Enviro Monitor
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- Crematoriums along Ganga go eco-friendly
- Water in 29 of 30 districts of Karnataka polluted
- Hyderabad lake goes Bengaluru way, spills toxic foam
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Climate change

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- Contribution of India's livestock to methane emissions is only 10.63%
- 74 per cent people in the world to face heat-waves by 2100
- Emperor penguins may not cope with climate change

Water stress

- NITI Aayog to rank states on managing water
- Water level in 91 major reservoirs at 19% of total capacity
- Residents find innovative ways to save their lakes
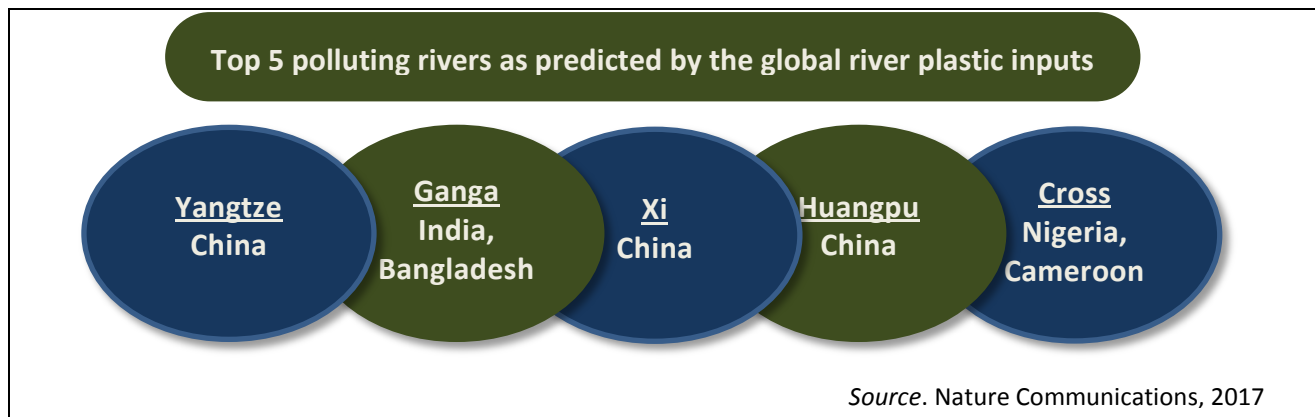- Impact of climate change on water resources in Uttarakhand

Smart cities

- Capitals of 11 states in latest smart city list
- Twenty smart cities form SPVs with municipal bodies
- Mapping expenditure: 80% Smart City funds for just 2.7% of city area
- Coimbatore corporation to set up air quality monitors, launch e-governance apps soon

Water quality

Ganga second-most polluting river in world; China's Yangtze tops the list. River Ganga has been found to be the second-most polluting river in the world, discharging 115,000 tonnes of plastic each year, as per a recent study. The researchers at The Ocean Cleanup, a Dutch foundation developing new technologies for ridding the oceans of plastic, found that rivers carry an estimated 1.15-2.41 million tonnes of plastic into the sea every year. This quantity is exceeded only by Yangtze in China, which transports 3,30,000 tonnes, says a recent paper published in the journal *Nature Communications.*

Top 5 polluting rivers as predicted by the global river plastic inputs

| Yangtze China | Ganga India, Bangladesh | Xi China | Huangpu China | Cross Nigeria, Cameroon |

Source. Nature Communications, 2017

CPCB to shut down 400 polluting industries along Ganga in Kanpur. The Central Pollution Control Board (CPCB) has decided to close down about 400 industries, including tanneries and the dyeing units, situated near the banks of the Ganga in Kanpur for their failure to install online monitoring system for assessing the waste generated by them. The CPCB had directed the industries to set up the system by 28 February 2017, but most of them did not comply with the directives till date. Consequently, the CPCB has started issuing closure notices to the industries. So far the board has issued closure notices to about 18 tanneries and dyeing industries.

Crematoriums along Ganga go eco-friendly. 'Green' crematoriums are planned to be built in villages along the Ganga (which have been branded as Ganga grams under the Namami Gange project). These crematoriums, which will come up in villages along the river at Rishikesh, Haridwar, Uttarkashi and Gangotri will offer 'ecologically-responsible cremation' in which less wood will be utilised besides other safeguards to ensure that the environment and the holy river is not polluted as a result of the cremation process.

Water in 29 of 30 districts of Karnataka polluted. Groundwater in 29 out of 30 districts in Karnataka is contaminated by one pollutant or the other but do not trust a quality testing laboratory to give you the accurate picture. The Comptroller and Auditor General has red-flagged these laboratories for generating fake reports --by claiming to have tested samples and not doing so -- and for suffering crippling staff shortage.

Hyderabad lake goes Bengaluru way, spills toxic foam. After Bengaluru's Bellandur and Varthur lakes, Hyderabad's Ramakrishnapuram Lake (RK Puram lake) near Neredmet too seems to be choking with pollution, spewing toxic foam. On 26th June afternoon, the lake's weir furiously frothed over with clouds of

noxious foam. The lake is a part of Alwal catchment area and feeds the aquifer from where water makes its way into homes of hundreds of residents of 14 different colonies. Blaming this noxious foam on the alarming rise in pollutants pouring into the lake, residents expressed concern.

Sea pollution blamed for mass fish death along Ganjam coast. Seepage of urea from the fertilizer godowns at Gopalpur port is responsible for the mass death of fish and other marine animals in Ganjam district of Odisha, according to the State fisheries department.

Zee News, 9 June 2017 | The Times of India, 15 June 2017 | Hindustan Times, 15 June 2017 | The Times of India, 19 June 2017 | The Times of India, 27 June 2017 | The Hindu, 29 June 2017

Climate change

Gulf of Mannar to be made climate change resilient. In a bid to restore biodiversity in Gulf of Mannar, the Tamil Nadu Environment Department has kick started a Rs 24.74 crore project to rejuvenate the coastal ecosystem. This is one of four projects under the National Adaptation Fund for Climate Change. Gulf of Mannar is among 21 islands dotting northern parts of the gulf, between Pamban and Thoothukudi, surrounded by shallow water rich in coral reefs. Gulf of Mannar has about 4223 species of various flora and fauna, with an ecosystem comprising mangroves, wetland, sea grass, estuary and coral reefs, which are not only crucial to the local fishing communities but also offer resistance to climate change. The survey to study and assess vulnerability of ecosystem and coastal communities to climate change is being conducted along 364.9 km in the lines from Kariachalli and Vilanguchalli islands.

Contribution of India's livestock to methane emissions is only 10.63%. India may be home to 15% of the global livestock population, but its contribution to the global methane emissions by the domesticated animals is only 10.63%, a study by the National Institute of Animal Nutrition and Physiology (NIANP) has revealed. After 10 years of research, scientists from NIANP and the National Institute of Veterinary Epidemiology and Disease Informatics have prepared a national census that not only records each state's contribution to methane emission by livestock but has also identified hotspots of emissions and amelioration strategies to combat emission.

The project titled "Outreach methane project on estimation of methane emission under different feeding systems and development of mitigation strategies" has identified certain changes that can be made in the diet to minimize the emission.

74 per cent people in the world to face heat-waves by 2100. 74% of the world's population will be exposed to deadly heat-waves by 2100, if carbon dioxide emissions continue to rise at current rates, a study warns. Even if emissions are aggressively reduced, the percentage of the world's human population affected is expected to reach 48 per cent, researchers said. A team of researchers led by Camilo Mora, associate professor at the University of Hawaii at Manoa in the US conducted an extensive review and found over 1900 cases of locations worldwide where high ambient temperatures have killed people since 1980. By analysing the climatic conditions of 783 lethal heat episodes for which dates were obtained, researchers

identified a threshold beyond which temperatures and humidities become deadly. The study is published in the journal *Nature Climate Change*.

Emperor penguins may not cope with climate change. The iconic Emperor penguins may see devastating decline in their populations by the end of this century, according to projections for melting Antarctic sea ice in a recent study in *Biological Conservation* journal. According to researchers, Emperor penguin should be listed as an endangered species, as the vanishing landscape due to climate change will strip the animals of their breeding and feeding grounds. The study led by researchers at Woods Hole Oceanographic Institution in the US, found that the iconic animals will not be spared by moving to new locations like other species that migrate to escape the wrath of climate change. Dispersal may help sustain global Emperor penguin populations for a limited time, but, as sea ice conditions continue to deteriorate, the 54 colonies that exist presently will face devastating declines by the end of this century.

The New Indian Express, 7 June 2017 | Business Standard, 12 June 2017 | The Asian Age, 20 June 2017 | The Times of India, 28 June 2017

Water stress

NITI Aayog to rank states on managing water. NITI Aayog will soon rank states on their water management capabilities, with emphasis on policy and governance measures. NITI Aayog, in consultation with states, has developed a Composite Water Management Index as a tool to assess and further improve the performance in efficient management of water resources. The index will help states and ministries and departments concerned formulate and implement suitable strategies for better management of water resources. The target is to prepare the index for states/union territories from the current financial year (2017-18) and the first ranking is expected to be out by 1 January 2018.

The 28 Key Performance Indicators cover irrigation status, drinking water and other water-related sectors.

Water level in 91 major reservoirs at 19% of total capacity. The water level in 91 major reservoirs in the country continued to be at 19 per cent of their total capacity for the second week in a row. According to the Union water resources ministry, the reservoirs, including the Nagarjuna Sagar, Indira Sagar and Bhakra dams, contained 29.67 billion cubic metres of water for the week ending Thursday, 29 June 2017. The fresh water level is 126 per cent of the storage reported during the corresponding period last year and 91 per cent of the decadal average, the ministry said in a statement.

● **Rajasthan, Jharkhand, Odisha, Uttarakhand, Andhra Pradesh, Kerala and Tamil Nadu reported lesser storage compared with last year.**

● **Reservoirs in Himachal Pradesh have reported equal storage.**

● **Punjab, West Bengal, Tripura, Gujarat, Maharashtra, Uttar Pradesh, Madhya Pradesh, Chhattisgarh, Telangana and Karnataka have recorded better storage.**

Residents find innovative ways to save their lakes. As most lakes in Bengaluru city are on the verge of disappearing, a few residents are floating innovative ways to revive some of the most endangered lakes. A simple mechanism called 'trash boom' is now being used to bring the aquatic life back to Avalahalli Lake in JP Nagar. The problem Avalahalli Lake is currently facing is excessive amount of weeds growing on the lake surface. Water hyacinths and algae are harming the ecology of the lake which was once known as a popular stop for large populations of migratory birds in south Bengaluru.

Impact of climate change on water resources in Uttarakhand. The state's water resources, notably water from the Himalayan glaciers and rivers, address the water need of people of the state and India as a whole. However despite the state's multiple water reserves including 17 rivers, several snow-fed glaciers, and 31 lakes, many districts of Uttarakhand face acute water scarcity. Water resources are diverted for activities in many sectors including agriculture, energy, tourism and forestry. The agriculture sector is the greatest consumer of water in the state, accounting for 75% of the total demand. Increasing population and rising standard of living also led to a great demand for water. The state's water scarcity is linked to the unsystematic distribution of water and poor management of water resources. Many of the state's rural water supply system no longer meet community needs, especially when frequent landslides damage water pipes and infrastructure. The quality of water too has deteriorated in some regions.

The Times of India, 4 June 2017 | Bangalore Mirror, 8 June 2017 | The Economic Times, 15 June 2017 | Press Information Bureau, 16 June 2017 | Business Standard, 29 June 2017
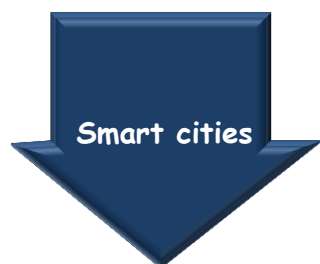
Smart cities

Capitals of 11 states in latest smart city list. The capital cities of Kerala, Gujarat, Bihar, Uttarakhand, Karnataka, Himachal Pradesh, Andhra Pradesh, Jammu & Kashmir, Mizoram, Sikkim and the new capital of Chhattisgarh, Naya Raipur, were among 30 urban areas which are selected to be developed as smart cities. The government also launched a city livability index to be based on 79 indicators to monitor the development of cities and address gap areas. The 30 cities in the order of marks scored are:

S No.	City	State/UT	S No.	City	State/UT
1	Thiruvananthapuram	Kerala	13	Satna	Madhya Pradesh
2	Naya Raipur	Chattisgarh	14	Bengaluru	Karnataka
3	Rajkit	Gujarat	15	Shimla	Himachal Pradesh
4	Amaravati	Andhra Pradesh	16	Dehradun	Uttarakhand
5	Patna	Bihar	17	Tiruppur	Tamil Nadu
6	Karimnagar	Telangana	18	Pimpri Chinchwad	Maharashtra
7	Muzaffarpur	Bihar	19	Bilaspur	Chattisgarh
8	Puducherry	Puducherry	20	Pasighat	Arunachal Pradesh
9	Gandhinagar	Gujarat	21	Jammu	Jammu & Kashmir
10	Srinagar	Jammu & Kashmir	22	Dahod	Gujarat
11	Sagar	Madhya Pradesh	23	Tirunelveli	Tamil Nadu
12	Karnal	Haryana	24	Thootukkudi	Tamil Nadu

25	Tiruchirapalli	Tamil Nadu	28	Allahabad	Uttar Pradesh
26	Jhansi	Uttar Pradesh	29	Aligarh	Uttar Pradesh
27	Aizawl	Mizoram	30	Gangtok	Sikkim

Source. Press Information Bureau. 2017

Twenty smart cities form SPVs with municipal bodies. The twenty cities selected in the first batch of the Smart Cities Mission have established special purpose vehicles (SPVs) with municipal corporations and appointed full-time CEOs, CIOs and CFOs. SPVs are separate companies focusing on the Smart Cities Mission which are set up at city level in the form of a limited company under the Companies Act, 2013. The SPV will convert the Smart City proposal into projects through project management consultants and implementation thereafter.

Mapping expenditure: 80% Smart City funds for just 2.7% of city area. 80% of the proposed central government investment in its flagship Smart City mission will flow to well-developed pockets that account for only 2.7 per cent of the cumulative area of cities identified under the initiative. Data obtained from the Ministry of Urban Development by the newspaper show that of the total Rs 1.31 lakh crore proposed to be spent on the 59 cities from 2015 to 2020, Rs 1.05 lakh crore will be spent on the Area Based Development component. This refers to pockets in the selected cities that will be made 'smart' with a combination of IT and infrastructure projects such as Wi-Fi hotspots, sensor-based public lighting, redesign of streets, zones promoting start-ups and multi-modal transit points.

Coimbatore corporation to set up air quality monitors, launch e-governance apps soon. The Coimbatore city corporation will set up 30 air quality monitors, another 30 attached to the smart benches and also release an application to redress grievances online to mark the second anniversary of the Smart Cities Mission on June 25. The devices will be set up at all zonal offices of the corporation. The corporation also plans to set up air quality monitoring systems in 30 corporation buildings located in all the five zones.

The Financial Express, 2 June 2017 | Indian Express, 14 June 2017 | The Times of India, 19 June 2017 | Press Information Bureau, 23 June 2017 | The Times of India, 24 June 2017 | Mint, 24 June 2017