

**SCHOOL OF STUDIES IN TRAVEL &
TOURISM MANAGEMENT
MBA (TOURISM ADMINISTRATION)
IVTH SEMESTER**

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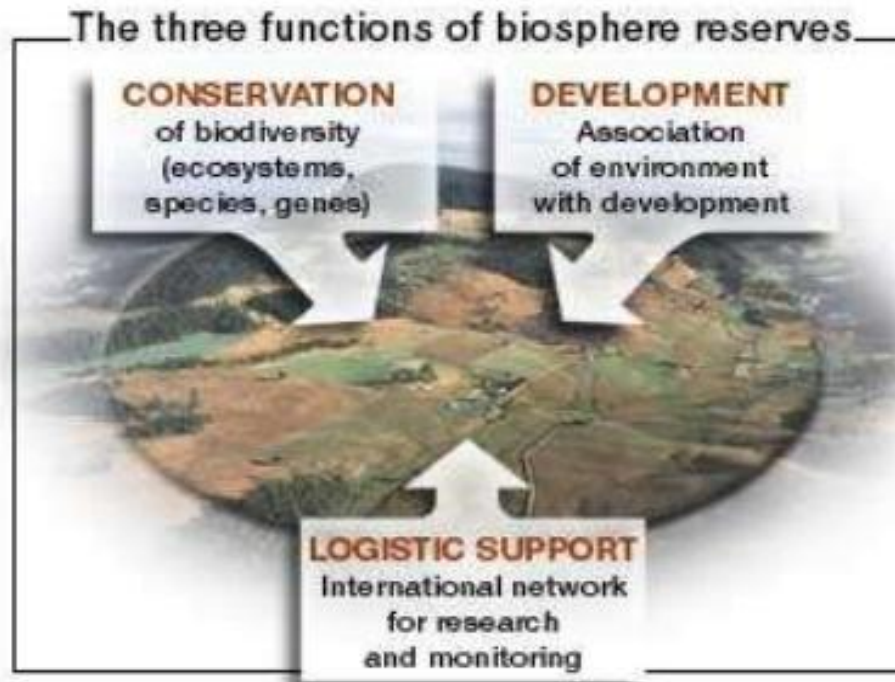
BR

- Biosphere reserves are areas of terrestrial and coastal ecosystems
- Biosphere reserves are sites established by countries and recognized under UNESCO's Man and the Biosphere (MAB) Programme
- They **promote**
 - ❖ sustainable development based on local community efforts and sound science.
 - ❖ solutions to reconcile *conservation* of biological and cultural diversity and economic and social development through partnerships between people and nature.
- They serve as 'living laboratories'
 - ❖ for testing out and demonstrating integrated management of land, water and biodiversity and
 - ❖ demonstrate innovative approaches to sustainable development from local to international scales.

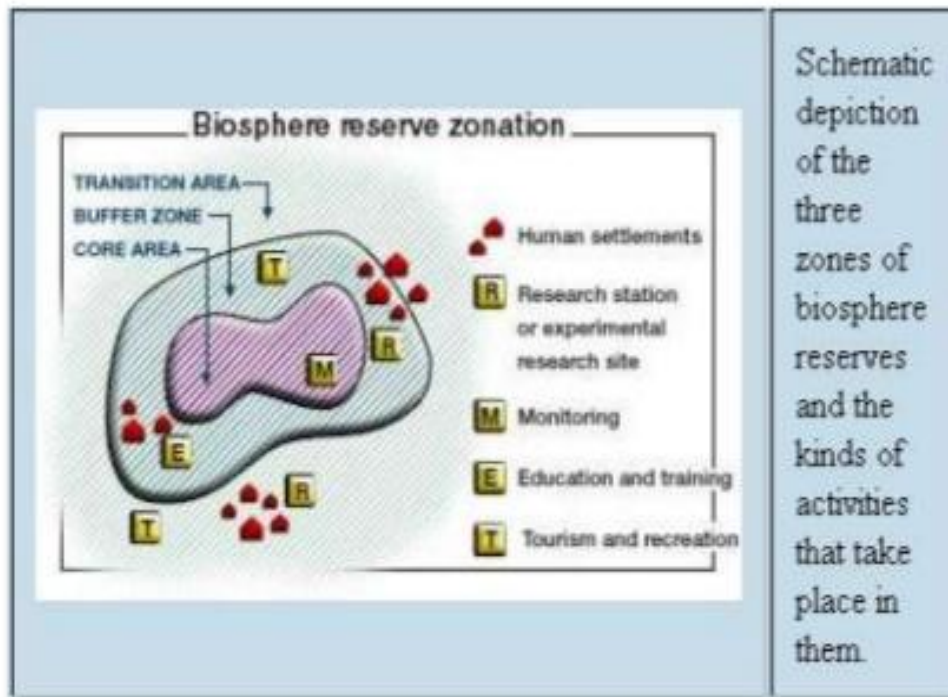
BR

- They are **internationally recognized**, nominated by national governments and remain under **sovereign jurisdiction** of the states where they are located, yet they share their experience and ideas nationally, regionally and internationally within the World Network of Biosphere Reserves (WNBR).
- The first biosphere reserve of the world was established in 1979, since then the network of biosphere reserves has increased to 580 in 114 countries across the world (MAB, 2012).
- BRs are thus special environments for both people and the nature and are living examples of how human beings and nature can co-exist while respecting each others' needs.
- **Direct Beneficiaries** of the Biosphere Reserves are the local people and the ecological resources and **indirect beneficiaries** are scientists, government decision makers and the world community.

Functions of biosphere reserves



Zones of a Biosphere Reserve



Zones of a Biosphere Reserve

The core area

- ❑ It needs to be **legally established** and give long-term protection to the landscapes, ecosystems and species it contains.
- ❑ It should be **sufficiently large** to meet these conservation objectives.
- ❑ As nature is rarely uniform and as historical land-use constraints exist in many parts of the world, there may be **several core areas** in a single biosphere reserve to ensure a representative coverage of the mosaic of ecological systems.
- ❑ The core zone is to be kept **free from all human pressures** external to the system.

Zones of a Biosphere Reserve

A buffer zone (or zones)

- It is a zone which is **clearly delineated** and which surrounds or is contiguous to the core area.
- **Activities** are organized here so that they do not hinder the conservation objectives of the core area but rather help to protect it
- It can be an area for **experimental research**, for example
 - *to discover ways* to manage natural vegetation, croplands, forests, fisheries,
 - *to enhance high quality production* while conserving natural processes and biodiversity, including soil resources, to the maximum extent possible.
 - *to explore* how to rehabilitate degraded areas.
- It may accommodate education, training, tourism and recreation facilities.

Zones of a Biosphere Reserve

The Transition Area:

- The Transition Zone is the **outermost part** of a Biosphere Reserve.
- This is usually **not delimited** one and is a **zone of cooperation** where conservation, knowledge and management skills are applied and uses are managed in harmony with the purpose of the Biosphere Reserve.
- This **includes** settlements, crop lands, managed forests and area for intensive recreation, and other economic uses characteristic of the region.
- In Buffer Zone and the Transition Zones,
 - ***Manipulative macro-management*** practices are used.
 - ***Experimental research*** areas are used for understanding the patterns and processes in the ecosystem.
 - Modified or degraded landscapes are included as ***rehabilitation areas*** to restore the ecology in a way that it returns to sustainable productivity.

Essential Features of Biosphere Reserves

Biosphere reserves cover the great variety of natural areas of the biosphere, going

from high mountains to greatly human-impacted plains, from coastal regions and islands

to vast inland forests, from the deserts of the tropics to the tundra of the polar regions.

To qualify for designation as a biosphere reserve, an area should normally:

- be representative of a major biogeographic region, including a gradation of human intervention in these systems;
- contain landscapes, ecosystems or animal and plant species, or varieties which need to be conserved;
- provide an opportunity to explore and demonstrate approaches to sustainable development within the larger region where they are located;
- be of an appropriate size to serve the three functions of biosphere reserves mentioned above;
- have an appropriate zoning system, with a legally constituted core area or areas, devoted to long-term protection; a clearly identified buffer zone or zones and an outer transition area

Biosphere Reserves: Indian approach

National Biosphere Reserve Programme

The national Biosphere Reserve Programme was initiated in 1986 and its aims and

objectives are as follows:

Aims of the Scheme

- To serve as wider base for conservation of entire range of living resources and their ecological foundations in addition to already established protected area network system
- To bring out representative ecosystems under conservation and sustainable use on a long term basis.
- To ensure participation of local inhabitants for effective management and devise means of improving livelihood of the local inhabitants through sustainable use.
- To integrate scientific research with traditional knowledge of conservation, education and training as a part of the overall management of BR.

The Core Advisory Group of Experts, constituted by Indian National MAB Committee

identified and prepared a preliminary inventory of 14 potential sites for recognition as

BRs in 1979. Subsequently additional BR sites were proposed by the National Committee/State Governments. Experts.

Biosphere Reserves: Indian approach

Objectives

It may be noted that BRs are not a substitute or alternative, but a re-enforcement to the existing protected areas. The objectives of the Biosphere Reserve programme, as envisaged by the Core Group of Experts, are as follows:

- To **conserve** the diversity and integrity of plants and animals within natural ecosystems;
- To **safeguard** genetic diversity of species on which their continuing evolution depends;
- To **provide** areas for multi-faceted research and monitoring;
- To **provide** facilities for education and training; and
- To **ensure** sustainable use of natural resources through most appropriate technology for improvement of economic well-being of the local people.

These objectives should be oriented in such a way that the BRs are the Units wherein the

Biological, socio-economic and cultural dimension of conservation are integrated

together into a realistic conservation strategy.

Criteria for selection of Biosphere Reserves in India

Primary criteria

- A site that must contain an effectively protected and minimally disturbed core area of value of nature conservation and should include additional land and water suitable for research and demonstration of sustainable methods of research and management.
- The core area should be typical of a biogeographical unit and large enough to sustain viable populations representing all trophic levels in the ecosystem.

Secondary criteria

- Areas having rare and endangered species
- Areas having diversity of soil and micro-climatic conditions and indigenous varieties of biota.
- Areas potential for preservation of traditional tribal or rural modes of living for harmonious use of environment.

How are Biosphere Reserves designated in India?

- ❑ At the initiative of the central/state governments, detailed study is carried out and a project report is prepared by the concerned state following the criteria adopted for designation of BRs.
- ❑ The land and forest being the state concerns, the respective state governments have to agree to designate the identified area as Biosphere Reserve.
- ❑ The Central Govt. provides financial assistance for management and research activities in these BRs.
- ❑ The Management of Biosphere Reserves is the responsibility of the concerned State/UT with necessary technical input and training facilities provided by the Central Government.

Biosphere reserves of North East India

S. No	Name of the BR & total Geographical area (km ²)	Date of Notification	Location in the state
1	<u>Nokrek</u> (820) (Core 47.48 & Buffer 34.52)	01.09.1988	Part of <u>Garo Hills</u> (Meghalaya)
2	<u>Manas</u> (2837) (Core 391 & Buffer 2,446)	14.03.1989	Part of <u>Kokrajhar</u> , <u>Bongaigaon</u> , <u>Barpeta</u> , <u>Nalbari</u> , <u>Kamrup</u> and <u>Darrang</u> districts (Assam)
3	<u>Dibru-Saikhowa</u> (765) (Core 340 & Buffer 425)	28.07.1997	Part of <u>Tinsukia</u> and <u>Dibrugarh</u> Districts (Assam)
4	<u>Dehang Debang</u> (5111.50) (Core 4094.80 & Buffer 1016.70)	02.09.1998	Part of <u>Siang</u> and <u>Debang</u> valley (Arunachal Pradesh)

THANK YOU