ENVIRONMENT ISSUES AND THE ADMINISTRATIVE RESPONSE

The development and growth of environmental policy in India has not been sudden, it has been a piecemeal process. Over a long period of time for more than a century, the Government of India has been working in this direction. It is only gradually that the government became more concerned about environment and with time it realised the drawbacks in its policies and, therefore, made changes in its activities. Earlier too, before independence, the British were also involved but it was for their selfish motive of profit, primarily. After independence, the Government of India realised that to support such a huge population and also to have rapid economic development, it is necessary that the environment is protected and preserved. Therefore, a more comprehensive approach was adopted and a few important measures for the protection of environment were taken. The first step in the field of environment management took place in 1972 when 24th United Nations General Assembly decided to convene a conference on the Human and Environment and requested a report from each member country on the state of environment. Consequently, a Committee on Human Environment was set up under the Chairmanship of Pitambur Pant, a member of the Planning Commission, to prepare these reports. These reports indicated the need for establishing greater co-ordination and integration in environment policies and programmes. In February 1972, a National Committee on Environmental Planning and Co-ordination was established in the Department of Science and Technology. However, the formation of this Committee did not contribute much for the attainment of its objective. In April 1981, it was reconstituted as National Committee on Environment Planning. It did a lot of significant work like; environment appraisal of development projects, human settlements’ planning, formulation of environmental guidelines and creating environmental awareness at various levels. For more comprehensive tools for the administrative and legislative
aspects, the Government of India constituted a High Power Committee under the Chairmanship of the Deputy Chairman of the Planning Commission, N.D. Tiwari. The Tiwari Committee submitted its report to the Prime Minister in September 1980.\textsuperscript{1} It recommended the creation of department of Environment and it came into being within the Ministry of Science and Technology under the charge of Prime Minister. Finally, the Ministry of Environment and Forests came into its present state only in 1985.

1. MINISTRY OF ENVIRONMENT AND FORESTS: THE ADMINISTRATIVE ORGANISATION

The Ministry of Environment and Forests is the key agency in the administrative structure of the Government of India dealing with the implementation of policies and programmes for the protection of environment including conservation and protection from pollution of the natural resources. It does all the governmental work related to the protection of the environment. All the measures that are taken by the government are done through this agency.

The broad objectives of the Ministry are: \textsuperscript{2}

- Conservation and survey of flora, fauna, forests and wildlife
- Prevention and control of pollution
- Aforestation and regeneration of degraded areas
- Protection of the environment and;
- Ensuring the welfare of animals

The organisational structure of Ministry includes various divisions, associated and autonomous offices, agencies, public sector undertakings (PSUs) and autonomous grant-in-aid institutions. All these institutions/agencies have strengthened and supported in carrying out the activities for the protection of environment in India.

The administration of the environment policies is carried out by about 900 staff members of the Ministry of Environment and Forests. Posts of Group ‘A’ have 169,
Group ‘B’ 264 and Group ‘C’ 441 employees. There are a number of divisions through which the Ministry functions.

The General Administration Division of the Ministry is entrusted with the duty of procurement of stationery, stores and equipment for functioning of the Ministry and providing essential services to the personnel of the Ministry including transport, communications, general upkeep etc. It has also decided to adopt sustainable energy efficient environment friendly green building technology for the construction of its new office building that is coming up shortly.

The Indian Forest Service (IFS) Cadre Management Division is enjoined upon to handle the business of the Ministry as the Cadre Controlling Authority for the Indian Forest Service.

The Vigilance Division is responsible for all vigilance/disciplinary matters relating to the Indian Forest Service officers, both in the Ministry including its attached and subordinate offices, autonomous organisations, and the IFS officers posted in the State governments. It also undertakes examination and processing of disciplinary cases, appeals, reviews and memorials of Indian Forest Service officers of all States/Union Territories, investigation of complaints, obtaining and maintenance of annual immovable property returns etc. It also handles the cases filed in various branches of the Central Administrative Tribunal and courts in India are also handled in Vigilance Division. Moreover, it handles the prosecution cases launched against IFS officers by various States/Union Territories and also other officers/staff of the Ministry. In the year 2009-10, 31 disciplinary proceeding cases, 17 appeal cases and 7 prosecution cases were processed in this Division of the Ministry. The Vigilance Division functions under the direct control of Joint Secretary and Central Vigilance Officer, and under the overall supervision of Secretary of the Ministry.

The Parliament Division in the Ministry of Environment and Forests is responsible for co-ordination of all parliament matters related to the Ministry. During 2009-10, a total number of 751 Parliamentary Questions pertaining to different aspects of environment were answered by the Ministry.³

Another unit is the Internal Work Study Unit which coordinates the activities relating to internal work studies of the Ministry. For instance, during 2009-10, about 1500
files were sent for review from Departmental Record Room (DRR) and about 3290 files were received in DRR for retention.  

The Plan Coordination Division is responsible for the coordination of all Plan schemes and programmes of the Ministry in close association with the Planning Commission. This involves preparation, monitoring and review of Five Year Plans, Annual Plans and the Annual Action Plans of the Ministry. It also looks after the monitoring of progress reports and reports under the 20-Point Programme of the Government of India. The Division regularly reviews the progress of plan schemes and takes necessary corrective actions to ensure proper and meaningful deployment of resources with a view to build up the capacities of the State Governments in forestry and environment sectors, for the programmatic aspects and variegated centrally sponsored and central sector schemes. During the X Five Year Plan (2002-2007), the total expenditure was Rs. 5115 crore as against an approved outlay of Rs. 5945 crores. For the XI Five Year Plan (2007-2012), the Ministry of Environment and Forests has been provided with an outlay of Rs. 10000 crores. For the Annual Plan of 2010-11, an outlay of Rs. 2200.00 crores has been allotted.  

Apart from these, there is a RTI Cell in the Ministry which carries out the activities relating to the implementation of RTI Act of 2005. Protocol unit is another unit of this administrative organisation. This unit provides comprehensive arrangements for Ministers of Environment and Forests, Secretary, Special Secretary and Director General of Forests and Special Secretary. There is also a Grievance Cell which attends to the complaints of public regarding forestry and environmental matters. It ensures timely redressal of public grievances by taking up the matter with the concerned authorities like District Magistrates, Municipal Corporations, Pollution Control Boards, State governments and others.
ORGANISATIONAL STRUCTURE OF THE MINISTRY OF ENVIRONMENT AND FORESTS (ENVIRONMENT WING) (As on 15th January, 2010)

CHART 1

MEF

Secretary (E & F)

AS (MFF)

JS (ARK)

JS (BPN)

JS (HPR)

Eco. Adv. (RSA)


JS (RG)

JS (RR)

SS (RRK)

PC

Annual Report

Economic Cell

Trade & Environment

IO

EN VS

Updated Website

PC

Regional Cell

CP

Biodiversity

IC

SD

GEO

Global Public Goods

CEAC: Genetic Engineering Approval Committee

GF: Global Environment Facility

GAP: General Administration

GSMD: Hazardous Substances Management Scheme

GIPS: Indias Global Pervyasan Puranik

IA: Impact Assessment

IC: International Co-operation

ICIMOD: International Centre for Integrated Mountain Development

IWSIU: Internal Work Study Unit

MAP: Malaria and Biopiracy Programme

MD: Mass Declaration

NBAP: National Biodiversity Action Plan

NBA: National Biological Authority

NCC: National Communication

NCSD: National River Conservation Scheme

NLCP: National Lake Conservation Plan

CL: Claire Language

PG: Public Grievances

PC: Plan Coordination

PR: Policy and Law

POPC: Persistent Organic Pollutants

RC: Biodiversity Convention

SACON: Salin Assam Center for Ornithology & Natural History

SACCM: Strategic Approach to International Chemicals Management

SASE: Source Appropriate Studies

SD: Sustainable Development

UNCCD: United Nations Convention on Climate Change

UNFCC: United Nations Framework Convention on Climate Change

UNCCD: United Nations Convention to Combat Desertification

VIO: Vigilance

WBIDRP: World Bank Industrial Development Capacity Building Project

ZSI: Zoological Survey of India

SS (RRK): R.K. Kharwa, Spl. Secretary

AS (MFF): M.F. Farooqui

JS (BPN): B.P. Natwarla, Joint Secretary

JS (HPR): H.K. Panja, Joint Secretary

JS (ARK): A.K. Goyal, Joint Secretary


JS (RR): Rajeev Dube, Joint Secretary

Adv. (OFS): G.K. Prade, Adviser

Adv. (SM): M. Moha, Adviser

JS (RC): R. Gumta, Joint Secretary

JS (RRR): R.R. Rashmi, Joint Secretary

* This work will directly be submitted to the Secretary (E & F)

** Officers for this work will report to SS (RRK)

* Officers for this work will report to JS (HPR)

A: Animal welfare

BG: Botanical Garden

BD: Botanical Survey of India

BCS: Bio-Diversity Conservation Scheme

CC: Climate Change

CDM: Clean Development Mechanism

CP: Control of Pollution

CRZ: Coastal Regulation Zone

CPCB: Central Pollution Control Board

CEP: Capacity Building Project

CED: Convention on Biological Diversity

EE: Environment Education

EIVR: Entities of Incomparable Value Regulations

FE: Forest Establishment

HAIHT: Foundation for Revitalization of Local Health Traditions

GPHED: GB Pan Himalayan Institute of Environment - Development

ORGANISATIONAL STRUCTURE OF THE MINISTRY OF ENVIRONMENT AND FORESTS (ENVIRONMENT WING)

CHART II
(As on 15th January, 2010)

** Officers for this work will report to S5 (RHK)
AICOPTAX: All India Coordinated Project on Building in Taxonomy
CRZ: Coastal Regulation Zone
CCU: Civil Construction Unit
EIV: Entities of Incomparable Value
ESA: Ecologically Sensitive Areas
IA: Impact Assessment
IPF: Integrated Finance Division
SWM: Solid Wastes Management

AS (MFF):
- RE
- Fly Ash
- ESA
- Assistance to Botanic Garden
- AICOPTAX
- EIV
- NMNH

AS (JMM):
- CCU
- NACCOM
- IPCC & all other Scientific/Technical Works related to CC

AS & FA:
- IFD (Environment, NRCD, Forest, Wildlife, NAEB)
- Office of the Principal Pay & Accounts Officer
- Budget

NDMA: National Disaster Management Authority
NMNH: National Museum of Natural History
NAEB: National Afforestation and Eco-Development Board
PLE: Public Liability Insurance
RE: Research in Environment

AS (MFF): M.F. Farooqui, Addl. Secretary
AS(JMM): J.M. Mushtak, Addl. Secretary
Adv (GVS): G.V. Subramani, Adviser
CE (BKR): B.K. Rolde, Chief Engineer
AS & FA: Additional Secretary and Financial Adviser
ADV (NB): Nalin Bhat, Adviser
ADV (SRS): Subodh K. Sharma, Adviser
Apart from these, there are many other divisions of the Ministry of Environment and Forests. There is Survey and Utilisation Division situated in Delhi for monitoring physical and financial targets of the forestry schemes of all the Union Territories, administering the functioning of all Forest Development Corporations including supply of raw materials to industries and collection and compilation of forestry statistics based on reports received from the various State forest departments. It also works for formulation of guidelines for international/domestic trade in forest produce and regulation of export & import of forest produce as per the Export and Import (EXIM) policy, all Non-Timber Forest produce (NTFP), matters including the National Medicinal Plant Boards and Policies related to MFPs including Medicinal Plants, handling of court cases (PIL-202/1995 & 171/1996) in concerned matters, review of production and disposal of timber in the country, etc.6

International Cooperation and Sustainable Development Division (IC&SD) of the Ministry is the nodal point within the Ministry to coordinate all international environment cooperation and sustainable development issues. It is the nodal division for United Nations Environment Programme (UNEP), Nairobi, South Asia Cooperative Environment Programme (SACEP), Colombo. The Division also handles bilateral issues and matters pertaining to multilateral bodies such as the Commission on Sustainable Development, Environment Support Programme of UNDP under Country Cooperation Framework -1, Global Environment Facility (GEF) and the regional bodies like Economic & Social Commission for Asia & Pacific (ESCAP), South Asian Association for Regional Cooperation (SAARC), European Union (EU) and the India Canada Environment Facility. IC&SD Division plays a coordinating role in the matters relating to the conventions in the field of environment. A compendium on various environment related conventions is proposed to be brought out by the Division. The IC & SD Division has also prepared reports for World Summit on Sustainable Development. In the area of sustainable development following new initiatives have been taken up by the Division:

i. Preparation of State of Environment (SoE) Report;

ii. Formulation of Sustainable Development Indicators (SDI).7
As part of the international cooperation, India has been dealing with the climate change, ozone depletion and Clean Development Mechanism of the Kyoto Protocol. In June 2008, India launched its National Action Plan on Climate Change. Eight National Missions form the core of national Action Plan on Climate Change. The ‘Green India’ Project launched by the Ministry with a view to cover six million hectares of degraded forestland through afforestation measures is an important contribution to the objectives of this Plan. Furthermore, the national Clean Development Mechanism Authority functions in the Ministry to evaluate and recommend CDM projects for host approval. Recently, in the year 2009 it participated in the meeting held in Siracusa, Rome and most importantly in Copenhagen.

The Ministry has set up an ozone cell as a national unit to work relating to ozone layer protection and implementation of the Montreal Protocol to the Ministry of Environment & Forests (MOEF).

The Externally-Aided Projects Division deals with the approvals and monitoring of forestry-related projects which are aided by external agencies. These projects are being implemented in the States with assistance from external donors like the Japan International Cooperation Agency (JICA), World Bank (WB), etc. At present, as many as nine projects are being aided by JICA and 1 by the World Bank.

The Hazardous Substances Management Division (HSMD) is the nodal point within the Ministry for management of chemical emergencies and hazardous substances. The main objective of the Division is to promote safe management and use of hazardous substances including hazardous chemicals and hazardous wastes in order to avoid damage to health of people and other living organisms and environment. The activities of the division are carried out under three main thrust areas, viz., Chemical Safety, Hazardous Wastes Management and Solid Waste Management. The Division is also the nodal point for the following three International Conventions:

i. The Basel Convention on the Control of Transboundary Movement of Hazardous Wastes and their Disposal


iii. The Stockholm Convention on Persistent Organic Pollutants (POPs)
For better execution of work, the Ministry established a separate construction unit within the Ministry in March, 1987. It was named as Civil Construction Unit (CCU). It undertakes construction works for all the attached and subordinate offices and autonomous bodies. There are 3 divisions looking after the construction works throughout the country. Two divisions are located in Delhi and the third division is in Bengaluru. CCU executes the civil construction works of the Ministry where CCU does not have its own unit. CCU provides necessary inputs for planning including budget and coordinates works being executed by CPWD. Lately, it was involved in the construction of museum and auditorium blocks for Rajiv Gandhi Regional Museum of Natural History at Sawai Madhopur with the sanctioned cost of Rs. 4100 lakhs.\(^{13}\)

Moreover, there is Control of Pollution Division, Forest Policy Division, Clean Technology Division and Conservation and Survey Division carrying out their respective responsibilities.

2. OFFICES/ORGANISATIONS UNDER THE MINISTRY OF ENVIRONMENT AND FOREST

Besides divisions of the Ministry, there are other boards and autonomous organisations working under the Ministry of Environment and Forests.

(i) Autonomous Organisation

The autonomous organisations working under the Ministry of Environment and Forests in different parts of India are as follows:

(a) Gobind Ballabh Pant Institute of Himalayan Environment & Development

This institute was established as a focal agency in 1988-89 in Almora to advance scientific knowledge, to evolve integrated management strategies, demonstrate their efficacy for conservation of natural resources, and to ensure environmentally sound development in the entire Indian Himalayan Region (IHR). It also attempts to maintain a balance of intricate linkages between socio-cultural, ecological, economic and physical systems that could lead to sustainability in the IHR.\(^{14}\)
(b) Indian Council of Forestry Research and Education

It is an apex body in the national forestry research system established in Dehradun. Its mission is the holistic development of forestry research through need based planning, promoting, conducting and coordinating research, education and extension covering all aspects of forestry. It deals with the solution based forestry research in tune with the emerging issues in the sector, including global concerns such as climate change, conservation of biological diversity, combating desertification and sustainable management and development of resources.15

(c) Indian Institute of Forest Management (IIFM)16

IIFM has its headquarters in Bhopal with the objective to:

- Provide training in management and related subjects for persons from the Indian Forest Service, Forest Departments, Forest Development Corporation and Forest related industries to inculcate an appreciation in those selected for training, that conservation is of overriding importance in the management of living natural resources and that the primary role of forests is of vital importance for the ecological and environmental purpose they serve.

- Select and prepare outstanding and talented young persons for careers leading to management responsibility in forestry and the forest-related systems.

- Meet the needs of Indian forestry and forest-related industry and commerce in respect of up-to-date information on forestry management through research, consultation and publication.

- Assist, institute and carry out research in matters concerning the use of management and allied techniques and methods conducive to the development of forestry in the country.

- Institute awards, scholarships, fellowships, prizes and medals in accordance with rules and bye-laws.

- Create patronships, affiliations & other classes of professional or honorary membership or office, as the society may consider necessary.
(d) Indian Plywood Industries Research and Training Institute

This was first established as Indian Plywood Manufacturers’ Research Association in 1962 as a cooperative research laboratory under the umbrella of Council of Scientific and Industrial Research (CSIR) for undertaking applied research on ‘Plywood’, an important wood based material. It was re-designated as present IPMRA in 1970, then was brought administrative control under government of India in 1978 and was finally transferred to the Ministry of Environment and Forests in 1990. Its activities include:

- Research on all aspects of production of sawn timber, manufacturing plywood and other allied engineered and reconstituted wood and lignocellulosic products.
- Training in connection with forest products utilisation for plywood industry and trade and allied industries.
- Inspection, testing and certification of all forest products.

(e) Wildlife Institute of India (WII)

It was set up at Dehradun in 1982 with a mandate to train government and non-government personnel, carry out research, and advise on matters of conservation and management of wildlife resources. It was accorded autonomy in April 1986. Its mission is to nurture the development of wildlife science and promote its application in conservation; in consonants with our cultural and socio-economic milieu. It is an institute of the Ministry with a 49 member Wildlife Institute of India Society as the apex body. The Society is chaired by the Union Minister for Environment and Forests.

(ii) Subordinate Offices under the Ministry of Environment and Forests

(a) Forest Survey of India

This chief organisation was established at Dehradun in June 1981 under the Ministry of Environment and Forests with the task for assessment and monitoring of the forest
resources of the country regularly. In addition, it is also engaged in providing the services of training, research and extension. Earlier, it started as “Preinvestment Survey of Forest Resources” (PISFR), a project initiated in 1965 by Government of India with the sponsorship of FAO and UNDP.\textsuperscript{21}

(b) Botanical Survey of India

The Botanical Survey of India is the apex research organisation under the Ministry of Environment and Forests for carrying out taxonomic and floristic studies on wild plant resources of the country. It was established in 1787 on the recommendations of Colonel Robert Kyd under the name of Company Bagan. In 1897 its name was changed to ‘Royal Botanic Garden’. After independence it was finally reorganized in 1954 to its present name with headquarters in Calcutta. The following are the objectives of the Botanical Survey of India:\textsuperscript{22}

- To carry out intensive floristic surveys and collect accurate and detailed information on the occurrence, distribution, ecology and economic utility of plants in the country.
- To collect, classify and circulate materials which may be of use to educational and research institutions and;
- To act as guardian of authentic collections in well planned herbaria and to keep record of the plant resources in the form of local, district, state and national flora.

To cope with the enormous work, new circles are being established around the country, latest being established at Hyderabad in 2005.\textsuperscript{23}

(c) Zoological Survey of India

It is the only taxonomic organisation, established on 1st July, 1916 in the country which is involved in the study of all kinds of animals from Protozoa to Mammalia, occurring in all possible habitats from deepest depths of oceans to the peaks of Himalayas. It was established to promote survey, exploration and research of the various aspects of the exceptionally rich animal life in India. The headquarters is in Kolkata and 16 regional centres are located in different parts of the country.\textsuperscript{24}
Recently, efforts have been made towards an integrated approach to zoological investigations, so as to have more purpose oriented research comprising biological, cytotoxicomic, and ecological aspects. However, taxonomy continues to occupy a prominent role.²⁵

(d) **Indira Gandhi National Forest Academy**

It was constituted in 1987 in Dehradun by renaming the erstwhile Indian Forest College, which was originally established in 1938 for training senior forest officers. The primary mandate of the Academy is to impart knowledge and skills to the professional foresters including new as well as different levels of seniors and help them to develop competence for managing the country’s forest and wildlife resources on a sustainable basis.²⁶

(e) **Directorate of Forest Education**

The post of Director, Forest Education was created in the year 1953 to assist the President, Forest Research Institute and College. With it rested the responsibility for professional and technical training/education in the country.²⁷ Subsequently, in 1991, the Directorate of Forest Education was brought under the Ministry of Environment and Forests. Presently, it controls over three Central Academies for State Forest Service in the country at Burnihat (Assam), Coimbatore (Tamil Nadu) and Dehradun (Uttarakhand) and one Rangers College namely; Eastern Forest Rangers College at Kurseong (West Bengal) besides four Rangers Colleges run by the State governments.²⁸

(f) **National Institute of Animal Welfare**

This institute was established in Faridabad with the mandate of promoting animal welfare in India. This institute was created with the purpose of fostering knowledge and training of personnel working with the animals in the state veterinary departments, municipal corporations, forensic labs, forestry labs, forestry departments, laboratories dealing with the animal experimentation, sanctuaries, animal houses/shelters, pharmaceuticals, diagnostic labs, nominees of Animal Welfare Board of India, CPCSEA members, SPCA members, institutional animal ethics committee, NGOs registered with Animal Welfare Board of India, students
graduated in veterinary and animal sciences, fisheries, wildlife sciences, biological sciences etc.  

(g) **National Zoological Park**

The National Zoological Park is located in New Delhi. The main objective is to create awareness among visitors regarding nature conservation.

(h) **National Museum of Natural History**

It was established in 1972 in New Delhi during the reign of Mrs. Indira Gandhi as the prime minister when it was realised there is a need of a museum of Natural History to depict its flora, fauna and mineral wealth to provide an out of school facility for education of children and to promote environmental awareness among the masses. It was thrown open for public on 5 June 1978. It is involved in the exhibition of galleries, discovery and activity rooms, summer programmes, teacher orientation programmes, programmes for persons with disabilities, conducted tours and film shows and publications.

(iii) **Boards**

The boards under the Ministry of Environment and Forest are:

(a) **Animal Welfare Board of India**

The Animal Welfare Board of India is a statutory advisory body on animal welfare laws established in 1962 under Section 4 of the Prevention of Cruelty to Animals Act, 1960. It ensures the implementation of animal welfare law, to provide grants to animal welfare organisations, to impart education in this field, to cooperate and coordinate work of organisations and to advise the Government of India on animal welfare issues.

(b) **Central Pollution Control Board**

The Central Pollution Control Board (CPCB) performs functions as laid down under the Water (Prevention and Control of Pollution) Act of 1974 and the Air (Prevention and Control of Pollution) Act of 1981. It is responsible for planning and executing comprehensive nationwide programmes for the prevention and control of water and
air pollution, for advising the central government on matters concerning prevention and control of water and air pollution and for coordinating activities of State Pollution Control Boards/ Pollution Control Committees besides providing technical assistance and guidance to them. The CPCB has established a network of water and air quality monitoring stations. The principal functions of the CPCB are as follows:

- Recommend to the central government on any matter concerning prevention and control of water and air pollution and improvement of the quality of air.
- Plan a nation-wide programme for the prevention, control or abatement of water and air pollution.
- Co-ordinate and resolve disputes among the activities of the State Boards.
- Provide technical support and assistance to the State Boards, carry out and sponsor investigations and research relating to problems of water and air pollution, and for their prevention, control or abatement.
- Plan and manage training of persons engaged in programme on the prevention, control or abatement of water and air pollution.
- Organise, through mass media, a comprehensive mass awareness programme on the prevention, control or abatement of water and air pollution.
- Collect, compile and publish technical and statistical data relating to water and air pollution and the measures devised for their effective prevention, control or abatement.
- Arrange manuals, codes and guidelines relating to treatment and disposal of sewage and trade effluents as well as for stack gas cleaning devices, stacks and ducts.
- Disseminate information in respect of matters relating to water and air pollution and their prevention and control.
- Lay down, modify or annul, in consultation with the State governments concerned, the standards for streams or wells, and lay down standards for the quality of air; and
• Perform such other functions as may be prescribed by the Government of India.

These functions are performed at the national level by the CPCB. In respect of Union Territories, the CPCB has delegated its powers and functions under the Water (Prevention and Control of Pollution) Act, 1974, the Water (Prevention and Control of Pollution) CASs Act, 1977 and the Air (Prevention and Control of Pollution) Act, 1981 to respective local administration, as per the policy decision of the Government of India.  

(c) National Afforestation and Eco-development Board

The National Afforestation and Eco-Development Board (NAEB) was set up in August 1992. It is responsible for promoting afforestation, tree planting, ecological restoration and eco-development activities in the country. It gives special attention to the degraded forest areas and lands adjoining the forest areas, national parks, sanctuaries and other protected areas as well as the ecologically fragile areas like the Western Himalayas, Aravallis, Western Ghats, etc. It operates the following major schemes:

• National Afforestation Programme (NAP) Scheme

• NAEB Scheme: the major components of the Scheme are:-
  i. Grants-in-aid for Greening India Scheme.
  ii. Monitoring and evaluation.
  iii. Communication.
  iv. Support to Regional Centres (RCs).

• Eco-Development Forces (ECF).  

(iv) Authorities under Ministry of Environment and Forests

The Authorities under the Ministry are:

(a) Central Zoo Authority:

The Central Zoo Authority was constituted under the Wildlife (Protection) Act of 1972. The main objectives of the authority are to complement the national effort in
conservation of wild life, standards and measures for housing, upkeep, health care and overall management of animals in zoos has been laid down under the Recognition of Zoo Rules, 1992. Every zoo in the country is required to obtain recognition from this Authority for its operation. The Authority evaluates the zoos with respect to the parameters, prescribed under the rules, and grants recognition accordingly. Zoos which lack the prescribed standards and norms and have no potential to come up may be refused recognition and asked to close down. Since its inception in 1992, the Authority has evaluated 347 zoos, out of which 164 have been recognised and 183 were refused recognition. Out of 183 zoos which were refused recognition, 92 have been closed down and their animals relocated suitably. Cases of the remaining 91 derecognised zoos are currently under evaluation.

The Central Zoo Authority also regulates the exchange of animals of endangered category listed under Schedule-I and II of the Wildlife (Protection) Act among zoos. Exchange of animals between Indian and foreign zoos is also approved by the Authority before the requisite clearances under EXIM Policy and the CITES permits are issued by the competent authority. The Authority also coordinates and implements programmes on capacity building of zoo personnel, planned breeding programmes and ex-situ research including biotechnological intervention for conservation of species for complementing in-situ conservation efforts in the country. Some of the major initiatives undertaken by the Authority since its establishment is the foundation of Laboratory for Conservation of Endangered Species at Hyderabad for carrying out research in biotechnology, planned breeding of Red Panda and its restocking into the wild, upgradation of diagnostic facilities for disease diagnosis at selected veterinary institutions and their networking with zoos on regional basis for better health care of animals.  

(b) National Biodiversity Authority:

To pursue the implementation of the Biological Diversity Act of 2002, National Biodiversity Authority was established by the Government of India in October 2003 at Chennai in Tamil Nadu. Under the Section 8 of the Act, the main functions of the Authority were to advise the Government of India, regulate activities and issue guidelines on matters relating to conservation of biodiversity, sustainable use of its components and equitable sharing of benefits arising out of utilisation of biological
resources. It also takes necessary measures to oppose the grant of intellectual property rights in any country outside India on any biological resource obtained from India or knowledge associated with such biological resource derived from India. It advises the State governments in the selection of areas of biodiversity importance to be notified as heritage sites and suggest measures for their management. It, along with the State Biodiversity Boards, provides guidance and technical support to Biodiversity Management Committees (BMC) for preparing People's Biodiversity Registers (PBR). 38

(c) National Ganga River Authority:

The National Ganga River Authority was constituted by the Government of India on 20th February 2009 under Section 3(3) of the Environment (Protection) Act, 1986 to revamp the cleaning process of the Ganga river. It is an empowered planning, financing, monitoring and coordinating authority for the Ganga river. The objective of the Authority is to have the river basin as the unit of planning and to have a comprehensive response covering water quality and flow, sustainable access, environment management, prevention and control of pollution and food and energy security, in the form of a national mission. 39

(d) National Tiger Conservation Authority:

It is constituted for strengthening tiger conservation by, *inter alia*, ensuring normative standards in tiger reserve management, preparation of reserve specific tiger conservation plan, laying down annual/audit report before the Parliament, constituting State level Steering Committees under the Chairmanship of Chief Minister and establishment of Tiger Conservation Foundation. 40

Besides all these there is one public sector undertaking known as Andaman and Nicobar Islands Forest and Plantation Development Corporation Limited in Port Blair.

(v) Centre of Excellence

The Ministry of Environment and Forests launched the scheme ‘Centre of Excellence’ in 1983 to promote institutions which would enhance people’s awareness
about environment. The main purpose to establish these centres is to enhance education, research and training in the field of environment. Ten centres in different areas have been set up till now to accomplish this purpose.\textsuperscript{41}

i. Centre for Environment Education (CEE), Ahmedabad.

ii. C.P.R. Environmental Education Centre (CPREEC), Chennai.

iii. Centre for Ecological Sciences, Bengaluru.

iv. Centre for Mining Environment, Dhanbad.

v. Salim Ali Centre for Ornithology and Natural History (SACON), Coimbatore.

vi. Centre for Environmental Management of Degraded Ecosystems (CEMDE), Delhi.

vii. Tropical Botanic Garden and Research Institute (TBGRI), Thiruvananthapuram.

viii. Madras School of Economics (MSE), Chennai.

ix. Foundation for Revitalisation of Local Health Traditions (FRLHT), Bengaluru.

x. Centre for Animals and Environment, Bengaluru.

The policy-making and implementation of the environment policies is a dynamic process. With time and place, the conservation and protection policies have to be changed in order to cope with the changing degrading environment. Therefore, there are a series of offices and organisations through which the Ministry of Environment and Forests carries out its responsibilities and functions for the protection of environment.

3. ENVIRONMENT INFORMATION SYSTEM

Realising the need for environment information, the ministry set up an Environmental Information System in 1983 acronymed as ENVIS. It was implemented as a comprehensive network in environmental information collection, collation, storage,
retrieval and dissemination to varying users including policy planners, decision makers, scientists and environmentalists, researchers, academicians and other stakeholders. ENVIS is conceived as a comprehensive distributed environmental information network system with the subject-specific centres to carry out the mandates and to provide the relevant and timely information to all concerned. To cover the wide range of disciplines of subjects of the ENVIS, all the states and union territories of the country are included in it.

Presently, ENVIS network consists of 76 network partners out of which 46 are on subject-specific and 30 are on state related issues. These network partners are called ENVIS Centres and are located in the notable organisations/ institutions/ Universities/ State/ UT Government Departments throughout the country. The broad objectives of ENVIS are: 42

(i) **Long-term objectives:**

a) to build up a repository and dissemination centre in environmental science and engineering;

b) to gear up the modern technologies of acquisition, processing, storage, retrieval and dissemination of information of environmental nature; and

c) to support and promote research, development and innovation in environmental information technology.

(ii) **Short-term objectives**

a) to provide national environmental information service relevant to present needs and capable of development to meet the future needs of the users, originators, processors and disseminators of information;

b) to build up storage, retrieval and dissemination capabilities with the ultimate objectives of disseminating information speedily to the users;

c) to promote, national and international cooperation and liaison for exchange of environment related information;
d) to promote, support and assist education and personnel training programmes designed to enhance environmental information processing and utilisation capabilities;

e) to promote exchange of information amongst developing countries.

Thus, the ENVIS network continues its work by information-related activities, database development, publication of requisite information packages through newsletters, abstracting service etc and also the query-response services. The ENVIS works with the help of Statistical Cell, Information and Facilitation Centre and the NGO Cell. Some of the important activities of the ENVIS network include publication of Annual Reports, ‘State of the Environment’ and quarterly newsletter ENVIRONNEWS, the ENVIS Focal Point is responsible for updating and maintenance of the website of the Ministry.

The Ministry of Environment and Forests is also the National Focal Point (NFP) of INFOTERRA (an International Referral System for Sources of Information) network of United Nations Environment Programme (UNEP).

4. **ENVIRONMENT IMPACT ASSESSMENT (EIA)**

Environment Impact Assessment is one of the important management tools employed in recent times to determine the impact of various human activities on the environment. It is a task to be carried out before any project or major activity such as industrial development or dam construction to ensure that it will not by any means damage the environment on a short term or long term basis. It is a tool for ensuring the optimal use of natural resources for sustainable development. Its objectives are to identify, examine, assess and evaluate the likely and probable impacts of a proposed project on the environment and, thereby, to work out remedial action plans to minimize adverse impact on the environment. It is a decision making tool that evaluates various alternatives for a project and seeks to identify the one that represents the best blend of economic and environmental costs and benefits. Moreover, it considers not only the environment but also aesthetic, economic, social and cultural aspects. There are number of cases when the projects were made environmental friendly on the apprehension of being rejected after EIA. For example, over a thousand large saplings were planted in two days in the Noida Park because of
EIA, after they have cut down 6000 trees few days back for a statue complex. The role of the EIA was formally recognized in the Rio Declaration on the Environment and Development of 1992. Principle 17 of the Rio Declaration states-

“Environmental impact assessment, as a national instrument, shall be undertaken for proposed activities that are likely to have a significant adverse impact on the environment and are subject to a decision of a competent national authority.”

In India, this technique was applied formally only after 1994 and was re-engineered in 2006. However, before 1994, the Tiwari Committee recommended the environment impact study of proposed projects, but limited emphasis was given on this issue. It was during 1994 that the Environment Impact Assessment Notification came into force under clause (a) of sub-rule 3 of rule 5 of the Environment (Protection) Rules, 1986. Moreover, public hearing has been made mandatory for environment clearance by the Amendment to the Environment Impact Assessment Notification of April 10, 1997.

The following stages are followed under the EIA process:

i. **Screening:** This is the first stage of EIA determining whether the proposed project requires an EIA and if it does, then the level of assessment required.

ii. **Scoping:** This stage defines the key issues and impacts that should be further investigated and also defines the boundary and time limit of the study.

iii. **Impact analysis:** This stage identifies and predicts the likely environmental and social impact of the proposed project and evaluates their significance.

iv. **Mitigation:** This step in EIA recommends the actions to reduce and avoid the potential adverse environmental consequences of development activities.

v. **Reporting:** This stage presents the result of EIA in the form of a report to the decision-making body and other interested parties.

vi. **Review of EIA:** It examines the adequacy and effectiveness of the EIA report and provides the information necessary for decision-making.
vii. **Decision-making:** It decides whether the project is rejected, approved or needs further change.

viii. **Post monitoring:** This stage comes into play once the project is commissioned. It checks to ensure that the impacts of the project do not exceed the legal standards and implementation of the mitigation measures are in the manner as described in the EIA report.

In the re-engineered Environment Impact Assessment Notification 2006, projects were categorised into category ‘A’ and category ‘B’ depending on their threshold capacity and likely pollution potential and were appraised for prior environmental clearance at the central and the state levels respectively. The environmental clearance was accorded to five hundred forty eight projects and Term of Reference to six hundred twenty four projects up to December 2009. Further, for appraisal of category ‘B’ projects and activities, State Level Environment Impact Assessment Authorities (SEIAAs) and State Expert Appraisal Committees (SEACs) have been constituted. So far, the Ministry of Environment and Forests has constituted 23 State/UT level Environment Impact Assessment Authorities for appraisal of all ‘B’ category projects and activities. These 23 State/UT level Environment Impact Assessment Authorities accorded environmental clearance to seven hundred fifty nine projects in the year 2009.

Further, the Ministry of Environment and Forests is in the process of preparation of 37 Environment Impact Assessment manuals on sector specific developmental projects, which are listed in the Schedule to the Environment Impact Assessment Notification 2006.

Recently, all the consultants/Public Sector Undertakings (PSUs) working in the area of Environment Impact Assessment are required to get themselves registered under the scheme of Accreditation and Registration of the National Accreditation Board of Education and Training (NABET) and the Quality Council of India (QCI) by 30th June 2010.
5. OTHER INITIATIVES FOR ENVIRONMENT MANAGEMENT

Apart from these, the ministry has been taking measures and schemes from time to time for the better functioning of the ministry in order to manage properly the environmental issues of the country. The Acts alone does not carry the burden of making of environmental policy. There are other plans, strategies and policies to complement the Acts. For instance, for proper protection of the forests of the country, the Ministry came out with separate National Forest policy in 1988. Recently, the Ministry has initiated a proposal to establish a National Environment Protection Authority (NEPA) to strengthen regulatory framework and to improve the environmental governance in the country. A concept note on NEPA was uploaded in the Ministry’s website and large number of suggestions have been received from various sections of society. A meeting was held which included the representatives of the various agencies of the government. A study has been awarded to IIT, Delhi to work out the scope and architecture of the NEPA in detail.\textsuperscript{51}

Relatively, there is Research in Environment Division of the Ministry since 1985 with the objective to generate information required to develop strategies, technologies and methodologies for better environmental management. Further, it aims at attempting solutions to the practical problems of resource management, conservation of natural resources and eco-regeneration of degraded areas and to strengthen infrastructure to facilitate research and scientific manpower development. The ministry supports research through its established research programmes. These include Environment Research Programme (ERP), Ecosystem Research Scheme (ERS), and Eastern and Western Ghats Research Programme (E&WGRP). In the year 2007-08, new thematic group was constituted on Economic & Social Issues. The ministry also encourages research through awards of National Fellowships to the outstanding scientists in the field of environment.\textsuperscript{52} The following awards are conferred on individuals or organisations by the Ministry of Environment and Forests:

a. Indira Gandhi Paryavaran Puraskar (IGPP).

b. Indira Priyadarshini Vriksha Mitra (IPVM) Awards.
c. Pitamber Pant National Environment Fellowship.
d. B.P. Pal National Environment Fellowship for Biodiversity.
e. E.K. Janaki Annual National Award on Taxonomy.
f. National Awards for Prevention of Pollution and Rajiv Gandhi Environment Award for Clean Technology.
g. Amrita Devi Bishnoi Wildlife Protection Award.
h. Rajiv Gandhi Wildlife Conservation Award.
i. Medina Puraskar.\textsuperscript{53}

The major policies apart from the Acts pertaining to protection of environment adopted by the Ministry of Environment and Forests for better environment management are:

(i) \textbf{Policy Statement on Abatement of Pollution 1992}

This environmental policy was made to shift emphasis from defining objectives for each problem area of environment towards actual implementation, and to focus on the long term, because pollution particularly affects the poor. This policy defined that to achieve the objectives, maximum use will be made of a mix of instruments in the form of legislation and regulation, fiscal incentives, voluntary agreements, educational programmes and information campaigns. The emphasis will be on increased use of regulations and an increase in the development and application of financial incentives. The emphasis is also on the integration of environmental and economic aspects in development planning, preventive aspects of pollution abatement and increased modern technological inputs to arrest industrial pollution and to rely on public cooperation.


This was another policy made in 1992 to guide the Ministry of Environment and Forests in the implementation of laws for environment protection. The main purpose of this policy is to reinforce traditional ethos and build up a conservation society in
harmony with nature and to use the best scientific knowledge for efficient use of resources. It has discussed guidelines for the protection of environment such as Environment Impact Assessment of all development projects at planning stage, compulsory ‘Prior Environmental Clearance’ of projects above certain size in certain ecologically sensitive areas, incorporation of environmental safeguards in all major sectors, enhance R&D and adoption of environmentally compatible technologies for conservation, education and mass awareness programme, development of institutions and effective participation of people.

(iii) National Environment Policy 2006

This National Environment Policy 2006 seeks to extend the coverage and fill in gaps that still exist in the earlier policies (i.e. the National Conservation Strategy and Policy Statement on Environment and Development, 1992; National Forest Policy, 1988; Policy Statement on Abatement of Pollution, 1992) in the light of present knowledge and accumulated experience. It builds on but does not displace the earlier policies. It is intended to mainstream environment concerns in all development activities. It briefly describes the key environment challenges currently and prospectively facing the country, the objectives of environment policy, normative principles underlying policy action, strategic themes for intervention, broad indications of the legislative and institutional development needed to accomplish the strategic themes, and mechanisms for implementation and review. It seeks to stimulate partnerships of different stakeholders, i.e. public agencies, local communities, academic and scientific institutions, the investment community, and international development partners, in harnessing their respective resources and strengths for environment management.

The dominant theme of this policy is that ‘while conservation of environmental resources is necessary to secure livelihoods and well-being of all, the most secure basis for conservation is to ensure that people dependent on particular resources obtain better livelihoods from the fact of conservation, than from degradation of the resource.’

The principal objectives of this policy in respect of current environment challenges are as follows:
(i) Conservation of Critical Environmental Resources:

To protect and conserve critical ecological systems and resources, and invaluable natural and man-made heritage, which are essential for life support, livelihoods, economic growth, and a broad conception of human well-being.

(ii) Intra-generational Equity: Livelihood Security for the Poor:

To ensure equitable access to environmental resources and quality for all sections of society, and in particular, to ensure that poor communities, which are most dependent on environmental resources for their livelihoods, are assured secure access to these resources.

(iii) Inter-generational Equity:

To ensure judicious use of environmental resources to meet the needs and aspirations of the present and future generations.

(iv) Integration of Environmental Concerns in Economic and Social Development:

To integrate environmental concerns into policies, plans, programmes, and projects for economic and social development.

(v) Efficiency in Environmental Resource Use:

To ensure efficient use of environmental resources in the sense of reduction in their use per unit of economic output, to minimize adverse environmental impacts.

(vi) Environmental Governance:

To apply the principles of good governance (transparency, rationality, accountability, reduction in time and costs, participation, and regulatory independence) to the management and regulation of use of environmental resources.

(vii) Enhancement of Resources for Environmental Conservation:

To ensure higher resource flows, comprising finance, technology, management skills, traditional knowledge, and social capital, for environmental conservation through mutually beneficial multi-stakeholder partnerships between local communities, public agencies, the academic and research community, investors, and multilateral and bilateral development partners.
To fulfill these objectives, there are stated principles which guide the activities of different actors in relation to this policy. They are enumerated as following:

(i) **Human beings are at the Centre of Sustainable Development Concerns:**

   They are entitled to a healthy and productive life in harmony with nature.

(ii) **The Right of Development:**

   This right must be fulfilled so as to equitably meet developmental and environmental needs of present and future generations.

(iii) **Environmental Protection is an integral part of the Development Process:**

   In order to achieve sustainable development, environmental protection shall constitute an integral part of the development process and cannot be considered in isolation from it.

(iv) **The Precautionary Approach:**

   Where there are credible threats of serious or irreversible damage to key environment resources, lack of full scientific certainty shall not be used as a reason for postponing cost-effective measures to prevent environment degradation.

(v) **Economic Efficiency:**

   This principle requires that the services of environment resources be given economic value, and such value to count equally with the economic values of other goods and services, in analysis of alternative courses of action. The further implications of this principle are Polluters pay and Cost Minimization.

(vi) **Entitles with “Incomparable” Values:**

   Incomparable values are those intrinsic values which include the environment’s resources that cannot be compared and cannot be less (and has to be more including the non-use loss) than the opportunity cost of losing the commercial gains from these preserved assets.
(vii) Equity:

The cardinal principle of equity or justice requires that human beings cannot be treated differently based on irrelevant differences between them. Equity, in the context of this policy refers to both equity in entitlements to, and participation of, the relevant publics, in processes of decision-making over use of environment resources.

(viii) Legal Liability:

The principle of legal liability may be viewed as an embodiment in legal doctrine of the “polluter pays” approach, itself deriving from the principle of economic efficiency.

(ix) Public trust doctrine:

This doctrine implies that state is not the owner but trustee of natural resources that are meant for public’s reasonable use and enjoyment.

(x) Decentralisation:

Decentralisation involves ceding or transfer of powers from a central to lower authorities to empower public authorities having jurisdiction over salient environmental issues.

(xi) Integration:

Integration refers to inclusion of environment considerations in sectoral policymaking, research and among various government agencies.

(xii) Environmental Standard Setting:

Environment standards must reflect the economic and social development situation in which they apply.

(xiii) Preventive Action:

It is preferable to prevent environmental damage from occurring in the first place, rather than attempting to restore degraded environmental resources after the act.
(xiv) Environmental Offsetting:

There is general obligation to protect the environment. If for exceptional reasons of overriding public interest environment protection cannot be provided in particular cases, cost-effective offsetting measures must be undertaken by the proponents of the activity, to restore as nearly as feasible, the lost environmental services to the same people.

The other policies of environment aspects by the Government of India include:

- National Health Policy, 2002.

The Strategies and Action Plans on environmental aspects by the government include:

- Environmental Action Plan, 1993
- Wildlife Conservation Strategy, 2002

(iv) International Initiatives:

The Ministry of Environment and Forests is also involved in the transboundary environmental initiatives in order to protect the transboundary ecosystems. The one that has been the proposed is the Indo-Bangladesh Sunderbans Eco-System Forum to be launched by September 2010. The Ministry of Environment and Forests has
earmarked a Rs 450 crore special grant, to be spent over the next five years, for augmenting the crucial embankment system in the estuarine region. This is separate from the Centre's Rs 5,032 crore project that is also aimed at improving the embankments that surround many inhabited islands in the Sunderbans.55

To conserve the region of Greater Mt. Kailash, a transboundary initiative has been taken up involving India, China and Nepal, facilitated by ICIMOD with support from UNEP. This project is titled ‘Mount Kailash Sacred Landscape Conservation Initiative: Developing a Transboundary Framework for Conservation and Sustainable Development in the Greater Mt. Kailash Region of Nepal, India & China’. It aims to promote long-term ecological, climatic, and biodiversity datasets within the Mt. Kailash Sacred Landscape (KSL) which would contribute to alleviating knowledge gaps that have emerged as a serious impediment to improved understanding, modeling, and prediction of climate change impacts (locally, regionally, and globally).56

6. OTHER MINISTRIES OF GOVERNMENT OF INDIA

However, Ministry of Environment and Forests of the Government of India alone is not involved in the legislation and implementation of environment policies, other Ministries of the Government of India are also involved. For instance, before the creation of Ministry of Environment and Forests, the Ministry of Law, Justice and Company Affairs dealt with the Water Pollution Act of 1974.

The Tourism Ministry of the Government of India promotes the tourism in a responsible and sustainable manner. Recently, the Ministry of Tourism held a meeting to plan National Workshop of Sustainable Tourism Criteria to discuss the modalities for the Sustainable Tourism Criteria for India with various stakeholders of the tourism industry. The Global Sustainable Tourism Criteria are a set of 37 voluntary standards representing the minimum that any tourism business should aspire to reach in order to protect and sustain the world’s natural and cultural resources while ensuring tourism meets its potential as a tool for poverty alleviation. Also, with the growing trend towards travel to economic-tourism destinations like National Parks and Sanctuaries, the Ministry organised a series of meetings with the Ministry of Environment and Forests and others under the initiative ‘Tigers – Our
National Beauties” to raise concern about growing dangers to wildlife due to unplanned growth of infrastructure.  

The Ministry along with Ministry of New and Renewable Energy (MNRE) and Bureau of Energy Efficiency (BEE) has jointly developed a low carbon campaign for Commonwealth Games 2010. ‘Go Green - It Works’ is a campaign that inspires the common man to adopt green behavior in his/her everyday life and lifestyle.

Another is the Ministry of New and Renewable Energy (MNRE) which is the nodal Ministry of Government of India at the National level for all matters relating to new and renewable energy such as solar, wind, biomass, small hydro, hydrogen, bio-fuels, geothermal etc. The endeavour of the Ministry is to promote renewable energy technologies and increase the contribution of renewable energy in the total energy mix today and in the years to come as well as to sub-serve the above objectives. The Ministry has a wide range of programmes on research and development, demonstration and promotion of renewable energy for rural, urban, commercial and industrial applications as well as for grid-interactive power generation. Recently, it organised the India-Iceland Workshop on Renewable Energy with focus on development and utilisation of Geothermal Energy and Small Hydro Power in January 2010.

The Ministry of Petroleum and Natural Gas has also initiated various steps through the Petroleum Conservation Research Association (PCRA) to promote energy conservation in the transport, industrial, agricultural and domestic sectors.

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