



Linking Nature to Humanity Presents an Opportunity to Ward off Doomsday Ecological Scenario”. Mentioning the Place of Biosphere Reserves in This Rubric, State, Whether There is a Need For More Biosphere Reserves in South Asia? (250 Words / 15 M) (GS-3 Ecology & Environment)

Approach:

1. Introduction
2. Briefly mention about the erosion of biodiversity.
3. Mention about the salience of BRs.
4. Conclusion stating the need for more BRs in S. Asia.

Biodiversity is the living fabric of our planet, underpinning human well-being for the present and the future. According to the **Global Assessment Report on Biodiversity and Ecosystem Services 2019 by IPBES**, the **main global drivers of biodiversity loss** are **climate change, invasive species, over-exploitation of natural resources, pollution and urbanization**.

The **ecological carrying capacity of the earth has largely been exceeded** due to the **collective excesses** by the global commons. This trend needs reversal with cleaner air, high quality drinking water, and enough food & healthy habitats to **ensure continual benefits from ecosystem services without critically affecting natural balance**. In fact, much has been accomplished for protecting nature, including **establishment of conservation areas** along with **ratification of numerous international conventions**.

Salience of Biosphere Reserves: the best mechanism created till date is the **World Network of Biosphere Reserves by UNESCO in 1971**. Biosphere reserves are places where **humans harmoniously cohabit with nature – contributing to sustainable development & nature conservation**. It provides various **ecosystem services** like **soil fertilization, nutrient cycling, pest regulation, erosion control, pollination, etc.**, besides giving **livelihoods to the local populace**. In **South Asia, over 30 biosphere reserves** have been established. The **1st such reserve** was the **Hurulu BR (1977) in Sri Lanka**. **India's first biosphere reserve** was designated by UNESCO in **2000** within the Nilgiris – **the Nilgiri BR**. Thereafter, the network has expanded with **Panna (Madhya Pradesh) being the latest inscription in 2020**.

South Asia hosts very diverse ecosystems. The **Khangchendzonga BR (2018)** is a good model which includes **some of the highest ecosystems in the world, with elevations more than 8000 m. More than 35,000 people inhabit there with several rare floras & faunas**. **Bangladesh, Sri Lanka, Maldives all have extensive coastlines with coral reefs & mangrove forests**. These areas are exposed to **extreme weather and sea-level rise**. Recently, **UNESCO has partnered with Maldives** to embark a **pilot plan for conservation and restoration of coastal ecosystems**, and enhance knowledge on climate change adaptation. Separately, **3 biosphere reserves** have been **created in Maldives**.



UNESCO's BRs have all developed **science-based management plans**, where **local solutions for sustainable human living and nature conservation are being practically applied**. The aim is to **detect changes and find solutions to increase climate resilience**. The sites are internationally recognized by UNESCO but **remain under the sovereignty of national governments**.

Need for more reserves in South Asia ?: some countries in S. Asia **lack any or enough biosphere reserves**. This is primarily due to **dearth of know-how** and **financial resources**. **Bangladesh, Bhutan and Nepal** are on the UNESCO's priority list as **they do not have any BR**. It is also held that the **number of BRs need increase in India, Maldives and Sri Lanka**. If these '**pockets of hope**' can be **expanded with more and larger sites covering terrestrial surfaces, including coastal areas with their offshore islands**, it will give realization to millions that **a better future is truly possible by living in harmony with the nature**.

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