

India Water Foundation

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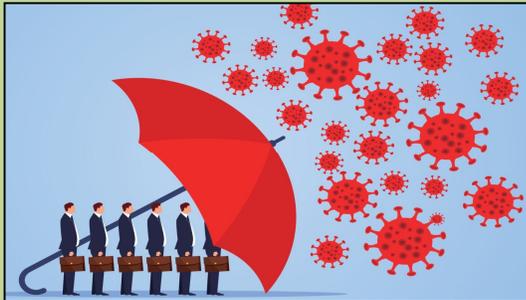
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Meanwhile, Dr Arvind Kumar, President, India Water Foundation called on the Lt Governor and briefed him about their environment-friendly endeavours through knowledge exchange, technology intervention and capacity-building measures and also extended their support for integrated management towards water resources by creation and rejuvenation of water bodies, the revival of traditional surface and groundwater bodies.



Lt Governor meeting Dr Arvind Kumar, President, India Water Foundation



Policy Dialogue on Regional Cooperation for Sustainable Development in South Asia



INDIA @ COP25, MAI



India Water Foundation

**REGUS, Level S-2, American Plaza,
Nehru Place, New Delhi-110019, India
Telefax: +91 11 26349533
www.indiawaterfoundation.org**

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Cross-Cutting Approach:

'The heart of alignment of Integrated National Water Policy'

By Dr. Arvind Kumar, President, India Water Foundation

"As a part of BOOND Dialogue, India Water Foundation and SKOCH organized a panel discussion on 'Integrated National Water Policy' on 11th January 2020, 1500 Hrs to 1700 Hrs to revisit various facets of the Policy as per contemporary perspectives at Casuarina Hall, India Habitat Centre, New Delhi. Around 150 delegates felt their presence made to hear the distinguished panelists presenting nuanced perspectives.

India is poised to play a major role in the community of nations in the twenty-first century. We see imbalances between availability-demand, population expansion, rapid socio-economic growth and climate change bringing water issues to the fore. Water conflicts can arise due to inter-sectoral /inter-states competition & conflicts because sharing limited and essential resource is extremely difficult. Are we not at cross-roads today, giving rise to a series of conundrum involving various socio-economic-ecological perspectives? Our country needs an 'Integrated National Water Policy' plan encompassing rural & urban areas. There is a greater need for awareness of holistic water policy and resolving issues of Competition & Conflict through Cooperation-Convergence-Cohesion approaches. Hence, BOOND Dialogue was the much needed step in the right direction.



The welcome address was given by Mr. Rohan Kochhar, Director, Public Policy, SKOCH Group. We are thankful to the noteworthy wisdom of Dr. M. Ramachandran, Former Secretary, Government of India and Distinguished Fellow, SKOCH Development Foundation having put forth the keynote address and Water & Sanitation Imperatives for India. The distinguished panelists for panel discussion were Mr. Sunil Kumar, Director, Central Water Commission, Dr. Sanjay Bajpai, Head, Technology Mission (Energy, Water & Other), Department of Science and Technology, Mr. G. Asok Kumar, MD, National Water Mission, Dr. Ritesh Kumar, Director-South Asia, Wetlands International, bringing multi-disciplinary views and notable recommendations.

There is a greater need for awareness of holistic water policy and resolving issues of Competition & Conflict through Cooperation – Convergence - Cohesion approaches. Hence, BOOND Dialogue was the much needed step in the right direction.

During panel discussions, we came across highlighting conundrums, perhaps missed before. If Ministry of Jal Shakti is entrusted with water conservation & management, then Ministry of Environment, Forest and Climate Change with conservation & protection of water resources i.e. wetlands, biodiversity, eco-system, but the vision of Jal Shakti is incomplete without significance of MOEFCC's interventions. Also, it was rightly argued that Water as 'Right' is difficult to guarantee. Even after years of planning, cities still do have access to quality water because of abysmal functioning of water boards and non-uniformity. Water connection and waste disposal and its envisaged objectives is still a distant dream given that India is a home to 7.7 lakhs wetlands, sources of water has started disappearing. Comparing 2012 policy, which gave a unified national perspective to take cognizance of water related realms, today, with Jal Shakti Abhiyan focus on water conservation through Jan Andolan and Jal Jeevan Mission provides for 24x7 piped water supply, vision of 2012 policy must move beyond myopic direction and accommodate contemporary interventions.



At the end of discussion, during the question & answer session raised, audience raised issues like rampant water usage in construction activities without any accountability and high Minimum Support Prices for water intensive crops like paddy or sugarcane, preventing them to opt for less other crops, which were succinctly answered by our panel experts.

Having gained a comprehensive view as a moderator, gaps and issues were highlighted which were missed as a part of the discussion intricately. I reiterated the essence of an integrated approach and public movement that our country needs to realize 'Integrated National Water Policy'. At this juncture of the water scenario, if we have to bridge the gap between demand and supply, different technologies like micro or drip irrigation, shifting water use efficiency from 3R to 9R circular principles, strengthening ecosystem services like wetlands, forests etc innovative scientific technologies and information sharing be employed towards water conservation; augmentation along with biodiversity. Water Availability & Quality is a gateway to fulfill the provisions of SDGs like health & well being, no poverty and hunger, clean energy, sustainable cities and climate change which largely remains compartmentalized. The scope of policy must encompass 'From No Poverty to Last mile Delivery'. We have to evolve an integrated approach incorporating

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'Transversal' shift interlinking vertical linkages between water-food-energy nexus with horizontal indicators like Health, Education, Agriculture, Entrepreneurship, Gender etc. An Integrated National Water Policy must be weighed against efficiency, effectiveness and equity if India has to realize its 24x7 water vision and also sustainable development goals 2030, the last 'Decade for Action'. These are there commendations I propose for a holistic implementation of a National Water Policy.

- Since Water is a State subject, States are required to formulate their own water policies, which currently only Meghalaya has formulated State Water Policy 2019 and prepared an operational action plan towards holistic water management. Such successful endeavors must be replicated by other states as well.
- Quality consciousness is significant, so must policy. Leverage innovative tools and technologies to detect and treat emerging contaminants or invasive species in water quality, which poses a tendency to cause endocrine disruption
- River Basin Management bill 2018, in the pipeline must be implemented to resolve "trans-local" water issues along several development assistance initiatives in internationally shared river basins. This must be backed by River basin Authority
- National Water Framework law is the need of the hour to supplement the National Water Policy/guidelines/Act in pursuit of requisite responsibility & accountability.
- Successful implementation of Science, Technology & Innovation policy 2013 needs Convergence & Synergy through capacity building measures, public-policy-participation and global partnerships
- Consideration of water aspects must encompass carrying generic principle of water planning at macro-level but customized with location specific purpose. High prioritization is required towards community pooling under the public trust doctrine towards food security, livelihoods, sustainable development. Communities need to be trained at the level of Panchayats through decentralized approach.
- Competing demands of various departments of Centre/States must be converged. Hence, water from rural-urban, agriculture, industry can be integrated and support principles of circular economy.
- Flood bank conservation holds the key to increase biodiversity in water say, Ganga which shall act as a marker or indicator for monitoring health of water resources.
- Technologies like Artificial Intelligence, Internet of things must be adopted to transform non-resource water towards water use efficiency.
- Research usual has focus on excellence but must focus on relevance of policies & must be put to application. Pilot and upscale such innovative projects.

Feature

CoP-25 and the postponed CoP-26: Where are we heading?

By Shweta Tyagi, Chief Functionary, India Water Foundation

All eyes were set on the UN Climate Change Conference COP-26 in Glasgow in 2020. Let's turn the stride towards 'Action-oriented Ambitions'. The world is currently facing an unprecedented global challenge and countries are rightly focusing their efforts on saving lives and fighting COVID-19", said COP-26 President-Designate and the UK's Secretary of State for Business, Energy and Industrial Strategy Alok Sharma

The postponement would better enable all parties to focus on important climate issues while allowing more preparation time. We have a great chance to shape the 21st century economy in ways that are clean, green, healthy, just, safe and more resilient.

The hash tag Time for Action was the buzz word at COP-25, Madrid and launched various ambitions to accelerate progress towards the Paris goals. With COP-25 being the final summit before the clock ticks over into the deadline year of 2020 Kyoto protocol, countries are announcing more ambitious contributions in 2020". Dr Kumar attended the UNFCCC CoP-25 from 2-13 December 2019 at IFEMA, Madrid, Spain. The conference incorporates the 25th Conference of the Parties to the United Nations Framework Convention on

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Climate Change (UNFCCC) 15th meeting of the parties for the Kyoto Protocol (CMP15), and the second meeting of the parties for the Paris Agreement (CMA2). It reflected unwavering focus on Climate Action and deep introspection over adaptation, mitigation and implementation pathways to realize climate neutrality by 2050.

U.N. Secretary-General António Guterres said, I am disappointed with the results of COP25. The international community lost an important opportunity to show increased ambition on mitigation, adaptation & finance to tackle the climate crisis. Still, his optimistic determination & to work for 2020 to be the year in which all countries commit to do what science tells us is necessary & to achieve carbon neutrality by mid-century and hold

temperature rise to 1.5 C shows a guiding light and a pedal to spin a climate friendly future.

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lifestyles & as a solution to climate change. The beautiful Madrid pavilion featured the charkha (spinning wheel) as a testimony to the Gandhian principles of perseverance, self-sufficiency and sustainability. Spinning the charkha was a symbolic act that provided an opportunity to step back and reflected their consumption choices and reminded the ancient wisdom of need-based consumption that motivates us to draw less from

nature and replenish more. In a climate talks that could boast few triumphs to its name, two small wins were the approval of a new Gender Action Plan and a work plan for the Local Communities and Indigenous Peoples Platform. As COP-25 opened, many viewed, it as an opportunity to be a platform to reduce global emissions, particularly through countries indicating intentions to put forth enhanced climate plans. While the Paris Agreement mandates countries put forth revised plans every five years, COP-25 did not set a deadline for announcing those actions in 2020. Many groups believed that 'No deal was better than a bad deal that would have undermined the Paris Agreement'. Critics have identified that it did not produce a desired increase of ambition from the world & major polluters, nor did diplomats reach consensus, critical sticking points to implement the Paris Agreement. One of the key agenda items was Article 6 of the

Paris Agreement, involving international carbon trading between nations. The previous COP in Poland failed to reach consensus on these trading rules, and after this latest meeting, many contentious issues remained unresolved. Several countries like India Brazil, India, South Korea and China also want to carry over credits earned, also by companies, to meet new climate targets under the Clean Development Mechanism, a trading scheme under Kyoto. The carbon credit system allows countries to reduce their emission reduction targets by accumulating and trading in carbon credits in the international market. The agenda of "carryover" carbon credits from the Kyoto Protocol to meet commitments under the Paris Agreement was at the crossroads and hence non-finalized.



Solidarity and clear ambitions: need of the hour

- Climate action is now counted in years, rather than decades. Climate change needs collective actions. The science on climate has not changed. India can reinforce the importance of science and evidence informing government policies and decision-making through sustainability and green options
- With key emitters such as the US, Australia and Brazil displaying hostility towards international climate action, a lot now hangs on countries like India, China and the EU to upscale the Paris Agreement's momentum.
- It's significant we finalize the "rulebook" of the Paris Agreement – the operating manual needed when it takes effect in 2020 – by settling on rules for carbon markets and other forms of international cooperation under "Article 6" of the deal.

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1. A renewed promise for new global climate finance goal to be made by 2025, which has to be higher than the \$100bn per year promised from 2020-2025.

All hopes stand high for next CoP-26 at 'X' destination. Fingers crossed.

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Cover Story

Saving the lifelines of MSMEs amidst COVID-19

[If there is one sector of the Indian economy that desperately needs immediate assistance amidst COVID-19 crisis, it is the micro, small and medium enterprises. MSMEs caters to the needs of 2/3rd population in Asia-Pacific and predominantly 1/3rd of the Indian population. The small scale industry employs approx 80% of workforce but is poised to support 3 trillion economic markets. MSMEs have the potential to employ more than 50 million people, scaling manufacturing capabilities, curtailing regional disparities, balancing the distribution of wealth, transforming the rural economy.]

Is COVID-19 crisis choking India's MSME sector?

Businesses have been taking a hit due to Covid-19 lockdown. The supply chain has been disrupted, imports are down, and markets are bearish. The MSME segment has perhaps been the

Finance minister Smt. Nirmala Sitharaman recently announced a series of measures for India's industry as part of the government's effort to address the economic impacts of the coronavirus crisis and the resultant three-week nationwide lockdown.

hardest hit and grappling with problems like low liquidity or cash flow and lack of workforce as the daily-wagers have gone to their villages. It's a worry that SMEs business won't pick up even after lockdown. Countries such as US, UK, Germany and China have announced quick relief for small companies. The Prime Minister has announced the creation of an economic task force to suggest some steps to ease the situation. The Finance minister Smt. Nirmala Sitharaman recently announced a

series of measures for India's industry as part of the government's effort to address the economic impacts of the coronavirus crisis and the resultant three-week nationwide lockdown.

While the government's package of Rs 1.7 lakh crore promises some relief for companies under various sectors, none of the measures specifically addressed the needs of the MSME sector. According to the ministry's annual report for 2018-19, there are over 63 million MSME units in India and seen as the backbone of the economy, accounting for a little under half of India's manufacturing output. It is said that "COVID-19 crisis can push around 40 crore informal sector workers in India deeper into poverty, quotes a report by International Labor Organization (ILO)". This is a situation that demands new way of thinking to tackle the crisis. MSMEs have been passing through a hard time due to the Covid-19 pandemic since an extended nationwide lockdown has meant units have been shut for more than a month. This has meant severe shortage of working capital, labour and livelihoods. To make matters worse, the government and big business together owe these small firms nearly Rs six lakh crore, MSME Minister Nitin Gadkari said recently.



A revival package of creating a fund with a corpus of Rs one lakh crore has been spoken but this must be cleared by the Ministry of Finance. As of now, there is only talk of some help for the MSMEs, no actual succor has arrived.

As World Economic Forum defines social entrepreneurship as an organizational expression of social innovation, it is the demonstration of alternative working models as we face the current challenges to our planet, our societies and our economies. The word entrepreneurship is a blessing. On the positive side, it connotes a special, innate ability to sense and act on opportunity, combining out-of-the-box thinking entrepreneurship. Social entrepreneurship can contribute towards employment generation and skill development for jobs and has a long way to be a major driver of improving employment status nationwide. India needs to act now to future-proof the appropriateness of its population to survive such shifts and to prevent dire disruptions to its economy. Let social entrepreneurship lead the way.

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5Trillioneconomy target where Plugging in loopholes through MSME sector, capacity building in Water, Environment, a Win-Win situation shall spearhead a sustainable Eco-System. This is an opportunity for MAKE in India, "citing the example of Japan where the government asked the industries to withdraw their investments from China and move elsewhere.

As the lockdown eases out and focus shifts to increasing economic activities, revival of the sector for large scale employment generation, leading the way for sustained economic growth, becomes imminent. Therefore an incentive to the MSMEs for getting the migrants back to the workplace is needed. As economies across the globe look to curb the unemployment crisis, there are two areas to focus on, one is job creation and second is skilling and re-skilling. On one side economies need a more skilled and job-ready workforce, on the other they need to create relevant job opportunities for this population of employable workforce. While there are many ways in which the unemployment crisis could be dealt with, from constructing relevant policies around skill development to fuelling various sectors with funds, boosting the social entrepreneurship sector or building the social economy is also one of the effective mediums. It can also be highlighted how the Skill India program can serve as a good example to boost social enterprises in the MSME sector through an active private sector participation.

Although larger enterprises drive productivity growth in an economy, even micro and small enterprises become more productive when they work side by side with medium and large enterprises. Creating a policy environment that can eventually move half of our workforce to medium and large enterprises would be the surest way to give the workers standing power against crises.

Special Report:

Indian State of Forests Report 2019

The report is published by the Forest Survey of India (FSI) which has been mandated to assess the forest and tree resources of the country including wall-to-wall forest cover mapping in a biennial cycle. Starting 1987, 16 assessments have been completed so far. ISFR 2019 is the 16th report in the series

In a remarkable feat, forest and tree cover has increased by more than 13 Lakhs hectares in the last four years. Union Minister for Environment, Forest and Climate Change, Shri Prakash Javadekar today released the biennial “India State of Forest Report (ISFR)”, in New Delhi.



Announcing the results the Union Minister said that India is among few countries in the world where forest cover is consistently increasing. Shri Javadekar told that in the present assessment, the

total forest and tree cover of the country is 80.73 million hectare which is 24.56 percent of the geographical area of the country. Total Forest and Tree Cover rises to 24.56 percent of the total geographical area of the Country.

The Environment Minister further said that as compared to the assessment of 2017, there is an increase of 5,188 sq. km in the total forest and tree cover of the country. “Out of this, the increase in the forest cover has been observed as 3,976 sq km and that in tree cover is 1,212 sq. km; Range increase in forest cover has been observed in open forest followed by very dense forest and moderately dense forest and the top three states showing increase in forest cover are Karnataka (1,025 sq. km) followed by Andhra Pradesh (990 sq km) and Kerala (823 sq km).”, said the Minister.

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Some Major Findings

Area-wise Madhya Pradesh has the largest forest cover in the country followed by Arunachal Pradesh, Chhattisgarh, Odisha and Maharashtra. In terms of forest cover as percentage of total geographical area, the top five States are Mizoram (85.41%), Arunachal Pradesh (79.63%), Meghalaya (76.33%), Manipur (75.46%) and Nagaland (75.31%).

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The Mangrove ecosystems are unique & rich in biodiversity and they provide numerous ecological services. Mangrove cover has been separately reported in the ISFR 2019 and the total mangrove cover in the country is 4,975 sq km. An increase of 54 sq Km in mangrove cover has been observed as compared to the previous assessment of 2017. Top three states showing mangrove cover increase are

Gujarat (37 sq km) followed by Maharashtra (16 sq km) and Odisha (8 sq km).

The total growing stock of India's forest and TOF is estimated 5,915.76 million cum of which 4,273.47 million cum is inside the forests and 1,642.29 million cum outside. There is an increase of 93.38 million cum of total growing stock, as compared to the previous assessment. Out of this the increase in growing stock, there is an increase of 55.08 million cum inside the forests and 38.30 million cum outside the forest areas.

The extent of bamboo bearing area of the country has been estimated 16.00 million hectare. There is an increase of 0.32 million hectare in bamboo bearing area as compared to the last assessment of ISFR 2017. The total estimated green weight of bamboo culms is 278 million tonnes, slowly an increase of 88 million tonnes as compared to ISFR 2017.

Under the current assessment the total carbon stock in country's forest is estimated 7,124.6 million tonnes and there an increase of 42.6 million tonnes in the carbon stock of country as compared to the last assessment of 2017. The annual increase in the carbon stock is 21.3 million tonnes, which is 78.2 million tonnes CO₂ eq.

Wetlands within forest areas form important ecosystems and add richness to the biodiversity in forest areas, both of faunal and floral species. Due to importance of wetlands, FSI has carried out an exercise at the national level to identify wetlands of more than 1 ha within RFA. There are 62,466 wetlands covering 3.8% of the area within the RFA/GW of the country.

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Methodology

ISFR 2019 is the 16th report in the series. In tune with the Government of India's vision of Digital India, FSI's assessment is largely based on digital data whether it is satellite data, vector boundaries of districts or data processing of field measurements.

The report provides information on forest cover, tree cover, mangrove cover, growing stock inside and outside the forest areas, carbon stock in India's forests, Forest Types and Biodiversity, Forest Fire monitoring and forest cover in different slopes & altitudes. Special thematic information on forest cover such as hill, tribal districts, and north eastern region has also been given separately in the report.

The biennial assessment of forest cover of the country using mid-resolution Satellite data is based on interpretation of LISS-III data from Indian Remote Sensing satellite data (Resource sat-II) with a spatial resolution of 23.5 meters with the scale of interpretation 1:50,000 to monitor forest cover and forest cover changes at District, State and National level.



on interpretation of LISS-III data from Indian Remote Sensing satellite data (Resource sat-II) with a spatial resolution of 23.5 meters with the scale of interpretation 1:50,000 to monitor forest cover and forest cover changes at District, State and National level. This information provides inputs for various global level inventories, reports such as GHG Inventory, Growing Stock, Carbon Stock, Forest Reference Level (FRL) and international reporting to UNFCCC, targets under CCD, Global Forest Resource Assessment (GFRA) done by FAO

for planning and scientific management of forests.

Satellite data for the entire country was procured from NRSC for the period October, 2017 – February, 2018. The satellite data interpretation is followed by rigorous ground truthing. Information from other collateral sources are also used to improve the accuracy of the interpreted image.

For the first time, Ortho-rectified satellite data has been used for forest cover mapping due to its better positional accuracy as it removes effects of image perspective (tilt) and relief (terrain) and scale distortions in the image to represent features in its true positions for accurate measurement of distances, angles and areas.

FSI, in a first ever attempt has carried out a rapid assessment of biodiversity for all the States and UTs (except two) and for all the sixteen Forest Type Groups as per Champion & Seth Classification (1968). Apart from the number of tree, shrub and herb species as observed in the

survey, Shanon Wiener Index which gives species richness along with the relative abundance, has also been calculated for each forest type groups in each State & UT.

FSI has carried out mapping of forest types of India as per the Champion & Seth Classification (1968), for the first time in the year 2011 based on the base line forest cover data of 2005. A new exercise for refining and updating the forest type maps as per the latest baseline forest cover was initiated in the year 2016 and has been completed in 2019.

Other Highlights

- The accuracy level achieved in the current assessment is the highest amongst all the previous assessments. The accuracy of forest cover classification has been assessed 93.17% .The accuracy of classification between forest and non-forest classes has been assessed 97.20%.
- A study to assess the dependence of the people living in close proximity to forests for their day to day needs like fuel wood, fodder, small timber and bamboo was undertaken by FSI during September 2018 to June 2019. Findings of the study in various States/UTs has been presented in the report.
- The present report also gives information on the fire prone forest areas of different severity classes, mapped in the grids of 5km x 5km based on the frequency of forest fires in the last 14 years that would enable the SFDs to manage and control forest fires effectively in the respective States.
- Non Timber Forest Produce (NTFP) are important source of livelihood for many tribal communities and villagers living in the proximity of forests. A new information has been generated from the national forest inventory data about the top five NTFP species in each State & UT in terms of their availability in forests i.e. relative occurrence. Invasive species pose serious threat to the sustainable management of forests. Analysis of NFI data has been done for determining five major invasive species in each State & UT and also an estimate of area affected by them.
- The information given in the report would provide valuable information for policy, planning and sustainable management of forest and tree resources in the country.

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Critical analysis

At the heart of SDGs, lies the pivotal Transversality'

[Dr. Arvind Kumar was as an expert at the 'Review of progress and achievements in five years of the adoption of the 2030 Agenda' session at Third South Asia Forum on the Sustainable Development Goals, jointly organized by UNESCAP and Government of Bangladesh on December 08-09, 2019. This platform discussed key challenges and opportunities of the 2030 Agenda for Sustainable Development in South Asia, which indeed witnessed a remarkable aura. He met vibrant multi-stakeholders from Governments, think-tanks, civil society, academia. Etc]



'From 1990's India has transitioned to open economy and achieving global strides, but at the same time have also become vulnerable to vagaries of climate change and differential access to common resources. Transitioning from MDGs to SDGs, India is still faced with daunting problems like persistent pockets of poverty and hunger, rapid urbanization inequality and environmental

degradation. To reflect on how communities can be made more resilient while confronting these challenges, India must forge an integrated approach based on 'Mutual trust and Shared Priorities'.

He argued that as countries of South Asian Least Developed Countries Bhutan, Bangladesh and Nepal are graduating to Developing Country status, India can play a role of 'Key Facilitator' among the South Asian countries through expanded transversal Economic Cooperation, ICT, Environment, promote people-to people contacts and develop scientific and cultural exchange etc. A proactive stance of India shall bridge the deficit between SAARC and BIMSTECH.

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It is known Climate change is one of the main driving force affecting demographic, economic, environmental, social and technological forces. Warmer temperatures are creating patterns of deeper droughts, land degradation and desertification, creating a stress on food security, massive stress on water stress, increasing carbon emissions and in efficient resource management. All this shows a trend towards a grim situation. This is resulting in the decline of the world's finest available 'natural capital' and is

leading to cascading set of consequences, including impaired food production, loss of livelihood



security, large-scale migration and increased economic and geopolitical tensions, moving beyond national borders.

With years into implementation of the SDGs, the world is still faced with daunting problems like conflict, inequality, persistent pockets of poverty and hunger, rapid urbanization and environmental degradation. It is imperative for policymakers in every country to reflect on how societies can be

made more resilient while confronting these challenges, because transitioning towards more sustainable and resilient societies also requires an integrated approach that recognizes that these challenges—and their solutions—are interrelated.

For instance for the institutionalization and convergence of the SDGs, India has set a precedent by establishing, 'SDG Index, the world's first sub-national tracker of SDGs. In India, the SDGs are part of the national, state and even at local grass root level and also features in development programmes like Polluter Pay principle for Ganga management. India has made a commitment to reduce the emissions intensity of its GDP by 20-25% from its 2005 levels by 2020 and by 33-35% by 2030. It's implementation shall definitely help to achieve overall development plans and reduce future economic, environmental and social costs.

We all know water and ocean resources are trans-boundary in nature. There's need for promising blue print towards climate change adaptation and building climate resilience. Climate resilience will be strengthened through healthy ecosystem services that rely on well-functioning river basins, effective water management in reducing vulnerability. It is re-emphasized that problems and challenges are often conceived in isolation, but solutions to the major solutions must be seen through an integrated approach. Links between Environmental commons and climate change have for a long time been ignored in international climate summits. But now, it has started seeking a central stage in regional platforms as well. What is needed now is 'Call for Action' transitioning from Conflict to Cooperation & Cohesion' as at UNFCCC COP-25 Madrid. What he observed is 'The journey towards realizing sustainable development is affordable if countries work together through development partnerships and regional cooperation'.

India must pursue a backchannel communication of Track1.5 diplomacy, serving weapon of Convergence towards a broad, trans-disciplinary coordination among South Asian stakeholders to build 'Resilient South Asia'. Alas, it is high time India must pledge for 'Call for Action' transitioning from Conflict to Cooperation & Cohesion'.

In India, the SDGs are part of the national, state and even at local grass root level and also features in development programmes like Polluter Pay principle for Ganga management. India has made a commitment to reduce the emissions intensity of its GDP by 20-25% from its 2005 levels by 2020 and by 33-35% by 2030.

Deep Perspectives:

Adaptation!! The Vanguard of SDGs

[As a panelist on 'Regional Cooperation for Addressing Disaster Risks and Building Climate Resilience' at the Policy Dialogue on Regional Cooperation for Sustainable Development in South Asia organized by BISS, Dhaka on December 10 2019, Dr. Arvind Kumar 're-emphasized that Adaptation is a global challenge that requires local / regional solutions'.]

If we talk about South Asia, it is particularly, prone to weather-related disasters including floods,



cyclones, landslides, droughts and heat waves, etc. The frequency and severity of such events are expected to increase significantly with climate change. Besides weather uncertainties, several other factors interact in human-natural systems, such as unplanned urbanization, high rates

of population growth, persistent poverty, loss of critical environmental services and land degradation. This is a real challenge, which we all agree upon.

Broadly speaking, water is climate change. Its reduced access is leading to cascading set of consequences, including impaired food production, the loss of livelihood security, large-scale migration and increased economic and geopolitical tensions, moving beyond national borders. Once resilience to water-induced calamities and environment-induced vagaries is enhanced, attainment of other goals will be easier because both water and climate changes are at the roots of bulk of the calamities.

As we are transitioning from pre-Kyoto Protocol era to post-2020 Paris Agreement being ratified and Agenda for Sustainable Development 2030 on the roll, enlightening communities and stakeholders of integrating SDGs towards Disaster Risk Reduction is the need of the hour.

As we are transitioning from pre-Kyoto Protocol era to post-2020 Paris Agreement being ratified and Agenda for Sustainable Development 2030 on the roll, enlightening communities and stakeholders of integrating SDGs towards Disaster Risk Reduction is the need of the hour. India must build a credible deterrence towards managing risks and forge cooperation towards Climate Resilience through 'Putting People First' approach. India must take the centre stage towards Regional cooperation among South Asian countries technology interventions, sharing best



practices finance, robust data-sharing, etc. This shall go a long way to anticipate and manage the impacts of climate change & natural disasters.

Climate change has emerged as a global phenomenon entailing extensive consequences and is deemed as a ‘threat multiplier’ entailing the potential of amplifying global risks. Successive disasters have

compelled us to turn our attention to the million-dollar question: Has climate crisis hit home? Asia-Pacific related Disaster Report 2019’ has designated 4 vulnerable ‘hotspots’ in the Asia Pacific which includes trans-boundary river basins, Pacific Ring of Fire and the Pacific small island developing states and lastly sand and dust stormcorridors.

The adoption of the Sustainable Development Goals (SDGs) and the transition to a low carbon economy has unleashed a series of challenges. It is said Implementation of SDGs require USD 90 trillion investment till 2030, with India alone requiring USD 2.5 trillion to achieve its committed climate targets by 2030 so definitely there is a need for adequate finances as well to strengthen the statistical capacities at regional level. Green finance must be prominently stressed to support strategies for SDGs necessitated to raise money for low carbon societies and influence to adopt more sustainable business practices. Let’s understand if such climate-related disasters are addressed, the global South could have 57% of the global GDP by 2060 which means ample prospects and shared priorities.

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As we are specifically discussing Disaster Management which is multidisciplinary and has complexity of information sharing and reporting. It is common experience that information is not available on real/near time to the community and response players. It takes long time to obtain the information and lot more time to integrate and generate information/reports/advisories. We have to utilize the IPCC data for a robust data-sharing

like Hazard mapping and vulnerability studies & disaster proof practices among countries will be helpful in filling up these existing gaps.



Similarly, various countries present here have surely proposed robust initiatives, best practices to tackle Disasters. What we need now is Convergence & Integration of such good initiatives as we all agree that ‘South Asia is a family’ and so the need of the hour is to push ourselves beyond a comfort zone and work in tandem either through bilateral or regional engagements. While harnessing the scientific temper at grassroots level, it is the civil society which can serve as a proactive catalyst between the

government and the people to ensure effective implementation of the climate related initiatives. As we are transitioning from pre-Kyoto Protocol era to post 2020 Paris Agreement being ratified and Agenda for Sustainable Development 2030 on the roll, it becomes necessary to enlighten communities of how SDGs is significant. For this ‘Moving from Global to Regionalization of SDGs’ is of significance which can only be achieved by Cooperation, Collaboration and Convergence and India has already laid a precedent through ‘Shared objectives Shared prosperity’. Having said that let us not forget it is essential to adopt a broad, trans-disciplinary perspective to tackle present day Disaster Risks and Build Climate Resilience, ‘Putting People First’ approach.



Discussion-in-Depth

Ushering wealth from waste water

Inger Andersen, Executive Director of UN Environment remarked that 'The green economy offers tremendous opportunity for businesses, financial institutions, governments, and people – it is the economy of the future'

In the wake of industrial development gathering momentum, demand for industrial water is mounting. In-fact, it is witnessed that industrial sector consumes an average of 6 per cent of freshwater per annum & this demand is likely to surge in view of expansion of industrial base in the country.

But, why are we facing this vulnerable situation?

We are also witnessing an extensive increase in water use and wastewater disposal in the absence of clear environmental policies, fragmented responsibility and control over water use for industrial purposes. Realizing the targets of SDG 6.4 which calls for water-use efficiency is yet to be incorporated altogether. Since we are in the 'Last Decade of SDGs' to realize 2030 agenda, efforts are slowly paced.

Challenges also relate to sustainable, equitable and efficient management of India's water resources which are yet to be managed. Increasing water footprint through unsustainable extraction of ground water, Contamination of water due to effluent discharge, ground water recharge surpasses its extraction limit. We are also witnessing deterioration in surface water quality due to rising trend of BOD and rising trend of contamination. Contamination of water due to effluent discharge, ground water recharge surpasses its extraction limit.

- Water scarcity problems are growing in terms of both intensity and extent. In the wake of water scarcity, domestic, agriculture, and industry where water needs are pitted against each other. The conflicts are likely to grow not only between sectors, but also within sectors.

All these are major hindrances to developing sustainable water management strategies.

Witnessing a 'compartmentalized approach' and persistent challenges

- Technology poses its own challenges. Advancements in water technology aimed at evolving technically feasible, economically viable, environmentally and ecologically sound and socially acceptable solutions in water management are not occurring.
- We have adopted piece-meal approaches to solve sectoral problems, and seriously lack capabilities to promote efficient water use and pollution abatement, to name a few.
- Most importantly, the agencies have slowly responded to the conflicting needs and interests of industry which again is a problem of integration & convergence.

Have we ever thought about an ‘integrated approach towards a green economy where industries can play a large role?’

“Dr Arvind Kumar was an expert panelist for the plenary session on ‘Stakeholders’ perspectives towards enhancing Water Use Efficiency in Industries’ during a workshop organized on ‘Increasing Water Use Efficiency in Industries’ dated 5 March 2020 by National Water Mission, Ministry of Jal Shakti, Government of India. He brilliantly argued that in the wake of water scarcity, domestic, agriculture, and industry where water needs are pitted against each other. The conflicts are likely to grow not only between sectors, but also within sectors”.

Excerpts from the discussion:

During the International Conference on Water Use Efficiency, 2011, it was highlighted that ‘Industrial sector is open to new and innovative ideas & with involvement and cooperation of all stakeholders, the objectives of water-

The water footprint of the Indian consumer covers 93 per cent agricultural products and 2 per cent industrial products while 2.5 per cent of the water footprint lies abroad”.

use efficiency can be achieved. This helped in promoting inter-sectoral convergence between water industry & centre-state synergy in water sector. This conference indeed spurred the provincial government to frame water laws for the first time. Also, during a Regional Workshop on Water Quality Monitoring in 2012, challenges discussed in the workshop ranged from capacity building, lack of reliable availability of data and also infrastructure. There was a clear call for global and regional collaborative water quality monitoring. Further, in a conference in Indore, for the first time principles of circular economy ‘3R’ were discussed to tackle water pollution and remarkably even today we are talking the same, except that 3R has shifted to 12 R.

The water footprint of the Indian consumer covers 93 per cent agricultural products and 2 per cent industrial products while 2.5 per cent of the water footprint lies abroad”.

Today, the industrial water use efficiency needs a contemporary approach for which we need

- Affirmative action’s from governments to increase water use efficiency bring Green Industrial policy, mainly of the demand side such as improving industrial efficiency by selecting correct technologies, green practices etc
- Shift towards decentralized system of water-re-use, again calling for circular principles
- As far financial arrangement is concerned, there must be cost sharing towards technologies for which we can leverage private partnerships, eco-friendly technologies should be



developed/shared by partnering both private and public sectors, which share the risks between the two

- Water management plans must be part of an integrated approach that examines how change in water use will impact all other areas of operation. Water conservation involving both distinct areas i.e. technical and human should be properly addressed. The solution, amongst various other solutions, lies in chalking out a comprehensive Industrial Water Policy, which should address industrial water related issues in a holistic manner and it should be followed by the establishment of a national nodal agency to coordinate with water related issues with other departments/agencies in a mode of convergence.

Case study:

(The report titled, 'From Waste to Resources: Shifting Paradigms for Smarter Wastewater Interventions in Latin America and the Caribbean,' reflects on the 'Wastewater: From Waste to Resource' initiative implemented in the Latin America and the Caribbean (LAC) region. The report states that the challenges faced in the LAC region "are not unique" and best practices from the region can help promote a paradigm shift towards a circular economy.

Lessons learned from the LAC region's experience suggest four key actions to achieve a paradigm shift in the wastewater sector.

- First, the report recommends planning wastewater treatment within the river basin to maximize benefits, improve efficiency and resource allocation, and engage stakeholders.
- Second, the report calls for moving from wastewater treatment plants towards water resource recovery facilities. The report argues countries need to "recognize the real value of wastewater and the potential resources that can be extracted from it", including clean water, energy and nutrients.
- Third, the report proposes implementing innovative financing and business models, including efficient subsidies.
- Fourth, the report suggests implementing necessary policy, institutional and regulatory frameworks to facilitate a shift towards reuse and resource recovery and a circular economy

Lastly, as we all know that Industry constitutes a major component of economic growth as well as it also serves as a big contributor to Greenhouse gas (GHG) emissions, air pollution, water contamination and soil degradation, the focus automatically shifts to the urgent need for 'Green industrial policy' that emphasizes on de-carbonizing the industry and improving environment resilience. It shall be a win-win situation for the industry and our collective fight against CLIMATE BREAKDOWN. Wastewater "should not be considered a 'waste' anymore, but a resource."

Overview

Wetlands in harmony with biodiversity!!

With the theme "Strengthening Actions for Nature to Achieve the SDGs" for the year 2020 at United Nations Environment Assembly(UNEA5), these guidelines become significant, notification of Wetlands (Conservation and Management) Rules, 2017, guidelines to support state governments to implement wetland rules have become signified.



World Wetlands Day on 2nd February 2020, with theme 'Wetlands & Biodiversity' has heightened significance of wetlands and its association with biodiversity, natural resources like air, water, ground water & surface water recharge, flora-fauna-avian habitat &; livelihood security. We have 30% land-based carbon stored in peat land; one billion people depend on wetlands for their livelihoods & wetlands provide \$47 trillion in essential services annually. Given that India has approx 7.57

lakh wetlands covering nearly 4.7% of India's geographical area, Wetlands are repository of 'natural environmental capital' to enhance socio-economic development and not just concrete economic growth.

On World Wetlands Day on 2nd February 2020, IWF initiated "public outreach-public awareness-public movement", to gauge key contemporary scenarios, challenges around wetlands visiting Siliserh Lake (Alwar) Rajasthan. Sending a strong appeal to strengthen this public movement towards wetland conservation Wetlands, people shared their good practices & initiatives with us.

According to The Ramsar Convention, "wetlands are areas of marsh, fen, peat land or water, whether natural or artificial, permanent or temporary, with water that is static or flowing, fresh, brackish or salt, including areas of marine water the depth of which at low tide does not exceed six meters." Fish ponds, rice paddies, stabilization ponds and saltpans are human-made wetland. Wetlands are vital for humans, for other ecosystems and for our climate, providing essential ecosystem services such as water regulation, including flood control and water purification. Wetland biodiversity matters for our

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health, our food supply, for tourism and for jobs. Wetlands also absorb carbon dioxide so help slow global heating and reduce pollution, hence have often been referred to as the “Kidneys of the Earth”.

Though they cover only around 6 per cent of the Earth’s land surface, 40 per cent of all plant and animal species live or breed in wetlands. The worrying thing is that they are disappearing three times faster than forests due to human activities and global heating. There exists vulnerability in our global systems when it comes to environmental, health and economic issues. As the crisis continues, there is an increasing recognition of how

multiple economic, social and institutional drivers exacerbate environment risks, including global heating, resilience and human health. “Extreme precipitation and flooding cause large-scale impacts on people, and are further intensified by rapid urbanization, infrastructure expansion, and large numbers of people residing in informal settlements in destitute conditions,” says the study Impacts of Natural Disasters on Households and Small Businesses in India. Wetlands form an important part of nature. But nature is declining globally at rates unprecedented in human history—and the rate of species extinctions is accelerating, with grave impacts on people around the world now likely, according to a landmark report by the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services. Thanks to reduced air and noise pollution in the light of COVID-19, the

Ecosystem-based Disaster Risk Reduction (Eco-DRR) is an approach where the regulatory functions of ecosystems (such as forests, wetlands and mangroves) are systematically harnessed to mitigate, prevent, or buffer against disasters.



wetlands in and around the city have begun returning to their glory so much that a number of rare bird species, including beautiful Night Herons, have found their habitats in Yamuna Biodiversity Park. Less noise/air pollution due to lockdown has given a security to birds; security of life and food.

Ecosystem-based Disaster Risk Reduction (Eco-DRR) is an approach where the regulatory functions of ecosystems (such as forests, wetlands and mangroves) are systematically harnessed to mitigate, prevent, or buffer against disasters. Eco-DRR recognizes that ecosystems can provide disaster risk reduction services as well as offer other ecosystem services of productive and cultural value, which also contribute to building local resilience to disasters and climate change. UN Decade on Ecosystem Restoration 2021–2030 is led by the United Nations Environment Programme, the Food and Agriculture Organization of the United Nations and partners. Let’s help to shape the decade.

Knowledge Update:

Nature based solutions for the Super Year 2020

“Societies face immense challenges including biodiversity loss, food and water security, human health, disaster risk and climate change, and solutions based on nature have been too frequently neglected” said Angela Andrade, Chair of IUCN’s Commission on Ecosystem Management, the scientific expert group that provided the standard’s technical foundation”.



What are nature-based solutions and why do they matter?

The International Union for Conservation of Nature (IUCN) defines nature-based solutions as “actions to protect, sustainably manage, and restore natural or modified ecosystems that address societal challenges effectively and adaptively, simultaneously providing human well-being and biodiversity benefits. More generally, ‘nature-based solutions’ is a term that can be used to describe alternative and non-traditional approaches to environmental issues, like flooding, water scarcity, or soil erosion, by harnessing natural capital. Although nature-based solutions were featured as one of six priority Action Portfolios by Secretary General of the United Nations at the 2019 UN Climate Action Summit, gray infrastructure is still the traditional standard.

Whilst the traditional method in infrastructural development is ‘gray’ – involving constructed and artificial structures – nature-based solutions encompass natural, green, and integrated infrastructure, which combines elements of all three.

Governments are quite rightly focusing on emergency response measures to slow the spread of the virus, save as many lives as possible and take whatever steps they can to relieve the economic hardship people in every country are already facing.

We don’t yet know how much longer it will be until the virus is brought to heel and how much worse things will get until that point. That is the reality we are all trying to come to terms with. For many of us in the climate and environmental communities, we are simultaneously trying to come to terms with the fact that the landscape for restoring balance to the world’s ecosystems has fundamentally changed. While simultaneous recovery to COVID-19, we can lead in environmental action and countries can take concrete measures to balance environmental and commercial interests. Humanity has an unprecedented opportunity to transition to a carbon-neutral and nature-positive global economy. Healthy ecosystems can support economic growth, societal wellbeing and climate stabilization



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Research shows that these solutions contribute to reduce the vulnerabilities to climate change impacts and can provide up to 37% of the mitigation needed between now and 2030 to meet the 2°C Paris Agreement climate change goal.

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The unfolding COVID-19 pandemic is causing business and government leaders to make difficult decisions. We are at a turning point where we cannot go back to business-as-usual and instead must use this opportunity to transition to a carbon-neutral and nature-positive global economy. With growing global concern over the biodiversity and climate crises, the importance of nature-based solutions has been widely recognized from the United Nations and national governments to the private sector and civil society. Nature-based solutions are interventions to protect, sustainably manage and restore natural and modified ecosystems in ways that address societal challenges, such as climate change, food security land degradation and biodiversity loss.

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“This new global standard will enable both the public and private sectors to consistently and reliably scale-up nature-based solutions to help society transition to a low carbon future,” said Stewart Maginnis, Global Director of IUCN’s Nature-based Solutions Group, whose team facilitated the standard’s development. “This is the result of a two-year rigorous and inclusive consultation among scientists, practitioners and communities with inputs from over 100 countries.”



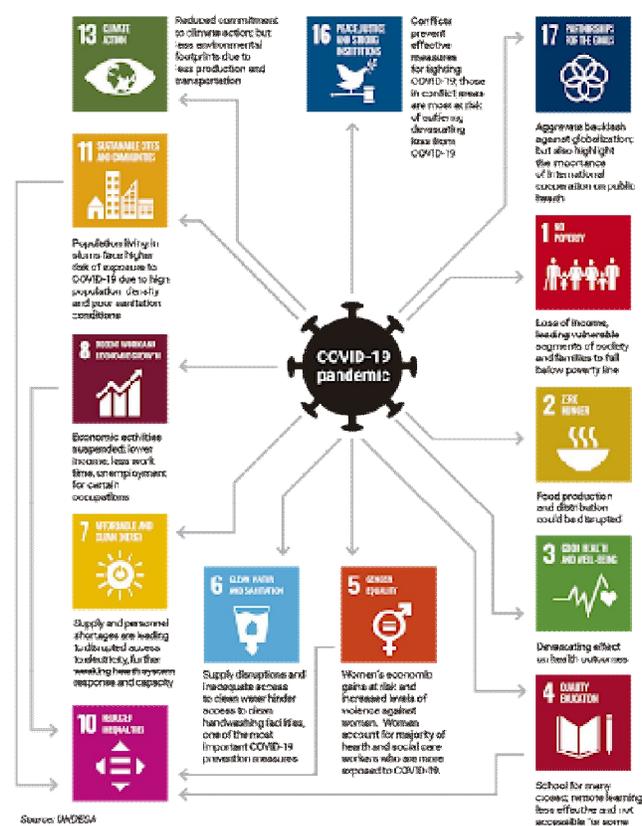
Nature is our forgotten ally in providing for society’s needs, such as water and protection from disasters as well as climate change. Nature-based solutions deserve much deeper consideration as governments decide how to design their economic responses to the coronavirus. Natural ecosystems make communities more resilient to the growing impacts of a warming climate and they support and create jobs, particularly in more rural and vulnerable communities. Today, the environment is economy. If we protect the environment, we save our economy.

Scenario

The underestimated conundrum between SDGs and COVID-19

'A study published in the medical journal the Lancet predicts 500,000 adult deaths caused by climate change by 2050'.

The COVID-19 pandemic and subsequent policies are affecting persons with disabilities in grave ways, including greater risk of contracting COVID-19, increased barriers in accessing healthcare services, disruptions in needed services, and lack of access to public information and healthcare communication messages. For the last four years, governments have tried to translate the SDGs into national policies with limited outcomes. But moving forward, the SDGs need to be re-focused into feasible and inclusive life-saving actions that can be and are carried out for people everywhere. The SDGs need to be re-focused into feasible and inclusive life-saving actions that can be and are carried out for people everywhere.



persons with disabilities, just as the Goals emerged from stories at the grassroots level around the globe

How COVID-19 might help us win the fight against climate change?

What happens over the coming months could go one of two ways.

There is a risk that as the immediate crisis wanes and its economic consequences become clearer, we cast aside longer-term aspirations in pursuit of short-term easy fixes, many of which would have adverse environmental consequences. These include rolling back environmental standards, stimulating the economy by subsidizing fossil-fuel-heavy industries and focusing on making more things, rather than using them better. Climate change similarly poses a major threat to human lives and urgently requires a comprehensive response. If the pandemic teaches us to acknowledge our vulnerability to high-impact shocks such as pandemics and climate-related disasters, we will be infinitely better placed to prepare for them.

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UNESCO estimates that some 1.25 billion students are affected, posing a serious challenge to the attainment of SDGs Goal 4 (Quality Education); and the International Labor Organization (ILO) estimates some 25 million people could lose their jobs, with those in informal employment suffering most from lack of social protection. Unfortunately, these are just the tip of the iceberg.

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Sadly, this pandemic hit at a time when the SDGs were gaining traction and a significant number of countries were making good progress. As the world is seized with containing the spread of the virus and addressing its negative impacts, the reality is that countries are resetting their priorities, and reallocating resources to deal with the pandemic. This certainly is the right thing to do because the priority now is to save lives, and we must do so at all costs.

Emerging evidence of the broader impact of the crisis on our quest to achieve the SDGs is troubling. UNESCO estimates that some 1.25 billion students are affected, posing a serious challenge to the attainment of SDGs Goal 4 (Quality Education); and the International Labour Organization (ILO) estimates some 25 million people could lose their jobs, with those in informal employment suffering most from lack of social protection.

Unfortunately, these are just the tip of the iceberg.

Crucially, in many parts of the world, the pandemic and its effects are exacerbated by the crisis in achieving clean water and sanitation targets (SDG 6), weak economic growth and the absence of decent work (SDG 8), pervasive inequalities (SDG 10), and above all, entrenched poverty (SDG 1) and food insecurity (SDG 2). The World Bank estimates the crisis will push some 11 million people into poverty. That is why we must all support the call by the United Nations to scale up the immediate health response to suppress the transmission of the virus, end the pandemic and focus on people particularly, women, youth, low-wage workers, small and medium enterprises, the informal sector and vulnerable groups already at risk. Working together we can save lives, restore livelihoods and bring the global economy back on track



Listen to global perspectives

The truly global nature of the COVID-19 crisis is forcing us to recognize that we are all in this together. For example, China sending help to Italy represents more than just shifts in the geopolitical landscape; it also shows an overcoming of the sense of “other,” and an acknowledgement that events in one part of the world can affect us all. The jury is out on whether COVID-19 will prompt the world to choose the route of national isolation or global solidarity, but a growing understanding that we are inherently connected to people in vastly different geographies and circumstances can help build momentum for strong climate action. In these crucial times, is shift resources away from crucial SDG actions. The response to the pandemic cannot be de-linked from the SDGs. Indeed, achieving the SDGs will put us on a firm path to dealing with global health

risks and emerging infectious diseases. Achieving SDG 3 (Good Health) will mean strengthening the capacity of countries for early warning, risk reduction and management of national and global health risks. This pandemic has exposed the crisis in global health systems. And while it is severely undermining prospects for achieving SDG 3 by 2030, it is also having far-reaching effects on all other SDGs.

Make people the top priority

The response to COVID-19 has seen the plight of patients, medical staff and other vulnerable groups skyrocket to the top of the agenda – of individuals, businesses and governments alike. Many individuals are re-arranging their lives to practice social distancing, offering elderly neighbors help with their chores and volunteering in health facilities and food banks, showing the power that can be unleashed when we are united behind a common cause.



Businesses are re-directing their production lines to provide medical and hygiene supplies, offering free access to their online platforms and supporting their employees in a number of ways, such as increasing their wages, highlighting how agile they can be in responding to critical needs. And governments are committing trillions to help those affected by coronavirus, in what looks like a “race to the top” in providing the most comprehensive support to their citizens.

All this shows that a large-scale response to a global crisis is possible. We need to harness this wave of compassion and pro-activity to protect vulnerable people in all contexts, including those most exposed to climate impacts.

Make a cultural shift

Many aspects of the COVID-19 response are similar to the types of changes we need as part of a comprehensive climate-change response. What is interesting is that many necessary shifts just require a change in culture. For example, neither the surge in cycling and expansion of bike lanes in Bogota as citizens avoid public transport, nor the coronavirus work-from-home experiment, have required any new technology, but instead have relied on new thinking. It is clear that we have many of the tools to make major advances in addressing climate change; what we need now is the political will to apply them.

While we must scale up the immediate health response to curb the spread of COVID-19, the response to the pandemic cannot be de-linked from the SDG. As the world responds to this pandemic and seeks to restore global prosperity, we must focus on addressing underlying factors through the Sustainable Development Goals. We must not slow our efforts, even amid this crisis. While some SDG gains have been eroded, this should not deflate our energy. They should rather spur us to accelerate and deepen our efforts during this Decade of Action to ‘recover better’, and build a healthier, safer, fairer and a more prosperous world.

Ganga Grams - A 'Transversal Perspective'

Hastinapur is a Nagar Panchayat in district of Meerut and Parikshitgarh is a Nagar Panchayat situated in Mawana tehsil of Meerut district, Uttar Pradesh.

Highlighting the commitment of the Government towards preserving the pristine glory of river Ganga, the vision of 'Ganga Grams' under 'Namami Ganga' is an integrated approach for holistic development of villages situated on the banks of River Ganga with active participation of various stakeholders, especially the grass root communities.

India Water Foundation, beginning from 5th October 2019 took Ganga Gram tour to strive to facilitate a shift from unsustainable to sustainable practices & improve the health and quality of life located in 9 villages of the Ganga river basin through improved sanitation practices, shared inputs to improve the quality of drinking water, improve health aspects, reduce waste and storm water runoff flowing from the 9 villages into the river Ganga. In our five trips comprising of India Water Foundation President Dr. Arvind Kumar, Chief Functionary Shweta Tyagi and Chief technical Advisor Sh. R S Tyagi and officials from the district administration in a working span of one month towards holistic understanding of these Ganga Gram villages in the blocks of Hastinapur and Parikshitgarh which includes Dudhlikhadar, Jalalpur, Maanpur, Rathourakala, Sirjipur, Nangala Gusai, Neemka, Samaspur, Sikandarpur..

Before our Pre-visit to these blocks, we undertook assessment of few studies/data/statistics for our understanding of these villages. We also studied the mandate of developing Ganga Gram (Model Village) i.e.-

- Make the village open defecation free by promote better sanitation practices in the villages through IEC activities
- Abate direct discharge of untreated liquid wastewater from such villages into river Ganga
- Facilitate adequate infrastructure for crematoria
- Develop proper solid waste disposal facilities in order to avoid any pollution to river Ganga
- Promoting brand "Ganga" through tourism.

Observations:

IWF witnessed certain barriers and root causes to inadequate sanitation management in the 9 rural areas:

- Low levels of awareness and capacity levels of poor people
- Lack of understanding of Water linkages with Health, Education, Skills etc
- Poor access to adequate means of livelihoods
- Inadequate focus on establishing support structures for community-managed services
- Inappropriate design of rural sanitation interventions
- Poor access to appropriate technology/good practices

Based on the requirements of the villages and highlighting the commitment of the Government



towards the preservation of Ganga, India Water Foundation looked forward to bring attitudinal change during its visits and argued that Water is the blue thread that can connect the aspirations of health, education, agriculture, inclusion etc. We envisaged extensive communication with various stakeholders, understand and conclude the success/failure of building capacity of people to conserve water resources; or inadequacy of government initiatives towards holistic understanding of the intertwined issues and develop wider understanding on

environment conservation; sanitation and hygiene, water management, etc. Based on our learnings in North -Eastern states of Meghalaya, Sikkim and 'Aspirational Districts of Uttar Pradesh & Uttarakhand where our focus has been on creation and raising the capacity building for communities linking indicators (Education, Health, Basic Infrastructure, Agriculture & Water Resources, Skill Development and Financial Inclusion). We suggested Building Soft Capacity because prior to implementation of any rejuvenation plan, it is essential to change the mind-set of the people. The Foundation suggested capacity building measures in water conservation, judicious use of water, recycle the wastewater for reuse and rainwater harvesting etc. We are sure that these designated 'Adarsh Grams', if implemented will certainly change the current state of affairs and help promote a brand 'Ganga Gram', fulfilling the aspirations under 'Clean Ganga by 2022'.



Miscellaneous Events:

1st November 2019

President India Water Foundation Dr. Arvind Kumar had an audience on 1 November 2019 with Dr. Harshvardhan, Hon'ble Minister for Science and Technology, Health and Family Welfare and Earth Sciences. While discussion Dr. Kumar updated him on the rational outcomes of the recent World Water Council Governors meet and highlighted the creation of Taskforce on horizontal inter-linkage of water with education, health etc which IWF is embarking since inception. Dr. Kumar also congratulated Dr. Harsh Vardhan's endeavor of twenty five years of pulse polio and also appreciated his ongoing proactive engagements, appealed to undertake similar zeal for water & health, as they are interlinked for which he assured cooperation for our dedicated endeavors.



5th November 2019

Dr. Arvind Kumar attended the 2nd meeting of the National Wetlands Committee on 5th Nov 2019 chaired by Hon'ble secretary Sh. C. K. Mishra, Ministry of Environment, Forests and climate change today at the Kaveri hall. Prithvi wing, ministry of environment forest and climate change. The discussions were fruitful to the realization of the guidelines of wetland. The recent Guidelines for implementing Wetland (Conservation and Management) Rules 2017, by MoEF&CC, Government of India is attached for your kind perusal. (<http://moef.gov.in/wp-content/uploads/2020/01/final-version-and-printed-wetland-guidelines-rules-2017-03.01.20.pdf>).



27th November 2019

With a view to provide impetus to economy and speedy realization of SDGs of which MSMEs hold key to, Memorandum of Understanding on cooperation in convergence of social enterprise initiatives for Development of MSMEs between Product and Process Development Centre (PPDC) and India Water Foundation was signed on 27 November 2019 at Ministry of MSMEs, Nirman Bhavan, New Delhi by Mr. R. Panneerselvam, Principal Director MSME-PDPC and Dr. Arvind Kumar President, IWF in presence of major dignitaries, Hon'ble Additional Secretary & Development Commissioner, MSME, Government of India Sh. Ram Mohan Mishra, IAS Additional Development Commissioner Mr. Anand Sherkhane, Dy. Director General, DC (MSME) Mr.D. P. Srivastava.



10 February 2020

Dr. Arvind Kumar had a pleasure meeting H.E Girish Chandra Murmu, Lieutenant Governor of Jammu and Kashmir along with his honorable colleague Ms. Shweta Tyagi at Raj Bhavan on 10 February 2020. It was equally nice to hear expanding horizons for the Union Territory of Jammu & Kashmir under his dynamic stewardship and Foundation also shared their endeavors on a good standing, which was well appreciated by the Governor.



19 February 2020

Dr. Jawed Ahmed, Assistant Professor, Jamia Hamdard and your team members Dr. Parul Agarwal, Dr. Harleen Kaur and Dr Bhavya Alankar for your valuable time at our office on 19 February 2020 at our IWF office. From our end, Dr. Arvind Kumar, President, IWF and Shweta Tyagi, Chief Functionary, IWF had presided over the discussion. An exchange of initiatives, endeavours was profoundly discussed culminating in overall productive interaction.



26th February, 2020

At the Social Enterprise Conclave - 2020 at Pravasi Bhartiya Kendra, Chanakyapuri, New Delhi on 26th February, 2020, along with dignitaries, Dr. Arvind Kumar, President, India Water Foundation ignited the lamp of knowledge and wisdom. Opening remarks were given by Sh. Ram Mohan Mishra, IAS Hon'ble Special Secretary & Development Commissioner, MSME, Government of India Keynote address as given by Sh. Anil K Gupta, social entrepreneur professor and inaugural note by Sh. Uday Kumar Varma, Retd Former Secretary, M/o MSME, Gol. Conclave was a rich amalgamation of around 300 participants and various presentations laid focus on human and social capital, innovation infrastructure, credit and market access, etc.



- **follow up: Our work on Capacity Building:**

India Water Foundation in capacity of Key Resource Hub of Networking, NCSTC, Ministry of Science and Technology, GoI has shared best practices and innovative solutions bringing awareness, behavioral change and shift in attitudinal mindset, gender mainstream and community empowerment under Eco-WaSH project promoting scientific temper and scientific literacy from Lab-to-Land and we localized Sustainable Development Goals under Mission Eco-Next project in India's most backward regions and engaging individuals to join as Jal Mitras (Friends of Water).

- India Water Foundation engaged the school children of Delhi-NCR through letters, telephonic conversations and interactions to become proactive catalyst for change and environmental stewards and we have embarked towards knowledge dissemination, awareness and capacity building on climate related issues.
- In the month of April and the COVID-19 pandemic, the Foundation has opted for 'Work from Home' keeping in mind the current situation and the safety of its staff. Regular online interactions, video-conferencing, communication exchange through mails and telephone, regular updates on social media sites, ongoing write-ups such as articles, reports, newsletters has been the 'new normal'.

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