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RESEARCH ARTICLE

BIODIVERSITY HOTSPOTS IN INDIA AND ENVIRONMENT PROTECTION UNDER THE CONSTITUTION OF INDIA

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Abstract

India is considered as a Subcontinent as it contains various elements of nature. Nature has been cherished and protected throughout History. History is not only about humans but also about nature. This Indian History is an edifice built on nature. The constitution of India insists on protecting the environment. In this article we will see about the four biodiversity hotspots in India and the constitutional provisions that insist on protecting the environment. The diversity of plant and animal species in a particular habitat is referred to as biodiversity. The two main factors that make up biodiversity are species evenness and species richness. India is renowned for having a diverse ecosystem, and with 23.39% of its land covered by trees and forests, there are nearly 91,307 identified animal species and 45,523 documented plant species. India is unique in that it is one of the 12 countries with the highest biodiversity in the world. Four of the world's 36 biodiversity hotspots are located in India. The Himalayas, Western Ghats, Indo - Burma and Sundaland.

Keywords: Biodiversity Hotspots, Constitution of India, The Himalayas, Western Ghats, Indo - Burma ,Sundaland, Rio de Janeiro, UNESCO

Introduction

History is not only about humans but also about nature. This Indian History is an edifice built on nature. The constitution of India insists on protecting the environment. In this article we will see about the four biodiversity hotspots in India and the

constitutional provisions that insist on protecting the environment. The diversity of plant and animal species in a particular habitat is referred to as biodiversity. The two main factors that make up biodiversity are species evenness and species richness. India is renowned for having a diverse ecosystem, and with 23.39% of its land covered by

trees and forests, there are nearly 91,307 identified animal species and 45,523 documented plant species. India is unique in that it is one of the 12 countries with the highest biodiversity in the world. Four of the world's 36 biodiversity hotspots are located in India: The Himalayas, Western Ghats, Indo - Burma and Sundaland. Two of these, the Indo - Burma and Sundaland, are distributed throughout South Asia and are not precisely contained within India's formal borders.²

Biodiversity Hotspots

Norman Myers (1988) popularised the concept of *Biodiversity hotspots*. According to him, a Biogeographic hotspot is a bio-geographic area that has a significant biodiversity and at the same time this biodiversity is threatened by humans. Biodiversity hotspots covering a wide variety of ecosystems cover 2.4 percent of the Earth's surface. But the so-called hot spots account for a large share of the Earth's landmass. Essentially they are a biogeographical region with rich biological and genetic resources that have been affected by human interference. And according to Norman Myers, two criteria must be met for an area to qualify as a biodiversity hotspot. To qualify as biodiversity hotspots an area must first have at least 1500 unique vascular plant species. Secondly, at least 30 percent of the primary vegetation concentration should be likely to be affected due to human threat. No organisation or organisation is authorised to declare an area as a Biodiversity Hotspot.³ An area is considered a biodiversity hotspot if it meets the two criteria mentioned above.

Biodiversity Hotspots in India

i) The Himalayas

All the world's mountain peaks above 8,000 metres including Everest- 8848 metres are found within the Himalayan hotspot. It extends over 3,000 kilometres across northern Pakistan, Nepal, Bhutan and the northwestern and northeastern states of India. It has many of the deepest river valleys in the world.⁴The Himalayan Mountain range is nearly 7.5 million square kilometres in size and is divided into

the Eastern Himalaya, which includes parts of Nepal, Bhutan, the northeastern Indian states of West Bengal, Sikkim, Assam, and Arunachal Pradesh, and the Western Himalaya, which includes parts of Kumaon-Garhwal, northwest Kashmir, and northern Pakistan. The Himalayan mountains are shelters for various ecosystems: Mammals such as tigers, elephants, gazelles, wild buffaloes, water-buffaloes and various species of birds are present in the Himalayan biodiversity hotspot. The Himalayas have coniferous forests. Subtropical broadleaf forests along the foothills. Temperate broadleaf forests in the mid hills.⁵

Special Statistics

Hotspot Original Extent (skm)	7,41,706
Hotspot Vegetation Remaining (skm)	1,85,427
Endemic Plant Species	3,160
Endemic Threatened Birds	8
Endemic Threatened Mammals	4
Endemic Threatened Amphibians	4
Humans Population Density (people/skm)	123
Area Protected (skm)	1,12,578

ii) Western Ghats

UNESCO has identified the Western Ghats in India as one of the World Heritage Sites. The Western Ghats are considered to be the world's most important biodiversity hotspot. Running parallel to the west coast of India, the Western Range covers an area of about 1,40,000 sq. km and stretches for 1,600 km in the north. This mountain range has the power to influence India's monsoon weather. This mountain range is about 1,600 km long and about 600 metres along the edge of the west coast of India.⁶ It is also located at a height. This western mountain range is located in six states of India: Gujarat, Maharashtra, Goa, Karnataka, Kerala and Tamil Nadu. The unique feature of the Western Range is that despite

occupying only six percent of India's land area, it contains one-third of the plant, fish, reptile, bird and mammal species. The range has high-quality 'Natural' and 'Semi-Natural' agro-ecosystems. There are countless endemic species in this mountain range. The region has a variety of flora including medicinal plants, especially large vertebrates. Also there are various genetic resources. The Western Ghats are home to about 20 crore people who are socially, economically, religiously and linguistically diverse.

Hotspot Original Extent (skm)	1,89,611
Hotspot Vegetation Remaining (skm)	43,611
Endemic Plant Species	3,049
Endemic Threatened Birds	10
Endemic Threatened Mammals	14
Endemic Threatened Amphibians	87
Humans Population Density (people/skm)	261
Area Protected (skm)	26,130

iii) Indo-Burma

The Indo-Burma Region is stretched over a distance of 2,373,000 km². In the last 12 years, 6 large mammal species have been discovered in this region: the Large-antlered Muntjac, the Annamite Muntjac, the Grey-shanked Douc, the Annamite Striped Rabbit, the Leaf Deer, and the Saola. Indo-Burma biodiversity is spread over India (Arunachal Pradesh, Assam, Meghalaya, Manipur, Tripura, Mizoram, Nagaland and Sikkim) Cambodia, Laos, Myanmar, Thailand, Vietnam and parts of southern China.⁷

Special Statistics

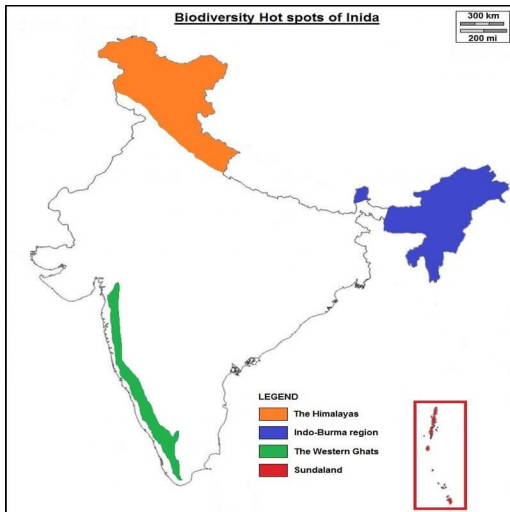
Hotspot Original Extent (skm)	23,73,057
Hotspot Vegetation Remaining (skm)	1,18,653
Endemic Plant Species	7,000
Endemic Threatened Birds	18
Endemic Threatened Mammals	25
Endemic Threatened Amphibians	35
Humans Population Density (people/skm)	134
Area Protected (skm)	2,35,758

iv) Sundaland

The Sundaland hotspot is the western part of the Indo-Malayan Archipelago made up of about 17,000 islands. Borneo and Sumatra are the largest island groups in the world. Andaman and Nicobar Islands, Malaysia, Singapore, Borneo, Indonesia, Southern Thailand, Java, Sumatra and Bali are included in the sundaland hotspot.⁸

Special Statistics

Hotspot Original Extent (skm)	15,01,063
Hotspot Vegetation Remaining (skm)	1,00,571
Endemic Plant Species	15,000
Endemic Threatened Birds	43
Endemic Threatened Mammals	60
Endemic Threatened Amphibians	59
Humans Population Density (people/skm)	153
Area Protected (skm)	1,79,723



Environment Protection under The Constitution of India

India participated in the United Nations Conference on Human Environment, held in Stockholm in 1972. India was one of the 196 countries that participated in the Earth Summit held in Rio de Janeiro in 1992. India also accepted the Convention on Biological Diversity (CBD) enacted at this Rio conference.⁹ Thus India is taking various initiatives for environmental protection.

The Constitution of India provides certain powers and rights to citizens to protect the environment. They are

Article 19(1)(g)

To practise any profession, or carry on any occupation, trade or business. This article states that citizens of India shall not engage in business or commercial activities which are harmful to public health.¹⁰

Article 21

Protection of life and personal liberty. It states that the right to life is not just for animals but it also provides the right to humans to live safely in an environment with basic human dignity. Because. In *M.C. Mehta vs. Union of India*,¹¹ Supreme Court had stated that the right to live includes living in a pollution-free environment and being free from diseases.¹²

Article 32,226

Guarantees citizens the right to seek Constitutional remedies from the Supreme Court and High Court. This provision provides the right to approach the Supreme or High Court whenever fundamental rights are violated through PIL. It also provides citizens with a duty to protect and maintain the environment.¹³

Article 47

Duty of the State to raise the level of nutrition and the standard of living and to improve public health. The State shall regard the raising of the level of nutrition and the standard of living of its people and the improvement of public health as among its primary duties and, in particular, the State shall endeavour to bring about prohibition of the consumption except for medicinal purposes of intoxicating drinks and of drugs which are injurious to health.¹⁴

Article 48A

Requires the State to protect and improve the environment, forest and wildlife. This article comes under Directive Principles of State Policy. This means that the government should try to protect the environment. It emphasises the conservation of the country's forests and wildlife. 48A imposes an obligation on the State to protect the environment from pollution by taking various measures.¹⁵

Article 51A(g)

To protect and improve the natural environment including forests, lakes, rivers and wildlife, and to have compassion for living creatures. This article states that it is the duty of a citizen of India to protect and improve the natural environment including lakes, rivers, forests and wildlife.¹⁶

Article 246

Subject matter of laws made by Parliament and by the Legislature of States. This section gives

the Central and State governments the power to make laws covering the production of mines, wildlife and mineral development. The article also gives Parliament additional powers to protect the environment.¹⁷

Article 253

Legislation for giving effect to international agreements. This article gives Parliament the power to make laws to implement treaties with other countries.¹⁸ To this article, Parliament enacted various laws in order to protect the environment like The Wildlife (Protection) Act 1972, Water Act 1974, The Forest (Conservation) Act 1980, Air Act 1981, The Environmental Protection Act 1986, The Biodiversity Act 2006 and Forests Right Act 2006.¹⁹

Conclusion

In the modern era the importance of environmental awareness at the local, national and global levels is increasing. It is very important to know the importance of biodiversity hotspots. India is a country of great biodiversity. Also India has innumerable biological and genetic species. So people of India should be proud of this. And as people of this proof country we must protect the biodiversity in India. Efforts should be made to improve the well-being of the people living here by using the ecosystem services here. We have protected our environment by following the Constitution of India.

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