Enviro Monitor
August 2020
Considering COVID-19 impacts

Waste management & Sanitation

- Swachh Survekshan 2020: Indore ranked cleanest city fourth time in a row
- Centre mulling to start environmental surveillance of SARS-CoV-2 virus in wastewater
- Delhi: 132 RWAs get notice for not segregating waste
- IIT-M teams up with Germans for pharma waste management

Water resources

- A tap for every home: India adds 20 million water connections in a single year
- Delhi government aims to meet water demand-supply gap in three years

Forests

- Panaji's lungs may get bigger, urban forest proposed along Miramar beach
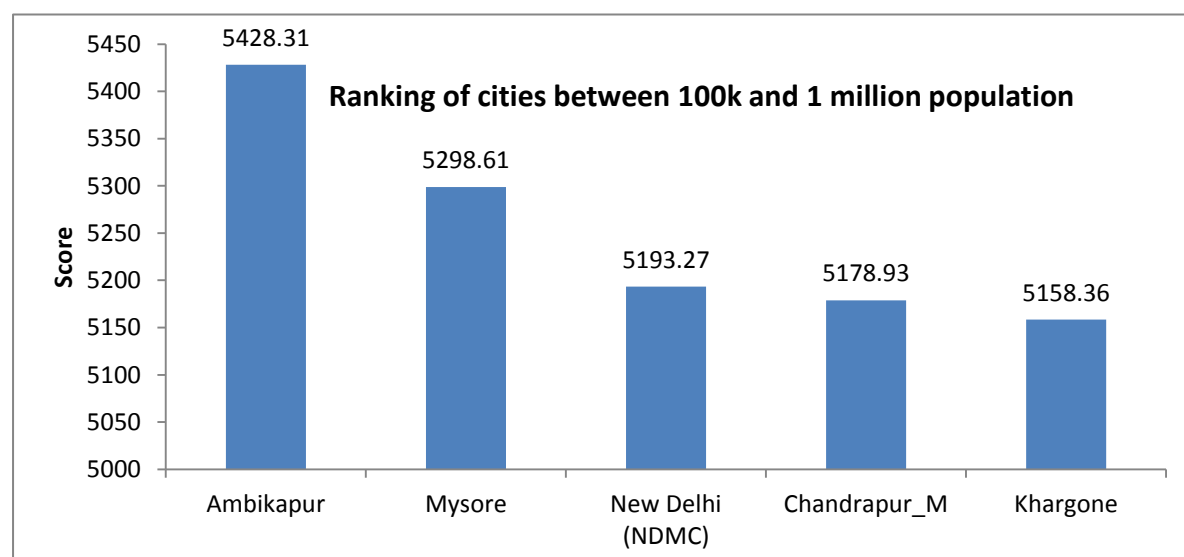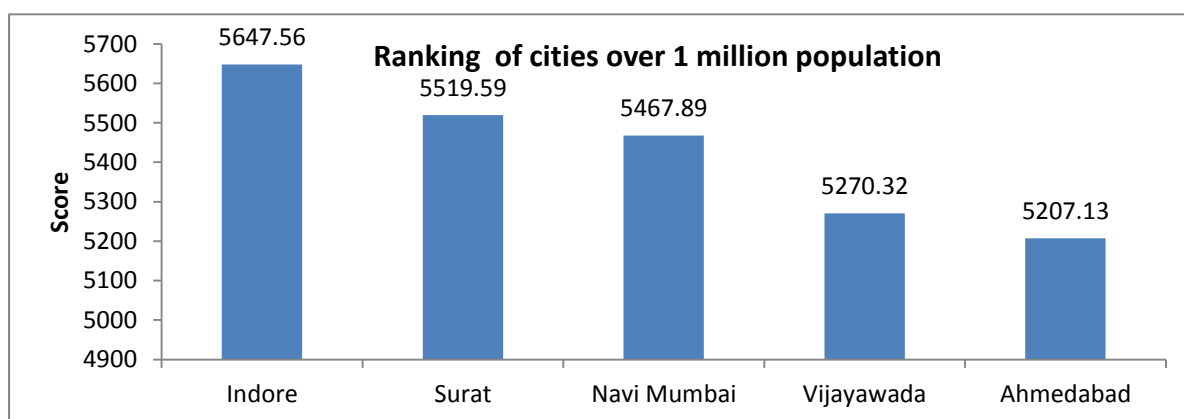- Four new forests being developed in Delhi for cleaner air

Climate change

- Global warming to make Chennai monsoons severe
- Study on climate underlines need to change cropping pattern
- RBI flags concerns over climate change impact on India's farm outlook
- Geothermal springs in Himalayas release large amount of carbon dioxide

Waste management & Sanitation

Swachh Survekshan 2020: Indore ranked cleanest city fourth time in a row. Every year, cities and towns across India are awarded the title of "Swachh Cities"' on the basis of their cleanliness and sanitation drives as a part of the Swachh Bharat Abhiyan (Clean India Mission) that was launched in 2014. Madhya Pradesh's Indore has been ranked India's cleanest city for the fourth consecutive year by Swachh Survekshan 2020, the central government's annual cleanliness survey to promote sanitation in urban centres under the Swachh Bharat Mission. While Indore ranked first among cities with more than one million population, Patna in Bihar was ranked the lowest at 47. Surat in Gujarat and Navi Mumbai in Maharashtra were ranked the second and third cleanest cities, respectively. In the category of cities with a population of less than 100,000, Karad won the first position, followed by Saswad and Lonavala. All three are in Maharashtra.

Ranking of cities over 1 million population

City	Score
Indore	5647.56
Surat	5519.59
Navi Mumbai	5467.89
Vijayawada	5270.32
Ahmedabad	5207.13

Ranking of cities between 100k and 1 million population

City	Score
Ambikapur	5428.31
Mysore	5298.61
New Delhi (NDMC)	5193.27
Chandrapur_M	5178.93
Khargone	5158.36

Source. Swachh Survekshan 2020, Ministry of Housing and Urban Affairs, Government of India
<https://www.swachhsurvekshan2020.org/>

Centre mulling to start environmental surveillance of SARS-CoV-2 virus in wastewater. After World Health Organization (WHO) recommended environmental surveillance of SARS-CoV-2 virus causing Covid-19 in wastewater following presence of non-infecting viral fragments in wastewater in some countries, India too is considering adopting the new surveillance tool to monitor the virus. The WHO in its latest scientific brief titled Status of environmental surveillance for SARS-CoV-2 virus states that detection of non-infective RNA fragments of SARS-CoV-2 in untreated wastewater and or sludge has been reported in a number of settings, such as Milan, Italy; Murcia, Spain; Brisbane, Australia; multiple locations in the Netherlands; New Haven, Connecticut and eastern Massachusetts, United States of America; Paris, France; and existing poliovirus surveillance sites across Pakistan.

Delhi: 132 RWAs get notice for not segregating waste. A poor performance in Swachh Survekshan 2020 has prompted South Delhi Municipal Corporation to issue show-cause notices to Residents' Welfare Associations (RWA) to nudge them towards segregation of waste at source, a key concern red-flagged by experts. Ranked 31 out of 47 cities, SDMC areas produce 3,600 metric tonnes of garbage every day. Most of the garbage either ends at the Okhla landfill site or the waste-to-energy plant.

IIT-M teams up with Germans for pharma waste management. Indian Institute of Technology-Madras (IIT-M), in collaboration with researchers from Germany, has developed new methods to safely dispose of toxic pharmaceutical sludge. The institute has established 'co-composting' facilities in various villages across India, and added that the research team is also in discussion with the Government of India for setting up more such facilities. The results of the study have been published recently in Waste Management.

Mint, August 18, 2020 | Hindustan Times, August 21, 2020 | The New Indian Express, August 25, 2020 | The Times of India, August 31, 2020

Water resources

A tap for every home: India adds 20 million water connections in a single year. India added nearly 20 million tap water connections in a single year, taking the total coverage to over 51 million, pushed by the Jal Jeevan Mission launched during the last Independence Day. Providing all households with piped water connection by 2024 means covering another 138 million homes. The challenge is bigger in some states, especially Uttar Pradesh, West Bengal, Assam, where less than 5 per cent population has access to tap water. Only nine districts in the country boast a tap connection in each household.

Delhi government aims to meet water demand-supply gap in three years. The Delhi government has set an ambitious target of meeting the gap between water supply and demand in the next three years, and various water augmentation projects are being expedited keeping that in mind, officials said on Saturday. The city needs around 1,150 million gallons of water per day (MGD) and the Delhi Jal Board is able to supply around 900 MGD on an average, which means that about 222 per cent of the demand is not being met.

Business Standard, August 21, 2020 | Millennium Post, August 23, 2020

Forests

Panaji's lungs may get bigger, urban forest proposed along Miramar beach. The Goa government has proposed to create an urban forest in the state capital along the Miramar-Caranzalem beach front. Around 18 hectares land, owned by the state, could be developed into greenery under the Centre's Nagar Van (urban forest) scheme. A proposal by the forest department and the directorate of urban development suggests that the land, already overrun by vegetation, could be converted into a coastal buffer zone by planting endemic trees and resilient shrubs.

Four new forests being developed in Delhi for cleaner air. From 22 square kilometre (1.48%) in 1993 to 324 square kilometre (21%) in 2019, the tree cover in the Delhi has been steadily rising despite several infrastructural projects and large scale construction activity taking place, according to government data. Presently, the national capital has a total of 12 forests. The forest department has now planned to develop four more forests for boosting the city's green cover. The forest department is developing the new city forests in Dera Mandi, Jaunapur, Aya Nagar and Mamurpur in Narela.

The Times of India, August 24, 2020 | Times Now, August 24, 2020

Climate change

Global warming to make Chennai monsoons severe. A study has found there could be a 5% increase in rainfall during the northeast monsoon between 2020 and 2049 and up to 21% between 2070 and 2099 over most parts of south peninsular India. This despite measures to control greenhouse gas emissions that contribute to global warming. The study was a collaborative work of Pune-based Indian Institute of Tropical Meteorology along with National Institute of Technology, Rourkela and SRM Institute of Science and Technology, Chennai. The findings came out of climate simulations and projections of 20 different global climate models from NASA Earth Exchange. The overall frequency and intensity of rainfall could increase and changes could start to become rapid by 2050; the highest 24-hour rainfall and consecutive five-day rainfall events could become intense; the number of consecutive dry days could reduce, but the number of very wet days could go up.

> **Coastal regions and cities like Chennai will suffer due to increased local convection resulting in heavy rainfall as the air absorbs more moisture directly from the sea.**

RBI flags concerns over climate change impact on India's farm outlook. The Reserve Bank of India (RBI) has flagged concerns about impact of climate change, in terms of volatile rainfall intensity, increase in extreme events and rising temperature, having implications for India's agriculture outlook. Observing that water tables have depleted at an alarming rate, the RBI said, around 52% of the wells in India recorded decline in water levels between the years 2008 and 2018. This imparts urgency to move from flood irrigation to micro irrigation methods like drip or hose reel, which can save up to 60% of the water used and also help in preventing pest incidence.

Study on climate underlines need to change cropping pattern. A recent analysis of the last 58 years' (1960 to 2017) weather data of Karnataka has indicated a considerable shift in rainfall pattern in the State, which has a bearing on agriculture and water security. It calls for changes in the present cropping pattern and agro plans in the light of the observed shift in rainfall and temperature variation that can lead to frequent recurrence of extreme weather conditions. The study titled Climate Change Scenario in Karnataka: A Detailed Parametric Assessment was conducted by Karnataka State Natural Disaster Monitoring Centre and its findings have long-term implications for both food and water security.

Geothermal springs in Himalayas release large amount of carbon dioxide. The Himalayas host hundreds of geothermal springs and they release a huge amount of carbon dioxide in the atmosphere, according to a study by the scientists of the Wadia Institute of Himalayan Geology (WIHG). The scientists studied geothermal springs which cover about 10,000 square kms in the Garhwal region of the Himalayas in Uttarakhand. The study, published in the scientific journal Environmental Science and Pollution Research, suggested that the CO_2 in these thermal springs are sourced from metamorphic decarbonation of carbonate rocks present deep in the Himalayan core along with magmatism and oxidation of graphite.

Deccan Herald, August 10, 2020 | Mint, August 25, 2020 | The Hindu, August 26, 2020 | The Times of India, August 28, 2020