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INDIA STRIVING TO COMBINE SUSTAINABILITY & ECONOMIC DEVELOPMENT THROUGH WELL-DESIGNED INITIATIVES FOR INCLUSIVE DEVELOPMENT: ECONOMIC SURVEY 2019-20

Relevant for: Environment | Topic: Environmental Conservation, Sustainable Development, and EIA

Ministry of Finance

India Striving to Combine Sustainability & Economic Development Through Well-Designed Initiatives for Inclusive Development: Economic Survey 2019-20

Global Agenda of Delivering Sustainable Development Only Possible if all Nations Act Upon their Fair Share of Responsibilities

India Among Few Countries Globally to See Considerable Increase in Forest and Tree Cover To 24.56 % of Geographical Area

Burning of Agricultural Residues Still a Major Concern Despite Reduction in Recorded Burning Events

Posted On: 31 JAN 2020 1:16PM by PIB Delhi

Emphasizing the idea that wealth creation should do no harm, the Economic Survey 2019-20 tabled in Parliament today by the Union Minister for Finance & Corporate Affairs Smt Nirmala Sitharaman, highlighted several ideas on the themes of Sustainable Development and Climate Change. The survey affirmed that the Sustainable Development Goals (SDGs) constitute a befitting framework to answer the developmental challenges to achieve a sustainable future, free from social, economic, and environmental inequalities and thereby ensuring a greener and healthy planet for future generations.

Sustainable Development Goals

As per the Survey, India is striving to combine the element of 'sustainability' to its economic development through **well designed initiatives for inclusive development** enshrined in its policies like electrification of rural households, augmenting usage of renewable sources, eliminating malnutrition, eradicating poverty, increasing access to primary education to all girls, providing sanitation and housing for all, equipping young people with skills to compete in the global labour market, enabling access to finance and financial services.

India and the SDGs

The Survey underscored the fact that India has achieved considerable progress in the field of SDGs as measured by the SDG India Index 2019. As per the SDG Index, Kerala, Himachal Pradesh, Tamil Nadu, Andhra Pradesh, Telangana, Karnataka, Goa, Sikkim, Chandigarh and Puducherry are the front runners. It is **noteworthy that none of the States/UTs fall in the Aspirant category in 2019**. Overall, it is encouraging to note that **the composite score for India in the index has improved from 57 in 2018 to 60 in 2019**, indicating the impressive progress made by the country in its journey towards achieving the SDGs.



SDG Nexus: A New Paradigm Approach

The Survey further highlighted that there are **linkages among various SDGs** and these have strong impacts on reinforcement of policies. This necessitates a 'nexus' approach which in turn employs the principles of integrating management and governance across sectors and scales. As per the Survey this envisages **looking at systems instead of individual components or short-term outcomes; looking at the inter-related feedbacks from other sectors; and promoting cooperation among sectors** while reducing competition for scarce resources.

An example of such a nexus would be the **Education and Electricity nexus** wherein it has been observed that basic infrastructure like electricity, separate toilets for girls and boys in schools create a healthy and positive environment at schools. Another such nexus would be **between Health and Energy**, wherein the success of many of the health improvement schemes relies heavily on the availability of electricity at the health centers, the Survey states.

India and its Forests

The Economic survey underlined that as a responsible nation, with the introduction of various schemes, India has been continuously moving towards economic growth, keeping in mind the **imperatives of sustainable development**. It further highlighted the fact that India is among a few countries in the world where, **despite ongoing developmental efforts, forest and tree cover are increasing considerably**. The forest and tree cover have reached **80.73 million hectare which is 24.56 per cent of the geographical area of the country**. The Survey further highlighted that the States/UTs showing gain in forest cover are **Karnataka (1,025 sq. km), Andhra Pradesh (990 sq. km) and Jammu & Kashmir (371 sq. km)** whereas those showing loss in forest cover include Manipur, Meghalaya, Arunachal Pradesh and Mizoram. In the Forest Report 2019, the **total carbon stock in forest is estimated as 7,124.6 million tons, showing an increase of 42.6 million tons** as compared to the last assessment in 2017.

Agricultural Residue Burning – A Major Concern

The Survey recognizes the fact that open burning of crop residues in the agricultural fields has become a **major environmental concern**. India, being the **second largest agro-based economy** with year-round crop cultivation, generates a large amount of agricultural waste, including crop residues. Varieties of surplus crop residues are burnt especially in **northern States of Punjab, Haryana, UP and Rajasthan**. The Survey said that about **178 million tonnes of surplus crop residues are available in the country**, burning of which leads to rise in pollutant levels and deterioration of air quality.

The Survey emphasizes that agricultural residue burning **contributes significantly in PM2.5 concentrations**. The effect of stagnant atmospheric condition over Delhi during the harvest season of Kharif crop further aggravates the deterioration of the ambient air quality over the region.

The Survey suggests various methods to address this issue which include **promoting the practice of conservation of agriculture with low lignocellulosic crop residues** like rice, wheat, maize etc, **role of agricultural machineries** in helping farmers sow the seeds for the next season, creating a market for **crop residue-based briquettes & mandating nearby thermal plants** to undertake co-firing of crop-residues with coal, **special credit lines for financing farm equipment and pollution control as a parameter** for deciding incentives to States/UTs.

The Survey further highlights the Central Sector Scheme on '**Promotion of Agricultural Mechanization for In-Situ Management of Crop Residue in the States of Punjab, Haryana, Uttar Pradesh and NCT of Delhi**'. Under this scheme, agricultural machines and equipment for in-situ crop residue management such as **Super Straw Management System for Combine Harvesters, Happy Seeders, Paddy Straw Chopper, Mulcher** etc are provided with 50% subsidy to the individual farmers and 80 % subsidy for establishment of Custom Hiring Centres.

Way Forward

The Economic Survey states that increased focus on sustainability requires various actions

towards building **individual and institutional capacity, accelerating knowledge and enhancing technology transfer and deployment**, enabling **financial mechanisms**, implementing **early warning systems**, undertaking **risk management** and **addressing gaps in implementation, up scaling** and working with a **spirit of cooperative federalism** between States and Central Government. The Survey finally exhorts the **developed countries to honour their financial obligations and promises** under the multilateral environmental agreements.

RM/SC/VM/DKS

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INDIA HAS STRIVED TO FOLLOW A SUSTAINABLE GROWTH PATH ALIGNED WITH ITS NATIONALLY DETERMINED CONTRIBUTIONS (NDCS) UNDER PARIS AGREEMENT IN ACCORDANCE WITH PRINIPLES OF EQUITY AND COMMON BUT DIFFERENTIATED RESPONSIBILITIES: ECONOMIC SURVEY 2019-20

Relevant for: Environment | Topic: Environmental Conservation, Sustainable Development, and EIA

Ministry of Finance

India Has Strived to Follow a Sustainable Growth Path Aligned With Its Nationally Determined Contributions (NDCS) Under Paris Agreement in Accordance With Priniples of Equity and Common but Differentiated Responsibilities: Economic Survey 2019-20

All Urban Areas of 35 States/UTs Declared Open Defecation Free

India Is the Second Largest Emerging Green Bond Market after China

India Launched Coalition for Disaster Resilient Infrastructure (CDRI) To Promote Resilience of Infrastructure Systems in September, 2019

Posted On: 31 JAN 2020 1:16PM by PIB Delhi

Emphasizing India's Holistic approach towards tackling the issues of climate change with focus on developmental imperatives, the Union Minister for Finance and Corporate Affairs, Smt Nirmala Sitharaman tabled the Economic Survey 2019-20 in Parliament today.

The Survey states that India has strived to ensure that it follows a growth path that delivers Sustainable development and protects the environment by investing in various schemes aligned with its Nationally Determined Contribution (NDC) under Paris Agreement in accordance with principles of equity and Common but Differentiated Responsibilities.

The Economic Survey further observed that India's mitigation strategies have emphasized on clean and efficient energy system, enhanced energy efficiency, resilient urban infrastructure, safe, smart and sustainable green transportation network, planned afforestation as well as holistic participation across all sectors.

Progress in India's Policies for Sustainable Development and Climate change

The Economic Survey observes that India is on track to achieve its NDCs. The Survey further highlights the significant leap in India's renewable energy sector i.e. 83 GW targets being achieved out of aimed target of 175 GW Renewable Energy under one of the World's largest Renewable Energy expansion programs.

Further, Swachh Bharat Mission (Urban) was launched in 2014 with twin objectives of ensuring 100 percent scientific solid waste management and making urban India ODF to achieve total environmental improvement. All Urban areas of 35 States/UTs have become ODF and percentage of waste processing rose from around 18 percent to 60 percent.

The Economic Survey highlights India's decision to revise the National Action Plan on Climate Change (NAPCC) in line with NDCs to make it more comprehensive. The Survey also lauded the performance of Schemes like UJALA for LED bulb distribution which crossed 360 million, street Lighting programme under which 10 million conventional streetlights were replaced by LED streetlights resulting in saving 43 million tons of CO₂ emission.

India's Initiative at the International Stage

In the Solar Sector, the International Solar Alliance (ISA) has taken up the role of 'Enabler' by institutionalizing 30 fellowships from the member countries; of 'Facilitator' by getting the lines of credit worth US\$2 billion from EXIM Bank of India and US\$1.5 billion from Agence Francaise de Development (AFD), France; of an 'Incubator' by nurturing initiatives like the Solar Risk Mitigation Initiative and of an "Accelerator' by developing tools to aggregate demand for 1000 MW solar and 2,70,000 solar pumps.

India recently launched the Coalition for Disaster Resilient Infrastructure (CDRI) on sidelines of UN Secretary General's Climate Action Summit in September 2019. CDRI aims to promote resilience of new and existing infrastructure systems to climate and Disaster Risks to reduce the infrastructure losses from Disasters.

India recently hosted the 14th session of the Conference of Parties (COP 14) to the United Nations convention to Combat Desertification (UNCCD) from 2-13 September 2019. The New Delhi declaration: Investing in Land and Unlocking Opportunities was adopted in the COP 14. India also announced support for enhanced South-South cooperation. Global Water Action Agenda for land water management was also launched.

India's efforts towards aligning Financial System with Sustainability

The Survey observed that India has the Second largest Emerging Green Bond Market after China. The SBI entered the market with an US\$650 million Certified Climate Bond. India also joined International Platform on Sustainable Finance (IPSF) in 2019 to scale up the environmentally sustainable investments.

The Survey also expressed concern over crunch issue in climate finance .Green Climate Funds' first replenishment (2020-2023) so far witnessed 28 countries pledging resources to replenish the fund for an amount of US\$9.7 billion which is quantitatively lower than the Initial Resource Mobilization (IRM) period. The Survey further expressed a hope that India will continue to do its fair share of responsibilities while strongly calling for developed countries to take the lead.

RM/SC/VM/SG

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CLIMATE CRISIS: BUDGET MAKES THE RIGHT MOVES - EDITORIALS - HINDUSTAN TIMES

Relevant for: Environment | Topic: Environmental Conservation, Sustainable Development, and EIA

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The Union Budget, which was presented on February 1, creditably took into account one of the most pressing challenges of our time — the climate crisis. With the implementation of the Paris Agreement commitments beginning on January 1, 2021, finance minister Nirmala Sitharaman made a concrete push for solar energy and clean air and signalled the end for old and polluting thermal power plants. While the environment ministry's budget is proposed to be increased by nearly 5% to 3,100 crore over the 2,955 crore in the last year, the allocation to the ministry of new and renewable energy has been proposed to be increased by 10.62% from last year. The government also announced the expansion of the KUSUM scheme to enable about two million new farmers to install standalone solar pumps. Importantly, the finance minister also emphasised on enabling farmers to use their barren lands for installing grid-connected solar pumps.

These steps are welcome. India is a climate-vulnerable country, and the nation must opt for a greener economic path if it wants to avoid the deleterious effects of changing climate, and also to meet the 2030 Sustainable Development Goals. However, the budget, many experts feel missed out the replenishment of the much-needed National Adaptation Fund for Climate Change.

The fight against the climate crisis will be a long-drawn affair. But, as the minister said, India has submitted its Nationally Determined Contribution, under the Paris Agreement, on a "best effort" basis, bearing in mind the development imperative of the country. She also promised that the government is committed to taking actions in various sectors to reduce fossil fuel consumption. This promise to stay the course is commendable, considering India's needs to grow and pull people out of poverty.

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STATUS OF IMPLEMENTATION OF EMERGENCY RESPONSE SUPPORT SYSTEM (ERSS)

Relevant for: Environment | Topic: Disaster and disaster management

Ministry of Home Affairs

Status of implementation of Emergency Response Support System (ERSS)

Posted On: 04 FEB 2020 2:40PM by PIB Delhi

Union Minister of State for Home Affairs, Shri G Kishan Reddy, in a written reply in Lok Sabha to a question regarding the implementation of the Emergency Response Support System (ERSS) said that the Ministry of Home Affairs is implementing Emergency Response Support System (ERSS) project through States/ Union Territories. ERSS seeks to enable a pan-India, single, internationally recognized number i.e. 112 based emergency response mechanism for various emergencies, including police, medical and fire, with computer-aided dispatch of field resources. Addition of other emergency services is a function of requirement and preparedness of States/ Union Territories. 112 service is accessible through call, SMS, e-mail, panic button and a 112 India mobile app.

All the States and Union Territories in the country have agreed to implement single number 112 based Emergency Response Support System (ERSS). This system has been made operational in 28 States/Union Territories and operationalization of ERSS in the States of Assam, Bihar, Haryana, Jharkhand, Meghalaya, Maharashtra (excluding Mumbai), Manipur, Odisha, Sikkim and West Bengal is at various stages of completion.

VG/SNC/HS

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'HABITAT LOSS FELLED LEOPARDS'

Relevant for: Environment | Topic: Biodiversity, Ecology, and Wildlife Related Issues

Conflicts and habitat loss are major threats to the health of leopard populations.

India's leopard population may be only a tenth of what it was a little over a century ago, experiencing catastrophic declines due to human pressures. Given the threats the animal faces – conflicts with humans, poaching, habitat loss and availability of prey – a group of scientists with new insights on loss of leopard abundance say that an initiative similar to 'Project Tiger' is required for the cat.

The leopard population, perceived to be stable due to broad geographic distribution, suffered a possibly human-induced population decline of 75% to 90% between 120 and 200 years ago, the scientists propose, in a paper titled, 'Genetic analyses reveal population structure and recent decline in leopards (*Panthera pardus fusca*) across the Indian subcontinent' published in the journal *PeerJ – Life and Environment* on Friday.

Scientists from the Centre for Wildlife Studies (CWS India) and the Wildlife Institute of India (WII) used genetic data from leopards from across the subcontinent to investigate population structure and patterns of decline. They probed the demographic history of each sub-population and compared genetic decline analyses with countrywide local extinction probabilities.

The authors argue that the population decline in a species seen as wide-ranging and locally abundant suggest that leopards demand attention just like tigers.

Authors Supriya Bhatt, Suvankar Biswas, Bivash Pandav and Samrat Mondol from WII, and Krithi K. Karanth from CWS India, collected faecal samples from the Terai-Arc landscape of northern India and identified 56 individuals using a panel of 13 microsatellite markers, and merged this data with those of 143 other leopards. Genetic analyses showed four sub-populations — Western Ghats, Deccan Plateau-Semi Arid, Shivalik and Terai region with high genetic variation.

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WHY DOES THE ENVIRONMENT MINISTRY WANT TO REGULATE RO-BASED WATER FILTRATION SYSTEMS?

Relevant for: Environment | Topic: Environmental Pollution - Air, Water, Soil & E-waste

The story so far: The [Union Environment Ministry has issued a draft notification](#) that seeks to regulate membrane-based water filtration systems in areas where the source of water meets drinking water norms of the Bureau of Indian Standards. This primarily affects reverse osmosis (RO)-based water filtration systems and the rules, at least in letter, effectively prohibit homes from installing domestic RO systems.

RO was originally a technology devised to desalinate sea water. The idea exploits the principle of osmosis. Take a tube, twist it into a 'U'-shape and insert a semi-permeable membrane (a material with very small holes that will allow only certain molecules to filter through) at the point where the tube curves. Fill half the tube with salt water and the other with freshwater. Over time, fresh water will cross over into the salty arm until the proportion of salt and water in both arms is the same. This is due to osmotic pressure which dilutes a region with a higher concentration of solute (in this case, the salt).

Say you wanted to readjust this tube and have all the salt in one arm and pure water in the other. You would need to create some external pressure that will counter the osmotic pressure and suck all the water from the salty arm into the freshwater arm while leaving the salt behind. This is the essential principle of an RO system.

RO desalination came about in the late 1950s and primarily in large industrial settings to convert brackish sea water into potable drinking water.

However, it is possible to deploy a wide array of membranes and multiple stages of filters to filter a wide variety of solutes — arsenic, fluoride, hexavalent chromium, nitrates, bacteria — that come mixed in water. This has led to an industry of home-RO systems that are installed in a multiplicity of ways to provide potable water.

Centre to bar domestic RO systems in places where tap water meets BIS norms

To create external pressure, RO relies on a pump and electric motors. It uses “activated carbon” components, such as charcoal and carbon black that can filter out contaminants as well as organic substances such as bacteria. It all depends on the filtering material and the number of filters that incoming tap water must pass through.

In making tap water pass through multiple stages of cleaning, RO systems end up wasting a lot of water. Anywhere between three-five times more water is wasted by them than they produce and given the challenges that cities and government face in providing potable water, environmentalist groups have convinced the National Green Tribunal to ban the use of RO systems in Delhi. It is as part of this legal dispute, which began in March 2019 that led the Environment Ministry to move to regulate RO systems.

Another concern with RO is that it filters out calcium, zinc, magnesium, which are essential salts needed by the body; drinking such water over time could be harmful. However, many manufacturers claim to overcome this challenge by “post-treatment”. The average RO system only aims to reduce Total Dissolved Solids, ensure water is odourless and has a pH from 6.5-

8.5. The National Institute of Virology (NIV) claimed that most filtration methods did not eliminate Hepatitis E virus. A combination of filtration systems can eliminate most contaminants.

Purifying water: On draft notification on RO systems

But opponents of RO systems say this increases costs and reduces the incentive for public-funded water distribution systems to supply clean water to the vast majority of the country who can ill-afford such systems.

Under the Jal Jeevan Mission, the Prime Minister has committed to provide tap water to the entire country by 2024. However, studies show that the existing quality of piped water is deficient in much of India. Last year, the Department of Consumer Affairs undertook a study through the Bureau of Indian Standards (BIS) on the quality of piped drinking water being supplied in the country. In Delhi, all samples drawn from various places did not comply with the BIS's requirements. Most from Mumbai were found to comply, the report claimed. In Hyderabad (Telangana), Bhubaneswar (Odisha), Ranchi (Jharkhand), Raipur (Chhattisgarh), Amravati (Maharashtra) and Shimla (Himachal Pradesh), one or more samples did not comply and none of the samples drawn from 13 State or Union Territory capitals, Chandigarh, Thiruvananthapuram, Patna, Bhopal, Guwahati, Bengaluru, Gandhinagar, Lucknow, Jammu, Jaipur, Dehradun, Chennai, Kolkata, complied with the requirements.

Countries with a high development index tend to have good quality tap water. Finland, Denmark, Switzerland, Germany, United Kingdom have access to freshwater lakes or glacier melt — extremely clean and mineral rich. This water is further filtered. Singapore and Israel rely on extensive recycling and even making sewage water fit for drinking. The limited population pressure, compared to India, as well as public resources allow these countries to ensure clean drinking water. But for much of the world, access to clean piped water from the public supply remains a challenge.

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In one week, the number of people found infected by the novel coronavirus grew from 332 people in 13 Chinese provinces and four nations to 4,474 cases in 30 provinces and 18 countries

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CAT CONUNDRUM: THE HINDU EDITORIAL ON CHEETAHS IN INDIAN FORESTS

Relevant for: Environment | Topic: Biodiversity, Ecology, and Wildlife Related Issues

The Supreme Court's order [enabling the introduction of exotic cheetahs](#) to an Indian habitat on an experimental basis has naturally led to renewed enthusiasm among wildlife lovers, who see in it a potential bulwark against creeping pressures on habitats. As a graceful animal that was hunted and extirpated in the country in the 20th century, the cat has periodically inspired campaigns for a fresh introduction mainly inspired by the nationalistic sense of loss.

Remarkably, the antiquity of the high-speed hunter that formed part of Mughal hunting groups has been a matter of scientific debate, with much literature tracing the origins of the Asiatic cheetah to about 200,000 years ago, and one recent hypothesis arguing, in contrast, that it appears to be a relatively modern alien import to India. With a group surviving in Iran, there is growing interest in preserving the Asian population. Whatever its origins, it is illogical to expect that a new population, whether from Africa or Iran, will fare better today than in the past. It is worth recalling that the same court observed in its 2013 order restraining the Environment Ministry from importing African cheetahs into Kuno, Madhya Pradesh, that there are many seriously threatened Indian species such as the lion, the Great Indian Bustard, Bengal florican, the dugong, and Manipur brow-antlered deer which deserve immediate conservation action.

[Also read: What drove the charismatic cheetah to extinction in India?](#)

Any move to rewild India's threatened natural spaces with cheetahs, which require large grassland ranges, should consider the viability of such a programme. Man-animal conflicts is an area of concern, as a growing human population lives cheek by jowl with tigers, leopards and long-ranging creatures such as elephants. While the Court has appointed an expert committee to guide and direct the experiment proposed by the National Tiger Conservation Authority, it needs a broader scientific inquiry into the added pressures that a small group of introduced predators will impose on an ecosystem, crucially on the prey base that currently sustains tigers and leopards. Any attempt at expensive rewilding will be negated by parallel efforts to liberalise environmental clearances for extractive industries in and around forests. Material extraction including minerals is going on close to protected areas, and fresh roads are sought to be built through even tiger territory, making pristine rewilding an incongruous concept. Moreover, cheetahs are genetically fragile and lose cubs in a litter prematurely, affecting the establishment of a viable population. Restoring ecology and diverse species cannot be a serious goal in the absence of iron-clad protections to existing parks, sanctuaries, migratory corridors, and buffer areas. Preserving wild spaces with surviving species should be the first order priority.

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ARCTIC ICE MELT IS DISRUPTING KEY OCEAN CURRENT, MAY ALTER CLIMATE IN WESTERN EUROPE: STUDY

Relevant for: Environment | Topic: Environmental Degradation - GHGs, Ozone Depletion and Climate Change

Heating up: A file photo of melt ponds on the Arctic sea ice. | Photo Credit: [STEFAN HENDRICKS](#)

Researchers have unravelled how an ocean water current, which plays a key role in keeping Western Europe warm, could be altered by an influx of unprecedented amounts of cold, fresh water from melting ice in the Arctic.

According to the scientists, including those from NASA's Jet Propulsion Laboratory in the US, a seawater current called the Beaufort Gyre keeps the polar environment in balance by storing fresh water near the surface of the Arctic ocean.

Wind blows the gyre in a clockwise direction around the western Arctic Ocean, north of Canada, where it naturally collects fresh water from the melting of glaciers, and river runoff, the study, published in the journal *Nature Communications*, noted.

The researchers said this fresh water is important in the Arctic since it floats above the warmer, salty water, and helps protect the sea ice from melting - in turn regulating the Earth's climate.

As the fresh water is slowly released by the gyre into the Atlantic Ocean over a period of decades, it allows the Atlantic Ocean currents to carry it away in small amounts.

However, since the 1990s, the researchers said, the gyre has accumulated a large amount of fresh water - 8,000 cubic kilometres - or almost twice the volume of Lake Michigan in the US.

According to the new study, the cause of this gain in freshwater concentration is the loss of sea ice in summer and autumn.

Due to this decades-long decline of the Arctic's summertime ice cover, the Beaufort Gyre is more exposed to the wind, which has spun the gyre faster, trapping the fresh water in its current, the scientists noted.

The westerly winds have also persistently dragged the current in one direction for over 20 years, increasing its speed and size, as well as preventing the fresh water from leaving the Arctic Ocean, they said.

Where the winds used to change direction every five to seven years, this decades-long western wind is unusual for the region, the study noted.

If the wind changes direction again, the scientists said, it could reverse the current, pulling it counterclockwise and releasing the water it has accumulated all at once.

"If the Beaufort Gyre were to release the excess fresh water into the Atlantic Ocean, it could potentially slow down its circulation. And that would have hemisphere-wide implications for the climate, especially in Western Europe," said Tom Armitage, lead author of the study from

NASA's Jet Propulsion Laboratory.

The release of fresh water from the Arctic Ocean to the North Atlantic can change the density of surface waters, the study warned.

Water from the Arctic loses heat and moisture to the atmosphere, and sinks to the bottom of the ocean, where it drives water from the north Atlantic Ocean down to the tropics in a conveyor-belt-like current called the Atlantic Meridional Overturning Circulation, the scientists explained.

This current helps regulate the planet's climate by carrying heat from the tropically-warmed water to northern latitudes like Europe and North America, and if it is slowed down, it could negatively impact all life forms, especially marine creatures, the study noted.

"We don't expect a shutting down of the Gulf Stream, but we do expect impacts. That's why we're monitoring the Beaufort Gyre so closely," said Alek Petty, a co-author of the study from NASA's Goddard Space Flight Center in the US.

The study also found that, although the Beaufort Gyre is out of balance due to the added energy from the wind, it expels that excess energy by forming small, circular eddies of water.

While the increased turbulence has helped keep the system balanced, it may also lead to further ice melt since it mixes layers of cold, fresh water with relatively warm, salt water below.

This could, in turn, lead to changes in how nutrients and organic material in the ocean are mixed, significantly affecting the food chain and wildlife in the Arctic, the researchers explained.

"What this study is showing is that the loss of sea ice has really important impacts on our climate system that we're only just discovering," said Petty.

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INDIA MOVES TO INCLUDE ELEPHANT, BUSTARD IN GLOBAL CONSERVATION LIST

Relevant for: Environment | Topic: Biodiversity, Ecology, and Wildlife Related Issues

A herd of wild elephant searching for food in a forested area near Panbari village, on the outskirts of Guwahati. | Photo Credit: [AP](#)

India will be moving to include the Asian Elephant and the Great Indian Bustard in the list of species that merit heightened conservation measures. The list will be debated at the 13th Conference of Parties (COP) of the Convention on the Conservation of Migratory Species of Wild Animals (CMS), an environment treaty under the United Nations Environment Programme (UNEP).

The COP is scheduled to be organised from February 17 to 22 in Gandhinagar, Gujarat. There are 130 parties to the convention and India has been a member since 1983.

“We expect the COP to clear the inclusion of the Great Indian Bustard and the elephant as it has been vetted by technical experts and reflects the consensus of several countries. The elephant faces risks particularly in neighbouring Bangladesh and Nepal,” Soumitra Dasgupta, a senior official in the Union Environment Ministry told *The Hindu*.

India is home to several migratory species of wildlife, including the snow leopard, Amur falcons, bar-headed geese, black-necked cranes, marine turtles, dugongs and hump-backed whales.

Having the elephant and the Great Indian Bustard in the list — more formally known as Appendix 1 — would coax countries neighbouring India, where wild animals such as tigers and elephant foray into, to direct more resources and attention to protecting them. There are now 173 species in the Appendix 1.

Representatives from across the world, and conservationists and international NGOs working in wildlife conservation, are expected to attend the COP, which will also see Prime Minister Narendra Modi address the gathering via video conference.

The Union Environment Ministry reports India as having 29,964 elephants according to the Project Elephant Census in 2017. The pachyderm merits the highest level of protection, or Schedule 1, under the Wildlife Protection Act.

India has been designated the President of the COP for the next three years. “The government of India has been taking necessary actions to protect and conserve migratory marine species. Seven species that include Dugong, Whale Shark, Marine Turtle (two species), have been identified for preparation of Conservation and Recovery Action Plan,” the Ministry said in a statement.

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SCIENTISTS RADIO-TAG INDIAN PANGOLIN

Relevant for: Environment | Topic: Biodiversity, Ecology, and Wildlife Related Issues

Scientists have, for the first time, radio-tagged the Indian pangolin, an endangered animal, that is rarely sighted in forests here.

The Indian pangolin, which resembles an ant-eater but dons a thick scaly skin, is hunted for meat and use in traditional Chinese medicine. Researchers say tagging the animal will help understand the habits of the reclusive, nocturnal animal.

Radio-tagging involves attaching a transmitter to an animal to monitor its movements. Several wild animals — tigers, leopards and migratory birds — have been tagged over decades.

“The Special Task Force of the Madhya Pradesh Forest Department has been actively working to curb wildlife poaching in the State. In recent years, we have successfully busted pangolin-smuggling syndicates that involved poachers and smugglers from more than nine States,” said Rajesh Shrivastav, Chief Wildlife Warden of Madhya Pradesh.

Pangolins are among the most trafficked wildlife species in the world. The International Union for the Conservation of Nature says these toothless animals have seen a rapid reduction in population. The projected population declines range from 50% to 80 % across the genus.

Out of the eight species of pangolin, the Indian Pangolin and the Chinese Pangolin are found in India. Both these species are listed under Schedule I Part I of the Wildlife (Protection) Act, 1972. “In anti-poaching operations, during which pangolin scales are recovered, those animals are already dead. Where live pangolins are involved, globally there is about 50% death rate among released pangolins. Given that several pangolins are rescued in the central Indian landscape, this new initiative by the Madhya Pradesh Forest Department and the Wildlife Conservation Trust (WCT) is to ensure better survival rates of these released individuals in the wild, and thus have a positive impact on the population of this endangered species,” said Aditya Joshi, wildlife biologist with the WCT, who is overseeing this project.

World Pangolin Day, celebrated on the third Saturday in February, is an international attempt to raise awareness of pangolins and bring together stakeholders to help protect these unique species from extinction.

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Heatwaves and floods which used to be 'once-in-a-century' events are becoming more regular occurrences, says an annual assessment of the Earth's climate by the World Meteorological Organization

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THE URBAN SONGBIRD: ON THE RED-WHISKERED BULBUL

Relevant for: Environment | Topic: Biodiversity, Ecology, and Wildlife Related Issues

The Red whiskered Bulbul | Photo Credit: [Kiran Dhukuchhu/Wikimedia Commons](#)

Have you ever wondered what a bird with whiskers would look like? The Red-whiskered Bulbul (*Pycnonotus jocosus*) is a sprightly and commonly found garden songbird that likes urban gardens, scrubland found on the outskirts of the city, and even humans. This bird was often traded in Asia, so a number are escapees.

A slender medium-sized bird (20 cm), it is dark brown above, white below, with a conspicuous white patch on the cheeks and an elegant black crest. It has crimson tufts below the eye, a crimson red vent (undertail coverts), black beak and legs.

The bird's diet consists of mostly fruits and the unfortunate odd invertebrate. You'll find them in pairs or small groups in gardens with fruiting trees. Their flight is strong, but slow and jerky. Their lively nature always livens up gloomy days. Their calls include loud and musical notes that sound like 'pettigroo' or 'kick-pettigroo'.

For someone who finds urban ecology fascinating, full of surprises and of prime importance, I went to the length of mapping their seasons for a year. When they start singing more than usual, we may assume that the bird is trying to pair up and the breeding season is about to commence. This is usually from February to May.

However, I noticed a bird singing away in my backyard in January last year, and observed that it was trying to woo a female nearby. As the days went by, I saw them both spending more time with each other and indulging in theatrics together, which seemed to give life to the garden. Soon I heard less of them and later, in April, saw two immature birds being guarded by the parents. To know that the birds had successfully bred in my own backyard, brought me immense happiness.

The next two months went in observing what the parents taught the two novices. The life lesson of hunting or being hunted has always been transformative in a bird's life.

They move away slowly to areas with greater tree density in the city post the monsoon season and then you see much less of them until the next breeding season. The nest is cup-shaped, loosely but strongly built of grass, roots, fibres, thin stalks and is lined with finer grass stems and roots. They are mostly placed in bushes.

Seeing them grow every day were the happiest days spent last spring. I hope you have your own Red-whiskered Bulbul moments this year.

The writer is the founder of NINOX - Owl About Nature, a nature-awareness initiative. He is the Delhi-NCR reviewer for Ebird, a Cornell University initiative, monitoring rare sightings of birds. He formerly led a programme of WWF India.

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Heatwaves and floods which used to be 'once-in-a-century' events are becoming more regular occurrences, says an annual assessment of the Earth's climate by the World Meteorological Organization

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INDIA SHOULD PREPARE FOR EXTREME WEATHER EVENTS - EDITORIALS - HINDUSTAN TIMES

Relevant for: Environment | Topic: Environmental Degradation - GHGs, Ozone Depletion and Climate Change

Feb 17, 2020-Monday

-°C

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One extreme weather event happened almost every month in India in 2018 and 2019, according to the *State of India's Environment 2020* report, released by the Centre for Science and Environment and *Down To Earth*, last week. In terms of deaths, 48% of the deaths in Asia due to extreme weather events happened in India (2018-19). In 2019, there were more deaths in India, even though the number of such events was fewer: 2,038 people died in 2019 due to extreme weather events, compared to 1,396 in 2018. While such events have always occurred, the report added, their character is changing, and there is now a clear imprint of global warming on them.

While the impact of the climate crisis is being seen across sectors — affecting health, education, livelihoods — several studies point out that a clear link is emerging between the climate crisis and social instability. A 2018 study, *Climate Change and Violent Conflict: Sparse Evidence from South Asia and Southeast Asia*, by the Stockholm International Peace Research Institute said that as the effects of climate crisis on livelihoods become more pronounced, support for rebel groups is likely to shoot up.

In India, climate migration is leading to a complicated and challenging situation. There is growing nativism and competition for resources on one hand, which has led to an anti-migrant sentiment, even when it comes to citizens from elsewhere in the country. But on the other, the climate crisis is leading to greater migration and mobility. These two parallel developments can lead to a crisis unless handled with care.

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INDIA'S BIRD POPULATION SUFFERS LONG-TERM DECLINE

Relevant for: Environment | Topic: Biodiversity, Ecology, and Wildlife Related Issues

Facing threats: Nilgiri Pipit, a species of High Conservation Concern is currently suffering a decline. File Photo

Over a fifth of India's bird diversity, ranging from the Short-toed Snake Eagle to the Sirkeer Malkoha, has suffered strong long-term declines over a 25-year period, while more recent annual trends point to a drastic 80% loss among several common birds, a new scientific report jointly released by 10 organisations said on Monday.

The State of India's Birds 2020 (SolB) assessment raises the alarm that several spectacular birds, many of them endemic to the sub-continent, face a growing threat from loss of habitat due to human activity, widespread presence of toxins, including pesticides; hunting and trapping for the pet trade. Diminishing population sizes of many birds because of one factor brings them closer to extinction because of the accelerated effects of others, the report warned. For every bird species that was found to be increasing in numbers over the long term, 11 have suffered losses, some catastrophically.

Rare urban sparrows

Of 101 species categorised as being of High Conservation Concern — 59 based on range and abundance and the rest included from high-risk birds on the IUCN (International Union for Conservation of Nature) Red List — endemics such as the Rufous-fronted Prinia, Nilgiri Thrush, Nilgiri Pipit and Indian vulture were confirmed as suffering current decline, and all except 13 had a restricted or highly restricted range, indicating greater vulnerability to man-made threats.

Among widely known species, the common sparrow, long seen as declining in urban spaces, has a stable population overall, although the data from major cities such as Mumbai, Delhi, Kolkata, Bengaluru, Hyderabad and Chennai confirm the view that they have become rare in cities and urban areas. Among the possible reasons for this is a decrease in insect populations as well as nesting places, but there is no conclusive evidence in the scientific literature on radiation from mobile phone towers playing a part.

The SolB was produced using a base of 867 species, and analysed with the help of data uploaded by birdwatchers to the online platform, eBird. Adequate data on how birds fared over a period of over 25 years (long-term trend) are available only for 261 species. Current annual trends are calculated over a five-year period.

Looking at the health of avifauna based on scientific groupings such as raptors (birds of prey), habitat, diet, migratory status and endemism (exclusively found in an area), the analysis concludes that raptors overall are in decline, with 'open country' species such as the Pallid and Montagu Harriers, White-bellied Sea Eagle and Red-necked Falcon suffering the most.

The severe long-term decline of vultures, recorded and analysed for years now, is underscored by the report.

Migratory shorebirds, along with gulls and terns, seem to have declined the most among waterbirds, the report states, consistent with population trends among Arctic-breeding

shorebirds based on independent assessments.

Habitats need help

Forward-looking actions suggested by the report include an update to the Red List of endangered species published by IUCN using the SoIB, collaborative research by scientists and citizens and urgent emphasis on habitats of species of high concern, notably grasslands, scrublands, wetlands and the Western Ghats.

Suhel Quader, a member of the SoIB team, noted that the report was a first step and an assessment of trends rather than causes. "Habitat loss and fragmentation are known causes of species declines, but targeted research is needed to pinpoint causes of decline", he said.

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PRIME MINISTER INAUGURATES 13TH CONFERENCE OF PARTIES ON CONSERVATION OF MIGRATORY SPECIES OF WILD ANIMALS AT GANDHINAGAR

Relevant for: Environment | Topic: Biodiversity, Ecology, and Wildlife Related Issues

Prime Minister's Office

Prime Minister inaugurates 13th Conference of Parties on Conservation of Migratory Species of Wild Animals at Gandhinagar

India doubled the tiger population two years before the deadline: PM

India to launch Marine Turtle Policy and Marine Standing Management Policy to address pollution caused by micro plastics

Posted On: 17 FEB 2020 1:19PM by PIB Delhi

Prime Minister Shri Narendra Modi inaugurated the 13th Conference of Parties on Conservation of Migratory Species of Wild Animals at Gandhinagar through video conferencing.

Speaking on the occasion, the Prime Minister asserted that India is one of the most diverse countries of the world. He added that with 2.4% of the world's land area, India contributes about 8% of the known global biodiversity. The Prime Minister stressed that for ages, conservation of wildlife and habitats has been part of the cultural ethos of India, which encourages compassion and co-existence. "Inspired by Gandhi ji, the ethos of non violence and protection of animals and nature have been suitably enshrined in the Constitution of India and is reflected in several laws & legislations," he added.

The Prime Minister spoke of the increase in India's forest cover, which currently stands at 21.67% of the total geographical area of the country. He mentioned how India has been championing the cause of "climate action" through conservation, sustainable lifestyle and green development model. In this context, he mentioned the push towards Electric Vehicles, Smart Cities, and Conservation of Water. He said India is one of the few countries whose actions are compliant with the Paris Agreement goal of keeping rise in temperature to below 2 degree Celsius.

The Prime Minister explained how focussed species conservation programmes have shown encouraging results. "India has achieved its target of doubling the number of

tigers from 1411 in 2010 to 2967, two years before the committed date of 2022,” he observed. He called upon Tiger Range Countries present at the Conference, and also others, to come together to strengthen tiger conservation through sharing of benchmarking practices. He spoke of initiatives taken by India for conservation of Asian elephants. He also spoke at length of efforts to protect the Snow Leopard, the Asiatic Lion, the one-horned rhinoceros, and the Great Indian Bustard. He also noted that the mascot ‘GIBI - The Great’, is a tribute to the Great Indian Bustard.

He also observed that the CMS COP 13 Logo is inspired by the traditional ‘KOLAM’ from southern India, which has a profound significance in the context of living in harmony with nature. He said the mantra of “Athithi Devo Bhava”, has been reflected in the theme for the CMS COP 13: “Migratory species connect the planet and together we welcome them home.”

The Prime Minister elaborated on some of India’s priority areas, while holding the Presidency of this convention for the coming three years.

Noting that India is a part of the Central Asian Flyway for migratory birds, the Prime Minister said that with a view to conserve birds along the Central Asian Flyway and their habitats, India has prepared a ‘National Action Plan for conservation of Migratory Birds along the Central Asian Flyway’. “India would be happy to facilitate preparation of Action Plans for other countries in this regard. We are keen to take the conservation of migratory birds to a new paradigm with active cooperation of all the Central Asian Flyway Range Countries,” he added.

The Prime Minister said India proposes to strengthen its association with the ASEAN and East Asia Summit countries. This would be in sync with the Indo Pacific Ocean Initiative (IPOI), wherein India will be playing a leadership role, he added. India by 2020, will be launching its Marine Turtle Policy and Marine Stranding Management Policy, the Prime Minister asserted. He said this will also address the pollution caused by microplastics. Single use plastics have been a challenge for environment protection and we in India have been on a mission mode to reduce its usage, the Prime Minister said.

Mentioning that several Protected Areas in India share common boundaries with the Protected Areas of neighbouring countries, the Prime Minister said that cooperation in conservation of wildlife through establishment of ‘Trans boundary Protected Areas’, would lead to very positive outcomes.

Reiterating the Union Government’s commitment to the path of sustainable development, the Prime Minister mentioned the release of the Linear Infrastructure Policy Guidelines to tailor development in ecologically fragile areas.

The Prime Minister explained how, in the spirit of “Sabka Saath, Sabka Vikaas, Sabka Vishwaas”, millions of people living in vicinity of forest area in the country have now been integrated in the form of Joint Forestry Management Committees and Eco Development Committees and associated with the protection of forest and wildlife.

VRRK/AK

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INDIA AND NORWAY TO WORK JOINTLY TOWARDS MITIGATING MARINE PLASTIC LITTER AND MICROPLASTICS;ISSUE JOINT STATEMENT.

Relevant for: Environment | Topic: Environmental Conservation, Sustainable Development, and EIA

Ministry of Environment, Forest and Climate Change

India and Norway to work jointly towards mitigating marine plastic litter and microplastics;Issue Joint statement.

2020 a super year for Environment, super year of Biodiversity and will be a deciding year for the course of action for the decade: Union Environment Minister

Posted On: 16 FEB 2020 5:02PM by PIB Delhi

India marks the beginning of super year of Biodiversity with the hosting of the 13th Conference of Parties (COP) of the Convention on the Conservation of Migratory Species of Wild Animals (CMS), an environmental treaty under the aegis of United Nations Environment Programme, from 17th to 22nd February 2020 at Gandhinagar in Gujarat.

Addressing a press conference, Union Environment Minister Shri Prakash Javadekar said that the year 2020 is a super year of Environment and will set the tone and tenor for the decade ahead. Highlighting the urgent nature of global environment issues including marine plastic litter, plastic pollution and microplastics, the Union minister said the issues cannot be solved by any one country alone.



On the side-lines of the COP, the Union Minister met a delegation led by Norwegian Minister of Climate and Environment, H.E. Mr. Sveinung Rotevan. India and Norway today agreed to jointly tackle concerns related to oceans, environment and climate matters.



The text of the Joint statement is as follows:

India – Norway Joint Statement on Climate and Environment

1. Meeting at the beginning of the '2020 Super Year' for the environment, the Ministers stressed that they will do their share to ensure that the 2020s will be a decade of rapid action on climate and environment.
2. The two sides expressed interest to continue and strengthen the mutually beneficial cooperation on environment and climate between the two countries, including on ocean affairs.
3. Actions that target climate change and air pollution at the same time pose a win-win situation. The two sides recognized that such actions should be stepped up, and agreed to work together to raise this agenda.
4. The Ministers recognized that the Kigali Amendment to the Montreal Protocol for phasing down use of Hydrofluorocarbons (HFCs) could prevent up to 0.40C of warming by end of the century, Further, noting that universal ratification of Kigali Amendment to the Montreal Protocol shall allow realization of its full potential.

5. The Ministers noted the results of the projects supported by Norway on issues / aspects related with phase down of HFCs. It was agreed to continue such projects for facilitating a smooth transition towards energy efficient solutions and technologies while phasing down HFCs.
6. If managed properly, the ocean holds the key to meeting many of the Sustainable Development Goals. Integrated ocean management is central to achieving a sustainable blue economy. In 2019 Prime Minister Modi and Prime Minister Solberg welcomed the signing of the MoU on India-Norway Ocean Dialogue and the establishment of the Joint Task Force on Blue Economy for Sustainable Development. The two Ministers were pleased with the progress that has been made under this MoU, including the establishment of the Marine Pollution Initiative. They were particularly satisfied that Norway and India will sign a Letter of Intent on integrated ocean management including sustainable Blue Economy initiatives.
7. The Ministers also noted the importance of delivering concrete, scalable solutions for ocean health and wealth at the UN Ocean Conference in Lisbon on June 2020.
8. The Ministers further noted the importance of sustainable management of chemicals and waste and welcomed the cooperation between India and Norway on the implementation of the Stockholm Convention on Persistent Organic Pollutants and on the minimisation of discharge of marine litter.
9. The Ministers emphasized a shared understanding of the global and urgent nature of marine plastic litter and microplastics and underlined that this issue cannot be solved by any one country alone. They are committed to supporting global action to address plastic pollution and exploring the feasibility of establishing a new global agreement on plastic pollution.
10. The Ministers agreed to support and work together with other political leaders to prompt a global and effective response to curb the direct and indirect drivers of biodiversity loss. They agreed to work together to deliver an ambitious, strong, practical and effective global biodiversity framework at COP15 of CBD to be held in Kunming, China, in 2020.
11. The Ministers further discussed the conservation of migratory species of wild animals. The Ministers recognized the importance of integrating ecological connectivity into the post-2020 global biodiversity framework.
12. The Ministers stressed that international supply chains and finance must de-invest from deforestation and destruction of nature and invest in companies and projects that improve smallholder livelihoods while promoting sustainable production and consumption. They

agreed to continue the discussion on forests and deforestation free supply chains.

13. The Ministers stressed that the fifth United Nations Environment Assembly of the United Nations Environment Programme offers a good opportunity to call for greater international action on several environmental issues, in particular strengthening action for nature to achieve the Sustainable Development Goals.

14. Minister Rotevatn thanked Minister Javadekar for the great hospitality extended to him and his delegation during the visit. He invited Minister Javadekar to visit Norway and the Arctic, to further strengthen the collaboration between India and Norway on climate and environment.

15. Norway and India will explore areas of cooperation in forestry and linking the same with climate change

Mr. Sveinung Rotevan

Mr. Prakash Javadekar

Minister of Climate and the Environment
Change

Minister of Environment Forest and Climate

Government of Norway

Government of India

The Opening Ceremony and Plenary session of the COP will take place on 17th February followed by Side Events and Working Group meetings till the Closing Ceremony on 22nd February. Prime Minister Narendra Modi will inaugurate the COP 13 via video conferencing. Numerous national and international organizations will showcase best practices in wildlife conservation during the course of the conference.





As the host, India shall be designated as the Presidency during the intersessional period following the meeting. The COP Presidency is tasked to provide political leadership and facilitate positive outcomes that further advance the objectives of the Convention, including steering efforts towards implementing the Resolutions and Decisions adopted by the Conference of Parties.

Migratory species of wild animals move from one habitat to another during different times of the year, due to various factors such as food, sunlight, temperature, climate, etc. The movement between habitats, can sometimes exceed thousands of kilometers/miles for some migratory birds and mammals. A migratory route will typically have nesting sites, breeding sites, availability of preferred food and requires the availability of suitable habitat before and after each migration.

India is home to several migratory species of wildlife including snow leopard, Amur falcons, bar headed Geese, black necked cranes, marine turtles, dugongs, humpbacked whales, etc.

GK

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BIRDS HIT: THE HINDU EDITORIAL ON STATE OF INDIAN BIRDS

Relevant for: Environment | Topic: Biodiversity, Ecology, and Wildlife Related Issues

Birds are under increasing pressure from human activity, struggling to survive as habitat loss, pesticides, hunting and trapping for the pet trade push them closer to the edge. Once-thriving endemic or migrant bird populations have been decimated over the past quarter century in India, as the scientific report, [State of India's Birds 2020](#), points out. The analysis, produced by 10 globally influential organisations, is a major addition to ornithology. It is a rare synthesis of scientific understanding and citizen-led initiatives, using over 10 million observations made by over 15,500 bird watchers, achieving what would be difficult for small groups of researchers working alone. What emerges is an alarming picture of long-term declines of several species for which enough data is available over a 25-year period, as well as a more recent trend of annual losses. Data inadequacies have led to the exclusion of many species. Some bird species assessed as 'least concern' by the IUCN, were found in peril in India. Remarkably, in spite of having a rich ornithological tradition, only 261 species out of 867 spotted qualified for a full analysis, based on robust long-term data; 52% of them are now classified as being of 'high concern'. The heartening news is that sparrow numbers remain stable overall, although the bird has largely disappeared from some of the big cities. But the Western Ghats offer bleak prospects, and the abundance index of 12 endemic species there has dropped by 75% since 2000. The fortunes of the Nilgiri Pipit, Nilgiri Thrush and several Sholakilis are tied to the survival of the high shola forest-grasslands. Equally critical to some species, such as the Hodgson's bushchat wintering away from Mongolia, is the protection of terai grasslands in Uttar Pradesh, Bihar, and the northeastern States.

India's conservation community expects the Environment Ministry, which released the status report at the global conference of the Convention on the Conservation of Migratory Species of Wild Animals at Gandhinagar, Gujarat, to secure a future for birds. Resolute steps to protect forests and other habitats will confer multiple benefits, protecting other myriad species too. The latest report is refreshing as it taps into citizen science for good data and should serve as a foundation for further collaborative work. It is essential to revive the Great Indian Bustard, now pushed to precariously low numbers. Coursers and floricans need help with their delicate habitat, as do neglected small birds such as the Green Munia that is widely trapped. Bird diversity makes India, Kerala in particular, a birdwatching destination. That variety must be protected not just for cultural reasons, but to improve the health of forests, wetlands, open country habitat and high mountains.

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INTERNATIONAL PROTECTION FOR GREAT INDIAN BUSTARD, BENGAL FLORICAN AND ASIAN ELEPHANT

Relevant for: Environment | Topic: Biodiversity, Ecology, and Wildlife Related Issues

Ministry of Environment, Forest and Climate Change

International protection for Great Indian Bustard, Bengal Florican and Asian Elephant

Posted On: 20 FEB 2020 7:52PM by PIB Delhi

India's proposal to include Great Indian Bustard, Asian Elephant and Bengal Florican in Appendix I of UN Convention on migratory species was unanimously accepted today at the ongoing thirteenth Conference of the Parties to the Convention on Migratory Species (CMS) in Gandhinagar.

Asian Elephant

The Government of India has declared Indian elephant as National Heritage Animal. Indian elephant is also provided highest degree of legal protection by listing it in Schedule I of the Wildlife (Protection) Act, 1972.

#UPDATE :#CMSCOPIndia

India's proposal to include mainland Asian elephant in Appendix I of [@BonnConvention](#) accepted unanimously.

Move will promote conservation of Asian Elephant in its natural habitat as well as to reduce human elephant conflict in range countries. [#CMSCOP13 pic.twitter.com/PgTRS9GOJX](#)

— PIB India (@PIB_India) [February 20, 2020](#)

Placing Indian elephant in Schedule I of the CMS Convention, will fulfil natural urge of migration of Indian elephant across India's borders and back safely and thereby promote conservation of this endangered species for our future generations. Intermixing of smaller sub populations in Nepal, Bangladesh, Bhutan and Myanmar and widen the gene base of these populations. It will also help to reduce human elephant conflicts in many parts of its migratory routes.

Mainland Asian elephants/Indian elephants migrate over long distances in search of food and shelter, across States and Countries. Some elephants are resident while others migrate regularly in annual migration cycles; proportion of resident and migratory populations depends upon, size of regional populations, as well as on extent, degradation and fragmentation of their habitats.

The challenges confronting Asian elephant conservation in most elephant Range States are habitat loss and fragmentation, human elephant conflict, and poaching and illegal trade of elephants.

"India, being natural home of largest population of mainland Asian elephant/Indian elephant (*Elephas maximus indicus*), wishes to promote conservation of this species, by seeking natural migration of elephants in all range countries, through bringing the subspecies under Appendix I of CMS

Convention”, said Shree Soumitra Dasgupta, ADG(Wildlife), while mooted the proposal which was unanimously accepted by the parties to the convention.

Great Indian Bustard

The Great Indian Bustard, an iconic, critically endangered and conservation dependent species, exhibits transboundary movements, and its migration exposes it to threats such as hunting in boundary area of Pakistan-India and power-line collisions in India. Inclusion of the species in Appendix I of CMS will aid in transboundary conservation efforts facilitated by International conservation bodies and existing international laws and agreement.

UPDATE [#CMSCOPIndia](#):

India's proposal to include the [#GreatIndianBustard](#) in Appendix I of [@BonnConvention](#) accepted unanimously at [#CMSCOP13](#)

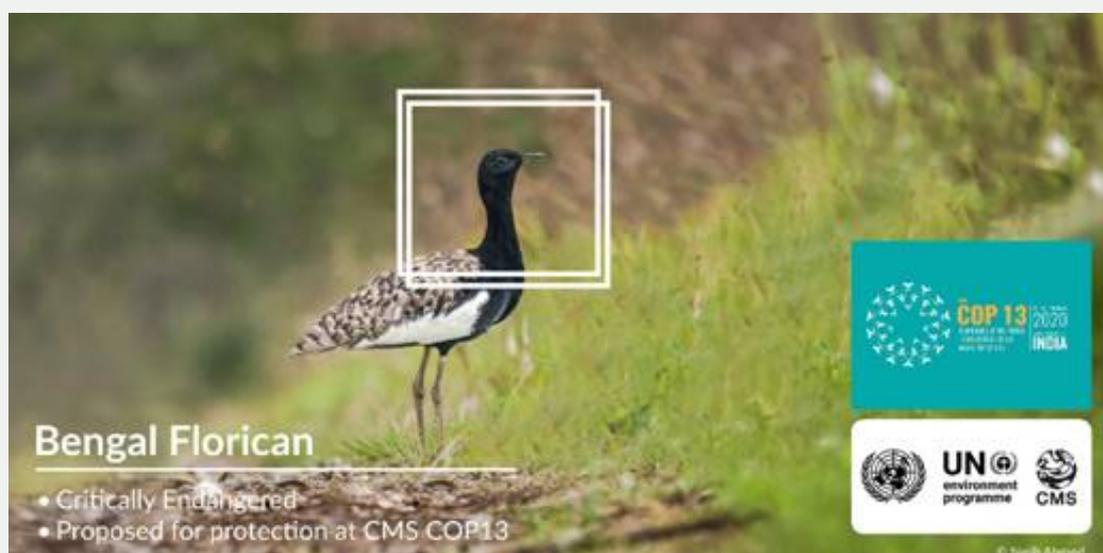
Move will aid in transboundary conservation efforts and protection of the species against hunting and other human induced mortality risks pic.twitter.com/o7IjCS34ga

— PIB India (@PIB_India) [February 20, 2020](#)

The Great Indian Bustard is a Critically Endangered species with a small population of about 100–150 individuals that is largely restricted to Thar desert in Rajasthan, India. The species has disappeared from 90% of this range; their population has reduced by 90% within 50 years (six generations); and their threats are expected to increase in future.

Bengal Florican

The Bengal Florican an iconic, critically endangered species of topmost conservation priority, exhibits transboundary movements, and its migration exposes it to threats such as land use changes, collision with power transmission line at boundary area of India-Nepal and probable power-line collisions. Inclusion of the species in Appendix I of CMS will aid in transboundary conservation efforts facilitated by International conservation bodies and existing international laws and agreement.



Populations have declined as a result of habitat loss, hunting and the species no longer breeds outside Protected Areas in the Indian subcontinent, except in a few areas of Assam.

The CMS Conference underway in Gujarat has kicked off the Super Year for Environment, which will include a UN Summit in September and culminate in the UN Biodiversity Conference at the end of 2020, when a new global biodiversity strategy for the next decade will be adopted - the Post-2020 Global Biodiversity Framework.

GK

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MONSOON IN SUNDERBANS LIKELY TO GET LONGER, WARN CLIMATE EXPERTS

Relevant for: Environment | Topic: Environmental Degradation - GHGs, Ozone Depletion and Climate Change

Mounting concern: The paper also highlights a rising threat to the habitat of the Bengal tiger. File photo

The monsoon in Sunderbans is likely to last longer and get more intense, according to a fact sheet titled *The Sunderbans and Climate Change*, which was made public during the ongoing Convention on the Conservation of Migratory Species of Wild Animals.

“Climate specialists have predicted that as climate change progresses, monsoon seasons in the Sundarbans will become longer and more intense. Conversely, drought conditions will also become more pronounced, presenting further challenges for agricultural producers in particular and ecosystems in general,” said the document released during the Conference of Parties being held at Gujarat.

Natural habitats

The document highlights the need for "long term coastal planning to ensure that these critically important intertidal habitats with their unique flora and fauna and local inhabitants have a space to retreat inland". The paper also points out that the habitat of the Bengal tiger (*Panthera tigris tigris*) in the Sunderbans is also affected by the storm due to a decline in the availability of prey.

While the fact sheet puts the rise in the sea level at 3.2 mm per year currently, it states that an estimated rise of 28 cm above the sea levels registered in the year 2000 would result in a 96 % decline of the habitat of the Bengal tiger in Bangladesh.

Discussions were also held on the Transboundary Conservation of Threatened Freshwater Fauna, including species like Indian River Terrapin (*Batagur baska*), Hilsa (*Tenualosa ilisha*) and Ganges River Dolphin (*Platanista gangetica*),.

The forum comprised scientists from the Wildlife Institute of India, World Wildlife Fund for Nature, Wildlife Trust of India, Turtle Survival Alliance (TSA) and the member secretary of Central Zoo Authority.

Risk of flooding

“There is clear evidence of the habitat of all the three species extending to the Sunderbans in both India and Bangladesh. We are hopeful that the points that were raised are going to be well received by the CMS and there will be some concerted action for the conservation of the freshwater species that migrate across the Sunderbans,” said Shailendra Singh, director, TSA.

The fact sheet points out that large parts of Sunderbans, which are designated as ‘Ramsar Sites’, are highly susceptible to flooding.

“Due to this, any swelling of ocean water is going to dramatically affect the area. Although mangroves are somewhat resistant to submersion in water, they can die when tidal inundation occurs too frequently or lasts too long,” the document stated.

Apart from the frequent storms and the rise of sea level, another concern is the rise of salinity both in water and soil. "Excess levels of soil salinity can be incredibly damaging to ecosystems as salts can accumulate in the soil and hinder plant growth. It also threatens the health of freshwater aquatic life such as fish and giant prawns," the document adds.

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HIMALAYAN WOLVES WITH HYPOXIA ADAPTATION ARE SEPARATE SPECIES

Relevant for: Environment | Topic: Biodiversity, Ecology, and Wildlife Related Issues

Himalayan wolves, also called as Tibetan wolves, which live at more than 4,000 metres altitudes are genetically distinct from grey wolves, according to a study published in the *Journal of Biogeography*. The divergence of Himalayan wolves relates to past uplift of the region, the authors of the paper note.

Living at such high altitudes, these wolves have genetically adapted themselves to live in low oxygen (hypoxic) conditions. While effective oxygen availability at sea level is nearly 22%, at 4,000 metres altitude, the effective oxygen availability is nearly half — 12.7%.

The researchers collected 280 wolf faeces from across the Tibetan Plateau of China, Kyrgyzstan and Tajikistan and studied the mitochondrial DNA. A subset of 110 samples was genotyped too. The genetic analysis revealed a clear divergence of Himalayan wolves and marked them as separate breed. There was considerable admixture at the lower edges of the range.

The study based on mitochondrial DNA supports an early divergence for the Himalayan wolves, making them the sister taxon to the grey wolves. The nuclear genome markers analysed also suggests differences between Himalayan wolves and grey wolves. But other studies suggest a recent ancestry for all extant wolf lineages.

Interestingly, unlike the grey wolves that inhabit the lower elevations the Himalayan wolves showed clear hypoxia adaptation. The admixed wolves had a mixture of genes belonging to Himalayan wolves and grey wolves but always carried the Himalayan wolf hypoxia adaptation.

The specialised genes for hypoxia adaptation allowed the animals to overcome the lack of oxygen at such high altitudes. Such adaptations are seen in dogs and humans to mitigate the deleterious effects of free radicals that are produced in response to low oxygen availability. While the precise genetic mechanism that facilitates humans to live in hypoxic conditions remain poorly understood, interbreeding of wolves and dogs is how the dogs might have acquired high-altitude adaptation.

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The WHO had to come up the name in line with the 2015 guidelines between the global agency, the World Organisation for Animal Health and the Food and Agriculture Organization.

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COUNTING BIRDS TOGETHER

Relevant for: Environment | Topic: Biodiversity, Ecology, and Wildlife Related Issues

The State of India's Birds Report 2020 represents the first collective attempt in India to understand and assess how the avifauna are doing. The results of this exercise are broadly sobering. While there are several species, including globally threatened ones, whose populations are doing reasonably, more bird species are showing declines in population than are showing population stability or increases. During the last two decades, over half the species assessed have declined. This trend is even more pronounced in recent times, with nearly 80% of the species assessed showing declines over the last five years. And these declines are particularly acute for certain groups of birds, including birds of prey, migrant shorebirds, birds of forests and grasslands, and endemic birds of the Western Ghats. The report further suggests that more bird species deserve immediate conservation attention than previously thought. To the list of 67 globally threatened Indian bird species previously identified by the IUCN (as critically endangered, endangered or vulnerable), the report adds 34 more species. The number of species of high conservation concern in India is now 101.

But the news is not all bad. The report also provides strong reasons for hope that we can further strengthen the understanding and conservation of our avian heritage. In particular, the report has two distinctive features that define a new approach: first, that the information it builds on comes from citizens like us all, and second, that the report's data and analysis are in the public domain, inviting critique and further refinement.

Assessing the status of our birds poses a variety of challenges. For a start, there are over 1,300 species of birds in India. While some are loud, colourful or diurnal, and hence relatively easier to detect, others are quiet, shy, or nocturnal. Further, finding them also means having to look in a wide variety of habitats: in forests, wetlands, farmlands, cities, mountains and even open oceans. And to complicate matters further, hundreds of species migrate into and out of our country at different times of the year. Addressing these challenges and achieving a coverage both of species and of habitats has been possible only because of an alignment in the formidable energies and efforts of a large and inspired community of birdwatchers across the country. Only through the efforts of over 15,500 birdwatchers, it became possible to assemble a dataset of over 10 million records, with data points going as far back as the 1970s. Upon this foundation, a large multi-institutional consortium of researchers drawn from both non-governmental and government institutions collaborated to analyse and put together the report.

While the report describes key patterns of change in the populations of certain bird species, answering why these changes have taken place, or developing conservation action that address these changes, are logical follow-up actions that are inconceivable without focused and sustained collective efforts. Just as we have collectively collected, curated, compiled and analysed bird data, we must remain engaged with the results, and continue to further not only an understanding of our avifauna but also actions to conserve them.

Besides collaboration, another key value that the report seeks to acknowledge is the importance of making, not just its outputs, but also the entire process open. The data that has gone into this report are not only collected by thousands of citizens, but are open for any researcher to use. The analyses (and the code) that form the basis of this report are in the public domain. Finally, the report and its results too are entirely open. A better public and scientific understanding of our biodiversity can grow only from wider and open access not only to data, but also from opening the entire process of scientific inquiry to wider peer and public scrutiny and challenge. And we are hoping that, as more and more people come in and examine the data, the analyses and the

results, and ask questions, it only adds greater strength to our understanding of our precious birds.

Of all the forms in which humans encounter nature, birds perhaps touch our lives most closely. Birds are nearly everywhere. They are colourful, they sing and they display. They perform vital functions like predation and seed dispersal. They pervade nearly every aspect of our cultural lives. Given our shared bonds in a timeless journey, to paraphrase ornithologist Nigel Collar, we need to continue building and strengthening models by which citizens, scientists, conservationists and managers collaborate not only to understand our birds, but also to enable them to fare better on our fast-changing planet.

M.D. Madhusudan, Uma Ramakrishnan and Suhel Quader are ecologists and members of a multi-institutional team that worked on the State of India's Birds Report

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To reassure Indian Muslims, the PM needs to state that the govt. will not conduct an exercise like NRC

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PANEL TO STUDY ULSOOR LAKE POLLUTION

Relevant for: Environment | Topic: Environmental Pollution - Air, Water, Soil & E-waste

A file photo of Ulsoor lake in Bengaluru. | Photo Credit: [V. Sreenivasa Murthy](#)

The southern bench of the National Green Tribunal (NGT) has directed the constitution of a joint committee to take samples of water from Bengaluru's Ulsoor lake and neighbouring areas to ascertain whether the lake is being polluted due to illegal activity and tasked the panel with also carrying out an analysis of the water in the lake.

The NGT bench comprising Justice K. Ramakrishnan and expert member Saibal Dasgupta made a suo moto direction based on a report in *The Hindu* in 2016 after schools of fish in the lake were found dead.

"The water analysis should include not only Biochemical Oxygen Demand (BOD), Chemical Oxygen Demand (COD) limit but also the Total Coliforms and Faecal Coliforms and also the presence of any heavy metals like Arsenic, Phosphorus, etc. which are likely to affect the human health and if such things are found, suggest the remedial measures required to restore the water quality in that area," the bench ruled.

The bench said *The Hindu* report indicated that the water quality had come down due to illegal activities being carried out while discharging untreated sewage, effluents and the dumping of garbage into the water body, affecting the quality of the water and the ecology and aquatic life, much required for ecological sustenance.

"If the quality of the water in the lake is affected, it will automatically reflect in the ground water quality which in turn affects the health of the people who are likely to consume the poor quality of water, which is not in conformity with the norms provided for drinking purpose," the bench observed.

The committee will comprise the Deputy Commissioner of Bengaluru (Urban), a senior scientist from the regional Office of Central Pollution Control Board, Karnataka State Pollution Control Board and the Commissioner, Bruhat Bengaluru Mahanagara Palike.

The committee has been directed to inspect the area, find out the source of pollution and take action against those responsible. The panel has also been asked to suggest remedial measures.

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The government has set an ambitious target of eliminating single-use plastics by 2022.

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INDIA'S PLASTIC WASTE CRISIS

Relevant for: Environment | Topic: Environmental Pollution - Air, Water, Soil & E-waste

Single-use plastics or disposable plastics, are commonly used for packaging. Nearly half of the plastics produced in India are single use plastics.

Prime Minister Narendra Modi in 2019 called for an end to using single-use plastics. The government has set an ambitious target of eliminating single-use plastics by 2022.

Since then, the Centre as well as various State governments have announced measures to curb its use.

Several states in India have already banned single-use plastics. But such measures are proving to be ineffective.

Most cities and towns have not implemented the provisions of the Plastic Waste Management Rules of 2016 or PWR.

According to PWR, plastic manufacturers and retail establishments that use plastics are legally bound to collect back plastic waste. This is referred to as 'extended producers responsibility'.

The rules also mandate the responsibilities of local bodies, gram panchayats, waste generators and retailers to manage waste.

This includes collecting and segregating recyclable plastic, non-recyclable plastic and other waste separately for processing.

But most cities and towns have not implemented these provisions due to the lack of a disciplined system of segregation and recycling.

Experts say that the government should also work on viable alternatives as the current ones are expensive.

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A BROWNING EAST: THE HINDU EDITORIAL ON CLIMATE CHANGE IMPACT ON THE EASTERN GHATS

Relevant for: Environment | Topic: Environmental Degradation - GHGs, Ozone Depletion and Climate Change

If the Western Ghats are the crown jewels of India's natural heritage, the Eastern Ghats spread across some 75,000 sq. km. from Odisha to southern Tamil Nadu, play an important dual role: fostering biodiversity and storing energy in trees. In these mountains exist a reservoir of about 3,000 flowering plant species, nearly 100 of them endemic, occurring in the dry deciduous, moist deciduous and semi-evergreen landscapes. Many animals, including tigers and elephants, and some 400 bird species are found in these discontinuous forests that receive an annual average rainfall of 1,200 mm to 1,500 mm. Crucially, many parts, primarily in Odisha, Andhra Pradesh and Tamil Nadu, provide forest produce and ecosystem services to millions. Given the key functions that the lands perform, in modulating climate, fostering biodiversity and providing sustenance, new research findings arguing that the Ghats face a serious threat from climate change, and temperature variations are a cause for worry. It is noteworthy that a disruption of the annual average temperature and diminished rainfall would rob the productivity of these forests, in terms of their ability to store carbon, and provide subsistence material. Existing data point to the impoverishment of areas experiencing rainfall reduction in the driest quarter of the year and a rise in seasonal temperature, through [reduced plant species diversity](#) and a dominant role for herbs over trees.

Protecting the Eastern Ghats, which are separated by powerful rivers — the Godavari and Krishna, to name just two — is an ecological imperative. India is committed, under the Paris Agreement on Climate Change, to create an additional carbon sink of 2.5 to 3 billion tonnes through enhanced forest and tree cover. Yet, forest protection policies have often failed dismally. By some estimates, the [Ghats have shrunk by 16%](#) over the past century, and just one region, Papikonda National Park, lost about 650 sq. km. in two decades from 1991. Relieving the pressure on forests can be done through policies that reduce extraction of scarce resources and incentivise settled agriculture. Schemes for restoration of forest peripheries through indigenous plant and tree species, matching national commitments, could qualify for international climate finance, and must be pursued. At a broader level, the response to the warnings issued by researchers from IIT Kharagpur, International Crops Research Institute for the Semi-Arid Tropics and the University of Hyderabad in a recent publication on changes to temperature and rainfall calls for decisive steps to mitigate carbon emissions. Improving tree cover nationally is certain to confer multiple benefits, including modulation of the monsoon, improved air quality and wider spaces for biodiversity to persist.

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NCAP CAN'T DRIVE CHANGE UNLESS DATA, REPORTING ISSUES ARE FIXED - EDITORIALS - HINDUSTAN TIMES

Relevant for: Environment | Topic: Environmental Pollution - Air, Water, Soil & E-waste

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Two-thirds of the world's most polluted cities are in India, and Delhi has the worst air among all capitals, the 2019 World Air Quality Report by IQAir AirVisual, which takes readings from 98 countries, said on Tuesday. The study was based on average yearly levels of PM2.5 concentration. (PM2.5 particles measure up to 2.5 microns in size and can enter the bloodstream via the respiratory system to travel through the body, causing problems such as asthma, lung cancer, and heart disease.)

The road map for cleaning Delhi's air has been clear for some time. While the closure of power plants and big industry, natural gas transition across sectors, phase-out of old vehicles, reduction in truck numbers, BS-VI fuels and BS-IV standards, and more, has bent the curve, more disruptive action is needed for clean energy and technology transition, mobility transition and waste management to get the next big cut. There also needs to be a stronger awareness about the nature and direction of action to drive change more strategically and for effective impact.

While the media focus on the non-flattering IQAir AirVisual report, which comes a year after the Centre rolled out the National Clean Air Programme (NCAP), has been on the Delhi-National Capital Region area, this is also an opportune moment to look at how other cities faring on the NCAP, the ambitious five-year action plan with a tentative target of 20-30% reduction in concentrations of PM10 and PM2.5 in 102 non-attainment cities, by 2024, with 2017 as the base year. This is important because the IQAir AirVisual says India has 14 of the 20 most polluted cities in the world.

While air quality monitoring has begun to expand under the NCAP to address the data deficit, without a methodical system for reporting, the data will remain unusable and cannot drive change in cities. For example, the CSE's Breathing Space, How to Track and Report Air Pollution under the National Clean Air Programme, says manual monitors require at least 104 days of monitoring, which is 28.5% of the days in a year. But the organisation's assessment of the latest available manual data for all cities shows that as much as 73% of monitoring stations

do not meet this requirement. The cities are also expected to immediately begin reporting on their annual progress; but for that, they must know the methods and standard operating procedures for such reporting. No official method for compliance reporting by cities/states has been released. Along with tackling sources of air pollution, these issues need to be redressed without further delay to ensure that cities are on the correct path for clean air.

END

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