



India's #1 Self-Study Notes

crack
IAS.com

📞 **92170 70707**
crackiasquery@gmail.com

www.crackIAS.com

Introduces the most scientific & easiest way of preparing

CURRENT AFFAIRS

Topic Wise NEWS

← SOURCES →

**PIB » The Hindu » Live Mint » HT » TOI » RBI ET » Indian Express
PRS Blog » IDSA » Government of India & UNO Official Sites
NASA & Nature into these subject separately.**



**Topic Wise News for
GS (Pre-cum-Mains)
every Month**

Download your copy from crackIAS.com

Monthly Archive on **topic** wise news for **GS Pre & Mains**

Index

Some parts of India may face water stress: IPCC.....	2
India welcomes the IPCC Working Group II contribution to the IPCC Sixth Assessment Report (AR6) on Climate Change: Impacts, Adaptation and Vulnerability.....	3
What is rain bomb? Australia hit by rare weather phenomenon, 8 dead. Check pics here.....	8
Winds of change in urban India that demand close investigation.....	10
India losing 5,334 million tonnes of soil annually due to erosion: Govt.....	13
UN Environment Programme must serve to strengthen international cooperation and encourage collective action to address the major environmental challenges of our time : India at 50th session of UNEP.....	14
The crane chase.....	18
Turtles play fast and loose with borders.....	20
Sri Lanka loses tusker Raja, its 'national treasure'.....	22
Antarctic explorer Shackleton's ship discovered after a century.....	23
Novel strategy to synthesize solid adsorbents for CO2 capture and utilization discovered.....	24
SC asks Sikri to head Char Dham panel.....	28
An effort to save the enigmatic owls in India.....	29
Question Corner.....	31
Rs. 19,000-crore afforestation plan launched.....	32
Union Environment Minister, Sh. Bhupender Yadav & Union Jal Shakti Minister, Sh. Gajendra Singh Shekhawat Jointly Release Detailed Project Reports On Rejuvenation Of 13 Major Rivers Through Forestry Interventions.....	33
India Cooling Action Plan.....	39
Great Barrier Reef suffers severe coral bleaching.....	42
Suspected poisoning kills 100 vultures.....	43
India, Japan launch clean energy partnership.....	45
Study reveals major decline in golden langur habitat.....	47
Harm in the name of good.....	49
From Minister to Officials, Media to people, everyone plants together 75 saplings on International Day of Forests at National Zoological Park.....	51
Explained.....	57
Standing Committee of the National Board for Wild Life recommends to celebrate October 5 as National Dolphin Day.....	60
Tribes oppose Narmada link project.....	63
The successful 'Protect Hornbills' project by the Nyishi tribe of Arunachal Pradesh turns 10.....	64
Panel to look into elephant deaths.....	67
Programme on Seagrasses.....	68

SOME PARTS OF INDIA MAY FACE WATER STRESS: IPCC

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

NEW DELHI : Ganga, Indus, Amu Darya and other international transboundary river basins in Asia could face severe water scarcity by 2050 due to climate crisis and related impacts that could act as stress multipliers, the Intergovernmental Panel on Climate Change (IPCC) warned on Monday.

Among the Asian cities, Ahmedabad faces high risk from heat and urban heat island effect (urbanized areas that suffer higher temperatures compared to surrounding areas) and Mumbai is at high risk from floods and rising sea levels, the IPCC said adding that Ahmedabad has made some institutional policies to adapt to these risks while Mumbai hasn't.

Overall, South Asia is among the most vulnerable regions in the world to severe climate impacts due to extreme poverty and inequity, IPCC underlined.

Climate change is already increasing vector-borne and water-borne diseases, undernutrition, mental disorders and allergic diseases in Asia by increasing hazards such as heatwaves, flooding and drought, air pollution, in combination with higher exposure and vulnerability, IPCC's report titled "Climate Change 2022: Impacts, Adaptation and Vulnerability" flagged.

Never miss a story! Stay connected and informed with Mint. [Download](#) our App Now!!

Log in to our website to save your bookmarks. It'll just take a moment.

Oops! Looks like you have exceeded the limit to bookmark the image. Remove some to bookmark this image.

Your session has expired, please login again.

You are now subscribed to our newsletters. In case you can't find any email from our side, please check the spam folder.

This is a subscriber only feature Subscribe Now to get daily updates on WhatsApp

END

Downloaded from **crackIAS.com**

© **Zuccess App** by crackIAS.com

INDIA WELCOMES THE IPCC WORKING GROUP II CONTRIBUTION TO THE IPCC SIXTH ASSESSMENT REPORT (AR6) ON CLIMATE CHANGE: IMPACTS, ADAPTATION AND VULNERABILITY

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

India welcomes the release of the Working Group II (WG2) contribution to the Sixth Assessment Report (AR6) of the Intergovernmental Panel on Climate Change (IPCC).

Union Minister for Environment, Forest and Climate Change, Shri Bhupender Yadav in a series of tweet messages said that the report reaffirms India's call for equity and climate justice and stated that the Developed countries must take the lead in urgent mitigation and providing finance for adaptation, loss and damage.

India welcomes the release of the Working Group II contribution to the 6th Assessment Report of the [@IPCC_CH](#) on Impacts, Adaptation and Vulnerability.

The report reaffirms India's call for equity, climate justice, and curbing unsustainable consumption.

“India is walking the path of climate resilient development under Prime Minister Shri Narendra Modi and has demonstrated a clear resolve to move ahead along a sustainable, resource efficient growth path.”, said the Union Minister

A delegation from India participated in the final discussions on the Summary for Policymakers of the Report, held online from 14th February to 27th February (extending two days over its scheduled duration) and has joined other nations in approving the Summary for Policymakers of the Report.

The following are the key findings of the Report and its Summary for Policymakers:

- The Report affirms that climate change due to historical emissions is leading to serious impacts which are already being felt globally including in developing countries with low contribution to cumulative emissions. These impacts will rise as warming proceeds and will rise rapidly at higher levels of warming.
- The Report emphasizes that action on adaptation is urgently needed – as urgently as action on mitigation.
- The Summary for Policymakers (SPM) underlines the need for climate action on the basis of equity and climate justice to ensure the well-being of humanity and the planet.
- The science of climate resilience now fully acknowledges the importance of equity and climate justice that India has always championed and had brought into the Paris Agreement.
- Further, the SPM clearly acknowledges the importance of Indigenous and Local Knowledge in adaptation to climate change.

- Vulnerable and marginalized communities, regions and populations face rising exposure to hazards. The SPM notes that vulnerability is enhanced by lack of development, social and economic inequalities.
- The Report is a clarion call for the world to abandon their unsustainable production and consumption and move urgently to climate resilient development. Reference to sustainable lifestyles has already been introduced in the Paris Agreement thanks to India's efforts, led by the Hon'ble Prime Minister at Paris in 2015.
- The Report notes that the impacts and the consequent limitations to adaptation would rise beyond 1.5 degree warming above pre-industrial levels. India notes that the Working Group I contribution to AR6 released in August, 2021 had made clear that developed countries need to rapidly decrease their emissions and reach net zero by 2050
- Provision of finance is critical for helping developing countries and vulnerable populations act quickly and effectively. Public finance is the key enabler for adaptation.
- Development to reduce non-climatic drivers of vulnerability is critical to promoting adaptation and is already reducing vulnerability. Rapid progress on achieving the SDGs will help in enhancing adaptive capacity and resilience.
- The Report re-affirms that the balance between adaptation and mitigation in climate resilient development depends on national circumstances according to countries' capabilities including resources and past contributions to global emissions.
- The Report fully acknowledges the importance of losses and damages arising from climate change. Inadequate adaptation due to lack of financial and technological resources, capacity building and other constraints lead to losses and damages. Further losses and damages would increase as some limits to adaptation are being reached and more would be at higher levels of warming.
- Adaptation suffers from a tremendous lack of finance, with only a small proportion of climate finance devoted to it, while the overwhelming proportion goes to mitigation.
- Ecosystem based adaptation and Nature-based approaches such as green infrastructure offer multiple benefits and synergies between adaptation and mitigation. Though the Report refers to the prospects and limitations of Nature-based Solutions (NbS) in climate mitigation, the SPM acknowledges the reservations of developing countries that NbS will be promoted as the sole or the major solution to climate mitigation which is obviously not the case.
- The Report recognizes the key role of agriculture and the great importance of food security in adaptation.
- India faces multiple climate hazards and has high vulnerability to climate change.
- The Report notes that future climate-resilient development pathways depend on climate risks, adaptation measures and the remaining carbon budget.

India is already walking the path of climate resilient development with its combination of several adaptation-oriented development actions and its contribution to mitigation. At COP26, as the implementation of the Paris Agreement began, India reaffirmed its commitment to climate actions, including the goal of net zero by 2070, and the one-word mantra of L.I.F.E. = lifestyles for environment.

India notes that future reports should strengthen the “solution space” and more comprehensively assess knowledge regarding effectiveness, costs and benefits.

India firmly believes that climate change is a global collective action problem that can be solved only through international cooperation and multilateralism.

India has taken tremendous actions under the visionary leadership of Prime Minister Shri Narendra Modi to combat climate change by taking several initiatives including, inter-alia, setting up of International Solar Alliance, Coalition for Disaster Resilient Infrastructure, ‘One Sun, One World, One Grid’ and Infrastructure for Resilient Island States, raising the domestic renewable energy target to 500 GW by 2030, putting in place an ambitious National Hydrogen Mission and continuing efforts to decouple its emissions from economic growth.

India’s cumulative and per capita current emissions are significantly low and far less than its fair share of the global carbon budget and its actions to address global climate change are compatible with Paris Agreement goals.

HRK

India welcomes the release of the Working Group II (WG2) contribution to the Sixth Assessment Report (AR6) of the Intergovernmental Panel on Climate Change (IPCC).

Union Minister for Environment, Forest and Climate Change, Shri Bhupender Yadav in a series of tweet messages said that the report reaffirms India's call for equity and climate justice and stated that the Developed countries must take the lead in urgent mitigation and providing finance for adaptation, loss and damage.

India welcomes the release of the Working Group II contribution to the 6th Assessment Report of the [@IPCC_CH](#) on Impacts, Adaptation and Vulnerability.

The report reaffirms India's call for equity, climate justice, and curbing unsustainable consumption.

“India is walking the path of climate resilient development under Prime Minister Shri Narendra Modi and has demonstrated a clear resolve to move ahead along a sustainable, resource efficient growth path.”, said the Union Minister

A delegation from India participated in the final discussions on the Summary for Policymakers of the Report, held online from 14th February to 27th February (extending two days over its scheduled duration) and has joined other nations in approving the Summary for Policymakers of the Report.

The following are the key findings of the Report and its Summary for Policymakers:

- The Report affirms that climate change due to historical emissions is leading to serious impacts which are already being felt globally including in developing countries with low contribution to cumulative emissions. These impacts will rise as warming proceeds and will rise rapidly at higher levels of warming.

- The Report emphasizes that action on adaptation is urgently needed – as urgently as action on mitigation.
- The Summary for Policymakers (SPM) underlines the need for climate action on the basis of equity and climate justice to ensure the well-being of humanity and the planet.
- The science of climate resilience now fully acknowledges the importance of equity and climate justice that India has always championed and had brought into the Paris Agreement.
- Further, the SPM clearly acknowledges the importance of Indigenous and Local Knowledge in adaptation to climate change.
- Vulnerable and marginalized communities, regions and populations face rising exposure to hazards. The SPM notes that vulnerability is enhanced by lack of development, social and economic inequalities.
- The Report is a clarion call for the world to abandon their unsustainable production and consumption and move urgently to climate resilient development. Reference to sustainable lifestyles has already been introduced in the Paris Agreement thanks to India's efforts, led by the Hon'ble Prime Minister at Paris in 2015.
- The Report notes that the impacts and the consequent limitations to adaptation would rise beyond 1.5 degree warming above pre-industrial levels. India notes that the Working Group I contribution to AR6 released in August, 2021 had made clear that developed countries need to rapidly decrease their emissions and reach net zero by 2050
- Provision of finance is critical for helping developing countries and vulnerable populations act quickly and effectively. Public finance is the key enabler for adaptation.
- Development to reduce non-climatic drivers of vulnerability is critical to promoting adaptation and is already reducing vulnerability. Rapid progress on achieving the SDGs will help in enhancing adaptive capacity and resilience.
- The Report re-affirms that the balance between adaptation and mitigation in climate resilient development depends on national circumstances according to countries' capabilities including resources and past contributions to global emissions.
- The Report fully acknowledges the importance of losses and damages arising from climate change. Inadequate adaptation due to lack of financial and technological resources, capacity building and other constraints lead to losses and damages. Further losses and damages would increase as some limits to adaptation are being reached and more would be at higher levels of warming.
- Adaptation suffers from a tremendous lack of finance, with only a small proportion of climate finance devoted to it, while the overwhelming proportion goes to mitigation.
- Ecosystem based adaptation and Nature-based approaches such as green infrastructure offer multiple benefits and synergies between adaptation and mitigation. Though the Report refers to the prospects and limitations of Nature-based Solutions (NbS) in climate mitigation, the SPM acknowledges the reservations of developing countries that NbS will be promoted as the sole or the major solution to climate mitigation which is obviously not the case.
- The Report recognizes the key role of agriculture and the great importance of food security in

adaptation.

- India faces multiple climate hazards and has high vulnerability to climate change.
- The Report notes that future climate-resilient development pathways depend on climate risks, adaptation measures and the remaining carbon budget.

India is already walking the path of climate resilient development with its combination of several adaptation-oriented development actions and its contribution to mitigation. At COP26, as the implementation of the Paris Agreement began, India reaffirmed its commitment to climate actions, including the goal of net zero by 2070, and the one-word mantra of L.I.F.E. = lifestyles for environment.

India notes that future reports should strengthen the “solution space” and more comprehensively assess knowledge regarding effectiveness, costs and benefits.

India firmly believes that climate change is a global collective action problem that can be solved only through international cooperation and multilateralism.

India has taken tremendous actions under the visionary leadership of Prime Minister Shri Narendra Modi to combat climate change by taking several initiatives including, inter-alia, setting up of International Solar Alliance, Coalition for Disaster Resilient Infrastructure, ‘One Sun, One World, One Grid’ and Infrastructure for Resilient Island States, raising the domestic renewable energy target to 500 GW by 2030, putting in place an ambitious National Hydrogen Mission and continuing efforts to decouple its emissions from economic growth.

India’s cumulative and per capita current emissions are significantly low and far less than its fair share of the global carbon budget and its actions to address global climate change are compatible with Paris Agreement goals.

HRK

END

Downloaded from [crackIAS.com](https://www.crackias.com)

© **Zuccess App** by crackIAS.com



WHAT IS RAIN BOMB? AUSTRALIA HIT BY RARE WEATHER PHENOMENON, 8 DEAD. CHECK PICS HERE

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

In the wake of a severe storm system pummeling [Australia's](#) northeastern city on Sunday, causing evacuations, power outages and school closures, parts of Australia's third-most populous city Brisbane were under water Monday after heavy rain brought record flooding to some east coast areas and killed eight people. Over 1,400 homes in the capital of Queensland state were at risk of flooding while more than 28,000 homes were without power statewide, as pristine beaches on the Gold and Sunshine coasts, which are key tourist attractions, all closed. The flooding in Brisbane and its surroundings is the worst since 2011 when the city of 2.6 million people was inundated by what was described as a once-in-a-century event.

Queensland Premier Anastacia Palaszczuk said the rainfall over Brisbane had been extraordinary since November when authorities were considering water use restrictions due to a shortage. State premier Anastacia Palaszczuk said, "we never expected this rain. This rain bomb is just really, you know, it's unrelenting ... It's just coming down in buckets." More than 100 schools across the southeast of a state famed for abundant sunshine will be closed on Monday. State rescue services said they received 100 requests an hour for help in recent days.

The latest fatality was a man aged in his 50s who drowned on Monday after driving his car into floodwater before dawn at Gold Coast city, south of Brisbane, Queensland state police said. The bodies of the man and his dog were retrieved hours later from a submerged car which had been washed from the road, a police statement said. Among the eight killed in the flooding were a 34-year-old man who tried to swim to safety after the waters submerged his car and another whose vehicle was swept away in the most populous state of New South Wales (NSW).

About 700 people were asked to evacuate from the city of Gympie on Saturday after the Mary River system surged beyond 22.06 m (72.4 ft) for the town's worst flood since the 1880s. Meteorologists said the deluge and thunderstorms would continue through Monday, before starting to ease off in Queensland, but moving south to New South Wales, where some communities at risk in its northeast have been told to evacuate.

The risk of riverine and flash flooding was "very real over coming days," said Steph Cooke, the state's emergency services minister. Brisbane Lord Mayor Adrian Schrinner said the floods are "very different" to 2011 because the rain pummeled the region for five days. In 2011, the rain had stopped days before the Brisbane River peaked and authorities had warned for several days of flooding downstream.

Additionally, Lismore was bracing for its worst flooding on record. Downtown Lismore was inundated on Monday after days of unrelenting rain and 15,000 people had been evacuated, officials said.

Never miss a story! Stay connected and informed with Mint. [Download](#) our App Now!!

Log in to our website to save your bookmarks. It'll just take a moment.

Oops! Looks like you have exceeded the limit to bookmark the image. Remove some to bookmark this image.

Your session has expired, please login again.

You are now subscribed to our newsletters. In case you can't find any email from our side, please check the spam folder.

This is a subscriber only feature [Subscribe Now](#) to get daily updates on WhatsApp

END

Downloaded from crackIAS.com

© **Zuccess App** by crackIAS.com

CrackIAS.com

WINDS OF CHANGE IN URBAN INDIA THAT DEMAND CLOSE INVESTIGATION

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

Wind speeds in Indian cities have been slowing dramatically over the decades and the country must probe this phenomenon

A quiet climatic change is taking place around us and no one seems to be talking about it. Perhaps like most unpleasant things, we may not recognize a creeping phenomenon until it's too late to address it.

The wind speed in major Indian cities has been slowing down consistently and significantly over several decades. When we mapped wind speeds during the years 1958 to 2015 in the country's fastest urbanizing cities (2011 census), we noticed an alarming and surprisingly consistent decline. The average wind speed has fallen by 47% in Hyderabad, 47% in Bengaluru, 46% in Kolkata, 34% in Ahmedabad and 25% in Pune.

We used agri-research institute ICRISAT's data on annual variations in wind speed for each month collected in situ district stations for near-surface wind speeds. For each city, we collected monthly data (for Delhi, we had fewer data points), removed a few outliers (that likely indicated storms), and estimated average annual wind speeds over 10 cities of India characterized by the fastest urbanization. The graph, which shows the best-fit line, emerged as a big revelation.

There are considerable variations in wind speed across months (May, June and July have suffered the biggest drop in wind speeds), but the annual average is a reasonable starting point. Surely, the measurement indices (including the height of the wind-speed measurement devices) simulated weather models, and more granular data on such patterns will reveal the exact nature of this phenomenon. At this stage, this simplest of metrics offers us findings that call for a larger investigation of this urban wind slowdown.

A decrease in wind speeds may have severe implications. Small changes in average wind speeds can have a large influence on atmospheric parameters. For instance, slow winds cannot carry moisture for long, resulting in altered rainfall patterns. Agriculture depends crucially on transpiration (a plant's exhalation of water vapour), which in turn needs evaporation that is a function of wind speed. Connectedly, wind-dispersed plant species also depend on wind speeds for survival. There are studies showing the impact of wind speed on natural disasters and ocean dynamics.

Lower urban wind speeds also mean that air pollution in our cities takes longer to get dispersed, making these places a toxic gas sink (Delhi comes to mind) and exacerbating public-health problems. Falling wind speed also has huge implications for the wind-energy sector. Typically, a 5% fall in wind speed can lead to an almost 17% fall in wind energy in an average turbine. Falling wind speeds can thus blow away the promise of cleaner energy.

Interestingly, scientists have found (not too long ago) that wind speeds have been declining globally since the 1960s. They call this "global terrestrial stilling". The average fall has been of 0.5km per hour every decade, studies note. This may not seem like much of a drop, but over long periods of time, it can have significant consequences. In Europe, for example, the decline has been as high as 15%. Another group of scientists, however, has claimed that this 'stilling' may have reversed. Regardless of this observation, the issue has become important globally.

Most of these studies focus on Europe and North America. Such investigations in India, unfortunately, have been scanty.

Our data shows a cause for concern in India. While the exact explanation of why wind speeds are falling is not clear, some scientists say it is happening (along with other atmospheric changes) as a result of an increase in surface roughness, attributed to land-use changes. This can be due to urbanization, or even forest growth.

Urbanization surely has an impact. Studies in Korea revealed that wind speeds are negatively correlated with population density. Wind speeds in Korea have decreased more in urban areas, and by more than they increased in rural regions, during 1993-2015. Studies in China indicate that urbanization is one of the major factors that can explain weakening winds in urban regions. Other studies show that increasing vegetation (due to agriculture and afforestation) could best explain the falling wind speeds, but these are outweighed by those studies where urbanization is put forth as the main culprit.

Urbanization affects the local climate through increased human intervention and the resultant complexity in airflow. Characterized by urban 'heat islands', altered rainfall patterns, increased fog, haze and reduced evaporative cooling, urbanization may well be the main driver of falling wind speeds. Given the dramatic reduction in wind speed in urban pockets of India, our hypothesis is the same. When we looked at the wind speed fall in some of the less-rapidly urbanizing districts, we noticed a relatively slower rate of change.

The reliability of studies on urbanization's effects on wind speed depend crucially on the methods adopted, but, by and large, it is likely that urbanization has a big effect. India is urbanizing at an unimaginable rate, and even though scholars have considered various implications arising from it, changing wind speed has not gained attention. Still, regardless of whether our falling wind speed is because of urbanization or not, it is an important atmospheric variable that deserves appropriate scrutiny in India. Although it may yet turn out not be the main factor behind reduced wind speeds, urbanization is certainly a compounding factor. Non-urban areas may have other reasons, such as differing climatic conditions, geographical vulnerabilities, etc, that could result in changing wind speeds.

Natural phenomena need to be scientifically investigated for their implications to broader socio-economic and cultural outcomes. India's meteorological data-gathering infrastructure is admirable. What we need is an interdisciplinary engagement of that data to distil an informed understanding of these winds of change so that we can formulate adaptation strategies.

Smriti Jalihal & Yugank Goyal are, respectively, a research associate at the Centre for Knowledge Alternatives; and founding director of the Centre and associate professor at Flame University.

Never miss a story! Stay connected and informed with Mint. [Download](#) our App Now!!

Log in to our website to save your bookmarks. It'll just take a moment.

Oops! Looks like you have exceeded the limit to bookmark the image. Remove some to bookmark this image.

Your session has expired, please login again.

You are now subscribed to our newsletters. In case you can't find any email from our side, please check the spam folder.

This is a subscriber only feature Subscribe Now to get daily updates on WhatsApp

END

Downloaded from **crackIAS.com**

© **Zuccess App** by crackIAS.com

CrackIAS.com

INDIA LOSING 5,334 MILLION TONNES OF SOIL ANNUALLY DUE TO EROSION: GOVT

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

A farmer at his barren agricultural land near Bikaner. Photo: PTI

India is losing 5,334 million tonnes of soil every year due to soil erosion because of indiscreet and excess use of fertilisers, insecticides and pesticides over the years, Parliament was told today.

About one millimetre of top soil is being lost each year with a total loss of 5,334 million tonnes annually due to soil erosion, Minister of State for Agriculture K. V. Thomas said in a written reply in Rajya Sabha.

The rate of loss is 16.4 tonnes per hectare every year, the minister said while quoting from a study conducted by Central Soil Water Conservation Research and Training Institute (CSWCRTI), Dehradun.

Experiments conducted by Indian Council of Agricultural Research (ICAR) indicated that non-judicious and imbalanced use of inorganic fertilisers (NPK) over years may result in deterioration of soil fertility/nutrient deficiencies, Mr. Thomas said.

On whether wrong irrigation practices were also responsible for this, the minister said excessive use of irrigation water in canal command may lead to secondary salinisation, affecting, thereby, the soil and crop productivity.

Detailing about corrective steps taken by the government, he said in order to promote judicious use of chemical fertilisers the government is advocating soil test based balanced and Integrated Nutrient Management (INM).

INM relies on conjunctive use of both inorganic and organic sources of plant nutrients like Farm Yard Manure (FYM), compost, bio-fertilisers and green manuring.

The government has launched "National Project on Management of Soil Health & Fertility" during 2008-9 to promote soil test based judicious use of fertilisers for improving soil health and its productivity, Mr. Thomas added.

Besides location specific bio-engineering measures developed by the CSWCRTI Dehradun for controlling soil erosion vis-a-vis top soil, the government has launched several programmes during different plan periods including Integrated Wasteland Development Programme and National Watershed Development Programme for rain-fed areas, he said.

[Our code of editorial values](#)

END

Downloaded from crackIAS.com

© **Zuccess App** by crackIAS.com

UN ENVIRONMENT PROGRAMME MUST SERVE TO STRENGTHEN INTERNATIONAL COOPERATION AND ENCOURAGE COLLECTIVE ACTION TO ADDRESS THE MAJOR ENVIRONMENTAL CHALLENGES OF OUR TIME : INDIA AT 50TH SESSION OF UNEP

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

Union Minister of Environment, Forest and Climate Change Shri **Bhupender Yadav** delivered national statement on the 50th session of United Nations Environment Programme (UNEP) in Nairobi today.



The Minister began his address by congratulating the **United Nations Environment Programme on completing 50 years**, during which it has rendered exceptional service to the global community.

Delivering the National Statement at UNEP@50 stated that in 2018, PM Shri [@NarendraModi](https://twitter.com/NarendraModi) gave a global call for eliminating single-use plastics on World Environment Day.

The call provided momentum for action on plastic, culminating in the resolution on plastics at 5th UNEP. pic.twitter.com/M55bZnEUoU

The Minister stated that India has been engaging with UNEP since 1972, dealing with critical environmental challenges. UNEP is one of the leading global voices on environment. It provides leadership and encourages partnership in caring for the environment by inspiring, informing, and enabling nations and people to improve their quality of life without compromising that of future generations, he added.

Shri Bhupendra Yadav emphasized that UNEP's 50th anniversary must serve to strengthen international cooperation and encourage collective action to address the major environmental challenges of our time, including climate change, conserving and enhancing biodiversity, and tackling pollution and waste, while moving to the path of sustainability.

Shri Yadav further highlighted that we must tackle today's environmental crises using the latest science and cutting-edge digital tools and technologies. For this, fostering global knowledge and technology exchange without barriers is critical.

The Minister remarked that in 2018, India hosted the World Environment Day on the theme 'Beat Plastic Pollution'. Hon'ble Prime Minister of India, Shri Narendra Modi gave a global call for eliminating single use plastics. This call of India provided the momentum leading to significant action on plastic pollution around the globe, culminating in the historic resolution and its adoption. We believe this will institutionalise 'Beat Plastic Pollution' around the world, he added.

The Minister said that on the occasion of its 50th anniversary it is appropriate that UNEP also turn to paying greater attention to the question of the means of implementation. Provision of finance, technology transfer and capacity building would ensure that implementation of these agreements is not a mere burden for developing countries but a pathway to a greener and healthier planet.

Shri Yadav further said that sustainable lifestyles underpin the survival of our planet. We believe that our utilization of resources must be based on 'Mindful and Deliberate Utilization' and NOT 'Mindless and Destructive Consumption'. Our Hon'ble Prime Minister gave a clarion call of L.I.F.E. - Lifestyles for Environment at COP26 at Glasgow. We believe that UNEP should join hands with India to spread the message of L.I.F.E. to the global community with a view to safeguarding humanity and the planet.

The Minister stressed that India looks forward to stronger collaboration with UNEP on environmental issues including Conventions and multilateral agreements relating to the environment. UNEP should also build a robust portfolio of projects, particularly for delivering on the environmental dimensions of the 2030 Agenda on Sustainable Development, and other multilaterally agreed global environmental goals.

Concluding his remarks the Minister said that India walks the talk and speaks from a position of strength and responsibility on biodiversity and climate change. It is from this experience that India sends a message of hope and optimism that humanity and all nations together can strive together and meet these challenges, he added.

RKJ/IG

Union Minister of Environment, Forest and Climate Change Shri **Bhupender Yadav delivered national statement on the 50th session of United Nations Environment Programme (UNEP) in Nairobi today.**



The Minister began his address by congratulating **the United Nations Environment Programme on completing 50 years**, during which it has rendered exceptional service to the global community.

Delivering the National Statement at UNEP@50 stated that in 2018, PM Shri [@NarendraModi](#) ji gave a global call for eliminating single-use plastics on World Environment Day.

The call provided momentum for action on plastic, culminating in the resolution on plastics at 5th UNEP. pic.twitter.com/M55bZnEUoU

The Minister stated that India has been engaging with UNEP since 1972, dealing with critical environmental challenges. UNEP is one of the leading global voices on environment. It provides leadership and encourages partnership in caring for the environment by inspiring, informing, and enabling nations and people to improve their quality of life without compromising that of future generations, he added.

Shri Bhupendra Yadav emphasized that UNEP's 50th anniversary must serve to strengthen international cooperation and encourage collective action to address the major environmental challenges of our time, including climate change, conserving and enhancing biodiversity, and tackling pollution and waste, while moving to the path of sustainability.

Shri Yadav further highlighted that we must tackle today's environmental crises using the latest science and cutting-edge digital tools and technologies. For this, fostering global knowledge and technology exchange without barriers is critical.

The Minister remarked that in 2018, India hosted the World Environment Day on the theme 'Beat Plastic Pollution'. Hon'ble Prime Minister of India, Shri Narendra Modi gave a global call for eliminating single use plastics. This call of India provided the momentum leading to significant action on plastic pollution around the globe, culminating in the historic resolution and its adoption. We believe this will institutionalise 'Beat Plastic Pollution' around the world, he added.

The Minister said that on the occasion of its 50th anniversary it is appropriate that UNEP also turn to paying greater attention to the question of the means of implementation. Provision of finance, technology transfer and capacity building would ensure that implementation of these agreements is not a mere burden for developing countries but a pathway to a greener and healthier planet.

Shri Yadav further said that sustainable lifestyles underpin the survival of our planet. We believe that our utilization of resources must be based on 'Mindful and Deliberate Utilization' and NOT 'Mindless and Destructive Consumption'. Our Hon'ble Prime Minister gave a clarion call of L.I.F.E. - Lifestyles for Environment at COP26 at Glasgow. We believe that UNEP should join hands with India to spread the message of L.I.F.E. to the global community with a view to safeguarding humanity and the planet.

The Minister stressed that India looks forward to stronger collaboration with UNEP on environmental issues including Conventions and multilateral agreements relating to the environment. UNEP should also build a robust portfolio of projects, particularly for delivering on the environmental dimensions of the 2030 Agenda on Sustainable Development, and other multilaterally agreed global environmental goals.

Concluding his remarks the Minister said that India walks the talk and speaks from a position of strength and responsibility on biodiversity and climate change. It is from this experience that India sends a message of hope and optimism that humanity and all nations together can strive together and meet these challenges, he added.

RKJ/IG

END

Downloaded from **crackIAS.com**

© **Zuccess App** by crackIAS.com

THE CRANE CHASE

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

Black-necked cranes flap their enormous wings, bob their heads and trumpet to the heavens. | Photo Credit: Getty Images/iStockphoto

Pankaj Chandan saw a pair of black-necked cranes on the first day of his first visit to eastern Ladakh. According to the Changpa pastoralists of the area, seeing these birds brings good luck. For more than an hour, he watched one incubating while its partner high-stepped through the Chushul marsh, searching with its piercing yellow eyes for edible roots or wriggling creatures. The experience instilled in him a resolve to study the species, which he has for almost two decades. Black-necked cranes are the only cranes to live in mountains. Since they inhabit remote areas of the Tibetan plateau, it was only in 1876 when the Russian military commander and explorer, Nikolay Przhevalsky, described them did they come under the scientific gaze. In late March, some fly for a week over the Himalaya to breed in the marshes adjoining rivers and lakes of Ladakh, the only crane species to migrate between winter and summer grounds.

Dancing together

A pair claims ownership over a large tract of wetland, chasing away rival claimants. Then courtship begins when the male and female dance together, flapping their enormous grey and black wings, bobbing their red-crowned black heads, and trumpeting to the heavens.

“It’s a wonderful sight to see them dancing like humans in the snow,” says Chandan .Sometimes, they flick plants, stones, and dried yak dung in the air and catch them, “playing like kids.”

When the time comes, both adults choose an islet on which they pile aquatic vegetation and mud into mounds. They nest in the same spot every year, and Ladakh has only about 18 nesting sites. For 17 years, a crane, marked by another researcher with a green tag, bred at the same site. Then either the tag fell off or the bird died, as no crane bearing that identity marker appeared again.

The people of Chushul told Chandan that the species gives birth to bar-headed geese one year and to cranes in the next. There might be something to that tale. In 1996, Otto Pfister, a crane researcher, reported a unique event. Two cranes chased a pair of bar-headed geese off their nest and usurped it. It’s likely the geese had arrived earlier and had unwittingly chosen the cranes’ old nesting spot. The female crane added her ivory egg with green and brown blotches to the nest with two white geese eggs, and she and her mate took turns incubating. The yellow and black goslings hatched first, and the foster parents kept them warm under their wings. But when the precocious young entered the water, the adults grew alarmed and ordered them to return with “gorr-kro, gorr-kro” calls. Goslings graze on grass by themselves, unlike colts, as crane chicks are called, which are fed by their parents. A few days later, the goslings and colts followed their leggy four-foot-tall parents.

Like the tiger

Brooding cranes can be touchy about intruders. Two adults spread their wings and chased Chandan and his colleagues for 200 m when they made the mistake of venturing too close. “They were ferocious like tigers,” he recalls. They even went after a yak that blundered into their territory. On another occasion, a pair sent a herd of Pashmina goats running as if from a

predator. The next day, the researchers spotted two orange colts, the cause of the adults' animosity. Although the cranes' diet includes everything from sedge tubers to small animals, Chandan was surprised when one snapped up a pika, smashed it on the ground, and gulped it down. By October, the young fly with their parents to their eastern winter range. Some land in Arunachal Pradesh's Sangti and Zemithang valleys. Now that their colts are grown, the adults relax their guard as they forage together in the fallow rice and potato fields.

They continue to occasionally dance and trumpet even out of the breeding season, but they don't consider dry dung as a toy anymore.

Janaki Lenin is not a conservationista but many creatures share her home for reasons she is yet to discover.

[Our code of editorial values](#)

END

Downloaded from [crackIAS.com](https://crackias.com)

© **Zuccess App** by [crackIAS.com](https://crackias.com)

CrackIAS!

TURTLES PLAY FAST AND LOOSE WITH BORDERS

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

The northern river terrapin is left only in tiny numbers in India and Bangladesh. AFP | Photo Credit: DR. SMA RASHID

Animals know no international boundaries and this has come as some sort of a surprise and challenge to experts and forest officials who installed GPS transmitters on the northern river terrapin in the Indian Sundarbans.

In just six weeks after the release, at least three of the 10 turtles of the critically endangered *Batagur baska* species have travelled hundreds of kilometres and are now in Bangladesh.

Shailendra Singh, director of Turtle Survival Alliance India (TSA), who played an important role in the conservation and release of the turtles, said that the animals with transmitters had traversed hundreds of kilometres and in the case of one turtle that was in Bangladesh at present, the dispersal has been about 400 km.

'Three cross over'

"There are three turtles that have entered Bangladesh. In the case of maximum dispersal, the animal descended from the release site in Indian Sundarbans, crossed the sea and Bangladesh Sundarbans, and is now in its fringe area," Dr. Singh said.

Of the three turtles in Bangladesh, one was caught by fishermen in Bangladesh who removed the transmitter from the animal.

"Fortunately, there was a telephone number on the transmitter and somehow the fishermen contacted the TSA office and we approached officials of the Sundarbans Tiger Reserve. We are trying to bring the turtle back to India," Dr. Singh said. Of the 10 animals released with the transmitter, signals are coming from six: four from India, and two from Bangladesh.

Experts have pointed out that five of the animals have descended down from the site of release in the Sundarbans and moved south. Justin Jones, Deputy Director of the Sundarbans Tiger Reserve, said that the turtle had been rescued by the Bangladesh Forest Department.

"We are trying to bring back the animal, but at present, the animal is at a facility under Khulna Forest Department. Bangladesh also has a facility for *Batagur Baska*, and the animal which is injured is at the facility," Mr. Jones said.

Highlighting the need for the release of the critically endangered turtles, the official of the Sundarbans Tiger Reserve said the objective of the initiative was to ascertain the habitat, breeding pattern and the movement of the species.

The population of the northern river terrapin, a freshwater turtle, had reached critical limits about 15 years ago when experts and forest officials were not sure about any surviving population of the freshwater turtles in the Sundarbans.

In 2008, a joint exploration of swamps mangroves and tidal creeks by the TSA and Sundarban Tiger Reserve located a cohort of eight males, three females, and one juvenile in a pond at the Sajnekhali Interpretation Center.

In 14 years, the conservation breeding of the species, categorised as critically endangered by International Union for Conservation of Nature Red List, has been a success with almost 12 adults and close to 370 juveniles of the species.

In the case of maximum dispersal, the animal descended from the release site... crossed the sea and Bangladesh Sundarbans, and is now in its fringe area

Shailendra Singh

Director of Turtle Survival Alliance India

[Our code of editorial values](#)

END

Downloaded from **crackIAS.com**

© **Zuccess App** by crackIAS.com

CrackIAS.com

SRI LANKA LOSES TUSKER RAJA, ITS 'NATIONAL TREASURE'

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

Nadungamuwa Raja being escorted by a security personnel. AFPLAKRUWAN WANNIARACHCHI | Photo Credit: LAKRUWAN WANNIARACHCHI

Sri Lanka is mourning the death of a much-loved Indian elephant that made the island nation its home for nearly half a century, and was named a “national treasure” by President Gotabaya Rajapaksa on Monday.

Sixty-nine-year-old Nadungamuwa Rajawwas known widely as the towering tusker that carried the casket containing the ‘Sacred Tooth Relic’ at the ‘Perahera’ festival or annual pageant in Kandy district. Following his passing on Monday, scores of people, including children and Buddhist priests, bid adieu to Raja, offering prayers at the site where the giant was laid. President Rajapaksa instructed officials to preserve Raja’s body “for future generations to witness”, his office said in a statement. Raja was handed over to taxidermists for stuffing, following Buddhist funeral rites, news agency AFP reported.

Raja was born in Mysuru in 1954 and belonged to Maharaja Jayachamarajendra Wadiyar. The king gifted him to a Sri Lankan monk physician for treating an illness, according to Dr. Harsha Dharmavijaya, an ayurvedic physician, whose family has been caring for Raja from 1978.

A 2021 feature published in the State-run Daily News said the monk, who received Raja as a gift could not maintain him, and sold him to a timber mill in Horana, south of capital Colombo. Troubled seeing the magnificent elephant — tall and with striking tusks — lifting and transporting logs, Dr. Dharmavijaya’s father purchased him.

In addition to his routine diet of coconut palm and an assorted fruit platter every day, Raja loved a jaggery treat every now and then, his mahout Wilson Koddithuwakku had recalled.

Famously, Raja would walk from north Colombo to the central Kandy district, covering some 90 km over seven days, stopping at Buddhist shrines along the way for a quick bath and food.

Scores of Sri Lankans paid tributes to Raja on social media, sharing images of the tusker. Animal rights activists posted messages such as “Finally free from chains” and “may you find freedom and peace”, reflecting prevalent concerns over the treatment of elephants in captivity.

[Our code of editorial values](#)

END

Downloaded from crackIAS.com

© **Zuccess App** by crackIAS.com

ANTARCTIC EXPLORER SHACKLETON'S SHIP DISCOVERED AFTER A CENTURY

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

Unearthing history: The Endurance ship that was discovered off the coast of Antarctica a century after its sinking. AFP | Photo Credit: ESTHER HORVATH

Scientists say they have found the sunken wreck of polar explorer Ernest Shackleton's ship Endurance, more than a century after it was lost to the Antarctic ice.

The Falklands Maritime Heritage Trust says the vessel lies 3,000 meters below the surface of the Weddell Sea, about 6.4 kilometers south of the location recorded in 1915 by its captain, Frank Worsley.

An expedition set off from South Africa last month to search for the ship, which was crushed by ice and sank in November 1915.

Mensun Bound, director of exploration for the Endurance22 expedition, said footage revealed the ship to be in remarkably good condition.

"This is by far the finest wooden shipwreck I have ever seen," he said. "It is upright, well proud (clear) of the seabed, intact, and in a brilliant state of preservation. You can even see 'Endurance' arched across the stern, directly below the taffrail."

Shackleton's 1914-16 attempt to become the first person to cross Antarctica via the South Pole failed — he never set foot on the continent.

But his successful bid to reach help at a remote South Atlantic whaling station and rescue his men is considered a heroic feat of endurance. All the men survived and were rescued many months later.

The expedition to find the ship comes 100 years after Shackleton's death in 1922.

[Our code of editorial values](#)

END

Downloaded from [crackIAS.com](#)

© **Zuccess App** by crackIAS.com

NOVEL STRATEGY TO SYNTHESIZE SOLID ADSORBENTS FOR CO₂ CAPTURE AND UTILIZATION DISCOVERED

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

Indian Scientists have discovered a strategy to synthesize novel solid adsorbents for CO₂ capture and utilization.

Carbon capture and utilization are growing fields of research focusing on reducing CO₂ emissions. Although several industrial advancements have already been demonstrated, none of the technologies can provide an economically viable and complete CO₂ capture and utilization solution. Therefore, fundamental research on novel solid adsorbents might offer a critical material for CO₂ capture and CO₂ utilization.

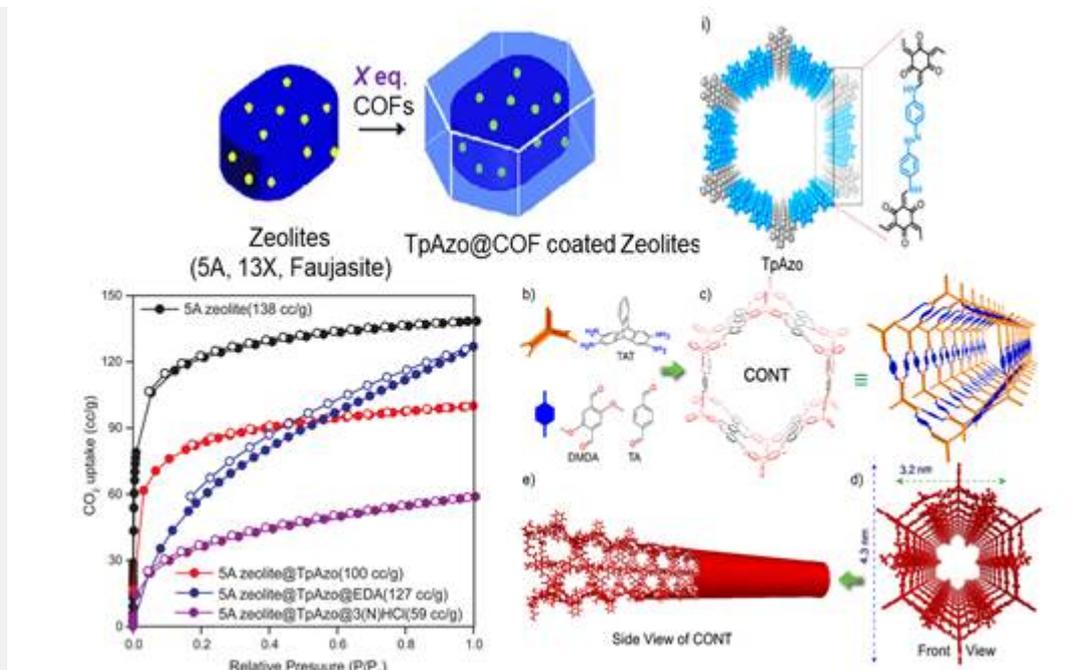
Professor Rahul Banerjee's group at IISER-Kolkata, with support from Department of Science & Technology, Govt. of India under Mission Innovation program, has demonstrated a strategy to synthesize novel solid adsorbents, especially for CO₂ capture and CO₂ utilization. Prof. Banerjee's group has discovered special types of nanoparticles or microparticles which can capture CO₂ in their micro and mesoporous voids.

The novel materials with distinct physical properties on its surfaces that have been synthesized include porous Covalent organic frameworks like COF-graphene Janus thin films published in 'Journal of **American Chemical Society**' porous covalent bonded organic nanotubes published in Nature Chemistry, and COF coated zeolite published in 'Journal of **American Chemical Society**'.

The judicious choice of 2D graphene sheets as a grafter helped the researchers to design and create COF-graphene Janus thin films through the interactions (non-covalent) between the COF and graphene, rendering flexible porous Janus films at the DCM-water interface. The newly designed COF-coated zeolites could be an excellent candidate for CO₂ storage in the industry due to their high surface area and increased chemical stability.

The high CO₂ uptake for the COF coated zeolites, even after treatment with weak acids makes it appropriate for industrial purposes. The COFs coating prevented the degradation of zeolite structure from moisture, weak acids, and water. The CO₂ uptake data for COF coated zeolite at 1 bar, 293K is 132 cc/g, supersedes the CO₂ uptake data of zeolite under the same condition.

Rahul Banerjee's group has recently discovered purely covalent bonded organic nanotubes (CONTs) with a hitherto unavailable structure via a novel bottom-up approach. Although zero-dimensional covalent organic cages and two- and three-dimensional covalent organic frameworks were previously reported, the synthesis of one-dimensional organic nanotubes was hitherto unheard of. The synthesized CONTs have the edge over the analogous carbon nanotubes (CNTs) in functionalization, synthetic conditions, and porosity which exhibits a BET surface area of 321 m² g⁻¹. They are also promising candidates for the efficient CO₂ adsorption with a CO₂ uptake capacity of 60-80 cc g⁻¹ at 1 bar and 293 K. These CONTs have also showcased photosensitizing ability, which can convert the adsorbed CO₂ into CO (130-200 μmol g⁻¹ h⁻¹) upon irradiation of visible light (400-700 nm).



Publication link:

<https://doi.org/10.1021/jacs.1c10263>

<https://doi.org/10.1021/jacs.1c09740>

For more details, Professor Rahul Banerjee (r.banerjee@iiserkol.ac.in) can be contacted.

SNC / RR

Indian Scientists have discovered a strategy to synthesize novel solid adsorbents for CO₂ capture and utilization.

Carbon capture and utilization are growing fields of research focusing on reducing CO₂ emissions. Although several industrial advancements have already been demonstrated, none of the technologies can provide an economically viable and complete CO₂ capture and utilization solution. Therefore, fundamental research on novel solid adsorbents might offer a critical material for CO₂ capture and CO₂ utilization.

Professor Rahul Banerjee's group at IISER-Kolkata, with support from Department of Science & Technology, Govt. of India under Mission Innovation program, has demonstrated a strategy to synthesize novel solid adsorbents, especially for CO₂ capture and CO₂ utilization. Prof. Banerjee's group has discovered special types of nanoparticles or microparticles which can capture CO₂ in their micro and mesoporous voids.

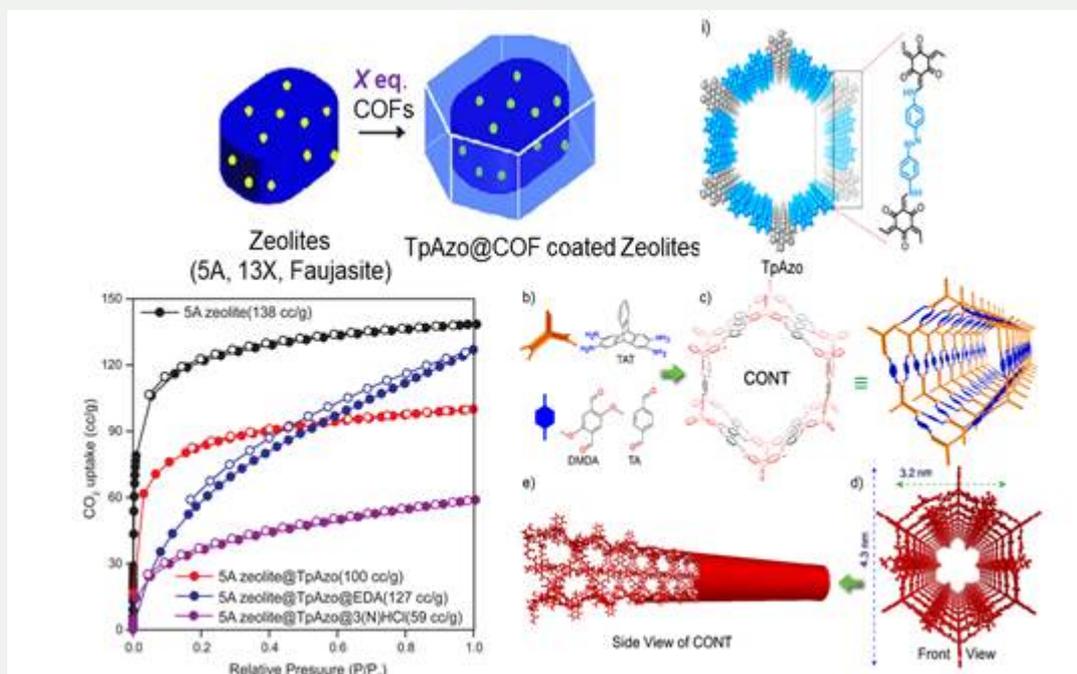
The novel materials with distinct physical properties on its surfaces that have been synthesized include porous Covalent organic frameworks like COF-graphene Janus thin films published in 'Journal of **American Chemical Society**' porous covalent bonded organic nanotubes published

in Nature Chemistry, and COF coated zeolite published in 'Journal of **American Chemical Society**'.

The judicious choice of 2D graphene sheets as a grafter helped the researchers to design and create COF-graphene Janus thin films through the interactions (non-covalent) between the COF and graphene, rendering flexible porous Janus films at the DCM-water interface. The newly designed COF-coated zeolites could be an excellent candidate for CO₂ storage in the industry due to their high surface area and increased chemical stability.

The high CO₂ uptake for the COF coated zeolites, even after treatment with weak acids makes it appropriate for industrial purposes. The COFs coating prevented the degradation of zeolite structure from moisture, weak acids, and water. The CO₂ uptake data for COF coated zeolite at 1 bar, 293K is 132 cc/g, supersedes the CO₂ uptake data of zeolite under the same condition.

Rahul Banerjee's group has recently discovered purely covalent bonded organic nanotubes (CONTs) with a hitherto unavailable structure via a novel bottom-up approach. Although zero-dimensional covalent organic cages and two- and three-dimensional covalent organic frameworks were previously reported, the synthesis of one-dimensional organic nanotubes was hitherto unheard of. The synthesized CONTs have the edge over the analogous carbon nanotubes (CNTs) in functionalization, synthetic conditions, and porosity which exhibits a BET surface area of 321 m² g⁻¹. They are also promising candidates for the efficient CO₂ adsorption with a CO₂ uptake capacity of 60-80 cc g⁻¹ at 1 bar and 293 K. These CONTs have also showcased photosensitizing ability, which can convert the adsorbed CO₂ into CO (130-200 μmol g⁻¹ h⁻¹) upon irradiation of visible light (400-700 nm).



Publication link:

<https://doi.org/10.1021/jacs.1c10263>

<https://doi.org/10.1021/jacs.1c09740>

For more details, Professor Rahul Banerjee (r.banerjee@iiserkol.ac.in) can be contacted.

SNC / RR

END

Downloaded from **crackIAS.com**

© **Zuccess App** by crackIAS.com

CrackIAS.com

SC ASKS SIKRI TO HEAD CHAR DHAM PANEL

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

The Supreme Court on Friday asked its former judge, Justice A.K. Sikri, to head the high-powered committee which independently monitors the environmental impact of the Char Dham road project in the Himalayas that extends up to the India-China border.

Justice Sikri is already chairing the oversight committee set up by the apex court in a judgment last December. This panel is tasked with ensuring that the government implements the remedial measures recommended by the high-powered committee for the environment.

Govt. mandate upheld

The judgment had upheld the government's mandate to broaden three Himalayan highways considered crucial by the Ministry of Defence for quick troop build-up along the India-China border.

These highways would be developed in accordance with the Double Lane with Paved Shoulder system.

Justifying the broadening of roads in the ecologically fragile Himalayan ranges, the government had argued in court that the armed forces cannot surrender the defence of the nation to threats of landslip during the widening of roads, for quickly moving military hardware to the "very vulnerable" Indo-China border.

[Our code of editorial values](#)

END

Downloaded from **crackIAS.com**

© **Zuccess App** by crackIAS.com

AN EFFORT TO SAVE THE ENIGMATIC OWLS IN INDIA

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

Illustration of Eastern Grass owl by Richa Kedia | Photo Credit: Richa Kedia

Owls are one of the most enigmatic creatures of the wild. These nocturnal hunters are often found in illegal wildlife trade in India due to various superstitions and taboos attached to them. Despite their immense role in the ecosystem, these endangered birds are trapped in large numbers for sacrifice and use in multiple rituals often promoted by local mystic practitioners. To highlight common threats and for effective identification of owls, TRAFFIC and WWF-India launched an identification tool recently. TRAFFIC was established in 1976 by WWF and IUCN as a wildlife trade monitoring network to undertake data collection, analysis, and provision of recommendations to inform decision making on wildlife trade. Identification (ID) cards have been issued to enable law enforcement authorities to accurately identify 16 commonly-found owl species in illegal trade. The ID cards, in English and Hindi, will be distributed free to wildlife law enforcement agencies across India. "India is home to about 36 species of owls, all protected under the Wildlife (Protection) Act, 1972. However, very little information is available on the status of species level counts, thus making them vulnerable. Through the identification tool, we wanted to highlight the need to protect these enigmatic creatures and assist officials and other organisations working for conservation in identification of owl species," says Merwyn Fernandes, Coordinator, TRAFFIC's India office. Not just the hunting, trading, or any other form of utilization of owls is a punishable offense as per the provisions of the Wildlife (Protection) Act, 1972; all owl species found in India are enlisted under the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES), which restricts their international trade. According to reports, at least 20 seizure incidences related to poaching and trafficking of owls have been reported across India since 2019. But many more go unreported, say experts. Authored by Saket Badola, Head of TRAFFIC's India office and Merwyn, the new ID tools provide essential information related to the species' legal status, habitat, and distribution. They provide valuable tips on identifying the owls at species level and highlight common threats. The owl species in the ID cards are Asian Barred Owlet, Barn Owl, Brown Fish Owl, Brown Hawk Owl, Brown Wood-owl, Collared Owlet, Collared Scops-owl, Dusky Eagle Owl, Eastern Grass-owl, Jungle Owlet, Mottled Wood-owl, Oriental Scops-owl, Rock Eagle-owl, Spot-bellied Eagle-owl, Spotted Owlet and Tawny Fish-owl.

The ID card is in a form of a downloadable booklet which has illustrations of the owls, the key features of each species, its distribution in India and its size comparison with the house sparrow and crow for easy identification.

The illustrations of the 16 owl species were done in watercolour by Richa Kedia. Speaking about the experience of recreating the scientific images through illustrations, Richa says, "Owls being nocturnal creatures, the most challenging part is to get the colouration of the species right as night images rarely bring out the exact appearance of the species. I had to rely on several books and sources to get the perfect colouration of each species." Her main focus was to make the eyes, beak, ears and claws of each owl species prominent. "I believe Illustrations have a greater impact when it comes to identification or spreading awareness about a species as you can create it from scratch with focus on body parts which are critical for identification purpose," says Richa, who specialises in wildlife illustrations and has worked with AP Forest Department as well as Indira Gandhi Zoological Park in spreading awareness on lesser-known species like small cats of the region. According to Saket, the main strategies to recover key wildlife species is to provide them a safe habitat and protect them from the threats of poaching and illegal trade. "Protecting owls will support ecosystem restoration and biodiversity," he says. Ravi Singh,

secretary general and CEO, WWF-India, adds, "Owls play an essential role in our ecosystem. They enhance agricultural productivity by keeping a check on the rodent populations. Unless trafficking and illicit trade of owls is controlled, the owl populations will remain under threat. Adequate conservation and protection efforts for owls and other endangered species is crucial for maintaining a healthy ecosystem". *The owl identification tool comes in a PDF format and can be downloaded from <https://www.wwfindia.org/?20662/strengthening-owl-protection-in-india>*

[Our code of editorial values](#)

END

Downloaded from **crackIAS.com**

© **Zuccess App** by crackIAS.com

CrackIAS.com

QUESTION CORNER

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

Arabidopsis thaliana (Thale Cress) | Photo Credit: Getty Images

Animals often use highly specific signals to warn their herd about approaching predators. Surprisingly, a similar behaviour is also observed in plants. Shedding more light on this phenomenon, Tokyo University of Science researchers have discovered one such mechanism. Using *Arabidopsis thaliana* as a model system, the researchers have shown that herbivore-damaged plants give off volatile chemical 'scents' that trigger epigenetic modifications in the defence genes of neighbouring plants. These genes subsequently trigger anti-herbivore defence systems.

Prior studies have shown that when grown near mint plants, soybean and field mustard (*Brassica rapa*) plants display heightened defence properties against herbivore pests by activating defence genes in their leaves, as a result of "eavesdropping" on mint volatiles. Put simply, if mint leaves get damaged after a herbivore attack, the plants in their immediate vicinity respond by activating their anti-herbivore defence systems in response to the chemical signals released by the damaged mint plant. To understand this mechanism better, a team led by Tokyo University of Science, studied these responses in *Arabidopsis thaliana*, a model plant used widely in biological studies (*Plant Physiology*).

First, researchers exposed the plants to beta-ocimene, a volatile organic compound often released by plants in response to attacks by herbivores like *Spodoptera litura*. Next, the researchers tried to determine the exact mechanism of action of volatile-chemical-activated plant defence. They found that the volatile chemicals released by the damaged plants enhanced histone acetylation and the expression of defence gene regulators. The team found a specific set of enzymes were responsible for the induction and maintenance of the anti-herbivore properties, a press release says.

[Our code of editorial values](#)

END

Downloaded from crackIAS.com

© **Zuccess App** by crackIAS.com

RS. 19,000-CRORE AFFORESTATION PLAN LAUNCHED

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

The Centre envisages a Rs. 19,000–crore project to rejuvenate 13 major rivers by planting trees, officials in the Environment and the Jal Shakti Ministries said at a joint press conference on Monday.

These ‘forestry’ interventions are expected to increase the cumulative forest cover by 7,417.36 sq. km. in the vicinity of these 13 rivers and would prevent 50.21 million tonnes of CO₂–equivalent in 10–year–old plantations and 74.76 million tonnes CO₂–equivalent in 20–year–old plantations.

They would help recharge groundwater, reduce sedimentation, generate Rs. 449.01 crore from non-timber and other forest produce as well as provide employment of 344 million man–days.

The rivers are the Jhelum, Chenab, Ravi, Beas, Sutlej, Yamuna, Brahmaputra, Luni, Narmada, Godavari, Mahanadi, Krishna and Cauvery funded by the National Afforestation & Eco-development Board, (MoEF&CC). The two Ministries made public multiple voluminous Detailed Project Reports, for each of these rivers, prepared by the Indian Council of Forestry Research & Education, Dehradun, (ICFRE).

[Our code of editorial values](#)

END

Downloaded from crackIAS.com

© **Zuccess App** by crackIAS.com

UNION ENVIRONMENT MINISTER, SH. BHUPENDER YADAV & UNION JAL SHAKTI MINISTER, SH. GAJENDRA SINGH SHEKHAWAT JOINTLY RELEASE DETAILED PROJECT REPORTS ON REJUVENATION OF 13 MAJOR RIVERS THROUGH FORESTRY INTERVENTIONS

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

The Union Minister for Environment Forest and Climate Change, Sh. Bhupender Yadav and the Union Minister, Jal Shakti, Sh. Gajendra Singh Shekhawat along with the Minister of State, MoEF&CC, Sh. Ashwini Kumar Choubey, jointly released the Detailed Project Reports (DPRs) on Rejuvenation of thirteen Major Rivers through Forestry Interventions. The 13 rivers for which DPRs were released are Jhelum, Chenab, Ravi, Beas, Sutlej, Yamuna, Brahmaputra, Luni, Narmada, Godavari, Mahanadi, Krishna, and Cauvery. The DPRs were funded by National Afforestation & Eco-development Board, (MoEF&CC) and prepared by Indian Council of Forestry Research & Education(ICFRE), Dehradun. Smt. Leena Nandan, Secretary, MoEF&CC, Sh. C.P. Goyal, Director General Forest & Special Secretary, MoEF&CC, Sh. Arun Singh Rawat, Director General, ICFRE were also present on the occasion.



Growing water crisis on account of depleting fresh water resources especially due to shrinking and degradation of river ecosystems is a major impediment to achieving national goals pertaining to environment, conservation, climate change and sustainable development. Thirteen rivers collectively cover a total basin area of 18,90,110 sq. km that represents 57.45% of the geographical area of the country. The length of 13 rivers including 202 tributaries within the delineated riverscapes is 42,830 km.

Addressing the gathering, the Union Environment Minister, Shri Bhupender Yadav said that these DPRs are in line with the holistic vision of Prime Minister, Shri Narendra Modi of making the coming 25 years as 'Amrit Kaal' as these DPRs will create a target of green cover expansion for upcoming 10 years and 20 years, then the future generations will get a 'Green India' through the 'Van Bhagidari and Jan Bhagidari' of the current generation. Sh. Yadav further added that the projects will alleviate the growing water stress and help achieve national goals related to climate change and sustainable development.



Addressing the gathering, the Union Minister, Jal Shakti, Shri Gajendra Singh Shekhawat said that 'water is the elixir of life' and this fact was known to all traditionally as rivers were treated as goddesses and were cared for with deep reverence in the hearts, minds and souls of the

masses. Shri Shekhawat said that the day we stopped thinking about what we give back to the rivers, when we did not balance the need for development with environmental sustainability, when we stopped becoming custodians of nature and rather forced our ownership on it, we have started exploiting and over exploiting our resources.



Talking about how under Prime Minister Shri Narendra Modi a holistic approach has been adopted towards river rejuvenation especially that of river Ganga, the Union Minister said that the entire world has witnessed and appreciated the results. The Union Minister for Jal Shakti stressed on the need for thinking of ourselves as custodians of nature and all its beauty & resources and the fact that in the past 5 decades we have forgotten our responsibilities towards sustainability and we need to ensure that we give a better resource base to our future generations. Sh. Shekhawat said that with these DPRs, through holistic planning, we can head towards giving a better resource base to the future through integrative management and combined efforts of all.

The rivers along with their tributaries are proposed for forestry interventions in the riverscape under different landscapes namely natural landscape, agricultural landscape and urban landscape. The different models of forestry plantations including timber species, medicinal plants, grasses, shrubs and fuel fodder and fruit trees are aimed to augment water, ground water recharge and contain erosion. A total of 667 treatment and plantation models are proposed in all the 13 DPRs meant for the proposed forestry interventions and supporting activities, in different landscapes. In all, 283 treatment models have been proposed for the natural landscapes, 97 treatments models in Agriculture Landscapes and 116 different treatment models in Urban Landscapes. Site specific treatments in terms of soil & moisture conservation and plantations of grasses, herbs, forestry and horticultural trees have been proposed for treatment of prioritized sites in the riverscape supported by GIS technique based on consultations with various stakeholders. Throughout this exercise Nodal officers from respective State Forest Departments were associated to coordinate with other line departments.

Each DPR incorporates detailed geospatial analysis of the delineated Riverscape, exhaustive review on the river environment, factors responsible for the current state and prioritization of areas using Remote sensing and GIS techniques along with field verification for proposed forestry interventions and other conservation measures through an extensive consultative process and designing and development of various treatment models for Natural, Agriculture & Urban landscape in each of the delineated riverscape. Each DPR consists of Vol. I, II and summary of the DPR in the form of an Overview. Additionally, an Overview as summary of all 13 DPRs is also prepared as abridged document.

The DPRs focus on protection, afforestation, catchment treatment, ecological restoration, moisture conservation, livelihood improvement, income generation, ecotourism by developing river fronts, eco-parks and bringing awareness amongst the masses. Research and monitoring have also been included as a component.

The proposed cumulative budget outlay of thirteen DPRs is Rs. 19,342.62 crore. The DPRs are expected to be executed through the State Forest Departments as nodal department and with convergence of schemes of other line departments in the states towards the activities proposed in the DPRs and funding support from the Government of India. For ease of implementation by the frontline staff, an Execution Manual in Hindi/Local Languages shall be prepared by the State

Forest Departments. Technical support shall be provided by ICFRE. The treatments are proposed to be spread over a period of five years with a provision for additional time for maintenance of plantations. In case of delay in initiation of the project, the proposed outlay of the DPRs shall be adjusted using the Wholesale Price Index (WPI) since the project outlay was worked out as per costs prevailing during 2019-20. During execution, "Ridge to Valley approach" shall be followed and soil & moisture conservation works would precede the plantation operations. Flexibility has been provided in change of species and sites in case the circumstances at the time of implementation so demand. Steering and Executive Committees at the National Level and State level have also been proposed in the DPRs.

The activities proposed in the DPRs shall help achieve potential benefits of increasing the green cover, contain soil erosion, recharge water table and sequester carbon dioxide in addition to benefits in the form of non-timber forest produce. Forestry interventions are expected to increase the cumulative forest cover by 7,417.36 km² across 13 riverscapes. The proposed interventions would help to sequester 50.21 million tons CO₂ equivalent in 10-year-old plantations and 74.76 million tons CO₂ equivalent in 20-year-old plantations. The proposed interventions in thirteen riverscapes would help in ground water recharge to the extent of 1,889.89 million m³ yr⁻¹, and reduction in sedimentation to the tune of 64,83,114 m³ yr⁻¹. In addition, Rs. 449.01 crore is likely to be generated from expected non-timber and other forest produce. It is also expected that the employment of 344 million man-days shall be generated through planned activities as provisioned in 13 DPRs.



These efforts will play an important role achieving the international commitments of India such as NDC forestry sector goal of creation of additional carbon sink of 2.5 -3 billion tons of CO₂ equivalent through additional forest and tree cover by 2030 under the Paris Agreement of UNFCCC, restoration of 26 million hectare of degraded lands by 2030 as a land degradation neutrality target under UNCCD, halt the biodiversity loss by 2030 under CBD and Sustainable Development Goals.

It will strengthen the country's progress towards Panchamrit commitment at CoP-26 during November 2021 in Glasgow whereby India promised to reduce its projected carbon emission by one billion tonnes by 2030, meet 50 per cent of energy requirements with renewable energy by 2030, enhance non-fossil energy capacity to 500 gigawatt by 2030, reduce the carbon intensity of its economy by 45 per cent by 2030 and achieve net zero emission by 2070.

Timely and effective implementation of the proposed forestry interventions as envisaged in DPRs of 13 major Indian Rivers is expected to significantly contribute towards improvement of terrestrial and aquatic biota, and livelihoods besides rejuvenation of the rivers in terms of Aviral Dhara, Nirmal Dhara besides Swachchh Kinara.

BY/AS

The Union Minister for Environment Forest and Climate Change, Sh. Bhupender Yadav and the Union Minister, Jal Shakti, Sh. Gajendra Singh Shekhawat along with the Minister of State, MoEF&CC, Sh. Ashwini Kumar Choubey, jointly released the Detailed Project Reports (DPRs) on Rejuvenation of thirteen Major Rivers through Forestry Interventions. The 13 rivers for which

DPRs were released are Jhelum, Chenab, Ravi, Beas, Sutlej, Yamuna, Brahmaputra, Luni, Narmada, Godavari, Mahanadi, Krishna, and Cauvery. The DPRs were funded by National Afforestation & Eco-development Board, (MoEF&CC) and prepared by Indian Council of Forestry Research & Education(ICFRE), Dehradun. Smt. Leena Nandan, Secretary, MoEF&CC, Sh. C.P. Goyal, Director General Forest & Special Secretary, MoEF&CC, Sh. Arun Singh Rawat, Director General, ICFRE were also present on the occasion.



Growing water crisis on account of depleting fresh water resources especially due to shrinking and degradation of river ecosystems is a major impediment to achieving national goals pertaining to environment, conservation, climate change and sustainable development. Thirteen rivers collectively cover a total basin area of 18,90,110 sq. km that represents 57.45% of the geographical area of the country. The length of 13 rivers including 202 tributaries within the delineated riverscapes is 42,830 km.

Addressing the gathering, the Union Environment Minister, Shri Bhupender Yadav said that these DPRs are in line with the holistic vision of Prime Minister, Shri Narendra Modi of making the coming 25 years as 'Amrit Kaal' as these DPRs will create a target of green cover expansion for upcoming 10 years and 20 years, then the future generations will get a 'Green India' through the 'Van Bhagidari and Jan Bhagidari' of the current generation. Sh. Yadav further added that the projects will alleviate the growing water stress and help achieve national goals related to climate change and sustainable development.



Addressing the gathering, the Union Minister, Jal Shakti, Shri Gajendra Singh Shekhawat said that 'water is the elixir of life' and this fact was known to all traditionally as rivers were treated as goddesses and were cared for with deep reverence in the hearts, minds and souls of the masses. Shri Shekhawat said that the day we stopped thinking about what we give back to the rivers, when we did not balance the need for development with environmental sustainability, when we stopped becoming custodians of nature and rather forced our ownership on it, we have started exploiting and over exploiting our resources.



Talking about how under Prime Minister Shri Narendra Modi a holistic approach has been adopted towards river rejuvenation especially that of river Ganga, the Union Minister said that the entire world has witnessed and appreciated the results. The Union Minister for Jal Shakti stressed on the need for thinking of ourselves as custodians of nature and all its beauty & resources and the fact that in the past 5 decades we have forgotten our responsibilities towards sustainability and we need to ensure that we give a better resource base to our future generations. Sh. Shekhawat said that with these DPRs, through holistic planning, we can head towards giving a better resource base to the future through integrative management and

combined efforts of all.

The rivers along with their tributaries are proposed for forestry interventions in the riverscape under different landscapes namely natural landscape, agricultural landscape and urban landscape. The different models of forestry plantations including timber species, medicinal plants, grasses, shrubs and fuel fodder and fruit trees are aimed to augment water, ground water recharge and contain erosion. A total of 667 treatment and plantation models are proposed in all the 13 DPRs meant for the proposed forestry interventions and supporting activities, in different landscapes. In all, 283 treatment models have been proposed for the natural landscapes, 97 treatments models in Agriculture Landscapes and 116 different treatment models in Urban Landscapes. Site specific treatments in terms of soil & moisture conservation and plantations of grasses, herbs, forestry and horticultural trees have been proposed for treatment of prioritized sites in the riverscape supported by GIS technique based on consultations with various stakeholders. Throughout this exercise Nodal officers from respective State Forest Departments were associated to coordinate with other line departments.

Each DPR incorporates detailed geospatial analysis of the delineated Riverscape, exhaustive review on the river environment, factors responsible for the current state and prioritization of areas using Remote sensing and GIS techniques along with field verification for proposed forestry interventions and other conservation measures through an extensive consultative process and designing and development of various treatment models for Natural, Agriculture & Urban landscape in each of the delineated riverscape. Each DPR consists of Vol. I, II and summary of the DPR in the form of an Overview. Additionally, an Overview as summary of all 13 DPRs is also prepared as abridged document.

The DPRs focus on protection, afforestation, catchment treatment, ecological restoration, moisture conservation, livelihood improvement, income generation, ecotourism by developing river fronts, eco-parks and bringing awareness amongst the masses. Research and monitoring have also been included as a component.

The proposed cumulative budget outlay of thirteen DPRs is Rs. 19,342.62 crore. The DPRs are expected to be executed through the State Forest Departments as nodal department and with convergence of schemes of other line departments in the states towards the activities proposed in the DPRs and funding support from the Government of India. For ease of implementation by the frontline staff, an Execution Manual in Hindi/Local Languages shall be prepared by the State Forest Departments. Technical support shall be provided by ICFRE. The treatments are proposed to be spread over a period of five years with a provision for additional time for maintenance of plantations. In case of delay in initiation of the project, the proposed outlay of the DPRs shall be adjusted using the Wholesale Price Index (WPI) since the project outlay was worked out as per costs prevailing during 2019-20. During execution, "Ridge to Valley approach" shall be followed and soil & moisture conservation works would precede the plantation operations. Flexibility has been provided in change of species and sites in case the circumstances at the time of implementation so demand. Steering and Executive Committees at the National Level and State level have also been proposed in the DPRs.

The activities proposed in the DPRs shall help achieve potential benefits of increasing the green cover, contain soil erosion, recharge water table and sequester carbon dioxide in addition to benefits in the form of non-timber forest produce. Forestry interventions are expected to increase the cumulative forest cover by 7,417.36 km² across 13 riverscapes. The proposed interventions would help to sequester 50.21 million tons CO₂ equivalent in 10-year-old plantations and 74.76 million tons CO₂ equivalent in 20-year-old plantations. The proposed interventions in thirteen riverscapes would help in ground water recharge to the extent of 1,889.89 million m³ yr⁻¹, and reduction in sedimentation to the tune of 64,83,114 m³ yr⁻¹. In

addition, Rs. 449.01 crore is likely to be generated from expected non-timber and other forest produce. It is also expected that the employment of 344 million man-days shall be generated through planned activities as provisioned in 13 DPRs.



These efforts will play an important role achieving the international commitments of India such as NDC forestry sector goal of creation of additional carbon sink of 2.5 -3 billion tons of CO₂ equivalent through additional forest and tree cover by 2030 under the Paris Agreement of UNFCCC, restoration of 26 million hectare of degraded lands by 2030 as a land degradation neutrality target under UNCCD, halt the biodiversity loss by 2030 under CBD and Sustainable Development Goals.

It will strengthen the country's progress towards Panchamrit commitment at CoP-26 during November 2021 in Glasgow whereby India promised to reduce its projected carbon emission by one billion tonnes by 2030, meet 50 per cent of energy requirements with renewable energy by 2030, enhance non-fossil energy capacity to 500 gigawatt by 2030, reduce the carbon intensity of its economy by 45 per cent by 2030 and achieve net zero emission by 2070.

Timely and effective implementation of the proposed forestry interventions as envisaged in DPRs of 13 major Indian Rivers is expected to significantly contribute towards improvement of terrestrial and aquatic biota, and livelihoods besides rejuvenation of the rivers in terms of Aviral Dhara, Nirmal Dhara besides Swachchh Kinara.

BY/AS

END

Downloaded from crackIAS.com

© **Zuccess App** by crackIAS.com

INDIA COOLING ACTION PLAN

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

The India Cooling Action Plan (ICAP) provides an integrated vision towards cooling across sectors encompassing, *inter alia*, reduction of cooling demand, refrigerant transition, enhancing energy efficiency and better technology options by 2037-38 through forging synergies with on-going programmes/ schemes of the Government. Following steps have been taken to implement the recommendation of various thematic areas of the ICAP:

(Issues relating to climate change and environmental protection are discussed in the various international environmental conventions and treaties comprising representatives from both developed and developing countries. Commitments including decisions in such conventions and treaties are arrived after extensive discussions and following a process of consensus. India has raised the issue of disproportionate usage of global carbon budget by developed countries that has led to global warming; their high levels of current emissions and their need to reach net zero much ahead of 2050.

India is a signatory to major global environmental conventions and treaties including, *inter alia*, United Nations Framework Convention on Climate Change, United Nations Convention to Combat Desertification, Convention on Biological Diversity, Paris Agreement, Montreal Protocol on Substances that Deplete the Ozone Layer, Stockholm Convention on Persistent Organic Pollutants, Minamata Convention on Mercury, Convention on International Trade in Endangered Species of Wild Fauna and Flora, Convention on the Conservation of Migratory Species of Wild Animals, etc. India has taken ambitious targets in support of global environmental goals as evidenced in its Nationally Determined Contributions for combating Climate Change under the Paris Agreement, ratification of the Kigali Amendment to the Montreal Protocol for phase down of Hydrofluorocarbons, restoration of 26 million hectares of degraded land by 2030 under the United Nations Convention to Combat Desertification and conserving 30% of land and oceans by 2030. India engaged constructively with all member states in the fifth United Nations Environment Assembly (UNEA 5.2) in 2022 to develop consensus on the resolution for driving global action on plastic pollution.

India has also hosted the Conference of Parties to the United Nations Convention to Combat Desertification in 2019 and Convention on the Conservation of Migratory Species of Wild Animals in 2020.

This information was given by Shri Ashwini Kumar Choubey, Minister of State, Ministry of Environment, Forest & Climate Change in Lok Sabha today.

BY

The India Cooling Action Plan (ICAP) provides an integrated vision towards cooling across sectors encompassing, *inter alia*, reduction of cooling demand, refrigerant transition, enhancing energy efficiency and better technology options by 2037-38 through forging synergies with on-going programmes/ schemes of the Government. Following steps have been taken to implement the recommendation of various thematic areas of the ICAP:

(Issues relating to climate change and environmental protection are discussed in the various international environmental conventions and treaties comprising representatives from both developed and developing countries. Commitments including decisions in such conventions and treaties are arrived after extensive discussions and following a process of consensus. India has raised the issue of disproportionate usage of global carbon budget by developed countries that has led to global warming; their high levels of current emissions and their need to reach net zero much ahead of 2050.

India is a signatory to major global environmental conventions and treaties including, *inter alia*, United Nations Framework Convention on Climate Change, United Nations Convention to Combat Desertification, Convention on Biological Diversity, Paris Agreement, Montreal Protocol on Substances that Deplete the Ozone Layer, Stockholm Convention on Persistent Organic Pollutants, Minamata Convention on Mercury, Convention on International Trade in Endangered Species of Wild Fauna and Flora, Convention on the Conservation of Migratory Species of Wild Animals, etc. India has taken ambitious targets in support of global environmental goals as evidenced in its Nationally Determined Contributions for combating Climate Change under the Paris Agreement, ratification of the Kigali Amendment to the Montreal Protocol for phase down of Hydrofluorocarbons, restoration of 26 million hectares of degraded land by 2030 under the United Nations Convention to Combat Desertification and conserving 30% of land and oceans by 2030. India engaged constructively with all member states in the fifth United Nations Environment Assembly (UNEA 5.2) in 2022 to develop consensus on the resolution for driving global action on plastic pollution.

India has also hosted the Conference of Parties to the United Nations Convention to Combat Desertification in 2019 and Convention on the Conservation of Migratory Species of Wild Animals in 2020.

This information was given by Shri Ashwini Kumar Choubey, Minister of State, Ministry of Environment, Forest & Climate Change in Lok Sabha today.

BY

END

Downloaded from crackIAS.com

© **Zuccess App** by crackIAS.com

CrackIAS.com

GREAT BARRIER REEF SUFFERS SEVERE CORAL BLEACHING

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

The phenomenon has been recorded two years after a mass bleaching event.

Australia's Great Barrier Reef is suffering widespread and severe coral bleaching due to high ocean temperatures two years after a mass bleaching event, a government agency said on Friday.

The report by the Great Barrier Reef Marine Authority, which manages the world's largest coral reef ecosystem, comes three days before a United Nations delegation is due to assess whether the reef's World Heritage listing should be downgraded due to the ravages of climate change.

"Weather patterns over the next few weeks will be critical in determining the overall extent and severity of coral bleaching across the Marine Park," the authority said.

"Bleaching has been detected across the Marine Park — it is widespread but variable, across multiple regions, ranging in impact from minor to severe," the authority added.

The reef has suffered significantly from coral bleaching caused by unusually warm ocean temperatures in 2016, 2017 and 2020. The previous bleaching damaged two-thirds of the coral.

The environmental group Greenpeace said the severe and widespread coral bleaching suffered during a La Niña weather pattern that is associated with cooler Pacific Ocean temperatures was evidence of the Australian government's failure to protect the coral from the impacts of climate change.

"This is a sure sign that climate change caused by burning coal, oil and gas is threatening the very existence of our reef," Greenpeace Australia Pacific Climate Impacts Campaigner Martin Zavan said in a statement.

In July last year, Australia garnered enough international support to defer an attempt by UNESCO, the United Nations' cultural organisation, to downgrade the reef's World Heritage status to "in danger" because of damage caused by climate change.

[Our code of editorial values](#)

END

Downloaded from **crackIAS.com**

© **Zuccess App** by crackIAS.com

SUSPECTED POISONING KILLS 100 VULTURES

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

A study found that the population of Himalayan griffon declined by 99.9%.

At least 100 vultures — all Himalayan griffons — died of suspected poisoning in Assam.

State Forest Department officials said the carcasses were found on a paddy field in the Chhaygaon area of Kamrup district, about 45 km west of Guwahati.

The area is close to a village where at least 10 endangered vultures died after feeding on a pesticide-laced cattle carcass in February 2020.

“We rushed to the spot after receiving information. No fewer than 100 vultures had died by then. We managed to save 12 vultures and a steppe eagle, also a scavenger,” Sachin Ranade of the Vulture Conservation Breeding Centre at Rani, near Guwahati, told *The Hindu* .

Poisoned carcass

Dimpi Bora, Divisional Forest Officer, said some bones of a goat were found near the carcasses of the vultures. “We suspect the vultures died after feeding on the poisoned carcass of the goat, but the cause of death can be ascertained after an autopsy report,” she said.

“It is high time the police investigated and punished the culprits behind such cases of poisoning. This has been happening for the past 12-15 years but no action is taken either by the police or the Forest Department,” wildlife activist Moley Baruah said.

A fortnight ago, more than 30 vultures were found dead after feeding on a poisoned carcass of a cow in Dibrugarh district of eastern Assam. Officials found some villagers had poisoned the carcass to get rid of stray dogs.

In February 2021, four Himalayan griffons were found dead in the Dhakuakhana area of Lakhimpur district. The carcasses were found near a dead cow.

Steep decline

In January that year, poisoned carcasses of two cows claimed the lives of 23 vultures in the Dhola area of Tinsukia district in eastern Assam. These vultures belonged to the oriental white-backed and slender-billed species.

A study by the Bombay Natural History Society and other organisations in the 1990s found that the population of the Gyps group — Himalayan griffon, white-backed and slender-billed are among its members — in India and Nepal declined from about 40 million by 99.9% in just two decades.

[Our code of editorial values](#)

END

CrackIAS.com

INDIA, JAPAN LAUNCH CLEAN ENERGY PARTNERSHIP

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

In a bid to achieve sustainable economic growth, and ensure energy security in areas of electric vehicles, India and Japan have launched a Clean Energy Partnership (CEP). The Ministry of External Affairs said that the partnership will lead to clean growth by boosting job creation, innovation, and investments.

"Cooperation under this partnership will build on the work already being covered out by the two sides under the foundation of the '[India-Japan Energy Dialogue](#)' established in 2007 and will substantially expand the areas of collaboration for mutual benefit," the statement further said.

The initiative was launched on the occasion of the 14th India-Japan Annual Summit being held in New Delhi.

"They (Indian and Japanese PMs) welcomed the launch of the India-Japan Clean Energy Partnership (CEP) for cooperation towards achieving sustainable economic growth, addressing climate change and ensuring energy security, in areas such as electric vehicles (EV), storage systems including batteries, electric vehicle charging infrastructure (EVCI), solar energy, clean including green hydrogen/ammonia, wind energy, exchange of views on respective energy transition plans, energy efficiency, CCUS (Carbon dioxide Capturing, Utilization, and Storage) and Carbon Recycling," a joint press statement by India and Japan said.

The two countries committed to continuing further discussions for establishing the Joint Crediting Mechanism (JCM) between India and Japan for the implementation of Article 6 of the Paris Agreement.

Besides, they also reaffirmed their determination to promote environmental cooperation in other areas.

"The Prime Ministers, building on the outcome of COP26, recognized the importance and imminence of tackling climate change and shared the importance of various pathways for pragmatic energy transitions reflecting different national circumstances and constant innovation to achieving global net-zero emission," the joint statement said.

The UN Climate Change Conference in Glasgow (COP26) brought together 120 world leaders and over 40,000 registered participants who deliberated on all facets of climate change -- the science, the solutions, the political will to act, and clear indications of action while reaffirming the Paris Climate accord of 2015.

Japanese Prime Minister Fumio Kishida is on a two-day visit to India (March 19-20) for a summit with his Indian counterpart Narendra Modi.

Never miss a story! Stay connected and informed with Mint. [Download](#) our App Now!!

Log in to our website to save your bookmarks. It'll just take a moment.

Oops! Looks like you have exceeded the limit to bookmark the image. Remove some to bookmark this image.

Your session has expired, please login again.

You are now subscribed to our newsletters. In case you can't find any email from our side, please check the spam folder.

This is a subscriber only feature [Subscribe Now](#) to get daily updates on WhatsApp

END

Downloaded from crackIAS.com

© **Zuccess App** by crackIAS.com

CrackIAS.com

STUDY REVEALS MAJOR DECLINE IN GOLDEN LANGUR HABITAT

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

Not protected: In India, fragmented population of golden langurs are distributed in some districts of Assam. File photo

A recent study by scientists has suggested a significant decline in the habitat of the golden langur (*Trachypithecus geei*), an endangered primate species distributed in the trans-boundary region of Bhutan and India.

A recent paper titled “Future simulated landscape predicts habitat loss for the golden langur: a range-level analysis for an endangered primate” throws light on whether the habitat of the endangered primate is protected or not.

Suitable areas

Golden langurs are easily recognised by the colour of their fur, and are distributed in the forested habitats of Tsirang, Sarpang, Zhemgang and Trongsa districts of Bhutan. In India, fragmented and isolated populations of the species are distributed in Chirang, Kokrajhar, Dhubri and Bongaigaon districts of Assam.

“The results indicate that out of the total range extent (66,320 square km), only 12,265 square km (18.49%) is suitable for the species at present, which will further be reduced to 8,884 square km by the year 2031, indicating major range contraction. These suitable habitats are largely scattered and fragmented in southern range of the species,” the paper points out. The paper has been published by scientists of the Zoological Survey of India (ZSI), including Lalit Kumar Sharma, officer in-charge of its wildlife section.

While most of the suitable areas in the northern range distributed in Bhutan are connected, except for a few dispersed small patches in the northeast, the model depicts a scattered distribution with fragmented populations in the southern part of the range located in Assam. Only 14.39% of the future suitable areas fall inside the protected area (PA) network of both countries in the entire global distribution range. The possible new suitable area gain predicted inside the PAs will remain at 547 square km, which is less than the loss of (1,412 square km) suitable habitats from the PAs, the study says.

Conservation efforts

Scientists say most of the southern populations in Assam are currently distributed in reserve forests that are under higher levels of anthropogenic pressures. There are several forest fragments in lower Assam holding small and isolated populations of golden langur without any conservation initiatives except for efforts by a few local people and non-governmental agencies. In recent years, studies from these areas have reported human-langur conflict cases, and the intensity of these cases is increasing because of enhanced human footprint in the habitat of the species.

“We found that the impacts of land-use change will be more fatal to the existence of golden langur than human-induced climate change. Therefore, the identified forest patches with suitable habitats should be prioritised by forest managers for the implementation of habitat improvement

activities,” Dr. Sharma says.

Recently, villagers near the Kakoijana Reserve Forest in Assam’s Bongaigaon district opposed the State government’s decision to earmark the area as a wildlife sanctuary. Earlier, in the 1990s, the extraction of timber by extremist groups in the region had resulted in the destruction of forest patches in southern Assam.

While recent community conservation programmes by the government yielded positive results for the golden langur population of Manas National Park, fragmented and isolated populations are still severely threatened.

[Our code of editorial values](#)

END

Downloaded from **crackIAS.com**

© **Zuccess App** by crackIAS.com

CrackIAS.com

HARM IN THE NAME OF GOOD

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

The UN General Assembly has proclaimed March 21 as the [International Day of Forests](#) to celebrate and raise awareness about the importance of forests. On this day, countries are encouraged to organise activities such as tree planting campaigns to help increase the green cover, conserve biodiversity, and fight climate change. For decades, the Indian government has been spending billions of rupees in its efforts to increase the green cover through tree planting. Recently, the Central government, through the National Afforestation and Eco-Development Board, launched an ambitious [19,000 crore plan for an afforestation project](#) to rejuvenate 13 major rivers. A press note from the government announced that “this project would increase ‘forest’ cover by 7,417.36 square kilometres in the vicinity of these rivers”. Will such a project really increase forest cover? And can forests be created through afforestation?

Forests are complex ecosystems that are built over years due to the interplay of birds, mammals, reptiles, insects, amphibians, fungi, microorganisms, water, soil, environmental conditions, and other factors. Unless these players are part of the rebuilding process, trees will remain as green cover rather than the enchanting, natural, complex ecosystems that they are.

It is argued that planting trees will help store carbon and reduce pollution. It is true that all trees — invasive species and native and non-native species — store carbon, but the other benefits which are critical vary widely depending on the species planted and the location of plantation. If wrong areas are selected for plantation, the natural habitat may get altered, which will cause habitat specialist species to become extinct. This will make the local environment and ecosystem less resilient. A classic example that we witness is the conversion of natural grasslands to wooded areas through tree planting. The Great Indian Bustard, once nominated to be India’s national bird, is now staring at extinction with fewer than 200 individuals. This is because many areas where these large birds thrived have been lost due to tree planting. The Ranibennur Wildlife Sanctuary in central Karnataka, which was designated to conserve this species, is an example of this unscientific thinking. Similarly, the Jayamangali Conservation Reserve, another grassland habitat in Karnataka, hosted wolves. But now there are leopards there as the whole area has been planted with acacia, anjan, eucalyptus and tamarind trees. Other natural habitats such as woodland savanna, laterite grasslands, scrubland, wetlands and rocky outcrops that have evolved to support unique biodiversity have been systematically transformed from ecologically rich habitats into sterile landscapes due to tree planting.

Some of these tree-planting campaigns claim to propagate native species. Native tree species is a very misused terminology in India. Though neem, peepal, banyan, and anjan may be native to India, they are non-native to many parts of the country. We tend to ignore this critical ecological criterion and take up planting of these species in all areas. Planting any kind of native tree species may probably help in urban settings but not in natural habitats.

Overall, it is not a bad idea to plant trees. But the aim should not be to only plant trees; it should be to make tree-planting activities friendly to local biodiversity. If we want to restore forests, we need to first understand systematically the native vegetation and the biodiversity that play a critical role in forming these forests. If we plant a range of locally found indigenous species, biodiversity will make a comeback. There is a rule of thumb in the tree-planting world: One should plant the right tree in the right place. And some add, ‘for the right reason’. We should also monitor and examine the outputs of such tree-planting or restoration initiatives.

Another solution is to let forests come back on their own through protection. This is called

assisted natural regeneration and is cheaper and more effective method. Scientific studies have shown that natural regeneration absorbs 40 times more carbon than plantations and host a lot more biodiversity. But of utmost priority is the task of halting deforestation and protecting existing forests.

Also read | [48,000 crore released to 32 States for afforestation](#)

While the government has embarked on the 19,000 crore project of planting trees, a report by the Centre for Science and Environment says that the government has cut the budget for wildlife conservation by 47% between 2018 and 2021. This means reduced support for forests and other habitat protection. We seem to be investing heavily in 'creating' forests while letting our natural forests that have evolved over centuries fade. Is this a sensible act?

Sanjay Gubbi is a conservationist and the author of Leopard Diaries: The Rosette in India

[Our code of editorial values](#)

END

Downloaded from [crackIAS.com](#)

© **Zuccess App** by crackIAS.com

CrackIAS

FROM MINISTER TO OFFICIALS, MEDIA TO PEOPLE, EVERYONE PLANTS TOGETHER 75 SAPLINGS ON INTERNATIONAL DAY OF FORESTS AT NATIONAL ZOOLOGICAL PARK

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

To celebrate International Day of Forest a historic plantation drive led by Union Minister MoEF&CC, Shri Bhupender Yadav, was organized today at National Zoological Park where from Ministers to Officials, Media to people, everyone present planted together 75 saplings to commemorate 75 years of independence.

This comes as a pioneer step on the clarion call made by Hon'ble Prime Minister Shri Narendra Modi to plant 75 trees in every village to mark 75 years of Indian independence.

This "Janbhagidari" initiative not only creates awareness but follows up on the recently released Detailed Project Reports (DPRs) on Rejuvenation of thirteen Major Rivers through Forestry Interventions. These efforts are in line with the holistic vision of Prime Minister, Shri Narendra Modi of making the coming 25 years as 'Amrit Kaal' with the target of green cover expansion for the upcoming 10 years and 20 years, then the future generations will get a 'Green India' through the 'Van Bhagidari and Jan Bhagidari' of the current generation.

Shri Bhupender Yadav highlighted that aim of the celebration is to bring awareness, especially in the young generation, so that they learn to love forests and contribute in their own way towards protection and conservation.

He stressed that action speaks louder than words hence coming forward and planting trees creates more awareness than speeches and articles. He appreciated that even the hands-on men were today in mud to plant trees referring to the participation of the media persons present in the drive.

Celebrated [#InternationalDayofForests](#) at National Zoological Park with plantation of 75 saplings with team [@moefcc](#) to commemorate 75 yrs of Indian Independence.

I appeal to all, especially my young friends, to come forward and contribute towards forest conservation. pic.twitter.com/DIVH6KcAcS

As another step forward to make forest conservation as '**Janbhagidari**', Ministry of Environment Forest and Climate Change, New Delhi, celebrated International Day of Forest today at National Zoological Park, New Delhi in presence of Union Minister Environment Forest and Climate Change Shri Bhupender Yadav and Minister of State Environment Forest and Climate Change Shri. Ashwini Kumar Choubey, with a view to raise awareness among people about all types of forests.



The theme of this year is “**Forest and sustainable production and consumption**”.



Shri Ashwini Kumar Choubey emphasized that the celebration of this annual event would be successful when every person understands forest conservation and sustainable utilization of its products.

To promote plantation of species like Sandalwood, Rose wood, Agar wood and Red Sanders, a brochures highlighting Silvicultural practices were released during the event. This will be very helpful in growing these species.



Further newsletter “Trumpet”, Gajah Suchana”, and “APP” initiative of Project Elephant Division were also released on this occasion. A manual on “Ex-situ Management of Amphibians in Zoo” prepared by CZA was also released.

BY/IG

To celebrate International Day of Forest a historic plantation drive led by Union Minister MoEF&CC, Shri Bhupender Yadav, was organized today at National Zoological Park where from Ministers to Officials, Media to people, everyone present planted together 75 saplings to commemorate 75 years of independence.

This comes as a pioneer step on the clarion call made by Hon'ble Prime Minister Shri Narendra Modi to plant 75 trees in every village to mark 75 years of Indian independence.

This "Janbhagidari" initiative not only creates awareness but follows up on the recently released Detailed Project Reports (DPRs) on Rejuvenation of thirteen Major Rivers through Forestry Interventions. These efforts are in line with the holistic vision of Prime Minister, Shri Narendra Modi of making the coming 25 years as 'Amrit Kaal' with the target of green cover expansion for the upcoming 10 years and 20 years, then the future generations will get a 'Green India' through the 'Van Bhagidari and Jan Bhagidari' of the current generation.

Shri Bhupender Yadav highlighted that aim of the celebration is to bring awareness, especially in the young generation, so that they learn to love forests and contribute in their own way towards protection and conservation.

He stressed that action speaks louder than words hence coming forward and planting trees creates more awareness than speeches and articles. He appreciated that even the hands-on people were today in mud to plant trees referring to the participation of the media persons present in the drive.

Celebrated [#InternationalDayofForests](#) at National Zoological Park with plantation of 75 saplings with team [@moefcc](#) to commemorate 75 yrs of Indian Independence.

I appeal to all, especially my young friends, to come forward and contribute towards forest conservation. pic.twitter.com/DIVH6KcAcS

As another step forward to make forest conservation as '**Janbhagidari**', Ministry of Environment Forest and Climate Change, New Delhi, celebrated International Day of Forest today at National Zoological Park, New Delhi in presence of Union Minister Environment Forest and Climate Change Shri Bhupender Yadav and Minister of State Environment Forest and Climate Change Shri. Ashwini Kumar Choubey, with a view to raise awareness among people about all types of forests.



The theme of this year is “**Forest and sustainable production and consumption**”.



Shri Ashwini Kumar Choubey emphasized that the celebration of this annual event would be successful when every person understands forest conservation and sustainable utilization of its products.

To promote plantation of species like Sandalwood, Rose wood, Agar wood and Red senders, a brochures highlighting Silvicultural practices were released during the event. This will be very helpful in growing these species.

Crack



Further newsletter “Trumpet”, “Gajah Suchana”, and “APP” initiative of Project Elephant Division were also released on this occasion. A manual on “Ex-situ Management of Amphibians in Zoo” prepared by CZA was also released.

BY/IG

END

Downloaded from crackIAS.com

© Zuccess App by crackIAS.com

EXPLAINED

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

The datacenters are designed to operate with 100% emission-free energy and will supply heat for the cities of Espoo and Kauniainen, and the municipality of Kirkkonummi, in a collaboration with Fortum | Photo Credit: Microsoft

The story so far :

[Microsoft has partnered with Fortum, a Finnish energy company to heat homes, services and businesses in Finland](#) with sustainable waste heat from a new datacentre region that Microsoft has planned to build in the Helsinki metropolitan area in Finland. The software giant claims the waste heat recycling concept from the datacentre region to be the world's largest scheme to recycle waste heat from data centres. The joint project takes place at the intersection of two megatrends: digitalisation and energy transition.

(Sign up to our Technology newsletter, Today's Cache, for insights on emerging themes at the intersection of technology, business and policy. Click [here](#) to subscribe for free.)

What is a datacentre ?

A datacentre is a physical facility that organisations use to store their critical applications and data, process data and disseminate them to users. It is designed based on a network of computing and storage resources that enables delivery of shared applications and data. The key components of a datacentre are routers, switches, firewalls, storage systems, servers, and application-delivery controllers.

Many large datacentres are located in dedicated buildings. Smaller datacentres may be situated in specially designed rooms within buildings constructed to serve multiple functions. Since datacentres consume large amounts of energy, it's important to ensure the physical structures that house them are well-designed and insulated to optimise temperature controls and energy efficiency.

How much heat datacentres generate?

The temperatures recorded in the hot aisles of a datacentre hover between 80 and 115 degrees Fahrenheit, according to Lifeline datacentres, a provider of datacentre facilities and services.

Global cybersecurity firm Kaspersky estimates over 75% of a datacentre's electricity becomes waste heat. It noted that in winter, a datacentre can provide heating up to 85 degrees Fahrenheit, similar to a gas boiler, with better energy efficiency than a heat pump in a new house.

What's the scale of their carbon footprint?

On a global level, datacentres consume around 200 terawatt-hours (TWh) of electricity, which is more than 1% of the world's total electricity. They contribute to 0.3% of all global CO2 emissions, according to the International Energy Agency.

Datacentre energy usage in some countries could increase to 15% to 30% of their total domestic electricity consumption by the end of the decade, according to predictive models by Eric

Masanet and Nuoa Lei of Northwestern University. Ireland's energy regulator says datacentres could use almost 30% of the country's electricity by 2027, endangering climate goals.

What is Microsoft's plan to cut carbon emission in Finland?

According to Microsoft, the recycled waste heat, along with other carbon reduction measures, can help the city of Espoo and its neighbouring communities to reach their CO2 emission reduction targets. It can also help decommission Fortum's last coal-fired heat unit in the city.

The heat recycling system can provide clean heat to homes, businesses and public buildings in Helsinki, and can reduce up to 400,000 tons of CO2 emissions annually, according to estimates by Fortum.

The company highlighted that once the new data centre region's waste heat capture is in operation, a total of about 60% of the area's heating will be generated by climate-friendly waste heat. Of this, 40% results from the datacentre region and the rest from other waste heat sources like purified waste water.

How will this work?

Fortum will capture the excess heat generated by the new datacentre region and transfer the clean heat from the server cooling process to homes, services and business premises that are connected to the district heating system.

District heating is the most popular method of heating premises in Finland. It is a system of generating heat in a centralised location by capturing heat and then distributing it to buildings for residential and commercial heating needs. The heat is transferred to customers as hot water which is pumped through insulated underground pipes.

The new generation of district heating is based on replacing fossil fuels with flexible solutions like renewable electricity, heat pumps and waste heat utilisation. Artificial intelligence will help optimise operations of the entire system.

Which other countries recycle waste heat from datacentres?

District heating is popular in the Nordic and Baltic countries, as well as in Russia and China, which have high heat demands during winters. Datacentres thrive in cold climates. Their location in cold climates helps to cut down on the need to cool server rooms. Cold weather is also an asset as technology companies shift to selling their heat which doesn't have a lot of demand in hot weather.

Which other companies are doing this?

Facebook is putting its waste heat to use heating nearby homes in Odense, Denmark. The company claims that its servers can heat 6,900 homes in the area, according to a blog by Aquicore. Apple is building a datacentre in Denmark and plans to run it with renewable energy and use waste heat to warm up nearby office buildings.

Fast fashion retailer H&M has been distributing waste heat to nearby homes in Denmark since 2013 and has plans to build a new, 1 MW datacentre that will be capable of heating up to 2,500 apartments at full load.

An IBM datacentre in Switzerland is heating a nearby community pool. In Canada,

communications company Quebecor donates its heat to the editorial office of a local newspaper.

[Our code of editorial values](#)

END

Downloaded from **crackIAS.com**

© **Zuccess App** by crackIAS.com

CrackIAS.com

STANDING COMMITTEE OF THE NATIONAL BOARD FOR WILD LIFE RECOMMENDS TO CELEBRATE OCTOBER 5 AS NATIONAL DOLPHIN DAY

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

Union Minister for Environment, Forest and Climate Change Shri Bhupendra Yadav informed that Standing Committee of the National Board for Wild has recommended to celebrate October 5th as National Dolphin Day every year as a historic step in creating awareness for conservation of Dolphins. Shri Yadav stated that generating awareness & community participation is integral for conservation of the indicator species. He chaired the 67th meeting of the Standing Committee of the National Board for Wild Life here today.

Happy to inform that the Standing Committee of National Board of Wildlife in its 67th meeting has decided that Oct 5 from this year will be celebrated as National Dolphin Day.

Generating awareness & community participation is integral for conservation of this indicator species. pic.twitter.com/VzLful8BNh

The Standing Committee discussed several important policy issues and the proposals for wildlife clearances forwarded by the State Governments and the Union Territory administrations.

Healthy aquatic ecosystems help in maintaining the overall health of the Planet. Dolphins act as ideal ecological indicators of a healthy aquatic ecosystem and conservation of the Dolphins will, therefore, benefit the survival of the species and also, the people dependent on the aquatic system for their livelihood. The Ministry has been taking up several activities for the protection and conservation of Dolphins and its habitats. Considering that generating awareness amongst the people on the benefits of conservation of Dolphins and participation of people in conservation efforts is imperative, the Standing Committee recommended that every year 5th of October shall be celebrated as National Dolphin Day.

The Standing Committee also considered 46 proposals for wildlife clearance and recommended several projects of public importance and essential for improving livelihood of local communities such as providing electricity in remote villages in Ladakh and Himachal Pradesh, drinking water supply to villagers in Karnataka. Projects of strategic importance such as road and border outpost in the Union Territory of Ladakh were also recommended during the meeting.

The Standing Committee recommended four proposals for construction of earthen dams in the State of Haryana to improve irrigation facilities. These dams will also recharge ground water in the Sanctuary which will benefit the wildlife habitat.

The Standing Committee also recommended road project under Pradhan Mantri Gram Sadak Yojana in the State of Uttarakhand in order to provide connectivity to remote villages with appropriate animal passage structures.

A Project for harnessing the geothermal energy for power generation and other direct heat applications by drilling through rocks overlying the geothermal reservoir in Ladakh was also recommended in the meeting with appropriate mitigation measures.

BY/IG

Union Minister for Environment, Forest and Climate Change Shri Bhupendra Yadav informed that Standing Committee of the National Board for Wild has recommended to celebrate October 5th as National Dolphin Day every year as a historic step in creating awareness for conservation of Dolphins. Shri Yadav stated that generating awareness & community participation is integral for conservation of the indicator species. He chaired the 67th meeting of the Standing Committee of the National Board for Wild Life here today.

Happy to inform that the Standing Committee of National Board of Wildlife in its 67th meeting has decided that Oct 5 from this year will be celebrated as National Dolphin Day.

Generating awareness & community participation is integral for conservation of this indicator species. pic.twitter.com/VzLful8BNh

The Standing Committee discussed several important policy issues and the proposals for wildlife clearances forwarded by the State Governments and the Union Territory administrations.

Healthy aquatic ecosystems help in maintaining the overall health of the Planet. Dolphins act as ideal ecological indicators of a healthy aquatic ecosystem and conservation of the Dolphins will, therefore, benefit the survival of the species and also, the people dependent on the aquatic system for their livelihood. The Ministry has been taking up several activities for the protection and conservation of Dolphins and its habitats. Considering that generating awareness amongst the people on the benefits of conservation of Dolphins and participation of people in conservation efforts is imperative, the Standing Committee recommended that every year 5th of October shall be celebrated as National Dolphin Day.

The Standing Committee also considered 46 proposals for wildlife clearance and recommended several projects of public importance and essential for improving livelihood of local communities such as providing electricity in remote villages in Ladakh and Himachal Pradesh, drinking water supply to villagers in Karnataka. Projects of strategic importance such as road and border outpost in the Union Territory of Ladakh were also recommended during the meeting.

The Standing Committee recommended four proposals for construction of earthen dams in the State of Haryana to improve irrigation facilities. These dams will also recharge ground water in the Sanctuary which will benefit the wildlife habitat.

The Standing Committee also recommended road project under Pradhan Mantri Gram Sadak Yojana in the State of Uttarakhand in order to provide connectivity to remote villages with appropriate animal passage structures.

A Project for harnessing the geothermal energy for power generation and other direct heat applications by drilling through rocks overlying the geothermal reservoir in Ladakh was also recommended in the meeting with appropriate mitigation measures.

BY/IG

END

Downloaded from **crackIAS.com**

© **Zuccess App** by crackIAS.com

CrackIAS.com

TRIBES OPPOSE NARMADA LINK PROJECT

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

Activists of Save Narmada Movement during a protest in New Delhi. File Photo

More than 5,000 tribal people in Gujarat gathered in Gandhinagar on Friday to oppose the proposed Par-Tapi-Narmada river link project, which the local communities fear will displace residents of the region in south Gujarat.

Thousands of them had gathered to register their strong protest in Dangs on March 18. So far, the local residents have held half a dozen rallies and protests objecting to the project which, they claim, would destroy their livelihood in Valsad, Dangs and Navsari districts.

Proposed by the Centre, the project is meant to transfer water from the surplus regions of the Western Ghats to the deficit regions of Saurashtra and Kutch through the Sardar Sarovar Project. Water is proposed to be taken from seven reservoirs through a 395-km canal. Of the seven reservoirs, six are located in Valsad and Dang districts and one in Maharashtra.

The controversial project seeks to link the Par, which originates at Nashik in Maharashtra and flows through Valsad, the Tapi from Saputara that flows through Maharashtra and Surat and the Narmada originating in Madhya Pradesh and flowing through Maharashtra and Bharuch, Narmada and Vadodara districts in Gujarat.

As per the detailed project report prepared by the National Water Development Agency (NWDA), about 6,065 hectares will be submerged due to the proposed seven reservoirs to be built in Maharashtra and Gujarat. While 60 villages will be affected partly, one will be fully submerged.

The number of affected families would be around 2,509.

The Opposition Congress has supported the agitation. "At no cost we will allow the project to materialise," said Congress MLA Anant Patel, a leading tribal leader in South Gujarat.

Worried about the spiralling protests by the tribals ahead of the Assembly polls, the State government has maintained that there is no move at all to start work on the project.

[Our code of editorial values](#)

END

Downloaded from crackIAS.com

© **Zuccess App** by crackIAS.com

THE SUCCESSFUL 'PROTECT HORNBILLS' PROJECT BY THE NYISHI TRIBE OF ARUNACHAL PRADESH TURNS 10

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

An elderly Nyishi man wearing the elaborate headgear called 'podum'. A woven cane cap traditionally adorned with the beak and casque of the great hornbill, today artificial beaks made of fibreglass are commonly used. | Photo Credit: KALYAN VARMA

On a November morning last year, I went along with Budhiram Tai to a site where he monitors a wreathed hornbill nest tree during the breeding season. As we approached the tree, something that looked like an old metal signboard on a branch caught my eye. "Budhiramji, what are these signs for and who put them here?" I asked the elderly man. He proudly walked up to the tree and told me that he had pinned these signboards some six years ago to protect the surrounding habitat of the hornbill nest tree. In a mix of Hindi and English, the message on the tags read: "This is the area of hornbills, cutting trees is prohibited here". I noticed similar signboards on many trees nearby. These messages were signed off with *Poo*, the Nyishi name for the wreathed hornbill.

Budhiram Tai, a *gaon burra* (village headman) of Seijosa, in East Kameng District of Arunachal Pradesh, is one of 11 nest protectors in the Hornbill Nest Adoption Program (HNAP), a community-based hornbill conservation programme that is celebrating its tenth year of success in 2022. HNAP operates in the forests outside Arunachal Pradesh's Pakke Tiger Reserve.

Hornbills are indicators of the health of a forest, they are seed dispersers and rightly called the 'farmers of the forest'; but they are globally threatened by habitat loss, fragmentation and hunting. Pakke Tiger Reserve and its environs harbour four species: the great hornbill, rufous-necked hornbill, wreathed hornbill and the oriental pied hornbill. Three of these, including the wreathed hornbill, are classified as 'vulnerable' species.

These birds have large home ranges and so use both the Pakke Tiger Reserve and the adjoining reserve forest to feed, nest and roost. In fact, flocks of wreathed hornbills, sometimes over 100 individuals, fly to the reserve forest to roost at night. While these hornbills and their nest trees are well protected inside the tiger reserve, they are vulnerable in the adjoining Papum Reserve Forest. The reserve forest is home to several villages and settlements of the Nyishi tribe. Earlier, most Nyishi followed animistic beliefs. The men wear elaborate headgear called 'podum', which is a woven cane cap adorned with the upper beak and casque of the great hornbill and also the tail feathers of other birds such as the racket-tailed drongo or a raptor.

Much like other parts of the Northeast, hunting was once a way of life here. And hornbills were among many wildlife species that were hunted. The great hornbill, in particular, was hunted for its beak that was used in the traditional headgear. But now many people have switched to using artificial beaks made of fibreglass.

Hornbills are particularly vulnerable during the breeding season when the female hornbill seals herself inside a tree cavity during a long incubation and fledging period that lasts almost four months. While hunting hornbills during the breeding season has been taboo here, there have been instances of violations in the past, mostly by outsiders. The trees that hornbills nest in are also at the risk of being cut down.

The legal authority of the reserve forest is the forest department, but, the villages on the forest fringes also claim rights over the land. To protect hornbills, it became critical to involve multiple local institutions and provide benefits to local communities to conserve hornbills and their habitat.

HNAP was officially launched in 2012 by the Nature Conservation Foundation (NCF) in partnership with the Ghora-Aabhe Society (a council of village headmen in the Nyishi tribe) and the Arunachal Pradesh Forest Department. Aparajita Datta of NCF has studied hornbills and their habitat in Pakke Tiger Reserve since 1995. Taking inspiration from Pilai Poonswad's initiative in Thailand (that protects several species of hornbills in partnership with local villagers, while nests were adopted by Thai citizens or foreigners), Datta proposed the idea of the HNAP; the project is based on the idea that the local community protects the habitat and the nests, while other citizens and institutions adopt nests to support the running costs of the programme. Thus, the hornbill chicks have three sets of parents: the biological parents, the local Nyishi nest protectors, and adoptive hornbill parents who support the programme financially.

This long-running community-based conservation programme, possibly among few such models in the country, has provided a source of livelihood to over 21 nest protectors so far. Many of these nest protectors were once hunters and so know the birds, their natural history and the forest well.

They now use their skills to find new nests and monitor them through the breeding season, until the chicks fledge. Their critical observations of the breeding activities contribute to long-term data on nesting. The biggest achievement however has been the successful fledging of 173 hornbill chicks of three hornbill species — great hornbill, wreathed hornbill and oriental pied hornbill — and protection of 35 hornbill nests in the reserve forest in 10 years.

Last year, in the middle of the hornbill breeding season, NCF received frantic calls from Prem Tok, the youngest nest protector. Prem, who once knew the forest as a hunter, took up the role of a protector with gusto, following in the footsteps of his ailing father. Once, he noticed that some men had come to cut trees near two active hornbill nest trees; he knew he had very little time to save these trees.

With the help of Tajik, the local coordinator of the HNAP, he talked with the villagers and persuaded them to call back the men who were sent to cut those trees. Prem was glad to find a chick in both the adjoining nest trees a few months later; the trees saved from the axe stand tall today.

There have been several other success stories. For instance, one of the great hornbill nests had remained inactive ever since a fire broke out in 2012. In 2016, as part of a rainforest restoration programme, the team planted native species around the nest tree. In 2020, the team was thrilled to know that the nest was occupied by a wreathed hornbill pair after a gap of eight years.

The nest protectors walk the forests with the same ease as one would in their own backyards. With a notebook and pen in hand, they jot down observations on hornbill movement and sightings of other birds or mammals that they chance upon. Tajik skilfully uses the GPS to record the coordinates for future references.

Tajik, who started off as an assistant and is now the field coordinator of the HNAP, has been quick to learn the use of technology for this work. Every week he calls for a meeting with the nest protectors. They bring their diaries full of detailed observations, and Tajik meticulously enters them into an online portal. These weekly meetings are full of experience-sharing and discussions between the nest protectors.

For an outsider, their loud voices might sound like they are in the midst of a heated argument. But what they are expressing are their concerns, and advice to younger members from the older nest protectors. The biggest challenge for them is to reduce human disturbances in this important hornbill habitat, but often those they are negotiating with belong to the same community or family.

The lack of job opportunities, rise in the cost of living and the access to quick money are key drivers for those who fell timber. It needs a lot of courage to talk people out of this activity. This meeting space brings them together every week for a cause.

Their contribution towards conserving these globally threatened species has been recognised and the HNAP has been awarded the Sanctuary Asia Award 2014 and the India Biodiversity Award 2016. Over 260 hornbill parents and 15 international zoos have supported and helped sustain the programme over 10 years.

The HNAP has invested in creating community support to expand protection of hornbills beyond protected areas. It has roped in additional local forums such as the Pakke Paga Hornbill Festival committee and the Vivekananda Kendra Vidyalaya Alumni Association Pakke Kessang District Unit as partners, so that they too can take ownership.

Budhiram, Prem and Tajik along with all the other nest protectors continue to teach me practical lessons in conservation. They wear many feathers in their cap, quite literally, but among them is a fibreglass beak that has replaced the original beak of the great hornbill, a species that they have vowed to protect and have grown to love as their own.

The writer is with the Nature Conservation Foundation.

[Our code of editorial values](#)

END

Downloaded from **crackIAS.com**

© **Zuccess App** by crackIAS.com

PANEL TO LOOK INTO ELEPHANT DEATHS

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

An elephant run over by a train near the Bagadihi railway station in Odisha. Special Arrangement BISWARANJAN ROUT

The Union Environment Ministry has constituted a “permanent” coordination committee that includes representatives of the Ministries of Railways and Environment to prevent elephant deaths on railway tracks, Environment Minister Bhupender Yadav said in a written response to a question in the Lok Sabha on Monday.

Mr. Yadav said that 19 elephants were killed across the country on railway tracks in 2018-19, 14 in 2019-20 and 12 in 2020-21. Several steps were taken to reduce the number of elephants deaths, the Minister noted.

These included making permanent and temporary speed restrictions in identified elephant corridors and habitats, making underpasses and ramps for movement of elephants at identified locations, providing fencing at selected locations, erecting signs to warn train drivers about identified elephant corridors, sensitising train crew and station masters to avoid train collisions with elephants and clearing vegetation on the sides of track within railway land.

The Wildlife Institute of India, an autonomous body of the Environment Ministry, in consultation with the Ministry of Environment, Forest and Climate Change, National Highways Authority of India, National Tiger Conservation Authority and World Bank Group, has published a document named “Ecofriendly measures to mitigate impacts of linear infrastructure” to assist project agencies in designing linear infrastructure, including railway lines, to reduce human-animal conflicts.

A Standing Committee on the Railways in 2013 had recommended restricting the speed of trains at vulnerable locations to reduce collisions. This translated into trains slowing down to 50 kmph or less in vulnerable locations.

[Our code of editorial values](#)

END

Downloaded from [crackIAS.com](#)

© **Zuccess App** by crackIAS.com

PROGRAMME ON SEAGRASSES

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

Seagrasses are flowering plants which are found in our sea beds and ocean floors. The major seagrass beds exist along our coastline of Gulf of Mannar and Palk Bay regions on the east coast, Gulf of Kachchh region on the west coast, the lagoons of islands in Lakshadweep in the Arabian Sea and Andaman and Nicobar Islands in the Bay of Bengal. Seagrass ecosystems are recognized globally for their ability to sequester carbon, nurture fish communities and support marine mammals such as sea cows or dugongs.

Seagrasses have been studied for over two decades with the financial support of the Ministry of Environment, Forest and Climate Change and the State/UT Governments. Academic and research institutions have been actively involved in seagrass research pertaining to seagrass mapping, species diversity and its transplantation.

Based on field surveys and satellite data, the National Centre for Sustainable Coastal Management has estimated the total extent of seagrass ecosystem in India to be 516.59 km². The CO₂ sequestration rate of seagrass ecosystem is estimated to be up to 434.9 tonnes/km²/year with an annual net CO₂ sink of 0.75 million tonnes for an area of 517 km².

Further, the Government has also initiated a project across the States of Andhra Pradesh, Maharashtra, and Odisha on enhancing climate resilience of India's coastal communities at a total cost of US \$130.269 million which includes a grant of US\$ 43.419 million by Global Climate Fund (GCF) covering 24 ecosystems in these selected States which aims to strengthen the climate resilience of coastal communities by protecting and restoring India's natural ecosystems such as mangroves and seagrasses.

This information was given by Shri Ashwini Kumar Choubey, Minister of State, Ministry of Environment, Forest & Climate Change in Lok Sabha today.

BY/IG

Seagrasses are flowering plants which are found in our sea beds and ocean floors. The major seagrass beds exist along our coastline of Gulf of Mannar and Palk Bay regions on the east coast, Gulf of Kachchh region on the west coast, the lagoons of islands in Lakshadweep in the Arabian Sea and Andaman and Nicobar Islands in the Bay of Bengal. Seagrass ecosystems are recognized globally for their ability to sequester carbon, nurture fish communities and support marine mammals such as sea cows or dugongs.

Seagrasses have been studied for over two decades with the financial support of the Ministry of Environment, Forest and Climate Change and the State/UT Governments. Academic and research institutions have been actively involved in seagrass research pertaining to seagrass mapping, species diversity and its transplantation.

Based on field surveys and satellite data, the National Centre for Sustainable Coastal Management has estimated the total extent of seagrass ecosystem in India to be 516.59 km².

The CO₂ sequestration rate of seagrass ecosystem is estimated to be up to 434.9 tonnes/km²/year with an annual net CO₂ sink of 0.75 million tonnes for an area of 517 km².

Further, the Government has also initiated a project across the States of Andhra Pradesh, Maharashtra, and Odisha on enhancing climate resilience of India's coastal communities at a total cost of US \$130.269 million which includes a grant of US\$ 43.419 million by Global Climate Fund (GCF) covering 24 ecosystems in these selected States which aims to strengthen the climate resilience of coastal communities by protecting and restoring India's natural ecosystems such as mangroves and seagrasses.

This information was given by Shri Ashwini Kumar Choubey, Minister of State, Ministry of Environment, Forest & Climate Change in Lok Sabha today.

BY/IG

END

Downloaded from crackIAS.com

© **Zuccess App** by crackIAS.com

CrackIAS