



Current Affairs of the Day

GS Paper III

- Researchers find new butterfly species
- 64% of world's arable land at risk of pesticide pollution: Study
- Odisha government proposes state's second biosphere reserve at Mahendragiri
- Forests under indigenous people more protected, says new report



Researchers find new butterfly species

A group of lepidopterists have added a species to the expanding list of butterflies in India. The discovery of the species *Nacaduba Sinhala Ramaswamii Sadasivan, 2021* in the Agasthyamalais in the Western Ghats a decade ago has now found a place in the Journal of Threatened Taxa.

Highlights:

1. It is the first time that a butterfly species was discovered by an all-Indian research team from the Western Ghats.
2. The new taxon of Lycaenid butterflies belongs to the *Nacaduba* genus.
3. Line Blues are small butterflies belonging to the subfamily Lycaenidae and their distribution ranges from India and Sri Lanka to the whole of southeastern Asia, Australia and Samoa.

64% of world's arable land at risk of pesticide pollution: Study

Around 64 per cent of land used for agriculture and food crops is at risk of pesticide pollution and almost a third of these areas are considered to be at high-risk, a global study of agricultural land across 168 countries has revealed.



Overuse of pesticides might tip the balance, destabilise ecosystems and degrade the quality of water sources that humans and animals rely on to survive, the study said.



Highlights:

1. Asia houses the largest land areas at high risk of pollution in countries like China, Japan, Malaysia, and the Philippines. Some of these areas are considered 'food bowl' countries, feeding a large portion of the world's population.
2. Globally, 34 per cent of the high-risk areas are in high-biodiversity regions, 19 per cent in low-and lower-middle-income nations and five per cent in water-scarce areas.
3. The study, published in Nature Geoscience, highlighted this through a global map of 168 countries facing pollution risk caused by 92 chemicals commonly used in agricultural pesticides.
4. The study examined risks to soil, the atmosphere and surface and ground water. Pesticides can be transported to surface waters and groundwater through runoff and infiltration, polluting water bodies, thereby reducing the usability of water resources.
5. Overuse of pesticides is concerning as it might tip the balance, destabilise ecosystems and degrade the quality of water sources that humans and animals rely on to survive, the study said.

Global pesticide use is expected to increase as the global population heads towards an expected 8.5 billion by 2030. The authors of the paper recommended a global strategy to transition towards a sustainable, global agricultural model that reduces food wastage while reducing the use of pesticides.

Odisha government proposes state's second biosphere reserve at Mahendragiri

The Odisha government has proposed a second biosphere reserve in the southern part of the state at Mahendragiri, a hill ecosystem having rich biodiversity.

Highlights:

1. The 5,569-square kilometre Similipal Biosphere Reserve is Odisha's first such reserve and was notified May 20, 1996.



2. The area of the proposed Mahendragiri Biosphere Reserve is around 470,955 hectares and is spread over Gajapati and Ganjam districts in the Eastern Ghats.

Mahendragiri Biosphere Reserve

1. The hill ecosystem acts as a transitional zone between the flora and fauna of southern India and the Himalayas, making the region an ecological estuary of genetic diversities. This is according to a feasibility report prepared by the Biosphere Reserve Committee for the proposed project.
2. Several environmentalists had recently urged the Odisha government to send an urgent proposal to the Centre to declare Mahendragiri a biosphere reserve.
3. A biosphere reserve in Mahendragiri is urgently needed for the conservation of the landscape, ecosystems, rare and threatened plant species in the hill system, which is now under severe degradation.
4. Mahendragiri is inhabited by the Soura people, a particularly vulnerable tribal group as well as the Kandha tribe.
5. The hills have diverse vegetation, according to the report of the proposed Mahendragiri Biosphere Reserve. The rich flora in Mahendragiri represents 40 per cent of the reported flora of Odisha, with around 1,358 species of plants.
6. Twenty-nine of the 41 species of threatened medicinal plants found in Odisha according to the International Union for the Conservation of Nature are found in the biosphere reserve area, according to the report.

Forests under indigenous people more protected, says new report

Deforestation rates are significantly lower in indigenous and tribal territories, where governments have formally recognized collective land rights, according to a new report.

Highlights:

1. On an average, indigenous and tribal territories in the Amazon Basin lost 0.17 per cent of the carbon stored in their forests each year between 2003 and 2016 due to deforestation and forest degradation, said the report titled Forest Governance by Indigenous and Tribal Peoples.



2. In contrast, forests outside indigenous territories and protected areas lost 0.53 per cent each year, 0.36 per cent more than the indigenous territories, the report said.
3. The indigenous people follow forestry management practices such as assisted forest regeneration, selective harvesting and reforestation and assisted growth of trees within existing forests. These form an efficient and cost-effective way to reduce carbon emissions, the study noted.

Improving the tenure security of these territories is an efficient and cost-effective way to reduce carbon emissions, showed the report jointly published by Food and Agriculture Organization (FAO) of the United Nations and the Fund for the Development of Indigenous Peoples of Latin America and the Caribbean (FILAC).

Threat of drastic Disempowerment

The report showed how the “cultural, geographic, economic and political conditions and factors that have favored the preservation of the forests in the indigenous and tribal peoples’ territories” are changing drastically. The consequences can cause serious, irreversible harm both environmentally and financially, it said.

The FAO report proposed a set of investments and policies that have great potential to reactivate the economies of the indigenous and tribal territories, mitigate climate change, preserve biological and cultural diversity, and reduce social and environmental conflicts.

The proposal is based on six pillars:

1. Recognition of collective territorial rights
2. Compensation for environmental services
3. Community forest management
4. Revitalization of ancestral knowledge
5. Strengthening of grassroots organizations and
6. Mechanisms for territorial governance