

Biodiversity Act 2002, Objectives, Features, Significance, History

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The Biodiversity Bill 2000 after enactment refers to the Biodiversity Act 2000 or Biological Diversity Act 2002, in response to the UN Convention on Biological Diversity (CBD) signed in 1992. India is one of the world's richest countries in terms of biological diversity. Even though it covers only 2% of the world's land area, it supports around 7-8% of all recorded species. To protect this natural wealth, the Biodiversity Act 2000 was enacted. It focuses on the conservation of biodiversity, sustainable use of biological resources, and fair sharing of benefits that come from their use.

Biodiversity Act 2002

India's forests, wetlands, and coastal areas host thousands of unique species. However, issues like biopiracy, habitat destruction, and illegal exploitation of natural resources threatened this rich **biodiversity**. To address these problems and meet global commitments under the Convention on Biological Diversity (CBD), India passed the Biodiversity Act 2002, which received President's assent in February 2003.

According to CBD Country Profile, India has about 91,200 species of animals and 45,500 species of plants. It is also home to four global biodiversity hotspots, the Western Ghats, Eastern Himalayas, Indo-Burma region, and Sundaland.

Biological Diversity Act 2002 Historical Background

The history and evolution of the Biodiversity Act 2002 is discussed below:

- United Nations Convention on Biological Diversity (CBD) (1992): The impetus for the Act was India's signing of the CBD, which recognized sovereign rights over biological resources and aimed to conserve biodiversity, ensure its sustainable use, and promote fair and equitable sharing of benefits.
- Economic liberalisation: The opening of the Indian economy in the 1990s led to concerns about the potential for biopiracy and the overexploitation of resources without adequate legal protection.
- National Biodiversity Strategy and Action Plan (1999): In 2000, the government drafted a Biodiversity Bill based on the recommendations of a civil society-formed committee tasked with developing this plan.
- Parliamentary approval (2002): The Bill was passed by the **Lok Sabha** on December 2, 2002, and by the Rajya Sabha on December 11, 2002.
- Presidential assent (2003): The Act was formally enacted on February 5, 2003, after receiving Presidential assent.
- Implementation rules (2004): Rules to implement the Act were developed in 2004.

Biological Diversity Act 2002 Objectives

The Biodiversity Act 2002 was designed to achieve the following major objectives:

- To conserve biological diversity in India.
- To promote sustainable use of natural and biological resources.
- To ensure fair and equitable sharing of benefits arising from biological materials and associated knowledge.
- To protect traditional knowledge and rights of local communities.
- To regulate access to Indian biological resources by foreign and national entities.

Biodiversity Act 2002 Features

The Biodiversity Act 2002 is one of the most comprehensive environmental laws in India. Its main features include:

- Regulation of Access: Any person or company, especially foreigners, must seek prior approval from the **National Biodiversity Authority** (NBA) before accessing India's biological resources.
- Benefit Sharing: It mandates fair benefit sharing between resource users and local communities.
- Traditional Rights: Local people, farmers, and artisans are allowed to use biological materials traditionally.
- Penalties: Violations are treated as criminal offences with up to five years imprisonment or fine up to 10 lakhs or more depending on the damage.
- Documentation: Local bodies prepare People's Biodiversity Registers (PBRs) to record species and traditional knowledge.

Biological Diversity Act 2002 Framework

The Biodiversity Act 2002 created a three-tier system for implementation and monitoring. This three-level structure ensures that biodiversity is managed efficiently from the grassroots to the national level.

Biological Diversity Act 2002 Framework		
Level	Institution	Key Role
National	National Biodiversity Authority (NBA)	Grants approvals, regulates access and benefit sharing.
State	State Biodiversity Boards (SBBs)	Controls access within states and ensures conservation.
Local	Biodiversity Management Committees (BMCs)	Maintains local biodiversity registers and ensures community participation.

Access and Benefit Sharing (ABS) Mechanism

One of the most important parts of the Biodiversity Act 2002 is the Access and Benefit Sharing (ABS) system. It ensures that when researchers or companies use India's biological resources, the profits or benefits are shared with local communities who have traditionally conserved them.

Examples of benefits include:

- Royalty payments to local bodies.
- Funding for conservation and research projects.
- Technology transfer and capacity-building for local groups.

People's Biodiversity Registers (PBRs)

Every Biodiversity Management Committee (BMC) prepares a PBR to record local species, traditional practices, and indigenous knowledge. These registers help:

- Identify rare and threatened species.
- Prevent biopiracy of traditional knowledge.
- Promote local conservation planning.

However, according to Down to Earth, many states still lag in completing PBRs, affecting grassroots implementation.

Biodiversity Act 2002 Provisions

The Act contains several important legal rules:

1. Approval Required: Foreign nationals or companies need NBA's permission to obtain biological resources.

2. Intellectual Property Rights (IPR): Any patent related to Indian biological material must get NBA's approval.
3. Prohibited Activities: Collection or export of endangered species without approval is banned.
4. Funds: NBA and SBBs maintain funds to promote research, conservation, and local awareness.

Biodiversity Act 2002 Amendment

Since its enactment, the Biological Diversity Act 2002 has been amended to simplify compliance, promote research, and strengthen conservation. The major changes include- Biodiversity (Amendment) Bill 2023. The Biodiversity (Amendment) Bill 2023 aims to strengthen implementation by:

- Encouraging Ayush industries to use biodiversity sustainably.
- Simplifying approvals for domestic researchers.
- Promoting digital recordkeeping and easing business procedures while maintaining conservation goals.

Biodiversity Act 2002 Significance

The Biological Diversity Act 2002 has made a huge difference by:

- Recognizing the sovereign rights of India over its biological resources.
- Giving legal power to local communities to protect and benefit from biodiversity.
- Promoting conservation through documentation and research.
- Preventing misuse and commercial exploitation of genetic resources.
- Supporting India's global commitments under the Convention on Biological Diversity (CBD) and Nagoya Protocol.

Biodiversity Act 2002 Challenges

The Biological Diversity Act 2002 faces several backlashes despite being advanced and beneficial in various aspects:

Challenges:

- Incomplete formation of Biodiversity Management Committees (BMCs)
- Lack of awareness among local people
- Delay in approval for access and benefit sharing
- Poor coordination among NBA, SBBs, and BMCs
- Limited benefit-sharing agreements
- Weak enforcement of penalties
- Overlapping laws and policies
- Lack of updated data
- Climate change impact on habitats
- Decline in research and documentation

Way Forward:

- Ensure all local bodies establish and update BMCs regularly.

- Conduct training and awareness programs in rural and tribal areas.
- Simplify the application and approval process through digital platforms.
- Create an integrated biodiversity database for better monitoring.
- Encourage industries to collaborate fairly with local communities.
- Strengthen legal actions against biopiracy and illegal resource use.
- Harmonize biodiversity laws with forest and environmental acts.
- Regularly update biodiversity registers and species databases.
- Promote eco-restoration and climate-resilient biodiversity plans.
- Increase funding for biodiversity research and conservation institutions.

Biological Diversity Act 2002 UPSC

The Biodiversity Act 2002 is one of India's most important environmental laws. It ensures that natural resources are used wisely and that benefits reach local communities who protect them. To make it fully effective, awareness, coordination, and stronger enforcement are essential. With better participation and digital monitoring, the Act can help India preserve its biological heritage for future generations.

These statistics highlight the growing importance of biodiversity documentation and community participation:

- The National Biodiversity Authority (NBA) is a statutory body headquartered in Chennai, established in 2003 under the Biological Diversity Act, 2002 to regulate access to biological resources and equitable benefit-sharing.
- As of November 2023, India has approximately 277,688 Biodiversity Management Committees (BMCs) constituted across 28 States and 8 Union Territories, and 268,031 People's Biodiversity Registers (PBRs) prepared.
- While the exact number of State Biodiversity Boards (SBBs) varies, many states have established functional SBBs under the Act.
- ABS Regulations 2025: The NBA notified new Access and Benefit Sharing Regulations, 2025, covering Digital Sequence Information, simplifying AYUSH permissions, and introducing clear benefit-sharing slabs for industries using biological resources.
- Benefit-Sharing Funds Released: In 2025, the NBA disbursed over ₹1.36 crore to Biodiversity Management Committees in Maharashtra and Uttar Pradesh, strengthening grassroots biodiversity conservation and ensuring equitable benefit-sharing.
- New Biodiversity Heritage Site: Tamil Nadu declared Elathur Lake in Erode as its third Biodiversity Heritage Site in September 2025, recognizing its rich wetland ecosystem and over 180 recorded bird species.

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