



Connecting Nature With Humanity

*This editorial is based on ["Pockets of hope, linking nature and humanity"](#) which was published in *The Hindu* on 20/05/2022. It talks about the importance of the World Network of Biosphere Reserve (WNBR) and significance of Biosphere Reserves for conservation of biodiversity.*

For Prelims: IPBES, Global Assessment Report on Biodiversity and Ecosystem Services, Aichi Targets for biodiversity, Ecological Carrying Capacity

For Mains: Significance of the Report Global Assessment Report on Biodiversity and Ecosystem Services. Success of Aichi Biodiversity Target and associated concerns.

Biodiversity is a very prominent feature of planet earth. Without its presence it is not possible to imagine the existence of life on earth. **Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services (IPBES)** have released **Global Assessment Report on Biodiversity and Ecosystem Services** in 2019.

The main goal of this report is to **bring attention** to the **loss of biodiversity, climate change, invasive species, over-exploitation of natural resources, pollution and urbanization**.

What is the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services (IPBES)?

- It is an **International and Intergovernmental agency** whose objective is to increase the science-policy interaction for biodiversity and ecosystem services.
- It is basically intended to promote **biodiversity conservation** and **sustainable development**.
- The **IPBES** officially has **137 member Nations**. IPBES membership is open to any country that is a member of the United Nations.
- **IPBES** is not affiliated with the **United Nations**. IPBES, on the other hand, receives secretariat services from the **United Nations Environment Programme (UNEP)**.

What is the Global Assessment Report on Biodiversity and Ecosystem Services?

- The assessment's overarching goal is to determine the current state and trends in **biodiversity and ecosystem services**.
- It also evaluates the effects of biodiversity and ecosystem services on human well-being, as well as the efficacy of remedies, such as the **Strategic Plan for Biodiversity and Aichi Biodiversity Targets**.

- The Report examines trends over the **last five decades**, presenting a comprehensive view of the interrelationship between **sustainable growth** and **environmental repercussions**.

What are Aichi Biodiversity Targets?

- Officially known as **“Strategic Plan for Biodiversity 2011-2020”**, provides a set of 20 ambitious yet achievable targets (**divided into 5 sections: A to E**), collectively known as the **Aichi Targets for biodiversity**.
- **Strategic Goal A:** Address the underlying causes of biodiversity loss by mainstreaming biodiversity across government and society
- **Strategic Goal B:** Reduce the direct pressures on biodiversity and promote sustainable use.
- **Strategic Goal C:** To improve the status of biodiversity by safeguarding ecosystems, species and genetic diversity
- **Strategic Goal D:** Enhance the benefits to all from biodiversity and ecosystem services
- **Strategic Goal E:** Enhance implementation through participatory planning, knowledge management and capacity building.

What is Causing Stress to Earth Carrying Capacity?

- The **ecological carrying capacity** may be defined as the maximum number of the species that can be sustained by any ecosystem.
 - The carrying capacity of the ecosystems have increased multiple folds. The availability of **ecosystem services** will rise as the **carrying capacity** of the ecosystem increases.
 - **Ecosystem services** can provide benefits only when the health of an ecosystem and **conservation of biodiversity** remain in focus.
 - The **conservation of biodiversity** has a direct connection with the **pollution control measures** of the **air, water and soil**.
 - The availability of **high quality drinking water, enough food** and **healthy habitats** can only be ensured when **ecosystem services** will continue by **conserving the biodiversity** of the ecosystem without affecting **nature’s balance**.
- It is our responsibility and certainly in our interest to respect the environment, whether we approach it from an **environmental, cultural, or religious perspective**.

How does UNESCO Support Biosphere Reserves Ecosystem?

- The **World Network of Biosphere Reserves** intended to increase the number of biosphere reserves in the globe by establishing new biosphere reserves whenever and wherever is possible.
- **The United Nations Educational, Scientific and Cultural Organization (UNESCO)** established one of the best mechanisms which is known as the **World Network of Biosphere Reserves**.
 - **The World Network of Biosphere Reserves** was created in 1971.
- Biosphere reserves are basically promoting the cooperation and coexistence of the places where humans live in harmony with nature.
- The **first biosphere reserve** was **established in Sri Lanka** which is known as **Hurulu Biosphere Reserve** in 1977.
- **UNESCO** designated India's first biosphere reserve in the blue mountains of the **Nilgiris** in 2000.
 - The **Nilgiri Biosphere Reserves** spread across three states **Tamil Nadu, Karnataka** and **Kerala**.
- The **World Network of Biosphere Reserves** now counts **18 sites from India** in the list of Biosphere reserves.
 - **Panna Biosphere Reserve, Madhya Pradesh** included in this list in 2020.
- **Glacier ecosystem, lake ecosystem** and **alpine ecosystem** all are present in **Bhutan, India** and **Nepal**. **South Asia** is well blessed with the number of biosphere reserves.
 - The **Khangchendzonga Biosphere Reserve**, established in 2018. It is blessed with some of the **highest ecosystems** in the world.
 - **Khangchendzonga Biosphere reserve** inculcates within itself a variety of species of

orchids and other species of **flora and fauna**.

- The major activities associated with these biosphere reserves are **crop production, animal husbandry, fishing, dairy products and poultry farming**.
- **Nomination** of any site to be designated as **UNESCO Biosphere Reserve** lies with the national government and **approved** by **UNESCO**.

What Steps can be taken in Order to Reduce the Stress?

- **Science-based management plans** should be the primary focus of the **UNESCO Biosphere Reserves** as per as protection of biological diversity is concerned.
- **Scientific research and monitoring for biodiversity conservation, clean energy, climate, environmental education, water conservation and waste management**, is essential to protect biodiversity and ecosystem. The aim is to detect changes and find solutions to increase **climate resilience**.
- **Bangladesh, Bhutan and Nepal** are on **UNESCO's priority list** because they do not have any **biosphere reserves**. The argument is that with at least **one biosphere reserve in each country**, will promote the **sence of optimism**.
- The **International Day for Biological Diversity** promotes the **spirit of biodiversity conservation**. Celebration of **Biological Diversity Day** basically revisiting the sense of the responsibility and instigating the the hidden approaches in side us to protect our environment.
- Local solutions and best practices for the **conservation and restoration of the species of flora and fauna** should be promoted along with the evaluation of sustainable human life and environmental protection.

Drishti Mains Question:

"Local solutions for the conservation and restoration of the ecosystem should be promoted for sustainable development."

UPSC Civil Services Examination, Previous Year Questions

Q. Consider the following statements: (2010)

1. The boundaries of a National Park are defined by legislation.
2. A Biosphere Reserve is declared to conserve a few specific species of flora and fauna.
3. In a Wildlife Sanctuary, limited biotic interference is permitted.

Which of the statements given above is/are correct?

- (a) 1 only
- (b) 2 and 3 only
- (c) 1 and 3 only
- (d) 1 and 2 only

Ans: (c)

- National Parks in India are declared by notification of the State Governments by reason of their ecological, faunal, floral, geomorphological, or zoological association or importance. The notification specifies the limits of the area notified as a National Park. Further, no alteration of the boundaries of a National Park can be made except on a resolution passed by the Legislature of the State. **Hence, statement 1 is correct.**
- Limited biotic interference like scientific research, tourism, photography, transaction of lawful business, etc., are allowed in the Wildlife Sanctuary only after the permission of the Chief Wildlife Warden. **Hence, statement 3 is correct.**
- Biosphere reserves are sites established by countries and recognized under UNESCO's Man and the Biosphere (MAB) Programme to promote sustainable development based on local community efforts and sound science. The purpose of the formation of the biosphere reserve is to conserve in

situ all forms of life, along with its support system, in its totality, so that it could serve as a referral system for monitoring and evaluating changes in natural ecosystems. **Hence, statement 2 is not correct.**

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