

# Enviro Monitor

November-December 2016

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- Human-induced climate change worsened 2015 heatwave in India
- Climate change will lead to uncontrollable rise in migration
- Growing mega-cities will displace vast tracts of farmland by 2030
- Climate change hits mango farmers
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- NGT raps six 'polluting' states
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## Climate change

**SAARC-level panel to mitigate climate change fallout on fisheries.** Fisheries scientists from South Asian Association for Regional Cooperation (SAARC) countries, who reviewed the remedial steps to be initiated to mitigate the impact of climate change on fisheries and aquaculture, have recommended a SAARC-level task force to formulate strategies in this regard. The major remedial measures put forward at the Conference

were introduction of saline temperature tolerant and fast-growing fish species for coastal aquaculture; establishment of fish sanctuary for improvement of natural stocks; setting up a common gene bank for vulnerable species; development of alternate energy and fuel sources for inland and marine capture fisheries; utilisation of e-commerce ventures and information communication technology for social and livelihood security of fishers and fish farmers.

At the meeting convened by SAARC Agriculture Centre with representatives of SAARC nations through video conference, the Central Marine Fisheries Research Institute has submitted the Country Status Report about the impact of climate change on coastal fisheries and aquaculture sector in India.

**Human-induced climate change worsened 2015 heatwave in India.** The heat waves that killed nearly 2500 people in India and 2000 people in Pakistan last year were exacerbated by human-induced climate change, scientists including those from IIT Delhi have found. Researchers examined observational and simulated temperature and heat indexes and found that the heat waves in the two countries "were exacerbated by anthropogenic climate change". While the two countries typically experienced severe heat in the summer, the 2015 heat waves, which occurred in late May/early June in India and in late June/early July in Pakistan, have been linked to the deaths of nearly 2500 people in India and 2000 in Pakistan.

**Climate change will lead to uncontrollable rise in migration.** Climate change will cause "uncontrollable" escalation in migration in South Asia. The study by ActionAid, Climate Action Network South Asia and Bread for the World (Brot Fuer Die Welt) cautioned about the devastating and increasing impact of climate change on migration. The organisations also underlined the need for action by all different governments of the world to tackle the issue. The study, [Climate Change Knows No Borders](#), looks at climate change and its impact on migration in South Asia, particularly in Bangladesh, India, Nepal and Sri Lanka. It said the region is

particularly vulnerable to climate change events, including droughts, heat waves, cyclones, rising sea levels, heavy rainfall, landslides and floods.

**Growing mega-cities will displace vast tracts of farmland by 2030.** Future crops will face threats not only from climate change, but also from the massive expansion of cities, a new [study](#) warns. By 2030, it is estimated that urban areas will triple in size, expanding into cropland and undermining the productivity of agricultural systems that are already stressed by rising populations and climate change. Roughly 60% of the world’s cropland lies on the outskirts of cities—and that’s particularly worrying, the report authors say, because this peripheral habitat is, on average, also twice as productive as land elsewhere on the globe.

**In India, agricultural expansion would force crops into habitats like wetlands that act as important buffers against flooding and sea-level rise.**

**Climate change hits mango farmers.** The cyclone Vardah that wreaked havoc in Tamil Nadu seems to have caused climate changes at Muthalamada, the mango hub of Kerala, where premature dropping of mango flowers and fruits is worrying the farmers. The damages are more visible at Chappakkad, Vellarankadavu and Naripparachalla areas, where almost all the families are engaged in mango cultivation. The orchards which bloomed during October and early November are now the worst-affected.

**India to achieve climate change goal earlier than thought.** The share of non-fossil fuels in India’s sources of electricity will increase way beyond the nation’s climate change commitments and much earlier than initially thought, according to a five year energy blueprint brought out by the Central Electricity Authority (CEA). CEA said in the draft national electricity plan, 2016, that the share of non-fossil fuel power generation capacity comprising hydel, nuclear and renewable sources of energy, will reach 46.8% by 2021-22, up from 30% at the beginning of this year. This is well ahead of what was prescribed as India’s intended nationally determined contribution, a commitment made at the UN framework convention on climate change in Paris in December 2015 of relying on non-fossil fuels for 40% of electricity generation by 2030.

[The Economic Times](#), 8 December 2016 | [Mint](#), 16 December 2016 | [The Economic Times](#), 19 December 2016 | [Deccan Herald](#), 20 December 2016 | [The Hindu](#), 22 December 2016 | [The Guardian](#), 27 December 2016 | [The Hindu Business Line](#), 28 December 2016 | [The New Indian Express](#), 29 December 2016



**Health cost of air pollution in India assessed at 3 per cent of its GDP.** The cost of serious health consequences from particulate matter pollution is estimated to be around 3 per cent of India's GDP, according to a Health Ministry statement in Lok Sabha. Minister of State for Health and Family Welfare Ms Anupriya Patel, in a written statement to the Parliament, cited the [India - Diagnostic Assessment of Select Environmental Challenges](#) report prepared by the World Bank Disaster Management and Climate Change Unit, which states that the total damage because of environmental degradation

**The total damage because of environmental degradation amounts to Rs 3.75 trillion.**

amounts to Rs 3.75 trillion, which is equivalent to around 5.7 per cent of the India's GDP.

**NGT bans waste burning in open areas across country, violators to be fined.** In a significant order, the National Green Tribunal (NGT) has imposed a complete ban on burning of waste in open places across the country and announced a fine of Rs 25,000 on each incident of bulk waste burning. While directing every state and Union territory to enforce and implement Solid Waste Management Rules, 2016, the green panel also asked the Environment Ministry and all states to pass appropriate directions in relation to the ban on short-life polyvinyl chloride and chlorinated plastics within a period of six months.

**NGT raps six 'polluting' states.** NGT has put the six neighbouring states of Delhi on notice and has asked, "Why should you not be directed to completely stop the operation of diesel buses coming to the national Capital". Taking cognisance of the dangerous air quality of the national Capital especially during winters, a chair headed by NGT chairperson Justice Swatanter Kumar asked the states of Rajasthan, Uttar Pradesh, Uttarakhand, Punjab, Himachal Pradesh and Haryana to take clear decision on switching to CNG vehicles and buy buses with additional fuel cylinders to resolve the issue of providing sufficient fuel in these buses.

**EU offers expertise to combat air pollution.** With Delhi and other cities of the country grappling with the issue of increasing air pollution, European Union has offered its technical expertise to help combat deteriorating air quality. Under the initiative, the EU will initially launch a project in three cities in January 2017 to help authorities come out with effective measures to reduce pollution.

**Delhi government uses new measures to fight air pollution.** With air pollution likely to once again reach severe limits, Delhi's deputy chief minister Mr Manish Sisodia has ordered immediate implementation of the six new measures to fight air pollution, including induced-draft air treatment system. The government has reportedly decided to collaborate with NEERI (National Environmental Engineering Research Institute), for the implementation and establishing of the systems to fight the menace of pollution. In collaboration with the Public Works Department, NEERI will design and execute induced-draft creation units at five major traffic intersections in Delhi. The IDC at IIT Bombay will help NEERI design for these traffic intersections. The unit has the potential to reduce carbon monoxide and particulate emission by 40%-60% emission in 20-30m radius during peak hours of traffic, air quality sensors, anemometers, camera and counters will be mounted on these units for better mapping which will enable robust data assimilation and analysis.

[The Pioneer](#), 21 November 2016 | [DNA](#), 1 December 2016 | [The Times of India](#), 9 December 2016 | [The Pioneer](#), 19 December 2016 | [Hindustan Times](#), 22 December 2016



**Single tribunal to decide all inter-state water disputes.** The Centre has decided to set up a single, permanent Tribunal to adjudicate all inter-state river water disputes subsuming existing tribunals, a step which is aimed at resolving grievances of states in a speedy manner. Besides the Tribunal, the government has also proposed to float some benches by amending the Inter-State Water Disputes Act, 1956 to look into disputes as and when required. Unlike the Tribunal, the benches will cease to exist once the disputes are

resolved. At present, there are eight Tribunals including those on Cauvery, Mahadayi, Ravi and Beas, Vansadhara and Krishna rivers. The Odisha government has filed a petition with the central government for setting up of a tribunal.

**Climate change to impact Hindu Kush-Himalaya water supplies.** More than a glacial retreat in the Hindu

Kush-Himalaya region (HKH), the shifts in rain and snow due to climate change will likely to have an impact on regional water supplies and groundwater recharge. A study conducted by two Kathmandu-based experts from International Centre for Integrated Mountain Development (ICIMOD) shows that at lower elevations, glacial retreat is unlikely to cause significant changes in water availability over the next couple of decades, but other factors, including groundwater depletion and increasing human water use, could have a greater impact. Higher elevation areas could experience altered water flow in some river basins if current rates of glacial retreat continue.

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The Hindu Kush-Himalaya is one of the most dynamic and complex mountain systems in the world, with several rivers and glacial systems making the region a "Third Pole" of the earth, providing fresh water resources to more than 210 million people in the mountains and 1.3 billion people downstream.

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**Karnataka staring at a major drinking water crisis as reservoir levels plunge.** The failure of the monsoons in Karnataka for the second consecutive year has, besides driving farmers into despair, plunged the major urban centres -- including Bengaluru -- into a major drinking water crisis. The water level at all 13 major reservoirs in Karnataka has

plummeted to a 10-year low, and with no rains being forecast for the next week, the state could be staring at a major drinking water crisis.

Data from the Karnataka State Natural Disaster Monitoring Centre has reaffirmed the prospect of a severe drinking water problem in

the summer months next year. Bengaluru could be looking at a

parched summer, with the water level at the Krishna Raja Sagar reservoir touching a 15-year low. 24

villages across Mysuru district are facing acute drinking water crisis. The district administration has started supplying potable water through tankers. Of this, 11 villages are in Mysuru taluk and 13 in Nanjangud taluk.

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**Climate proofing: Himachal prepares \$150 million plan to manage natural water resources.** Recognising the challenge to its water resources in the face of climate change, Himachal Pradesh has drawn-up a USD 150 million project to manage the state's stressed water ecology and restore nearly 10,000 hectares of its river basin. The money will be sought under the Green Climate Fund (GCF), an international fund under

aegis of the United Nations that is expected to have a corpus of USD 100 billion to help countries fight climate change. The state's Irrigation and Public Health has already submitted a detailed concept note to the Centre. The five-year project aims to arrest the rate of depletion and enhance long term livelihood means of the population living in hilly areas. It also specifies involve the participation of communities in water harvesting and management.

[The Indian Express](#), 22 November 2016 | [The Times of India](#), 2 December 2016 | [Deccan Herald](#), 18 December 2016 | [India Live Today](#), 19 December 2016 | [The Tribune](#), 20 December 2016 | [The Hindu](#), 27 December 2017



**28 facilities chosen for medical waste disposal.** In Karnataka, 28 healthcare facilities have been chosen for the implementation of "Environmentally Sound Management of Medical Wastes in India" programme which aims at streamlining the management and disposal of biomedical waste. Four large, eight medium and 16 small healthcare facilities have been chosen in each of the five states - Gujarat, Karnataka, Maharashtra, Odisha and Punjab.

**21 units to shred South Delhi green waste.** South Delhi Municipal Corporation has set up 21 green waste management centres across its zones in order to curb the menace of open burning of dry leaves. The project will not only help check air pollution, but also expected to encourage scientific disposal of waste.

**App to drive garbage separation in Domlur.** 750 households in Domlur, Karnataka, will get a QR code and be geo-tagged on a central database. Pourakarmikas will record their attendance at every house by scanning the code with a mobile application and rate its level of waste segregation. In addition to ensuring that no house is missed, this new technology will also identify households that do not segregate their garbage. At the citizen's end, the app helps track the local waste collector. This pilot project is being implemented by a group that calls itself *Waste Samaritans*. They were the winning team at the 'Reimagine Waste', a hackathon organised in April by Waste Impact and the Indian Institute of Science, among others. Unlike a regular hackathon, the teams -- comprising techies, students and waste pickers -- were encouraged to take up an ensuing 45 day challenge to further their ideas so as to bring them closer to implementation.

**Ghazipur garbage to be used for highway construction.** Several lakh tonnes of garbage piled up at the Ghazipur landfill site in east Delhi over the years will be cleared by 2018 and used in construction of a national highway. The East Delhi Municipal Corporation (EDMC), which operates the 70-acre landfill, has signed a Memorandum of Understanding with the National Highways Authority of India, the Ministry of Road Transport and Highways, and the Urban Development Ministry. The EDMC will facilitate and the NHA execute the Road Ministry fund, and the Urban Development Ministry will promote the project to use garbage in construction of a section of National Highway-24.

[Deccan Herald](#), 3 November 2016 | [The Hindu](#), 1 December 2016 | [The Times of India](#), 15 December 2016 | [The Times of India](#), 18 December 2016



**2017 may ring curtains on many mines.** The mining sector is bracing itself for a dark new year, with two difficult deadlines set under laws governing forest conservation, forest dwellers' rights and the mines and mineral development and regulation law of 2015 looming

over hundreds of existing and proposed mines. Industry body FICCI has written to the Mines Ministry to request an extension of the December 31, 2016 (for forest clearances in mineral-rich Odisha) and January 11, 2017 (for converting letters of intent issued by states for mining operations before January 12, 2015, when the new MMDR law kicked in) deadlines to provide 'a lease of life' to these mines.

**About 317 applicants across 12 major mineral states, such as Andhra Pradesh, Tamil Nadu, Jharkhand, Odisha, Rajasthan and Gujarat, risk forfeiture of rights.**

**Adopt eco approach to bauxite mining: Andhra University.** Geo-scientists and researchers of Andhra University have studied the environmental implications of open cast bauxite mining in the Agency area and came up with suggestions for eco-friendly ways of doing it. Andhra Pradesh has the second highest reserves of bauxite in the country. The study, titled '[Bauxite mining in Eastern Ghats of Andhra Pradesh, Possible Environmental Implications and Measures for Environmentally Friendly Mining](#),' attempts to present the possible impacts of active mining initiatives of bauxite in the region. It further examined people's apprehensions related to impact on the environment and tribal socio-economic and cultural implications.

**Centre to extend ban on mining in Aravallis across NCR.** The Centre has asked Delhi and its neighbouring states to ban mining and construction of farmhouses across the Aravalli range in the national capital region (NCR), declare rivers and tributaries flowing through it as national conservation zones, and increase the green cover by six times.

**Madhya Pradesh plans to invite experts to study impact of mining on Narmada.** The Madhya Pradesh government is planning to invite Indian and international experts to study sand mining's impact on Narmada river. Illegal sand mining on Narmada - the lifeline of Madhya Pradesh - is reported on a regular basis. Experts say sand mining affects a river's groundwater tables besides destroying habitat of biodiversity.

**In Himachal, illegal sand mining in Sutlej basin damages environment.** Illegal sand mining in the Sutlej River basin in Himachal Pradesh is on the rise. This unscientific and illegal method of sand queering is not only creating environmental hazards, but also, giving a fillip to corruption. As per data available with the Industry Department, as many as 3875 cases of illegal sand mining have been registered so far, of which in 2600 cases, fines were imposed. More than Rs 2 crore has been collected as fine, while trials are on in the remaining cases.

[Business Standard](#), 23 November 2016 | [The Times of India](#), 24 November 2016 | [Hindustan Times](#), 20 December 2016 | [The Hindu](#), 28 December 2016 | [Hindustan Times](#), 28 December 2016