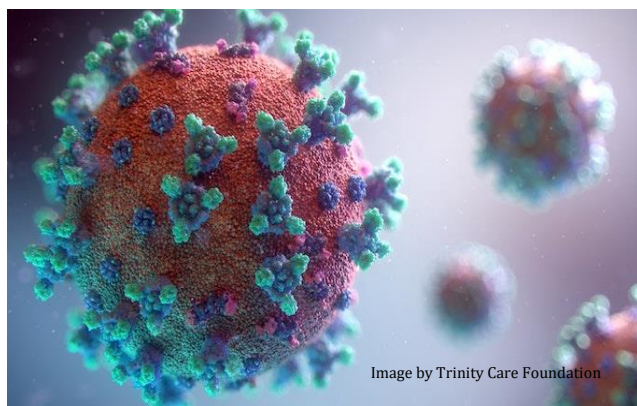


In the News

COVID-19 Pandemic and Land Use



A study published in Mammal Review Journal explains a relation between changes in animal's behaviour due to the land use pattern change anticipated to be one of the factors of an outbreak of COVID-19. The study suggests that most of the human viruses have been observed to be transmitted from animals, particularly the industrially domesticated ones, which are

reared in close confinement with greater possibilities of physical contact. The study has investigated the association of land-use changes, such as urbanization, deforestation, and conversion to agriculture, with induction of transmission of such infectious diseases to humans. Nevertheless, the study urges to have more studies that link the impact of land-use changes on the animal ecology and pathogen spread.

Source: <https://indianexpress.com/article/india/land-use-changes-may-lead-to-spread-of-new-diseases-like-covid-19-study-6441197/>

Land use and flood



In recent years, Hyderabad city has been witnessing a declining trend in three of the most important indicators of urban flooding – change in land use, change in land cover, and change in vegetation pattern.

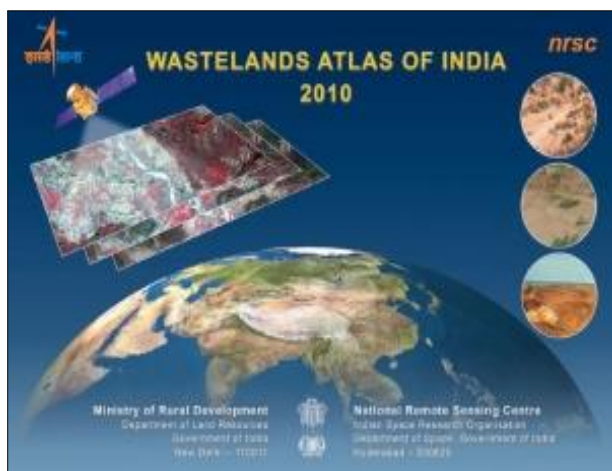
The Normalized Differential Vegetation Index (NDVI) for the city ranged from 0.05 to 0.07 in the sparsely built-up areas, and -

0.01 to -0.04 in the closely built-up areas. The NDVI of the city was found to be significantly low due to the excessive concretization and loss of vegetation, which considerably impacts the drainage flow. The Modified Normalized Differential Water Index (MNDWI), which is a marker for the availability of water bodies in an area, has been observed drying and vanishing, and the remaining has changed their contours and water content over time. Whereas, the Normalized Differential Built-up Area Index (NDBI) measures the extent of built-up area, which has been recorded to be high, characterizes as the higher degree of run-offs due to the imperviousness of the urban built-up. It has been observed that MNDWI of

the city in 2013 has significantly declined as compared to MNDWI value in 2009, which suggests the water holding capacity of the wetlands has tumbled considerably.

Source: <https://timesofindia.indiatimes.com/city/hyderabad/urbanisation-poor-vegetation-making-hyd-prone-to-floods/articleshow/78880227.cms>

Wasteland Atlas of India



Wasteland Atlas of India, developed by the National Remote Sensing Centre (NRSC) was released in 2019. It is the fifth edition of the Atlas. The Wasteland Atlas of India - 2019 includes category-wise wasteland information at the state and district level. The Atlas features changes in wastelands from 2008-2009 to 2015-2016. This time, it includes wasteland (12.08 Mha) of Jammu & Kashmir, which was not included in the

previous Atlas. The total wasteland area for the year 2015-2016 was recorded as 55.76 Mha which accounts for 16.96% of the total geographical area of India. Whereas, the total wasteland area for the year 2008-2009 was 56.60 Mha which accounts for 17.21% of the total geographical area of India.

Source: <https://dolr.gov.in/documents/wasteland-atlas-of-india>

UNCCD COP-14



The United Nation Convention to Combat Desertification (UNCCD) Conference of Parties 14th edition (COP-14) was held at Greater Noida in 2019. The theme of the COP was 'Restore Land, Sustain Future'. In the Delhi declaration, the commitments were on a range of issues, such as health and gender, restoration of ecosystem, action on climate change, peace forest initiatives, engagement of private sectors, and recovery of 5 Mha degraded land in India. As a national target for action, all the parties agreed to achieve

land degradation neutrality by 2030, while conforming to sustainable development goals. A Drought Toolbox was also launched, which is one-stop-shop for all the actions on drought. The parties coalesced on action on Sand and Dust Storm (SDS) by developing a source-based maps of SDS as it affects 151 countries. Additionally, India proposed an initiative of

south-south cooperation for resolving issues related to climate change, biodiversity, and ecosystem and land degradation. India has also committed to raising its ambition of land restoration from 21 Mha to 26 Mha by 2030. Furthermore, India has proposed to establish a global technical support unit for capacity building and support to UNCCD party countries for the land degradation neutrality target program. A Global Water Action Agenda has also been proposed by India to UNCCD as it is a key component to achieving land degradation neutrality.

Source: <https://www.unccd.int/official-documents/cop-14-new-delhi-india-2019>

Land use and aquaculture



Case story of Himachal Pradesh

The Government of Himachal Pradesh is mooting on the initiation of land-based fish farming with the help of a new technology called Recirculating Aquaculture System (RAS) to culture various types of fish throughout the year. As a part of the sustainable development of fish farming, the technology is an initiative through the Pradhan Mantri MatsyaSampada Yojana (PMMSY). The Government is prepared to roll out the development of 15 RAS facilities across the State in the next five years. It has been estimated that normal water RAS facilities can produce 40 tonnes of fish per unit per year, whereas the cold-water RAS facilities can produce 10 and 4 tonnes of fish per unit per year. This initiative is expected to meet the livelihood and economic commitments of the State

Source: <https://timesofindia.indiatimes.com/city/shimla/himachal-to-start-land-based-fish-farming-using-ras-tech/articleshow/78609908.cms>

Case story of Goa

The Directorate of Fisheries, Goa has suggested making a policy to use fallow land of the Khazan area in Goa for agriculture and fisheries. The directorate has also recommended the preparation of the Khazan Management Plan. The Khazan land currently spans over 18,500 ha of area, out of which 3,500 ha of the land is either fallow or marshland.

Source: <https://www.downtoearth.org.in/blog/wildlife-biodiversity/mangroves-and-khazan-agriculture-sustaining-goas-promise-for-fish-curry-and-rice-72460>

Bihar plans afforestation drive in villages along the Ganga river stretch



The Government of Bihar is set to launch a massive plantation drive in the villages located along the River Ganga stretch, to reduce soil erosion in the fringe villages and increase groundwater. The plantation drive will be launched across India under the Namami Gange programme. A target has been set to plant 5 million trees in India, with an estimated budget of Rs. 1 billion. In Bihar, 100 villages along the bank of Ganga have

been selected for such plantation drive. The selected villages are in the districts of Munger, Bhagalpur, Begusarai, Purnia, Samastipur, Patna, Vaishali, Bhojpur, and Saran.

Source: <https://www.downtoearth.org.in/news/environment/bihar-plans-afforestation-drive-in-villages-along-ganga-river-63424>

Bihar plans developing organic corridor in 13 districts along the Ganga river stretch



As part of Jal Jeevan Hariyali Mission, the Government of Bihar is planning to develop Organic Corridors, passing through 13 districts to keep Ganga clean. The Corridor will have confluence between Buxar and Bhagalpur. An estimated budget for this plan will be around Rs. 1.5 billion.

Source: https://www.business-standard.com/article/pti-stories/bihar-govt-to-develop-organic-corridor-in-13-districts-120030400153_1.html

Bihar Government to chart low carbon development pathway



The Government of Bihar is all set to pursue a climate-resilient and low carbon development pathway with the help of the United Nation Environment Programme (UNEP). UNEP has agreed to provide support to the Government to help meet the climate goals of the State. The UNEP will majorly support with developing a comprehensive Green House Gas (GHG) inventory and building a roadmap to achieve net-zero

emissions by mid-century.

Source:<https://www.unep.org/news-and-stories/press-release/government-bihar-chart-low-carbon-development-pathway-unep-support>

Artificial Intelligence to keep watch on air pollution in Bihar



The State government will be using Geo-based Artificial Intelligence (AI) and remote sensing technology to identify and monitor the sources of air pollution. The Bihar State Pollution Control Board (BSPCB) has signed a Memorandum of Understanding (MoU) with the United Nation Development Programme (UNDP) to take up this initiative. The technologies like Internet of Things (IoT) and AI will be used to identify and

monitor the sources of air pollutions, such as brick kilns, industries, stubble burning, vehicular emissions etc. The platform will be developed in collaboration with the University of Nottingham.

Source:<https://timesofindia.indiatimes.com/city/patna/mou-inked-to-check-pollution-through-artificial-intelligence/articleshow/80773918.cms>