National Mission on Biodiversity and Human Well-Being (NMBHWB)

The National Mission on Biodiversity and Human Well-Being is an ambitious government mission that strives to bring to the limelight the issues of conservation and biodiversity. In this article, you read all about this mission, also known as the National Biodiversity Mission, for the UPSC exam.

National Biodiversity Mission

The National Biodiversity Mission is under the Prime Minister's Science, Technology, Innovation, Advisory Council (PM-STIAC).

- The main aim of the mission is to bring conservation and biodiversity to the forefront of Indian science, policy, and society's attention.
- The mission's activities are wide-ranging and involve among others, restoration of biodiversity in many habitats, developing an early-warning system for zoonotic diseases, addressing knowledge gaps in biodiversity, etc.
- The mission is expected to meet conservation and sustainable development goals in multiple ways.
- Activities under the NMBHWB will not be restricted to certain geographical areas or protected regions.
- The lead partners for the mission are the Ministry of Environment, Forest & Climate Change, the Department of Biotechnology and the Department of Science and Technology.
    - Mission catalogued and supported by: Office of the Principal Scientific Adviser to the GOI
    - Mission hosted by: Ministry of Environment, Forest and Climate Change
    - Nodal Agency: National Biodiversity Authority
- It is envisaged as an inclusive mission that involves scientists, farmers, policymakers, students, industrialists, etc.
- It will engage government agencies, NGOs, scientific institutions at the national, state and local levels.
- This is a significant mission because currently, biodiversity science is a very fragmented and neglected field in India.

National Biodiversity Mission Objectives

The stated objectives of the National Biodiversity Mission are mentioned below.

1. To assess India's biodiversity status in terms of distribution and conservation.
2. To develop a professional cadre to handle large sets of environmental data for the management and monitoring of biodiversity.
3. To expand knowledge in ecosystem functioning which provides updates on restoration efforts.

4. To enhance choices for agricultural production and livelihoods.
5. To formulate a dynamic biodiversity-based sustainable economy anchored by a reliable information system.
6. To engage the public for security and the general well-being of society.

National Biodiversity Mission Salient Features

The Mission is an initiative to transform biodiversity science in India by linking biodiversity with the economic prosperity of people.

- It envisages using the country's rich biodiversity to find solutions to challenges in climate change, health and agriculture domains.
- Governments, NGOs, and other institutions will converge and work together to catalogue, evaluate, map, monitor and utilise India's plentiful but declining biodiversity in a sustainable manner.
- One of the important features of the mission is that it would help create a cadre of biodiversity science professionals to work in achieving its objectives.
- Another important feature is that it would strive to enhance the feeling of pride in citizens of the vast natural resources of their country which would in turn aid in helping restore and conserve biodiversity and nature.

Components of National Biodiversity Mission

The National Biodiversity Mission has two major components as discussed below:

First Component

This is titled NISARG Bharat (National Initiative for Sustained Assessment of Resource Governance). This component documents, catalogues, maps, monitors and manages biodiversity for conservation and sustainable utilization of biological resources. This has three sub-programs under it.

1. Exploration, Discovery and Genetic Characterization of India's Biodiversity
2. National Framework for Electronic People's Biodiversity Registers (e-PBRs)
3. Cataloguing and Mapping Life of India

Second Component

The second major component consists of six Programs, each with field-based projects to realize the identified Sustainable Development Goals.

The six programs are on the following:

1. Ecosystem Services
2. Climate Change and Disaster Risk
3. Agriculture
4. Health
5. Bioeconomy
6. Capacity Building and Outreach

Significance of National Biodiversity Mission

The National Biodiversity Mission will allow India to emerge as a leader in demonstrating linkages between the conservation of natural resources and biodiversity and the well-being of people. This is significant because India, with just 2.3% of the global land area, is home to about 8% of biodiversity in the world.

- NMBHWB will help in strengthening the science of restoration, conservation and sustainable utilization of natural resources.
- It can potentially help India enhance its natural assets by crores of rupees.
- Critically, the mission will immensely help India in satisfying its national commitments towards international conservation protocols and treaties such as:
    - United Nations Framework Convention on Climate Change (UNFCCC)
    - United Nations Convention on Biological Diversity (UNCBD)
    - Convention on International Trade in Endangered Species of Wild Flora & Fauna (CITES)
    - Convention on Migratory Species
    - World Heritage Convention
- There is proposed work on environmental DNA and barcoding in the mission which will aid India's participation in the Earth BioGenome Project.
- Implementation of the programs in the mission will help in mitigating the impact of climate change and other natural disasters such as floods, pandemics, etc.
- The mission can help revitalise India's agricultural sector by increasing the rural incomes from biodiversity-based agriculture and also generating employment in restoration and nature tourism.
- Restoration of degraded land can also generate employment opportunities for many.
- Various programs under the mission will help find nature-based or green solutions to pressing problems such as degradation of soil, land, forests, rivers, etc.