



Biodiversity & Conservation:

Climate Change as a "Threat Multiplier": A pervasive theme is the exacerbating effect of climate change on biodiversity loss. Marine heatwaves are increasingly frequent and intense, directly impacting species productivity and distribution, leading to decimation of critical ecosystems like seagrasses, corals, and kelps. Climate change also intensifies wildfires, droughts, and storms, devastating ecosystems and forcing species to adapt or migrate faster than they can. If global warming exceeds 1.5°C, it is projected to become the dominant driver of biodiversity loss in the coming decades.

Persistent Threats: Beyond climate change, the "big five" threats continue to be significant:

Habitat Loss and Degradation: Primarily due to land-use change, particularly conversion for agriculture.

Overexploitation: Unsustainable harvesting, hunting, and illegal wildlife trade (estimated at up to \$20 billion annually) continue to push species to the brink.

Pollution: Plastic pollution, chemical runoff, and nutrient loss severely impact ecosystems, especially marine environments.

Invasive Alien Species: Their spread is often accelerated by climate change, making eradication difficult once established.

Wildlife Disease: Outbreaks, some exacerbated by habitat degradation and trade in live animals, pose significant risks to wild populations.

The Biodiversity Finance Gap: There's a recognized need for significant financial investment to protect nature.

Key Initiatives and Developments:

Global Frameworks and National Implementation: The Kunming-Montreal Global Biodiversity Framework (KM-GBF), agreed upon by 196 countries, aims to halt and reverse biodiversity loss by 2030. Countries are in the process of submitting their National Biodiversity Strategies and Action Plans (NBSAPs) to align with these global goals.

Focus on Nature-Based Solutions: There's a growing integration of climate and biodiversity agendas through "nature-based solutions" (NbS), which leverage natural systems for climate mitigation and adaptation. This includes initiatives like reforestation, wetland restoration, and sustainable land management.

Increased Collaboration and Technology: There's an emphasis on cross-sector collaboration (governments, NGOs, private sector, local communities) and the integration of technology (AI, machine learning, geospatial analysis) for better biodiversity risk management, monitoring, and conservation planning.

Circular Economy Models:

India's Efforts: India, a mega-diverse country, is actively engaged in biodiversity conservation.

The Ministry of Environment, Forest and Climate Change (MoEFCC) celebrated International Day for Biological Diversity 2025 with the theme 'Harmony with Nature and Sustainable Development', highlighting India's people-led conservation efforts.





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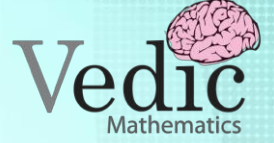
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Initiatives include expanding wetland protection (89 Ramsar sites), notifying Biodiversity Heritage Sites, and launching campaigns like 'Ek Ped Maa Ke Naam' (Plant4Mother).

Significant investment has been allocated for wildlife habitats, including flagship programs like Project Tiger, Project Elephant, and Project Snow Leopard. India now has 54 tiger reserves.

The International Big Cat Alliance (IBCA) officially became a treaty-based intergovernmental organization in January 2025, with India playing a key role in driving global big cat conservation.

Advanced research facilities like a Next Generation DNA Sequencing facility at the Wildlife Institute of India are enhancing conservation capabilities.

Success Stories (Though Challenges Remain):

Despite the grim outlook, targeted conservation efforts are showing positive results in bringing some species back from the brink.

Species Recovery: Examples include the Iberian lynx, kākāpō (flightless parrot from New Zealand), European bison, humpback and blue whales, and several species in India like vultures, Asian elephants, and Asiatic lions.

Habitat Restoration: Wetland restoration projects (e.g., Holnicote Estate, UK) are demonstrating success in creating diverse habitats and improving ecological function.

Protected Areas:

Community Involvement: Engaging local communities in conservation efforts (e.g., in Papua New Guinea to reduce tree kangaroo hunting, or in Namibia with rhino rangers) is proving crucial for long-term success.

MCQS

1. Which of the following is identified as a "threat multiplier" for biodiversity loss?

- A) Overexploitation
- B) Pollution
- C) Climate Change
- D) Habitat Loss

Answer: C) Climate Change

The text explicitly states, "Climate Change as a 'Threat Multiplier': A pervasive theme is the exacerbating effect of climate change on biodiversity loss." It then details how climate change intensifies other threats like marine heatwaves, wildfires, droughts, and storms.

2. According to the text, what is the estimated annual value of illegal wildlife trade?

- A) Up to \$500 million
- B) Up to \$5 billion
- C) Up to \$20 billion
- D) Up to \$100 billion

Answer: C) Up to \$20 billion

Under the "Persistent Threats" section, specifically "Overexploitation," the text mentions, "illegal wildlife trade (estimated at up to \$20 billion annually) continue to push species to the brink."

3. What is the primary cause of Habitat Loss and Degradation mentioned in the text?

- A) Invasive Alien Species
- B) Pollution
- C) Land-use change, particularly for agriculture
- D) Wildlife Disease outbreaks





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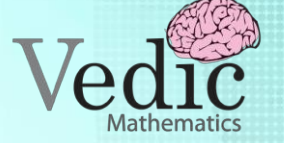
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Answer: C) Land-use change, particularly for agriculture

The text states, "Habitat Loss and Degradation: Primarily due to land-use change, particularly conversion for agriculture."

4.The Kunming-Montreal Global Biodiversity Framework (KM-GBF) aims to achieve what by 2030?

- A) Increase global CO2 emissions
- B) Halt and reverse biodiversity loss
- C) Eliminate all invasive alien species
- D) Develop new types of genetically modified crops

Answer: B) Halt and reverse biodiversity loss

The "Global Frameworks and National Implementation" section mentions, "The Kunming-Montreal Global Biodiversity Framework (KM-GBF), agreed upon by 196 countries, aims to halt and reverse biodiversity loss by 2030."

5.Which of the following is NOT an example of a "nature-based solution" (NbS) mentioned in the text?

- A) Reforestation
- B) Wetland restoration
- C) Sustainable land management
- D) Building large concrete dams

Answer: D) Building large concrete dams

The text lists reforestation, wetland restoration, and sustainable land management as examples of nature-based solutions. Building large concrete dams is typically a conventional infrastructure project, not a nature-based solution.

6.As of July 2025, how many Ramsar sites does India have for wetland protection?

- A) 54
- B) 75

C) 89

D) 100

Answer: C) 89

Under "India's Efforts," it states, "Initiatives include expanding wetland protection (89 Ramsar sites)..."

7.Which new intergovernmental organization, focused on global big cat conservation, officially became treaty-based in January 2025, with India playing a key role?

- A) Global Wildlife Fund (GWF)
- B) International Big Cat Alliance (IBCA)
- C) World Conservation Union (WCU)
- D) Asian Leopard Society (ALS)

Answer: B) International Big Cat Alliance (IBCA)

The text clearly states, "The International Big Cat Alliance (IBCA) officially became a treaty-based intergovernmental organization in January 2025, with India playing a key role in driving global big cat conservation."

8. Which of the following species is NOT listed as a success story for species recovery in the text?

- A) Iberian lynx
- B) Kākāpō
- C) Polar bear
- D) European bison

Answer: C) Polar bear

The "Species Recovery" section lists the Iberian lynx, kākāpō, European bison, humpback and blue whales, and several species in India (vultures, Asian elephants, Asiatic lions) as examples. Polar bears are not mentioned in this list.

