Enviro Monitor

July 2020

Considering COVID-19 impacts

Waste management

- Biomedical waste amid COVID-19
- Delhi's daily biomedical waste 5 times of what it can process

Climate change

- Heatwaves, floods, droughts: projections for India in coming decades
- Snow cover declines in major river basins of Himachal Pradesh
- Coastal flooding could hit 20% of world GDP by 2100

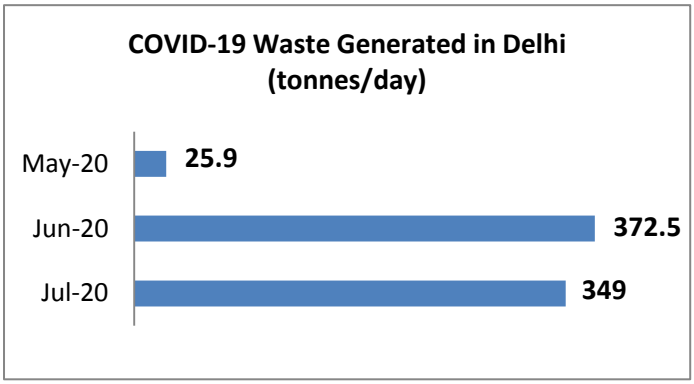
Air quality

- Nitrogen dioxide levels fell by more than 70% during COVID-19 lockdown in New Delhi
- Air pollution reduces average life expectancy in India by five years.
- Programme to improve indoor air quality launched
- Delhi lost 6% of its GDP to bad air in 6 months

Biomedical waste amid COVID-19. The amount of biomedical waste being generated in the country has drastically increased in the last few months as the number of COVID-19 cases has risen. The Coronavirus outbreak is piling pressure on India's biomedical waste disposal system. CPCB revised its guidelines for the fourth time on July 21 after facing opposition from the waste management firms. Henceforth, as per the revised guidelines, leftover food and general solid waste from COVID-19 health care facilities should not be mixed with biomedical waste. Earlier, the biomedical waste treatment operators had claimed that the efficiency of the incinerators are reduced due to introduction of food waste.

The global medical waste management market size is expected to grow from $13.5 billion in 2019 to $14.9 billion in 2020 at a compound annual growth rate (CAGR) of 10.6%. The markable growth is mainly due to the COVID-19 outbreak and the measures to contain it. The amount of biomedical waste being generated from COVID-treating hospitals, quarantine centres, healthcare facilities, and self/home-quarantine has triggered the need for medical waste management. The medical waste management market is then expected to stabilize and reach $16.62 billion in 2023 at a CAGR of 3.8%.

Delhi's daily biomedical waste 5 times of what it can process . The quantum of biomedical waste generated in the city increased by 15 times in June compared with the preceding month when just 25 tonnes was being produced daily. Moreover, while 372 tonnes of biomedical waste was generated in June every day, in July it was 349 tonnes, stated a report submitted by Environment Pollution (Prevention and Control) Authority (EPCA) to the Supreme Court. The report, which collected data from both the state and central pollution control boards, mentioned that in Haryana, UP, Rajasthan and Delhi, the quantum of biomedical waste collectively increased from 94 tonnes per day in May to 761 tonnes in July (till July 24). However, the huge increase in June was attributed to waste from households and quarantine centres not being segregated and mixed with general garbage.



Millennium Post, July 7, 2020 | The New Indian Express, July 23, 2020 | The Times of India, July 31, 2020

Heatwaves, floods, droughts: projections for India in coming decades. The first 'Assessment of Climate Change over Indian Region', released by the Ministry of Earth Sciences recently, warns of tropical cyclones, thunderstorms, heat waves, floods and droughts in India unless mitigation measures are adopted soon. The projections are for the decades leading to the end of the 21st century. These projections, based on a climate forecasting model developed at the Indian Institute of Tropical Meteorology, Pune, will be part of the next report of the Intergovernmental Panel on Climate Change, expected to be ready 2022.

Key Points

- Surface air temperature over India has risen by 0.6°C per year during 1901-2018.
- Regions of North India have undergone warming more than the South, where warming has been mainly during winters
- Every decade between 1951-2015 had 7.4 warmer days and 3.1 warmer nights than the annual averages for daily maximum and nightly minimum respectively.
- The frequency of warm days is projected to increase by 55% and that of warm nights by 70%, both relative to 1976- 2005.
- In coming decades, the average duration of heatwaves during April-June is projected to double, and their frequency to rise by 3 to 4 times compared to 1976-2005.
- By the end of the 21st century, average temperature over India is projected to rise by 4.4°C, relative to the average temperature during 1976-2005.

Snow cover declines in major river basins of Himachal Pradesh. Rapidly changing climate is degrading the snow cover of Himalayan rivers originating in Himachal Pradesh, according to a recent study by the State Centre on Climate Change under the aegis of the Himachal Council for Science Technology and Environment (HIMCOSTE). The state witnessed a marginal decrease of about 0.72% in its snow cover from October 2019 to May this year in comparison to 2018-19 i.e. total average area under snow has reduced from 20210.23Km2 to 20064.00Km2. Further, during peak winter months, the snow cover area has reduced gradually from February onwards which may affect the runoff patterns during the summer months.

Coastal flooding could hit 20% of world GDP by 2100. Failure to rein in climate change and bolster sea defences could jeopardize up to a fifth of the world's economic output by the end of the century, as flooding threatens coastal countries worldwide, according to a study published in in the journal Scientific Reports.

Areas that are now home to some 171 million people around the world would be affected by extensive flooding.

From Bangladesh and India to Australia and even Britain, rising sea levels already are leading to more frequent and extreme flood events. With climate change causing polar ice to melt and ocean waters to expand, economists have sought for years to put a figure on the future potential damage.

Hindustan Times, July 12, 2020 | Indian Express, July 23, 2020 | Mint, July 30, 2020

Nitrogen dioxide levels fell by more than 70% during COVID-19 lockdown in New Delhi. The UN Secretary-General's Policy Brief on COVID-19 in an Urban World said that with an estimated 90 per cent of all reported COVID-19 cases, urban areas have become the epicentre of the pandemic. The policy brief warned that the environmental gains could be temporary if the cities re-open without policies to prevent air pollution and promote de-carbonisation. It also pointed out that several new scientific studies suggest that poor air quality is correlated with higher COVID-19 mortality rates.

Air pollution reduces average life expectancy in India by five years. A quarter of India's population is exposed to pollution levels not seen in any other country, according to data released by Air Quality Life Index, a tool developed by the Energy Policy Institute of The University of Chicago (EPIC). Authors of the research said the quality of the air many humans breathe constituted a far higher health risk than COVID-19. Nearly a quarter of the global population lives in just four south Asian countries that are among the most polluted -- Bangladesh, India, Nepal and Pakistan.

Programme to improve indoor air quality launched. Energy Efficiency Services Limited (EESL), a joint venture of public sector undertakings, has launched a national programme to improve indoor air quality. The initiative is called the Retrofit of Air-conditioning to improve Indoor Air Quality for Safety and Efficiency (RAISE) national programme. As per EESL, the pilot project has shown about 80 per cent improvement in Air Quality parameters with almost no implementation hassles.

Delhi lost 6% of its GDP to bad air in 6 months. Of the 28 metropolitan cities around the world, Delhi has borne the highest economic cost — 5.8% of the GDP — due to air pollution in the first six months of the year despite the lockdown, an online analysis by IQAir AirVisual and Greenpeace Southeast Asia has found. The study estimated that Delhi lost around 24,000 lives in the first half of 2020 due to high PM2.5 and nitrogen dioxide (NO2) levels, while the economic cost was around Rs 26,230 crore (US$3.5 billion). It analysed 28 major metropolitan cities and found that air pollution impacted 1-5.8% of the city's GDP, depending on the varying levels of pollution.

In Mumbai, air pollution from PM2.5 and NO2 was responsible for the loss of an estimated 14,000 lives and a cost of Rs 15,750 crore (US$2.1 billion) since January 1.

In the first half of 2020, air pollution was responsible for the loss of an estimated 98,000 lives in the world's five most populous cities and a combined economic cost of US$56.5 billion.

Air pollution impacts in five most populous cities from January 1 through June 30, 2020

City	Total Population	Estimated Premature Deaths	Estimated Economic Cost
Tokyo	37 million	29,000	US$31 billion
Delhi	30 million	24,000	US$3.5 billion
Shanghai	26 million	27,000	US$13 billion
São Paulo	22 million	7,300	US$3.5 billion
Mexico City	22 million	11,000	US$5.5 billion

Source: Greenpeace Southeast Asia/IQAir AirVisual cost of air pollution counter. Population source: United Nations World Population Prospects.

The Times of India, July 11, 2020 | The Hindu Business Line, July 20, 2020 | The Financial Express, July 28, 2020 | Mint, July 28, 2020 | Deccan Herald, July 28, 2020