

Enviro Monitor

December 2019

Climate change



- India among top 10 nations on climate change performance
- With 2081 deaths last year, India 5th most vulnerable to climate change
- 50% Indians feel climate change impacts economy

Forestry & Biodiversity



- Rise in India's forest cover
- Karnataka Biodiversity Board to prepare report on landslips
- People's biodiversity registers in place for all local bodies in Kerala

Water resources



- PM launches Atal Bhujal Yojana for managing groundwater
- Bundelkhand, India's most water scarce region, could get piped water in homes soon
- Chennai Corporation forms special committees to monitor water bodies
- Groundwater getting toxic rapidly in Karnataka

Air quality



- A pollution link to why Delhi gets heavy winter fog
- Air pollution killed 12.4 lakh Indians in 2017
- To cut vehicular pollution by 2024, Delhi government shifts focus to e-vehicles

Waste management



- IIT-H developing bacterial systems to treat sewage
- Collection of e-waste to be streamlined in



India among top 10 nations on climate change performance. India is among the top 10 performing nations as per the [Climate Change Performance Index](#). The index is based on criteria like the country's energy use, its per capita emissions, its emission reduction targets for 2030, its national and international climate policy, renewable energy deployment and past trends of emissions. It assigns every country scores on each of these indicators to assess its overall ranking. This assumes significance in view of India's resolve to reach 175 GW of clean energy capacity by 2022. The country has already achieved around 84 GW of clean energy capacity, including 32 GW of solar and 37 GW of wind energy. At present, India's total installed power generation capacity is around 365 GW. The *Climate Change Performance Index* report assesses the climate programmes of 57 countries and the European Union, which together account for more than 90 per cent of the global greenhouse gas emissions.

With 2081 deaths last year, India 5th most vulnerable to climate change. India is the fifth most vulnerable of 181 countries to the effects of climate change, with its poorest being the most at risk, according to a new report launched on December 4, 2019. Japan is the most vulnerable, followed by the Philippines, Germany and Madagascar. India had the most (2,081) deaths in 2018 due to extreme weather events caused by climate change--cyclones, heavy rainfall, floods and landslides--found the 15th edition of the [Global Climate Risk Index 2020](#) prepared by Germanwatch.

50% Indians feel climate change impacts economy. One in two Indians believes that human-made climate change is the primary cause of increased severe weather events that the world experiences today as compared to 23 per cent of the US general population, an online survey carried out for IBM has shown. The survey was conducted by Morning Consult through online interviews of 4816 people — 2000 adults each in India and the US apart from 400 Indian business leaders and their 195 US counterparts.

[Business Standard](#), 9 December 2019 | [Indian Express](#), 10 December 2019 | [The Hindu Business Line](#), 12 December 2019 | [Business Standard](#), 15 December 2019



Rise in India's forest cover. India's total forest and tree cover stood at 80.73 million hectare, which is 24.56 per cent of the geographical area of the country, according to biennial [State of Forest Report](#). In previous 2017 assessment, it was 21.54 per cent. The assessment is largely based on digital data – satellite, vector boundaries of districts or data processing of field measurements.

Findings:

- ◆ About 21.40% of forest cover in India is prone to fires, with forests in the north-eastern region and central India being the most vulnerable
- ◆ The assessment shows a decrease of forest cover to the extent of 765 square km in the Northeast
- ◆ Mangrove cover in the Sunderbans has shrunk by more than two square kilometres – from 2214 sq km to 2112.11 sq km - between 2017 and 2019
- ◆ Haryana has diverted highest share of forest cover for non-forestry purposes over the last four years in North India.

GREEN COVER	
Total forest and tree cover	<ul style="list-style-type: none"> • 80.73 million hectare • 24.56% of geographical area
Top three states showing increase in forest area	<ul style="list-style-type: none"> • Karnataka • Andhra Pradesh • Kerala
Top three states with area-wise largest forest area	<ul style="list-style-type: none"> • Madhya Pradesh • Arunachal Pradesh • Chhattisgarh

Karnataka Biodiversity Board to prepare report on landslips. The Karnataka Biodiversity Board will soon prepare a detailed report on landslips that were reported in the Western Ghat districts – Hassan, Chikkamagaluru, Kodagu, Shivamogga, and Uttara Kannada – during the rainy season in 2018 and 2019.

People’s biodiversity registers in place for all local bodies in Kerala. Kerala has become the first state to prepare people’s biodiversity registers (PBRs) – a grassroots-level record of bio-resources and their traditional knowledge – for all its 1,034 local bodies. Though most local bodies in the state are yet to make full use of such registers as a planning tool, PBRs of three local bodies reportedly show their comprehensiveness. For instance, the PBR of Muppainad panchayat in Wayanad, where plantations and forests make up for over 60% of the total land area, records 35 rice varieties that were in use there.

[The Times of India](#), 12 December 2019 | [The Hindu](#), 30 December 2019 | [The Hindu Business Line](#), 30 December 2019 | [Hindustan Times](#), 30 December 2019 | [The Hindu](#), 31 December 2019 | [The Telegraph](#), 31 December 2019 | [The Times of India](#), 1 January 2020



PM launches Atal Bhujal Yojana for managing groundwater. The Atal Bhujal Yojana aims at improving management of groundwater in seven states. It aims to benefit nearly 8350 gram panchayats across 78 districts in 7 states — Gujarat, Haryana, Karnataka, Madhya Pradesh, Maharashtra, Rajasthan and Uttar Pradesh. Under the scheme, money

will be given to the states as a grant. The PM released operational guidelines of Jal Jeevan Mission that will work towards delivering piped water supply to every home.

The total budget of the scheme is Rs 6000 crore out of which Rs 3000 crore will be contributed by the World Bank.

Bundelkhand, India’s most water scarce region, could get piped water in homes next year. People living in Bundelkhand and Vindhya regions in Uttar Pradesh, which are among the most water-scarce areas in the country, may get piped water supply at homes next year, due to a Rs 3,000-crore project of the Uttar Pradesh government. The state government has invited bids from private consultants to help draw up a plan and select companies to execute a project to take piped water to nine most water-deficient districts in Bundelkhand and Vindhya regions. Uttar Pradesh will first roll out the project in the districts of Jhansi, Banda, Chitrakoot, Jalaun, Hamirpur, Lalitpur and Mohaba in Bundelkhand, Sonbhadra and Mirzapur in Vindhya region, and later will expand this to the arsenic/ fluoride and acute encephalitis (AES) affected districts where lack of clean drinking water leads to deaths.

Chennai Corporation forms special committees to monitor water bodies. The Chennai city corporation is to set up 'water body monitoring' committees at the zonal level to monitor the water bodies under its purview. These committees are also set to inspect illegal sewage connections to Storm Water Drains (SWDs) and block them.

Groundwater getting toxic rapidly in Karnataka. Karnataka is among the top three big states (over 25 districts) with high groundwater contamination, along with Rajasthan and Tamil Nadu, as almost all the 30 districts in the state showed fluoride and nitrate content, exposing people to fluorosis and cancer, respectively. All the 33 districts in Rajasthan have fluoride, nitrate as well as iron content beyond permissible limits, followed by Karnataka. Groundwater in three districts of neighbouring Tamil Nadu has shown the presence of lead besides the common contaminants.

[The New Indian Express](#), 12 December 2019 | [Deccan Herald](#), 13 December 2019 | [Indian Express](#), 26 December 2019 | [The Economic Times](#), 28 December 2019



A pollution link to why Delhi gets heavy winter fog. A study by Indian Institute of Tropical Meteorology and India Meteorological Department shows that the intensity of fog during the winter season has been increasing over Delhi due to the high pollution load. According to the study published in the journal of *Aerosol and Air Quality Research*, the frequency and intensity of fog episodes during the winter season has been increasing during the past decade (2006 to 2016) over the megacity of Delhi due to the high pollution load. Mass concentration of Black carbon (BC) -- a component of particulate matter increased before and during the initial phase of a dense fog period.

Air pollution killed 12.4 lakh Indians in 2017: ICMR. More than seven in every 10 Indians were exposed to lethal air pollutants through 2017, says a government study on the impact of air pollution on national health. Air pollution killed 12.4 lakh people in the country in the year of study. Of the total 1.24 million (12.4 lakh) deaths due to air pollution, 0.67 million (6.7 lakh) are attributable to ambient particulate matter pollution (PM levels) and 0.48 million (4.8 lakh) to household air pollution, the study by Health Ministry and the Indian Council of Medical Research says.

12.5% of total deaths in India were caused by air pollution in 2017.

To cut vehicular pollution by 2024, Delhi government shifts focus to e-vehicles. A quick rollout of 5000 e-autos and getting online commerce companies to press more battery-operated bikes into service are the immediate objectives that the Delhi government seeks to achieve through its *Electric Vehicle Policy*. The policy also makes it mandatory for all new private households and business establishments to keep 20% of their parking charging infrastructure for e-vehicles.

[The Tribune](#), 9 December 2019 | [Mint](#), 23 December 2019 | [Indian Express](#), 24 December 2019 | [Hindustan Times](#), 31 December 2019



IIT-H developing bacterial systems to treat sewage. Researchers from Indian Institute of Technology Hyderabad (IIT-H) are developing algal-bacterial hybrid systems that help treat wastewater while enabling biodiesel production. The immediate intended beneficiaries of the research are gated urban communities that have in-house plants for treating sewage. The team primarily focuses on treatment of domestic sewage and its components like those originating from kitchen and

laundry.

IIT-H will collaborate with Pune-based Centre for Materials for Electronics Technology to design and develop state-of-the-art processes and equipment in e-waste recycling. The institutions are also planning to offer M.Tech programme in this field and undertake joint research.

Collection of e-waste to be streamlined in Coimbatore. The Coimbatore City Corporation will streamline collection and disposal of e-waste, both from residential and non-residential establishments across the city. The e-waste includes tube lights, mobile phones, modems, wall clocks, batteries, routers, monitors and keyboards. The civic body has joined hands with a private player, Green Era Recyclers, who owns a Tamil Nadu Pollution Control Board-authorized e-waste recycling facility to streamline the collection process.

[The Times of India](#), 10 December 2019 | [The Hindu](#), 11 December 2019 | [The Times of India](#), 24 December 2019