

7.1.5 National Forest Policy, 1988

Salient features of the policy are:

1. Maintenance of environmental stability through preservation and restoration of ecological balance.
2. Conservation of natural heritage of country by preserving remaining forests.
3. Checking soil erosion and extension of sand dunes.
4. Increasing forest cover by afforestation.
5. Afforestation and development of wastelands.
6. Meeting basic requirements of people (fuel, timber, food) and encouraging wood substitutes.
7. Efficient utilization of forest produce.
8. Conservation of biological diversity, a network of national parks, sanctuaries, biosphere reserves and other protected areas should be extended and properly managed.

Joint Forest Management (JFM) is an approach and program initiated in the context of the National Forest Policy, 1988 wherein state forest departments support local dwelling communities to protect and manage the forests and share the costs and benefits from the forests with them.

Draft National Forest Policy, 2018 aims at sustainable forest management by incorporating elements of ecosystem security, climate change, forest hydrology and robust framework to monitor and develop forest cover and strengthening an overall environmental balance. Its important provisions are:

1. It envisages a **Community Forest Management Mission**.
2. Proposes **Private Intervention** in forests for maintaining its quality.
3. Emphasises the importance of **Urban Forestation**.
4. Proposes setting up a **National Board of Forestry** for better management of the country's forests.

Under **Green Highways (Plantation, Transplantation, Beautification and Maintenance) Policy-2015**, Ministry of Road Transport and Highways has decided all existing National Highways and 40000 km of additional roads in the next few years as Green Highways.

1% of the total project cost of all highway's projects will be kept aside for the highway plantation and its maintenance.

7.1.6 Coastal Regulation Zone (CRZ)

CRZ area is classified into CRZ-I, CRZ-II, CRZ-III, CRZ-IV.

1. **CRZ-I:** These areas are environmentally most critical and further classified into:
 - a. CRZ-I A: The ecologically sensitive areas like Mangroves, Corals, Sand Dunes, Turtle Nesting Grounds, Protected Areas etc.
 - b. CRZ-II B: These include the intertidal zone.
2. **CRZ-II:** The developed land areas up to or close to the shoreline, within the existing municipal limits or in other existing legally designated urban areas.
3. **CRZ-III:** Land areas that are relatively undisturbed (viz rural areas etc.) and those do not fall under CRZ-II. CRZ-III is further classified as:
 - a. CRZ-III A: Areas with population density more than 2161 sq. km as per 2011 Census.
 - b. CRZ-III B: Areas with population density of less than 2161 sq. km as per 2011 Census.
4. **CRZ-IV:** It constitutes the water area and is further classified into:
 - a. CRZ-IV A: The water area and the sea bed area between the LTL up to 12 Nm on the seaward side.
 - b. CRZ-IV B: The water area and the bed area between LTL at the bank of the tidal influenced water body to the LTL on the opposite side of the bank, extending from the mouth of the water body at the sea up to the influence of tide.

Recently, the Government has approved the **CRZ Notification, 2018** (under the Environment Protection Act, 1986) based on the recommendations of **Shailesh Nayak Committee report**. Salient features of the notification are:

1. **Floor Space Index (FSI)** norms have been eased and restrictions imposed on it has been de-froze.
2. **No Development Zone (NDZ)** of 20 meters have been stipulated for all islands.
3. NDZ has been reduced for densely populated areas under CRZ-III:
 - a. CRZ-III A areas shall have a NDZ of 50 meters from HTL on the landward side.
 - b. CRZ-III B areas shall have a NDZ of 200 meters from the HTL.
4. All **Ecologically Sensitive Areas** have been accorded special importance.
5. **Defence and Strategic Projects** have been accorded necessary dispensation.
6. **Pollution abatement** has been given due importance by permitting construction of treatment facilities in CRZ-I B areas with due safeguards.
7. **CRZ clearance have been streamlined**. Now, CRZ clearances are needed only for CRZ-I and CRZ-IV projects while States will have the power to grant clearances for CRZ-II and CRZ-III projects.
8. **Temporary Tourism infrastructure** amenities will be promoted. Such temporary tourism facilities will also be permissible in the No Development Zone (NDZ) of the CRZ-III areas.

7.1.7 Wetland (Conservation and Management) Rules, 2017

Wetland (Conservation and Management) Rules, 2017 have been made for the effective conservation and management of wetlands in our country. Key features of the Rules are:

1. Decentralization of wetland management with delegation of powers to the State Governments.
2. **Central Wetlands Regulatory Authority (CWRA)** has been replaced with **National Wetlands Committee**.
3. The **State or UT Wetlands Authority** will have to prepare a list of all wetlands and also develop a comprehensive list of activities to be regulated and permitted within notified wetlands and their zone of influence.
4. The Rules prohibit encroachment on wetlands, solid waste dumping, discharge of untreated waste and effluents from industries and human settlements, poaching etc.
5. On the other hand, regulated activities include subsistence level biomass harvesting, sustainable culture fisheries practices, plying of non-motorized boats and construction of temporary nature.
6. It prescribes that the conservation and management of wetlands should be on the principle of 'wise use' as defined by the Ramsar Convention.

However, there is no provision of appealing to the National Green Tribunal (NGT). Also, the definition of wetland does not include river channels, paddy fields, man-made water bodies/tanks specifically for drinking water purposes and structures specifically constructed for aquaculture, salt production, recreation and irrigation purposes.

MoEFCC has notified guidelines for implementation of **Wetlands (Conservation and Management) Rules, 2017**:

1. Wetlands to be regulated include:
 - a. Wetlands designated to the list of Wetlands of International Importance under the Ramsar Convention.
 - b. Wetlands notified under the rules by the Central Government, State Government and UT administration.
 - c. All wetlands, irrespective of their location, size, ownership, biodiversity or ecosystem values, can be notified under the Wetland Rules, except river channels, paddy fields and certain categories human-made water bodies among others.
 - d. Protected Areas and areas falling within the purview of Coastal Regulation Zone have been excluded from notification under the Wetland Rules.

2. State Wetland Authority will be set up with the minister in charge of environment in the state acting as the chairperson of the authority.
3. The list of wetlands is developed on wetlands definition of the Ramsar Convention.
4. For each wetland to be notified, a zone of influence is to be defined.

7.1.8 Solid Waste Management Rules, 2016

These rules replace the Municipal Solid Waste (Management and Handling) Rules, 2000. Its salient features include:

1. The rules are now applicable beyond municipal areas and include urban agglomerations, census towns, notified industrial townships etc.
2. The source segregation of waste has been mandated.
3. Generator will have to pay “**User Fee**” to waste collector and “**Spot Fine**” for littering and non-segregation.
4. Rules mention time-frame for setting up solid waste processing facilities by all local bodies.
5. Every waste generator shall segregate and store the waste generated by them in three separate streams namely biodegradable, non-biodegradable and domestic hazardous wastes.
6. Ministry of Urban Development (MoUD) shall formulate **National Policy and Strategy on Solid Waste Management**.
7. The Department of Fertilizers, Ministry of Chemicals shall promote marketing and utilization of compost.
8. They also promote setting up of **Waste to Energy (WtE) plants**.

7.1.9 Hazardous and Other Wastes (Management and Transboundary Movement) Amendment Rules, 2019

MoEFCC has amended the Hazardous and Other Wastes (Management and Transboundary Movement) Rules, 2016. Salient features of the amended rules include:

1. Solid Plastic Waste has been prohibited from import into the country including in Special Economic Zones (SEZ) and by Export Oriented Units (EOU).
2. Exporters of silk waste have now been given exemption from requiring permission from the MoEFCC.
3. Electric and electronic assemblies and components manufactured in and exported from India, if found defective can now be imported back into the country, within a year of export, without obtaining permission from MoEFCC.
4. Industries which do not require consent under Water (Prevention and Control of Pollution) Act 1974 and Air (Prevention and Control of Pollution) Act 1981, are now exempted from requiring authorization under the Hazardous and Other Wastes (Management and Transboundary Movement) Rules 2016, provided that hazardous and other wastes generated by such industries are handed over to the authorized actual users, waste collectors or disposal facilities.

7.1.10 Construction and Demolition Waste Management Rules, 2016

Salient features of the Rules are:

1. Prescribes duties of waste generator like segregating construction and demolition waste and depositing it at collection centre.
2. It also provides duties of service providers and contractors.
3. It prescribes timeframe for implementation of the rules.

7.1.11 Bio-medical Waste Management Rules, 2016

Salient features of the Rules are:

1. The ambit of the rules has been expanded to include vaccination camps, blood donation camps, surgical camps or any other healthcare activity.
2. It calls for phasing-out the use of chlorinated plastic bags, gloves and blood bags within two years.
3. It calls for pre-treatment of laboratory waste, microbiological waste, blood samples and blood bags.
4. It seeks to provide training to all its health care workers and immunize all health workers regularly.
5. It seeks to establish a Bar-Code System for bags or containers containing bio-medical waste for disposal.
6. As per the rules, bio-medical wastes have been classified into 4 categories- Untreated Human Anatomical Waste, Animal Anatomical Waste, Soiled Waste and Biotechnology Waste.
7. As per the rules, the State Government shall provide land for setting up common bio-medical waste treatment and disposal facility.

7.1.12 E-Waste Management Rules, 2016

The MoEFCC notified E-Waste Management Rules, 2016 to supersede E-Waste (Management and Handling) Rules, 2011.

Salient features of the Rules are:

1. The new E-Waste Rules include Compact Fluorescent Lamp (CFL) and other mercury containing lamps, as well as other equipment.
2. For the first time, the rules brought the producers under **Extended Producer Responsibility (EPR)** making them responsible for the collection of E-Waste and for its exchange.
3. Various producers can have a separate **Producer Responsibility Organization (PRO)** and ensure collection of E-Waste as well as its disposal in an environmentally friendly manner.
4. **Deposit Refund Scheme** has been introduced as an additional economic instrument under which the producer charges an additional amount as a deposit at the time of sale of the electrical and electronic equipment and returns it to the consumer along with interest when the end-of-life electrical and electronic equipment is returned.
5. Phase-wise Collection Target for E-Waste has been introduced.
6. The roles of State Government have also been introduced in the rules to ensure safety, health and skill development of workers involved in dismantling and recycling operations.
7. Urban Local Bodies has been assigned the duty to collect and channelize the orphan products to authorized dismantler or recycler.

The Amendment Rules 2018 has added the **Reduction of Hazardous Substances (RoHS) provision**, under which, cost of Sampling and Testing shall be borne by the Government for conducting the RoHS test. If the product does not comply with the RoHS provisions, then the cost of the test will be borne by the producers.

7.1.13 Plastic Waste Management Rules, 2016

Salient features of the rules are:

1. Increase the **minimum thickness** of plastic carry bags from 40 to 50 microns and stipulate minimum thickness of 50 micron for plastic sheets also to facilitate collection and recycling of plastic waste.
2. Expand the applicability jurisdiction from **municipal area to rural areas**.

3. To promote the use of plastic waste for **road construction** as per Indian Road Congress guidelines or energy recovery, or waste to oil etc. for general utilization of waste and also address the waste disposal issue.
4. First time, responsibility of waste generators like individuals and bulk generators like offices have been introduced.
5. To introduce collection of plastic waste management fee through pre-registration of producers, importers of plastic carry bags/multi-layered packaging and vendors selling the same for establishing the waste management system.
6. **Extended Producer Responsibility** has been introduced.
7. Central Pollution Control Board (CPCB) has been mandated to formulate guidelines for thermoset plastics.

The 2016 Rules were Amended in 2018, laying emphasis on phasing out of “**Multi-layered Plastic (MLP)**” which are “non-recyclable, or non-energy recoverable, or with no alternate use.”

1. The Amended Rules also prescribe a **Central Registration System** for the registration of the producer/importer/brand owner.
2. The amendment provided that registration should be automated and take into account Ease of Doing Business for producers, recyclers and manufacturers.
3. While a National Registry has been prescribed for producers with a presence in more than two states, a State-level Registration has been prescribed for smaller producers/brand owners operating within one or two states.

7.1.14 Miscellaneous

Indian Forest Act, 1927 was enacted to consolidate all the previous laws regarding forests and extend state’s control over forests as well as diminishing the status of people’s right to forest use. The Act regulated movement and transit of forest produce and duty leviable on timber and other forest produce. It also defined forest offences. The Act classified forests into Reserved Forest, Protected Forest and Village Forest.

1. Amending the Indian Forest Act, bamboo grown in non-forest areas have been exempted from the definition of trees to promote its commercial cultivation.

The Mines and Mineral Development (Regulation) Act, 1957 was enacted to regulate the mining sector in India. This Act is applicable to all minerals except minor minerals and atomic minerals. Mining minor minerals (e.g., river sand) comes under the purview of state governments. For mining in forest lands, prior permission of Environment Ministry is required.

Pradhan Mantri Khanij Kshetra Kalyan Yojana (PMKKKY) is aimed at mitigating the adverse impacts, during and after mining, on the environment, health and socio-economic conditions of people in mining districts and also to ensure a sustainable livelihood for the affected people.

It is implemented by the **District Mineral Foundations (DMFs)** of the respective districts that use the funds collected by the DMF from the miners. 60% of the funds will be utilized for high priority areas such as drinking water supply while 40% of the fund will be utilized for areas like physical infrastructure, irrigation, energy and watershed development.

DMF is a trust set up under Mines and Minerals (Development & Regulation) Amendment Act (MMDRA) 2015 as a non-profit body in those districts affected by the mining operations.

National Green Tribunal (NGT) is a statutory body created in 2010 to handle the expeditious disposal of cases pertaining to environmental issues. It was enacted in consonance with the Right to Healthy Environment under Article 21 of Constitution.

7.2 Institutional Measures

7.2.1 National Afforestation and Eco-Development Board

MoEFCC constituted the National Afforestation and Eco-development Board (NAEB) in 1992. National Afforestation Programme (NAfP), a flagship programme of NAEB, was launched in 2002 and involves plantation in degraded lands across the country.

7.2.2 Compensatory Afforestation Fund Management and Planning Authority (CAMPA)

To compensate the loss of forest area and to maintain environmental sustainability, government announced a well-defined act known as CAMPA.

Provisions of the Act are as follows:

1. The law establishes a **National Compensatory Afforestation Fund** under the Public Account of India and a **State Compensatory Afforestation Fund** under the Public Account of each State.
2. These funds will receive payments for
 - a. Compensatory Afforestation
 - b. Net Present Value (NPV) of forest
 - c. Other project specific payments
3. The National Fund will receive 10% of these funds and the State Funds will receive the rest.
4. According to the Act, a company diverting forest land must provide alternative land to take up compensatory afforestation.

7.2.3 National Clean Energy Fund

The National Clean Energy Fund (NCEF) has been created out of cess on coal produced/imported under the “polluter pays” principle. The Fund lies under the Public Account with its secretariat in Department of Expenditure, Ministry of Finance.

An Inter-Ministerial Group which is chaired by the Finance Secretary recommends projects eligible for funding under NCEF.

7.2.4 Forest Survey of India (FSI)

FSI is an organization set up under MoEFCC. It was established in 1981 and is headquartered at Dehradun. FSI is responsible for **assessment and monitoring of the forest resources** of the country regularly. Indian State of Forest Report (ISFR) is a biennial publication of FSI.

7.2.5 Botanical and Zoological Survey of India

Botanical Survey of India (BSI) is an institution set up by the Government of India in 1890. The objective is to identify the plant resources of this country.

Zoological Survey of India (ZSI) is an institution set up by the Government of India in 1916 **to explore and research the fauna**. The history of ZSI goes back to Asiatic Society of Bengal founded by Sir William Jones in 1784. It is the mother of institutions like Indian Museum, ZSI and Geological Survey of India.

BSI and ZSI are **headquartered at Kolkata** and comes under the jurisdiction of MoEFCC.

7.2.6 Central Ground Water Authority (CGWA)

CGWA was constituted under Environment (Protection) Act, 1986. However, it is not a statutory body. CGWA has the mandate of regulating groundwater development and management in the country.

India is the largest user of groundwater in the world which in turn has led to overexploitation. Hence, CGWA has notified **guidelines for groundwater extraction**:

1. For industries

- a. Introduction of Water Conservation Fee (WCF).
- b. Mandatory requirement of digital flow meter, piezometers.
- c. Mandatory water audit by specified industries extracting groundwater.
- d. Mandatory roof top rainwater harvesting except for specified industries.

Exemptions from requirement of NOC have been granted to sectors like agricultural users, users employing non-energized means to extract water, individual households using less than 1 inch diameter delivery pipe and armed forces during operational deployment.

7.2.7 Central Water Commission (CWC)

CWC is a premier technical organization of India in the field of water resources and is presently functioning as an **attached office** of the Ministry of Water Resources, River Development and Ganga Rejuvenation.

The Commission is entrusted with the general responsibilities of initiating, coordinating and furthering in consultation of the State Governments concerned, schemes for control, conservation and utilization of water resources throughout the country, for the purpose of flood control, irrigation, navigation, drinking water supply and water power development. It also undertakes the investigations, construction and execution of any such schemes as required.

7.2.8 Animal Welfare Board of India

The Animal Welfare Board of India was established in 1962 under The Prevention of Cruelty to Animals Act. It is a statutory advisory body on animal welfare laws which promotes animal welfare in the country.

It works to ensure that animal welfare laws are followed in the country and provides grants to Animal Welfare Organizations. The Board comes under the jurisdiction of Ministry of Fisheries, Animal Husbandry and Dairying and is headquartered at Ballabgarh in Haryana.

7.2.9 Central Zoo Authority

Central Zoo Authority has been constituted under the Wildlife Protection Act and is responsible for the oversight of zoos. Every zoo in the country is required to obtain the recognition from the authority for its operation.

Powers of the authority include:

1. Recognize and derecognize zoos.
2. Permission for acquisition of wild animals.
3. Cognizance of offences.
4. Grants of licenses, certificate of ownership, recognition etc.

Central Zoo also provides technical and financial assistance to such zoos which have the potential to attain the desired standard in animal management.

7.2.10 National Biodiversity Authority

National Biodiversity Authority (NBA) was established in 2003 to implement India's **Biological Diversity Act (BDA)**. It is a statutory, autonomous body and it performs regulatory and advisory functions for the Government of India on issues of conservation, sustainable use of biological resources and fair and equitable sharing of benefits arising out of the use of biological resources.

NBA checks biopiracy and protects the indigenous and traditional genetic resources. Anybody seeking any kind of IPR (Intellectual Property Rights) on a research based upon biological resource or knowledge obtained from India requires prior approval of NBA. No person who has been granted approval, shall transfer any biological resource or knowledge associated to others except with the prior permission of the NBA.

The **State Biodiversity Boards (SSBs)** also regulate, by granting approvals or otherwise requests for commercial utilization or bio-survey and bio-utilization of any biological resource by Indians.

7.2.11 Wildlife Crime Control Bureau (WCCB)

Wildlife Crime Control Bureau (WCCB) is a statutory multi-disciplinary body established by the Government of India under MoEFCC, to combat organized wildlife crime in the country. The Bureau has its headquarters in New Delhi and five regional offices at Delhi, Kolkata, Mumbai, Chennai and Jabalpur.

It is mandated to collect and collate intelligence related to wildlife crimes, establish a centralized wildlife crime data bank, coordinate with foreign authorities for wildlife crime control and assist the governments in wildlife policy making.

WCCB also assists and advises the customs authorities in inspection of the consignments of flora and fauna as per the provisions of Wildlife Protection Act, CITES and Export Import (EXIM) Policy governing such an item.

7.2.12 Wildlife Trust of India (WTI)

It is an NGO founded in 1998 with the aim of conserving nature, especially endangered species and threatened habitats, in partnership with communities and governments.

The WTI is committed to the protection of India's wildlife and it achieves this by working in partnership with the local communities and governments.

7.2.13 National Board for Wildlife

National Board of Wildlife (NBWL) is a "statutory organization" constituted under Wildlife Protection Act 1972. It is chaired by Indian Prime Minister.

It advises the Central Government on framing policies and measures for wildlife conservation. No alteration of boundaries in national parks and wildlife sanctuaries can be done without its approval.

7.3 Other Government Initiatives

Ganga Conservation measures:

1. **National Ganga Council** under the chairmanship of the Prime Minister replaced the erstwhile National Ganga River Basin Authority.
2. Empowered Task Force on river Ganga was set up under the chairmanship of Union Minister of Water Resources, River Development and Ganga Rejuvenation.

3. **National Mission for Clean Ganga (NMCG)** will have a two-tier structure with a Governing Council and an Executive Committee.
 - a. The NMCG will exercise powers under The Environment Protection Act. It can also fine polluters. However, NMCG will only take action in case of non-compliance if CPCB does not do so.
4. Namami Ganga Programme is an integrated conservation mission under NMCG with a budget outlay of 20,000 crore to accomplish the twin objectives of effective abatement of pollution along with conservation and rejuvenation of Ganga. Initiatives under Namami Ganga include:
 - a. Ganga Gram Yojana under which 1600 villages situated along the banks of river Ganga will be developed.
 - b. Ganga Task Force will be created.
5. Swachh Yug Campaign has been launched to make villages located along Ganga open defecation free.
6. The Uttarakhand High Court declared Ganga as a 'living entity', meaning that it will enjoy all the rights, duties and liabilities of a 'living person'. The move by the High Court is a step towards generating awareness on the increasing issue of water pollution. It is for the first time in India that a natural element has been declared a legal person. However, the concept of nature having legal rights is not new and is already being practiced in countries like Ecuador and New Zealand.

The **Green Skill Development Programme (GSDP)** of the MoEFCC is an initiative for skill development in the environment and forest sector to enable India's youth to get gainful employment and/or self-employment.

All courses are National Skills Qualifications Framework (NSQF) Compliant.

Environmental Information system (ENVIS) is a Central Sector Scheme being implemented by MoEFCC since 1982-83.

Green Good Deeds Campaign launched by MoEFCC is a social movement to protect the environment and promote healthy living.

The focus of ENVIS since inception has been on providing environmental information to decision makers, policy planners, scientists and engineers, research workers etc.

National Bamboo Mission (NBM) will be a sub-scheme of **National Mission on Sustainable Agriculture (NMSA)** under the umbrella scheme **Krishonnati Yojana**. The Mission envisages promoting holistic growth of bamboo sector by adopting area-based, regionally differentiated strategy and to increase the area under bamboo cultivation and marketing.

7.4 Miscellaneous

Lighting a Billion Lives (LABL) is a campaign by TERI to promote the use of solar lanterns which are specially designed and manufactured on a decentralized basis.

Urban Services Environmental Rating System (USERS) is a project funded by UNDP, executed by MoEFCC and implemented by TERI. It is aimed at improving basic services like water supply and sewerage.

Eco-mark is a certification mark issued by Bureau of Indian Standards to products conforming to a set of standards aimed at the least impact on the ecosystem.

The **Indo-French Centre for Promotion of Advanced Research (CEFIPRA)** launched a multi-disciplinary Indo-French research project titled "Adaptation of Irrigated Agriculture for Climate Change (AICHA)." It aims at developing an integrated model for analyzing the impact of climate change on ground water-irrigated agriculture in South India.

Forest (Conservation) Act, 1980 was enacted to counter India's rapid deforestation and resulting environmental degradation. Under the provisions of this Act, prior approval of the Central Government is required for diversion of forestlands for non-forestry purposes.

Critical Wildlife Habitats (CWH) are envisaged under Forest Rights Act (FRA), 2006. They are defined under the Act as "areas of national parks and sanctuaries that are to be kept as inviolate for the purposes of wildlife conservation."

While Ministry of Tribal Affairs is the implementing authority for FRA, the Act identifies MoEFCC as the agency to notify the guidelines. Baiga tribe of Madhya Pradesh became the first to get habitat rights under the Act.