debt and geo-economic conditions, according to the report, have threatened to signal the peaking of human

development in large parts of the global population. Economic instability gets added up here by the geopolitical tensions and outbreak of active hostilities in different areas of the world. Thus, the global order turns even more unstable with polarizing narratives, eroded trust, and insecurity.

It also discusses the evolution of technological risks, dedicating special attention to an arms race in experimental technologies that harbour existential threats to humanity. The report forewarns of new vulnerabilities created by a shortening time cycle of technological change as societies fail to catch up with the ethical, regulatory, and security implications of emergent technologies. The rule of robust governance frameworks features centrality in the management of these risks and ensures that the gains accruing from technological advancement assume sweeping benefits across society.

Another major concern that remains in focus is the societal risks; it is more than probable that there will be an explosion of crime and corruption in most fragile states and among vulnerable populations. The erosion of social cohesion, combined with the reinforcement of misinformation and disinformation via social media, is increasing political and economic vulnerabilities that are highly conducive to instability and conflict. Strengthening social safety nets, promoting inclusive governance, and building the resilience of communities are among the proposals in the report to mitigate these risks.



However, the added emphasis of the World Risk Report 2024 is on the need for worldwide cooperation and multilateralism in dealing with these interconnected risks. Rather, it assumes some form of multipolar order will hold over the next decade, one shaped by middle and great powers that set and enforce—yet also contest—the current rules and norms. This is a fragmented world order, with implications for global risk preparedness: without consensus and cooperation, effective responses toward transnational risks are very difficult. The report calls for renewed efforts to develop stronger international institutions, promote collaboration and build a more resilient global community.

The 2024 World Risk Report comes across as not very optimistic about the current reality and prospects. It has taken the view that the management of the hazards arising through climate change, economic instability, and technologies and societal vulnerabilities cannot be put off any longer and has to be addressed comprehensively and cooperatively. In other words, if done within the context of global cooperation, resilience, and inclusive and sustainable development, such as enabling the international community to better cope with complex and volatile risk environments, better address the building of a more secure and prosperous future for all.



World Water Day 2024

World Water Day is observed each year on 22nd March. In this regard, the 2024 theme for the year states, "Harnessing Water for Peace." The United Nations observes this day to sensitize people about the potential global crisis and the need for viable water management. In reality, with such a topic, as "water for peace," waters can be a source of conflict, and yet can also be a part of the solution toward peace and cooperation. The upshot of the development was yet another deep realization that it was incumbent on the two countries to come up with a more amicable water-sharing formula that assures the sustenance of all communities.

Certainly, of all the messages that stood out sharply from World Water Day 2024, it was that, if managed cooperatively, water can indeed be an instrument of peace. It called for international cooperation with management over something referred to as transboundary waters: water resources that are shared by two or more countries. Over 40 per cent of the world's population is in the transboundary river basins; therefore, joint water affairs are thus the way to go. Many best practices of countries have been discussed in the conference that has a history of cooperation

with managing the joint watercourses sustainably and justifiably.

It also stressed that the most urgent task is to address the problem of water scarcity, which has already reached more than 2.2 billion people worldwide. Insufficient access to clean drinking water and proper sanitation has very negative implications for public health, economic development, and social well-being. World Water Day 2024 urged the scaling up of investments in water infrastructure, particularly



in developing countries, to guarantee universal access to clean and safe water for all. This includes the construction and rehabilitation of water supply facilities, improvements in water quality, and proper water management.

Much was brought out during the event of World Water Day 2024; climate change is yet another important factor. Emphases were made that this vital issue has dramatically influenced the availability of water resources and will continue to do so in the years to come, leading to an increase in droughts, floods, and other extreme weather events. These changes will exacerbate water shortages and put in danger the availability of fresh water. To ensure that the water systems are both resilient and adaptive to changes in the environment, the observance called for the integration of climate resilience into water management practices. This includes investments in infrastructure to withstand extreme weather, protection of natural water sources, and encouragement of practices which utilize water efficiently and sustainably.

The same warnings about involving the local community and having local solutions to the water challenges were repeated on World Water Day 2024. In involvement, it called for the role of local communities and people in the management of water resources and implementation of sustainable practices. It called for the empowerment of people to undertake their water management actively, through education, capacity building, and access to resources. The event



demonstrated community-based achievements in successful water supply and quality improvements, proving that local solutions could help solve worldwide water problems.

Finally, World Water Day 2024 brought out the value of water to imperative peace and sustainable development: the event underscored that it would take international cooperation, increased investments in infrastructure, and community and climate resilience to improve the global water situation. Therefore, the world community should be able to use water as a means of peace in advocating for sustainable water management practices that would make easier access for all people to the important resources on their way to a peaceful, sustainable future.



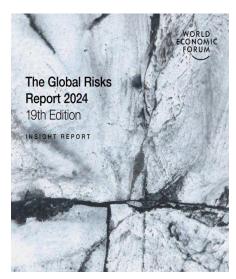
World Water Development Report 2024

The World Water Development Report 2024, themed "Water for Prosperity and Peace", was launched on March 22, 2024, in connection with World Water Day. The inescapable part that water plays, importantly, is defined here in terms of creating prosperity and peace at a world level. The Water Nexus estimates UN-Water to indicate an interlink between water management and socio-economic development processes, including processes of conflict resolution. It follows that equitable and sustainable water management holds the key to providing a foundation for stability, economic development, and social welfare in the face of issues largely characterized by water resource scarcities, pollution, and climate change.

The central high points in this report include the recognition of water as a human right. Besides this, safe drinking water and adequate sanitation also rank as basic requirements for living a life in dignity, stability, and good health. It identifies that other development goals are nothing but a mirage without these two basic services. It thus calls for prompt actions toward ensuring that safe

and clean water is available to people, pointing out disparities that exist in regions and among different communities.

The report considers the importance of water in agriculture; it is the most critical socio-economic factor for billions around the world. This highlights that water is important for various agricultural uses; it plays a facilitative role in solutions for food production and the promotion of rural economies. It could be the most important set of activities that, if not conducted sustainably about the use and management of water in the agricultural sector, compromise food security and result in national problems of environmental degradation. The report calls for the adoption of sustainable methods in agriculture as a way to enhance productivity while maximizing efficiency in the use of water and protecting natural resources.



Added to this is the provision on how water contributes to community stability and peace-building under vulnerable contexts. It goes on to elaborate that fair and sustainable water management can help in the management of migration and mitigation of disaster risks. Equitable and efficient ways of resource allocation for water will reduce conflicts between communities and increase their resilience to environmental and socio-economic pressure.

The report strongly stresses that the relations between sustainable water management, economic development, and peace are complex, multidimensional, and tightly interlinked; hence, any advancement in one can be expected to have positive and sometimes imperative results in others. For instance, gains made in better water management could increase agricultural productivity, at least at one level, and contribute to the alleviation of poverty. On the other hand, improvement in public health because of adequate clean water supplies and sewage disposal would ensure its societies become more stable and prosperous.



The harmful effects of climate change, notably the increasing intensity and rise in frequency of droughts and floods, are putting an increasingly heavy toll on water management. Resilience to climatic changes must become an integral part of all intervention strategies in water management, which will ensure that water systems become resilient and adaptive to changing climatic environments. That would entail an approach combining infrastructural investment that is resilient to extreme weather, with source protection and a promotion of sustainable water use.

The report further underlined the necessity of international cooperation in the summoning of transboundary water resources. With over 40 per cent of the world's population residing in shared river basins across national borders, cooperative water management is irreplaceably crucial in the prevention of conflict and building stability. The report gives several examples of cases of successful transboundary water cooperation, showing how shared water resources could have been sustained and jointly managed equitably.

The World Water Development Report 2024 puts it quite aptly: No water, no prosperity, let alone peace. It thus calls urgently for collective actions to the realization of sustainable and equitable management of water resources underpinning an interlink between the water resources and socio-economic development with peace. It is only when the global community recognizes water as a human right and acts upon such a realization that issues concerning climate change and water become intertwined and that peace can take itself forward into a future that is more secure, prosperous, and peaceful for all concerned.

These events, in the period under review, catalyze policy formulation and implementation that respond to the environment and climate. They offer a premise for international cooperation and set standards of activities. They build understanding among the global public for environmental protection and climate actionto a wiser and more engaged global public. These developments seek to address issues related to water scarcity, extreme weather conditions, community resilience, and ecosystem building. The developments would help communities and ecosystems adapt to changes in climate. Many of the developments involve international agreements and collaborations-a recognition that environmental challenges have become an important global agenda that requires collective action. This, therefore, attests to an increase in global commitment to and engagement in the fight against various environmental challenges and climate change. Interconnectedness among these developments could be understood as the holistic approach required toward these issues, to have a sustainable and resilient future.



Domestic Context

Gaining such alignment of the national efforts with global frameworks on water and climate change has manifold benefits. It provides for effectiveness and efficiency by improving coherence, consistency, and synergy in the implementation of activities by different stakeholders at different levels of governance. For instance, it would ensure that national policies are in line with the Paris Agreement objectives; hence, it saves countries from redundancies and gaps in their strategy towards a low-emission economy and management of climatic vulnerabilities. To that end, it enables financial investments to be aligned with the international commitments through which organizations like the International Development Finance Club (IDFC) can support countries to achieve their Nationally Determined Contributions-NDCs-and Long-Term Strategies (LTSs).

This coordination also promotes the development of innovation and cooperation, such as the creation of platforms for shared learning and cooperation. Memberships in international initiatives such as the Coalition for Disaster Resilient Infrastructure, the International Solar Alliance, the Leadership Group for Industry Transition, and the Global Commission on Adaptation present countries with opportunities to share best practices, gain access to essential resources, and deploy relative strengths. Further, such alignment will amplify the effects of water and climate-related activities due to the intricate, intertwined elements and associated cobenefits. For instance, sustainable water management practices like carbon sequestration enhancement, protection of natural ecosystems, efficiency in water use, and nature-based solutions mitigate the impacts of climate change by further improving water security, biodiversity conservation, and human well-being.

The integration of policies related to water and climate in India spans various areas of general development: economic, environmental, and societal. Water is crucial for human health, food security, energy production, and ecosystem preservation; hence, catering to the various and vital requirements of the large, ever-increasing population has been a major challenge for India's national water policy. These gains are, however, pitted against major challenges: scarcity of water, its pollution, and the intractable relations between climate change and water resources. In short, sound and sustainable water management forms the core of India's development goals. Climate change is a challenge now well recognized globally, which presents both risks and opportunities to India. The country is especially vulnerable concerning agriculture, public health, infrastructure, biodiversity, and different means of livelihood due to increased temperatures, changing rainfall patterns, extreme weather events, sea-level rise, and glacial melting. Hence, responding through adaptation to these changes and building resilience for the progress and development of India becomes necessary.

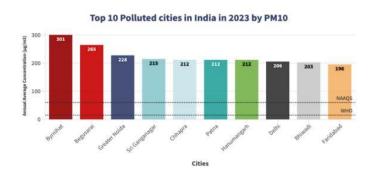
During the review period, activities, reports, and conferences related to environmental issues, climate change, and water management in India have grown impressively. Other major works



undertaken during the period include a review of the National Clean Air Programme, the release of SoFR 2023, enhancement of India's NDCs, works related to Water Quality Monitoring and Management, works related to NAFCC, India Water Week 2023, the G20 Environment and Climate Sustainability Ministers' Meeting, the India Climate Conference 2023, a Conference on Air Pollution and Health, and the G20 Conference, amongst others. A brief description of each of these developments follows.

National Clean Air Programme (NCAP) Review

India was very aggressive in 2023 concerning the National Clean Air Programme, an important initiative needed to address urban air pollution challenges and work towards improvement in air quality across the country. Ongoing implementation of NCAP saw heightened efforts in its effective framing by way of rigorous reviews and updates. This year, the periodic progress



reports mentioned the establishment of new continuous air quality monitoring stations and the deployment of advanced pollution control technologies in major cities. Such measures have targeted particular sources of pollution, including those from vehicles and industrial discharges, thereby contributing to an integrated approach

to air quality management.

The 2023 review commented that NCAP is increasingly trying to incorporate local and regional perspectives into its implementation. Indeed, the updates reflect a certain increase in the level of coordination among central and state governments, local authorities, and other stakeholders toward more focused and region-specific interventions. This is directly related to how collected data from such endeavours have helped fine-tune pollution control measures and set ambitions higher. The effects are gradually beginning to show, with preliminary reports indicating a gradual decline in the levels of pollutants in several urban areas, though with many challenges. This sort of iteration review and adaptation reflects India's commitment to progressively enhance the effectiveness of NCAP in combatting air pollution and safeguarding public health.



State of Forest Report (SoFR) 2023

The Ministry of Environment, Forests, and Climate Change (MoEFCC) released in 2023 the two-yearly State of Forest Report 2023, a rigorous assessment of India's forest resources. The report underlines the main trends in forest and tree cover, thus giving salient insights into the health and growth of these vital ecosystems. SoFR 2023 reports that the forest cover in India has shown an increasing trend due to afforestation and reforestation programs undertaken by both government and non-government agencies. It also exemplifies the efforts that are being paid toward the improvement of strategies relating to forest management, with the main focus on the implementation of community-based conservation and sustainable forestry practices to upgrade biodiversity and ecological balance.

Further, SoFR 2023 throws up challenges that remain to be resolved relating to the conservation and management of forests. Despite trends appearing encouraging on the whole, this report identifies various areas in which the onslaught of urbanization and the expansion of industries have resulted in unabated deforestation and degradation. The report also identifies various regions where forest fires, illicit felling of trees, and habitat fragmentation require continued intervention. The findings from the SoFR 2023 thus stand as a critical tool for policymakers and conservationists, guiding future actions in the form of continued and adaptive management to ensure forest resources are protected for generations to come.

India's Nationally Determined Contributions (NDCs) Update

In 2023, India upgraded its Nationally Determined Contributions, making it a key milestone of the country's climate action plan under the Paris Agreement. Updates in the NDCs reflect greater



ambition toward greenhouse gas emission reductions, thus joining the rest of the world's efforts in pushing for limited temperature increases and bringing relief to the impacts of climate change. The proposed new targets include a reduction in carbon intensity, an increase in renewable energy, and energy efficiency across different sectors. This revision suggests that India is being proactive about climate change to align with its

development priority and economic growth. The revised NDCs focus on enhancing climate resilience through a host of adaptation strategies.



This would include protection of the vulnerable population from climate hazards, investment in climate-resilient agriculture, and water resource management that adapts to shifting precipitation patterns. Essentially, the purpose of integration among these adaptation measures in India is to enhance its resilience against extreme adverse impacts of climate change, including weather phenomena and rising sea levels. The update to the NDCs not only renews India's pledges to international climate imperatives but also provides a clear framework for embedding sustainability within national development strategies, with both mitigation and adaptation goals being pursued pari passu.

Water Quality Monitoring and Management Initiatives

In 2023, India achieved notable progress in the monitoring and management of water quality through the ongoing execution of various initiatives, particularly the Jal Jeevan Mission (JJM).

This comprehensive program is dedicated to ensuring that every rural household in the nation has access to safe and sufficient drinking water. The year witnessed a focused effort to broaden the mission's reach by incorporating advanced water quality monitoring systems and enhancing the infrastructure for water treatment and distribution. The Jal Jeevan Mission's commitment to improving water accessibility and safety resulted in the establishment of new water testing laboratories and the implementation of real-time monitoring technologies. These initiatives aim to swiftly address contamination challenges and uphold high water quality standards across various regions.



Furthermore, 2023 reports on water quality evaluations indicated significant strides toward fulfilling the objectives of the Jal Jeevan Mission. The data revealed considerable enhancements in the availability of potable water, with numerous rural communities experiencing improved access and reliability. The updates underscored the mission's effectiveness in decreasing the prevalence of waterborne diseases and bolstering public health overall. Nevertheless, challenges persist, including the need to ensure the sustainability of water sources and tackle local water quality concerns, especially in areas affected by agricultural runoff and industrial pollution. The continuous efforts to monitor water quality and manage resources efficiently are essential for preserving the progress made and advancing India's aim of universal access to safe drinking water.



National Adaptation Fund for Climate Change (NAFCC) Projects

In 2023, the National Adaptation Fund for Climate Change (NAFCC) maintained its crucial role in strengthening climate resilience in India's most at-risk areas. The allocation of funds was purposefully directed towards initiatives aimed at mitigating specific climate threats, including the enhancement of water management in regions susceptible to drought, the fortification of coastal defences against rising sea levels, and the promotion of climate-smart agricultural techniques. This year witnessed a significant uptick in funding for projects that combined infrastructural advancements with community-oriented adaptation approaches. These initiatives sought to enhance resilience by utilizing innovative technologies and practices specifically designed to address the distinct challenges encountered by local communities.

The results and effects of NAFCC-funded initiatives in 2023 were captured in comprehensive reports, which underscored numerous positive outcomes. A variety of projects effectively showcased improved adaptive capacity, marked by increased agricultural yields through the use of drought-resistant varieties and enhanced irrigation systems. Coastal populations gained from strengthened sea walls and upgraded early warning systems, thereby diminishing their susceptibility to severe weather incidents. Furthermore, the reports indicated that the funding played a vital role in promoting local participation and capacity development, ensuring that adaptation strategies were not only effective but also sustainable. Nevertheless, persistent challenges were noted, including the necessity for better integration of adaptation initiatives with overarching development strategies and ongoing support for monitoring and evaluation to enhance project effectiveness.



G20 Environment and Climate Sustainability Ministers' Meeting

Another milestone event that falls within the period of India's presidency was the G20 Environment and Climate Change Sustainability Ministers' Meeting in Chennai, India, on July 28-29, 2023. This was a congregation of all ministers of the world's top economies to present and

discuss different aspects related to the environment and mechanisms for climate sustainability. The agenda aimed at devising collective methods to tackle climate change, enhance biodiversity conservation, and ensure sustainable resource utilization. In this regard, immediate climate action is indispensable, and ministers discussed how to accomplish net-zero emissions, accelerate the transition toward



renewable energy sources, and ensure sustainable development in line with the goals of the Paris Agreement. The meeting also emphasized that environmental degradation and climate-related risks require action from all nations in a collective manner since it is beyond national frontiers.

Hosting the country's responsibility was underlined with a commitment towards inclusiveness and cooperation. It instituted the need for G20 nations themselves to be leaders of global climate actions, especially in supporting developing countries' efforts toward the mitigation and adaptation of climate conditions. Further discussions touched upon green finance, technology transfer, and the components of capacity building crucial in realizing common climate and environmental goals. The results of the meeting represented complete consensus through one clear, unanimous message: a just transition to a sustainable future in which countries vowed to scale up their international collaboration to make their economies and societies more climate-resilient, ensuring economic development would not be achieved at the expense of environmental degradation.

India Climate Conference 2023

The Indian Climate Conference at New Delhi on September 7-8, 2023, gave a long-sought-after platform to policy-makers, experts, and other stakeholders as to how mitigation and adaptation to the menace of climate change can be tried. This gathering facilitated comprehensive discussions on cutting-edge aspects of climate science and the latest approaches toward greenhouse gases reduction and response for climate change-induced resilience. Participants deliberated on issues related to the development of renewable energy, sustainable agriculture, infrastructure in urban areas, and technological support for climate action. The sessions mentioned that if there is a need for increased ambition, climate issues have to be taken into consideration in the country's



development plans through strong policies guiding India towards a Low Carbon Climate Resilient future.

The conference had one main focus: to develop actionable policy recommendations that would advance India's climate goals and make substantial contributions toward the global fight against climate change. There were calls from experts and policymakers for an integrated approach-one that comprises technological innovation, strong governance frameworks, financial strategies, and community involvement. The discussions emphasized the need for the adoption of policies and measures in a manner so as to be fair and inclusive, hence climate actions reaching all sections of society, especially the most vulnerable. The conference ended with a strong call for closer collaboration among the public-private sectors, international agencies, and civil society to enhance climate solutions and accelerate the transition toward a more sustainable and climate-resilient India.

Conference on Air Pollution and Health

The Conference on Air Pollution and Health, which took place from November 15 to 17, 2023, in Bengaluru, India, represented a significant assembly of specialists, policymakers, and health professionals dedicated to tackling the profound effects of air pollution on human health and the environment. This event provided a forum for the presentation of cutting-edge research regarding the health implications of air pollution, including its links to respiratory and cardiovascular diseases, as well as its wider environmental repercussions, such as ecosystem degradation and climate change. Attendees participated in discussions concerning the origins of air pollution, which encompass industrial emissions, vehicle exhaust, and agricultural practices, while also examining evidence-based strategies aimed at reducing pollution levels and enhancing air quality. The conference underscored the pressing necessity for comprehensive and coordinated actions at local, national, and global scales to address air pollution and safeguard public health.

A key feature of the conference was the emphasis on innovative strategies and policy measures designed to alleviate air pollution. Experts shared case studies and exemplary practices from various regions, highlighting successful initiatives in air quality monitoring, emission control technologies, and public health interventions. The discussions also underscored the vital importance of government regulations, urban planning, and public awareness campaigns in mitigating air pollution and its health consequences. The conference concluded with a series of recommendations for policymakers, advocating for stricter air quality standards, improved enforcement mechanisms, and increased investment in clean energy solutions. There was a strong agreement on the necessity of integrating air quality management with broader environmental and health policies, ensuring that efforts to enhance air quality also support the achievement of sustainable development goals and protect vulnerable populations from the detrimental effects of pollution.



India's Presidency of G20

1. India's leadership of the G20 in 2023 represented a pivotal moment as the country hosted the G20 summit, during which key resolutions were adopted with a pronounced emphasis on environmental sustainability, climate change, and the management of water resources. Under India's stewardship, the conference convened global leaders to discuss pressing issues that hold significant implications for the future of the planet. In the realm of environmental protection, the G20 nations reached a consensus on a robust framework aimed at combating deforestation and fostering biodiversity conservation. This resolution highlighted the necessity of safeguarding natural ecosystems, acknowledging their critical role in achieving climate objectives and sustaining global environmental health. The agreement included pledges to bolster cross-border collaboration in the protection of endangered species and the restoration of degraded lands, particularly focusing on the Global South, where such efforts are vital for sustainable development.

In terms of climate change, India's presidency was crucial in securing a landmark resolution that reaffirmed the collective commitment to attaining net-zero emissions by the middle of the century. This resolution urged accelerated actions to eliminate fossil fuel subsidies, increase investments in renewable energy, and implement circular economy practices. The G20 nations also recognized the necessity for enhanced financial and technical



assistance for developing countries, facilitating their transition to low-carbon economies and improving climate resilience. This resolution was regarded as a significant advancement in aligning the G20's economic strategies with the objectives of the Paris Agreement, especially concerning the goal of limiting global temperature increases to 1.5°C above pre-industrial levels. The conference underscored India's role in championing climate justice, ensuring that the perspectives of vulnerable nations and communities were integrated into the global climate dialogue.

During the G20 conference held under India's presidency, a significant resolution was adopted to tackle the global water crisis. This resolution emphasized the vital role of water security in achieving sustainable development and proposed strategies for improving water management, increasing water use efficiency, and ensuring fair access to clean water. The G20 member states pledged to exchange best practices in water conservation and management, with an emphasis on implementing innovative technologies for water recycling, desalination, and sustainable agricultural practices. Additionally, the resolution highlighted the necessity for cooperation on transboundary water issues, especially in areas where water scarcity presents considerable



geopolitical challenges. By prioritizing water security, the G20, guided by India's leadership, has laid the groundwork for more unified global efforts to address water-related issues, ensuring that water remains integral to the broader sustainability agenda.

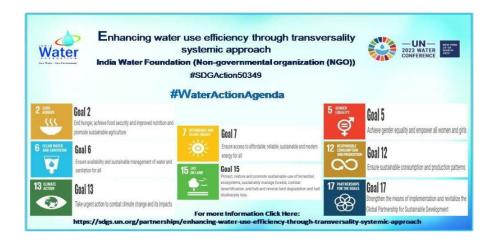
These initiatives and conferences exemplify India's commitment to confronting environmental and climate challenges, improving water management strategies, and engaging in global sustainability discussions. At the India Water Foundation, we place much emphasis on integrating findings emerging from ongoing global developments and simultaneously those from purely local happenings related to the environment, climate change, and water management. Critical analysis and synthesis of the findings are done so that our reports, blogs, and other communication vehicles contain the latest and most effective approaches in this vital area. With this approach, the aim is to dispel essential knowledge and innovative solutions far and wide to enhance awareness about better and sustainable practices for the benefit of mankind. Therefore, we have taken up the work of timely informing them about the latest developments concerning the environment and climate to inspire them towards appropriate action and urge cooperation among different stakeholders towards positive change and community wellbeing.



INFOCUS

Recent Developments

India Water Foundation's water action commitment 'Enhancing water use efficiency through Transversality systemic approach' SDG Action 50349, Water Action Agenda. For more information please click on the link: https://sdgs.un.org/partnerships/enhancing-water-use-efficiency-through-transversality-systemic-approach



India Water Foundation's water action commitment 'Promoting understanding of interlinkage between water security and climate among grass root communities' SDG Action 50655, Water Action Agenda. For more information please click on the link: https://sdgs.un.org/partnerships/promoting-understanding-interlinkage-between-water-security-and-climate-among-grass





ACVITIES OF INDIA WATER FOUNDATION GLOBAL INPERSON

55th session of the UNHRC in Geneva on behalf of like-minded organizations during the interactive dialogue on the Report of the Special Rapporteur of Human Right to food on 7 March 2024



India is one of the very few countries which not only

strengthens food security for its own people with a very strong public food distribution system but also for its neighbouring countries and countries of the global south when needed", said Dr. Arvind Kumar at the 55th session of the UNHRC in Geneva on behalf of like-minded organizations during the interactive dialogue on the Report of the Special Rapporteur of Human Right to food on 7 March 2024

55th session of the UN HRC in Geneva during the interactive dialogue on the Report of the Special Rapporteur of Human Right on climate change on 13th March 2024.

"India, despite being home to more than 17% of the global population, has contributed less than 4% of the global cumulative CO2 emissions" was highlighted by Dr. Arvind Kumar, President, India Water Foundation at the 55th session of the UN Human Rights Council in Geneva in his



oral statement during the interactive dialogue on the Report of the Special Rapporteur of Human Right on climate change on 13th March 2024. During the interactive dialogue on the Report of the Special Rapporteur of Human Right to food on 7th March 2024 he emphasized that India is one of the very few countries which not only strengthens food security for its own people with a very strong public food distribution system but also for its neighbouring countries and countries of the global south when needed.

Safeguarding human right of Water and Sanitation in India amidst climate Emergency

India has made commendable progress in the field of sanitation and water since the launch of the Swachh Bharat Mission (SBM) and the Jal Jeevan Mission (JJM) programmes currently, 62% of



households in rural India have tap water connections, 40% rural households have declared themselves Open Defecation Free Plus. This leads to strengthening of public health systems, maintenance of cultural and ecosystem diversity, prevention of migration of ethnic communities, and sustainable sources of water leading to equity and equitable access" said Dr. Arvind Kumar at the official side event on Safeguarding human right of Water and Sanitation in India amidst climate Emergency" of 54th session of UN Human Rights Council organised by India Water Foundation. The event was organised in hybrid mode and was joined by more than 400 participants worldwide. The eminent speakers in the event were Dr. Satya Tripathi, Secretary General, Global Alliance for Sustainable Planet, Ms. Karin Gardes, Acting Executive Director & COO, Stockholm International Water Institute, Mr. Atul Bagai, Head, UNEP India Office, Mr. Rajan S Ratna, Deputy Head and Senior Economic Affairs Officer, United Nations ESCAP SSWA Office, Ms. Sonja Koeppel, Co-secretary, Protocol on Waterand Health and Secretary of the Water Convention, UNECE, Mr. Vishwaranjan Sinha, Programme Officer, Water and Wetlands-South Asia, IUCN. The event was moderated by Shweta Tyagi, Chief Functionary, India Water Foundation. We are grateful to all the speakers for sharing their concise and insightful perspectives and the UNHRC for giving us the privilege to host this important session on Human Rights in India.

At the 54th session of the UN Human Rights Council Meeting on Interactive dialogue with the Independent Expert on the promotion of a democratic and equitable international order

At the 54th session of the UN Human Rights Council Meeting on Interactive dialogue with the Independent Expert on the promotion of a democratic and equitable international order Dr. Arvind Kumar, President, India Water Foundation highlighted the responsibility of Global North

as a historical polluter. He further stressed that the recent global developments, such as Covid pandemic, triple planetary crisis, mounting debt, challenges of food and energy security etc. have severely impacted the Global South. As a development sector organization IWF has been vocal about the energy transition from fossil fuels to renewables and India is the forerunner in global and sustainable energy transitions. At various climate Summits, India resisted the onslaught from the Global



North and protected the interest of the Global South be it on the question of climate financing, limiting the emission norms, or highlighting the Global North's responsibility as the historical polluter. As a responsible neighbour not just most of its neighbours but also Africa and other countries of the global south received vaccines from India considering the whole world as one family or Vasudhaiv Kutumbkam.



Working Group Meeting at the 54th session of UN Human Rights Council

India Water Foundation's representative from Kashmir Ms. Tasleema Akhter during the



Interactive dialogue with the Working Group on the use of mercenaries as a means of violating human rights and impeding the exercise of the right of peoples to self-determination at the 54th session of UN Human Rights Council highlighted how as a social activist she has been exploring the cases of untold stories of atrocities committed on the innocent victims of terrorism in the Valley and have witnessed violence and killings of innocent persons by Pakistan sponsored terrorism. She

appealed to the UN Human Rights Council to take appropriate action against the perpetrators of such inhuman acts so that the people of Kashmir can live happily and peacefully thereafter.

Side event on Linguistic Minorities and Human Rights in India organised by Sindhi Adhikar Manch at the 54th session of UN Human Rights Council

"There is hardly any doubt that India's North East Region is full of potential, not just for

economic growth but also for cultural exchange and in the past decade the development has changed the face of the region and brought the states from periphery to mainstream. If we speak especially for Manipur then there is a systematic anti-India disinformation Campaign going on where bots from across the border have tweeted extensively, giving a religious angle to the Manipur incident" said Dr. Arvind Kumar at the side event on Linguistic Minorities and Human Rights in India organised by Sindhi Adhikar Manch on 25th September 2023 at the 54th session of UN Human Rights Council at Geneva, Switzerland.





IWF representative speaking at the side event organised by RSKS during the 54th session of UNHRC in Geneva

India is one such country where development policies and programmes have been made specifically keeping gender equity and inclusion in mind. Whether it is the Ujjawala yojna, the swachh bharat mission, the Jal Jivan Mission or several other programmes, the prime beneficiaries are women. The development is women led and for women, We should highlight this at every platform that India just not talk the talk but deliver also." said Shweta Tyagi, Chief Functionary, India Water Foundation and Associate Editor Focus Global Reporter as a panelist in the side event organised by Rajasthan Samagra Kalyan Sansthan on 25/09/2023 at the 54th session of UN Human Rights Council in Geneva, Switzerland. She also highlighted that in the G20 Delhi Declaration a resolution has been passed to create a new Working Group on Empowerment of Women to support countries as they continue to address gender inequality across the spectrum.



Multi-Stakeholder Policy Dialogue on 'Water Transversality & Climate Risk: Adaptation, Mitigation & Resilience Building'

"The Water Transversality approach highlights the interdependence of water, energy and food

security with ecosystems – water, soil, and land – that underpin that security. This approach identifies mutually beneficial responses that are based on understanding the synergies of water and related sector policies" said Dr. Arvind Kumar during the Multi-Stakeholder Policy Dialogue on 'Water Transversality & Climate Risk: Adaptation, Mitigation & Resilience Building' organised by India Water Foundation in collaboration with Global Alliance for a Sustainable Planet at the Global Alliance for a Sustainable Planet Pavilion in Thematic Arena 2 in the



Blue Zone on 5th December 2023. The other speakers in the event were Dr. David Cooper, Acting Executive Secretary, Convention of Biological Diversity, Dr. Satya Tripathi, Secretary General, Global Alliance for a Sustainable Planet, Mr. Eric Tardieu, Vice President, World Water Council, Dr. Eddy Moors, Rector, IHE Delft Institute of Water Education, Mr. Thomas Rebermark, Director - Swedish Water House- International Processes, Stockholm International Institute of Water, Mr. Anthony Mhagama, Manager of the SUSTAIN II Programme, IUCN, Mr. Hitesh Vaidya, Chief Technical Advisor, IWF. The event was moderated by Ms. Shweta Tyagi, Chief Functionary, India Water Foundation. The event highlighted the benefits and co-benefits of water and water ecosystem management would allow for more targeted climate finance and raise awareness for the role of water for climate mitigation and adaptation as well as resilience



building event was moderated by Ms. Shweta Tyagi, Chief Functionary, India Water Foundation.

COP28 (1st December 2023)

India Water Foundation in collaboration with Open Dialogues International Foundation, REScoop, Saving Our Planet, International Climate Development Initiative and Femmes Bladi organized an official side event titled 'Change through Participation: Open Dialogues as a tool for empowering climate action' of UNFCCC COP28 at

Blue Zone in Dubai on 1st December 2023. The speakers in the event were Dr. Arvind kumar, President, India Water Foundation, Ms. Chiara Martinelli from CAN Europe, Mr. Stephan Savarese from Saving Our Planet and Ms. Chia Chun Angela Liang.



REPORTS

55th session of the UN HRC Meetings, Geneva

he Human Rights Council is an intergovernmental body within the United Nations system responsible for strengthening the promotion and protection of human rights around the globe and for addressing situations of human rights violations and making recommendations on them. It has the ability to discuss all thematic human rights issues and situations that require its attention throughout the year. It is the world's peak multilateral human rights body comprised of 47 Member States and meets at least three times per year in Geneva. It is mandated to strengthen the global promotion and protection of human rights, and to address human rights violations and situations of concern.

The 55th session of the UN Human Rights Commission convened in Geneva, Switzerland from 26th February 2024 to 5th April 2024. There were various mandates under discussion from minorities' issues, disabilities issue, child rights, climate change, clean and safe environment etc.

India Water Foundation at the 55th session of UN HRC

India water Foundation participated in the 55th session of the UN HRC with full force submitting written and oral statements-

Written statements- The written statements were submitted in interactive dialogues like-

- 1. Protecting Human Rights in India in the Changing Climate Protecting Human Rights in India in the Changing Climate.
- 2. The essentials of housing for the vulnerable and poor in India
- 3. Feeding the poor and vulnerable in India
- 4. Attaining healthy environment by Clean Water and proper Sanitation

Oral Statements-

- 1. Item 3: General debate on the promotion and protection of all human rights, civil, political, economic, social and cultural rights, including the right to development
- 2. Item 4: General debate on human rights situations that require the Council's attention, report by the High Commissioner on DPRK
- 3. Item 3: Interactive dialogue on the report of the High Commissioner on climate change



- 4. Item 3: Interactive dialogue with the Special Rapporteur on adequate housing as a component of the right to an adequate standard of living, and on the right to non-discrimination in this context
- 5. Item 3: Interactive dialogue with the Special Rapporteur on the right to food
- 6. Item 3: Interactive dialogue with the Special Rapporteur on minority issues
- 7. Panel discussion on challenges and good practices to realize the right to social security and to provide quality public services











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54th Session of United Nations Human Rights Council

he Human Rights Council is an intergovernmental body within the United Nations system responsible for strengthening the promotion and protection of human rights around the globe and for addressing situations of human rights violations and making recommendations on them. It has the ability to discuss all thematic human rights issues and situations that require its attention throughout the year. It is the world's peak multilateral human rights body comprised of 47 Member States and meets at least three times per year in Geneva. It is mandated to strengthen the global promotion and protection of human rights, and to address human rights violations and situations of concern.

The fifty-fourth session of the United Nations Human Rights Council is being held in Geneva, Switzerland at Palais des Nations since 11th September- 13th October 2023. The various mandates under discussion during this session are- (a) the mandate of Independent Expert on human rights and international solidarity; (b) the mandate of Special Rapporteur on minority issues; (c) the mandate of Special Rapporteur on the human rights of migrants; and (d) the mandate of Special Rapporteur on the promotion and protection of human rights and fundamental freedoms while countering terrorism. The mandates of the four current mandate holders were extended until the appointment of their successors.

The key issues considered including reprisals, arbitrary detention, systemic racism, enforced disappearances, water and sanitation, and the rights of Indigenous peoples and people of African descent. It will also present an opportunity to address grave situations in over a dozen States.

India Water Foundation at the 54th Session of UNHRC

India water Foundation participated in the 54th session of the UNHRC with full force submitting written statements, speaking as panelist in side events and organizing a side event.

Side Event - India Water Foundation organized a side event titled "Human Rights in India-Safeguarding Human Right to Water and Sanitation amidst Climate Emergency" on 14th September 2023. The eminent speakers in the event were- Dr. Arvind Kumar, President, India Water Foundation, Mr. Satya Tripathi, Secretary General, Global Alliance for sustainable planet,



Mr. Rajan Ratna, Deputy Head and Senior Economic Affairs Officer United Nations ESCAP-SSWA Office, Ms. Karin Gardes, Acting Executive Director & COO, Stockholm International Water Institute, MS. Sonja Koeppel, Cosecretary Protocol on Water and Health and Secretary of the Water Convention, Mr. Vishwaranjan Sinha, Programme Officer, Water and Wetlands-South Asia, IUCN. The side event analyzed the policies and programmes related to human



right to water and sanitation in India especially in the context of climate emergency the world is grappling with.

All the speakers appreciated the Government of India for the significant progress India has made especially in Water and sanitation sector and also gave suggestions and recommendations for the sustainability of the schemes. The side event received ample coverage in national and international media and was much appreciated by all.











INDIA WATER FOUNDATION ANNUAL REPORT 2023 - 24



















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Written Statements- The written statements were submitted in interactive dialogues like right to water and sanitation, right to civil, political, economic, social and cultural rights, including the right to development, right to clean and healthy environment, annual panel discussion on gender equality, right to equitable international order etc.

Oral Statements- The oral statements were delivered in –

General Assembly 4

- 1. Right to development
- 2. ID with working group on mercenaries
- 3. Right to civil, political, economic, social and cultural rights and covid-19 recovery-
- 4. Right to equitable international order
- 5. Right to Equitable International Order

At the 54th session of the UN Human Rights Council Meeting on Interactive dialogue with



the Independent Expert on the promotion of a democratic and equitable international order Dr. Arvind Kumar, President, India Water Foundation highlighted the responsibility of Global North as a historical polluter. He further stressed that the recent global developments, such as Covid pandemic, triple planetary crisis, mounting debt, challenges of food and energy security etc. have severely impacted the Global South. As a development sector organization IWF has been vocal about the energy transition from fossil fuels to renewables and India is the forerunner in global and

sustainable energy transitions. At various climate Summits, India resisted the onslaught from the Global North and protected the interest of the Global South be it on the question of climate financing, limiting the emission norms, or highlighting the Global North's responsibility as the historical polluter. As a responsible neighbor India not just gave vaccines to most of its neighbors but also to Africa and other countries of the global south considering the whole world as one family or Vasudhaiv kutumbkam.







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Right to Development

India Water Foundation's representative from Kashmir Ms. Tasleema Akhter during the Interactive dialogue with the Working Group on the use of mercenaries as a means of violating human rights and impeding the exercise of the right of peoples to self-determination. She also highlighted how as a



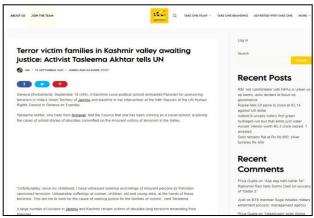
social activist she has been exploring the cases of untold stories of atrocities committed on the innocent victims of terrorism in the Valley and have witnessed violence and killings of innocent persons by Pakistan sponsored terrorism. She appealed to the UN Human Rights Council to take appropriate action against the perpetrators of such inhuman acts so that the people of Kashmir can live happily and peacefully thereafter.





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Panelist

As a panelist in Side Event on 'Linguistics Minorities' on 25th September 2023Dr. Kumar gave a true account and reasons behind the recent Manipur crisis which was blown out of proportion



by national and international media. He said, "There is hardly any doubt that India's North East Region is full of potential, not just for economic growth but also for cultural exchange and in the past decade the development has changed the face of the region and brought the states from periphery to mainstream. If we speak especially for Manipur then there is a systematic anti-India disinformation Campaign going on where bots from across the border have tweeted extensively, giving a religious angle to the Manipur incident." He further added

that "There is a need to implement tailored strategies that cater to the unique needs and aspirations of the state by ensuring comprehensive infrastructure and human development, addressing unemployment and providing alternative livelihood opportunities for long-term stability."











INDIA WATER FOUNDATION ANNUAL REPORT 2023 - 24

































Media Coverage Links

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Here's an overview of some of the key issues on the agenda of the 54th session of UN Human Rights Council.

Promotion and protection of all human rights, civil, political, economic, social and cultural rights, including the right to development

Economic, social and cultural rights

- a. Environmentally sound management and disposal of hazardous substances and wastes- It holds the mandate of human rights of the environmentally sound management and disposal of hazardous substances and wastes.
- b. Human rights to safe drinking water and sanitation- It holds the mandate of the human rights to safe drinking water and sanitation.
- c. Preventable maternal mortality and morbidity and human rights- This discusses the follow-up report on good practices and challenges in the application of a human rights-based approach to the elimination of preventable maternal mortality and A/HRC/54/1 5 morbidity, including through the utilization of the technical guidance by States and other relevant actors, including the United Nations Population Fund, the United Nations Development Programme, the United Nations Entity for Gender Equality and the Empowerment of Women (UN-Women) and the World Health Organization.
- d. Promoting and protecting economic, social and cultural rights within the context of addressing inequalities in the recovery from the coronavirus disease (COVID-19) pandemic- It discusses promoting and protecting economic, social and cultural rights within the context of addressing inequalities in recovery from the COVID-19 pandemic.

Civil and political rights

- a. Enforced or involuntary disappearances- It is a working Group on Enforced or Involuntary Disappearances.
- b. Truth, justice, reparation and guarantees of non-recurrence- It discusses the promotion of truth, justice, reparation and guarantees of non-recurrence.
- c. Contemporary forms of slavery- It discusses contemporary forms of slavery, including its causes and consequences.
- d. Question of the death penalty- It discusses on capital punishment and the implementation of the safeguards guaranteeing protection of the rights of those facing the death penalty.
- e. Equal participation in political and public affairs- It discusses challenges, good practices and experiences in implementing the right to participate in public affairs, notably in the context of the COVID-19 pandemic and the post-pandemic recovery, including the role of participation in securing public health, and to prepare a summary report thereon, including any recommendations stemming there from, with a view to ensuring better recovery.
- f. Arbitrary detention- It discusses on Arbitrary Detention



Right to development

It focuses on identifying and sharing best practices with Member States and to promote the implementation of the right to development worldwide for the enjoyment of all human rights, in order to allow Member States, relevant United Nations agencies, funds and programmes, international and regional organizations, national human rights institutions, civil society organizations and other stakeholders to identify challenges and gaps and share good practices and experiences in this regard.

Rights of peoples and of specific groups and individuals

- a. Youth and human rights- It holds discussion on youth and human rights, fully accessible to persons with disabilities and young people's engagement with climate change and global environmental decision-making processes.
- b. Human rights and Indigenous Peoples- It discusses the impact of certain development projects on the rights of Indigenous Peoples, in particular the impact on Indigenous women and contributes to the promotion of, respect for and the full application of the provisions of the United Nations Declaration on the Rights of Indigenous Peoples, and to follow up on the effectiveness of the Declaration.
- c. Human rights of older persons- It discusses the enjoyment of all human rights by older persons.
- d. Rights of the child- It discusses the report on the rights of the child and inclusive social protection, in close cooperation with all relevant stakeholders, including States, the United Nations Children's Fund, other relevant United Nations bodies and agencies, the Special Representative of the Secretary-General on Violence against Children, regional organizations and human rights bodies, national human rights institutions and civil society, including through consultations with children themselves, to make the report available in an accessible and child-friendly format.
- e. Human rights of migrants- It discusses the human rights of migrants.

Interrelation of human rights and human rights thematic issues

It discusses the gaps, challenges and progress in the implementation of the 2030 Agenda for Sustainable Development, focusing on the means of implementation taken together as an integrated package. Need for an integrated approach to the implementation of the 2030 Agenda for Sustainable Development for the full realization of human rights, focusing holistically on the means of implementation. It discusses the contribution of the Human Rights Council to the prevention of human rights violations. Also countering cyber bullying against children, which will be fully accessible to persons with disabilities, inviting States, civil society organizations, including children's organizations, United Nations agencies, the private sector, academia and other relevant stakeholders, ensuring the participation of children themselves, to address the implementation of the obligations of States under relevant provisions of international human rights law and to discuss challenges and best practices in this regard. Moreover countering religious hatred constituting incitement to discrimination, hostility or violence an update on the various drivers, root causes and human rights impacts of religious hatred constituting incitement to discrimination, hostility or violence, highlighting gaps in existing national, legal, policy and law enforcement frameworks, in particular in the context of the urgent debate held at its fifty-third session, to be followed by an interactive dialogue. The discussions were on the Negative impact of the legacies of colonialism on



the enjoyment of human rights, Impact of unilateral coercive measures and overcompliance on the right to development and the achievement of the Sustainable Development Goals, Promotion of a democratic and equitable international order, Use of mercenaries as a means of violating human rights and impeding the exercise of the right of peoples to self-determination, World Programme for Human Rights Education, Mandate of the open-ended intergovernmental working group to elaborate the content of an international regulatory framework on the regulation, monitoring and oversight of the activities of private military and security companies, Right to work in connection with climate change actions, responses and impacts in the context of sustainable and inclusive economies, Contribution of the Human Rights Council with regard to the human rights implications of drug policy.

Panel Discussions

- 1. Biennial panel discussion on unilateral coercive measures and human rights Theme: "Impact of unilateral coercive measures and over compliance on the right to development and the achievement of the Sustainable Development Goals.
- 2. Annual discussion on the integration of a gender perspective throughout the work of the Human Rights Council and that of its mechanisms.
- Biennial panel discussion on youth and human rights Theme: Young people's engagement with climate change and global environmental decision-making processes accessible to persons with disabilities.
- **4.** Annual half-day panel discussion on the rights of Indigenous Peoples Theme: Impact of certain development projects on the rights of Indigenous Peoples, in particular the impact on Indigenous women accessible to persons with disabilities.

Other thematic debates

At this 54th session, the Council discussed a range of civil, political, economic, social and cultural rights and issues through dedicated debates with the:

- 1. Special Rapporteur on the human rights to safe drinking water and sanitation
- 2. Special Rapporteur on the negative impact of unilateral coercive measures on the enjoyment of human rights
- 3. Special Rapporteur on truth, justice, reparation and guarantees of non-recurrence
- 4. Expert Mechanism on the Right to Development and the Special Rapporteur on the right to development
- 5. Special Rapporteur on contemporary forms of slavery, including its causes and consequences
- 6. Working Group on Arbitrary Detention
- 7. Independent Expert on the promotion of a democratic and equitable international order
- 8. Working Group on Enforced or Involuntary Disappearances



- 9. Working Group on the use of mercenaries as a means of violating human rights and impeding the exercise of the right of peoples to self-determination
- 10. Special Rapporteur on the implications for human rights of the environmentally sound management and disposal of hazardous substances and wastes
- 11. OHCHR on its report on economic, social and cultural rights, and COVID-19 recovery
- 12. Advisory Committee
- 13. ID on HC oral update on drivers, root causes and human rights impacts of religious hatred constituting incitement to discrimination, hostility or violence

In addition, the Council will hold dedicated debates on the rights of specific groups including with the:

- 1. Independent Expert on the enjoyment of all human rights by older persons
- 2. Special Rapporteur on the rights of Indigenous Peoples and the Expert Mechanism on the Rights of Indigenous Peoples

Indian NGOs Shine at UNHRC: Showcasing Country's Women Led-Development

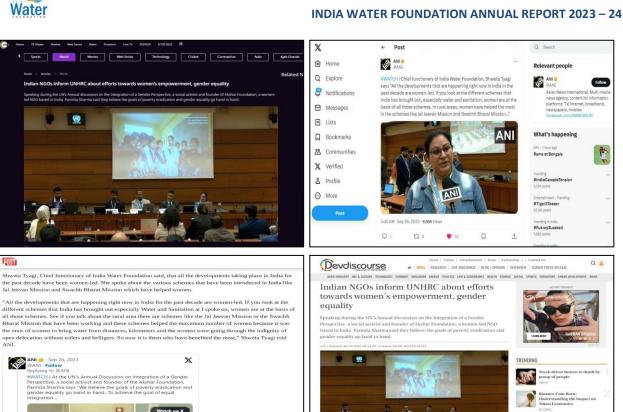


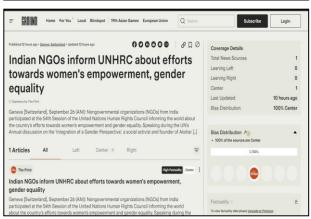




















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UNFCCC COP - 28

30th November-12th December 2023, Dubai

he COP is the supreme decision-making body of the Convention. All States that are Parties to the Convention are represented at the COP, at which they review the implementation of the Convention and any other legal instruments that the COP adopts and take decisions necessary to promote the effective implementation of the Convention, including institutional an administrative arrangements.

The COP 28 Summit in Dubai marks a pivotal moment, with nations coming together to solidify their commitments in combating climate change. Since the landmark Paris Agreement, concrete and collaborative actions initiated by countries have been successful in addressing climate challenges such as global warming. Further in this direction, COP 28 has emerged as a crucial milestone, successful milestone, successfully uniting the world to address pressing environmental concerns. Beyond witnessing nations agreeing on ways to limit the global temperature rise within the 1.5-degree Celsius threshold, helping vulnerable communities adapt



to the effects of climate change, and achieving net-zero emissions, the Summit featured the Global Stocktake for the first time, examining the progress made in curbing global warming and underscoring the seriousness of countries in building a sustainable and resilient future through collaborative endeavors on the global stage.

As COP28 draws near, the world braces for pivotal decisions that could profoundly shape the course of global climate action. On one hand, the planet hurtles toward an impending climate catastrophe. On the other, governmental efforts to avert this crisis appear insufficient. Amidst these dire realities, a beacon of hope emerges in the form of a highly anticipated event—an acronym laden with the promise of change: COP28. This gathering holds the potential to steer us toward a more sustainable and resilient future.

India Water Foundation at COP28

Side Event

India Water Foundation co-organized a side event in partnership with Open Dialogues International Foundation, RE Scoop, Saving Our Planet,



International Climate Development Initiative and Femmes Bladi. Speakers in the event were Dr. Arvind kumar, President, India Water Foundation, Ms. Chiara Martinelli from CANEurope, Mr.



Stephan Savarese from Saving Our Planet and Ms. ChiaChun Angela Liang. The Discussion focused on if and how multi-stakeholder dialogues and other participatory engagement methods can be an effective tool for climate action in its different dimensions, including specific UNFCCC agenda themes (such as energy, just transition, gender, adaptation and resilience, science, It was an Interactive dialogue with the audience, combined with the discussion.

Multi-Stakeholder Policy Dialogue

India Water Foundation organized a Multi-Stakeholder Policy Dialogue on 'Water Transversality& Climate Risk: Adaptation, Mitigation & Resilience Building' in collaboration

with Global Alliance for a Sustainable Planet at the GASP Pavilion in in the Blue Zone on 5th December 2023. The speakers in the event were Dr. Arvind Kumar, President, India Water Foundation, Dr. David Cooper Acting Executive Secretary, Convention of Biological Diversity, Dr. Satya Tripathi, Secretary General of GASP and former UN Assistant Secretary General, Mr. Eric Tardieu, Vice President, World Water Council, Dr. Eddy Moors, Rector, IHE Delft Institute of Water Education, Mr. Thomas Rebermark, Director- Swedish Water



House- International Processes, Stockholm International Institute of Water, Mr. Anthony Mhagama, Manager of the SUSTAIN II Programme, IUCN, Mr. Hitesh Vaidya, Chief Technical Advisor, IWF. The event was moderated by Ms. Shweta Tyagi, Chief Functionary of India Water Foundation. The event highlighted the benefits and co-benefits of linkage of water and related sectors. Need for targeted climate finance and raising awareness for the role of water for climate mitigation and adaptation as well as resilience building.

Young Ambassador of Climate Change

Our little Jalmitra, an ambassador for environment and Climate Dhananjay Kumar a student of amity International School, Pushp Vihar, Delhi attended COP28 as Green zone registered participant and explored breakthrough climate innovations, cutting-edge technology, interactive



exhibits, inspiring art installations and film screenings. He also treated his taste buds to some sumptuous meals. The COP brought together young climate champions from over 180 countries to a platform to share their solutions on the global stage, and to deliver a clear message to leaders all over the world- We need to act now to address climate change. He addressed world leaders and made an appeal to other young delegates to reduce emissions to control global warming and to conserve our precious natural resources and use them responsibly for a sustainable planet. After all they are the future residents of

Earth and shall hold all of us responsible for degrading the #environment and heating it.



High Level Political Forum 2023: A Report

10th -19th July 2023 by Dr. Arvind Kumar*

"Unless we act now, the 2030 Agenda will become an epitaph for a world that might have been" said UN Secretary-General António Guterres

The UN Secretary-General's latest progress report on the SDGs makes for sobering reading.

Only 12% of the SDG targets are on-track. Nearly 50% of the targets are moderately or severely off-track. About 30% have either stagnated or "regressed below the 2015 baseline." World hunger has returned to 2005 levels and, at the current pace, bridging gender inequality could take 300 years. If present trends continue, it is projected that by 2030. 575 million people will be living in extreme poverty; 84 million children will be out of school, and of those still enrolled, 300 million will leave unable to read and write; renewable



sources will constitute a mere fraction of global energy supplies; and 660 million people will live without electricity and nearly two billion will have no access to clean cooking. We're at half-time, we're behind, and we're losing. How do we turn this around in the second half and win?

HLPF 2023 reviewed five SDGs in detail: SDGs 6 (clean water and sanitation), 7 (affordable and clean energy), 9 (industry, innovation, and infrastructure), 11 (sustainable cities and



communities), and 17 (partnerships for the Goals). Here, too, the reports from the field were sobering. SDG 6 is alarmingly off-track. Achieving SDG 7 by 2030 poses an unprecedented challenge but is still doable with scaled-up ambition and the right policies. Regarding SDG 11, there is a growing urban divide, inadequate housing is a pressing problem, and only half of the world's urban population has access to public transport. During these specific reviews, many delegates were struck by how often they heard panelists and experts note that we have most of the data, indicators, and diagnoses we need,

as well as policy recommendations to follow, and declarations of general commitment to build upon. For example, on SDG 6, the March UN 2023 Water Conference produced what most participants regarded as a concrete action agenda, and the SDG 6 Synthesis Report 2023 on Water and Sanitation provides a clear blueprint to accelerate progress.



Over and over speakers urged translating plans, blueprints, recommendations, and statements of support into concrete, ambitious action. Instead of lip service, it's time to turn the pledges of leave no one behind into actions, actions, actions. How We Got Here?

It's not just a goal to be accomplished – it's hope for a better future to be delivered.

In recent years it has become fashionable among some politicians to blame the lack of implementation of the 2030 Agenda and SDGs on the impacts of the COVID-19 pandemic, supply chain constraints, the war in Ukraine, climate-related extreme events, and even the triple



Dr. Kumar with Sh. G Krishan Reddy, Minister of Tourism, Govt. Of India

planetary crisis (climate change, biodiversity loss, and pollution). But as UN Secretary-General António Guterres and Under-Secretary-General for Economic and Social Affairs Li Jinhua pointed out more than once during HLPF 2023, countries were already falling short of the Goals before COVID-19 struck or the Ukraine war began. As many speakers during the Ministerial Segment acknowledged, the crafters of the 2030 Agenda and the SDGs, and the UN General Assembly that adopted the package, knew it was ambitious and aspirational. Most were not naïve or self-deluding. They knew the SDGs' predecessor, the Millennium Development Goals (2000-2015), did not meet many of its less ambitious targets, so setting more comprehensive and ambitious

targets with another 15-year timeline was aiming high. They chose to offer hope to the world for a better future all could aspire to: "the future we want."

Some of the difficulties in implementing the 2030 Agenda are inherent in the package itself. The Goals are not just about a few tangible deliverables like clean water and affordable and clean energy for all, but also harder to measure Goals that the UN has spent 78 years seeking, such as peace, justice, good governance, and equality for all. Another difficulty is that the SDGs and targets are considered a package deal—they are all linked and should be pursued together without unduly favoring one over another. This can be frustrating to champions of particular Goals (climate, energy, water, or cities), who see their favorite as key to success in all others, the connector to them all, and want to push progress first and/or hardest on their SDG. But as HLPF 2023 panelists were at pains to point out repeatedly, work on one Goal affects achievement of another, positively or negatively. Everyone likes to point out synergies where they can be identified, but as a panelist on SDG 9 said, tradeoffs and unintended impacts must also be analyzed and considered, but often are not.

This large and complex package also makes it difficult to communicate the relevance of sustainable development to the average citizen. Indeed, many of the presenters of their country's



Voluntary National Reviews (VNRs) noted they had integrated the SDGs into their national plans and programmes and were in the process of doing so for local and sectoral plans and programmes but expressed concern about how to make it real to the average man or woman. The



chair of the session on localization of the SDGs urged participants to work on making the SDGs relatable to everyday concerns to increase buy-in from the average person. Furthermore, means of implementation, including financial, technological, and capacity-building resources, as well as the 2015 Addis Ababa Action Agenda, the global framework for financing sustainable development, have fallen short. Even funding for championed popular Goals such as climate, water, and energy is nowhere close to meeting the estimated needs for the transformative change envisioned by the Goals.

Last, but not least, the 2030 Agenda lacks a monitoring and accountability mechanism that can supplement bottom-up and multilateral pressure for SDG defaulters to change course. This concern was reiterated during a side event considering how to revamp VNR reporting processes so they are not primarily "descriptive" texts that can lean towards the self-congratulatory. They discussed how the VNRs can become self-critical and action-oriented reflections capable of spurring genuine learning and improvements in policy and implementation. While acknowledging the difficulty of including robust language to this end in a political declaration,

various negotiators involved in preparations for the SDG Summit did call for referencing the need for stronger data to track progress, as well as requiring VNR analyses to explore policy implications of possible synergies and the costs of inaction.



Where We Need to Go!!

It's not time for despondency, or for looking beyond 2030. We need to double down on action. The UN Secretary-General

offered his own prescription when he released the progress report in April 2023. Among other things, his doctor's orders proposed: a recommitment to accelerated, sustained, and transformative action; pledges for concrete, integrated, and targeted policies and actions to eradicate poverty, reduce inequality, and end the war on nature; strengthened national and subnational capacity, accountability, and delivery institutions; a recommitment to the Addis Ababa Action Agenda; strengthening the UN development system; and addressing SDG-related gaps and weaknesses in the international architecture that have emerged since 2015. Subsequently, he called for reform of the international financial architecture and the creation of an SDG Stimulus



plan to unlock at least USD 500 billion annually for developing countries. He has also called for forging a "new social contract" at the 2025 Social Summit.

Guterres also urged every country to come to the SDG Summit armed with concrete national plans and pledges, particularly ones that address poverty and inequality. He repeated this call during the HLPF Ministerial Segment, as did many ministers and other high-level officials who spoke during the general debate. During the HLPF panel discussions, several recommendations were floated to address specific issues, such as new intergovernmental bodies for water matters, energy, clean cooking, and an intergovernmental process to agree on new development indices that go beyond the limitations of GDP. Many of these suggestions have not made it into the draft Political Declaration to be adopted at the Summit. It also remains unclear at this juncture how many countries will come to the Summit with actionable pledges.

At the halfway point between the adoption of the 2030 Agenda for Sustainable Development and its 17 Sustainable Development Goals (SDGs) in 2015 and its 2030 deadline, only 12% of the SDG targets are on-track, and some targets are regressing below the 2015 baseline. This message from the UN Secretary-General's progress report on the SDGs haunted participants at the 2023 High-level Political Forum on Sustainable Development (HLPF) held under the auspices of the UN Economic and Social Council (ECOSOC). The theme of general debate during the Ministerial Segment of the 2023 HLPF was "Building momentum towards the SDG Summit." The second SDG Summit, scheduled for 18-19 September 2023, was top-of-mind for delegates throughout the entire eight days. At nearly every session, speakers voiced their wish lists and expectations for the Summit.

Five SDGs were under review at HLPF 2023: SDGs 6 (clean water and sanitation), 7 (affordable and clean energy), 9 (industry, innovation and infrastructure), 11 (sustainable cities and communities), and 17 (partnerships for the Goals). Many status updates confirmed

the somber tone of the Secretary-General's report. SDG 6 is "alarmingly off-track." Achieving SDG 7 by 2030 poses "an unprecedented challenge" but is still achievable with scaled-up ambition and the right policies. Regarding SDG 11, there is a growing urban divide, inadequate housing is a pressing problem, and only half of the world's urban population has access to public transport. For SDG 9 "there is hope" with progress on some targets such as mobile network access, but the implementation pace on others needs to quicken and more support for innovation and infrastructure in least developed



countries (LDCs) is needed. As for SDG 17, while there have been advances in areas such as development aid, remittance flows, and access to technology, funding for development



remains a major challenge, particularly in low-income countries. Participants discussed possible responses to accelerate implementation for each Goal reviewed.

HLPF 2023 also held sessions on the implementation challenges faced by different groups of



countries, including small island developing states (SIDS), Africa, LDCs, landlocked developing countries (LLDCs) and, for the first time, middle-income countries (MICs), which are not considered poor enough to receive concessional financing yet face significant difficulties in raising capital for SDG implementation initiatives. In addition, a session was held to examine how to "localize" the implementation of the SDGs and another spotlighted the perspectives of Major Groups and other Stakeholders (MGoS). Thirty-eight countries presented their Voluntary National Reviews (VNRs) during HLPF 2023:

one for the first time, 36 for the second, and one for the third. The European Union (EU) presented the first-ever supranational review. These sessions facilitated the sharing of experiences, including successes, challenges and lessons learned.

HLPF 2023 was convened at UN Headquarters in New York from 10-19 July 2023. Several hundred side events, special events, VNR Labs, and exhibitions took place during the HLPF, which was attended by more than 120 ministers and vice-ministers, as well as other representatives from governments, intergovernmental organizations, and civil society. Participants discussed possible responses to accelerate implementation of the Goals that underwent in-depth review this year.

The ENB summary report of the meeting highlights that:

- SDG 6 (clean water and sanitation) is "alarmingly off-track";
- While achieving SDG 7 (affordable and clean energy) by 2030 poses "an unprecedented challenge," the Goal is still achievable with scaled-up ambition and the right policies;
- "There is hope" for SDG 9 (industry, innovation and infrastructure), with progress on some targets such as mobile network access, but the pace of implementation on others needs to quicken, and more support for innovation and infrastructure in least developed countries (LDCs) is needed;
- Challenges to achieving SDG 11 (sustainable cities and communities) include a growing urban divide, inadequate housing, and limited access to public transport; and
- While there have been advances in some areas of SDG 17 (partnerships for the Goals), such as development aid, remittance flows, and access to technology, funding for development remains a major challenge, particularly in low-income countries.



While delegates acknowledged that only 12% of the SDG targets are on track, according to the *ENB* analysis of HLPF 2023, the Philippines Undersecretary of the Department of Foreign Affairs captured the mood best when he said: "We have not failed. The deadline is still ahead of us."

Thirty-eight countries presented their Voluntary National Reviews (VNRs) during HLPF 2023. Saint Kitts and Nevis presented its first VNR. Chile presented its third. Bahrain, Barbados, Belgium, Bosnia and Herzegovina, Brunei Darussalam, Burkina Faso, Cambodia, Canada, the Central African Republic (CAR), Comoros, Croatia, the Democratic Republic of the Congo (DRC), the EU, Fiji, France, Guyana, Iceland, Ireland, Kuwait, Liechtenstein, Lithuania, Maldives, Mongolia, Poland, Portugal, Romania, Rwanda, Saudi Arabia, Singapore, Slovakia, Syria, Tajikistan, Timor-Leste, Turkmenistan, Tanzania, Uzbekistan, Viet Nam, and Zambia presented their second VNRs. The EU presented the first-ever supranational review. These sessions, *ENB* notes "facilitated the sharing of experiences, including successes, challenges and lessons learned."

HLPF 2023 also included sessions on the implementation challenges faced by different groups of countries, including Small Island developing States (SIDS), Africa, LDCs, landlocked developing countries (LLDCs), and, for the first time, middle-income countries (MICs). According to *ENB*, MICs "are not considered poor enough to receive concessional financing yet face significant difficulties in raising capital for SDG implementation initiatives." In addition, a session convened on how to "localize" the implementation of the SDGs. Perspectives of Major Groups and other Stakeholders (MGoS) also received attention.

Thirteen special events convened during the Forum:

- 2023 SDGs Learning, Training, and Practice Special Event;
- Launch of the Sustainable Development Goals Report: Special Edition;
- Tracking SDG 7: The Energy Progress Report and the SDG 7 Policy Briefs Launch;
- Launch of State of Food Security and Nutrition in the World (SOFI) 2023;
- Local 2030 Coalition Special Event at 2023 HLPF;
- Sixth Local and Regional Governments Forum on the 2030 Agenda;
- Science Day at 2023 HLPF;
- Fourth Global Climate and SDG Synergy Conference;
- HESI Global Forum 2023;
- SDG 6 Water Action Agenda Special Event;
- 2023 SDG Global Business Forum;
- Parliamentary Forum at the 2023 HLPF; and
- Intergenerational Dialogue on Leveraging Skills and Investment to Achieve the SDGs.



Sixteen VNR Labs and several hundred side events and exhibitions also took place. More than 120 ministers and vice-ministers, as well as other representatives from governments, intergovernmental organizations, and civil society attended HLPF 2023.

But most participants refuse to give up hope. Clinging to the sports metaphor that pervaded the 2023 Forum, optimists called for a pep talk at halftime and team captains that can lead everyone to double down on their efforts in the next seven years of the 2030 Agenda and eke out a victory. Using a crew metaphor, current UN Environment Assembly President Leila Benali urged synchronized teamwork, since "nothing is more powerful than everyone rowing together in the same direction." Perhaps the Philippines Undersecretary of the Department of Foreign Affairs put it best in his statement during the general debate: "We have not failed, because that negates all we have accomplished. We knew the agenda had lofty ideas and we committed to this journey. We have not failed. The deadline is still ahead of us

Meeting with the President of the World Bank

At COP 28 Dr. Arvind Kumar, President, India Water Foundation had a wonderful opportunity to meet and have a fruitful discussion with Mr. Ajay Banga, President of the World Bank. I was deeply touched by his graciousness, warm gesture and humble demeanour. Also had a highly productive comprehensive bilateral meeting with Mr. Saroj Kumar Jha, Global Director, Global Water Practice, World Bank Group. Our discussion steered from World Bank strategy and work plan for India to



exploring opportunities of engaging with the World Bank and contributing to its future endeavours.



GLOBAL ONLINE

High level policy dialogue on "Stewardship for achieving Water Partnerships for Peace by Transversality Systemic Approach"

international water law has developed principles norms that provide the basis for transboundary water cooperation, which can avoid conflict and contribute stability and peace. Unfortunately, only 32 out of the 153 countries sharing transboundary waters have at least 90% of their transboundary basin area covered operational arrangement for water cooperation" said Dr. Arvind Kumar, President, India



Water Foundation during the high level policy dialogue on "Stewardship for achieving Water Partnerships for Peace by Transversality Systemic Approach" organized by India Water Foundation and supported by Ministry of Jalshakti, Government of India and Un ESCAP organized on 28th March 2024 to commemorate the 16th foundation day of India Water Foundation and the WorldWater Day 2024. The event was chaired by Dr. Armida Salsiah Alisjahbana UN Under Secretary General and Executive Secretary United Nations ESCAP and other speakers in the event were Mr. Eric Tardieu, Vice President, World Water Council, Dr. Eddy Moors, Rector, IHE Delft Institute of Water Education, Ms. Dani Gaillard Picher, International Policy Advisor, Swedish Water House-, Stockholm International Institute of Water, Dr. Rajan Ratna, Deputy Head and Senior Economic Affairs Officer, South and South West Asia Office of United Nations ESCAP, Mr. Atul Bagai, Head UNEP India Office. The event was moderated by Ms. Shweta Tyagi, Chief Functionary of India Water Foundation. The event highlighted the benefits and co-benefits of linkage of water and related sectors and how water is not only a resource to be used and competed over – it is a human right, intrinsic to every aspect of life and should be transformed into a tool for peace building. To watch the complete recording of the event please go to https://youtu.be/3xhHrJ7f2zs



Managing Ecosystems for Multiple Benefits via EbA for Climate Adaptation and Resilience

bA takes into account transversality approach of water and emphasizes water as a socio economic connector and indicator that interlinks sectors like agriculture, energy, biodiversity through actor and synergy sector intersectoral convergence" said Dr. Arvind Kumar during an official side event of 11th Asia-Pacific Forum for Sustainable Development on Managing **Ecosystems** For Multiple Benefits Via EbA For Climate Adaptation And Resilience



organized by India Water Foundation on 22 February, 2024. Other speakers in the event were Ms. Hitomi Rankiney, Chief Environment and development Policy Section, UNESCAP, Dr. Amani Alfarra, Program Manager - Water & Natural Resource Management, FAO Rome, Dr. M V Ramana Murthy, Advisor & Programme Head, Deep Ocean Mission, Ministry of Earth Sciences, Dr. Sudipta Chatterjee, Associate Director- Programs, India, TNC, Ms. Temina Lalani Shariff, Regional Director South Asia, CGIAR, Mr. Kazuya Suzuki, Chief Representative, JICA Thailand Office, Ms. Srabani Roy, Strategic Group Leader, ICIMOD and Mr. Jaidev Joshi, Senior Programme Officer Water Wetlands & NBS, IUCN Asia. The event was moderated by Ms. Shweta Tyagi, Chief Functionary, India Water Foundation. This session delves on interaction between climate changes and how it impacts various ecosystems and explores novel perspectives on how ecosystems respond to climate change, how ecosystem resilience can be enhanced and how ecosystems can assist in addressing the challenge of a changing climate.



High level policy dialogue on 'Deciphering Nexus of Poverty Eradication, Food Security and Climate Change through Multistakeholder Partnerships'

e have to harvest the opportunities that the agriculture and food systems offer to lift people out of poverty and the future must be built on bottom-up systemsthinking approaches" said Dr. Arvind Kumar, President India Water Foundation during the high level policy dialogue on 'Deciphering Nexus of Poverty Eradication, Food Security and Climate Change through Multistakeholder Partnerships' as an event of official side



UNECOSOC Partnership Forum 2024 organised by India Water Foundation and supported by Global Alliance for a Sustainable Planet on 30th January 2024. The event was chaired by Sh. Gajendra Singh Shekhawat, Minister of Jalshakti, Government of India, Co-Chaired by Ms. Lin Yang, Deputy Executive Secretary, United Nations ESCAP. Other speakers in the event were Ms. Susan C Gardner, Ph.D. Director, Ecosystems Division, UN Environment Programme, Mr. Shombi Sharp, UN Resident CoordinatorIndia, Mr. Satya S. Tripathi Secretary General, Global Alliance for a Sustainable Planet, Ms. Danielle Gaillard-Picher, International Policy Advisor, Swedish Water House, SIWI - Stockholm International Water Institute and Mr. Sanjeev Bhuchar, Senior Watershed Management Specialist, ICIMOD. The event was moderated by Ms. Shweta Tyagi, Chief Functionary, India Water Foundation. The event delved on the nexus of poverty (SDG1), food insecurity (SDG2) and climate change (SDG13) and how partnerships (SDG17) can find solutions on several bottlenecks impeding greater progress. To watch the complete recording of the event please go to







A webinar on

"Building back biodiversity: Integrating Multi-Actor Perspectives"

On the occasion of International Day of Biodiversity

Organized by India Water Foundation and Supported by IUCN, UNEP and Namami Gange, GOI

On 22nd May 2023 (Virtual)

Biodiversity decline and the risk of future pandemics have many common root causes: forest degradation and habitat fragmentation that drive humans and wildlife increasingly into contact. More effective biodiversity policies can reduce the risk of future pandemics—potentially with a fraction of the economic and social costs associated with a global pandemic. The benefits and cost effectiveness of working with nature extends to other domains—including food and water security, and climate change. Fortunately, this is becoming better understood, as people have started to realize the importance of biodiversity for their own health, well-being and prosperity. To reduce future shocks and build societal resilience, the postpandemic recovery must focus on well-being and inclusiveness, and trigger investment and behaviour changes. But to achieve this, bold, interdependent actions are needed across several fronts—each of which is necessary and none sufficient on its own.

Efforts to conserve and restore biodiversity, address climate change in ways that limit global temperature rise without imposing unintended pressures on biodiversity, and transform the way we produce, consume and trade goods and services that rely on and impact biodiversity must be increased. Unsustainable subsidies must be redirected into nature-positive incentives. The recently adopted Global Biodiversity Framework (GBF) includes a target to protect 30% of the planet's land and seas by 2030; the Global Plastics Treaty currently under negotiation—and which could be legally binding—will include mandates around plastic environmental pollution; and the EU's global deforestation law will require companies working in areas with high rates of deforestation to certify their products as deforestation-free.



Financialrelated drivers also mean organisations will have to simultaneously consider how climate disruption and loss of nature will impact their business, and how their business is driving climate change and biodiversity loss. As organisations navigate pathways towards net-zero greenhouse gases (GHG)—while also adapting to the impacts of climate change—biodiversity and nature will inevitably have to become part of the plan, as well as part of risk assessment.

This means greater efforts are needed to address direct and indirect drivers of biodiversity loss including taking integrated and holistic approaches to planning and implementation, greater interaction among government ministries, economic sectors and society; committing to an integrated, whole-of-government, whole of society approach to improve the way we manage the



natural environment and interactions with human society; further strengthen integration of gender, the role of indigenous and localcommunities, peoples business, finance sector and all other stakeholder engagement; and, given the present pandemic crisis, taking a "One Health" approach managing which calls for ecosystems, including agricultural and urban ecosystems, as well as the use of wildlife, through an integrated approach, to promote healthy ecosystems and healthy

people.

To delve on these crucial issues India Water Foundation organized a virtual event to commemorate the International day of Biodiversity 'Building Back Biodiversity: Multi-actor Perspectives' on 22nd May 2023 from 18.00 HRS (IST) onwards. The event was organized in collaboration with International Union for Conservation of Nature (IUCN), United Nations Environment Programme (UNEP), Convention for Biological Diversity (CBD) and National Mission to Clean Ganga (NMCG) of the ministry of Jalshakti, Government of India. The event was a multi-actor perspective on why greater efforts are needed to address direct and indirect drivers of biodiversity loss. Around 600 participants joined the webinar from all around the globe from multi sector organizations. All the speakers presented their nuanced perspectives on this crucial issue of biodiversity which is undeniably linked to climate change, water, agriculture, energy etc. and garnered a thunderous response from the wonderful audience who joined in great numbers from different time zones.

Speakers



- 1. Dr. Arvind Kumar, President, India Water Foundation
- **2.** Mr. G. Asok Kumar, IAS, Director General, National Mission for Clean Ganga, Ministry of Jalshakti, Department of Water Resources, River Development and Ganga Rejuvenation, Government of India
- 3. Dr. Avinash Mishra, Advisor- Water Resources Niti Aayog, Government of India
- 4. Ms. Susan Gardner, Director, Ecosystems Division, UNEP
- **5.** Ms. Katinka Weinberger, Chief, Environment and Development Policy Section, United Nations Economic and Social Commission for Asia and the Pacific
- **6.** Dr. Sasha Koo-Oshima, Deputy Director & Water Lead of the Land and Water Division FAO
- 7. Mr. Vishwaranjan Sinha, Programme Officer Water and Wetlands, IUCN
- 8. Mr. Vineet Sarin, Chief Development Specialist, JICA

Moderator

Ms. Shweta Tyagi, Chief Functionary, India Water Foundation

Recommendations

- Sovernments must not only develop their national biodiversity targets but put in place the laws, policies and programmes necessary to achieve them.
- ➤ Businesses need to assess and disclose impacts and pivot towards sustainable practices.
- ➤ The efforts of indigenous peoples and local communities in protecting biodiversity must be recognized and protected.
- We all need to reduce waste and shift to more sustainable consumption.
- ➤ We need to raise the necessary finance to facilitate these actions, reform subsidies and align major investment flows with the goals and targets of the Framework.
- > The degraded ecosystems should be restored not just for addressing biodiversity loss

Click here for Full Video Recording: https://youtu.be/NFPr-OihIxQ















"Multi-Sectoral dialogues: Finding Solutions to Beat Plastic Pollution"

On the occasion of World Environment Day

Organized by India Water Foundation in collaboration with UNEP, IUCN, and UN ESCAP

On 2nd June 2023 (Virtual)

Intergovernmental Negotiating Committee is developing a legally binding instrument on plastic pollution, with the aim of having it finalized by the end of 2024. While this progress is good news, current commitments by governments and industry are not enough Countries need to encourage innovation and provide incentives to businesses that do away with unnecessary plastics. Taxes are needed to deter the production or use of single-use plastic products, while tax breaks, subsidies and other fiscal incentives need to be introduced to encourage alternatives, suchas reusable products.

Waste management infrastructure must also be improved. Multi-stakeholder and inter-sectoral partnerships should be promoted to address this grave issue. Thisevent will provide a platform to share analysis and experiences with the aim of developingguidance to enhance co-operation, partnerships, policy coherence and sustainable financing solutions to address and prevent plastics pollution. On 5 June every year, the World celebrates World Environment Day. This year, the theme of the Day was "Beat plastic pollution" – a call for action for the world to work together to address one of the great environmental challenges of our time and raise global awareness of the need to reduce the heavy burden of plastic pollution on people's health and the threat it poses to the environment and wildlife.

Humanity produces more than 430 million tonnes of plastic annually, two-thirds of which are short-lived products that soon become waste, filling the ocean and, often, working their way into the human food chain. While the world has derived great benefit from the use of plastics, which have transformed people's everyday lives, the negative ecological effects and adverse impact on health from their misuse and overuse cannot be overlooked. Many people aren't aware that a



material that is embedded in our daily life can have significant impacts not just on wildlife, but on the climate and on human health.

Plastic remains in the environment for a long time, it cannot biodegrade, only break down into smaller and smaller pieces. The economic damage caused by plastic waste is vast. Plastic litter in the Asia-Pacific region alone costs its tourism, fishing and shipping industries \$1.3 billion per year. In Europe, cleaning plastic waste from coasts and beaches costs about €630 million per year. Studies suggest that the total economic damage to the world's marine ecosystem caused by plastic amounts to at least \$13 billion every year. The economic, health and environmental reasons to act are clear.



To delve on the same India Water Foundation organized a virtual session to commemorate World Environment Day in collaboration with Union for Conservation of Nature (IUCN), United Nations Environment Programme (UNEP) and United Nations Economic and Social Commission for Asia and the Pacific (UN ESCAP) on 2nd June 2023, 14.30HRS (IST) onwards.

Speakers

- 1. Dr. Arvind Kumar, President, India Water Foundation
- 2. Mr. Avinash Mishra, Advisor, Niti Aayog, Government of India
- 3. Mr. Erik Solheim, Senior Adviser, World Resources Institute
- 4. Mr. Atul Bagai, Head-UNEP India Office
- 5. Dr. Rajan Sudesh Ratna, Deputy Head and Senior Economic Affairs Officer, South and South West Asia Office, United Nations ESCAP
- 6. Ms. Maeve Nightingale, Senior Programme Officer, Coastal and Marine from the Science and Strategy Group Asia IUCN
- 7. Mr. Hitesh Vaidya, Director, National Institute of Urban Affairs
- 8. Mr. Pema Gyamtsho, Director General, ICIMOD
- 9. Ms. Martina Burkard, Project Director, Competence in Motion, Support to Ganga Rejuvenation / India EU-Water Partnership

Moderator

Shweta Tyagi, Chief Functionary, India Water Foundation

Recommendations



- **1.** Shifting economic incentives to penalize pollution and reward resource efficiency will increase the economic attractiveness of circular economy solutions.
- 2. We should strive to eliminate plastic products we don't need; innovate, so all plastics that we do need are designed to be safely reused, recycled, or composted; and circulate everything we use to keep it in the economy and out of the environment.
- **3.** Certain priority sectors like packaging have been using an unsustainable quantum of plastics (typically single-use) they should be regulated and have to be incorporated in the National Action Plans (NAP) and the national reporting system under implementation measures.
- **4.** Under core obligations, transparency with respect to production, consumption and import / export of plastic and plastic waste has to be created and nurtured at a global level
- **5.** Control measures have to be focused on differentiating between recycling and disposal (waste-to-energy and co-incineration) technologies.
- **6.** Many countries have expressed that compostable and biodegradable plastics are the solutions to the plastic crisis. However, it should be brought to the knowledge of the member states that bioplastics come with their own set of challenges and do little to tackle the plastic problem at source
- 7. The narrative that the plastic crisis is strictly a "waste management problem" needs to change. The problem of plastics is much more complicated. It is a concoction of unsustainable production issues, human health issues, environmental issues and much more

Click here for Full Video Recording: https://youtu.be/WN5hckuG7bE













A High Level Policy Dialogue on "Deciphering Interlinkages of SDG6 through Multi-sector Partnerships"

Organized by India Water Foundation in collaboration with UNEP, CBD IUCN, UN ESCAP, IHE DELFT, IUCN and JICA On 10thJuly 2023 (Virtual)

he High-level Political Forum on Sustainable Development (HLPF) was held from Monday, 10 July, to Wednesday, 19 July 2023, under the auspices of the Economic and Social Council . This includes the three-day ministerial segment of the forum from Monday, 17 July, to Wednesday, 19 July 2023 as part of the High-level Segment of the Council. The last day of the High-level Segment of ECOSOC was on Thursday, 20 July 2023. The theme was "Accelerating the recovery from the coronavirus disease (COVID-19) and the full implementation of the 2030 Agenda for Sustainable Development at all levels."

In the forum, participants were able to further discuss the effective and inclusive recovery measures to address the impacts of the COVID-19 pandemic on the Sustainable Development Goals (SDGs) and explore actionable policy guidance for the full implementation of the 2030 Agenda and the SDGs at all levels. The HLPF in 2023, without prejudice to the integrated, indivisible and interlinked nature of the SDGs, also reviewed in-depth Goals 6 on clean water and sanitation, 7 on affordable and clean energy, 9 on industry, innovation and infrastructure, 11 on sustainable cities and communities, and 17 on partnerships for the Goals.

India Water Foundation got the privilege to organize an official virtual side event at the HLPF 2023 'Deciphering Interlinkages of SDG6 through Multi-sector Partnerships" in collaboration with International Union for Conservation of Nature (IUCN), United Nations Environment Programme (UNEP), Convention for Biological Diversity (CBD), Japan International Cooperation Agency (JICA), IHE DELFT Institute for Water Education, Global Alliance for a Sustainable Planet (GASP) and United Nations Economic and Social Commission for Asia and the Pacific (UN ESCAP) on 10th July 2023 from 17.00 HRS (IST)



Water is a fundamental part of all aspects of life. Due to its crosscutting nature, water underpins all three dimensions of sustainable development and supports the achievement of many SDGs

through intimate linkages with climate, the environment and health, among many others. The UN 2023 Water Conference vision statement, for example, acknowledges that "without a functioning, resilient water cycle for all people everywhere," human health, environmental integrity and a sustainable, equitable future "will remain out of reach."

Understanding the linkages is a first step towards active management and will help governments establish intersectoral mechanisms and



procedures to address these issues, including partnerships, coordinating committees, consultation mechanisms, integrated monitoring and data management and evaluation criteria for inclusive and sustainable development. Water is associated with many sectors and affects the increases and decreases in production of sectors. Water stands out as the most critical sustainable development challenge since it deals with the most valuable and limited resource on earth. If water becomes scarce or threatened, it causes risks to economic, social, and environmental sustainability. Moreover, water also influences the increases and decreases in SDG indicators. Water can help us find a more sustainable path. Since water connects all the 17 SDGs and offers opportunities for partnership for the Goals. When viewed this way, it soon becomes apparent that many new approaches to water will effectively address several of the goals simultaneously.

The primary objective of this high-level policy dialogue is to highlight the interdependency between the targets under Goal 6 on water and sanitation and other social, economic and environmental Goals and targets in the 2030 Agenda. Therefore, the intention is to capture the transversality of SDG6: incorporating water and sanitation in other Goals is necessary for the achievement of Goal 6, and implementing targets under Goal 6 enables the achievement of a number of other targets across the 2030 Agenda. The event aims to capture key messages made by multisectoral participating organizations, experts, leaders, including intergovernmental organizations, UN system entities and stakeholders.

Speakers

1. Sh. Gajendra Singh Shekhawat, Hon'ble Union Minister of Jal Shakti, Ministry of Jal Shakti, Government of India



- 2. Dr Tedros Adhanom Ghebreyesus, Director-General, WHO
- 3. Dr. Arvind Kumar, President, India Water Foundation
- 4. Ms. Susan Gardner, Director-Ecosystems Division, UNEP
- 5. Mr. David Cooper, Executive Secretary, Convention for Biological Diversity
- 6. Mr. Shombi Sharp, UN Resident Coordinator, India
- 7. Mr. Eddy Moors, Rector, IHE Delft
- 8. Mr. Rajan S Ratna, Deputy Head and Senior Economic Affairs Officer, United Nations ESCAP-SSWA Office
- 9. Mr. Satya Triathi, Secretary General, Global Alliance for a Sustainable Planet
- 10. Mr. Katsuo Matsumoto, Director General, JICA
- 11. Mr. Mark Smith, Director General, International Water Management Institute
- 12. Mr. Vishwaranjan Sinha, Programme Officer, Water and Wetlands-South Asia, IUCN

Moderator

Ms. Shweta Tyagi, Chief Functionary, India Water Foundation

Recommendations

Goal 6 is one of the goals that is seeing the least amount of progress being made in the subregion. There is a need to accelerate progress with regard to access to safe drinking water, sanitation and hygiene and transboundary water cooperation to achieve 2030 targets. Concerted efforts are also needed to address regressions in progress that are being seen in the areas of water use efficiency, protection and restoration of water-related ecosystems and participatory water and sanitation management.

- Financing: Government, national and international financial institutions and multi-sectoral
 actors need to be improved targeting and use of existing funding for water and sanitation
 initiatives more effectively. There is a need to mobilise domestic resources and additional
 investment is needed from the private sector and public sources
- Governance: there is a need to enhance institutional and individual capacities to foster cross sectoral decision making, planning and implementation and identifying areas for horizontal and vertical cooperation at all levels. Decision makers need to combine traditional knowledge with the modern technology and innovative methods by involving multiple stakeholders to increase efficiency of water use and ensure sustainable fresh water supplies, especially in water stressed and transboundary regions. Addressing the rural urban disparities and the decentralization of the freshwater management needs to be prioritized.
- New paradigm: There is a need to shift from a reductionist, hydrologic paradigm to hydro eco-social paradigm, to secure water for humans, ecosystems and food. At the same time gender dimension in the governance of scarce resources is becoming more critical nationally.



Regional cooperation: There is a dire need of horizontal and vertical cooperation between the
countries for water protection which will be beneficial for ecosystem preservation,
agriculture and food security. Cooperation between countries on early warning systems is
also important. SSWA countries could also learn from Iran on how it has been implementing
actions to achieve SDG 6 despite the many problems it faces with international sanctions.

Click here for Full Video Recording: https://youtu.be/dX9aRGw86ug



Quarterly Meeting between stakeholders and the IPBES

Secretariat: Attending the Quarterly Meeting between stakeholders and the IPBES Secretariat. One and the International Indigenous Forum on Biodiversity and Ecosystem Services (IIFBES), the two existing IPBES stakeholder networks, meet three or four times per year with the IPBES Secretariat staff updating on ongoing



work, exchanging ideas and asking questions. This interesting meeting was a follow up on the IPBES caucus Day which took place in November 2022. It was a great opportunity to engage and interact directly with the IPBES Secretariat!

 $\frac{https://www.facebook.com/drarvind.kumar.3/posts/pfbid0K9mdGJD5nv7rZumdz2L4rivr4etqoWyKxETQqU5iUxJU3YGwgARDXzLnxK9zE7HFl}{}$

International Day of Biodiversity: "Every dollar invested in environmental protection generates more than 2,500 dollars in so-called ecosystem services — water regulation, coastal protection, Carbon storage, food, oxygen, medicines, fiber and other invisible functions that nature provides." said Dr. Arvind Kumar during the celebrations of International Day of Biodiversity that India Water Foundation organised with support of IUCN, UNEP, CBD and NMCG on 'Building Back Biodiversity: Multi-actor Perspectives' on 22nd May 2023 from 18.00 HRS (IST) onwards.

World Environment Day: "The international legally binding instrument on plastic pollution should include clear, defined, and monitorable targets – against which Member States can measure progress. It needs to be inclusive and address the concerns of all countries and those that work within the plastics economy and must cover the full life cycle of plastics use" said Dr. Arvind Kumar during the multi stakeholder dialogues on 'Finding Solutions to Beat Plastic Pollution' organised by India Water Foundation and supported by IUCN and UNESCAP on the conclusion of the INC2 negotiations in Paris and observing the World Environment Day on 2nd June 2023

High level policy dialogue on Deciphering Inter-linkages of SDG 6 through multi sectoral partnerships: 'We have to

identify opportunities to integrate water management into sectoral programmes and planning processes – such as climate change, agriculture and poverty reduction and establish formal coordination mechanisms, with clear institutional mandates, responsibilities, and incentives for



coordination.' said Dr. Arvind Kumar, President, India Water Foundation during the high level policy dialogue on Deciphering Inter-linkages of SDG 6 through multi sectoral partnerships organised by India Water Foundation in collaboration with UNEP, UNESCAP, IHE Delft, IUCN, JICA and Global Alliance for a Sustainable Planet. This was an official virtual side event of High-LevelPoliticalForum2023 being held in New York from 10th-19thJuly. The dialogue was moderated by Shweta Tyagi, Chief Functionary, India Water Foundation and chaired by Sh. Gajendra Singh Shekhawat, Hon'ble Minister of Jalshakti, Ministry of Jalshakti, Government of India. Other eminent speakers in the dialogue were Dr. Tedros A. Ghebreysus, Director General, WHO, Ms. Susan Gardner, Director, Ecosystems Division, UNEP, Dr. David Cooper, Acting Executive Secretary, CBD, Dr. Eddy Moors, Rector, IHE Delft, Dr. Rajan Sudesh Ratna, Deputy

Head, UNESCAP, Mr. Satya Tripathi, Secretary General, GASP, Dr. Mark Smith, Director General, IWMI, Dr. Katsuo Matsumoto, Director General, JICA, Mr. Vishwaranjan Sinha, Project Officer Wetlands, IUCN.



SIWI World Water Week 2023: During

his presentation at the SIWI World Water Week 2023 (20 March 2023, Virtually) on "From Geo-Politics to Geo-Economics: Case study of Brahmaputra Basin" Dr. Arvind Kumar driving from his experience of more than a decade in the north east region highlighted that integrating optimized financing; improved data and information; enhanced Capacity; innovations; and Good Governance when it all comes together it is Transversality approach for peace, stability and shared prosperity in the basin and achieving timely SDGs. He further pointed out that apart from ecological, economic and other benefits transboundary water cooperation shall be beneficial in achieving net zero targets by supporting the development and implementation of adaptation strategies and measures, besides speaking about the stumbling blocks and prospective multifold impacts of cooperation in the Brahmaputra Basin for the riparian countries. This session was organised by WMO and had senior WMO officials and other water and development experts.

IPBES 10TH SESSION: Attended the tenth session of the Plenary of the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services (IPBES 10) virtually from 28 August to 2 September 2023 in Bonn, Germany.



NATIONAL INPERSON

International Water Conclave, Shillong Meghalaya

"A flexible legal framework, such as an agreement, enhancing institutional capacity can support the development and implementation of adaptation strategies and measures" highlighted Dr.

Arvind Kumar in his presentation titled Deciphering Nexus of Water, Climate and Disasters: From Geo-Politics to Geo-Economics in the session Water and Climate Change at the International Water Conclave Shillong being held in Shillong, Meghalaya from 9-10th February 2024. The event was inaugurated by the Hon'ble CM of Meghalaya Sh. Conrad K Sangma. Also present during the inauguration was Ms. Debashree Mukherjee, Secretary, Ministry of Jalshakti, Government of India and Chief Secretary of Meghalaya Sh. D K Wahlang. The two day conclave has set the tone on how states, regions and countries can come together through dialogue and knowledge sharing to address the



issue of climate change focusing on the water crisis in the world and to discuss the action steps that can be initiated to this end. I am sure that this first step will create a bigger impact for concerted action.



India Energy Week 2024

6-9th February 2024, Goa

India is not only embracing but also leading changes with its vast resources, booming economy, and progressive young population. Prioritizing energy security while aiming for a low-carbon future, India offers numerous investment opportunities in hydrocarbons, renewables, LNG, biofuels, and the broader energy sector. With the third largest energy demand globally and growth rates surpassing the global average, India has a crucial role amidst complex global challenges. The Ministry of Petroleum and Natural Gas hosted the India Energy Week in Goa from February 6th to 9th, 2024. This event serves as a significant platform for realizing both India's and the world's ambitious low-carbon goals. The exhibition featured 350 exhibitors presenting their technologies and services to 35,000 international energy professionals, while the conference included 400 speakers, including ministers, CEOs, thought leaders, and innovators, discussing challenges and exploring solutions to foster collaboration towards a sustainable future, with an audience of over 4,000 delegates

Why India

India, ranking as the world's third-largest energy consumer, holds a pivotal position in global energy discourse. With a burgeoning economy and population, the nation is poised to experience the most substantial surge in energy requirements, significantly impacting global energy demand.

In order to fulfill India's objectives of ensuring secure, accessible, affordable, and sustainable energy, significant investments will be channeled across the entirety of the energy supply chain. These investments present unprecedented opportunities for the global energy community to contribute to the transformation of one of the world's most critical energy markets. India Energy Week 2024 serves as a dynamic platform for facilitating discussions on global energy demand. By bringing together experts, policymakers, and industry leaders, this event fosters collaborative dialogues aimed at highlighting India's role in the global energy landscape. Through India Energy Week, participants gain insights into energy security, sustainability, innovation, and the

challenges posed by escalating energy demand, enriching global perspectives on these crucial issues.

INDIA WATER FOUNDATION AT IEW

Dr. Arvind Kumar, President, India Water Foundation went to Goa to speak in the India Energy Week 2024. He made a presentation in session 15: (Sustainable use of Natural Resources) on 7th February 2024 from 11.30 am onwards in Technical Theater 3 – Energy Transition Theater, at ONGC campus Goa. His presentation was





based on Deciphering Inter linkage of biodiversity loss and climate change: Achieving net zero via Decarbonisation in India.

Major Takeaways from IEW 2024:

The India Energy Week 2024 drew to a successful close in Goa on February 9th, marking an occasion of immense achievement. A press release from the Ministry of Petroleum and Natural Gas announced that



the forthcoming edition of this prestigious global energy conference will take place at Yashobhoomi in New Delhi from February 11th to 14th. Additionally, Union Minister Hardeep Singh Puri disclosed that the fourth edition in 2026 will return to Goa, specifically at the IPSHEM-ONGC Training Institute.

The four-day event, inaugurated by Prime Minister Narendra Modi, showcased a plethora of global oil, gas, biofuels, and renewable energy companies, each presenting their products and services. The platform facilitated collaboration, innovation, and growth across the energy spectrum through meaningful partnerships, as highlighted in the release.



Prime Minister Modi, in his opening address on the first day of the India Energy Week, reiterated India's dedication to unprecedented levels of investment in the energy sector, promising new avenues for investment and development. He emphasized the significant government spending in the sector and its potential to stimulate further investment within

India. Furthermore, PM Modi inaugurated the integrated Sea Survival Training Centre, ONGC Institute in Goa, and witnessed demonstrations of its capabilities. Throughout the day, various conferences and panels, including a ministerial panel on "Ensuring energy security for nations and industry in a VUCA world," were held, featuring esteemed participants from around the world.

On the second day, the International Energy Agency (IEA) released a report forecasting India's rise as the largest source of global oil demand growth between 2024 and 2030. Additionally, discussions centered around topics such as developing LNG markets and infrastructure, highlighting the critical role of affordable pricing and synchronized infrastructure in meeting energy targets. During a ministerial panel discussion titled 'South-South Cooperation: Energy for Inclusive Growth,' India's G20 Sherpa Amitabh Kant projected India's future as an exporter of clean energy by 2047, particularly through the export of green hydrogen.

The third day witnessed Union Minister Hardeep Singh Puri commending the technological innovations showcased at the event and announcing India's achievement of 12% ethanol



blending with petrol, ahead of schedule. This milestone prompted the government to revise the target for ethanol blending to 20% by 2025. Moreover, discussions during spotlight sessions emphasized India's role as an emerging energy demand center and the potential it holds for global energy trade. Bharat Petroleum Corporation Limited (BPCL) unveiled its initiative 'Pure for Sure,' aimed at enhancing last-mile delivery efficiency and elevating customer satisfaction levels. Overall, the India Energy Week 2024 served as a pivotal platform for dialogue, collaboration, and strategic planning to address the evolving energy landscape, reaffirming India's commitment to sustainable energy development and global energy cooperation.

Could hydrogen revolutionize the path to a greener, budget-friendly future?

Prime Minister Narendra Modi's call for increased investment in India's energy sector resonates with the nation's imperative to meet its escalating energy demands while ensuring both security and affordability. Under the "Panchamrit" strategy, diversification takes center stage, with ambitious targets set for renewables, biofuels, and emerging clean energy sources such as hydrogen. This comprehensive approach aims to diminish reliance on fossil fuels and mitigate the impacts of climate change.

The announcement of a 20% ethanol blending target in petrol by 2025 marks a significant policy shift. This move not only reduces greenhouse gas emissions compared to traditional petrol but also strengthens energy security by decreasing import dependence. Moreover, it is anticipated to generate new opportunities for farmers and foster rural development. The spotlight on startups during the event underscores India's acknowledgment of the pivotal role that youthful innovation plays in propelling progress. By integrating startups into the energy value chain, there's potential for the creation of cutting-edge clean energy solutions, thus accelerating India's transition towards a sustainable future. The event's emphasis on green hydrogen, produced from renewable energy sources, underscores its transformative potential. With its clean and versatile nature, hydrogen can be utilized across various sectors, including transportation, power generation, and industrial applications. Its combustion emits no greenhouse gases, rendering it a crucial tool in combatting climate change. India's Green Hydrogen Mission signifies the government's commitment to establishing itself as a global leader in green hydrogen production and export. Through numerous collaborations and Memoranda of Understanding (MoUs) announced at the event, India is actively laying the groundwork for a thriving green hydrogen ecosystem. This initiative has the potential to attract substantial investments, foster job creation, and position India as a key player in the global energy landscape. Minister Puri's reaffirmation of India's focus on a gas-based economy, alongside cleaner sources like hydrogen, demonstrates a strategic approach. Gas presents a comparatively cleaner alternative to coal while offering stability and flexibility to the power grid. This balanced strategy ensures energy security while facilitating a gradual transition towards renewables in the long run.



As the India Energy Week 2024 unfolds, it unveils a dynamic and ever-changing energy landscape for the nation. With a dedicated focus on renewables, alongside cleaner alternatives like hydrogen, and a strategic push for diversification, India stands on the



brink of a transformative era in its energy sector. Despite existing challenges, the developments witnessed at the event paint a promising picture of the future, where innovation and the adoption of clean energy solutions hold the key to ensuring energy security, environmental sustainability, and

robust economic growth for India. Hydrogen, with its remarkable versatility and potential for clean combustion, emerges as a pivotal player in this journey towards a sustainable energy future. Its wide-ranging applications across various sectors signify its potential to revolutionize India's energy landscape. However, the realization of this potential hinges upon India's ability to effectively harness and leverage hydrogen technology on a large scale. While the road ahead may pose hurdles, the momentum gained at the India Energy Week 2024 reflects a collective determination to overcome challenges and steer India towards a brighter energy future. With concerted efforts, strategic planning, and a commitment to innovation, India has the opportunity to not only meet its energy needs but also emerge as a global leader in the adoption and advancement of revolutionary energy technologies like hydrogen. Only time will reveal the



extent to which India can capitalize on its potential and establish itself as a beacon of progress and sustainability in the realm of energy.

The India Energy Week (IEW) 2024 concluded with notable success, wraps up with 30% more exhibitors.

The event showcased a diverse array of innovations spanning over 18,000 square meters. Minister Puri praised the efforts of exhibitors, including individual entrepreneurs, for their contributions to technological innovation. He emphasized the significance of IEW as a prominent platform, facilitating interactions across a wide spectrum of industry professionals that might otherwise take much longer to

connect with across different global geographies. Reflecting on the event's achievements, Minister Puri underscored the diversity and quality of technological innovations exhibited, highlighting IEW's growing prominence in the industry. Additionally, IEW 2024 featured the Energy Startup Challenge, recognizing Iron Technologies with the top prize, followed by Vasitara Private Limited and Aloe Ecell. Honorable mentions were awarded to Biofuels Junction and VDT Pipeline Integrity Solutions, showcasing the innovative spirit thriving within the Indian energy sector.



Meeting with Chief Secretary & DGP Government of

Sikkim: During our visit to Sikkim to attend the C20 working group meetings and conclave of the G20, on the side lines I had an opportunity to make a courtesy call with Sh. V B Pathak, Chief Secretary, Government of Sikkim at his office and apprised him of our current endeavours and future prospects. Fortunately, at his office also got an opportunity to meet Mr. Amrendra Kumar Singh, Director General of Police, Sikkim. Their humble demean our, warm gesture and positive stance is much appreciated. I also presented them my book 'India at 75 and beyond'. I had a long discussion on various wonderful initiatives of the sikkim government and how Sikkim had transformed in last five years since my previous visit in 2017.

https://www.facebook.com/drarvind.kumar.3/posts/pfbid02fjytmFLU5dh8AKAeDhc2w6XCb3k7qzZnFqWS9fVZ1dwjxxxAGUQauvgLdN2za7wbl





Strategic Meeting of Tibetan Parliamentarians: "While

harnessing technology for carbon sequestration, emphasis on Nature Based Solutions efforts like

reforestation and Ecosystem Restoration need to be focused on because triple benefits – carbon sequestration, boost to biodiversity, and promotion of human well-being – accrue from such solutions. There is a need to leverage both nature and technology to head off the worst of climate change" said Dr. Arvind Kumar, President, India Water Foundation at the Strategic Meeting of Tibetan parliamentarians in Delhi at Hotel The Ashok on 8th August 2023.



He spoke on the topic - Endanger of Climatic Changes in Southeast Asia. The session was attended by MPs of the Tibetan Parliament-in-Exile and was followed up by a comprehensive interaction round.



Opening &Valedictory Sessions organized by REACH,

SRM Institute of Science and Technology, Chennai on 5th June 2023: As Chief Guest during the opening and the valedictory sessions at the World Environment Day celebrations organised by Centre for Research in Environment Sustainability Advocacy and Climate Change (REACH), SRM Institute of Science and Technology, Chennai on 5th June 2023. The opening session was followed up



by technical presentations by Professor Bommanna Longanathan, Murray State University, USA, Dr Pravakar Mishra, Scientist, National Centre for Coastal Research, Ministry of Earth Sciences, Dr Kine Baek, Team Leader, Environmental Chemistry and Technology, Norwegian Institute of Water Research, Norway, Ms Emmy Noklebye, Research Scientist, Norwegian Institute of Water Research, Norway and Prof. Paromita Chaktaborty, Convener, WED 2023, Head, REACH, SRMIST and Prof. Neppolian Bernaurdshaw, Dean, Directorate of Research, SRMIST gave a vote of thanks. Prizes were also distributed to faculty members, students and other staff of the University. I also had an opportunity to meet the Vice Chancellor of the SRM University Prof. C Muthamizhchelvan and presented him my book 'India at 75 and beyond'. We also witnessed the great work done by SRMIT University by visiting their labs and appreciating the work especially on the topics of environmental nuclear research, air pollution, remote sensing, societal health, transboundary movements of pollutants, waste processing, Geographic Information Systems, and soil and water resources. We look forward to enhanced partnership and collaboration with the University for various future endeavours.

Meetings with Mr. Pravakar Mishra, Scientist G, NIOT: Our recent

visit to Chennai we visited the National Institute of Ocean Technology (NIOT) and National Centre for Coastal Research (NCCR) of the Ministry of Earth Sciences, Government of India and had meetings with Mr. Pravakar Mishra, Scientist G and Ms. Tune Usha Scientist G and other Scientists of the research Centre.



We were amazed by the tremendous work done by the NCCR in coastal management and shoreline research, coastal water quality monitoring, prediction, monitoring marine litter and micro plastics. Coastal resources and ecosystem services, and capacity building and training.



People are not aware of the great work done by these institutes despite the high-end research they are conducting to develop and improve the country's capabilities in addressing the challenging problems prevailing in the coastal zone, which have societal, economic and environmental implications which we personally witnessed during our tour of their labs and workshops. I presented Mr. Pravakar Mishra my book 'India at 75 and beyond' and during our discussion explored various opportunities for future endeavours.

Stakeholder's Meet: Jal Jeevan Mission, Waste Water Treatment And Waste 2 Wealth", at CSIR-CSIO,

Chandigarh: "It is important to align policy, institutional, regulatory, and financing frameworks to encourage and incentivize the development of wastewater resource recovery projects." Said Dr. Arvind Kumar at the Stakeholder's Meet: Jal Jeevan Mission, waste water treatment and Waste2 Wealth", on 26th June 2023 at CSIR-CSIO, Chandigarh.

India Water Foundation & G20



IWF attended the Civil-20 working group of G20 on Sustainable and Resilient Communities at Sikkim: Dr Arvind Kumar and Shweta Tyagi attended the meeting. Ms. Tyagi, Chief Functionary made a presentation on the success story and best practice developed at Meghalaya by India Water Foundation. It was a great vibrant atmosphere interacting with civil societies from all over the world on

the sidelines of having meetings with the Govt. of Sikkim as their partners in progress.

Meeting with the Chief Minister of Chhattisgarh

HCM which he accepted graciously. His humble and warm demeanour is

Under the able leadership of Prime Minister Sh. Narendra Modiji towards achieving the targets of Viksit Bharat by transforming the India Economy from the fifth largest in the world to third, as a partner in progress we had an audience with the Hon'ble Chief Minister of Chhattisgarh Sh. Vishnu Deo Sai at Chhattisgarh Sadan, New Delhi & presented my publication Indiaat75and Beyond to

what makes him a people's leader. HCM Sh. Sai is doing incredible work in the state and I am sure his dynamic approach will propel Chhattisgarh towards a trajectory of Prosperity and development.





NATIONAL (ONLINE)

Five Day Faculty Development Program organized by Amity

University: "A 'zero-harm, zero-waste, zero-discharge' approach can be the step toward transforming industry practices for good through material recovery and



reuse. Maintaining economic growth, while creating sustainable livable cities for all, is the biggest urban challenge facing Asia and the Pacific today. The benefits of zero waste include clean seas and fresh air, fertile soils and sanitary cities, and resilient economies and sustainable extraction. A Circular economy involves the reduction and minimization of waste throughout product life cycles." were some of the points highlighted by Dr. Kumar in his valedictory speech as Guest of Honour of the Five Day Faculty Development Program organized by Amity University. Uttar Pradesh on "Building a Sustainable Future with gree ntechnology: innovations, opportunities and challenges".



FRIDAY BLOGS

Reappraising the 2030 deadline in Achieving SDGs?

https://www.focusglobalreporter.org/reappraising-the-2030-deadline-in-achieving-sdgs/

At the threshold of Disaster: Who's Accountable for Sustainable Habitat?

Like all developing countries India is urbanizing rapidly. By 2036, its towns and cities will be home to 600 million people, or 40 percent of the population, up from 31 percent in 2011, with urban areas contributing almost 70 percent to GDP. Unplanned urbanization is the new normal for most Indian cities and most Global South countries. It has taken the form of large, dense, unplanned informal settlements and slums. The report on urban competitiveness on a global scale highlighted that many urban regions struggle to access clean water, adequate sanitation, healthcare facilities, and educational opportunities..........Read more

https://www.focusglobalreporter.org/at-the-threshold-of-disaster-whos-accountable-for-sustainable-habitat/

Splintering the Continuum of Plastic Pollution

https://www.focusglobalreporter.org/splintering-the-continuum-of-plastic-pollution/



Recalibrating MSMEs to achieve Viksit Bharat!

As we navigate a new development course in a changing world, the importance of Micro, Small, and Medium Enterprises (MSMEs) and the circular economy is crystal clear. MSMEs, which account for 90% of businesses, more than 70% of employment, and 50% of GDP worldwide, remain the core of the economy for most societies. Around the globe MSMEs are catalysts for economic inclusivity. In India MSMEs contribute to approximately 8% of GDP, employ over 60 million people, and hold a substantial share of 40% in the exports market and 45% in the manufacturing.....read more

https://www.focusglobalreporter.org/recalibrating-msmes-to-achieve-viksit-bharat/

Reweighing Complete Water Security from Source to Tap?

https://www.focusglobalreporter.org/reweighing-complete-water-security-from-source-to-tap/

Food and Water Insecurity: The Domino effect of Climate Change?

https://www.focusglobalreporter.org/food-and-water-insecurity-the-domino-effect-of-climate-change/



Published Articles & Book

Harnessing Water Use Efficiency Through Transversality Systemic Approach (Published In ICID)

In the past, the main force behind the demand for food has been the growth of the population.

However, with a slowdown in global population growth rates, other factors like increasing per capita income and individual food consumption are now gaining more importance in influencing the global demand for food. As of the first quarter of 2023, the world's population has reached 8 billion, and projections indicate that it is expected to further increase to 9.2 billion by the year 2050. This marks a progression from the global population of 7.6 billion in 2018, which grew to 8 billion by the closing part of the first quarter of (Figure) 2023......Read more https://www.focusglobalreporter.org/wp-content/uploads/2024/02/ArvindKimar_icid-article.pdf



Promises And Perils of Climate Negotiations (Published In Law Street Journal)

In the past three decades, the United Nations has sponsored 28 annual climate summits. But that process has failed to provide a legally binding path to significant carbon emission reductions or the phase-out of fossil fuels responsible for the climate crisis. The just concluded COP28 summit, held in Dubai and largely controlled by fossil fuel interests, has pledged "transition away from fossil fuels" but that deal is also voluntary. Now, with the world on track for catastrophic global warming, litigation is increasingly being used to force governments to fossil fuels and enforce existing laws......Read more https://lawstreet.co/environment/promises-and-perils-of-climate-negotiations/

India Water Foundation President, Dr. Arvind Kumar, Advocates for Sustainable Water Access at 54th UNHRC Session (Published In Law Street Journal)

Right to Water is not a privilege it is a basic human right and for the first time in its history, the United Nations has recognized that everyone, everywhere, has the right to live in a safe, clean, healthy and sustainable environment including clean air, safe and sufficient water, healthy and sustainably produced food, non-toxic environments, healthy ecosystems and biodiversity and a safe, livable climate. With the urgent global challenges posed by environmental degradation and the triple planetary crisis of climate change, pollution, and nature and biodiversity loss, the questionRead more https://lawstreet.co/environment/india-water-foundation-president-dr-arvind-kumar-advocates-for-sustainable-water-access-at-54th-unhrc-session



Blue Economy for Food and Livelihood Security (Published In Law Street Journal)

NEW DELHI: Every individual not only has the right to feed themselves and their family in dignity but also has the responsibility to do everything within their power to do so.



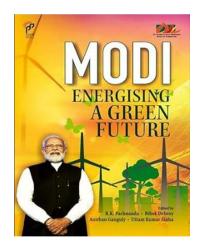
This means every person must have access to resources and the freedom to exercise their human rights and responsibilities. Last year, 735 million people went hungry. More than 3 billion cannot afford a healthy diet proving that we are going backward on our goal of zero

hunger by 2030. States are obliged to develop, individually and through international cooperation, a range of measures of production, conservation and distribution of food to ensure that everyone can access enough food to be free from hunger and malnutrition.Read more https://lawstreet.co/environment/blue-economy-for-food-and-livelihood-security

India's Pursuit of Energy Security: Potentials and Prospects

The publication titled Modi: Energising A Green Future was formally released on 8th January 2024 at India International Centre by Sh. Bhupendra Singh Yadav, Union Cabinet Minister of Environment Forests and Climate Change, Government of India. It has been edited by Sh. Anirban Ganguly, Chairman, Shyama Prasad Mukherjee Research Foundation, Sh. Bibek Debroy, Chairman, Economic Advisory Council to the Prime Minister, Sh. Ranjit Pachnanda, former Chairman of Haryana State Electricity Regulatory Board and Sh. Uttam Sinha, Senior Fellow, Manohar Parikar Institute for Defense Studies.

I am extremely grateful to all the editors for allowing me to contribute to this milestone publication. This publication highlights how Climate Change and energy security are interconnected and are two sides of the same coin. India has shown the world what it takes to be a climate leader. This volume presents a well-integrated collection of chapters from distinguished decision-makers, influential opinion makers, and eminent experts creating in the process a synergy of views supporting India's transition to affordable and sustainable energy that not only reduces emissions, but spurs economic growth and promotes sustainable climate investments. Please get your copy



 $\frac{\text{https://www.amazon.in/Modi-Energising-Green-Future-Pachnanda/dp/9390095875/ref=sr_1_8?qid=1692692532\&refinements=p_27\%3AUttam\%20Kumar\%20Sinha\&s=b}{\text{ooks\&sr=1-8\&fbclid=IwAR3cjRraCLG7jj9Li_IjvaBpGfynk0ScgmpdvLv47ZZst9ZDXNq0nNalVk0}}$





For more information......www.indiawaterfoundation.org

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