

“WILD LIFE MANAGEMENT WITH SPECIAL REFERENCE TO BIOSPHERE RESERVES IN INDIA”

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ABASRACT:

The biosphere, termed as biological factory of living organisms, is characterized by different life forms of living organisms including both plants and animals communities of varying ecosystems. The number of varieties of species of plants and animals is very significant indicator of the health and wealth of a nation. Extinction of species is a process of *Loss of Biodiversity*. The extinction caused by nature is balanced by the evolution of new species but anthropogenically caused species extinction leads to mass destruction of biodiversity. Several measures have been adopted by the Union and State Governments for the conservation and preservation of wildlife in the country. These include : i) Enactment of Laws, ii) Protection of Endangered species, iii) Establishment of *Biosphere Reserves*, iv) Establishment of Sanctuaries and v) Establishment of National Parks. The concept of '*Biosphere Reserve*' has its root in the conference on 'the Regional Use and Conservation of the Resources of the Biosphere' organized by *Man and Biosphere Programme (MAB)* of the UNESCO in 1968, wherein one of the recommendations was related to the *utilization and preservation of genetic resources*. India has also made biosphere reserves of terrestrial and coastal ecosystems within the framework of UNESCO's Man and Biosphere Programme. In all 13 Biosphere Reserves have been identified and notified by the Ministry of Environment and Forests of Government of India, of which 4 have been recognized and approved by the International Coordinating Council of MAB Programme of the UNESCO. The present paper tries to analyse the geographical perspectives of all the 13 Biosphere Reserves in India.

Key Words : Biodiversity, Biosphere Reserve, Endangered Species, Extinction of Species, Habitat, Conservation.

Introduction:

Biodiversity means variety of living species of organisms of both plant and animal communities in an ecosystem having certain specific environmental conditions and larger spatial scale. According to C. J. Barrow (2005) 'Biodiversity' is the diversity of different species together with genetic variation within each species in a given area (ecosystem). 'The regions or areas or locations having richest biodiversity are called 'Biodiversity Hotspots' or 'Mega diversity Regions'. The value and importance of biodiversity are viewed in terms of benefits we get directly or indirectly from biological communities comprising plants

animals and micro-organisms. Its value deals with economical, ecological, environmental and social (human) services (benefits) of ecological resources. Besides, ecological resources and therefore, biodiversity, are also important politically and its religiously. The importance of biodiversity and its conservation was given more importance during the first 'Earth Summit' (Rio conference) held in year 1992 in Rio de Janeiro.

Extinction of species (i.e. plants, animals and microbes) is a process of loss of biodiversity. Species extinction is defined as complete elimination of a specific species of biological community from natural habitats as well as from cultivation or captivity as 'Zoons'

and protected areas. Before the appearance of “Economic man on this planet earth species extinction was caused only by ‘Natural processes but now ‘Anthropogenic Processes’ of species extinction has outplayed natural process (Savindra Singh, 2011). The extinction caused by nature is balanced by the evolution of new species but anthropogenically caused species extinction leads to mass destruction of biodiversity because natural process of extinction of species and loss of biodiversity in exceeding a slow process wherein there is enough time for the evolution of new species but the anthropogenic process of species extinction and biodiversity loss is a very rapid one taking very little time span. Natural causes of biodiversity include – i) Climatic changes ii) Volcanic eruption, iii) collision of meteors, iv) continental drift and fragmentation and v) drought & famine. Anthropogenic causes include – i) habitat loss, ii) fragmentation, iii) over exploitation, iv) intensive agriculture, v) introduction of exotic species, vi) diseases vii) environmental pollution, viii) genetic transformation, ix) tourism industry, etc. The destruction of natural habitats of wildlife and biodiversity loss assumed alarming proportion. The protection of natural habitats wildlife has now drawn the attention of world communities so that there may be proper conservation of biodiversity. The first Rio Summit of 1992 was attended by the representatives of 178 countries including India.

Biosphere Reserve :

The concept of ‘Biosphere Reserve’ has its root in the conference on ‘the Regional use and Conservation of the Resources of the

Biosphere’ organized by ‘Man and Biosphere Programme (MAB) of UNESCO in 1968 wherein one of the recommendations was related to the ‘utilization and preservation of genetic resources.’ The recommendations of the said conference proposed to make specific efforts to preserve representative samples of significant ecosystem, original habitats of domesticated plants and animals, and remnant populations of rare and endangered species, and for the preservation of natural areas and endangered species. It was decided to have a co-ordinated world-wide network of National park, Biological Reserves and other Protected Areas under MAB Programme. Such areas were occasionally referred to as ‘Biosphere Reserves’.

Wildlife Management in India :

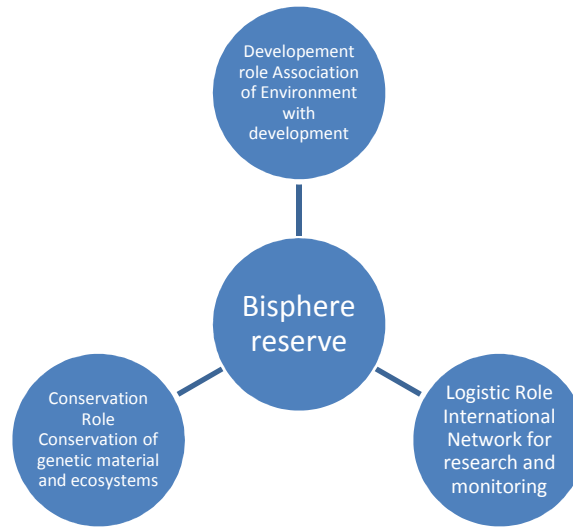
Several measures have been adopted by the Union and state government for the conservation and preservation of wildlife in the country. These include :

- i) Enactment of Rows.
- ii) Protection of Endangered Species.
- iii) Establishment of Biospheres.
- iv) Establishment of Sanctuaries.
- v) Establishment of National parks.

Biosphere Reserves in India :

India has also ‘Biosphere Reserves’ of terrestrial and coastal ecosystems within the framework of UNESCO’S MAB Programme with the following goals;

- i. Conservation of Biodiversity
- ii. Promoting Research and Training
- iii. Monitoring and Providing Models for Sustainable Development



The first 'Biosphere Reserve' was identified in 1976. At present (2005) there are 499 biosphere reserves identified in 110 countries of the world including India.

Presently in all 13 biosphere reserves have been identified and notified by the ministry of environment and forests of Government of India, of which 4 have been recognized and approved by the International UNESCO. They are as follows :

- i) Nilgiri, ii) Gulf of Mannar,
- iii) Sundarbans and iv) Nanda Devi.

The geographical attributes of all the 13 biosphere reserves in India are as follows:

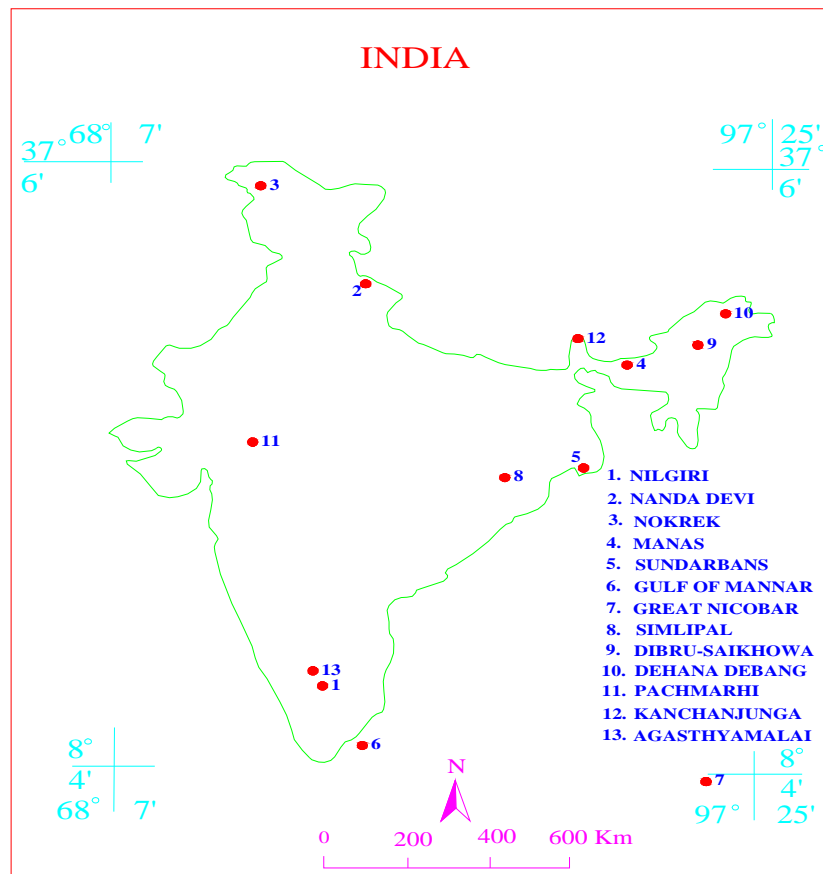
i) NILGIRI :

This is the first identified and notified biosphere reserve in India, which was notified

on 1st August, 1986. It is spread over 5520 sq. km. geographical area It is located in the western Ghats comprising three states namely, Tamilnadu, Kerala and Karnataka, Part of Wynad, Nagarhole, Bandipur, Madumali, Nilampur, Silent valley and Siruvani Hills are included in this reserve.

ii) NANDA DEVI :

The second biosphere reserve of India was notified on 18.01.1988, which is located in the western Himalaya. Its geographical area is 5860 sq. km. It includes the part of Chamoli, Pithoragarh and Almora districts of Uttarakhand.

BIOSPHERE RESERVES IN INDIA
**iii) NOKREK :**

In the eastern Himalaya region this is one of the smallest reserves having only 820 sq. km. area located in the Garo Hills of Meghalaya. It was notified on 01.09.1988.

government of India on 14.03.1989. Its geographical area is 2387 sq. km.

iv) MANAS :

This reserve is also found in the Eastern Himalayan Region of Assam state. Parts of Kokrajhar, Bongaigaon, Barpeta, Nalbari, Kamrup and Darang districts of Assam are included in this area, which was notified by the

v) SUNDARBANS :

It is one of the largest biosphere reserve in India located in the Gangetic Delta region. Parts of delta of Ganga and Brahmaputra rivers in west Bengal are included in this area having 9360 sq. km. geographical area and it was notified on 29.03.1989.

vi) GULF OF MANNAR :

It is the largest biosphere reserve in India located in the Gulf of Mannar (Tamilnadu) between India and Sri Lanka. It is a coastal biosphere region having marine ecosystem with the geographical area of 10500 sq. km. It was notified on 18.02.1989.

vii) GREAT NICOBAR :

This is the best example of Island ecosystems, located on the southernmost islands of Andaman and Nicobar, which was notified on 06.01.1989 with the geographical area of 885 sq. km.

viii) SIMLIPAL :

Part of Mayurbhanj district of Odisha (formerly Orissa) was identified as a biosphere reserve on 21.06.1994, with an area of 4374 sq. km.

ix) DIBRU-SAIKHOWA :

It is the smallest biosphere reserve in India having only 765 sq. km. area and is notified of Dibrugarh and Tinsukia of Assam State in the Eastern Himalayan Region.

x) DEHANA DEBANG :

Parts of Siang and Debang valley of Arunachal Pradesh in the eastern Himalayan region comes under this biosphere reserve, which was notified on 2.9.1998 with an area of 5112 sq. km.

xi) PACHMARHI :

Named after pachmarhi hill station and notified on 03.03.1999, this reserve is located in two states of central India, Madhya Pradesh and Gujarat, Parts of Betul, Hoshangabad and Chhindwada district of M. P. and Semi-arid area of Gujrat Rajputana is included in this area. Its Geographical area is 4926 sq. km.

xii) KANCHANJUNGA :

An another biosphere reserve found in eastern Himalayan region is named after the kanchanganga hills of Sikkim. Its geographical area is 2619 sq. km. and it notified on 07.02.2000.

xiii) AGASTHYAMALAI :

Neyyar, peppara and Shenduruny wildlife sanctuaries and their adjoin areas in kerala state are identified as a Biosphere Reserve on 12.11.2001. This reserve is spread over an area of 1701 sq. km.

CONCLUSIONS :

Establishment of Biosphere Reserves is one of the best measures have been adopted by the union and state governments of India, for the conservation and Governments of India, for the conservation and preservation of wildlife is the country. In all 13 Biosphere Reserves have been identified and notified in India by the ministry of Environmental and forests (MEF) of government of India. 4 biosphere reserves out of 13 have been recognized and approved by the International coordination council of government of India. 4 biosphere reserves out of 13 have been recognized and approved by the International coordination council (ICC) of MAB programme of the UNESCO. In the

Eastern Himalayan Region there are as many as 5 biosphere reserves are found but is found Western Ghats region and peninsular region of India have 2 biosphere reserves each. Island coastal and delta regions of India have only 1 biosphere reserve each.

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