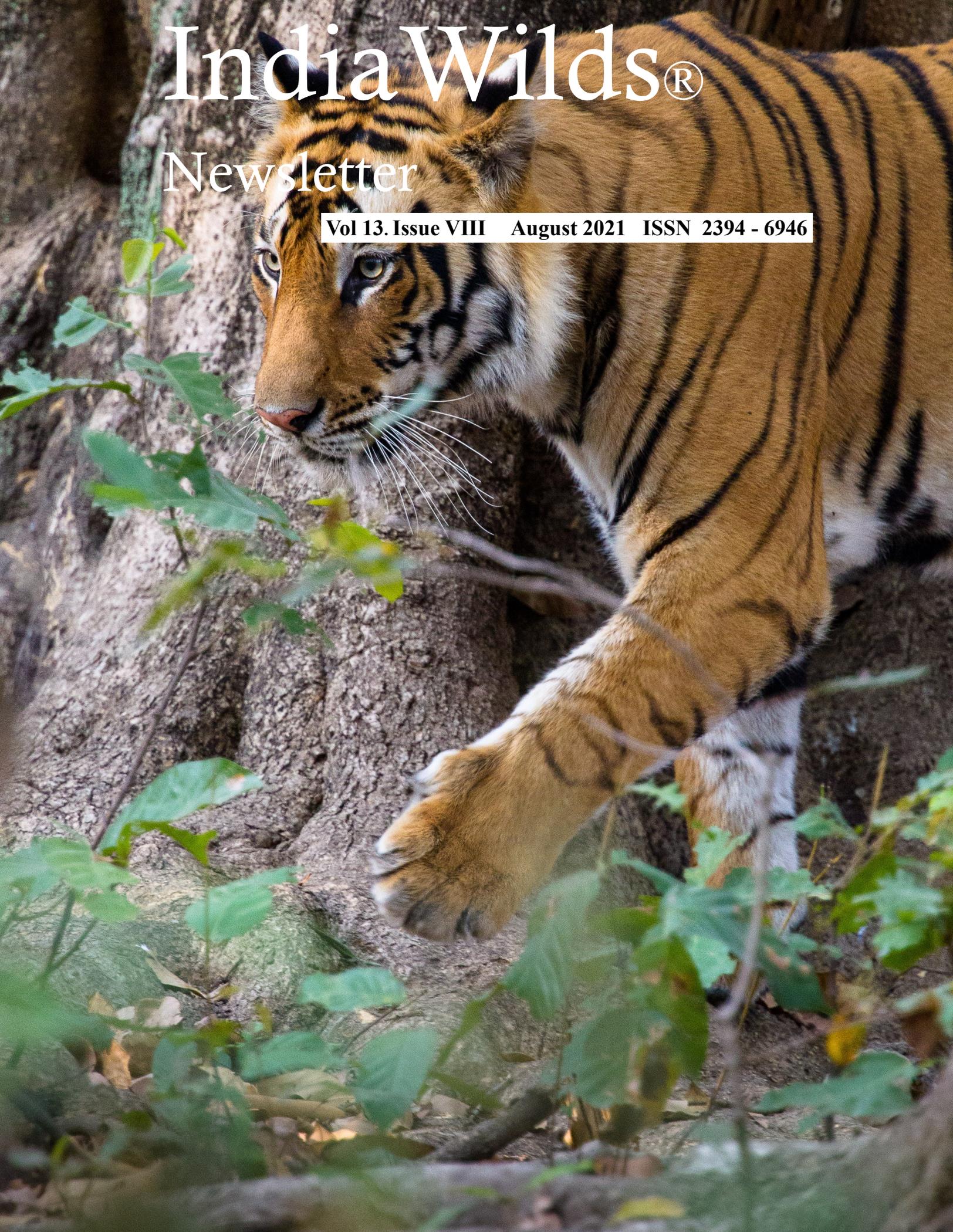


IndiaWilds®

Newsletter

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Climate Change: Curse of Human Race

There is no pride in burning down one’s own house. We don’t expect an intelligent man to do it. Nevertheless, we the humans are doing exactly that. We are destroying our home, the Planet Earth. It has been proven now beyond doubt that human influence has warmed the climate at a rate that is unprecedented in at least the last 2000 years. The scale of changes that we humans have caused to the climate system as a whole, and the present state of various aspects of the climate system are simply unprecedented over many centuries and even many thousands of years.

Human-induced climate change is already affecting many weather and climate extremes in every region across the globe. Evidence of observed changes in extremes such as heatwaves, heavy precipitation, droughts, and tropical cyclones, and, in particular, their attribution to human influence, has strengthened since the Fifth Assessment Report (AR5) of IPCC. This and many more such alarming findings have been released in the new bombshell report of Intergovernmental Panel on Climate Change (IPCC) [IPCC, 2021: Summary for Policymakers. In: *Climate Change 2021: The Physical Science Basis. Contribution of Working Group I to the Sixth Assessment Report of the Intergovernmental Panel on Climate Change* [Masson- Delmotte, V., P. Zhai, A. Pirani, S. L. Connors, C. Péan, S. Berger, N. Caud, Y. Chen, L. Goldfarb,

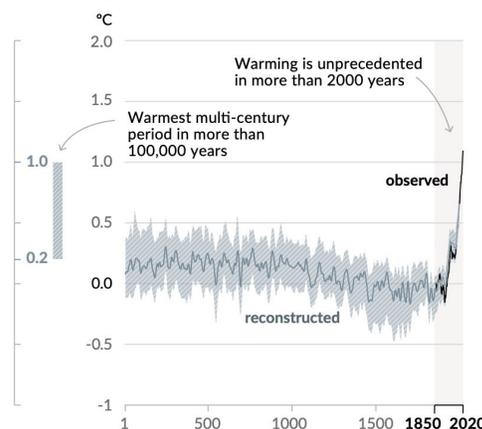
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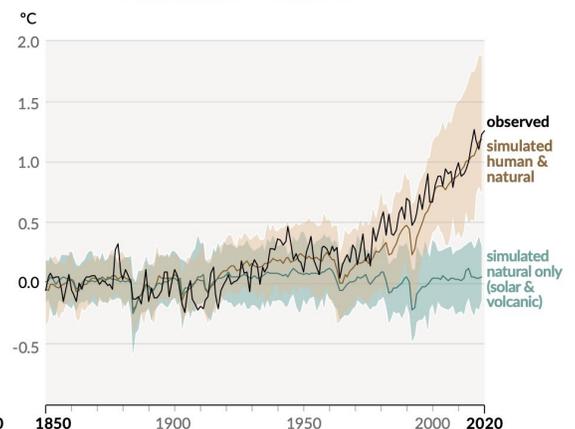
Human influence has warmed the climate at a rate that is unprecedented in at least the last 2000 years

Changes in global surface temperature relative to 1850-1900

a) Change in global surface temperature (decadal average) as reconstructed (1-2000) and observed (1850-2020)



b) Change in global surface temperature (annual average) as observed and simulated using human & natural and only natural factors (both 1850-2020)



Global surface temperature change relative to 1850-1900. (a) Change in global surface temperature (decadal average) as reconstructed (1-2000) and observed (1850-2020); (b) Change in global surface temperature (annual average) as observed and simulated using human & natural factors and only natural factors (both 1850-2020). (Source: Figure SPM.1 from AR6 WGI Summary of Policymakers, courtesy IPCC)

Cover Page Photograph:

Tiger by Sabyasachi Patra



M. I. Gomis, M. Huang, K. Leitzell, E. Lonnoy, J. B. R. Matthews, T. K. Maycock, T. Waterfield, O. Yelekçi, R. Yu and B. Zhou (eds.]. Cambridge University Press. In Press.]

The team of researchers, from the Intergovernmental Panel on Climate Change (IPCC), poured over 14000 scientific papers over eight years to arrive at this path breaking Sixth comprehensive assessment report (AR6). The Working Group I contribution to the Sixth Assessment Report is the most up-to-date physical understanding of the climate system and climate change, bringing together the latest advances in climate science, and combining multiple lines of evidence from paleoclimate, observations, process understanding, and global and regional climate simulations.

The anecdotal observations of common men and women, who have experienced higher heat, drought, higher precipitation, increase in frequency of sudden extreme weather events like cyclones etc over the last few decades, have been confirmed, by scientists in this report, as linked to climate change induced by human actions.

In the Paris Agreement the central aim was to strengthen the global response to the threat of climate change by keeping a global temperature rise this century to well below 2 degrees Celsius above pre-industrial levels and to pursue efforts to limit the temperature increase even further to 1.5 degrees Celsius. However, the Sixth comprehensive assessment report (AR6) finds that the 1.5 degrees Celsius global ambient temperature increase over preindustrial levels will be reached earlier in 2040 instead of the predicted year 2050.

Global warming: Drought & Rains

The IPCC scientists report with high degree of confidence that the Global surface temperature has increased faster since 1970 than in any other 50-year period over at least the last 2000 years. It also states with medium degree of confidence that the “Temperatures during the most recent decade (2011–2020) exceed those of the most recent multi-century warm period, around 6500 years ago [0.2°C to 1°C relative to 1850– 1900]. Prior to that, the next most recent warm period was about 125,000 years ago when the multi-century temperature [0.5°C to 1.5°C relative to 1850–1900] overlaps the observations of the most recent decade”.

We the people of India are increasingly facing extreme weather events like heatwaves, rains, landslides, and cyclones. The IPCC data is ominous in its predictions. We have to be very worried as with every additional increment of global warming, changes in extreme weather events becomes larger. “Every additional 0.5°C of global warming causes clearly discernible increases in the intensity and frequency of hot extremes, including heatwaves (*very likely*), and heavy precipitation (*high confidence*), as well as agricultural and ecological droughts in some regions (*high confidence*). Discernible changes in intensity and frequency of meteorological droughts,

Scenario	Near term, 2021–2040		Mid-term, 2041–2060		Long term, 2081–2100	
	Best estimate (°C)	Very likely range (°C)	Best estimate (°C)	Very likely range (°C)	Best estimate (°C)	Very likely range (°C)
SSP1-1.9	1.5	1.2 to 1.7	1.6	1.2 to 2.0	1.4	1.0 to 1.8
SSP1-2.6	1.5	1.2 to 1.8	1.7	1.3 to 2.2	1.8	1.3 to 2.4
SSP2-4.5	1.5	1.2 to 1.8	2.0	1.6 to 2.5	2.7	2.1 to 3.5
SSP3-7.0	1.5	1.2 to 1.8	2.1	1.7 to 2.6	3.6	2.8 to 4.6
SSP5-8.5	1.6	1.3 to 1.9	2.4	1.9 to 3.0	4.4	3.3 to 5.7

Global surface temperature changes, assessed based on multiple lines of evidence, for 20-year time periods and the five illustrative emissions scenarios. Temperature differences relative to the average global surface temperature of the period 1850-1900 are reported in °C. (Image: Table SPM.1 from AR6 WGI Summary of Policymakers, courtesy IPCC.)

with more regions showing increases than decreases, are seen in some regions for every additional 0.5°C of global warming (*medium confidence*). Increases in frequency and intensity of hydrological droughts become larger with increasing global warming in some regions (*medium confidence*). There will be an increasing occurrence of some extreme events unprecedented in the observational record with additional global warming, even at 1.5°C of global warming. Projected percentage changes in frequency are higher for rarer events (*high confidence*).”

Millions of Indians are dependent on agriculture. As per India Economic Survey 2018, more than 50% of India's work force was employed in agriculture and the sector contributed to 17-18% of India's GDP. So any extreme weather event like drought due to climate change has the potential to cause unprecedented upheavals in our daily lives as well as create social strife.

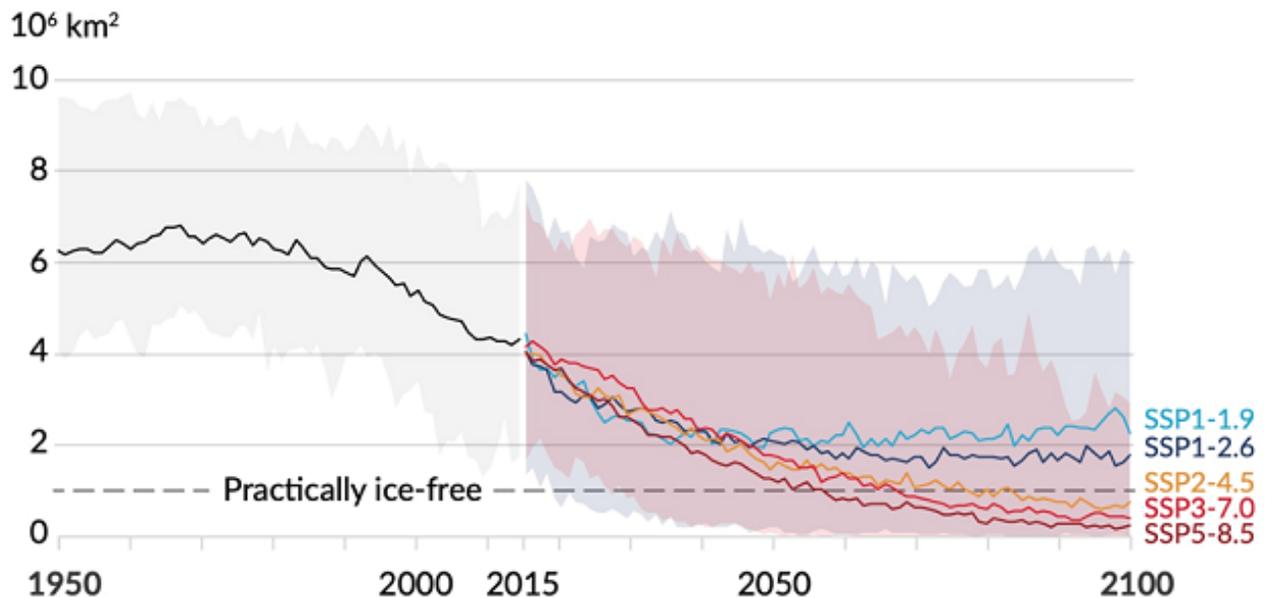
Along with drought, climate change also causes heavy rains. “At the global scale, extreme daily precipitation events are projected to intensify by about 7% for each 1°C of global warming (*high confidence*). The proportion of intense tropical cyclones (categories 4-5) and peak wind speeds of the most intense tropical cyclones are projected to increase at the global scale with increasing global warming (*high confidence*).” In India, in the last few years we are roughly facing more than one cyclonic storms every year. Cyclonic storms in summer was earlier unheard off. However, in the last few years, cyclones in April and May has become regular. These cyclones are causing unprecedented loss of infrastructure, inundation and Governments are forced to undertake massive evacuation of people to storm shelters. There is huge financial burden as well as immense human suffering.

Arctic thawing & loss of Sea ice:

Scientists also state with a high degree of confidence that between 2011–2020, the annual average Arctic sea ice area

reached its lowest level since at least 1850. While predicting the comparison over a longer period of time, the report states with medium confidence that “the late summer Arctic sea ice is smaller than any time in the last 1000 years”. Similarly, scientists have also found that all the world’s glaciers are retreating. “The global nature of glacier retreat, with almost all of the world’s glaciers retreating synchronously, since the 1950s is unprecedented in at least the last 2000 years (*medium confidence*)”.

b) September Arctic sea ice area



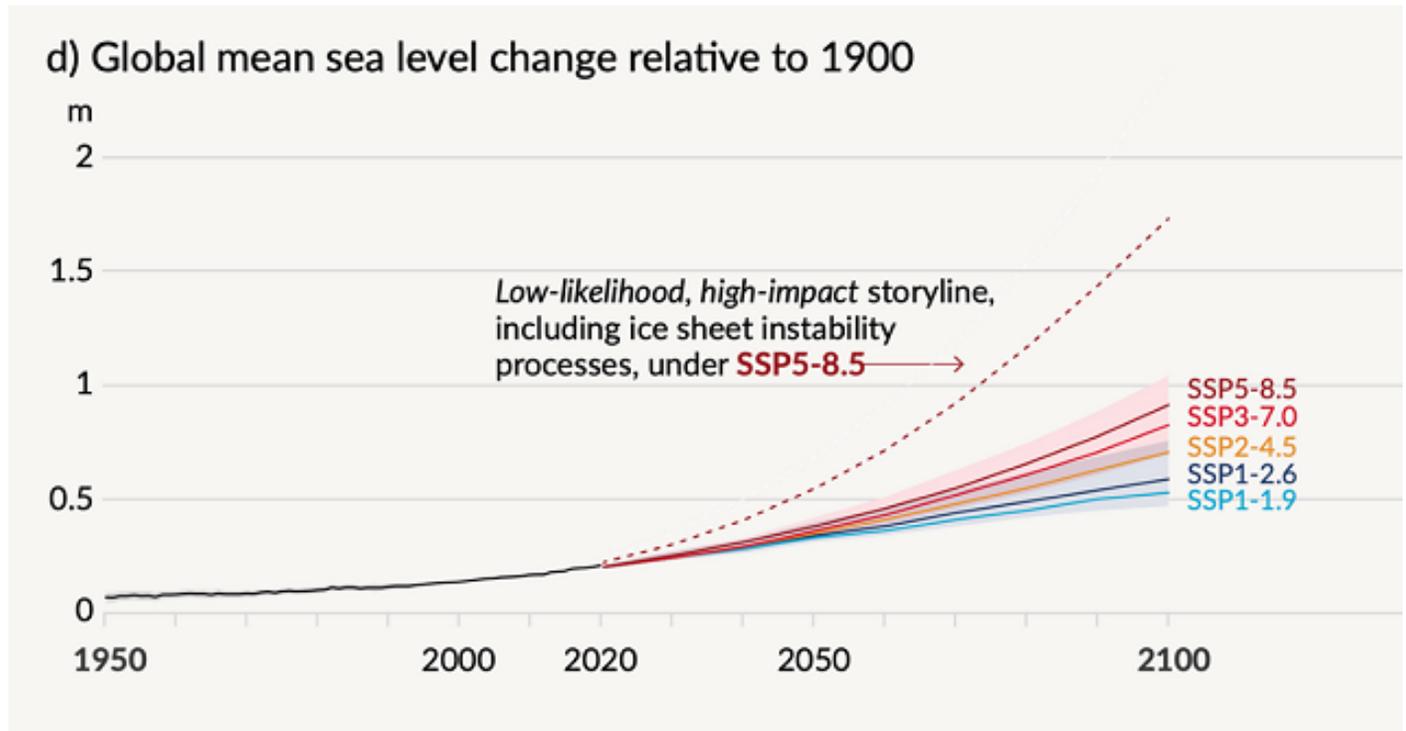
September Arctic sea ice area in 10^6 km^2 based on CMIP6 model simulations. Very likely ranges are shown for SSP1-2.6 and SSP3-7.0. The Arctic is projected to be practically ice-free near mid-century under mid- and high GHG emissions scenarios. (Image: Figure SPM.8b from AR6 WGI Summary of Policymakers, courtesy IPCC.)

Retreating glaciers have a huge impact on our lives. Many of our rivers and streams have originated from these glaciers. With the retreating glaciers, often rivers change course or even dry up. The lifestyles of people dependent on the glacier melt water and rivers is undergoing huge changes. Without the glacial melt water, some of the local communities in Ladakh in India and in other places find it difficult to survive. They are the ones who are the first to notice any changes. Scientists take years to research and then get their paper peer-reviewed and published and still many more years before it gets worldwide attention of IPCC and the world at large. Hence, it is important to note that there are people who are suffering immensely due to climate change and this warning by IPCC scientists through the AR6 report is to be actioned upon.

Climate Crisis: Sealevel rise

It has long been suspected that the human induced climate change has resulted in massive impact on our oceans. Pollution is easily visible. It is also easy for any lay man to correlate between a warming arctic, ice loss and sealevel increase. Scientists have now with a high degree of confidence state that “heating of the climate system has caused global mean sea level rise through ice loss on land and thermal expansion from ocean warming. Thermal expansion explained 50% of sea

level rise during 1971–2018, while ice loss from glaciers contributed 22%, ice sheets 20% and changes in land water storage 8%. The rate of ice sheet loss increased by a factor of four between 1992–1999 and 2010–2019.” As a result, ice sheet and glacier mass loss were the two dominant contributors to global mean sea level rise during 2006–2018.



Global mean Sea level change in meters relative to 1900. The historical changes are observed (from tide gauges before 1992 and altimeters afterwards), and the future changes are assessed consistently with observational constraints based on emulation of CMIP, ice sheet, and glacier models. Likely ranges are shown for SSP1-2.6 and SSP3-7.0. Only likely ranges are assessed for sea level changes due to difficulties in estimating the distribution of deeply uncertain processes. The dashed curve indicates the potential impact of these deeply uncertain processes. It shows the 83rd percentile of SSP5-8.5 projections that include low-likelihood, high-impact ice sheet processes that cannot be ruled out; because of low confidence in projections of these processes, this curve does not constitute part of a likely range. Changes relative to 1900 are calculated by adding 0.158 m (observed global mean sea level rise from 1900 to 1995–2014) to simulated and observed changes relative to 1995–2014 (Image: Figure SPM.8d from AR6 WGI Summary of Policymakers, courtesy IPCC.)

Given the rapid pace of industrialization in the 20th century and 21st century, one can easily use one’s logical faculties to deduct that the sealevels increased rapidly in the past century. Even during our lifetime we have seen many islands swallowed by the sea. This conventional wisdom has now been confirmed by the AR6 report authors. “Global mean sea level has risen faster since 1900 than over any preceding century in at least the last 3000 years (high confidence). The global ocean has warmed faster over the past century than since the end of the last deglacial transition (around 11,000 years ago) (medium confidence)”.

The Global mean sea level increased by 0.20m or 7.8 inches m between 1901 and 2018. The average rate of sea level rise was 1.3 mm/year between 1901 and 1971. It then increased to 1.9 mm/year between 1971 and 2006. It further increased to

“3.7 [3.2 to 4.2] mm yr⁻¹ between 2006 and 2018 (high confidence).” The AR6 assessment report now finds that “Human influence was very likely the main driver of these increases since at least 1971”.

The increase in sea levels will have disastrous consequences for mankind. Most of our low-lying areas, atolls, coastal cities like Mumbai, Chennai, Kolkata will be massively impacted due to the increase in sea levels. Today our scientists are virtually certain that global mean sea level will continue to rise over the 21st century. If the world wakes up now and contains the green house gas (GHG) emissions to a very low level (SSP1-1.9), relative to 1995-2014, then the likely global mean sea level rise by 2100 is between 11 to 21 inches. If the GHG emissions scenario is (SSP1-2.6), then the likely mean sea level increase would be 0.32-0.62 m or 12.5 inch to 24.4 inch ie. from 1 feet to 2 feet level.

The mean sea level rise will be 0.44-0.76 m or 17 to 29 inches under the intermediate GHG emissions scenario (SSP2-4.5), and 0.63-1.01 m or 2 feet to 3 feet ¾ inches under the very high GHG emissions scenario (SSP5-8.5). Despite these scenario building, the report states that we need to be prepared for a very high greenhouse gas emissions scenario. “Global mean sea level rise above the likely range – approaching 2 m by 2100 and 5 m by 2150 under a very high GHG emissions scenario (SSP5-8.5) (low confidence) – cannot be ruled out due to deep uncertainty in ice sheet processes.”

We the present generation will long be dead and gone but our actions will continue to reverberate around the world for time immemorial. Sea level is going to rise for centuries to millennia due to continuing deep ocean warming and ice sheet melt and will remain elevated for thousands of years. “Over the next 2000 years, global mean sea level will rise by about 2 to 3 m if warming is limited to 1.5°C, 2 to 6 m if limited to 2°C and 19 to 22 m with 5°C of warming, and it will continue to rise over subsequent millennia (low confidence). Projections of multi-millennial global mean sea level rise are consistent with reconstructed levels during past warm climate periods: likely 5–10 m higher than today around 125,000 years ago, when global temperatures were very likely 0.5°C–1.5°C higher than 1850–1900; and very likely 5–25 m higher roughly 3 million years ago, when global temperatures were 2.5°C–4°C higher (medium confidence).”

Together with sudden climate change induced cyclonic storms, storm surge and shifting ocean currents, many of our cities are now facing sudden and unprecedented flooding. The IPCC report warns “in some areas, coastal flooding that occurred once a century in the recent past could be a yearly event by 2100.” The flooding will impact our coastal infrastructure. Many of our powerlines, telecom cables and roads will be inundated and rendered non-functional. The power and telecom cables were not designed to be submerged. It would cause unprecedented disruption not only to coastal communities but also to places far from the sea.

The face of earth will be changed forever. Many of our cities and megacities of today will be under water forever. Many more stories similar to that of Atlantis going under water is going to be come true. Man, who thought he can control nature by use of technology, incurs the wrath of nature Gods and entire civilisations go under water. We the people of earth, we only have this moment to reverse our actions. Tomorrow will be too late. Our Governments are still jostling with each other to shirk responsibilities and trying to lessen their own actions. Many are claiming big changes even though the climate change mitigation efforts are mostly in letter and not in spirit. If this IPCC report doesn't shake us up from our slumber, then history will never forgive us.

Article -

Gir National Park: The only abode of Asiatic Lions

By Mrs. Shakti & Mr. A S Bishnoi

Gir National Park, also known as Sasan Gir, was established in 1965, with a total area of 1,412 km², of which 258 km² is fully protected as National park and 1,153 km² as wildlife sanctuary. It is part of the Kathiawar-Gir dry deciduous forest landscape. It is also well-known as the last abode of the Asiatic lion.

History:

In the 19th century, the rulers of Indian princely states used to invite the British officers for hunting expeditions. It was seen as a matter of pride to bag a lion. The lion population was fast getting decimated due to the continuous hunting expeditions. By the end of the 19th century lions were exterminated from all other areas except the private hunting grounds of Nawab of Junagarh. The Nawab was tight fisted in granting lion hunting permits as he wanted to save the lions for obtaining favours from the British. So around a dozen lions were the last remaining population in his hunting grounds.



Following a popular outcry in the press in Bombay regarding a proposed plan of Viceroy for hunting lions, the lion hunting virtually stopped and the population slowly started growing back. Today, Gir and its neighboring areas are the only places in Asia where Asiatic lions occur

There are seven major perennial rivers in the Gir region: Hiran, Shetrunji, Datardi, Shingoda, Machhundri, Godavari and

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Raval. The four reservoirs of the area are at four dams, one each on Hiran, Machhundri, Raval and Shingoda rivers, including the biggest reservoir in the area, the Kamleshwar Dam, dubbed 'the lifeline of Gir'.

During peak summer, surface water for wild animals is available at about 300 water points. When drought hits the area following a poor rainfall, surface water is not available at a majority of these points, and water scarcity becomes a serious problem, mainly in the eastern part of the sanctuary. Ensuring the availability of water during peak summer is one of the major tasks of the Forest Department staff.

Our Journey:

Gujarat has different dialects in various regions, Kathiawar, being my personal favourite. I was brought up in Gujarat and I have been fascinated to know about the culture of various places. My good friend Mr Mukesh Jagani is from Saurashtra. So during college days, I had visited this quaint town of Talala, in Junagadh in 2000. I came to know about Asiatic lion and their frequent visit to Mango fields. I was fed with lots of fantastic stories of encounters with the mighty lion. These stories beautifully told and retold several times by my friend and his family members made me curious about the ways of king of the jungle. So we visited his field in the night near the Hiran river cross and sat on machan, a tree house. The first sight of mighty cat with distance of about 5 m was an experience for which I have no words to describe. We were silent and mesmerized even after the male lion left from that place. As we headed back to my friend's home, he was normal. However, with fear, anxiety, awe, and the many emotions that I was experiencing, my imagination was running wild and concocting stories. Though we reached home soon, the memory of this experience remained alive for a long time.



Years passed and I got married and have a daughter of 7 years. While I was teaching her about animals, she being inquisi-

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tive asked several questions and finally it was decided to go on a lion safari again. Soon we headed to my friend's house in Jan 2020 from Pune. We did not go in my friend's mango orchards to see the mighty lions, but opted for gypsy safari by forest department.

Gir Sanctuary has the count of 2,375 distinct fauna species about 38 species of mammals, around 300 species of birds, 37 species of reptiles and more than 2,000 species of insects. Gir National Park and

Sanctuary does not have a designated area for tourists. However, to reduce the tourism hazard to the wildlife and to promote nature education, an Interpretation Zone has been created at Devalia within the sanctuary. Within its chained fences, it covers all habitat types and wildlife of Gir with its feeding-cum-living cages for the carnivores and a double-gate entry system.



We commenced our journey in an open Gypsy and we were fortunate to see pack of wolves crossing our gypsy followed by Nilgai family(blue bull). Then our much awaited flagship animal, the majestic lion and two lionesses sleeping under a tree was a sight to remember. It was sight to reckon with. Another few meters we saw one mighty lioness walking. Our all

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dreams came true within minutes. Moving ahead we saw Vulture, spotted owlets and 12 Leopards. The last sighting was again spotted owl before culmination of our journey.

Gir Lion:

Gir today has 523 asiatic lions as per the 14th Asiatic Lion Census 2015 conducted in May 2015. The population was 411 in 2010 and 359 in 2005. The lion population in Junagadh District was 268 individuals, 44 in Gir Somnath District, 174 in Amreli District, and 37 in Bhavangar District. There are 109 males, 201 females and 213 cubs.

Even though the Gir Forest is well protected, there are instances of Asiatic lions being poached. My friend used to often narrate stories of the forest dwelling Maldhari community poisoning lions for attacking their livestock. Other threats to lions include floods, fires and the possibility of epidemics. But Gir nonetheless still remains the only preserve for lions.

There are 'The Cat Women of Gir Forest' who assist forest depart in counting and also generate awareness in the local populace especially younger lots for conservation and to avoid poaching. We even went to Kamleshwar Dam and nearby bird sites and manage to capture them in our camera. Gir is an excellent places for bird lovers.



Some Interesting Lion facts:

Since Gir is the only abode of lions in India, it is a major attention of tourists and wildlife enthusiasts.

(a) A limited number of lions live in India – Whereas India is the only home for wild Asiatic lions, a greater number of wild

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lions live in Sub-Saharan Africa. Asiatic Lions and African lions are different species.

- (b) In comparison to African lions, Asiatic lions are smaller in size.
- (c) Lions are the only wild cats that prefer to live in a group known as pride.

Life of Asiatic Lions is 18-20 years.

(d) The average life of Asiatic Lion ranges in 15 to 16 years but many of them become old after crossing 9 or 10 years of their life. Nearly 30% deaths are caused by unnatural causes like electrocution or being hit by speedy vehicles or trains. 60% of Asiatic lions die due to natural causes. Few Lions in the area have drowned in open wells of villages.

Concern: Conservation of Asiatic lions:

Despite the 500+ numbers shown up in the census, Asiatic lions are in danger of getting extinct as they are all concentrated in one landscape. One single epidemic can wipe away the entire population. So a second home for the Asiatic lion is important to save the species.

Gir Sanctuary, Pania Sanctuary, Gir National Park forms the Gir Conservation Area (GCA) which currently exists to protect the Asiatic lions in the wildlife reserve. Mitiyala and Girnar are the other two wildlife sanctuaries which protects satellite areas within the dispersal distance of GCA. Another sanctuary is being established near Barda Forest to serve as an alternative home for Gir Asiatic Lions. The plan to shift a few lions to Kuno-palpur in Madhya Pradesh to create an alternate home for lions have been stopped by Gujarat, despite the Supreme Court of India giving it the go ahead several years ago. Gujarat doesn't want to share lions with any other states as Gujarat wants to be known as the only state to have lions.

In the last two decades I have seen drastic change in the topography in and around Gir. The local people have shifted focus from agriculture for easy money. Hotel industry is coming up with good number of buildings on high-way and offering the grand view of Gir and also promising sure shot sighting of lions. Hoteliers are eyeing good business opportunities around Gir sanctuary and people are selling land for easy gain and more money. This move will have long term effect on lions of Gir. Govt should take action and stop construction of so called "Jungle Resorts" in and around Sanctuary so that the lions can stay in peace. Otherwise Asiatic Lions will soon need to be shifted to preserve them.

Due to the tourism industry led rampant construction of hotels and guest house, the vehicular traffic has increased. Since the road connecting Talala and Junagadh pass through Sanctuary, it causes disturbance and is a threat to the lions. Even though tourism is limping due to Covid 19 pandemic, normalcy is in sight now and tourism traffic is expected to rebound in the next few months. In the coming few months and years this problem will aggravate. We need to take action now to preserve the sanctuary as this is the only place in Asia where lions live.

Conservation News -

Single Use Plastic items to be phased out by July 2022

Government notifies the Plastic Waste Management Amendment Rules, 2021, prohibiting identified single use plastic items by 2022

Pollution due to single use plastic items has become an important environmental challenge confronting all countries. India is committed to take action for mitigation of pollution caused by littered Single Use Plastics. In the 4th United Nations Environment Assembly held in 2019, India had piloted a resolution on addressing single-use plastic products pollution, recognizing the urgent need for the global community to focus on this very important issue. The adoption of this resolution at UNEA 4 was a significant step.

Plastics dumped in mangroves courtesy: Paramvir Singh



In view of this, the Ministry of Environment, Forest and Climate Change, Government of India, has notified the Plastic Waste Management Amendment Rules, 2021, which prohibits identified single use plastic items by 2022.

The manufacture, import, stocking, distribution, sale and use of following single-use plastic, including polystyrene and expanded polystyrene, commodities shall be prohibited with effect from the 1st July, 2022:-

1. a. ear buds with plastic sticks, plastic sticks for balloons, plastic flags, candy sticks, ice-cream sticks, polystyrene

Conservation News -

[Thermocol] for decoration;

1.b. plates, cups, glasses, cutlery such as forks, spoons, knives, straw, trays, wrapping or packing films around sweet boxes, invitation cards, and cigarette packets, plastic or PVC banners less than 100 micron, stirrers.

In order to stop littering due to light weight plastic carry bags, with effect from 30th September, 2021, the thickness of plastic carry bags has been increased from fifty microns to seventy five microns and to one hundred and twenty microns with effect from the 31st December, 2022. This will also allow reuse of plastic carry due to increase in thickness.

The plastic packaging waste, which is not covered under the phase out of identified single use plastic items, shall be collected and managed in an environmentally sustainable way through the Extended Producer Responsibility of the Producer, importer and Brand owner (PIBO), as per Plastic Waste Management Rules, 2016. For effective implementation of Extended Producer Responsibility the Guidelines for Extended Producer Responsibility being brought out have been given legal force through Plastic Waste Management Amendment Rules, 2021.

The waste management infrastructure in the States/UTs is supposedly being strengthened through the Swachh Bharat Mission. The following steps have also been taken to strengthen implementation of Plastic Waste Management Rules, 2016 and also to reduce the use of identified single use plastic items. The States/UTs have been requested to constitute a Special Task Force for elimination of single use plastics and effective implementation of Plastic Waste Management Rules, 2016. A National Level Taskforce has also been constituted by the Ministry for taking coordinated efforts to eliminate identified single use plastic items and effective implementation of Plastic Waste Management Rules, 2016.

The State /UT Governments and concerned Central Ministries/Departments have also been requested to develop a comprehensive action plan for elimination of single use plastics and effective implementation of Plastic Waste Management Rules, 2016, and its implementation in a time bound manner. Directions under Section 5 of Environment (Protection) Act, 1986, have been issued to all States/Union Territories inter alia for setting up for institutional mechanism for strengthening enforcement of Plastic Waste Management (PWM) Rules, 2016.

The Government has also been taking measures for awareness generation towards elimination of single use plastics and effective implementation of Plastic Waste Management Rules, 2016. A two month long Awareness Campaign of Single Use Plastic 2021 has been organized. The Ministry has also organized pan India essay writing competition on the theme for spreading awareness amongst school students in the country.

To encourage innovation in development of alternatives to identified single use plastic items and digital solutions to plastic waste management, the India Plastic Challenge – Hackathon 2021, has been organized for students of Higher Educational Institutions and startups recognized under Startup India Initiative.

Reduction in single use plastics will go a long way in helping the marine ecosystem as well as terrestrial ecosystem recover from the ill effects of single use plastic dumped everywhere.

Conservation News -

Joint Elephant and Tiger population estimation in 2022

Following a revamping of the Union council of ministers, Shri Prakash Javadekar was dropped as a minister. In his place Shri Bhupender Yadav, assumed charge as Minister of Environment, Forest and Climate Change.

All India Elephant and Tiger population estimation exercise to be done in convergence for the first time in 2022

For the first time the Elephant Census and Tiger Census are going to be converged and done in 2022. The Ministry of Environment, Forest and Climate Change (MoEFCC), released the protocol for this All India Elephant and Tiger population estimation during a function to commemorate the occasion of World Elephant Day.



Asian elephants are listed as "Endangered" on the IUCN Red List of threatened species. This has been done as most of the range states except India, have lost their viable elephant populations due to loss of habitats & poaching etc. The current population estimates indicate that there are about 50,000 -60000 Asian elephants in the world. More than 60 % of the population is held in India.

Indian Elephant has also been listed in the Appendix I of the Convention of the Migratory species in the recently concluded Conference of Parties of CMS 13 at Gandhi Nagar, Gujarat in February 2020.

World Elephant Day is being celebrated to bring attention of various stakeholders to support various conservation policies to help elephants, including improving enforcement policies to prevent the illegal poaching and trade of ivory, conserving elephant habitats, providing better treatment for captive elephants and reintroducing some captive elephants into sanctuaries. Elephant is the Natural Heritage Animal of India and India also celebrates this day to spread awareness towards conservation of the species.

Speaking on the occasion, the Union Environment Minister, Shri Bhupender Yadav, stressed on the involvement of local and indigenous people in the conservation of elephants and said that a bottom up approach is the way forward, which will also help in minimizing Human-Elephant Conflict as well.

Conservation News -

Shri Yadav said that there has been a pressing need to improve and harmonize the population estimation methods along more scientific lines in various states across India and expressed happiness that the Ministry for the first time is converging both elephant and tiger population estimation.

Minister of State, Shri Ashwin Kumar Chaubey, while addressing the gathering stated that Saving Elephants is saving forests and saving forests leads to saving the entire ecosystems and exhorted all especially the youth to nurture and carry forward the traditional ethos of Indian culture of living in harmony with Nature and wildlife.

The programme also witnessed release of the fourth edition of the quarterly newsletter “Trumpet” of the Elephant Division of the Ministry by both the dignitaries. To highlight on the various conservation regimes adopted across country by the State Forest Departments as well as institutions and organizations, Project Elephant Division and Elephant Cell releases the quarterly newsletter "Trumpet". This edition of the newsletter articulates the need for landscape approach for synchronized elephant population enumeration.

The Ministry also partnered with WII, NMNH, WWF-India and WTI in organising the week long programme of “Azaadi ka Amrit Mahotsav” as a precursor to the World Elephant Day, 2021. The winners of the online painting and essay competition were also announced by the Ministers.

India extends full support to the UK for a successful COP26 to be held in Glasgow in November

India has extended full support to the UK for hosting COP26, in Glasgow in November 2021, stating that India is always committed to the United Nations Framework Convention on Climate Change (UNFCCC) Framework and its Paris Agreement, and hence will work constructively for successful and balanced outcome at COP26.

The Environment Minister had a detailed meeting with Mr. Alok Sharma, COP26 President-Designate, UK in New Delhi on 18th August, wherein they discussed issues relating to climate change, COP26, India-UK 2030 Roadmap, and other related matters. India’s support for UK for COP26 was conveyed by the Environment minister during this meeting.

COP26 President-Designate, UK, Alok Sharma sought the support of India on the COP 26 Initiatives launched by the UK and for a successful COP at Glasgow and acknowledged India’s leadership role. Both the leaders also exchanged views on important climate negotiation agenda items to be deliberated in the upcoming COP26 at Glasgow.

“India believes that Climate actions must be nationally determined and strongly advocates that the differentiation and operationalization of flexibility provided in the UNFCCC and the Paris Agreement for developing countries should be at the core of decision-making” emphasized Shri Yadav reiterating India’s focus on climate justice while fighting climate change.

The Environment Minister also mentioned about the global initiatives spearheaded by India for tackling climate change viz. Leadership Group for Industry Transition (LeadIT), Coalition on Coalition Disaster Resilient Infrastructure (CDRI) and International Solar Alliance (ISA).

Conservation News -

India ratifies Kigali Amendment to Montreal Protocol on Ozone layer depleting substances

The Union Cabinet, chaired by the Prime Minister has given its approval for ratification of the Kigali Amendment to the Montreal Protocol on Substances that Deplete the Ozone Layer for phase down of Hydrofluorocarbons (HFCs) by India, adopted by the Parties to the Montreal Protocol on October, 2016 at 28th Meeting of the Parties to the Montreal Protocol held at Kigali, Rwanda. This cabinet meeting was held on 19th of August

Benefits:

- (i) HFC phasedown is expected to prevent the greenhouse gas emissions, helping prevent climate change and would benefit the people.
- (ii) The industry producing and consuming Hydrofluorocarbons will be phasing out Hydrofluorocarbons as per the agreed schedule under and transition to non-HFC and low global warming potential technologies.

Implementation strategy and targets:

- (i) National strategy for phase down of Hydrofluorocarbons as per the applicable phase down schedule for India will be developed after required consultation with all the industry stakeholders by 2023.
- (ii) Amendments to the existing legislation framework, the Ozone Depleting Substances (Regulation and Control) Rules to allow appropriate control of the production and consumption of Hydrofluorocarbons to ensure compliance with the Kigali Amendment will be done by mid-2024

Major Impact, including employment generation potential:

- (i) Hydrofluorocarbons. phasedown is expected to prevent the emission of up to 105 million tonne of carbon dioxide equivalent of greenhouse gases, helping to avoid up to 0.5 degree Celsius of global temperature rise by 2100, while continuing to protect the ozone layer.
- (ii) Implementation of HFC phase down under the Kigali Amendment through the adoption of low-global warming potential and energy-efficient technologies will achieve energy efficiency gains[^] and carbon dioxide emissions reduction - a "climate co-benefit,"
- (iii) HFCs phrase down implementation will involve synergies with on-going government programmes and schemes of the Government of India with the objective to maximize the economic arid social co-benefits, besides environmental gains.
- (iv) There would be scope for domestic manufacturing of equipment as well as alternative non-HFC and low-global warming potential chemicals to enable the industry to transition to the low global warming potential alternatives as per the agreed HFC phase down schedule. In addition, there would be opportunities to promote domestic innovation for new generation alternative refrigerants and related technologies.

Conservation News -

Details:

1. Under the Kigali Amendment; Parties to the Montreal Protocol will phase down production and consumption of Hydrofluorocarbons, commonly known as HFCs.
2. Hydrofluorocarbons were introduced as non-ozone depleting alternative to Hydrofluorocarbons (HFCs). While HFCs do not deplete the stratospheric ozone layer, they have high global warming potential ranging from 12 to 14,000, which have adverse impact on climate.
3. Recognizing the growth in use of HFCs, especially in Refrigeration and Air-conditioning sector the Parties to the Montreal Protocol, reached agreement at their 28th Meeting of the Parties (MOP) held in October 2016 in Kigali, Rwanda to add HFCs to the list of controlled substances and approved a timeline for their gradual reduction by 80-85 per cent by the late 2040s.

2047. India will complete its phase down of HFCs in 4 steps from 2032 onwards with cumulative reduction of 10% in 2032, 20% in 2037, 30% in 2042 and 80% in 2047.

2048. All amendments and adjustments of the Montreal Protocol, prior to the Kigali Amendment have Universal support.

Background:

1. The Montreal Protocol on Substances that Deplete the Ozone Layer, is an international environmental treaty for protection of the Ozone Layer by phasing out the production and consumption of man-made chemicals referred to as ozone depleting substances (ODS). The stratospheric ozone layer protects humans and the environment from harmful levels of ultraviolet radiation from the sun.
 2. India became a Party to the Montreal Protocol on Substances that Deplete the Ozone Layer on 19 June 1992 and since then has ratified the amendments to the Montreal Protocol. Though the present approval of the Cabinet, India will be ratifying the Kigali Amendment to the Montreal Protocol for phase down of Hydrofluorocarbons.
 3. India has successfully met the phase out targets of all the Ozone Depleting Substances as per the Montreal Protocol Schedule
-

Equipment Discussions -

Canon launches compact & lightweight XF605 4K UHD Professional Camcorder with Broadcast-Quality Features

Canon has launched a 4k UHD professional camcorder XF605.

The new XF-series professional camcorder comes equipped with a 1.0-inch CMOS sensor and the ability to record 4K/60p/4:2:2/10-bit/HDR video to dual on-board SD card slots. The XF605 is equipped with Canon's renowned Dual Pixel CMOS AF¹, and achieves high-speed and high-accuracy in focusing. It is the first XF-series model to include Eye Detection



AF, as well as improved face and head detection, enabling more accurate and stable tracking of subjects.

The XF605 camcorder also includes new video transmission functionality, making it an ideal tool for broadcast journalists. Featuring a Canon L-Series lens with 15x zoom, 3-ring operation, a 1.0-inch CMOS sensor, and a DIGIC DV7 image processor, the XF605 allows for the capture of in-camera HDR video. Users also have the ability to leverage a high frame rate of up to 120 FPS when opting for Full HD recording.

Canon Log 3 recording is also available, to provide additional color latitude. Weighing more than 21 ounces less than the XF705, (which is more than a 25% reduction), the XF605's compact body is also 10% shorter in both length and height. In addition, the Canon XF605 camcorder provides professionals with a more intuitive user experience through features such as Direct Touch menu operations and touch-panel playback. By way of the newly released CTM² mobile app for iOS, the XF605 can connect and transfer recorded video data via cable³ or wirelessly to compatible iOS devices and transfer

Equipment Discussions -

proxy footage, audio, and metadata to servers at broadcast stations or other locations, thus making possible faster and more efficient workflows for broadcast operations.

The camcorder features built-in Wi-Fi/Ethernet connectivity for Browser Remote, IP streaming, and FTP transfer. What's more, the camcorder is also the first XF-series model to feature USB Video Class, allowing use as a webcam without the need for a third party HDMI to USB adapter.

The XF605 is equipped with a new multi-accessory shoe. By connecting the XLR microphone adapter CA-XLR2d-C (sold separately) developed by TEAC Corporation, up to four channels of XLR input can be used together with the audio input of the XF605. This enables flexible audio recording workflow.

The Canon XF605 4K UHD Professional Camcorder is scheduled to be available in mid-October 2021 for an estimated retail price of **\$4499.00***.

Equipment Discussions -

Canon Expands 8K Broadcast Lens Lineup with new 10×16 KAS S 8K UHD Portable Zoom Lens

Canon has announced the launch of an 8K resolution 10×16 KAS S - a new portable zoom lens for 8K broadcast cameras featuring a 1.25-inch sensor. According to Canon, the new lens was designed to meet the ever-growing demand in recent years for ultra-high-resolution video production equipment, especially in such fields as sports broadcasting and documentary filmmaking. The new 8K lens also cements Canon's commitment to next-generation and innovative lens technology for a variety of content creation industries.

One of the interesting features of this lens is its fast constant aperture of f/2.8 across the entire zoom range that spans 16mm at the wide end to 160mm at the telephoto end, a zoom magnification of 10x. This combination of aperture speed and zoom range is ideal for events such as sports and live broadcasting, which often involve frequent changes in focal length, in order to provide immersive and high-resolution imagery with colorful and vibrant appearance.



The Canon 10×16 KAS S lens is equipped with lens elements such as fluorite, UD lenses, Hi-UD lenses¹ and wide-diameter aspherical lenses that help to reduce chromatic aberrations, spherical aberrations and other effects that could diminish image quality. Canon utilized its optical simulation technologies, honed and improved through the company's history to determine the ideal placement of lens elements. What's more, high-precision manufacturing operations and assembly technologies help to optimize manufacturing consistency for this type of lens class. Together, these features and procedures allowed for Canon to develop a lens with an image that is clear and sharp from the center to the periphery throughout the entire zoom range.

The lens also features a high-performance digital drive unit powered by the high-resolution 16-bit absolute value encoder digital drive unit that has a proven track record of use with 2/3-inch 4K broadcast zoom lenses. This makes possible high-precision position detection, which is vital for productions that incorporate virtual imaging systems.

Availability: The Canon 10×16 KAS S 8K UHD portable zoom lens is scheduled to be available in late October 2021.

Pricing: Canon hasn't given any indication about the pricing of this lens. As this is going to be a special interest lens, interested people need to contact their local Canon representative.

Equipment Discussions -

Canon EOS R5 + Atomos Ninja V+ now record 8K ProRes Raw

Earlier this year Atmos had announced that Ninja V+ monitor recorder will be able to record 8K ProRes Raw from Canon EOS R5. Now the firmware upgrade is available and one can start shooting in 8K ProRes Raw at 8K 30fps.

The ProRes Raw will give greater flexibility in post production than the existing Canon Raw lite codec. One can easily change the White balance and ISO in postproduction. This promises to be very helpful in reducing the overheating issue faced by Canon EOS R5. This will hopefully increase the adoption of the EOS R5 among filmmakers.



The Atomos Ninja V+ costs **1499 US Dollars**. So this external ProRes Raw recording won't come cheap. For those with existing Ninja V+ units, it is a great boon.

B&H Link to Atomos Ninja V+: <https://www.bhphotovideo.com/c/produ...1112239/SID/EZ>

PRESS RELEASE

Ninja V+ To Support 8K ProRes RAW From The Canon EOS R5 Now Available

8K Apple ProRes RAW now available from the Ninja V+ & Canon EOS R5

Join Atomos and content creator Levi Allen on the 7th September to hear all about the first ever content shot in 8K Apple ProRes RAW.

Melbourne, Australia – 19th August 2021 – Atomos is thrilled to announce that the firmware announced earlier in 2021 for the Ninja V+ to support 8K ProRes RAW from the Canon EOS R5 is now available to download.

Equipment Discussions -

Ninja V+ and 8K workflow

Atomos and Canon are delighted to announce the ability for creators to capture stunning and pristine 8K ProRes RAW images from such an affordable, capable, and compact camera system. This will be a true game changer in content creation. When combined with the Canon EOS R5 full-frame mirrorless camera, the Ninja V+ will record 8Kp30 ProRes RAW.

Apple ProRes RAW 8K provides an unparalleled combination of real-time, multi-stream editing performance, and impressive image quality preservation. The recently announced new features of white balance (WB) and ISO in Final Cut Pro gives creators even greater flexibility and control over their image processing during post-production.

The Atomos Ninja V+ coupled with the benefits of the Canon EOS R5 full-frame mirrorless camera are placing the power with creators by combining the first affordable 8K solution that will propel content creators to a whole new level of production. Canon and Atomos have democratized 8K for the masses with no compromise in quality.

Ninja V+ more power

Redesigned with a stealth grey bezel and expanded processing power, the Ninja V+ delivers even more options for creators. Using the new Atomos Silicon chip, the AtomIC3, and the AtomOS 10 technology, the Atomos team re-engineered the Ninja V+ to meet the evolving needs of the creator. This innovation increased the power to record ProRes RAW at even higher frame rates and resolutions.

ProRes RAW - the new standard for RAW

ProRes RAW continues to build momentum in 2021 with over 30 cameras supported by Atomos, cementing its position as the industry standard for RAW video capture. ProRes RAW combines the visual and workflow benefits of RAW video with the incredible real-time performance of ProRes. The format gives filmmakers enormous latitude when adjusting the look of their images and extending brightness and shadow detail, making it ideal for HDR workflows. Manageable file sizes speed up and simplify file transfer, media management, and archiving. ProRes RAW is fully supported in Final Cut Pro, Adobe Premiere Pro and Avid Media Composer, along with a collection of other applications including ASSIMILATE SCRATCH, Colorfront, FilmLight Baselight and Grass Valley Edius.

Atomos 10.68 for Ninja V+ available here: <https://www.atomos.com/product-suppo...t=ninja-v-plus>

To update Canon EOS R5 visit your local Canon website.

Join Atomos and content creator Levi Allen on the 7th September to hear all about the first ever content shot in 8K Apple ProRes RAW.

Sign up here: <https://www.atomos.com/events>

Natural History -

COUNTRY NOTEBOOK: Lone sentinel of the puddles: M.Krishnan:- 19-10-1952

The Sunday Statesman (shared by Shri. Saktipada Panigrahi)

"LIFE has grown wet and plastic during the past week. Visitors bring in footloads of mud, which they scrape against the stone steps or distribute over the verandah- being given to pretty joys, I note with satisfaction that when they go away the sodden gravel leading to my gate shakes of at each step from their shoes and that I have gained soil. The ditches flanking the road are turned into brown rivulets, and the dip in the field beyond, hardly perceptible in September, is now a miniature pond.

All these wetness is different from the somewhat formalised depictions of wetness that we are so used to. There would be white glints and dimpled blue patches in an artist's picture of these October puddles and flooded drains, and turbulent streaks of red, perhaps, to denote the freshets. Actually the lowering skies yield no highlights; everywhere the water is a torpid, deep umber, thick with mud and squirming with infant life. Almost as if by magic, innumerable mosquito larvae and tadpoles have appeared in the pond of the field, even little fish. Life began in the slush, according to biologists, and the slush is very fecund still. As I bend over its squelching rim to peer into the peer's teeming depths, I am conscious that I am not alone.

Another huddled watcher is on the other side, acutely aware of me. My cautious advent had driven it to several yards away, now it seems on the point of flight. I retreat to the roadside and squat immobile, and the Pond Heron returns to the water, step by deliberate step, its apprehensive head stretched out in front of its long neck. It stops at water's edge and is immediately harder to see. The extended neck is doubled up and drawn in between the shoulders, so far in that the bird is neckless; the streaked brown of its humped back and yellowish greys of its legs and beak blend with muddy background. It walks carefully into the water, lifting each foot clear of the surface and carrying it forward through the air before immersing it quietly again, and now its neck is again outstretched- it is withdrawn once more as the bird halts, and take its stance in the shallows.



© Mrudul Godbole

For long two minutes it stays utterly still, only the hard, yellow glint in its eye betraying the avid life in the dull, slumped body.

While fish that pass by,
Till the destined fish comes in,
Great is the heron's dejection

- says a cynical couplet, in Tamil. Presently, and without the least warning stir, the dagger-billed head shoots down on the extensive neck, a tadpole is lifted deftly out of the thick water and swallowed in the same movement. At once the neck is drawn in, and the morose, huddled pose is resumed, so quickly and completely that I could have sworn that its waiting had been unbroken had I not watched the movement.

The "Pond Heron" or "Paddy Bird" is probably the most familiar of our waterside birds. Wherever there is not too rapid water, a puddle or a pond or any shallow stretch, you will find it there, an unmistakable little heron with dingy plumage, a humped back and sulky habits. When alarmed it emits a harsh "kra-ak" and is instantly transformed into a dazzling creature on broad, white wings- its pinions and underparts are white, but hidden except in flight by its earthy mantle, and in flight it seems an all-white bird. Americans in India used to call this heron the "surprise bird" from the sudden contrast between its drab, unobtrusive repose and flashing whiteness of its flight; I believe the name is no longer in fashion.

Though roosting and nesting in company, pond herons are unsociable by day. They are lone hunters; occasionally you may see three or four near one another, but they never seek prey in common, and even when going home to roost do not join together in large flocks. They are strong flyers, and though they look rather like Cattle Egrets in size and whiteness when on the wing, it is easy to tell their firm, quick wing beats from the lubberly action of the egrets.

Incidentally, all herons fly with their necks tucked in. Wordsworth's-

And heron, as resounds
the trodden shore,
Shoots upward, darting his long
Neck before

- might be quite true of a heron shooting up into the air in alarm, but once it settles down to flight the neck is not darted before, but is doubled up and drawn in- that, in fact, is the token by which one may know members of the heron tribe from other waterside birds on the wing."

- M. Krishnan

Wildlife Photography -
Tiger by Sabyasachi Patra



Chinkara by Shyamala Kumar



Wildlife Photography -
Elephants at Munnar by V S Sankar



Black-capped Kingfisher by Mrudul Godbole



Wildlife Photography -

Eelscape by Samrat Sarkar



Velvet Ant by Prajwal Ullal



Spare a Thought



This is the 152nd issue of IndiaWilds. An adolescent tiger on its prowl adorns the cover page of this issue.

Beauty, grace, power, awe... these and many other emotions are aroused whenever I see a tiger in the wild. Unfortunately, these days one can't help but think about the future of our wilderness and wildlife. There was a time when wildlife was numerous and human habitations were few and scattered around. The strength and power of the tiger was rightly recognised by humans and we see the tiger as the vehicle of our Goddess. However, scientists are now unanimous in their assessment that the destructive hand of man has changed the face of planet earth over the last 2000 years. Today human induced climate change has massive consequences for our natural world as well as ourselves. With the rapid increase in ambient temperatures, we are finding it difficult to live without air conditioners. How will our tigers cope up?

Diversion of forests for various industrial projects is shrinking the tiger habitat. To make matters worse, the destruction of forests have also reduced the percolation of waters and natural streams and fresh water sources are drying up at a rapid rate. Tigers dispersing from protected areas to find a territory for themselves are being mowed down by speeding vehicles in the ill-planned roads that cut through our forests. Poaching is threatening the food supply of tigers and other carnivores. In this scenario how long can our National animal survive in the wild is anyone's guess. As we visit various national parks and sanctuaries and enjoy watching the grace of this majestic animal, it has become more important than ever to raise our voice to protect our last wilderness and wildlife. Else history will not be kind to us.

Touche.

I look forward to your inputs and support in preserving the last tracts of wilderness and wildlife of our beautiful country. For other interesting articles and images check - <http://www.indiawilds.com/forums/>

To post in the IndiaWilds forums, you can register free of cost using your Full Name as user id at -

<http://www.indiawilds.com/forums/register.php>

If you are already a member of IndiaWilds and have forgotten you user id and/or password you can mail administrator@indiawilds.com

Regards,

Sabyasachi Patra

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