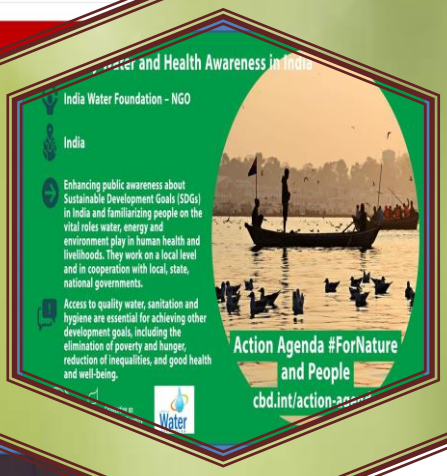


CHRONICLE-V

(Jan 2021-June 2021)

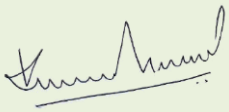
Center for Sustainable Development Goals | India Water Foundation | Focus Global Reporter

From Editors Desk

Dear Jalmitra,

It gives me great pleasure to present the chronicle with highlights of our last six months. In these unprecedented times of Corona, I hope all of you are safe and healthy. The pandemic has created a moment for change. Recovery is our chance to shape a better future and the Sustainable Development Goals are our roadmap. We are at a pivotal time – for people, societies, economies, and our planet and need all-inclusive sustainable solutions. Let's find them with cooperation, cohesion and collaboration. To conclude I thank my team because I believe teamwork is the ability to work together toward a common vision. The ability to direct individual accomplishment toward organizational objectives. It is the fuel that allows common people to attain uncommon results. It is about finding your unique blueprint and expressing that courageously and confidently"

Thankyou



Dr. Arvind Kumar

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Editorial

Revisioning a Holistic approach to combat Population Boom?

By Dr. Arvind Kumar, President, India Water Foundation

The Indian states with the highest fertility rates also have the lowest socioeconomic indicators. As India's population crossed 1390 million population as of July 2021 and the global population of 7.9 billion and projected to be 9.74 billion by 2050 the world is now facing the impacts of population growth and its interlinked relationships to the environment, economy and climate trends. On the contrary the global population is also expected to dip by a further 2 billion from earlier United Nations Population Division estimates, research led by the University of Washington and published in medical journal The Lancet suggests. Surprisingly the current fertility rate for India in 2021 is 2.179 births per woman, a 0.95% decline from 2020. As per UNESCAP's SDG Progress report the progress in the South Asia Region on SDG realization and achieving the 2030 Agenda is very slow or stagnant on half of the goals however the Southern Asia population is equivalent to 24.89% of the total world population. As modern innovations, medical care and industrialization became more accessible and reliable human population witnessed exponential growth.

Though the government has taken some strict actions to promote mass movement against population growth by substantially increasing access to contraceptives and family planning services but the extreme decisions like the infamous mass sterilization drive of 1976, lasting for the 21-month period known as the "Emergency, under which around 2.6 million men were sterilized in India and the recently launched scheme on World Population Day when Uttar Pradesh State's Law Commission released the first draft of the proposed 'UP Population Bill, 2021' is unwarranted. Although political will is very important to enforce measures for managing population growth, however, the approach should not be political. To ensure trust among the citizens and to pursue them to take actions and bring around the community we need a social movement and programs backed by an efficient, long term and accessible family planning plan to benefit the state in the long term and to incorporate a sense of social security among the population.

There is a need for a national-level action plan to curb the population outbreak, to have a data-driven and community-centric approach for strengthening existing programs, upcoming new bills, and new strategies for policy intervention. Though the population control plans and schemes are necessary, the right approach is very important, educating and empowering women on these issues and generating awareness among men should be the first step. There should be aid support for family planning such as contraceptives accessible to citizens with awareness programs to change perspective of ethnic groups to encourage the use of contraceptives. Quality education is a key component to achieve sustainable development, thus educating young population on reproduction and population management is very crucial for equally distributing resources among population for alleviating poverty and provide community with better living conditions and social security. It should come as an inner call for the citizens like they have turned water and environment

conservation into a public movement similarly population control should be taken up by citizens and turned into a public movement. This requires the support of NGOs and grassroots level organizations for spreading awareness and overcome the social norms of religious groups. The right way for implementing population policy is to have a bottom-up approach, with engaging organizations and resource persons for community engagement for the effective outcomes.

Population growth imposes an increasing burden on the world's limited and continually depleting natural resources, as they are under increasing strain. The expanding population and growing resource demand have already sprung the rapid expansion of energy production and escalated consumption across the globe. The rising level of consumption has accelerated the impacts of environmental effects like contamination of groundwater and surface water along with air pollution, soil exhaustion, deforestation, and enhanced greenhouse effect resulting in global warming. With population increase, we demand more energy, food, and water from fewer resources along with growing poverty levels, this leads to unequal distribution of resources and opportunities causing conflict and unsustainable resource management. “So, is it time for all countries to turn to drastic population control in order to sustain life on Earth, or is it a violation of human rights, no matter what?”

Feature

UN Decade of Ecosystem Restoration

By Shweta Tyagi, Chief Functionary, India Water Foundation

"Studies in recent years have shown that due to climate change and degradation the crop yields may reduce by 10 percent globally and up to 50 percent in certain regions in upcoming years (Aronson, 2013). This will affect India's economy and growing food demand. Ecological restoration can help to mitigate the impacts of climate change and increasing vulnerability"

On this year's World Environment Day on June 5, to give a global platform for inspiring positive change in the environment, the UN decade on Ecosystem Restoration is launched. It will be a ten-year project that "aims to halt and reverse the decline of our natural ecosystem on every continent and ocean" according to the UNEP. The UNEP's campaign - "Recreate, Reimagine, Restore" - focuses on reversing the degradation of our ecosystems, this will help in tackling poverty and combat climate change and taking the theme forward will be successful with people's participation. The objective of ecosystem restoration is will be to help contribute towards the conservation of our ecosystems and also the sustainable use of biodiversity as well as to create economic, environmental and social benefits and would be applied at many scales-with everyone having a community driven role.

Figure 1 Logo for UN Decade (Source: UN.org)

Ecosystem restoration being one of the main components of environmental conventions like Ramsar convention on wetlands and Rio conventions on biodiversity, desertification and climate change is one of the best ways of applying nature-based solutions for tackling water and food insecurity, climate change mitigation and adaptation, and biodiversity vulnerability. Although the restoration requirements are and will be different depending on the type of ecosystem in which they are to be applied (Convention on biological diversity, 2021), as earth having diversity of ecosystems from fresh water, farm lands, forests, oceans etc., with all these ecosystems being vital for the prosperity and wellbeing of human beings. Following this year's UNEP report have called the actions for ecosystem restoration on large scales in order to achieve the sustainable development and have launched a campaign for everyone to join refer as *#GenerationRestoration*.

Ecological restoration has also impacted the Indian agriculture. Studies in recent years have shown that due to climate change and degradation the crop yields may reduce by 10 percent globally and up to 50 percent in certain regions in upcoming years(Aronson, 2013). This will affect India's economy and growing food demand. Ecological restoration can help to mitigate the impacts of climate change and increasing vulnerability.

India in recent years have seen many success stories and booming research in the positive direction of ecological restoration. In 2005, a group of 20 tribal women from 6 villages in the Surguja district in the state of Chhattisgarh decided to grow a traditional crop called Jeera phool (n indigenous, superfine, aromatic variety of rice) and formed a self-help group to protect and promote it. They started selling the crop, with its popularity began to grow, it crop was eventually registered with the Plants Varieties and Farmers Rights Authority of India. The success of the Jeera Phool initiative was recognized and adopted by project funded by the Global Environment Facility, with support of the United Nations Environment Programme (UNEP), and was implemented by the Alliance of Diversity International, CIAT and the Indian Council of Agricultural Research. (UNEP, 2020). Another study conducted by the scientists from Nature Conservation Foundation, India and Columbia University based on restoration projects that have been under way for over 20 years in Anamalai Hills, a biodiversity hotspot in India's Western Ghats, which has witnessed extensive deforestation between 1890 and 1940 for tea, coffee, cardamom, and eucalyptus plantation by the British. Since 2000, three plantation companies have conducted restoration activities on the plateau. The sites were carefully chosen after ensuring they were degraded rainforests alone and didn't include the famously misunderstood native grasslands of the Western Ghats. The active restoration process included steps to prevent cutting of wood, preventing the growth of weeds, and planting a diverse variety of native species. Researchers studied an average of 1,099 plants, spanning 106 species, per hectare. They also studied 50 plots of land in the region, half of which underwent 'active restoration', while the other half underwent 'natural regeneration' where nature took over with no human intervention. These types of studies helped to discovered that active restoration came closer to the natural ecosystem and healthy growth of the benchmark areas. Compared to natural regeneration, these plots also showed more consistent and prominent results. (Shankar, 2003)

The active restoration process included steps to prevent cutting of wood, preventing the growth of weeds, and planting a diverse variety of native species. Researchers studied an average of 1,099 plants, spanning 106 species, per hectare. They also studied 50 plots of land in the region, half of which underwent 'active restoration', while the other half underwent 'natural regeneration' where nature took over with no human intervention.

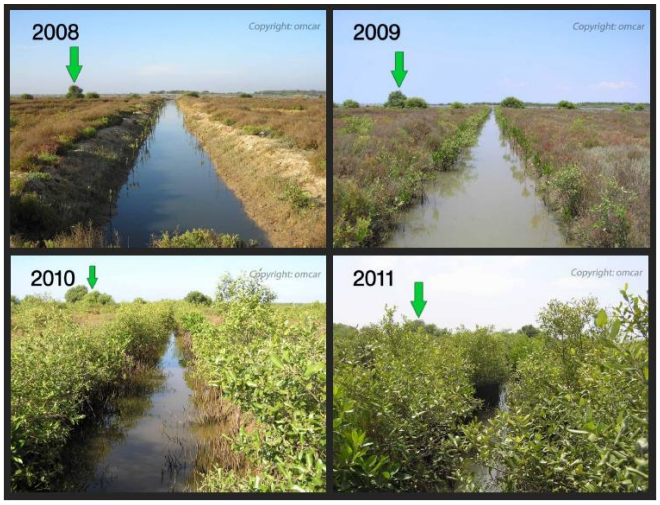


Figure 2Photo sequence showing mangrove restoration at Palk Bay, India. (©OMCAR Foundation)

Globally, now we recognize that ecosystem restoration is key for the long-term sustainability of our planet and also a key component in conservation programs (Aronson, 2013). Restoration by repairs and replanting of wetlands, river beds, forest and other habitats, eliminate invasive species, replacing turf grass with native

species and planting rain gardens to absorb rainwater from the roof or asphalt, with addition to proper planning, political and social support, environmental risk assessments, resource management, and reconstruction of all ecosystem attributes (Miao and Marrs, 2000) will help in restoring our local ecosystem.

Ecological restoration is not quick or easy, and will take deep changes in the way we measure economic progress, but it will help to improve the productivity and capacity of ecosystems to meet the needs of the society. Restoring ecosystem gives us healthy and sustainable life by nurturing the nature by collective responsibility to conserve it. As Jordan Sanchez who is the pen and voice behind this year's poem for the World Environment Day implies that people to understand the situation, we are in is serious but there is always something we can do, by remaining positive and acting together.

Cover Story

The menace of Adulterated Food and Counterfeit Drugs

Dr. Arvind Kumar, President, India Water Foundation

{"In its first ever country-wide survey on milk adulteration conducted in year 2011, the Food Safety Standards Authority of India found that of the total 1,791 samples tested throughout the country at least over 68 per cent i.e., 1,226 samples were either diluted with water or mixed with harmful detergents."}

"Only in India we are liberal with the health concerns, Will you eat this Wheat?" the Supreme Court asked while refusing to entertain pre-arrest bail pleas of two Madhya Pradesh-based businessmen who are accused in a food adulteration case. Among man's everyday needs, food plays a major sustaining role. From the simple dish to the most elaborate haute cuisine, food preparation is as varied and rich as a man's taste. The lure of riches and general apathy towards mankind has led to adulterants being added to food from the simple stones in rice to the more harmful brick and boric powder. An ICMR report showed 51 per cent of foods in India were contaminated with pesticides, of which 20 per cent had levels exceeding the Maximum Tolerance Limits (MTL). An estimated 600 million – almost 1 in 10 people in the world – fall ill after eating contaminated or adulterated food and 420 000 die every year, resulting in the loss of 33 million healthy life years as per WHO estimates. Food adulteration has been a persistent problem in recent years especially in India with authorities uncovering several cases. In its first ever country-wide survey on milk adulteration conducted in year 2011, the Food Safety Standards Authority of India found that of the total 1,791 samples tested throughout the country at least over 68 per cent i.e., 1,226 samples were either diluted with water or mixed with harmful detergents. As India is facing the worst effects of COVID-19 pandemic and continue battling against the devastating second wave, we encountered a new emerging problem of fake drugs and medicines during this crisis. The high demand of medicines and medical equipment during the second wave of COVID-19 resulted in huge surge in urgent requirements which boosted the trade of medicines and other essentials for treatment of COVID 19 patients. The unregulated trade open medicines and equipment along with reselling of medicines like Remdesivir vials, antibiotic and saline solution also created the path for smuggling and

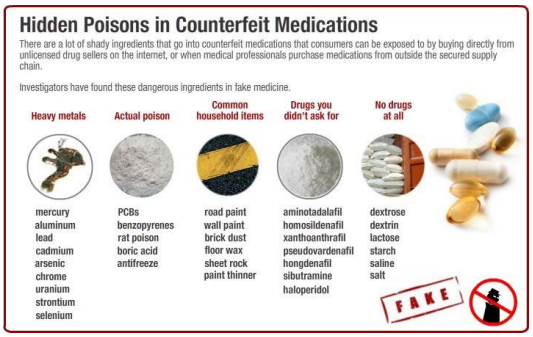
India has been battling the challenge of substandard drugs for a while. The problem was in the spotlight when the government launched its Jan Aushadhi initiative, in which five medicines were reportedly recalled in a span of 20 days because of quality lapses. There were also reports of this number rising to 11 in four months.

black-market demand. As per World Health Organization (WHO) report "About 10.5% of medicines sold in low and middle-income countries, including India, are substandard and falsified. What exactly is food adulteration? Food adulteration is when substandard, harmful; substances are mixed with natural food, spoiling their nature and quality. Adulterated food is extremely harmful to our health, robbing our bodies of essential nutrients. However, despite being a major issue, adulteration continues across the country. One of the reasons is that it fuels business. But at what cost? Why do companies engage in adulteration? The answer is simple—increasing profit margin. While it's unethical and government laws deem it an illegal practice, adulteration continues rampantly even today. This is due to loopholes that exist in regulations and the lack of strong implementation of the laws.

Greed and profit lure towards adulteration

Even notable brands are sometimes entangled in these scams. Adulteration exists in almost every product we consume – groceries, medicines, liquor and even milk and honey. Around 68.7 per cent of milk and milk products sold in India is not as per the standards laid down by the Food Safety and Standards Authority of India (FSSAI). As per the member of the Animal Welfare Board of India, the most common adulterants are detergent, caustic soda, glucose, white paint and refined oil. If you are thinking food adulteration merely involves adding colors to vegetables and fruits, think again. Chalk powder in salt, chemicals in turmeric powder, coriander powder with sawdust, brick powder with chili powder, etc., is a glimpse into what food adulteration is. Unknowingly, we consume these on a daily basis, risking our health. The 2018-2019 Food Safety Standards Association of India (FSSAI) Report alarmingly revealed that 28% of food samples were adulterated and that adulteration had doubled since 2012.

Perils of Adulteration and Counterfeiting food and drugs



Adulterated food is dangerous because it may be toxic and can affect health and it could deprive nutrients essential for proper growth and development of a human being. The worst part is some adulterated food even causes cancer, the most life-threatening disease. Also, in many cases many pregnant women who consumed such adulterated food ended up with miscarriages because of poor fetus growth and in some extreme cases the women died while delivering babies. Just to make more profit and money, risking other's lives is absolutely an unethical practice. But they do not bother at all.

The central government, on its part, is trying everything possible to control this "crime". In India, the ministry of health and family welfare is completely responsible for providing safe food to the citizens. The Prevention of Food Adulteration Act, 1954, has laid down guidelines to provide pure and wholesome foods to consumers. The Act was last amended in 1986 to make punishments more stringent and to empower consumers further. But the government is planning to enforce harsher punishment now. The FSSAI has issued the draft amendments to the Food Safety and Standards (FSS) Act, which was passed in 2006 but the regulations were notified only in 2011. Among the key amendments, the FSSAI has proposed to include a new section to crack down on food adulteration.

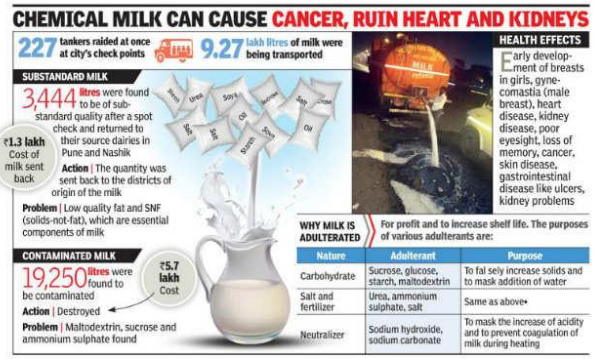
There should be a single window- one organization to address all kinds of adulteration whether food or counterfeit medicine. At a time when we are talking about making India self-reliant, we must not forget that we have also had feedback from drug regulators around the world for discrepancies in our manufacturing quality.

It is not known at the time of consumption of medicine that it is a spurious drug. Therefore, if the drug is not effective a patient usually thinks that the diagnosis is wrong and either he consults another physician or ends up having a series of diagnostic tests including blood, x-rays, ultra sound, CT scan, MRI etc. resulting in an increased medical expenses, mental agony and absence from work or studies. If there are certain toxic effects of the medicine then it is usually assigned to an allergic reaction of the medicine and the physician might change the medicine. The toxic medicine is then completely forgotten and is not pursued any further. If the medicine is fatal then usually the death is assigned to the disease or the negligence of a doctor or the hospital Even when spurious drugs do not endanger life, they can leave the patient seriously ill and those with inadequate potency can induce drug resistant bacteria i.e., they will not respond even when right medicine in right dosage is given.

While the government is working towards making India self-reliant, a potential shortage of drugs and an inward-looking approach could pose another challenge—the perils of counterfeit drugs. The Central Drug Standards Control Organization (CDSCO), the drug regulatory authority of India conducted a nationwide survey in 2009 and announced that of "24,000 samples that were collected from all over India and tested. It was found that only 11 samples or 0.046% were spurious. In 2017 a similar survey found 3.16% of the medicines sampled were substandard and 0.0245% were fake. Those more commonly prescribed are probably more often faked. Domestically produced generics have often come under the scanner for failing quality tests. This is especially alarming at a time when the world is anxious about the adequacy of basic medicine supplies, given the reduced production and increased demand mostly everywhere. India has been battling the challenge of substandard drugs for a while. The problem was in the spotlight when the government launched its Jan Aushadhi initiative, in which five medicines were reportedly recalled in a span of 20 days because of quality lapses. There were also reports of this number rising to 11 in four months.

Stringent Laws and Punishment

Due to its outdated laws, lack of infrastructure and awareness of the public for standards and quality, India finds it difficult to implement stringent food safety regulations. Investment in food safety infrastructure, i.e., laboratories, slaughterhouses, quarantine facilities, is low. Besides, to ensure that safe food enters the country, the government should set up robust laboratory infrastructure to improve food testing facilities and manufacturing practices to maintain hygiene standards. People need to be very cautious when they buy products from stores and malls. They should check for standards like ISI standard mark, Agmark for quality products, FSSAI standard mark, date of packing and date of expiry etc. If none of the prescribed standard marks is there, then they should totally avoid buying such products. Awareness among stakeholders like vendors and middlemen by education and regulation go hand in hand. Prevention of food adulteration in turn prevents food wastage. Digitalization and Revolutionized technology that present scenario of food safety with improved strategic planning can aid to combat this widespread problem. There should be a single window- one organization to address all kinds of adulteration whether food or counterfeit medicine. At a time when we are talking about making India self-reliant, we must not forget that we have also had feedback from drug regulators around the world for discrepancies in our manufacturing quality. In other countries the punishment for food and medicine adulteration is execution or life sentence. As a result, these kinds of incidents are not repeated. What India needs is a regulatory mechanism that is geared for quality and armed against fake drugs, that not only promises an influx of innovative drugs from around the world, but also ensures that our patients have access to superior quality products. Combating counterfeit drugs should be a key objective of the exercise. The government must focus on dealing strictly with those who engage in food adulteration. One way of doing this is by hiking the penalty, including making it analogous to attempt to murder in some extreme cases of adulteration. It is equally important to regularly check food stuff for adulteration and ensure speedy trials through specific fast track courts.



Agenda

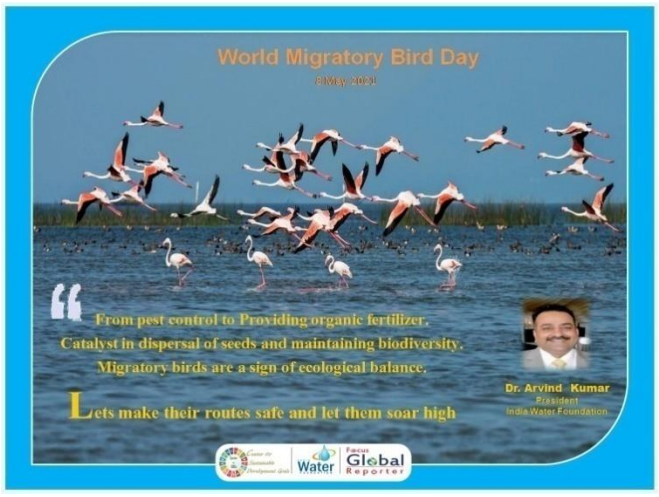
Biodiversity to Desertification Day

By Dr. Arvind Kumar, President, India Water Foundation

2021 being the year of "Make or Break", India Water Foundation contributed by celebrating and observing various environment events by generating awareness among the society and engaging various stakeholders to motivate and engage communities in talks towards protected and sustainable environment.

Migratory Day, 8 May

The migration of birds is a natural event that happens all around the world. Migratory birds fly hundreds to thousands of kilometers to find the best habitats that provide good feeding grounds and shelter for raising their young. Migratory birds have perfectly adapted bodies which help them to fly huge distances.



World migration bird day (WMBD) is an awareness raising campaign on migratory birds. It highlights the need for conserving migratory birds and also their habitats. It aims to draw attention to the threats faced by migratory birds, their ecological importance, and the need for international cooperation to conserve them. WMBD is celebrated bi-annually on the second Saturday of May and October.

The theme for this year's WMBD was "Sing, Fly, Soar-Like a Bird!" with a focus on the phenomena of 'Bird song and bird flight" as a way to connect and inspire people of various group ages in the world and celebrate their shared desire to protect birds and the habitats they need to survive.

Bees Day, 20 May

To develop awareness and concerns about food security and its impact on the economy due to bee's loss, the United Nations General Assembly on December 20, 2017 declared May 20 as World Beekeeping Day to commemorate the birthday of Anton Jansa, a pioneer beekeeper born in 1734.

There are 2 billion bees on earth as of year 2020, and are most efficient around the world than any other pollinator of food plants. It is estimated that one third of our daily diet depends on pollination, mainly by

bees, but also by other insects, birds, and bats. Bees are responsible for pollinating about 85% of all human food crops, as well as many of the plants that grow food for cattle. Bees participate in all aspects of nature. They support the growth of trees, flowers, and other plants, which serve as food and shelter for large and small creatures. Bees contribute to complex, connected environments that allow for a wide range of species to survive. We can lose all the plants that bees pollinate, all the animals that eat those plants, and so on in the food web. This means that a world without bees would be vulnerable to feed the world's 7 billion people, hence bees are a key to biodiversity.

Biodiversity Day, 22may

Biodiversity (biological diversity), is the abundance of living things that make up life on Earth (UNEP, 2020). Biodiversity ensures that we have fertile soil, as well as a variety of foods, including fruits and vegetables that we should eat. It is the basis of many of our industries and livelihoods and helps to control climate change by storing carbon and rain control.

Climate change alters ecosystems and its affects can be seen in individual species and how they interact with their components of ecosystem, it's an ever-growing threat to us humans and also to the natural biodiversity and ecosystems. We are losing 1,000 times more species than ever before in recorded human history and one million species are at risk of extinction. (IPBES, 2019). The effects of climate change present significant challenges to current conservation approaches. To mitigate these uncertainties, Nature based solutions including, site-specific natural and cultural contexts that include traditional, local and scientific knowledge can be very helpful in conservating biodiversity.

To raise awareness for conserving biodiversity, the world observes 'Biodiversity week' with 22 may'2021 as international day for biological diversity.

Environment Day, 5 June

On world environment day the UN launched the decade on Ecosystem Restoration. India Water Foundation, President Dr Arvind Kumar, was invited as Distinguished speaker By Department of Agriculture and environmental science, National Institute of food technology entrepreneurship and management the celebrated wanted by midday on team of ecological restoration. The event was organized by ministry of food processing industries and NIFTEM.

He presented a keynote presentation on the theme ***"#ECOLOGICALRESTORATION"***

Food Safety Day, 7june

On 7TH June'2021 to call attention and inspire action to help prevent, detect and manage foodborne risks, innumerable benefits of safe food, human health and sustainable development, World Food Safety Day (WFSD) was celebrated with this year's theme being 'Safe food today for a healthy tomorrow 'emphasizing the importance of production and consumption of safe and healthy food and its immediate and long-term benefits for people, the planet and the economy. This acts as catalyst for WHO to pursues its efforts to mainstream food safety in the public agenda and reduce the burden of foodborne diseases globally.With the observance of WFSD, all stakeholders are motivated to participate in awareness generation about food safety and to highlight that everyone involved in food systems has a part to play. This year WFSD call for action by: Ensure it's safe - Government must ensure safe and nutritious food for all; Grow it safe - Agriculture and food producers need to adopt good practices; Keep it safe - Business operators must make sure food is safe; Eat it safe- All consumers have a right to safe, healthy and nutritious food; Team up for safety – Food Safety is a shared responsibility.

World Ocean Day, 8 June

World Oceans Day was observed on June 8, giving the world an opportunity to raise awareness amongpeople about the impact of economic activities and human actions on the ocean. As oceans play a major role in everyday life of people globally by being the lungs of our planet and playing an important part of the biosphere.This year's theme was 'The Ocean: Life and Livelihoods' to shed light on 'the wonder of the ocean and how it is our life source, supporting humanity and every other organism on Earth'

The Indian Ocean, being the warmest ocean plays a crucial role in regulation of the mean climate patterns and variability of Asian as well as tropical countries. With growing natural disasters, there is now a need to invest in capacity building, governance transparency and confident-enhanced institutional cooperation. With India working on mitigating the impacts of climate trends due to warming of Indian ocean, it can be a model framework to combat climate change impacts in the climate resilient pathways.

Ground Water Day, 10 June

India facing it's one of the most major serious water crises, the 2018 Niti Aayog report 'Composite water management index' Should how to major cities of India like Delhi, Bengaluru, Chennai and Hyderabad among others Running towards zero groundwater levels by 2020 that will be affecting access for more than 100 million people in India. the groundwater depletion rate in India have been increased by 22% percent between 2000 and 2010.

As the amount of water is increasing year by year leading to water scarcity in many parts of the world, today's awareness of the problems of water pollution contamination and rapid depletion of groundwater causing freshwater crisis we observed groundwater day on 10th June 2021 to raise dialogue and awareness among stakeholders and communities. Groundwater being the most viable source of freshwater, should be conserved by proper groundwater recharging techniques, minimizing use of pollutant, safe waste disposal and by initiatives like reducing, reusing, recycling and replenishing.

Wind Day, 15 June

On June 15 2021 global wind day was observed as a worldwide event with the #InWithWind, to celebrate the discovering of wind energy its powers and the possibility it holds to positively impact economic by green jobs and growth. The event is organised by Wind Europe and the global energy council and act as a catalyst to create awareness of the benefits of wind energy.

Wind energy is the most sustainable renewable source and a great alternative to fossil fuels to create clean energy it is a fastest growing industry and help to mitigate impacts of climate change and global warming. Wind energy is also seen as one of the cheapest forms of energy specially in European countries. It is economically viable and long-term sustainable technology and can help us to achieve that zero targets in direction of climate action. Wind energy help us in de-carbonising our economy and aid to limit Global warming. It can help us achieve India's commitment to achieve 60GW from wind as committed by Government of India. India Water Foundation celebrated the event by raising awareness with our #HarnessWindPower.

Sea Turtle Day, 16th June

Sea turtles play an important part in the marine food web. They can help prevent some impacts of Climate Change in coastal communities. Having strong and healthy dune systems and coral reefs will prevent coastal areas to get flooded due to sea level rise and due to an increase of extreme weather events like hurricanes. Sea turtles are very important for different ecosystems and many other species depend on them.

However, the continued decline of sea turtle populations will have serious economic consequences, particularly for coastal communities in developing countries, said Dr Susan Lieberman, Director WWF's global Species Programme. Today 6 out of the 7 species of sea turtles are threatened with extinction. With poaching being the most blamed there are many other anthropogenic threats that are the main cause for their decline in population.

To generate awareness about this issue we celebrate Sea Turtle Day, on June 16th'2021 under the theme 'Turtles rock!' calling for pledge to educate and collaborate communities about marine pollution and degrading sea habitat.

Desertification and Drought Day, 17 June

Consider as one of the main issues of 21st century and impacting negatively a minimum of more than 3 billion people, land degradation impacts agriculture productivity food security water security and total economic value of the area, caused due to dryland ecosystems, deforestation, overgrazing and bad irrigation practices. Land degradation disrupts the ecosystems and cause great harm to the environment. To call attention to this issue and with aims at finding achievable solutions for combating desertification that can be practiced by the majority of the countries and individuals all over the world.Desertification and Drought Day is marked on June 17 across the globe, with this year's theme 'Restoration Land Recovery. We build back better with healthy land'. Land degradation requiring more attention than ever before, India water foundation

Deep Perspective:

Commemoration of 'WORLD WETLAND DAY'

This year on 2 February, the world celebrated 'Wetland Day' With this year themes of 'Wetlands and Water' calling attention to the important of wetlands as also the source of freshwater and leading actions towards restoring wetlands to tackle their encroachment and wetland degradation in the wake of UN decade of Ocean Science and Ecosystem Restoration. The wetland day is celebrated to raise awareness on a global level for the important role of wetlands, as they provide various services, by being natural habitat of various species, improving the water quality, help in controlling shoreline erosion, economic value by providing various products, recreation, flood and drought protection and protect against climate change. India celebrates wetland day 2021 shedding lights on the Namami Gange Mission and India's wetland inventory system by remote sensing techniques to map the wetlands of India.

Figure 3 Dr. Arvind during Inaugural session

India water foundation as one of the main catalogue and catalyst of encouraging dialogues among various stakeholders in water sector, Celebrated world wetlands day 2021 by the success of collaborative event with National Mission for Clean Ganga (NMCG), Ministry of Jal Shakti, Department of Water Resource, River Development & Ganga Rejuvenation, Government of India "Water, Wetlands, Life: Inseparable Coexistence: Safeguarding biodiversity, delivering water & food in the face of changing climate". The main objective of the event was to have a holistic understanding on various features of wetland management and transfer them into an indicator of economic development and encourage understanding the linkage between Wetlands and water, Wetlands and food security, Wetlands and climate change, Wetland biodiversity in achanging climate.

Figure 4 WORLD WETLAND DAY, 2021 EVENT

The event's Inaugural Session was opened by Dr Arvind Kumar, President, India water foundation; Sh. Rajiv Ranjan Mishra, DG, NMCG; Mr. Pankaj Kumar, Secretary, Ministry of JalShakti; Sh. Rattan Lal Kataria, Hon'ble Minister of State, Ministry of Jal Shakti, Government of India; Sh. Gajendra Singh Shekhawat, Hon'ble Union Minister of Jal Shakti, Ministry of Jal Shakti, Govt of India. The Panellist of the 2nd session (Panel discussion on Water, Wetlands, Life: Inseparable coexistence) included: Mr. Atul Bagai, Head, UNEP India Office (Moderator); Department of Science and Technology, Govt. Of India; Mr. Dhananjay Mohan,

Director, Wildlife Institute of India; Dr Ritesh Kumar, Director, Wetlands International South Asia; Mr. Suresh Babu, World Wide Fund; Mr. Brijesh Sikka, Senior Consultant, NMCG.

The event highlighted the interconnectedness of all the water bodies and their role in maintaining each other and the importance to define critical local and national wetland conservation plans as well as advocate for actions to safeguard wetlands.

Recommendations as outcomes of the event:

- To create multi-stakeholder partnership opportunities and alliances at all levels for capacity building and identifying funding opportunities, best practices and lessons learned based on existing projects and programs and documentation that demonstrablylinks management of wetlands to improving ecosystem services.

- Integrated wetlands wise approach for the scientific management and governance ofincorporating various components like Biodiversity, Ecosystem management, Riparianerosion control, Natural Resource Management, Natural & Human capital, etc.

- Conservation and rejuvenation process should prioritize actions in holistic way and tobring behavioural change among stakeholders.

Figure 5 Hon'ble Minister Speech

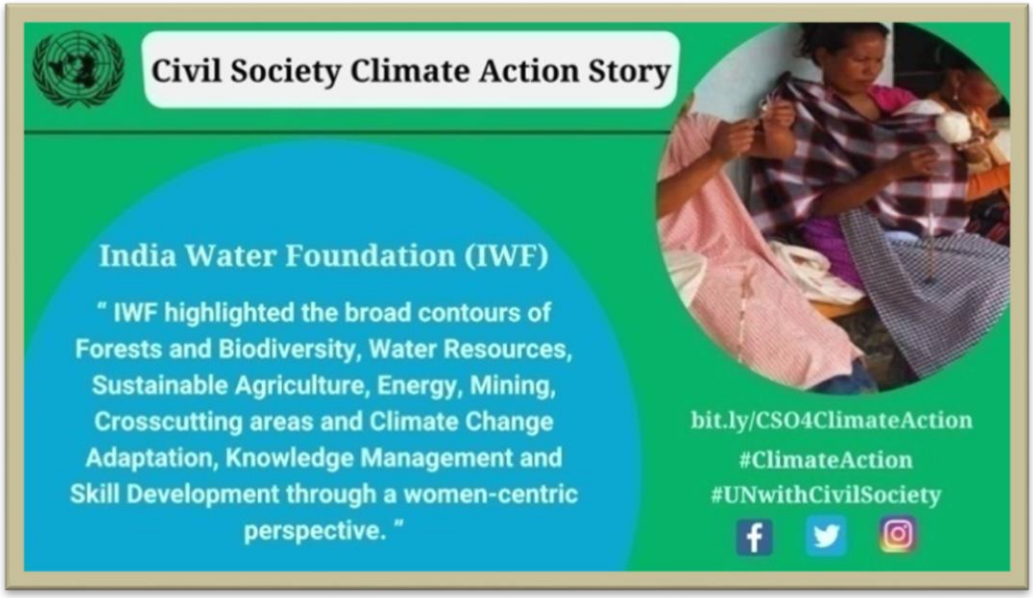
- Understanding the linkages among water, wetland, biodiversity conservation andsustainable development

To raise community awareness and scientific knowledge on wetlands, IWF was the part of an innovative attempt to develop Guidelines forprotection and conservation of Urban Wetlands by NMCG with the help of the prestigiousSchool of Planning and Architecture in the form of a toolkit called, 'Urban wetlands/water bodymanagement guideline - a toolkit for local stakeholders' which was released at the event, along with 'Frameworkfor Ecological Monitoring of Ramsar Sites and Other Wetlands in India'. TheWetland Quiz was also held and received enthusiastic participation throughout India and winners were announcedby Ms. Bhawna Badola, CEO, Tree Craze Foundation during the function. Posters for spreadingawareness on wetlands by WWF-India were unveiled by the Minister and MoS, Jal Shakti.

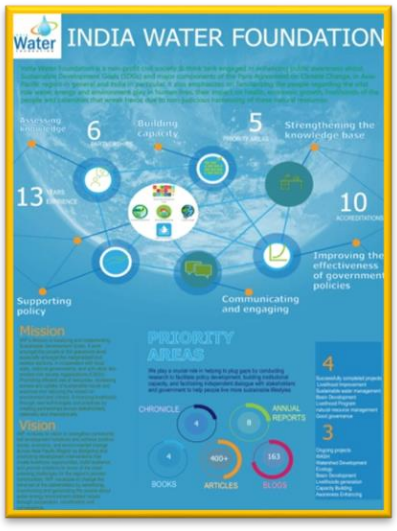
Special Moments

January 2021: Proud moment for India Water Foundation to be showcased as one of the four best civil societies in the world for their climate action story that inspires others, benefits the planet and its positive impact provide hope for the future. Congratulations to the people of Meghalaya and all partners associated with this project which we undertook on probono basis.

https://www.un.org/en/civil-society/india-water-foundation



IPBES8 Stakeholder Days



India Water Foundation E-poster was selected for the IPBES 8 stakeholder days.

The poster represented India Water Foundation's mission and priority areas and how they are related to IPBES which is The Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services, an intergovernmental organization established to improve the interface between science and policy on issues of biodiversity and ecosystem services.

SHWETA TYAGI elected as member GCNI

June 2021: The chief-functionary of India Water Foundation, Mrs. Shweta Tyagi was elected as a member in the Governing Council of UN Global Compact Network India. Mrs. Tyagi is excited and committed to contribute towards amplifying and integrating SDGs.

June 2021: India Water Foundation is selected as one of the two members of the South Asia network for sustainable development (SANS), adding another feather in cap of India Water Foundation. SANS by ENSCAP has been developed to foster subregional cooperation by sharing good practices towards achievement of the SDGs amongst the government agencies, think-tanks, CSOs and other stakeholders in South Asia to build back better.

SANS
South Asia Network on the SDGs

Figure 6India water foundation, now a member of SANS

India water foundation is now committed to push for integration of SDGs in programmes and policies and to ACTNOW with cooperation and coordination in pursuit of a shared development vision in the south Asian region.

June 2021: Our Jal Mitra campaign to turn 'Biodiversity Conservation into Public Movement' has been well received and shared by CBD as IWF's action commitment. Let's take collective actions to safeguard, conserve and protect biological diversity.

Sector Partner: India Water Foundation has signed Memorandum of Understanding with the National Jal Jivan Mission of the Ministry of Jalshakti, Government of India for the implementation of the Jal Jivan Mission across the country.

Major Publication:

United Nations: 75 and Beyond: We are pleased to present 'United Nations:75 and beyond' the iconic special publication of Focus Global Reporter (FGR), a publication of UN accredited India Water Foundation commemorating the 75th anniversary year of the United Nations giving an overview of UNs role today and tomorrow. We have endured to bring significant issues to the forefront and concentrated on getting insights and perspectives on the same from 20 people who are environmental authorities, leaders, experts, influencers, intellectuals and generate a strong voice in their respective domains. In their interviews they have provided integrated interpretation with a thorough and fundamental analysis. I am hopeful the publication is expected to give our readers a power-packed and enriching experience and shall foster communication not only among the disciplines, but also with the development partners, decision makers and most importantly the public which depends on such information to understand the minute contours of thematic issues. As always, even in the turbulent times a modest effort from the team of Focus Global Reporter. https://www.amazon.in/United-Nations-Dr-Arvind-Kumar/dp/B091YKS9ZM/ref=sr_1_1?dchild=1&keywords=United+Nations+%3A+75+and+Beyond&qid=1626513510&sr=8-1

Special Supplement

On the occasion of environment day 2021, India water foundation released a special supplement to accelerate its actions and be a platform to disseminate Environment based knowledge, Best Practices through its various platforms.

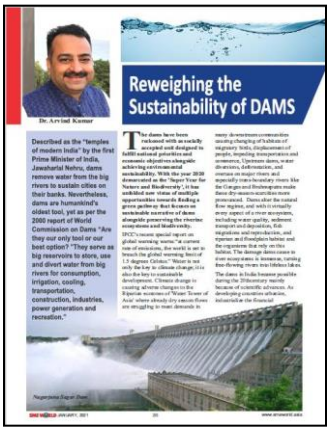
The special supplement included an editorial by Dr. Arvind Kumar on *Restoration is not a substitute for conservation.* The team and members of India Water Foundation contributed with insightful articles on various issue for the supplement.

https://www.indiawaterfoundation.org/special-supplement/

January 2021: Dr. Kumar's article "Reweighing the Sustainability of DAMS" published in **SME World magazine**, January 2021, Vol XIV No. 1 issue.

Described as the "temples of modern India" by the first Prime Minister of India, Jawaharlal Nehru, dams remove water from the big rivers to sustain cities on their banks. Nevertheless, dams are humankind's oldest tool, yet as per the 2000 report of World Commission on Dams "Are they our only tool or our best option?" They serve as big reservoirs to store, use and divert water from big rivers for consumption, irrigation, cooling, transportation, construction, industries, power generation and recreation."...Read more

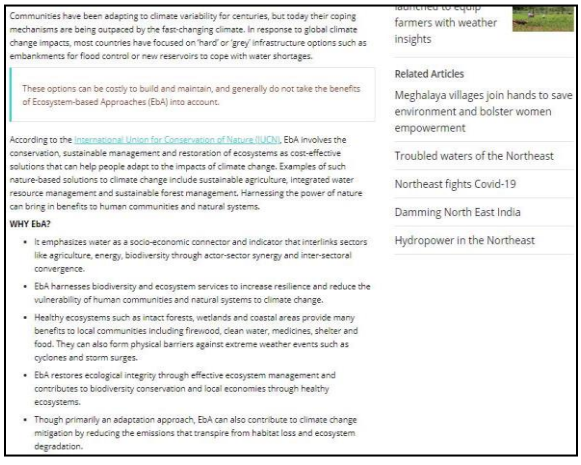
https://www.smeworld.asia/Focus.aspx?Focus=Focus-281%2Freweighing-the--sustainability-of-dams&fbclid=IwAR2xcPDB4I_RL_rrSagcphXq3AiPu6zbYTJYaHyiRjvwpqTOIYdmFFVLQpg#.YMxZVWQzbIX


Reweighing the Sustainability of DAMS

January 2021: Article on Ecosystem-based approach: The case of Meghalaya–on the portal of India Water Portal. Communities have been adapting to climate variability for centuries, but today their coping mechanisms are being outpaced by the fast-changing climate. In response to global climate change impacts, most countries have focused.....more

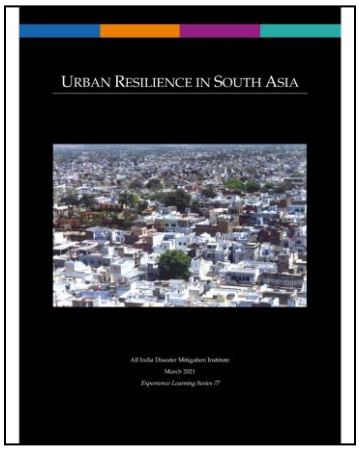
https://www.indiawaterportal.org/article/ecosystem-based-approach-case-meghalaya?fbclid=IwAR2zzWYrbf8Zzt_EwaK-OhLJyyXmTY8EEWIogkvaKDzu1vrgPeNQdhFtJlg


Ecosystem-based approach: The case of Meghalaya


Communities have been adapting to climate variability for centuries, but today their coping mechanisms are being outpaced by the fast-changing climate. In response to global climate change impacts, most countries have focused on 'hard' or 'grey' infrastructure options such as embankments for flood control or new reservoirs to cope with water shortages.

January 2021: Re-strengthening the BLUE GREEN Economy**:** Natural Ecosystems provides us with a myriad of services ranging from food security, climate regulation, better lives, and livelihoods. Yet despite this the last three to four decades have seen increasing degradation of environment. This in turn, is threatening the livelihoods of millions of people around the world who depend on these critical ecosystems for their primary source of food job security both directly and indirectly. ……..more
http://www.focusglobalreporter.org/restrengthening-the-blue-green-economy/

March 2021: My contribution on "Towards Renewed and Resilient Green Cities': A Commitment" published in 'Urban Resilience in South Asia' Experience Learning Series 77 taken out by All India Disaster Mitigation Institute.



March 2021: Wetlands and Rivers: Undeniable Linkage: In the last three decades alone, nearly one-third of natural wetlands have been lost to urbanization, agriculture expansion and pollution. The loss of wetlands in urban areas has been more rapid. Data from 26 cities and towns show that since 1970s, for everyone square kilometer increase in built up area, 25 ha of wetlands has been lost. Similarly in the last 150 years, the need to create farmland, generate electricity and make water transport easier has changed the dynamics of the river……more
http://www.focusglobalreporter.org/wetlands-and-rivers-undeniable-linkage/

April 2021: Rethinking Climate and Health Emergency: Don't you feel in addition to socio-economic determinants of human health, the impact of environmental, climate, ecosystem change and degradation on health should be increasingly recognized? Clean and safe drinking Water and Healthand nutrition is a fundamental human right and a key indicator of sustainable development but are we doing enough to maintain our Water, health and food systems?.....more
http://www.focusglobalreporter.org/rethinking-climate-and-health-emergency/

May 2021: Envisaging Biodiversity and Health Nexus: With the world still combating the most unprecedented global health crisis on score of sheer scale, India is reeling under the pressure of providing access to the fundamental human right to health to its population.....more
http://www.focusglobalreporter.org/envisaging-biodiversity-and-health-nexus/

June 2021: Dr. Kumar's article on 'Re-instilling Resilienc to Climate Change a Necessity' published in MEDC's issue on the theme of Sustainable Development & Climate Change – Rising to the Challenge".

June 2021: Rethinking the Water Diplomacy for Peace and Prosperity: India's geographical setting render it a key player in the South-East Asian region in water sharing, with neighbouring countries of Pakistan, Nepal, Bhutan, Bangladesh, China and Myanmar. Interestingly, India's relationships with her neighbours, becomes especially significant in the context of its water-sharing and.....more
https://www.focusglobalreporter.org/rethinking-the-water-diplomacy/?fbclid=IwAR1e8m12G5An1keryeiqfPSHBk5-Yz0od8gu1dFlmH36PDigkjvqO8XO_C8

June 2021: Restoration is not a substitute for conservation: While we can successfully restore biodiversity, structure, and function to a degraded ecosystem, ecological restoration is not a substitute for conservation, nor should the promise of restoration be used to justify destruction or unsustainable use. In reality, restoration may not succeed in re-establishing the full assemblage of native species or the full extent of the original ecosystem's structure and function……more
https://www.focusglobalreporter.org/restoration-is-not-a-substitute-for-conservation/

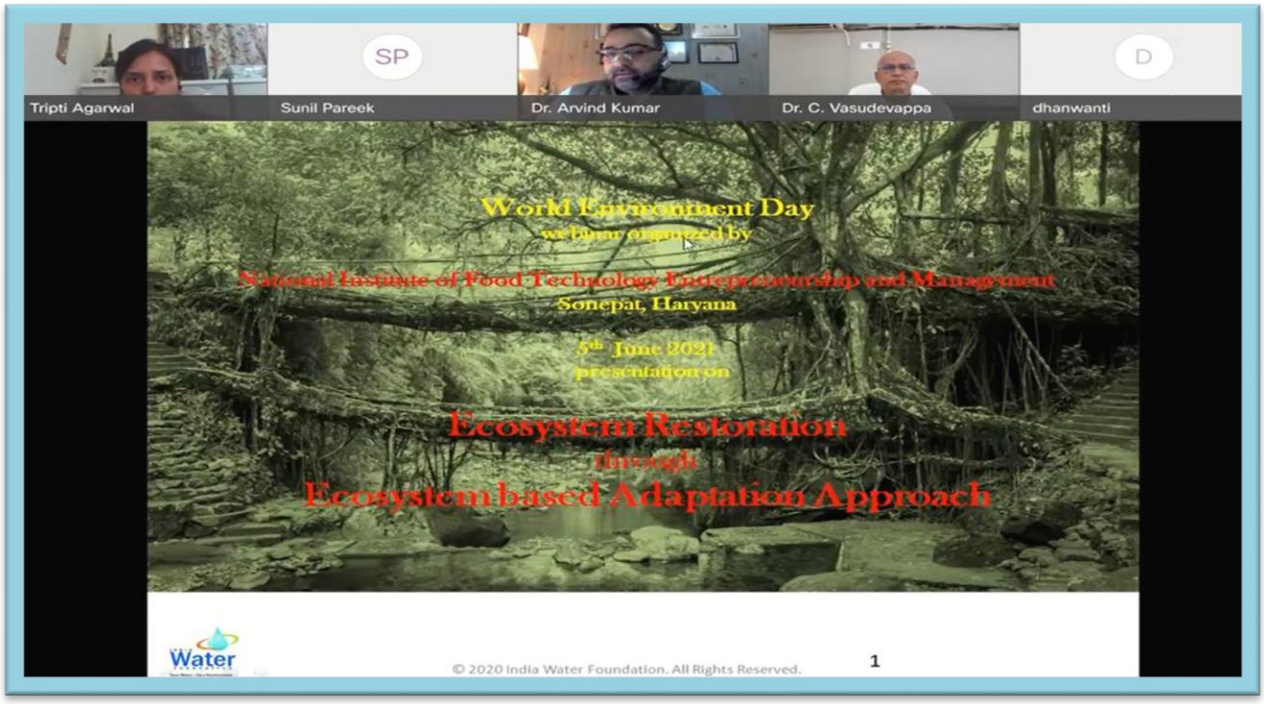
Major Events and Activities

June 2021: As Governor of the World Water Council Dr. Arvind Kumar, President India Water Foundation attended the ***74thWorldWaterCouncilBoardofGovernors meeting*** virtually on 29th June 2021. IWF proudly became a signatory of the declaration on No ecological security without Water Security. Among other usual discussions and presentations the roadmap for the preparations of 9WorldWaterForum which will be held in March 2022 in Dakar was charted out.

June 2021: Our Jal Mitra campaign to turn 'Biodiversity Conservation into Public Movement' has been well received and shared by CBD as IWF's action commitment. Let's take collective actions to safeguard, conserve and protect biological diversity. By adopting a bottom-up approach and 'Putting People First' the India Water Foundation aims to mobilize local action to protect the environment and biodiversity. This includes their Jal Mitra campaign to turn 'Biodiversity Conservation into Public Movement'. India Water Foundation's pledge is part of the Action Agenda for Nature and People.

June 2021: To achieve the vision of our Prime minister of restoring 26 million hectares of degraded land by 2030 and achieve land degradation neutrality we have to cooperate and collaborate and work in convergent mode to restore our land ecosystem said Dr Arvind Kumar how ecosystem restoration is interlinked to economic recovery. Please like, share and subscribe India Water Foundation YouTube channel for a wider dissemination. https://youtu.be/nr0Hc8u2dQk

June 2021: On World Environment Day Dr. Kumar made keynote presentation on the theme "ECOLOGICALRESTORATION" organized by National Institute of Food Technology Entrepreneurship and Management (NIFTEM) and Ministry of Food Processing Industries, Government of India on 5th June 2021. Please like, share and Subscribe India Water Foundation YouTube channel for a wider dissemination. (https://youtu.be/OneU1SN8usI).



June 2021: Dr. Kumar's spoke on the International Conference on Ecosystem Restoration on the World Environment Day 2021 organized by AKP Healing India supported by United Nations Environment Programme. Please like and share for a wider dissemination. Also watch the full video on India Water Foundation YouTube channel (https://youtu.be/m9mQ_AEJ_C0)

June 2021: Presenting a short video about the challenges and crises we are facing – climate change, nature loss and pollution and how we can address these challenges to protect, sustainably manage and restore ecosystems that address societal challenges effectively and adaptively. Please like and share for a wider dissemination. Also watch the full video on India Water Foundation YouTube channel (https://youtu.be/v6Zw3ZSGPhY).

May 2021: Whether in a village in Ladakh or a metropolis such as Delhi, humans depend on the services ecosystems provide, such as fresh water, pollination, soil fertility and stability, food and medicine. Ecosystems weakened by the loss of biodiversity are less likely to deliver those services, especially given the needs of an ever-growing human population. Therefore, let us all be a part of conservation and restoration of ecology and ecosystems.
Also watch the full video on India Water Foundation YouTube channel (https://youtu.be/CHa9Y6Ci1Zo).

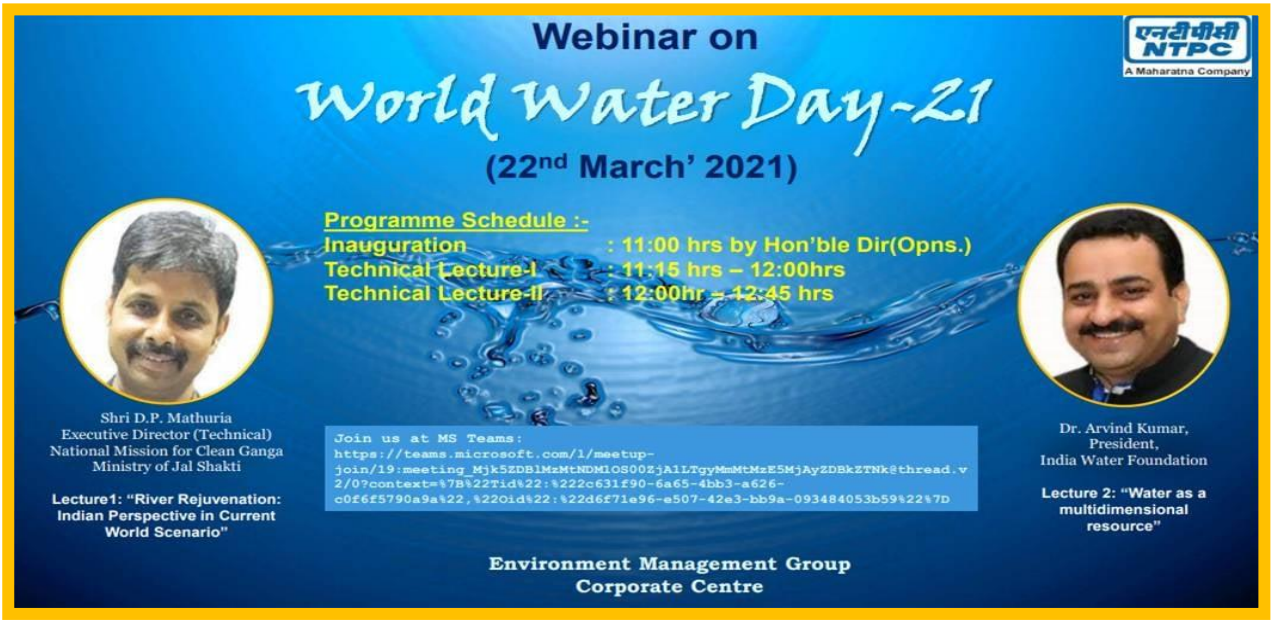
May 2021: We humans are a part of biodiversity and need to stop behaving as the Supreme Being at the top of the hierarchy of all life forms. Let's be part of the solution by planting more trees, consuming a variety of foods in our diets to promote crop diversity, not wasting food and water. Conservation of biodiversity is pivotal for the management and restoration of ecosystem services. Also watch the full video on India Water Foundation YouTube channel (https://youtu.be/CGLt7bnQoPU). Please like, share and subscribe for wider dissemination.

May 2021: As a member of Technical Advisory Committee Dr. Kumar had a comprehensive focused discussion convened by the Ministry of Environment Forest & Climate Change Government of India of the TAC Members on the submission of India's Third National Communication (TNC) and Biennial Update Report (BUR) to the UNFCCC under the chairmanship of Mrs. Richa Sharma Additional Secretary MoEFCC and Advisor Dr. J R Bhatt. The 13 sectoral presentations by government and other institutions on studies relating to impacts, vulnerability and adaptation were innovative and presented with high enthusiasm. Remarkable preparation for the COP 26.

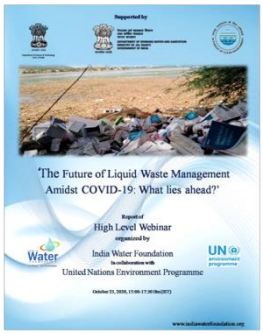
May 2021: As the nation grapples with the current situation, there is an urgent need for coordination and cooperation amongst all stakeholders on a high moral and ethical ground but are we treading on that path. Listen to Dr Kumar articulating about the same.You tube Video Link:https://youtu.be/3q9DDdI6a3w?list=PLbFmm9rLOoERli4XR-AvhqIXFZuZSaOeA

April 2021: As Governor of the World Water Council during the 73 World Water Council Board of Governors meeting Dr Arvind Kumar commented on the interlinkage of water security and ecological security. Among other usual discussions and presentations, the roadmap for the preparations of 9WorldWaterForum which will be held in March 2022 in Dakar was charted out keeping in mind the pandemic situation and travel restrictions. Amidst COVID19 pandemic situation the 73 World Water Council Board of Governors Meeting was held virtually on 1st April 2021.

March 2021: "Water as a multi-dimensional resource" was the topic of the talk that Dr Arvind Kumar President India Water Foundation delivered in the programme organized by NTPC Ltd. to commemorate the World Water Day 2021.



January 2021: The Report of Future of liquid waste management what lies ahead organized by India Water Foundation in collaboration with UNEP on 23 Oct 2020.



https://www.indiawaterfoundation.org/wp-content/uploads/2021/01/Report-of-High-Level-Webinar.pdf?fbclid=IwAR0LHHFiqDEgQ_fZnm4_4G8akkV5z-hWePuxmytP58nUQMuiW6uQekYzYfw

January 2021: Sh. Rajiv Ranjan Mishra, DG-NMCG and Sh. Rozy Agarwal, ED(F)-NMCG met Sh. Arvind Kumar, President, India Water Foundation. They discussed various issues related to river rejuvenation. Shri Mishra presented a copy of the book "Rowing down the Ganges" to him. Namami Gange

- Webinar on Adaptation Communications: draft supplementary guidance for voluntary use by Parties in communicating adaptation information through Adaptation Communications 30 June 2021, 12:30–2:00 p.m. Central European Summer Time
- UNEP Second pre-meeting to the Ministerial Conference on Marine Litter and Plastic Pollution (4:30pm – 7:30pm IST)
- Registration and documentation for the pre-meeting on Marine Litter and Plastic Pollution, 28-29 June
- Meeting with PHED Haryana 3.00 pm Virtually for SECTOR PARTNER
- Virtually celebrated 72nd Foundation Day on 24th June 2021 Date: 24 June 2021 Time: 15:00 Hrs (Indian Standard Time) +05:30 GMT Organised by: ICID"
- General Assembly resolution 72/277", which is scheduled for 22 June 2021, from 2:00 – 4:00 pm (GMT+3).
- The webinar on "The Strong Economic Case for Financing Biodiversity" will take place on June 22 at 8.00-9.30 am EDT
- 59th Meeting (Virtual) of Governing Council of Global Compact Network India (GCNI)

- UNEA Major Group & Stakeholders Consultation (for Bureaus Retreat) Mon 21 Jun 2021
- Tsunagaru Lab Webinar Series-Approach to Indian Social Issues-Part 1Friday, May 28, 2021, 13:30 to 16:30 (Japan time) / 10:00 to 13:00 (India time)
- Subcommittee meetings on 27 May and 3 June 2021 from 2:00 pm to 5:00 pm (GMT+3)
- The pre-meetings to be held 27-28 May 2021 ahead of the Ministerial Conference on Marine Litter and Plastic Pollution, Civil Society Unit
- Strengthening Sustainable Forest and Ocean Management to Mitigate Climate Change on 26 May 2021 at 5.30 pm IST
- UN Environment - Nairobi / 154th Meeting of the Committee of Permanent Representatives on 20 May 2021 (To: Kumar, Arvind) 7:30 pm
- Dialogue between CSOs and Land Degradation Neutrality Fund- 12th Update. online meeting on 17th May 2021 – 3 pm to 5 pm CET
- Video Conference for shortlisted candidates for 'Sector Partner' for National Jal Jeevan Mission, 13.05.2021 (Thursday) at 11.00 AM
- Meeting of the Technical Advisory Committee (TAC) for India's Third National Communication and BURs to UNFCCC on 12-05-2021 at 3 pm
- Round table discussion on “Catch the Rain” campaign on 11 May at 11 am
- The SBSTA and SBI Chairs are pleased to invite United Nations organizations and admitted observer organizations to follow the informal consultations on the Koronivia joint work on agriculture, to be convened virtually on Tuesday, 13 April 2021, from 14:00 to 15:30 CEST. (UNFCCC)
- The SBI Chair is pleased to invite Parties to actively participate in informal consultations on matters relating to the least developed countries, to be convened virtually on Monday, 12 April 2021, from 13:00 to 14:30 CEST. (UNFCCC)
- Briefing session for major groups and stakeholders accredited to UNEP on the Food Systems Summit (today: Tuesday, 30 March 2021- 3:00 - 4:30pm EAT (East African Time)
- Building Food and Water Security in an Era of Climate Shocks, Session 1 of the UN DESA Global Policy Dialogues for Climate Action, Wednesday, 24/03/2021, 8:30-10:00 a.m. EDT

- [World Water Day Webinar] : WASH RESPONSE TO COVID-19 IN FRENCH INFORMAL SETTLEMENTS (06.30 PM IST)
- Webinaire Journée Mondiale de l'Eau et sortie du Rapport des Nations unies "La Valeur de l'Eau" (Webinar World Water Day and release of the United Nations Report "The Value of Water")
- Nature-based Solutions for recovery efforts - Ministerial panel events, Ministerial Panel 1, 3 March, 08:00 – 09:00 CET, Ministerial Panel 2, 3 March, 14:00 – 15:00 CET
- UN Environment Invitation to the UN Science-Policy-Business Forum - 18-20 February 2021
- Fifth meeting of the Open-ended Committee of Permanent Representatives of the UN Environment Programme (OECPR-5), to be held 15 – 16 February 2021
- Global Major Groups and Stakeholder Forum (GMGSF) prior to the first session of UNEA 5 starts in 1 Day on Feb 11, 2021 3:00 PM - 6:00 PM EAT
- Geneva Beat Plastic Pollution Dialogues | Plastics in the Life Cycle/SCP - Thursday 11 February 2021, 14:00 CET
- CBD Notification 2021-006 - Webinar on policy options for access and benefit-sharing and digital sequence information on genetic resources. The webinar will be held on 11 February 2021 from 9:00 a.m. to 10:30 a.m. (EST).
- UNESCAP South and South-West Asia Office and ICRIER virtual Policy Dialogue on the topic of "Galvanizing South and South-East Asia Connectivity post-COVID19", 22 January 2021 from 15:00-16:30 hours (IST)
- 21 December 2020: Take Climate Action: Act Now https://youtu.be/e9gupRAvjfQ
- 08 December 2020: Human Rights Day 2020 https://youtu.be/xOsL_oCz-30
- 08 December 2020: End Gender Based Violence https://youtu.be/WGLp2O5GJjg
- 05 December 2020: World Soil Day 2020 https://youtu.be/hV4DFtWGE64

Discussion-In-Depth

UNEA 5.1

{This report on "The Impacts of Sand and Dust Storms on Oceans" was released virtually by UNEP on Friday the 6th of November. The report is written by Dr. Nicholas Middleton, Professor at Oxford University and worldwide renowned expert on Sand and Dust Storms and supported by GESAMP, the GPA, the GPNM, and the UN Decade of Oceans 2021-2030}

UNEA 5.1 conducted between 22 February 2021 to 23 February 2021. With the theme of 'Strengthening Actions for Nature to Achieve the Sustainable Development Goals' was the first global conference in direction to deal with environment and sustainability issues, under the Decade of Action 2021-2030.

Figure 7 UNEA 5.1 LOGO

Due to the exceptional circumstances under the COVID-19 pandemic, thetwo-partsession (UNEA 5.1: 22nd Feb to 23rd Feb and UNEA 5.2: June 2021) was held online and was attended by 151 countries, above 100 ministries and high-level representatives of the society. Green recovery, plastic management, marine litter, climate change and nature-based solutions were the highly discussed topics. The UN Secretary-General, also launched the flagship UNEP report "making peace with nature".

Some of the key messages from the Leadership Dialogue: Contribution of the environmental dimension of sustainable development tobuilding a resilient and inclusive post-pandemic world are summarized below.

One of the lessons that we learnt from the Covid-19 pandemic is that health of nature and human health are interlinked. It shows that our overexploitation of nature has consequences which in turn affects human lives.

Degrading our ecosystem both contributes to increased emissions and also reduces our resilience to climate change.

The pandemic has exposed our vulnerability but has also given us with an opportunity to change our ways and to put in place a green recovery that will transform our relations with nature and restore our planet.

We should invest to transform our economy into a circular economy to achieve our sustainable goals and to use nature-based solutions to address climate change, nature loss and pollution.

The green recovery must include ways to help the poorest and most vulnerable. It must generate new green jobs and should also ensure that countries have the means to implement green recovery.

Many Members of States are already putting in place key components of a green recovery. These include more stringent National Determined Contributions, nature protection, ban on plastics, ocean cleanup, energy

transition to sustainable sources, there should be a whole-society approach that fully engages the youth, businesses and local communities.

Figure 8H.E. Mr. Sveinung Rotevatn, President of UNEA, opening remarks

This decade is the most important decade for ecosystem restoration and with the launch of the UN Decade of Ecosystem Restoration should provide opportunities to change our ways.

As the leading global authority, UNEP has a crucial role to play in the integrating medium-term strategy, coordinated response and multilateralism.

While the members showed commitment and understanding during the sessions, the issues of technical glitches faced by various delegates and mostly by developing countries providing connectivity challenges which reduced the effectiveness and shed the light on the issue of digital divide due to varied challenges like multilingualism, different time zones and internet connectivity, which led to lower transparency, inclusivity, and equitable participation as compared to previous UNEA.

Figure 9Plenary of UNEA-5

Although the virtual platform is beneficial in reducing environmental footprint and provide a means of knowledge sharing, the difference in time zones and technical difficulties in substantive decision making leading to weaker outcomes.Training and for technical improvements may address the technical divide and ensure equal participation.

UNEP as a leading global authority, have a huge potential for substantive outcomes, with multilateralism at its core it achieves global participation, inclusivity and effective outcomes, however, India Water Foundation appreciate the huge impact and outreach of the assembly sessions and its importance in reaching a global collaboration for environment.

360^0 Coverage:

Land Degradation

Currently around 69% of India falls under dry lands. India's land going under degradation and desertification at higher rates as in 2003 the total land degraded in India was at 29.3% which have seen an increase of 0.57% in 2003, (ISRO's space application center). With 96 million hectares of India currently facing land degradation, PM Modi during COP14 of UNCCD under the theme "Restore land, sustain future", have pledged that India is committing to reclaiming 26 million hectares which is 1/3 of the countries area by 2030

Land is one of the main resources of humankind, it supports wildlife vegetation transport and 95% of our all-basic needs and requirements like food, shelter clothing. The combination of human induced processes along with biophysical environment when act upon land and decrease the productivity of the land, that process is known as land degradation. consider as one of the main issues of 21st century land degradation impacts agriculture productivity food security water security and total economic value of the area. Land degradation disrupts the five main ecosystem functions and services that are essentials for humankind which is food production, fibre provision, microclimate regulation, water retention and carbon storage. Land degradation also result in death certification or amendment of lands this disturbs the peace around the world and may become cause of wars among nations. As the world loses 24 billion tons of fertile land every year, United Nations by SDG 15 targets to restore these degraded lands and soil and achieve land degradation neutrality by 2030. As defined by ISRO, Land degradation is temporary or permanent Degradation of productivity of land due to physical, chemical, or biological factors, . Land degradation threatens agricultural productivity, economy, water security, biodiversity and increase the risk of climate change impacts. Land degradation when occurs in dry land areas it results in desertification, currently around 69% of India falls under dry lands. India's land going under degradation and desertification at higher rates as in 2003 the total land degraded in India was at 29.3% which have seen an increase of 0.57% in 2003, (ISRO's space application centre). With 96 million hectares of India currently facing land degradation, PM Modi during COP14 of UNCCD under the theme "Restore land, sustain future", have pledged that India is committing to reclaiming 26 million hectares which is 1/3 of the countries area by 2030 to tackle India's growing crisis of ruined/degraded land, with nearly 30% of its land area already degraded specially in states of Rajasthan Madhya Pradesh and Maharashtra have been

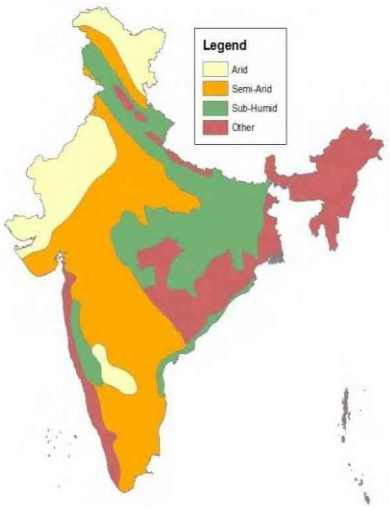


Figure 10Degraded Land Areas, ISRO

already degraded through deforestation, soil erosion, over-cultivation, and depletion and degradation of wetlands. With India working towards to achieve its national commitment of tacking land degradation by land degradation neutrality and restoring millions of hectares, The national afforestation program under ministry of environment forest and climate, change will aid and in restoration of degraded forest areas under this plan over 2 mn hectares have already been approved for a forest station to restore India's green cover 43% of the world population is currently residing in areas affected by land degradation, with reports stating that by 2050 the around four billion people will be living in dry lands with India being one of the most affected regions, India Water Foundation Recommends sustainable long term and immediate actions to tackle land degradation. To achieve land degradation neutrality here are some recommendations by India water foundation :

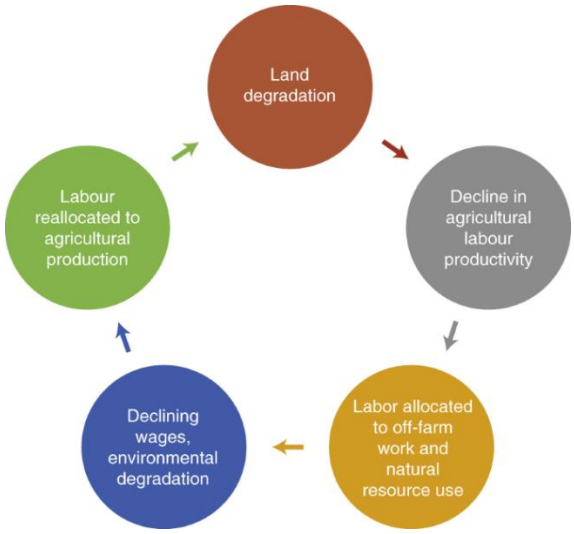


Figure 11 Land degradation and poverty | Nature Sustainability

A. Research and study on land degradation to assess the situation in terms of social economic impact of land degradation in India
B. Framing action plans on basis of success stories and scientific studies with nature-based solutions and ecological based adaptations.
C. Strong policies an act on land pollution, Encroachment of wetlands deforestation an eco-sensitive zones protection.
D. Introducing farm management practices by agroforestry and sustainable plan farming, while reducing dependency on forest from rural households for fuel.
E. Soil and water conservation by integrated watershed management approach.
F. Restoring green cover and grasslands by including local communities and including traditional practices

As countries have come to realise the importance of land and water management practices and the benefits of green development, UN recommends the following actions to the countries to tackle land degradation

- Continue to mainstream the land-water linkage into relevant national policies and strategies
- Establish and build national capacities in the monitoring of water resources, including wetlands
- Implement land and water conservation approaches and taking water management decisions at the appropriate level
- Improve water-use efficiency by using all available methods for all uses
- Ensure the interaction between the national focal points for the three Rio Conventions
- Further incorporate LDN policies and integrated land and water strategies during the next review of the UNFCCC Nationally Determined Contributions.
- Explore climate funding as an essential source of funding, complemented with national funding sources

A healthy land has a natural capacity to store and filter water this capacity is lost when the land is degraded by land use changes, poor irrigation management altered hydrology improper agriculture practices leading to poorer soil qualities and degradation of wetlands. Do you neutralise the impacts of these studies have recognized the importance of Land Degradation Neutrality (LDN) to achieve a long term security in terms of land productivity.

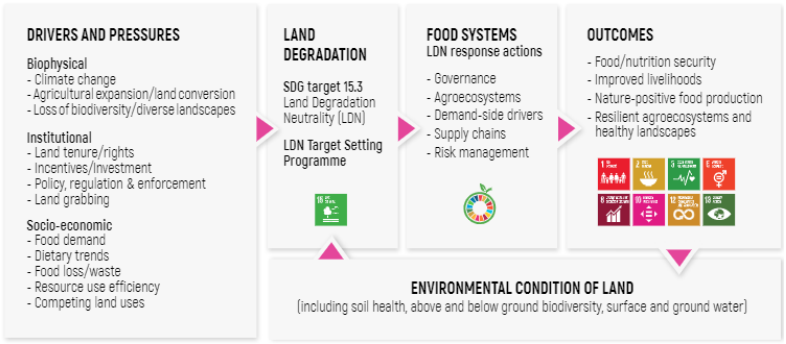


Figure 12LDN Target Setting Programme to transform our Food systems, Source UNCCD

Land Degradation Neutrality (LDN) is an integral part of SDG 15 and is incorporated in target 15.3, which aims to "combat desertification, restore degraded land and soil, including land affected by desertification, drought and floods, and strive to achieve a land degradation-neutral world" by 2030. LDN provides a supporting framework to manage both land and water resources sustainably at the landscape level, address the challenge of water insecurity and drought and provide opportunities for policy and operational synergies within the land-water nexus. LDN targets help countries to identify and adopt a broad range of measures to avoid or reduce land degradation while improving gender equality and livelihoods. These measures include sustainable land and water management practices as well as integrated land use planning. When combined with localized action to reverse past degradation, through land rehabilitation and restoration, countries are more likely to achieve 'no net loss' in their healthy and productive land. Achieving a land degree degradation neutrality is an intense and long-term process Having a right and sustainable approach can help us to restore our lands and move towards a sustainable and green future.

Overview:

Making Peace with Nature (UNEP)

In 2018 alone, damages from climate-related natural disasters cost about US$155 billion. The deteriorating state of the planet undermines efforts to achieve healthy lives and well-being for all. Around one quarter of the global burden of disease stems from environment-related risks, including those from animal-borne diseases (such as COVID-19), climate change, and exposure to pollution and toxic chemicals.

The current pace that the world is developing has a detrimental effect on its natural systems. Over the last 50 years, the global economy has grown nearly fivefold, due largely to a tripling in extraction of natural resources and energy that has fueled growth in production and consumption. The world population has increased by a factor of two, to 7.8 billion people, and though on average prosperity has also doubled, about 1.3 billion people remain poor and some 700 million are hungry. Due to the over use of our natural resources, there has been extreme events happening like climate change, biodiversity loss, pollution and resource degradation. Social, economic and financial systems fail to account for the essential benefits society gets from nature and to pro-vide incentives to manage it wisely and maintain its value.

Current and projected changes in climate, biodiversity loss and pollution make achieving the SDGs even more challenging. For example, even small increases in temperature, along with associated changes such as in weather, precipitation, heavier rainfall events, extreme heat, drought and fire, increase risks to health, food security, water supply and human security, and these risks increase along with warming.

In 2018 alone, damages from climate-related natural disasters cost about US$155 billion. The deteriorating state of the planet undermines efforts to achieve healthy lives and well-being for all. Around one quarter of the global burden of disease stems from environment-related risks, including those from animal-borne diseases (such as COVID-19), climate change, and exposure to pollution and toxic chemicals. Pollution causes some 9 million premature deaths annually and millions more die every year from other environment-related health risks.

Figure 13 Book Cover, Making peace with nature

The risks to human well-being and the achievement of the Sustainable Development Goals will continue to esca-late unless environmental degradation is halted. Global warming of more than 2°C combined with continued loss of biodiversity and increasing pollution will likely have dire consequences for humanity. The costs of inaction on limiting environmental change far outweigh the costs of action. Global aggregate

impacts from climate change are estimated to be very high by the end of the century unless cost-effective mitigations strategies are undertaken.

Transforming human's relationship with nature is paramount to a sustainable future. Only a system-wide transformation will achieve well-being for all within the Earth's capacity to support life, provide re-sources and absorb waste. This transformation will involve a fundamental change in the technological, economic and social organization of society, including world views, norms, values and governance.

Major shifts in investment and regulation are key to just and informed transformations that overcome inertia and opposition from vested interests. Regulatory processes should embody transparent decision-making and good governance involving all relevant stakeholders. Opposition to change can be defused by redirecting subsidies toward alternative livelihoods and new business models.

The COVID-19 crisis provides an impetus to accelerate transformative change. The pandemic and the ensuing economic upheaval have shown the dangers of ecosystem degradation, as well as the need for international cooperation and greater social and economic resilience. The crisis has had major economic costs and is triggering significant investments. Ensuring that these investments support transformative change is key to attaining sustainability.

Given the interconnected nature of climate change, loss of biodiversity, land degradation, and air and water pollution, it is essential that these problems are tackled together. Response options that address multiple issues can mitigate multidimensional vulnerability, minimize trade-offs and maximize synergies. Limiting global warming to well below 2°C above pre-industrial levels and pursuing efforts to further limit the temperature increase to 1.5°C requires rapid implementation and a significant strengthening of pledges under the Paris Agreement. Globally, net carbon dioxide emissions need to decline by 45 per cent by 2030 compared with 2010 levels and reach net zero by 2050 to put the world on a pathway to 1.5°C with a probability of about50 per cent, whereas more ambitious targets would be necessary for higher certainty.

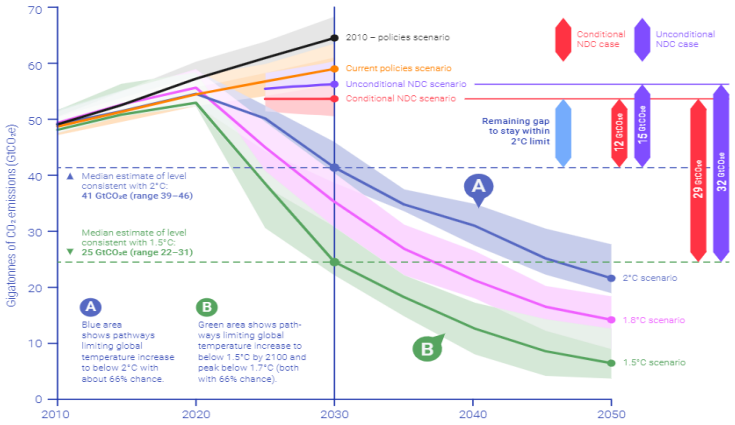


Figure 14Global greenhouse gas emissions under different scenarios and the emission gap in 2030 for unconditional and conditional nationally determined contributions (NDCs) scenarios

Limiting global warming to well below 2°C above pre-industrial levels and pursuing efforts to further limit the temperature increase to 1.5°C requires rapid implementation and a significant strengthening of pledges under the Paris Agreement.

Governments should incorporate full natural capital ac-counting into their decision-making and use policies and regulatory frameworks to provide incentives for businesses to do the same. Governments should shift away from environmentally harmful subsidies, invest in low-carbon and nature-friendly solutions and technologies, and systematically internalize environmental and social costs. A One Health approach integrates action across sectors and disciplines to protect the health of people, animals and the environment. Such an approach is key to minimize future human health risks from climate change, ecosystem degradation and deteriorating food, air and water quality. It is also essential in preventing and limiting the impact of future health emergencies, including pandemic outbreaks of animal-borne diseases such as COVID-19.

We all have a part to play in bringing together transformative change with an immediate and long term impact. This can be enhanced through capacity-building and education. Governments initiate and lead in intergovernmental cooperation, policies and legislation that transform society and the economy. Such transformations enable the private sector, financial institutions, labororganizations, scientific and educational bodies and media as well as households and civil society groups to initiate and lead transformations in their domains. Individuals can facilitate transformation by, for instance, exercising their voting and civic rights, changing their diets and travel habits, avoiding waste of food and resources, and reducing their consumption of water and energy. They can also promote behavioral change by raising awareness in their communities. Human cooperation, innovation and knowledge-sharing will create new social and economic possibilities and opportunities in the transformation to a sustainable future.

Deep Seas-Marine Litter

Marine litter, in the last few years had become one of the current major environmental problems all around the world with each square-mile containing thousands of microplastic in the oceans. Marine litter consists the items that have been or being used by humans, and discarded into the waterways like: seas, rivers or beaches and directly enters into the water systems. There is a wide spectrum of sources from where the marine litter originates and enter into the waterways. In the last year due COVID-19 pandemic Have led to increase of demand of single use plastic for management of virus effects, followed by large percentage of plastic waste scattered in the waterways have now led to the pandemic of plastic pollution globally. This bull in the amount of marine litter the oceans have supplemented the need of a collaborative global scale action to manage marine litter.

The exposure to other toxic chemicals off marine litter over long period of time can result in reproductive, hormonal, and health issues among humans. Moreover, studies have showed that 90% of the bottled water contained back to plastic whereas it is 7% of tap water contain microplastic.

Plastics having a very slow rate of degradation and half-life makes the most of the marine litter items, and found in all of the world's seas and oceans even in the remote areas. the problem of microplastic is a major concern as it damages the aquatic biodiversity by blocking their digestive tracts an altering their feeding behavior resulting in reduced growth and reproduction of the species. The effects of marine litter is not only limited to coastal and sea areas it also persisted to humans and in-land ecosystems. The microplastic also ends up reaching in our food chain by seafood consumption and is very harmful due to effects of biomagnification. The exposure to other toxic chemicals off marine litter over long period of time can result in reproductive, hormonal, and health issues among humans. Moreover, studies have showed that 90% of the bottled water contained back to plastic whereas it is 7% of tap water contain microplastic.

Figure 15 Marine Litter, UNEP

The management of marine litter in our oceans, coastal areas and water-ways is now a necessity with approach of dynamic, interactive and multidisciplinary strong responses to avoid and mitigate the impacts of marine litter on our environment, economy and social sectors. The key at the key actions to control microplastic are knowledge, prevention, mitigation, removal and behavioral change and also involving measures ranging from behavioral change, policies, and scientific research with collaboration among various sectors.

Figure 16 Marine Litter, IUCN

With more than 11 million metric ton plastic going to ocean every year, one of the main challenges in management of microplastic are the lack of Monitoring programs to assist the state and trend and plastic pollution reaching to the oceans. While expert's advice to look for past data trends, Observational studies, quantification and quality studies different samples to link and study data in long term monitoring to understand the changing patterns, and develop simple and concise methodology to mitigate microplastics. The low budget for projects and lack of data accessibility are considered as the key challenges in monitoring plastic debris, while too little consistent data on harm of plastic results in no implementation of regulation.

With marine litter being a part of a product global problem in waste management which is now causing a major public-health-environmental concern, now around the globe, the regional programs are being implemented and working to strengthen laws to prevent industries and communities from discharging waste into the ocean while also working on capacity building among citizens and stakeholders to enforce policies and programmes like- Encouraging and increasing recycling and recovery programs; forcing local regional and global partnerships; promoting circular economy and green products; increasing ocean pollution clean-up drives and marine litter prevention programs.

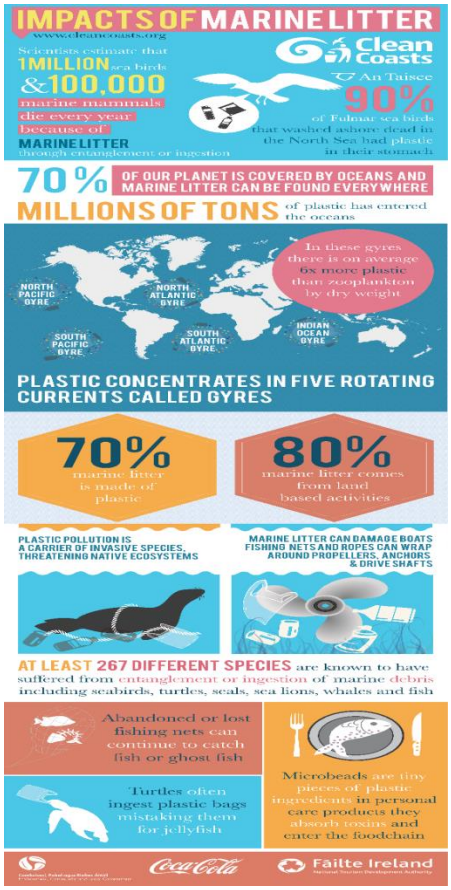


Figure 17 Impacts of marine litter, CleanCoast.Org

As global-multi stakeholder partnership are very important for cooperation coordination and sharing ideas while enhancing knowledge base by engaging multi-level partnership by introducing global partnership programs and strategies; utilization of 3-Rs initiatives to minimize and manage the plastic and waste production; research in collaboration on scientific data collection and assessment to frame guidelines for actions on a global level with Voluntary participation for data collection, international level working groups a national level multi bodies, are some of the ways to curb the ever-increasing marine litter issue. While the management of marine litter is complicated, complex and a huge task with the right solutions and sustainable plan can help us in achieving positive improvement Introducing the marine litter related impacts.

Knowledge Update

G7 Summit 2021- Ripples or Waves? - India's take on the G7 Summit and what's next for COP26

"One Earth, One Health" was the phrase coined by the Prime Minister Shri Narendra Modi at the first outreach session held at the G7 Summit in Cornwall, UK.

"One Earth, One Health" was the phrase coined by the Prime Minister Shri Narendra Modi at the first outreach session held at the G7 Summit in Cornwall, UK. This is the first meeting of the leaders of the largest economies since the Covid pandemic began last year. The UK currently holds the presidency and this year has invited India, along with Australia, South Africa and South Korea, as guest countries for the summit.

The theme for this year's summit is "Build Back Better". The UK outlines four priorities for the summit which are-

- Leading the global recovery from Corona virus while strengthening resilience against future pandemics.
- Promoting future prosperity by championing free and fair trade.
- Tackling climate change and preserving the planet's biodiversity.
- Championing shared values and open societies.[1]

Figure 18- G7 Leaders together at Cornwall for the G7 2021 Summit

[1] https://indianexpress.com/article/explained/explained-the-g-7-agenda-this-year-india-7353336/

PM Modi attended the outreach session titled 'Building Back Stronger – Health' virtually from India calling for a global response against the Corona virus and future pandemics. India was hit hard by the covid-19 virus due to its large population especially when the second all-India surge of the virus. The Indian government believes that the best way to fight the pandemic is to vaccinate the whole population but there is a shortage of vaccines. There are currently two locally made vaccines for the corona virus: Covidshield and Covaxin. The Serum Institute of India (SII) makes Covidshield (under license from AstraZeneca), while Bharat Biotech, makes the locally-developed Covaxin. The Sputnik V vaccine, which was approved for use in April, is also now available, with three million doses supplied by Russia. This vaccine is also being produced locally, with supplies expected to be available for use from July or August. The government set a target to make 2 billion doses to be made between August and the end of the year to fully vaccinate the population. But India is facing a shortage in vaccine manufacturing and supply, earlier this year US President Biden invoked the US Defense Production Act (DPA), giving US vaccine makers priority access. This caused a severe shortage of raw materials that is required to produce the vaccines. The US administration later agreed to provide 'specific raw materials' for the manufacture of Covishield vaccine in India.

Figure 19-"One Earth, One Health" was coined by PM Modi when he spoke virtually to the G7 Leaders

At the G7 summit, the leaders pledged to deliver an additional 870 million vaccine doses for the developing world on top of the 250 million already promised by the US and 100 million from the UK and deliveries will take place over the next year. In his speech at the G7 President Biden quoted "This is about our responsibility, our humanitarian obligation, to save as many lives as we can". US NSA Jake Sullivan said the G7 will make a further joint declaration on "a comprehensive plan to help end this pandemic as rapidly as possible". The World Health Organization Director General, Dr Tedros Ghebreyesus welcomed and thanked the leaders for their donations but also stated that more vaccines are needed and at a faster pace.

President Biden quoted "This is about our responsibility, our humanitarian obligation, to save as many lives as we can". US NSA Jake Sullivan said the G7 will make a further joint declaration on "a comprehensive plan to help end this pandemic as rapidly as possible".

At the session PM Modi sought for a proposal to waiver the patents protections regarding the Covid-19 vaccines and technologies.In October last year, India and South Africa, along with 57 members of WTO proposed a waiver from certain provisions of the Trade-Related Aspects of Intellectual Property Rights (TRIPS) agreement for prevention, containment, and treatment of COVID-19. Many countries including Australia have shown support of the PM call to waiver the patents. The PM also emphasized on the special responsibility of democratic and transparent societies to deal with the global

challenge. The PM also highlighted India's "whole of society" approach to fight the pandemic while synergizing the efforts of all levels of the government, industry and society, and also explained India's successful use of open-source digital tools for contact tracing and vaccine management, and conveyed India's willingness to share its experiences and expertise to other developing countries. [2]

One of the big themes of this year's G7 summit is Climate Change. The leaders of the G7 nations have committed to a "green revolution" that would limit the rise in global temperatures to 1.5C and pledged to halve emissions by 2030, relative to 2010. They have also promised to reach net zero emissions by 2050, with measures including ending all unabated coal "as soon as possible", ending almost all direct government support for the fossil fuel energy sector overseas and phasing out petrol and diesel cars. The Paris Agreement is a legally binding international treaty on climate change. It was adopted by 196 Parties at COP 21 in Paris, on 12 December 2015 and entered into force on 4 November 2016.Its goal is to limit global warming to well below 2, preferably to 1.5 degrees Celsius, compared to pre-industrial levels. To achieve these ambitious targets, countries have to reduce their greenhouse gas emissions and invest to reach a carbon neutral world as soon as possible. The Paris Agreement is a landmark in the fight against climate change because, for the first time, a binding agreement brings all nations into a common cause to undertake ambitious efforts to combat climate change and adapt to its effects. The reason coal is being targeted is because coal is the world's dirtiest major fuel and ending its use is seen as a major step by environmentalists, but they also want guarantees rich countries will deliver on previous promises to help poorer nations cope with climate change. The G7 will end the funding of new coal generation in developing countries and offer up to £2bn ($2.8bn) to stop using the fuel. [3]

Its goal is to limit global warming to well below 2, preferably to 1.5 degrees Celsius, compared to pre-industrial levels. To achieve these ambitious targets, countries have to reduce their greenhouse gas emissions and invest to reach a carbon neutral world as soon as possible. The Paris Agreement is a landmark in the fight against climate change because, for the first time, a binding agreement brings all nations into a common cause to undertake ambitious efforts to combat climate change and adapt to its effects.

[2] https://theprint.in/diplomacy/one-world-one-health-pm-modi-seeks-g7-support-for-vaccine-patent-waiver/676928/
[3] https://www.bbc.com/news/uk-politics-57456641

As part of the 'Build Back Better for the World' plan the UK Prime Minister launched the UK's Blue Planet Fund. The £500 million fund will support countries including Ghana, Indonesia and Pacific Island states to tackle unsustainable fishing, protect and restore coastal ecosystems like mangroves and coral reefs, and reduce marine pollution. The G7 also endorsed a Nature Compact to halt and reverse biodiversity loss by 2030 – including supporting the global target to conserve or protect at least 30 percent of land and 30 percent of ocean globally by the end of the decade. The PM Boris Johnson said 'Protecting our planet is the most important thing we as leaders can do for our people. There is a direct relationship between reducing emissions, restoring nature, creating jobs and ensuring long-term economic growth. As democratic nations we have a responsibility to help developing countries reap the benefits of clean growth through a fair and transparent system. The G7 has an unprecedented opportunity to drive a global Green Industrial Revolution, with the potential to transform the way we live'.[4]

Speaking about India's unwavering commitment to climate action, he mentioned the commitment by Indian Railways to achieve Net Zero Emissions by 2030. He stressed that India is the only G-20 country on track to meet its Paris commitments. India's headline Paris pledge was to reduce the emission intensity of its gross domestic product (GHG emissions per unit GDP) by 33-35 per cent over 2005 levels by 2030.

PM Modi spoke at this session highlighting the need for climate action to include all dimensions of mitigation, adaptation, technology transfer, financing and equity, climate justice and lifestyle change to provide the necessary space for developing countries to grow. The PM of India called on the G7 nations to keep their unfulfilled promise of setting aside $100 billion annually to finance mitigation and transfer of technology to developing countries to meet the challenges posed by climate change.[5] Developed countries at the 2009 Copenhagen climate summit had pledged to put aside $100 billion annually to fight climate change by 2020. The PM then highlighted India's initiatives to mitigate the impact of climate change stating that India has shown leadership and innovation in addressing climate change while also highlighted the importance of recognizing India's different trajectories and historical responsibilities in the making of this crisis. The PM highlighted that the planet's atmosphere, biodiversity and oceans cannot be protected by countries acting in

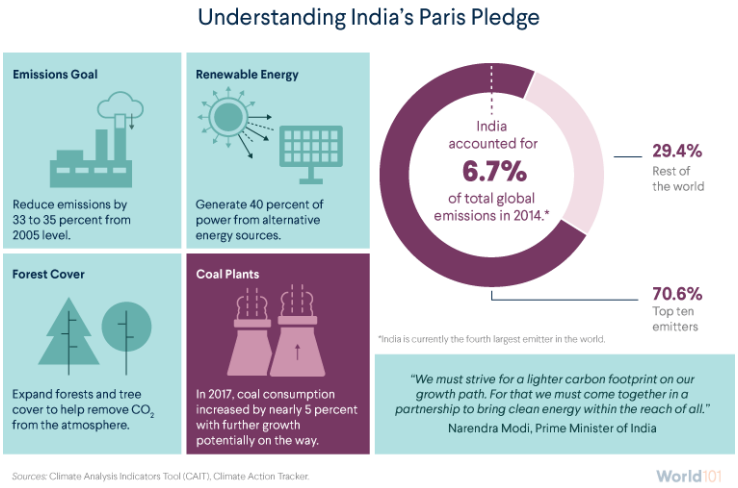


Figure 20- India's Paris Pledge

[4] https://www.g7uk.org/g7-leaders-commit-to-protect-planet-and-turbocharge-global-green-growth/
[5] https://www.livemint.com/news/world/india-asks-g-7-to-fulfill-100-bn-promise-towards-climate-change-11623599833880.html

silos, and called for collective action on climate change. Speaking about India's unwavering commitment to climate action, he mentioned the commitment by Indian Railways to achieve Net Zero Emissions by 2030. He stressed that India is the only G-20 country on track to meet its Paris commitments. India's headline Paris pledge was to reduce the emission intensity of its gross domestic product (GHG emissions per unit GDP) by 33-35 per cent over 2005 levels by 2030. But assessing progress towards this target is tough: Official emissions data, which India communicates to the UNFCCC, is available until 2014 only. Also, data is available only for select years (1994, 2000, 2007, 2010 and 2014), not including the baseline year 2005. India's also committed to ensuring that at least 40% of its installed power capacity would be from renewable energy by 2030. Non-fossil sources accounted for about 37 per cent of India's power capacity, as of September 2019, according to the Central Electricity Authority (CEA). Thus, the larger 2030 target seems like an easy one to achieve.

He also took note of the increasing effectiveness of the two major global initiatives nurtured by India i.e., theCoalition for Disaster Resilient Infrastructure (CDRI) and the International Solar Alliance (ISA). The CDRI is a multi-stakeholder global partnership which aims to promote new and existing infrastructure systems to be resilient to climate and disaster risks in support towards sustainable development. The Prime Minister of India launched CDRI during his speech at the UN Climate Action Summit on 23rd September 2019. The ISA is an alliance of 121 countries initiated by India that are mostly sunshine countries with the aim to work towards efficient use of solar energy to reduce our dependence on fossil fuels. Prime Minister stressed that developing countries need better access to climate finance, and called for a holistic approach towards climate change that covers all dimensions of the problem- mitigation, adaptation, technology transfer, climate financing, equity, climate justice and lifestyle change.

developing countries need better access to climate finance, and called for a holistic approach towards climate change that covers all dimensions of the problem- mitigation, adaptation, technology transfer, climate financing, equity, climate justice and lifestyle change.

Addressing the session 'Building Back Together - Open Societies and Economies' as the lead speaker, PM Modi recalled that democracy and freedom were a part of India's civilization ethos. He stressed the need to ensure that cyberspace remains an avenue for advancing democratic values and not of subverting it. [6]These comments came amid much criticism of India's alleged curbing of free speech. India signedoff on the 'open societies' joint statement by the G7 and guest countries, which encourages values such as "freedom of expression, both online and offline, as a freedom that safeguards democracy and helps people live free from fear and oppression but India pushed to dilute the language related to Internet shutdowns, saying shutdowns are sometimes necessary for maintaining 'law and order' and combating communal violence. The UK had moved to agree to a compromise on the language in the summit document, to refer to only shutdowns that are "politically motivated".

[6] https://www.indiatoday.in/india/story/cyberspace-advance-democratic-values-not-subvert-it-pm-modi-g7-summit-1814396-2021-06-14

"Tackling climate change is now as much a political and communications challenge as it is a scientific or technological one. We have the skills to address it in time, all we need is the global will to do so." said Sir David Attenborough, who was recently appointed as the UK's COP26 People's Advocate, when he addressed leaders in a pre-recorded video. There has been mixed reaction to the announcements made at the G7 summit, many stakeholders have welcomed the commitments made by the G7 in regards to combating climate change but many felt that the G7 leaders failed to make new pledges on climate finance. People now hope that there will be concrete pledges made by the world's biggest economies at the upcoming COP26 in November at Glasgow, which could arguably be the most important UN climate talks since the Paris Agreements.

Knowledge Update

COP 26

The United Nations climate change conference 2021 also known as cop 26 is scheduled to be held in the city of Glasgow from 1-12 November 2021. This will be the 26th conference of the parties to the United Nations framework convention of climate change UNFCCC, Will be the 16 meeting of parties of the Kyoto Protocol (CMP 16) and 3rd meeting of the parties to the Paris agreement (CMA 3).

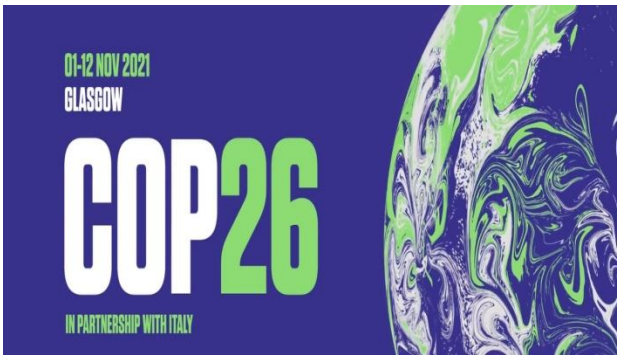


Figure 21 COP 26, Glasgow

2021 being called "make or break year" to in fight against climate change.As per UN reports and Cop 26 can provide a positive opportunity to agree to a global action towards climate mitigation pathways. COP 26 is a crucial opportunity to reflect on what targets have been achieved and more importantly what more needs to be achieved, 5 years on from the Paris Agreement.

The COP 26 was delayed by a year due to the ongoing Covid pandemic. The global economic and social disruption caused by the COVID-19 pandemic has meant that governments around the world are beginning to focus again on how to rebuild their economies. COP26 will play a crucial role in encouraging the road to recovery to be more sustainable as governments begin their efforts to 'build back better'. In addition to the impact of COVID-19 pandemic at the global scale. The year 2020 and 2021 also stood out for successive announcement for stronger action on climate change by nations like China to attain net zero emissions by 2060, South Korea and Japan with their 2050 carbon neutrality goals, and European Union and the UK raising clear GLG reduction targets for 2030 to 68% and 55% respectively against their 1990 levels, with US also coming back to Paris agreement and pitch for more net zero targets and increasing their climate commitments. The positive actions from the developed and powerful nations have also encouraged other G20 countries including India to have more ambitious 2030 action plans to mitigate climate change and promote collective efforts to fight global warming and have a carbon neutral long term sustainable action plan.

Alok Sharma the president-delegate of 26 United Nations climate change conference, in conversation with Narendra Modi and Prakash Javadekar highlighted the Importance of India's in low carbon economy clean energy net zero emission an encouraging influence to promote developing movement of corporate climate action in the supply chain sector along with corporations on climate change mitigation development pathways.

Figure 22COP 26: key issues and agenda, Environmental Protection UK

The conference of party is the core decision making body of UNFCCC and resulted in several important decision and agreements for example cop 3, Kyoto was one of the most important meetings and resulted in adaptation of Kyoto Protocol similarly Paris agreement was adopted in cop 21 in 2015. The last year have seen the adverse effect of pandemic (COVID- 19) which shed light on raising inequity among communities and countries which is aggravated by the impacts of climate change. This provides the stage for India representing the economic aspiration of countries with emerging economy and Increasing word abilities to climate risk. India is already one of the top leaders in green and resilient development with projects like largest public program for energy efficiency lighting adaptation to meet the demand of the growing population as the world's most second populous country while also bearing the largest damages due to climate related extreme events. With the leadership of Prime Minister Narendra Modi this has placed India on decisive stage at upcoming Glasgow event.

The year 2020 and 2021 also stood out for successive announcement for stronger action on climate change by nations like China to attain net zero emissions by 2060 , South Korea and Japan with their 2050 carbon neutrality goals, and European Union and the UK raising clear GLG reduction targets for 2030 to 68% and 55% respectively against their 1990 levels, with US also coming back to Paris agreement and pitch for more net zero targets and increasing their climate commitments.

India have expanded a series of actions for climate mitigation in the last few years with resilient infrastructure, sustainable planning and building green economy an engaging socio-economic aspiration of Indian citizens in the climate action plans therefore creating green jobs while minimizing the consequences of climate disasters on livelihood and economy of the country, thus proving the benefits of investing in climate action. Mr. Sharma identified mitigation, adaptation, finance and collaboration as the four key theme components for cop 26, India's long term mitigation targets like moving towards renewable energy can help the world in this new normal by collaboration of public private finance towards climate and economics mark plans for enabling green development for our emerging economy. India's global action initiatives such as CDRI and international solar alliance, enabled India to become a leader in Green Finance and sustainable initiatives.

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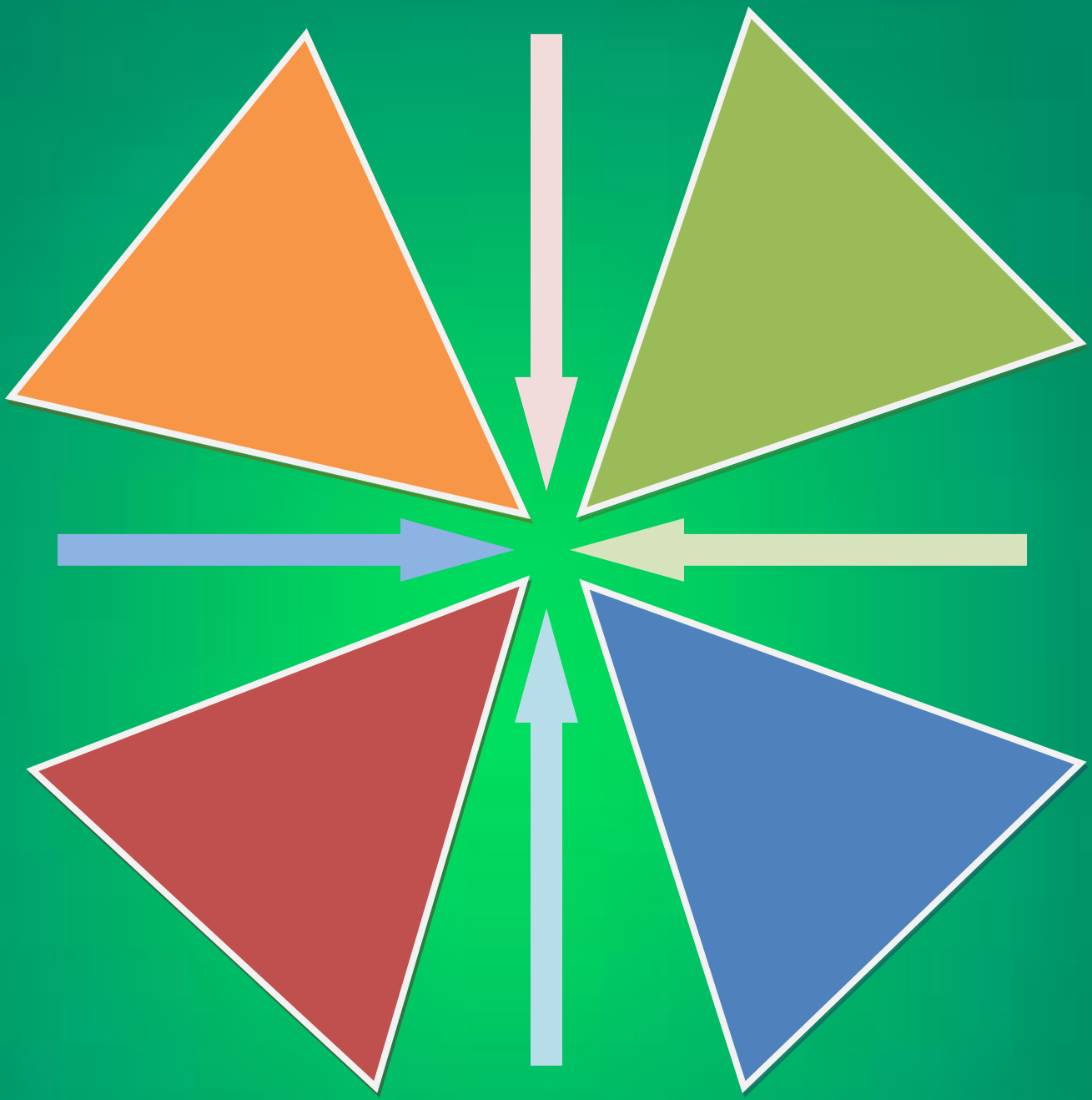

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