

## Prelim Bits 06-02-2024 | UPSC Daily Current Affairs

### Hindu Kush Himalaya

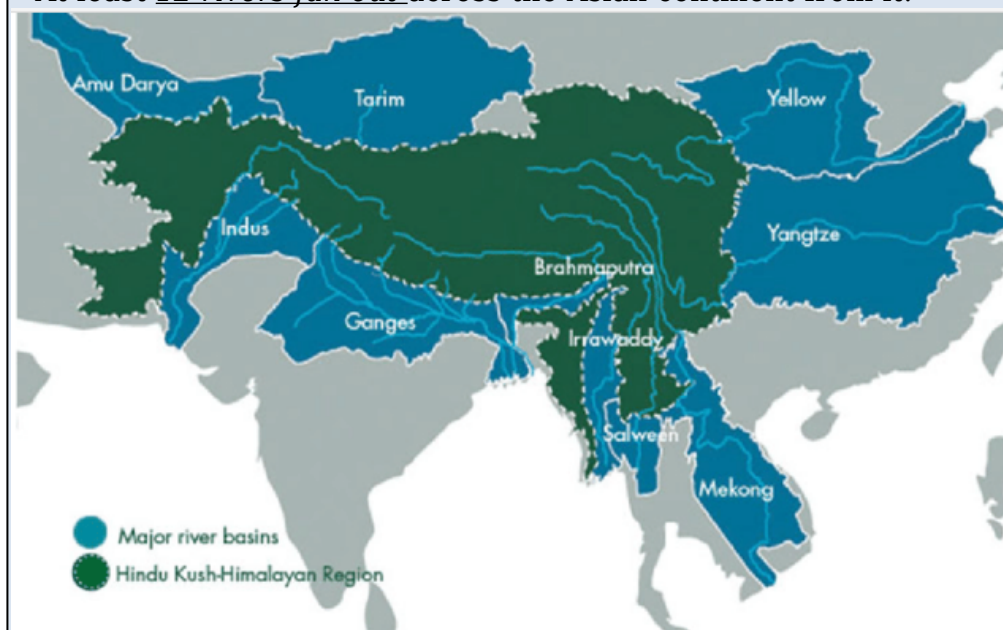
ICIMOD experts call for urgent finance to prevent collapse of nature in High Mountain Asia in a recent meeting at Kathmandu.

**High Mountain Asia** comprises of mountain ranges such as the Tian Shan, Kunlun Shan, Pamir, Karakoram, Hindu Kush, the Tibetan Plateau and the Himalayas. Mountains cover 22% of Earth's land surface but hold 50% of the world's global biodiversity hotspots.

- **Geography** - It stretches 3,500 kms and *spans 8 countries*, is home to most of the snow and ice on Earth outside the poles.
- It is located *in Kathmandu* (capital of Nepal).
- **Importance** - It comprises *4 biodiversity hotspots* out of the world's 36 global biodiversity hotspots, 2 of the global 200 eco regions, 575 Protected Areas, 335 important bird areas.
- Still 85% of mountain communities remain dependent on this biodiversity, for food, water, flood control and cultural identity.

### Water Tower of Asia - Hindu Kush Himalayas

- It provides clean water for a *third of the world's population*.
- At least *12 rivers fan out* across the Asian continent from it.



- **Biodiversity on the brink** - *70% of the original biodiversity has been lost* over the last century.

- It is estimated to be warming at nearly 2 times the average rate of warming in the Northern Hemisphere.
- 241 million people live in the HKH region, of whom 31% are food-insecure and 50% of whom face some form of malnutrition.

***The International Centre for Integrated Mountain Development (ICIMOD)***, a regional intergovernmental organization established in 1983 to make Hindu Kush Himalaya region greener, more inclusive and climate resilient.

***Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services (IPBES)***, an independent intergovernmental body established in 2012 for conservation and sustainable use of biodiversity. UNEP provides secretariat services to it.

## References

1. [Down To Earth| Hindu Kush Himalayas is Deteriorating](#)
2. [ICIMOD| Hindu Kush Himalayas](#)

## Conservation Reserve

*The Telangana Forest Department moots conservation reserve in Tadoba-Kawal tiger corridor.*

*The proposed conservation reserve comprises areas of tiger corridor between the Tadoba-Andhrari Tiger Reserve in Maharashtra and the Kawal Tiger Reserve in Mancherial district of Telangana State.*

- **Conservation Reserve** - A protected area that act as buffer zones to or connectors and migration corridors between established national parks, wildlife sanctuaries and reserved forests.
- **Aim** - To protect landscapes, seascapes, flora and fauna and their habitat.
- **Legality** - Wildlife (Protection) Amendment Act of 2002, the amendment to the Wildlife Protection Act of 1972.
- It is designated by the state government after discussing it with nearby communities.
- **Criteria for designation** - Uninhabited and completely owned areas of the Government.
- **Managed by** - Conservation Reserve Management Committee.
  - 1 from each village panchayat.
  - 3 from NGOs and 1 each from the departments of Agriculture and Animal Husbandry.
  - A member-secretary who will be the representative from the Forest or Wildlife wing.
- **Coverage** - There are **115** existing Conservation Reserves in India covering an area of

5548.75 km<sup>2</sup>, which is 0.17% of the geographical area of India as of 2023.

*The 1<sup>st</sup> conservation reserve of India is located near Tiruppadaimarathur in Tamil Nadu.*

- *Rajasthan has highest number* of conservation reserves (36) followed by Jammu and Kashmir as on July, 2023.

***Community reserves** are protected areas which includes those areas owned by government but part of the lands are also privately owned.*

## References

1. [The Hindu| Conservation Reserve in Tadoba-Kawal tiger corridor](#)
2. [ENVIS| Conservation Reserves in India](#)

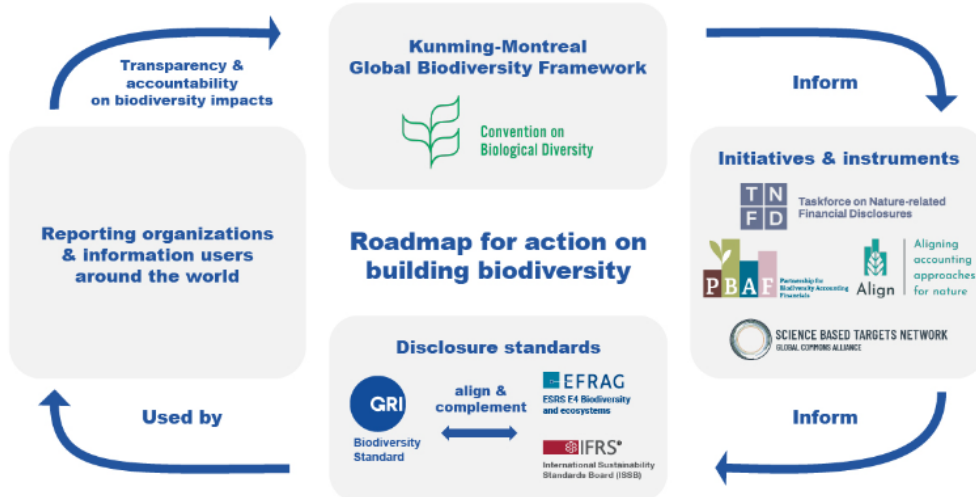
## Global Reporting Initiative (GRI) Biodiversity Standard

*An updated transparency standard to report a global response to the biodiversity crisis has been formed.*

- **Global Reporting Initiative (GRI)** - An international independent standards organisation.
- **Objective** - To assist businesses, governments and other entities in *assessing & reporting impacts, driving action and accountability* on issues related to climate change, human rights and corruption.
- **GRI Secretariat** - **Amsterdam, the Netherlands** and have a network of 7 regional offices.
- **Previous standard** - GRI 304: Biodiversity 2016.
- **GRI 101: Biodiversity 2024** - It updates, expands, and replaces GRI 304: Biodiversity 2016, effect from January 2026.
- **Aim** - To enable companies to meet the demands of stakeholders for information on biodiversity impacts and to understand the impacts of supply chain and operations.

*Over 1 million plant and animal species being pushed towards extinction.*

- **Document design by** - Global Sustainability Standards Board (GSSB), a group of consultants from representative organisations.
- **Standards** - It mentions *location-specific impacts*, direct *drivers of biodiversity loss*, and *impacts on communities and Indigenous Peoples* among others.
- **Significance** - It improves *transparency* on biodiversity impacts.



## Biodiversity in UN Agenda for Sustainable Development

- **SDG 14** - To conserve and sustainably use the *oceans, seas and marine resources*.
- **SDG 15** - To protect, restore and promote sustainable use of *terrestrial ecosystems*, sustainably manage forests, combat desertification, and halt and reverse land degradation and halt biodiversity loss.

## References

1. [Down To Earth| New GRI Biodiversity Standard](#)
2. [Global Reporting| GRI](#)

## Nagoya Protocol

Recently, Cameroon has adopted the Nagoya Protocol.

**Cameroon** is a biodiversity hotspot, with an estimated 11,000 plant, animal, and microorganism species. *Prunus Africana*, a plant endemic to Cameroon, is used to make drugs for prostate cancer.

- **Nagoya Protocol** - A supplementary agreement to the Convention on Biological Diversity (CBD) that came in 1993.
- **Adopted in** - **2010**, in Nagoya, Japan and came into force in 2014.
- **Objective** - To ensure *access of genetic resources* and *fair and equitable sharing of benefits* arising from their utilization, thereby contributing to the conservation and sustainable use of biodiversity.
- **Coverage** - It applies to genetic resources, associated benefits and *traditional knowledge (TK)* that are covered by the CBD.
- **3 core obligations** - On access, benefit sharing and on compliance.
- **Importance** - It will create greater legal certainty and transparency for both providers and users of genetic resources.
- Both genetic resources and traditional knowledge are valuable for Bioprospecting.

**Bioprospecting** is the exploration of biological material for new sources of drugs, food or other products which can also help to conserve and sustainably use biodiversity.

- It also helps to protect the rights of indigenous and local communities and promote *biodiversity-based innovation* and development.

### 3 Objectives of Convention on Biological Diversity (CBD)

- The *conservation* of biological diversity
- The *sustainable use* of the components of biological diversity
- The *fair and equitable sharing* of the benefits arising out of the utilization of genetic resources

### References

1. [Down To Earth| Cameroon adopts Nagoya Protocol](#)
2. [CBD| Nagoya Protocol](#)

### Magnetic Anomaly under Lake Rotorua

Recently, scientists have unveiled a hidden hydrothermal system and a magnetic anomaly beneath the waters of Lake Rotorua.

- Mapping Lake Rotorua's floor, showed a series of eruption craters, traces of an ancient river, and a significant magnetic anomaly in the southern part of the lake.
- **Magnetic anomaly** - Typically, volcanic rocks exhibit strong positive magnetic responses due to the presence of magnetite.
- But in Lake Rotorua, the hydrothermal fluids have altered the *magnetite into pyrite*, or fool's gold.
- This results in a *reduced magnetic signal*.

### Lake Rotorua

- **Geography** - It is situated *atop a dormant volcanic crater* on New Zealand's North Island.
- **Formation** - When a magma chamber collapsed following a volcanic eruption, created the *Rotorua Caldera*.
- **Characteristics** - It is shallow, with an average depth of about 10 m, and is part of the Taupo Volcanic Zone.
- It is renowned for its *geothermal marvels* such as bubbling mud pools, shooting geysers, and natural hot springs.
- But despite the intense geothermal activity, its temperature at the *bottom remains cooler*.

- **Significance of discovery** - It confirm for the 1<sup>st</sup> time that the hydrothermal activity on the mainland extends into the submerged realm of Lake Rotorua.
- It helps to deepen our understanding of the complex interplay between land, water, and the forces beneath the Earth's crust.

### Reference

## Other Important Topics

### MEERA GAON MERI DHAROHAR (MGMD)

*The Government of India has decided to map and document all villages under Mera Gaon, Meri Dharohar (MGMD) Programme.*

- The Mera Gaon, Meri Dharohar (MGMD) Programme is a National Mission on Cultural Mapping.
- The Ministry of Culture is conducting the program in collaboration with the Indira Gandhi National Centre for the Arts (IGNCA).
- The program will create a virtual platform that allows people to explore India's cultural heritage.

### High-speed Expendable Aerial Target 'ABHYAS'

*4 Four flight trials of High-speed Expendable Aerial Target (HEAT) ABHYAS were successfully carried out by Defence Research & Development Organisation (DRDO) recently.*

- **ABHYAS** - The High-speed Expendable Aerial Target (HEAT) ABHYAS is a ***high-speed indigenously-designed*** target developed for the ***Indian Armed Forces***.
- It is designed for autonomous flying with the help of an auto pilot made by the Aeronautical Development Establishment (ADE) of the *Defence Research and Development Organisation (DRDO)*.

### E-SAKSHI

- It was launched for revised fund flow procedure under ***Members of Parliament Local Area Development Scheme (MPLADS)***.
- **Launched by - *Ministry of Statistics and Programme Implementation (MoSPI)***.
- It offers convenience and accessibility, allowing MPs to propose, track, and oversee the projects in real-time and enabling swift responses to emerging needs or issues.

### Robotic Elephant

- A robotic elephant was handed over to the Shivan Temple in Devarshola in ***Gudalur, Tamil Nadu*** by an NGO recently.
- The aim was to ensure traditions involving elephants could still be continued, but without the actual animals, who deserved to live in the wild.

### OBC Reservation Bill in Jammu & Kashmir

*The Union government recently introduced a Bill in the Lok Sabha to provide reservation to Other Backward Classes (OBCs) in panchayat and municipal bodies of Jammu and Kashmir.*

- The number of seats reserved for OBCs will be decided by a commission that will be formed after the legislation has been passed by the Parliament.
- Presently, there is no reservation for OBCs in panchayats and municipalities in the Union Territory.

### Dhanauri wetland

- The Dhanauri Wetlands & birdwatching area is located in Dhanauri village in **Uttar Pradesh**.
- The Dhanauri Wetland is a vital birding and nesting site for more than 217 bird species, including over 150 **Sarus cranes** (State Bird of U.P.)
- It is also home to 23 species of endangered, critically endangered, and threatened birds.
- The wetland is an Important Bird Area recognized by **Bird Life International** and has been documented by the Bombay Natural History Society.

### **Astronomical Society of India**

*Bengaluru will host the largest annual gathering of astronomers from India when the 42<sup>nd</sup> meeting of the Astronomical Society of India will be held in the capital of Karnataka.*

- The Astronomical Society of India was established in 1972 and has grown to become the prime association of professional astronomers in India.
- The objectives of the society are the promotion of Astronomy and related branches of science in India.
- The society organizes scientific meetings and supports the popularization of Astronomy and other similar activities.

### **Brown Wood Owl (Strix leptogrammica)**

- The brown wood owl is found in India, Bangladesh, Sri Lanka, Indonesia, Taiwan, and south China.
- It is a resident breeder in **south Asia**.
- These owl species do not have ear tufts and have high forest dependence and are *polytypic species* (contains two or more subspecies).
- **Conservation status**
  - IUCN - Least Concern
  - CITES - Appendix II

### **Pradhan Mantri Khanij Kshetra Kalyan Yojana (PMKKKY)**

- PMKKKY is meant to provide for the welfare of areas and people affected by mining related operations.
- It will be implemented by the District Mineral Foundations (DMFs) of the respective districts using the funds accruing to the DMF.

### **Lunar Nuclear Fission Reactor**

*NASA finishes 1<sup>st</sup> phase of ambitious lunar nuclear reactor project recently.*

- Solar power has its limitations on the Moon because night on Earth's lone satellite lasts for the equivalent of **14 days here on Earth**.
- But a nuclear reactor, even one placed in permanently shadowed areas where there might be water ice, could generate power continuously without any dependence on weather.