

Biodiversity Conservation Programmes

There are two methods of biodiversity conservation, in situ and ex situ. The former envisages conservation within the natural ecosystem such as protected areas (wildlife sanctuaries, national parks, biosphere reserves, heritage sites, etc.), and the latter is a method of conservation outside natural habitats (botanical and zoological gardens, gene banks, seed banks etc). In case of domesticated or cultivated species, conservation means conservation in the surroundings where they have developed their distinctive properties. In addition to this there are special projects envisaged by Government of India to protect threatened species such as Project Tiger, Project Elephant, Project Rhino, Project Hangul, etc.

Global Initiative

In addition to the aforesaid conservation programmes, laws related to intellectual property rightly from part of the global initiatives in biodiversity conservation. A product derived by the activity of the productive human mind or intellect is referred to as intellectual property. Cultural and artistic knowledge, industrial designs, logos that come in the ambit of trade marks (pictorial or verbal), music related products, sound recording, biotechnology products, industrial secrets, etc comes with in the framework of intellectual properties

Intellectual Property Acts	
Patent	Patent Act 1970
Copyright	Copyright Act 2000
Trade mark	Trade mark Act 1999
Design	Design Act 2000
Circuit layout	Semiconductor Intended layout Design Act
Geographical indicators	GI of Goods (Registration Protection) Act
Biodiversity	Biodiversity Act 2002
New Plant varieties	New Plant varieties and Farmers Protection Act 2001

Activities in India

Several activities related to biodiversity conservation are going on in India. Many such activities, including formation of biosphere reserves, are centered in biodiversity-rich forests ecosystems. In addition to this, many ecosystems such as wetlands, mangroves and sacred groves have also been

brought under conservation schemes. As mentioned, Project Elephant, Project Tiger, etc are some of the national efforts in India towards conservation of selected individual species. National Botanic Gardens have been established at Lucknow and Kolkata for the conservation of plants. Further, there are Orchidaria at Yercard and Meghalaya for the conservation of orchids. The Government of India has also enacted several laws aimed at conserving our rich biodiversity.

Programmes in Kerala

So far, five National Parks have been declared in Kerala for the conservation of biodiversity, which include Silent Valley, Eravikulam, Mannavan Shola, Pambadaum Shola and Mathikettan Shola. Further, there are 15 wildlife sanctuaries and one project tiger area (Periyar Tiger Reserve) in the State. Biosphere reserve such as Nilgiri and Agasthyamalai represent mainly forest areas. Use of forestlands for non-forestry purposes and expansion of area under plantation crops have been regulated by law. Programmes for control of exotic species and regeneration of natural forests and degraded forests would also help conserving forests biodiversity. The forest biodiversity has not been less affected in Kerala as a result of such activities. Programmes aimed at conserving sacred groves and mangroves would also help in conserving local biodiversity to a certain extent.

Wetlands such as Astamudi Lake, Sasthamkotta Lake and Vembanad Lake have been declared as Ramsar Sites or wetlands of International Importance, with the idea to conserve and sustainably manage them. Further, there are bird sanctuaries at Kumarakam, Thattekkad, Mangalavanam and Choolannur. Coastal Zone Regulation Act and rules to prevent conversion of rice fields provide legal support to protect mangroves and wetlands, including rice fields, contributing towards biodiversity conservation in the State.

Details of National Parks and Wildlife Sanctuaries in Kerala as on 31. 03. 2004

Sl. No.	Name of National Parks/ WLSs	Area (km ²)	Year of formation
1	Neyyar Wildlife Sanctuary	128.00	1958
2	Peppara Wildlife Sanctuary	53.00	1983
3	Shenthuruni Wildlife Sanctuary	171.00	1984
4	Periyar Wildlife Sanctuary (Core area (350 sq.km) is declared as Periyar National Park vide No.G.O(P)310/82/AD dated 27 th October 1982)	777.00	1950
5	Chinnar Wildlife Sanctuary	90.44	1984
6	Idukki Wildlife Sanctuary	70.00	1976
7	Eravikulam National Park	97.00	1978
8	Thattekkad Bird Sanctuary	25.00	1983

9	Chimmony Wildlife Sanctuary	85.00	1984
10	Peechi - Vazhani Wildlife Sanctuary	125.00	1958
11	Parambikulam Wildlife Sanctuary	285.00	1973
12	Silent Valley National Park	89.52	1984
13	Wayanad Wildlife Sanctuary	344.44	1973
14	Aralam Wildliefey Sanctuary	55.00	1984
15	Pampadam Shola National Park	1.32	2003
16	Mathikettan National Park	12.82	2003
17	Anamudi Shola National Park	7.50	2003
18	Mangalavanam Bird Sanctuary	0.0274	2004
19	Kurinjimala Sanctuary	32.00	2006
20	Choolannur Pea Fowl Sanctuary	3.42	2007
	Total	2452.48	

Note: 148 sq.km Reserve Forest area has been added to Silent Valley national Park as its buffer zone as per G.O (MS) No.36/07/F&WLD dated 11.06.2007

(Source: Forest Department, Govt.of Kerala)

Acts and Rules

Government of India constituted a National Biodiversity Authority (NBA) at Chennai in 2003 with the aim of conservation of biodiversity. The Biological Diversity Act, 2002 is formed for the conservation and sustainable utilization of biodiversity and for equitable sharing benefits arising out of the uses of biodiversity and its components.

Programmes

As per the provisions if the Biological Diversity Act, 2002 and the Biological Diversity Rules, 2004 several programmes have been initiated in the States. The Biological Diversity Rules 2004 provide legal support for biodiversity conservation, protection of IPR and for the formation of State Biodiversity Boards. State Biodiversity Boards have been constituted in majority of States. The following are the responsibilities of State Biodiversity Boards:

- i. Advice the State Government, subjected to any guidelines issued by the Central Government, on matters related to conservation of Biodiversity, sustainable utilization of its components, and equitable sharing of benefits arising out of the utilization of biodiversity.**
- ii. Regulate the commercial utilization of biodiversity by Indians by granting approvals or otherwise, and**
- iii. Perform such other function a may be necessary to carry out the provisions of this Actor as may be prescribed by the State Government. Establishment of Biodiversity Management Committee (BMCs) at all three local bodies –Grama Panchayath, Block Panchayath and District Panchayath- is one of the prime responsibilities of the State Biodiversity Board.**

Responsibilities of Local Bodies

BMCs should be constituted at Grama Panchayath, Block Panchayath and District Panchayath levels. The purpose of this is promote conservation, sustainable use, documentation of biological diversity including preservation of habitats, conservation of land races (primitive cultivars which were grown by ancient farmers and their successors), folk varieties and cultivars, domesticated stocks and breeds of animals and microorganisms and documentation of knowledge relating to biodiversity. Preparation of biodiversity register also forms a major activity of BMCs. The authority of these registers should be kept and modified periodically. Information/knowledge gathered on biodiversity, traditional knowledge, sharing of benefits arising out of the uses of biodiversity, etc should be registered in this register. The BMCs may levy charges by way of collection of fees from any person for assessing or collecting any biological resource for commercial purposes.

Taking cognizance of the provisions of the Biological Diversity Act, 2002 and the Biological Diversity Act, 2002 and the Biological Diversity Rules, 2004, National Biodiversity Authority and State Biodiversity Boards were constituted in India.

The Kerala State Biodiversity Board (KSBB) is based at Thiruvananthapuram. Initially attached to Kerala State Council for Science, Technology and Environment (KSCSTE), the Board now functions under the Environment Department. The technical programmes of the Board are coordinated by Kerala Forest Research Institute (KFRI).

Kerala State Biodiversity Board (KSBB)

The following are the major aims of KSBB

- Provide technical support and guidelines for the BMCs towards the preparation of biodiversity registers and its legal protection
- Provide guidelines and support for the collection of biodiversity and tax on it.
- Provide support and directions for the formation of district technical support groups.

Activities aimed at constitution of BMCs under Panchayath, Block, District, Municipality and Corporation levels form the most important activity of KSBB.

People's Biodiversity Register (PBR)

Preparation of a register for documenting biodiversity represents the biodiversity register. Biodiversity registers prepared with the help of local communities or local people are often referred

to as People's Biodiversity Register. Just like preparing a list of things in a house, preparation of biodiversity register is an attempt to realize the rich biodiversity in the Grama Panchayaths, Block Panchayaths, District Panchayaths, States and the whole Country. Correct identification and documentation is one prerequisite for further research and research institutions, leading to new discoveries and development of new commercial products, patenting such products, equitable distribution of benefits, if any, and through this, paving the way for a new economic order in the country.

PBR is not simply a register with names of species and their distribution patterns in an area. It is a comprehensive data base recording people's knowledge and insight of the status, uses, history, ongoing changes and forces driving these changes in the biological diversity resources of their own localities. This will also provide information on the current utilization patterns of biodiversity, its economic benefits to the local communities and future management strategies required for the sustainable utilization of biodiversity in a decentralized manner. Further, it also helps equitable sharing of benefits arising out of commercial utilization of biodiversity resources and knowledge of their uses.

As per the provisions of Biological Diversity Act, 2002 and the Biological Diversity Rules, 2004 several programmes have been initiated in the state. The Biological Diversity Rules provide legal support for Biodiversity conservation, protection of IPR and for the formation of State Biodiversity Boards. Establishment of Biodiversity management committee at Grama Panchayaths, Block Panchayaths, District Panchayaths is one of the prime responsibility of the State Biodiversity Board. Biodiversity management committee at the three local bodies has the responsibility of preparing PBRs. Biodiversity registers are to be prepared based on the directions by Kerala State Biodiversity Board and on the format provided by Kerala Forest Research Institute (KFRI). Identification of experts, training at District, Block, Panchayat and Ward levels could be done with the assistance of KFRI and Kerala Institute of Local Administration (KILA).

KFRI and a network of institutions will provide instructions and advices to the local bodies on the preparation of PBRs and implementation of the programmes. Technical Monitoring Committee will monitor the preparation as well as management of PBRs. The progress of activities should be examined at ward level in every three months. Similarly, monitoring should also be done at District and Block levels in every six months.