

Enviro Monitor

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Water stress



- Usable groundwater rapidly depleting in north, east India
- Groundwater monitoring to go real time in Thiruvananthapuram soon
- Every drop counts: Bengaluru residents adopt smart meters to conserve water

Air quality



- India to develop own certification facility for air pollution monitoring equipment
- Committee constituted to oversee clean air programme
- Indoor emissions affect air-quality standards

Climate change



- IIT-M gets Centre of Excellence to study climate change impact on coastal infrastructure
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Water quality



- Ganga has higher proportion of antibacterial agents
- Toxic chemicals finding way into Sirsa river



Usable groundwater rapidly depleting in north, east India. India's northern and eastern states saw a rapid decline in usable groundwater between 2005 and 2013, raising an impending risk of severe droughts, food crisis, and drinking water scarcity for millions

The estimate shows rapid depletion of UGWS in Assam, Punjab, Haryana, Uttar Pradesh, Bihar, and West Bengal.

of people, researchers have found. A team from the Indian Institute of Technology (IIT) Kharagpur, West Bengal and Athabasca University, Canada, compiled the first estimates of usable groundwater storage (UGWS) at the state-level across all of India using both in situ and satellite-based measurements.

Groundwater monitoring to go real time in Thiruvananthapuram soon. Open wells, which have been relied upon to record fluctuations, in groundwater levels are set to make way for advanced real-time monitoring in the district. The groundwater department has completed setting up of a pilot system involving fully penetrated 'slim holes' enabled with piezometers, which are placed in boreholes to monitor the pressure or depth of groundwater. The system will have digital water level recorders connected to telemetry -- an automated communication process by which measurements and data are collected at remote points and transmitted to receiving equipment for monitoring. The system is being introduced under the phase-3 of national hydrology project. Ernakulam and Thiruvananthapuram were chosen for implementing the system.

Every drop counts: Bengaluru residents adopt smart meters to conserve water. With the onset of summer, citizens have installed smart water meters to keep track of water consumption in their apartments. This not only helps them manage their usage but also keep a watch on excess consumption at any particular time. About 6,000 to 8,000 homes under the Bangalore Apartment Federation have installed meters since September 2018, which has reduced their water consumption by 30 per cent. [The Times of India](#), 5 April 2019 | [The Times of India](#), 10 April 2019 | [The New Indian Express](#), 17 April 2019



India to develop own certification facility for air pollution monitoring equipment. The National Physical Laboratory (NPL) is developing India's own certification facility for air pollution monitoring equipment. The move could boost the 'Make in India' initiative as NPL expects demand for such equipment to soar as part of the centre's National Clean Air Programme. Certification of PM2.5 and PM10 volume samplers has already been established at NPL. This would now be extended to

Continuous Emission Monitoring System (CEMS).

Committee constituted to oversee clean air programme. The Union Environment Ministry has constituted a committee to implement the National Clean Air Programme (NCAP), which aims to reduce particulate matter (PM) pollution by 20%-30% in at least 102 cities by 2024. The committee will be chaired by the Secretary, Union Environment Ministry and has among its members the Joint Secretary (Thermal), Ministry of Power; Director-General, TERI; and Professor Sachidananda Tripathi, Indian Institute of Technology-Kanpur.

Indoor emissions affect air-quality standards. India can achieve its air quality goals if it completely eliminates emissions from household sources. A recent [study](#) has pointed out that the use of firewood,

kerosene and coal in the households contributed to about 40% of the PM 2.5 pollution in the Gangetic basin districts. This number varied across the country but household emissions remained one of the major culprits behind air pollution. The analysis was carried out by researchers from the Indian Institute of Technology (IIT), Delhi in collaboration with University of California in Berkeley, Urban Emissions, Delhi and the University of Illinois, Urbana-Champaign.

[The Hindu](#), 20 April 2019 | [The Hindu](#), 29 April 2019 | [Mint](#), 30 April 2019



IIT-M gets Centre of Excellence to study climate change impact on coastal infrastructure. A Centre of Excellence to study climate change impact on coastal infrastructure and the adaptation strategies was inaugurated at the Indian Institute of Technology, Madras (IIT-M) campus. The facility has been established by

the Union Department of Science and Technology (DST), under the Indo-German Centre for Sustainability. Studies will be undertaken to evaluate the intensity and frequency of tropical cyclones and extreme rainfall events under futuristic warming scenarios and the corresponding effect on coastal infrastructure.

The centre will play a major role in helping communities in India's 7,500 km-long coastal line to prepare for the impact of climate change such as rise in sea levels and increased frequency of tropical cyclones.

Global warming shrank Indian economy by 31 per cent. Global warming has caused the Indian economy to be 31 per cent smaller than it would otherwise have been, according to a Stanford study which shows how Earth's temperature changes have increased inequalities. The study, published in the journal Proceedings of the National Academy of Sciences, showed that growing concentrations of greenhouse gases in Earth's atmosphere since 1960s have enriched cool countries like Norway and Sweden, while dragging down economic growth in warm countries such as India and Nigeria.

NASA scientists confirm global warming is heating up earth's surface. Satellite measurements by NASA researchers have verified the ground-based data which shows the Earth's surface has been warming globally over the past 15 years. The team used measurements of the 'skin' temperature of the Earth taken by a satellite-based infrared measurement system called AIRS (Atmospheric Infra-Red Sounder) from 2003 to 2017. The researchers compared these with station-based analyses of surface air temperature anomalies—principally the Goddard Institute for Space Studies Surface Temperature Analysis (GISTEMP). The [study](#) has published in a recent issue of *Environmental Research Letters*.

[The Hindu](#), 16 April 2019 | [The Week](#), 18 April 2019 | [The Financial Express](#), 23 April 2019



Ganga has higher proportion of antibacterial agents. A study commissioned by the Union Water Resources Ministry to probe the “unique properties” of the Ganga found that the river water contains a significantly higher proportion of organisms with antibacterial properties. Other Indian rivers also contain these organisms but the Ganga — particularly in its upper Himalayan stretches — has more of them, the study suggests. The study, ‘Assessment of Water Quality and

Sediment To Understand Special Properties of River Ganga,’ began in 2016 and was conducted by the Nagpur-based National Environmental Engineering and Research Institute (NEERI). The NEERI team was tasked with assessing the water quality for “radiological, microbiological and biological” parameters in the Bhagirathi (a feeder river of the Ganga) and the Ganga at 20 sampling stations.

Toxic chemicals finding way into Sirsa river. Chemical-ridden drums are being openly washed in the Sirsa river in the Marrawala area of Haryana bordering the Baddi-Barotiwala industrial belt. Plastic waste can also be seen floating on the surface of the river and along its banks, adversely affecting the sustenance of aquatic flora and fauna.

[The Tribune](#), 3 April 2019 | [The Hindu](#), 19 April 2019