



# **BRIEF STATEMENT ON ACTIVITIES AND ACHIEVEMENTS 2018**



**Ministry of Environment, Forest and Climate Change,  
Government of India**

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## Abbreviations

A.I.C.O.P.T.A.X.	:	All India Coordinated Project on Capacity Building in Taxonomy	GBPNIHESD	:	G.B. Pant National Institute of Himalayan Environment and Sustainable Development
A.W.	:	Animal Welfare	G.P.G.	:	Global Public Goods
B.U.R.	:	Biennial Update Report	G.C.	:	General Co-ordination
B.C.S.	:	Bio-diversity Conservation Scheme	G.E.A.C.	:	Genetic Engineering Approval Committee
B.G.	:	Botanical Garden	G.E.F.	:	Global Environment Facility
B.G.I.R.	:	Botanical Garden of the Indian Republic	G.I.M.	:	Green India Mission
B.S.I.	:	Botanical Survey of India	G.L.O.B.E.	:	Global Learning & Observation to Benefit the Environment
C.B.D.	:	Convention on Biological Diversity	G.O.S.	:	Group of Secretaries
C.B.P.	:	Capacity Building Project	G.O.I.	:	Government of India
C.C.	:	Climate Change	H.S.M.D.	:	Hazardous Substance Management Division
C.C.U.	:	Civil Construction Unit	I.A.	:	Impact Assessment
C.D.M.	:	Clean Development Mechanism	I.C.	:	International Co-operation
C.E.S.	:	Centre for Ecological Science	I.C.I.M.O.D.	:	International Centre for Integrated Mountain Development
C.M.W.	:	Conservation and Management of Wetlands	I.F.C.	:	Information Facilitation Counter
C.O.P.	:	Conference of the Parties	I.F.D.	:	Integrated Finance Division
C.P.A.	:	Control of Pollution Air	I.F.S.	:	Indian Forest Service
C.P.W.	:	Control of Pollution Water	I.G.P.P.	:	Indira Gandhi Paryavaran Puraskar
C.P.B.	:	Cartagena Protocol on Biosafety	I.N.C.C.A.	:	Indian Network for Climate Change
C.P.C.B.	:	Central Pollution Control Board	I.P.C.C.	:	International Panel on Climate Change
C.T.	:	Clean Technology	I.T.	:	Information Technology
C.R.Z.	:	Coastal Regulation Zone	I.U.C.N.	:	International Union for Conservation of Nature
C.S.D.	:	Commission on Sustainable Development	I.W.S.U.	:	Internal Work Study Unit
C.V.O.	:	Chief Vigilance Officer	L.C.	:	Legal Cell

D.T.E.P.A.	:	Dehanu Teluka Environment Protection Authority	M.B.P.	:	Man and Biosphere Programme
D.M.E.D.	:	Development Monitoring & Evaluation Division	M.G.C.E.&E.	:	Mahatma Gandhi Chair on Environment & Ecology
E.C.	:	Economic Cell	N.A.T.C.O.M.	:	National Communication
E.E.	:	Environment Education	N.B.A.	:	National Biodiversity Authority
E&F	:	Environment & Forest	N.B.A.P.	:	National Biodiversity Action Plan
E.I.	:	Environment Information	N.C.Z.M.A.	:	National Coastal Zone Management Authority
E.E.A.T.	:	Environment Education Awareness and Training	N.E.P.T.R.I.	:	National Environmental Protection Training and Research Institute
E.I.V.R.	:	Entities of Incomparable Value Regulations	N.E.S.F.P.	:	National Environmental Science Fellows Programme
E.N.V.I.S.	:	Environmental Information System	N.E.S.P.F.	:	National Environmental Science Fellows Programme
E.P.T.R.I.	:	Environment Protection Training & Research Institute	N.F.A.	:	National Fellowship Awards
E.S.A.	:	Ecologically Sensitive Areas	N.F.A.P.	:	National Forestry Action Programme
F.E.	:	Forest Establishment	N.F.C.	:	National Forest Commission
F.R.L.H.T.	:	Foundation for Revitalization of Local Health Traditions	N.T.C.A.	:	National Tiger Conservation Authority
G.A.	:	General Administration	N.F.A.	:	National Fellowship Awards
N.G.O.	:	Non Governmental Organisation	P. G.	:	Public Grievances
N.G.T.	:	National Green Tribunal	R.O.	:	Regional Office
N.G.R.B.A.	:	National Ganga River Basin Authority	R.E.	:	Research in Environment
N.I.A.W.	:	National Institute of Animal Welfare	R.O.H.Q.	:	Regional Office Head Quarter
N.L.C.P.	:	National Lake Conservation Plan	R.F.D.	:	Results Framework Document
N.M.C.G.	:	National Mission on Clean Ganga	R.T.I.	:	Right to Information
N.M.N.H.	:	National Museum for Natural History	R.T.	:	Research & Training
N.N.R.M.S.	:	National Natural Resources Management Systems	S.A.C.O.N.	:	Salim Ali Centre for Ornithology & Natural History

N.R.C.D.	:	National River Conservation Directorate	S.B.A.	:	Swachh Bharat Abhiyan
N.R.C.P.	:	National River Conservation Plan	S.D.	:	Sustainable Development
N.B.A.P.	:	National Biodiversity Action Plan	S.I.C.O.M.	:	Society for Integrated Coastal Management
N.C.Z.M.A.	:	National Coastal Zone Management Authority	S.O.E.R.	:	State of Environment Report
N.E.P.T.R.I.	:	National Environmental Protection Training and Research Institute	S.T.P.	:	Sewage Treatment Plants
N.F.A.	:	National Fellowship Awards	S.U.	:	Survey & Utilization
N.C.Z.M.A.	:	National coastal Zone Management Authority	S.F.A.	:	Standard Financial Annex
N.Z.P.	:	National Zoological Park	T&E	:	Trade & Environment
NMHS	:	National Mission on Himalayan Studies	U.N.C.C.D.	:	United Nations Convention to Combat Desertification
P.E.	:	Project Elephant	U.N.D.P.	:	United Nations Development Programme
P.T.	:	Project Tiger	W.H.C.	:	World Heritage Conservation
O.C	:	Ozone Cell	W.C.C.B.	:	Wildlife Crime Control Bureau
O.L.	:	Official Language	W.I.I.	:	Wildlife Institute of India
P&L	:	Policy and Law	W.L.	:	Wildlife
			W.G.E.E.P.	:	Western Ghat Ecology Expert Panel
			Z.S.I.	:	Zoological Survey of India

**Role and Mandate of the Ministry**

The Ministry of Environment & Forest and Climate Change (MoEF &CC) is the nodal agency in the Central Government for overseeing the implementation of India's environment and forest policies and programmes relating to conservation of the country's natural resources including lakes and rivers, its biodiversity, forests and wildlife, ensuring the welfare of animals and prevention and abatement of pollution. While implementing these policies and programmes, the Ministry is guided by the principle of sustainable development. The Ministry is also the nodal agency for the United Nations Environment Programme (UNEP), South Asia Co-operative Environment Programme (SACEP), International Centre for Integrated Mountain Development (ICIMOD) and the United Nations Conference on Environment and Development (UNCED). The Ministry also coordinates with multilateral bodies such as the Commission on Sustainable Development (CSD), Global Environment Facility (GEF) and regional bodies such as Economic and Social Council for Asia and Pacific (ESCAP) and South Asian Association for Regional Cooperation (SAARC) on matters pertaining to environment. The broad objectives of the Ministry are:

- Conservation and survey of flora, fauna, forests and wildlife
- Prevention and control of pollution
- Afforestation and regeneration of degraded areas
- Protection of environment, and ensuring the welfare of animals.

These objectives are well supported by a set of legislative and regulatory measures, aimed at the preservation, conservation and protection of the environment. Besides the legislative measures, a National Conservation Strategy and Policy Statement on Environment and Development, 1992, National Forest Policy, 1988, a Policy Statement on Abatement of Pollution, 1992 and a National Environment Policy, 2006 also guide the Ministry's work.

**Subjects under the Ministry of Environment, Forest and Climate Change.**

The following items of work have been allocated to the Ministry of Environment, Forest and Climate Change :

1. Environment and Ecology, including environment in coastal waters, in mangroves and coral reefs but excluding marine environment on the high seas.
2. Environment Research and Development, education, training, information and awareness.
3. Environmental Health.
4. Environmental Impact Assessment.
5. Forest Development Agency and Joint Forest Management Programme for conservation, management and afforestation.
6. Survey and Exploration of Natural Resources particularly of Forest, Flora, Fauna, Ecosystems etc.
7. Bio-diversity Conservation including that of lakes and Wetlands.
8. Conservation, development, management and abatement of pollution of rivers excluding the river Ganga and its tributaries.
- 8A. National River Conservation Directorate.
9. Wildlife conservation, preservation, protection planning, research, education, training and awareness including Project Tiger and Project Elephant.
10. International co-operation on Issues concerning Environment, Forestry and Wildlife.
11. Botanical Survey of India and Botanical Gardens.
12. Zoological Survey of India.
13. National Museum of Natural History.
14. Biosphere Reserve Programme.
15. National Forest Policy and Forestry Development in the country, including Social Forestry.

16. All matters relating to Forest and Forest Administration in the Union territories.
17. Indian Forest Service.
18. Wild Life Preservation and protection of wild birds and animals.
19. Fundamental and applied research and training including higher education in forestry.
20. Padmaja Naidu Himalayan Zoological Park.
21. National Assistance to Forestry Development Schemes.
22. Indian Plywood Industries Research and Training Institute, Bangalore.
23. Afforestation and Eco-Development which shall include National Afforestation and Eco-Development Board.
- 23A. Bio-fuel plantations in forest, wastelands and environmental issues concerning bio-fuels.
24. Desert and Desertification.
25. Forest Survey of India.
26. Indian Institute of Bio-diversity, Itanagar.
27. Central Pollution Control Board.
28. G.B.Pant Institute of Himalayan Environment & Development.
29. Wildlife Institute of India and Indian Board for Wildlife.
30. Indian Institute of Forest Management.
31. Central Zoo Authority including National Zoo Park.
32. Indian Council of Forestry Research & Education.
33. Andaman and Nicobar Islands Forest and Plantation Development Corporation Limited.
34. Prevention of cruelty to animals.
35. Matters relating to pounds and cattle trespass.
36. Gaushalas and Gausadans.
- 36A. Climate change and all other matters related thereto.
37. The Prevention of Cruelty to Animals Act, 1960 (59 of 1960).
38. The National Green Tribunal Act, 1995 (27 of 1995).
39. The Water (Prevention and Control of Pollution) Act, 1974 (6 of 1974).
40. The Water (Prevention and Control of Pollution) Cess Act, 1977 (36 of 1977).
41. The Air (Prevention and Control of Pollution) Act, 1981 (14 of 1981).
42. The Indian Forest Act, 1927 (16 of 1927).
43. The Wild Life (Protection) Act, 1972 (53 of 1972)
44. The Forest (Conservation) Act, 1980 (69 of 1980).
45. The Environment (Protection) Act, 1986 (29 of 1986).
46. The Public Liability Insurance Act, 1991 (6 of 1991).

NOTE:- The Ministry of Environment, Forest and Climate Change will be responsible for overall policy in relation to forests, except all matters, including legislation, relating to the rights of forest dwelling Schedule Tribes on forest lands.



## Chapter-1

### Natural Resources- Survey and Exploration

#### 1.1 Zoological Survey of India (ZSI)

The Zoological Survey of India (ZSI) a premier institute under the Ministry of Environment, Forest and Climate Change has successfully completed 100 years of services to the Nation. ZSI has been actively involved since its inception in 1916, in the survey, exploration and research leading to the expansion of our knowledge on the immensely rich faunal diversity of our country. ZSI acts as a custodian of the National Zoological Collections. ZSI Headquarter is located in Kolkata and has 16 Regional Centers located at different parts of the country involved in the surveys and exploration of the different states, ecosystems and conservation areas. The primary and secondary objectives are as follows:

#### Activities undertaken

- Faunal Surveys: Total surveys sanctioned for the FY 18-19 are 100, of which 74 have been completed by November 2018:
- Faunal Identifications: Various groups of animals comprising 24845 specimens were collected from surveys conducted. Altogether 1812 species have been identified by the scientists of ZSI Headquarters and Regional Centres ranging from microscopic to the highly evolved organisms.
- New Discoveries and New Records: 77 species have been described by the scientists of ZSI : 2 species of Platyhelminthes, 2 Nematoda, 1 Acanthocephala, 1 Annelida, 7 Arachnida, 12 Crustacea, 4 Collembola, 3 Coleoptera, 3 Diptera, 6 Hemiptera, 11 Hymenoptera, 3 Lepidoptera, 1 Odonata, 8 Orthoptera, 5 Trichoptera, 1 Myriapoda, 4 Pisces , 2 Amphibia and 1 Reptilia
- New records to India: 12 species have been recorded for the first time from India
- Important Books released:
  - Faunal diversity of Indian Himalaya, by Hon'ble Secretary, MoEFCC, Shri C.K. Mishra.
  - Faunal Diversity of Biogeographic Zones : Islands of India, by Hon'ble Minister, Dr. Harsh Vardhan.
  - Status of Coral Resources of India and Strategies for their Protection and Management, by Hon'ble Minister, Dr. Harsh Vardhan.
  - Chelonian Types of National Zoological Collections released by Hon'ble Minister, MoEFCC during his visit to FBRC, Hyderabad.
  - Faunal Diversity of Estuarine Ecosystem released by Hon'ble Minister, MoEFCC during his visit to ZSI HQ, Kolkata
  - Animal discoveries 2017 by Hon'ble Prime Minister of India at New Delhi during World Environment Day – 2018.
- DNA Barcoding of important Taxa: 835 barcodes have been submitted on BOLD and about 20 sequences on NCBI have been submitted from April 2018 to November 2018.
- Training and Extension: Three National Conferences, six National workshops and three administrative trainings were organized during the period.
- ENVIS Centre on faunal diversity: Data Entry: Total: Entry 6442 species list.

- International Conference on Status and Protection of Coral Reefs was organized in collaboration with Administration, Union Territory from 22nd to 24th of October at Bangaram island inaugurated by Dr. Harsh Vardhan, Hon'ble MEF.

## 1.2 Botanical Survey of India (BSI)

### Activities undertaken:

- Botanical Exploration & Inventorisation of Phytodiversity
  - Field tours and Herbarium consultation tours: 112 field tours were undertaken for floristic/ethnobotanical/ pharmacognostical studies on flowering and non-flowering plants, as well as live germplasm collection for introduction in the gardens, by different regional centres and units of BSI. These include 25 tours in 22 protected areas.
  - Apart from these, 21 herbarium consultation tours and 16 ex-situ conservation tours were also conducted.
  - During these field tours, ca 33,743 specimens were collected and 28,791 specimens were identified into 14,408 taxa (species, subspecies and varieties). This resulted into the discovery of 17 new species and 22 new records for India. 2 plant species have been rediscovered after 100 years.
- National Flora (Flora of India):
  - Completed the taxonomic description of 75 species of family Bignoniaceae, 15 species subtribe Sporobolinae and 24 species of Genera Lepisorus and Adiantum
  - 186 species of following 7 projects have been completed by the Senior Research Fellows of BSI under Flora of India.
  - Revision of the subtribe Eleusininae (Poaceae: Chloridoideae) in India; Revision of the Family Myrsinaceae in India; Taxonomic revision of subgenus Carex of Genus Carex L. (Cyperaceae) in India; Taxonomic revision of the family Fagaceae in India; Taxonomic Studies on lichenised non thelotremoid Indian Graphidaceae; Taxonomic Studies of genus Rubus L. in India; Taxonomic revision of fern genus Pteris L. (Pteridaceae) in India.
- Regional/State Flora/District: Completed the taxonomic description of 986 species for different regions/States.
- Flora of Protected Areas: Completed taxonomic description of 976 species from various protected Areas.
- Ex-Situ Conservation:
  - 135 live plants under 49 species collected from WB, Meghalaya and Arunachal Pradesh have been introduced in the nursery of Acharya Jagadish Chandra Bose IBG, Howrah.
  - 23 rare and endangered species have been introduced in other associated botanic gardens of different Regional Centres.
- Micro-Propagation of Threatened Species: Multiplication of *Cymbidium tigrinum*, *C. eburneum*, *Illex khasiana* (at ERC, Shillong) and *Eremostachys superba*, *Pittosporum eriocarpum* and *Indopiptadenia oudhensis* (at NRC, Dehradun) have been taken up through tissue culture.
- Documentation of indigenous Knowledge of Plant Resources:
  - 282 ethnobotanical information from Lodha tribal group of WB have also been recorded. Manuscript of the ethnobotanical study of Odisha have been finalized. Total 320 ethnobotanical interested plant species in duplicate voucher specimens were collected with the help of medicine

man from different tribal populated village at Dhenkanal. Among these 320 plants, 194 plants are used for medicine, 42 plants for food, 14 plants for small timber, 5 for agriculture implements, 8 for bio-fencing, 3 plants for insect repel, 3 as tooth brush, 3 for oil, 2 for liquor, 10 as fodder and 4 as rope/fibre.

- Studies of Nutritional Values of Wild Edible Plants of Meghalaya: Nutritive values, mineral estimation and antioxidant profile of 12 plant species have been carried out using parameters like proximate composition, mineral content and antioxidant activities.
- During the period, 12360 specimens mounted, 6,789 herbarium specimens remounted, 20,359 herbarium sheets dusted and fumigated, 14,268 herbarium sheets poisoned and 4,569 sheets have been incorporated in different herbaria.
- BSI started digitizing its herbarium specimens in its Data Centre at CNH for creation of Digital Herbarium (DH) of high resolution images and Indian Virtual Herbarium (IVH) of low resolution images by deploying the manpower from its existing strength. Digitization of 15485 specimens completed by December 2018.
- Status of Database preparation and Digitisation of specimens: Ca. 300 publications comprising of nearly 1 lakh pages and all 53 back volumes of BSI journal were digitized. Prepared database of around 22,000 records pertaining to Lichens and Fungi Checklist.
- Review of the work on ‘Red listing of Orchids of Eastern Himalaya as per IUCN criteria’ (Entire Sikkim, Darjeeling district of West Bengal and Arunachal Pradesh excl. Changlang and Tirap): 350 specimens of Sikkim Himalayan Regional Centre, Gangtok were finalized in respect of their identity and geo-coordinates.
- Green Skill Development Programme: The first GSDP course was formulated for skilling Biodiversity Conservationists (Basic Course) and Para-taxonomists (Advance Course) of 3 months duration each, on a pilot basis in ten select districts of the country (covering nine bio-geographic regions). 94 Trainees successfully completed the basic course qualifying as skilled Biodiversity Conservationists and 152 Trainees completed the Advanced Course qualifying as skilled Para-taxonomists. BSI and ZSI are the nodal Centres for the programme. During the period 4 sub centres is being run in BSI for conducting advance course for para-taxonomists
- List of Publications by BSI/ ZSI:
  - Two volumes of Records of Zoological Survey of India, Three Occasional papers, one Fauna of India, One Conservation Area Series (Protected Area Network), Two Guide/Handbooks and Two special publications.
  - DNA Barcoding of important Taxa: 835 barcodes have been submitted on BOLD and about 20 sequences on NCBI have been submitted.
  - During the last one year BSI published four important publications on the Indian flora. These are “Orchids of Maharashtra”, “Flora of Utrakhand, Volume I”, “Endemic Bamboos of India” and “Plant Discoveries, 2017.” In addition, scientists of BSI published 235 research papers and communicated 68 research papers in various peer reviewed journals, both Indian and foreign

### 1.3 Survey & Utilization

The Survey & Utilization Division deals with matters related to State Forest Development Corporations, International Organizations like International Tropical Timber Organization, International Network for Bamboo &

Rattan (INBAR), Trade Policy, Forest Survey of India, Sandalwood & Red Sanders related matters, formulation of guidelines of international/domestic trade in forest produce and regulation of export & import of forest produce as per the Export and Import (EXIM) policy, Minor Forest Produce, all matters relating to Andaman and Nicobar Islands Forest Plantation Development Corporation Limited, forestry trade tariff and related issues for Bilateral/Multilateral Trade Negotiations, Wood Based Industries, Bamboo Cell, Permission for Industrial Estates including North Eastern States and NE Cell.

**Forest Survey of India:** Forest Survey of India (FSI), a premier national level organization under Ministry of Environment, Forest & Climate Change, Government of India is engaged in the assessment of the country's Forest resources on a regular basis.

**Major activities:** The major activities of FSI are:

- Biennial Forest Cover Assessment using Remote Sensing technology.
- Inventory of Forest and Trees Outside Forests (Rural & Urban areas).
- Training and Extension.
- Projects and Consultancies

**Activities undertaken:**

- FSI is involved in forest cover assessment of the country by interpretation of satellite data on a two-year cycle and presents the information in the form of 'India State of Forest Report'. So far 15 cycles of forest cover assessment have been completed since 1987 till year 2017. In addition to forest cover, assessment of tree cover of the country is also being carried out using the Trees Outside Forests (TOF) inventory data. There is an increase of 6,778 sq km in the forest cover and 1,243 sq km in tree cover of the country as compared to 2015 assessment.
- During year 2018, 305 scenes of LISS III sensor of Indian Remote Sensing Satellite were procured from NRSC Hyderabad. For the first time, fully ortho rectified satellite data has been procured for use in Forest Cover mapping which is expected to improve the positional accuracy of the data.
- The 16th cycle FCM work was initiated with the two-day workshop on FCM methodology focusing on radiometric correction of ortho-rectified satellite data using ToA values was conducted on 12-13th April, 2018. Meanwhile, the Forest Cover Mapping methodology was updated to include NDVI based approach for change detection and vector approach for incorporation of changes. This methodology was discussed with all analysts during the workshop held on 10-11th September, 2018 to introduce these concepts and also provide a hands-on training based on the new approach. An updated methodology manual (Version 1.2) was prepared and recently published by FSI. The data preparation activities have been completed and the classification work has been initiated in October 2018.
- FSI conducts, inventory of forest and TOF in selected grids of size 5kmx5km every year. Forest inventory is carried out on about 6,000 grids and TOF inventory is carried out on 10, 000 grids every year. Till September 2018, a total of 4,394 grids have been inventoried in forest area and 9,630 grids have been inventoried in TOF area. Data entry work of Forest Inventory (FI) 3,773 grids and TOF (R & U) 3,110 grids data have been completed.
- Under revisiting of forest types of India, FSI is attempting to assess the biodiversity of different forest type groups. For this purpose, a sampling design has been prepared and data collection of the selected points is underway.

- **Removal of fuelwood, fodder and small timber in Forest Fringe Villages from forest of India:** FSI is attempting to estimate the dependence of people in forest fringe villages in the country. A methodology has been developed for carrying of the study. About 1000 villages with 30 households in each village is selected for the survey for collection of data on fuelwood, fodder and small timber. The field works for the study is underway.
- The preliminary updation in forest types for the majority of states have been completed and the field verification for the project is in progress and the entire project is expected to be completed in the year 2019.
- Exercise on the real time monitoring of forest fires was initiated in 2004 by FSI. This system was revamped in 2017 with the launch of “Forest Fire Alert System 2.0” wherein all the processes were fully automated to generate customized alerts at Beat level. The fire alerts received from MODIS (Moderate resolution imaging Spectro radiometer Sensor) and SNP-VIIRS (Visible Infrared Imaging Radiometer Suite) are processed for pure forest fire signals using Recorded Forest boundary layer/ FSI forest cover layer and other ancillary ground information.
- FSI is currently piloting the application of Canadian Forest Fire Danger Rating System (CFFDRS) in India in the state of Himachal Pradesh in collaboration with Himachal Pradesh Forest Department and World bank funded HP Forest For Prosperity Project.
- Under the National Spatial Data Infrastructure (NSDI) Web Server (Application Server) and Database Server have been installed and established as FSI node at Forest Survey of India, headquarters Dehradun. The server would be repository for the entire forestry database that would be available to users through internet. Preparation of Data Content Standard for forest theme of FSI along with Unified Modelling Language (UML) Class Diagram with integration of unique forest codes was prepared and submitted to NSDI, which is further sent to BIS for finalization. Web Map Service (WMS) services have also been prepared for Forest Cover and Forest Type of the entire country and have been uploaded on NSDI portal. Web Feature Service (WFS) for some spatial layers also have been created and tested on NSDI portal.
- A web-GIS based application namely **Decision Support System (DSS)** has been developed to provide qualitative and quantitative information with respect to forest area.
- **e-Green Watch:** Compensatory Afforestation Fund Management and Planning Authority (CAMPA) is the National Advisory Council for monitoring, technical assistance and evaluation of compensatory afforestation and other forestry activities funded by CAMPA fund. It is designed and developed as a web based workflow applications and integrated information system which shall enable automating of various functions and activities related to monitoring and transparency in the use of CAMPA funds and various works sanctioned in the Annual Plan of Operations (State CAMPA) approved by the State Authorities. State govt. uploads the polygons under following categories:
  - Compensatory Afforestation Land (CA Land)
  - Diverted Land (DL)
  - Other Plantation Work (OPW)
  - Plantation Work (PW)
  - Assets
- A total of 1,12,214 polygons pertaining to 28 states have been checked by FSI through this portal till October 2018. E-Green Watch is included in all the training programmes which are conducted for Forest Department officials at FSI to improve their participation in the monitoring programme as well as to

improve the accuracy of the polygons uploaded in the portal. A customized on-field training programme for over 2000 officials was also conducted for Madhya Pradesh Forest Department from March 12-16th, 2018 at Bhopal.

- The Ministry vide Notification dated 27th February, 2018 constituted a regulatory Committee under the Chairmanship of Additional PCCF, Regional Office, Shillong for the purpose of allotment of wagons for movement of surplus timber from North Eastern parts of the country to other parts of the country.
- **Bamboo Cell:** The Ministry has created a 'Bamboo Cell' in SU Division to deal with all matters related to Bamboo.
- **International Tropical Timber Organization (ITTO) has 74 members divided into two category:** Producer Countries (36 members) and Consumer Countries (38 members). India is a founder member (producer Country Category) of ITTO which aims for conserving tropical forest and assisting countries to develop economically in the field of forestry. As a member of ITTO, India pays annual contribution to ITTO every year. In the current year 2018-19, the Government of India sanctioned the 1st installment of annual contribution of US \$ 89,267/- to ITTO for the calendar year 2018.
- **International Network of Bamboo and Rattan (INBAR):** The International Network for Bamboo and Rattan (INBAR) is an intergovernmental organization established in 1997. INBAR is dedicated to improving the social, economic, and environmental benefits of bamboo and rattan. INBAR plays a unique role in finding and demonstrating innovative ways of using bamboo and rattan to protect the environment and biodiversity, alleviate poverty, and facilitates fairer pro-poor trade. During the current year 2018-19, Government of India has sanctioned and released 1st installment of annual contribution of US \$ 25,565 for the calendar year 2018 to INBAR.

## Chapter-2

### Conservation

#### 2.1 Biodiversity Conservation

The Ministry undertakes activities under Convention on Biological Diversity (CBD), its Nagoya Protocol on Access and Benefit Sharing (ABS), National Report to the CBD and Nagoya Protocol, National Biodiversity Action Plan, Intergovernmental Platform on Biodiversity and Ecosystem Services (IPBES), Biological Diversity Act (BD Act), National Biodiversity Authority (NBA) and projects on biodiversity implemented through NBA.

**Activities undertaken:** Convention on Biological Diversity (CBD) and related matters:

- During the period, India participated in the various important international meetings relating to biodiversity and implementation of decisions of CoP to the CBD, including through making submissions to the CBD Secretariat.
- India also continued to contribute to the IPBES work programme and deliverables including through nomination of Indian experts in its activities.
- Activities to strengthen the institutional capacity of NBA, SBBs and constitution of BMCs, as well as preparation of Peoples Biodiversity Registers (PBRs) were continued during the year, including by providing special grant to NBA for SBBs and PBRs, and by developing project proposals.
- On the invitation of CBD Secretariat, in our capacity as past president of CoP-11, prepared an article on 'Nature Protects if She is Protected' by the Minister, for commemorative volume being brought out by CBD Secretariat on 25th anniversary of the Convention.
- Meeting of Consultative Committee of Members of Parliament attached to MoEF&CC held on 9.8.2018 with theme on Biodiversity. The Parliament Estimate Committee meeting held informal discussion on 2.7.2018 at Ooty, Tamil Nadu with the representatives of National Biodiversity Authority (NBA), Tamil Nadu Biodiversity Board and Government Botanical Garden with the subject of 'Preservation of Biodiversity and Eco-system.
- Consultations were organised to discuss the agenda items of CoP-14 to the CBD, CoP-MoP-9 to the Cartagena Protocol on Biosafety and CoP-MoP-3 on Nagoya Protocol on ABS with representatives of MoEF&CC and its organizations, concerned Ministries and Departments to prepare country positions.
- As an obligation under Article 26 of the CBD, India has to submit National Report to CBD Secretariat on measures taken for the implementation of the Convention once in four years. So far five cycles of national reporting have been completed (1998, 2001, 2005, 2009 and 2014). During the year, work relating to finalization of India's sixth national report was completed, and was published online by the Hon'ble Minister for Environment, Forest and Climate Change, Dr. Harsh Vardhan on 29 December 2019. The Division is presently implementing eight projects on biodiversity through National Biodiversity Authority (NBA). The details of the projects are given below.
  - UNEP-GEF-MoEF&CC ABS Project on "Strengthening the Implementation of the Biological Diversity Act and Rules with Focus on its ABS Provisions" is being implemented in ten provincial states of India in partnership with SBBs in Andhra Pradesh, Karnataka, Gujarat, Goa, Himachal Pradesh, Odisha, Sikkim, Telangana, Tripura and West Bengal.

- Centre for Biodiversity Policy and Law (CEBPOL) has been set up by the Ministry and housed in NBA with technical collaboration from Norway with the aim to develop professional expertise on biodiversity related policies and laws and develop capacity building on various issues identified by both India and Norway pertaining to biodiversity. The project activities were reviewed in the Ministry in a meeting held on 19.09.2018. CEBPOL high level bilateral inter-ministerial meeting and dissemination workshop was held during December 2018.
- India joined UNDP managed global project on Biodiversity Finance Initiative (BIOFIN) in 2015. During the year, the ninth meeting of the Project Steering Committee of UNDP's Natural Resources Management project, of which BIOFIN is one component, was held on 19.9.2018 at MoEF&CC.
- A project on 'Capacity Development of Statutory Institutions for Effective Implementation of the ABS Mechanism in India' under Indo-German Biodiversity Programme for Euro 3 million is being implemented through NBA in three pilot states of Maharashtra, Tamil Nadu and Uttarakhand through the respective SBBs.
- NBA-ASEAN Centre for Biodiversity Cooperation project entitled 'Capacity building towards implementing the Nagoya Protocol on ABS, the City Biodiversity Index and Strategic Plan on Biodiversity. Under this project, a regional training workshop on "Development and implementation of ABS legal framework to implement Nagoya Protocol on access and benefit sharing and tradition knowledge digital library was conducted on 22nd-25th October, 2018 for ASEAN countries at NBA, Chennai.
- Under the UNDP ABS global project on implementation of Nagoya Protocol which has been approved for USD 350,000, it is proposed to map research institutions that access and utilize genetic resources in India, develop a guidance document on ABS, and develop capacity of research institutions through training. The ninth meeting of the Project Steering Committee of UNDP's Natural Resources Management project, of which UNDP ABS global project is one component, was held on 19.9.2018 at MoEF&CC.
- FAO TCP project on "Strengthening Agriculture and Allied Sector Contributions to India's National Biodiversity Action Plan (NBAP) 2008 and National Biodiversity Targets (NBTs) has a budget of USD 263,000 for two years. Under project, a stakeholder meeting was held in the MoEF&CC on 8th June 2018, which was attended by representatives from the SBB of project states, MoEF&CC, NBA and the Ministry of Agriculture and Farmers Welfare (MoA&FW).
- ICLEI project on "INTERACT-Bio: Integrated sub-national action for Biodiversity-Supporting implementation of National Biodiversity Strategy and Action Plan (NBSAP)" is supported by the Federal Ministry for the Environment, Nature Conservation, Building and Nuclear Safety (BMUB), Government of Germany under their International Climate Initiative (IKI). The project with a four year duration is being implemented in three countries - Brazil, India and Tanzania, in partnership with ICLEI's offices in these regions. The project cities in India are Cochin as the model city, and Mangalore and Panaji as the Satellite cities. The first Project Steering Committee meeting of the project INTERACT-Bio: Integrated sub - national action for Biodiversity - Supporting Implementation of National Biodiversity Strategy and Action Plan, held on 19.9.2018 at MoEF&CC.



- The day when the Convention text was adopted in 1992, 21st May is celebrated as the International Day for Biodiversity (IDB) to raise awareness about the importance of the biodiversity. The theme for the year 2018 was Celebrating 25 years of action on biodiversity. The national level celebrations of IDB were organised in Hyderabad on 22nd May 2018. During the event, 9 winners and 14 special mentions of the India Biodiversity Awards 2018 were presented in four categories to recognise the efforts of individuals and communities working at the grassroots level for conservation of biodiversity. 'India Naturally!' a publication narrating the stories of these Champions of biodiversity and some knowledge products and communication materials were also released on the occasion.
- Nagoya Protocol on ABS requires Parties to issue a permit or its equivalent at the time of access as evidence that access to genetic resources was based on prior informed consent and that mutually agreed terms were established. After publishing the first IRCC under the Nagoya Protocol on 1st October 2015, India has published so far 215 IRCCs on the ABS Clearing House, out of the total 300 IRCCs published (<https://www.cbd.int/doc/press/2015/pr-2015-10-07-abs-en.pdf>).

### **Biological Diversity Act and National Biodiversity Authority**

- During the period, four meeting of the Authority were held in which decisions have been taken on ABS applications, and on important regulatory, policy and legal decision. During the period, 368 applications were received, 323 applications have been cleared by the Authority and 110 agreements have been signed.
- NBA has received a sum of Rs. 13.72 crores as benefit sharing component as on 31.10.2018.
- Four meetings of the Expert Committee on Access and Benefit Sharing were held to evaluate the request of the applicants and submitted recommendation to Authority for consideration and decision. The committee evaluated around 470 applications.
- A meeting of Core Expert Group to develop guidelines or eligibility conditions/parameters for identification of repositories was held on 5th May 2018 at Chennai.
- So far, 26 State Biodiversity Boards (SBBs) have constituted 74,067 (Biodiversity Management Committees (BMCs) across the country and 21 SBBs have prepared 6161 Peoples Biodiversity Registers (PBRs) till September 2018 (as received from the SBBs).
- Till date, 12 Biodiversity Heritage Sites have been notified in 7 states.
- So far, 26 States have notified their State Biodiversity Rules and UTs of Andaman & Nicobar Islands, Delhi and Puducherry have forwarded their concurrence on delegating powers and functions of NBA under the provisions of Section 22(2) of the BD Act. The UTs of Andaman & Nicobar Islands and Delhi have submitted the indicative list of nominated officials from the concerned govt. departments.

### **2.2 Conservation and Management of Mangroves & Coral Reefs:**

Ministry of Environment, Forest and Climate Change (MoEF&CC) is implementing a Central Sector Scheme (CSS) on Conservation and Management of Mangroves and Coral Reefs in Coastal States/UTs of India. Under the scheme, 38 mangrove and 4 coral reef sites have been identified for on-ground intervention. During the financial year 2018-19, the Ministry is providing financial support in the ratio 60:40 to the Forest Departments of the Coastal States/UTs on demand and the respective approval of their Management Action Plans (MAPs).

**Activities undertaken:**

- 14 MAPs have been approved under the scheme.
- 1 MAPs have been re-validated under the scheme.
- Increase of 181 sq. km of mangrove cover in the country in the year 2017 in comparison to year the 2015 assessment by FSI Report titled 'India State of Forest Report (2017).
- National Committee on Conservation and Management of Mangroves and Coral Reefs has been re-constituted with the approval of Hon'ble Minister.
- During this financial year, about Rs 8.28 Crores have been released under the scheme as on date

**2.3 Biosphere Reserves**

The Indian National Man and Biosphere (MAB) Committee identifies and recommends potential sites for designation as Biosphere Reserves, following the UNESCO's guidelines and criteria. There are 18 designated Biosphere Reserves (BRs). Out of 18 Biosphere Reserves, 11 Biosphere Reserves have been included in the World Network of Biosphere Reserves of UNESCO.

**Activities undertaken:**

- Funds have been released to twelve(12) BRs in nine 9 states and one (1) union territory for habitat management/ improvement, value addition, forest protection, livelihood improvement of the communities, development of infrastructure for eco-tourism, research, monitoring and documentation activities in the core and buffer zone.
- Inclusion of Khangchendzonga Biosphere Reserve in the World Network of Biosphere Reserves (WNBR) and presentation of Report on activities of Indian National MAB Committee before ICC meeting during July,2018 at Palembang, Indonesia.
- Applications for Young Scientist Award 2018 of MAB Programme UNESCO invited by the Ministry.
- Third party evaluation of Biosphere Reserve Scheme conducted.
- Brainstorming workshop in Bhopal regarding DBT with officials from Biosphere Reserves and state government.
- Submission of 60 second video along with transcript of five Biosphere Reserves sent to UNESCO for exhibition in the ECOSOC event in New York on 05th June 2018 under the banner #ProudtoShare and video clips of Sundarban and Agasthiyamalai Biosphere Reserve have been selected for showcase.

**Progress/ Achievements:**

- 12 number of Management Action Plan (MAP) 2018-19 submitted by the State Governments have been scrutinized for release of funds.
- So far Rs. 10.08 Crores have been released to 12 Biosphere Reserves.
- Khangchendzonga Biosphere Reserve, Sikkim included in the World Network of Biosphere Reserves of UNESCO MAB Programme during the meeting of MAB ICC held at Palembang, Indonesia during July, 2018.

**2.4 Biosafety**

Activities undertaken related to Cartagena Protocol on Biosafety (CPB) to the Convention on Biological Diversity

(CBD) and Nagoya Kuala Lumpur Supplementary Protocol on Liability and Redress (NKLSPLR), and the Genetic Engineering Appraisal Committee (GEAC) are given below.

The GEAC was reconstituted on 28.5.2018, after completion of tenure of previous Committee. Three meetings of the new GEAC have been convened during 2018-19 so far, and as per GEAC's decision, the meetings are being held on a quarterly basis. The Committee has considered applications related to event selection trials of GM crops, import of animal feed, protocols for additional studies to be undertaken on GM Mustard etc. in its meetings. A Sub-Committee on Framing Guidelines for Import of Animal Feed including Dried Distillers Grains Soluble (DDGS) was constituted based on the recommendations of the GEAC in its 135th meeting, to recommend a procedure for import of animal feed in India.

As a follow-up to the eighth meeting of the Conference of the Parties serving as the meeting of the Parties to the Cartagena Protocol on Biosafety (COP-MOP) decisions, several initiatives including capacity building and awareness programs to facilitate compliance have been undertaken. Several consultative meetings of experts and stakeholders have been convened prior to each COP-MOP meeting to finalize the country position and negotiating brief. A series of fifteen "State Level Biosafety Capacity Building Workshops" were organized as auxiliary activities in the State Agricultural Universities (SAUs), under the UNEP/GEF supported Phase II Capacity Building Project on Biosafety, implemented by MoEFCC. The workshops were aimed towards dissemination of various project outcomes and knowledge products developed under the Phase II Capacity Building Project. Some of the publications were also translated into regional languages including Hindi, Punjabi, Telugu, Kannada, Marathi, Bengali and Gujarati and distributed at the respective state level workshops. The workshops are targeted specifically for the scientists from research institutions and universities in the state, agriculture department officials, agricultural research stations, industry and progressive farmers.

### **Progress/Achievements**

- Revised Action Taken Notes in respect of 301st Report of Parliamentary Standing Committee on "Genetically Modified Crops and its Impact on Environment" by Department-Related Parliamentary Standing Committee on Science & Technology, Environment & Forests, following meeting of Chair of the Committee with Secretary (EFCC) in January, 2018 was submitted by the Division.
- Developed and operationalized new GEAC Website with features for receiving applications in online mode ([www.geacindia.gov.in](http://www.geacindia.gov.in)).
- Organized 15 capacity building workshops on Biosafety in 15 State Agricultural Universities.
- Organized 7 training workshops for strengthening capacities of enforcement officials (Customs and Plant Quarantine).
- Reviewed and finalized the report of Mid-Term Evaluation of UNEP-GEF Phase-II Biosafety Project, which was held in early 2017, and had been pending since then.
- Preparation of outreach materials such as updated Biosafety Resource Kit; Brochure on State Agricultural Universities Workshops etc. which were released on International Day of Biodiversity (22nd May, 2018) in Hyderabad.
- Implementation Report in respect of six Parliament Assurances pending for the last 5 years were submitted and cleared.
- Nominated GEAC experts for various international trainings/ conferences, including Cochran Fellowship, South Asia Biosafety Conference, Korea BCH Workshop, OECD Conference, National Project Coordinators Meeting.

- Prepared and filed Counter Affidavits in High Court of Hyderabad on matters related to illegal cultivation of Bt Cotton.

## 2.5 All India Coordinated Project on Capacity Building in Taxonomy (AICOPTAX)

### Activities Undertaken

- 37 Project proposal under various thematic areas of Plant, Animal and Microbial Taxonomy funded under Grant-In Aid. Thematic areas covered includes; fresh water and marine Phytoplankton and zooplanktons, insects, protozoa, anneliida, pathogenic and non pathogenic bacteria, aquatic plants, Algae, fungi, lichens, Research in plant biosystematics and training in Taxonomy.
- 31 new species identified under Plant, Animal and Microbial Taxonomy.
- New Steering Committee for the AICOPTAX program constituted in June 2018. The emphasis were given on selecting experts having extensive research experience in the field of plant animal and microbial Taxonomy.
- Review of the progress of 42 ongoing projects under AICOPTAX Scheme undertaken by MoEFCC, BSI, ZSI and Experts of the Steering Committee at BSI/ZSI Kolkata on 5-6 June 2018. The progress w.r.t. survey and exploration undertaken, new taxa identified and recorded, Target achieved and objective fulfilled.
- 15 New Thematic area for Plant, Animal and Microbial Taxonomy identified for research and capacity building till 2020-21. The advertisement floated for call for proposal 2018-19 for 15 thematic areas of plant, animal and microbial taxonomy.
- Marine Animal taxonomy workshop conducted in Port Blair and Lakshdip, Jamnagar, Gujarat, Jodhpur and 4 New plant Taxonomic Research Training centre established in J& K, West Bengal, Maharashtra, Delhi and 4 new Animal Taxonomic centre proposed to be established in different parts of the Country.
- Brainstorming session/meeting to discuss the various prospective of plant, animal and Microbial Taxonomy was conducted at Botanic Garden of Indian Republic, Noida on 3-4 October, 2018.
- Inventorization of total project completed prepared started from 1998 till date prepared.

## 2.6 Assistance to Botanic Garden (ABG)

### Activities Undertaken:

- Five Lead and 18 small Botanic Gardens established all over India, thereby ensuring conservation of 850 Rare, Endangered and Threatened (RET) plant species through these Botanic Garden. Data base of RET plant conservation prepared under each Botanic Garden.
- Monitoring and evaluations of 38 Botanic Gardens undertaken by BSI. Region wise RET species finalized by BSI to about 55 Botanic Garden all over India for conservation.
- Progress Reviewed for all the Lead Botanic Gardens under the ABG Scheme by MoEFCC constituted expert group.
- MoU signed with on going 25 Lead and Small Botanic Garden for effective implementation of the scheme.
- Expert Group Committee of ABG Scheme recommended 34 new projects proposal for establishing Botanic Garden all over India till 2020-21.
- 234 Rare, Endangered and Threatened (RET) plants conserved through ex situ conservation and

methodology developed for their conservation. 100 % fund utilized under Grant In Aid.

- Approximately 2.5 Lakh researchers, students enriched their knowledge on plant conservation and environment education through these Botanic Gardens all over India.
- Timeline prepared to conserve rare, endangered and threatened plants at Botanic Garden of Indian Republic, Noida , with the ex-situ exchange program of RET sps., with the small and lead Botanic Garden funded under ABG program of MoEF&CC.
- Compendium of Rare, endangered and threatened plant species conserved under Lead and Small Botanic Gardens of ABG program prepared.

#### **E.K. Janaki Ammal National Award on Taxonomy 2017**

- 24 applications scrutinized for the E.K. Janaki Ammal National Award on Taxonomy ( one each in plant, Animal and Microbial Taxonomy).
- Award money enhanced from 1 Lakh to 5 Lakh.
- New parameter devised for selection of nominees under plant, animal and microbial Taxonomy.

#### **Assistance to Biodiversity Park program**

- In order to strengthen and restore the urban degraded ecosystem, biodiversity(flora, fauna and wetlands), Secretary, EFCC granted approval to new scheme/program; Assistance to Biodiversity Park .
- Draft Guidelines and Concept note prepared .

#### **Botanic Garden of Indian Republic, (BGIR ) Noida , U.P.**

- Under the plant conservation program about 4500 plants of endemic Trees, 450 medicinal plants of 34 species., 25 Threatened plant species planted and conserved in 8 arboretum of BGIR Noida.
- Botanic Gardens components finalized for BGIR Noida.
- New Steering Committee constituted to oversee the development of BGIR Noida.
- Botanic Garden Landscape work assigned to CPWD .
- Enlisting of all endemic, threatened plants completed in BGIR Noida.
- Civil works (Boundary Wall, STP Water, Under ground water Tank, Cafeteria and Souvenir Shop, Rain Shelter, Bio Toilets) worth Rs 12 Crore started in BGIR Noida in year 2018-19.
- BGIR Inaugurated for its development and Up-gradation in May 2018 by Hon'ble Minister, EFCC and Hon'ble Minister of State EF&CC.

### **2.7 Forest Conservation**

**Implementation of FC Act, 1980:** FC Division implements the provisions of Forest Conservation Act, 1980. The Forest (Conservation) Act, 1980 came in to force with effect from October 25, 1980. Under the provisions of this Act, prior approval of the Central Government is essential for diversion of forest lands for the non-forestry purposes. The Act has succeeded in controlling the indiscriminate release of forest land for non-forestry purposes.

#### **Activities undertaken:**

- Introduction of PARIVESH for single Window Clearance for Transparency: This innovative initiative has drastically improved the entire process of forest clearance in the Ministry. It has ensured transparency and has expedited the process of granting clearance.

- Many Guidelines were issued during the 2018-2019 for streamlining and fast disposal of diversion proposals under the Forest (Conservation) Act, 1980.
  - IFor Activities which constitutes violation of provision of Forest (Conservation) Act, 1980 and rules made thereof and guidelines issued in this behalf, by user agencies and quantum of penalty to be imposed.
  - IGeneral approval for diversion of forest land for creation of critical public utility infrastructure by Government Departments involving forest land up to 40 hectares of forest land and in Left Wing Extremism (LWE) affected district.
  - IFor deposition of fund through online for implementation of CAT plan in more than one instalment for small Hydel Project.
  - For General approval for diversion of forest land required for creation of border security related infrastructure within the International Border and LAC by Paramilitary organizations like BRO, ITBP, BSF, SSB of the Ministry of Defence and Home Affairs and extending the dispensation to NHIDCL.
  - Relaxation of norms for Survey and Investigation (Prospecting of ores) on forests land.
  - For diversion of forests land for establishment / construction of Zoos.
  - For Identification and suitability of non-forest land for Compensatory Afforestation and identification of Land Bank for Compensatory Afforestation (CA).
  - Simplifying Compliance of the Scheduled Tribes and Other Traditional Forest Dwellers (Recognition of Forest Rights) Act, 2006.

## 2.8 Forest Establishment

The Forest Establishment Division is handling the establishment matters relating to the Indian Council of Forestry Research and Education (ICFRE), an autonomous organisation under the Ministry of Environment, Forest and Climate Change and its Institutes/Centres; Forest Survey of India (FSI) and its Regional Centres; National Zoological Park (NZP); Wildlife Crime Control Bureau (WCCB) and its Regional Offices; Indira Gandhi National Forest Academy (IGNFA); Directorate of Forest Education (DFE) with four Central Academies, Forest Departments of all the Union Territories of India (except Andaman & Nicobar Forest Planation Development Corporation), general references relating to frontline staff of State Forest Departments viz;

- Recruitment Rules – framing & amendment of Recruitment Rules of technical and Ministerial posts.
- Constitution of Screening Committee for appointment of Joint Secretary and above level post in ICFRE.
- ACC approval for appointment of Director General, ICFRE.
- Consideration of proposals regarding up-gradation of pay scales, creation of posts, merger of posts, cadre restructuring and other establishment matters in r/o frontline staff of Forest Deptt. of States and UTs in consultation with nodal Ministries/Departments.
- Consultation with nodal Ministries in various establishment/service matters of all Scientific/ Technical/ Ministerial officers/ staff.
- Recruitment/Promotion/Deputation of Group A & B officers through UPSC.
- Appeal against penalty in disciplinary cases of Group 'A' 'B' & 'C'.
- Appeal against adverse entries in the ACR/APAR.
- Framing policy regarding various establishment matters of ICFRE as per extant guidelines of Govt. of

India.

- FE Division is Nodal Division for sending requisition to Staff Selection Commission for filling up Direct Recruitment posts in Attached and Subordinate Offices of this Ministry.

#### Activities undertaken

- Selection to the post of DDG (Education), ICFRE and Director, AFRI have been made.
- Search-cum-Selection committee is being constituted for selection of post of Director, FRI, Director, IWST, Director, HFRI.
- Framing/amendment of RRs for Group 'A', 'B' and 'C' posts in r/o FSI and Group 'B' post in IGNFA.
- Vacancy requisition of Regional/Subordinate offices forwarded to SSC for various DR posts (Non-Gazetted).
- Promotion cases in r/o Group 'A' officers of FSI taken up with UPSC.
- Creation of 57 posts of Frontline Staff in Lakshadweep.
- Up-gradation of pay for the posts of ACF and Forest Ranger in UT of A & N Islands.
- Filling up the vacancy in the post of Training Officer (Hindi) in IGNFA on deputation basis taken up with UPSC.
- Appointment to the post of Inspector in Wildlife Crime Control Bureau (WCCB).

### 2.9 Forest Policy

Forest Policy Division of Ministry of Environment, Forest and Climate Change (MoEF&CC) deals with the National Forest Policy, 1988, Indian Forest Act, 1927 and its amendments including policy matters and legislative matters of other Ministries and State Governments related to forests. In addition Forest Policy Division deals with forest related issues under various conventions such as UNFCCC, UNCCD & UNCBD, etc. The Division is the National Focal Division for the International Cooperation on United Nations Forum on Forestry (UNFF), Asia Pacific Forestry Commission (APFC), Asia Pacific Forest Invasive Species Network (APFISN), Committee on Forestry of FAO (COFO), UN-REDD and Centre for International Forestry Research (CIFOR) and Indian Poplar Commission of FAO. The Division is mandated to deal with technical aspects related to NDC related forestry targets and implementation of REDD+ programme in the Country at National level. The Division is also nodal division for coordinating bilateral agreement between India and USAID on Forest PLUS program.

The Division gives policy directions and issues advisories from time to time to State Governments on important forestry matters.

#### Activities undertaken:

- Indian Forest (Amendment) Act, 2017 was notified in January 2018. With this amendment, bamboo grown outside forest has been removed from the category of tree and forest produce and therefore bamboo grown in non-forest areas has been exempted from the requirement of felling and transit permit for its economic use. Thus the hardship being faced by farmers and other bamboo growers for obtaining felling and transit permit has been done away with. This will encourage bamboo growers and farmers for cultivation of bamboo on their private land.
- As per information received from State Governments, 23 States/ UTs have already liberalized/ exempted the bamboo from requirement of transit and felling permit (with restriction on 1-2 spp. in few States).

These States are Assam, Arunachal Pradesh, Manipur, Meghalaya, Nagaland, Sikkim, Bihar, Punjab, Karnataka, Chhattisgarh, Maharashtra, Madhya Pradesh, Delhi, Haryana, Gujarat, Himachal Pradesh, Tamil Nadu, Odisha, Telangana, Kerala, Uttarakhand, Uttar Pradesh and Goa. Further Government of Tamil Nadu and Government of Goa have already amended their respective Acts to omit bamboo from definition of tree.

- Further an Advisory dated 25.06.2018 was again issued to all States/ UTs for necessary amendments in State Forest Act and State Transit and Felling Regulations in line with Indian Forest (Amendment) Act, 2017 regarding removal of bamboo grown outside forest from definition of forest produce and tree.
- Advisory dated 19.01.2018 issued to all States/UTs to consider Pan India Card/Transit Permit for inter-state movement of commonly grown agro-forestry species. Himachal Pradesh and some other States are adopting the pan India Transit System. Further Pan India Transit Permit for inter-state movement of ten commonly grown agroforestry species (eucalyptus, poplar, Casuarina, Subabul, Silver oak, Acacia mangium, Melia Dubia, Khejri, India willow and Gamari) was also issued on 23.01.2018 to all States/UTs for adoption.
- The Division is also working on creation of a “National Portal on Pan India Transit System”.
- Draft National Forest Policy, 2018 had been prepared and placed in public domain for wide consultation till April 2018. Based on analysis of all comments received through consultation process including inter-ministerial consultation, a revised Draft National Forest Policy, 2018 has been finalized. The same is under consideration for notifying the new National Forest Policy of 2018.
- Forest Policy Division supported and provided all necessary technical inputs to the Department of Agriculture, Cooperation and Farmers Welfare for finalizing the restructured National Bamboo Mission. The Mission has been launched in 2018 with an outlay of Rs. 1,290 Crore to promote bamboo sector in a holistic manner.
- International Day of Forests was celebrated on 23.03.2018 to sensitize the people, students and other stakeholders on importance of forests. On this day redevelopment and upgradation of Okhla Bird Sanctuary was also inaugurated.
- National Forest Reference Level for REDD+ implementation in country has been accepted by the UNFCCC. National REDD+ Strategy was also released to guide State Governments for implementation of REDD+. Four Committee viz. National Governing Council, Thematic Advisory Group, Technical Working Group and National Designated Entity for REDD+ have been constituted at national level for coordinating implementation of REDD+ in the country.
- Expert Committee was constituted to develop strategy to increase green cover/tree cover outside recorded forest areas. The committee submitted the Report and it is in public domain.

## 2.10 Forest Protection

It involves the following activities:

- Implementation of the Centrally Sponsored Scheme of “Forest Fire Prevention & Management Scheme” (FPM).
- Major Forest Protection issues such as forest fires, Encroachments, Illegal felling, vacancy position of frontline staff etc.
- Nodal Division for dealing with forest fires and Crisis Management Plan for fire in the county.
- Nodal division for issues relating to Left Wing Extremism affected forest areas.



- Pest & disease attack relating to forest protection (excludes research aspect).
- Nodal division for use of Space Technology in the Ministry.

The Centrally Sponsored Scheme of Intensification of Forest Management Scheme was reviewed in the Ministry of EF&CC at the end of the XII Five Year Plan and as per the direction of this Ministry, the erstwhile Intensification of Forest Management Scheme was revised and replaced as Centrally Sponsored Forest Fire Prevention & Management Scheme w.e.f. 2017-18 and the objective of the scheme is to assist the State / UT Governments in protection of forests from forest fire by taking effective prevention and management measures.

**Activities undertaken:** During 2018-19, an amount of Rs. 38.61 crores (including central sector) has so far been released to States / UTs under the CSS: Forest Fire Prevention & Management Scheme.

### **2.11 Wildlife Conservation**

Wildlife Division of the Ministry is the nodal Division which deals with the policy and law matters and knowledge management for conservation of biodiversity and Protected Area network in the Country. The Division also provides technical and financial support to the State/ UT Governments for conservation of wildlife and their habitats under the Centrally Sponsored Scheme - Development of Wildlife Habitats (CSS-DWH). Wildlife Division also provides Grants in Aid to the Central Zoo Authority, New Delhi and Wildlife Institute of India, Dehradun.

The management and conservation efforts are discernable in the population increase of key stone species. Due to the concerted management efforts and enhanced financial allocation, most of the keystone species have shown remarkable increase in population.

The Wildlife Wing of the Ministry of Environment, Forest and Climate Change, which is headed by the Additional Director General of Forests (Wildlife) who is also the Director, Wildlife Preservation as per Wildlife (Protection) Act, 1792.

The statutory institutes/ organizations like the Central Zoo Authority and Wildlife Crime Control Bureau are also under the Wildlife Division. Besides the Wildlife Division also provides Grants in aid to the Wildlife Institute of India, Dehradun an Autonomous Institute under the Ministry.

#### **Activities undertaken:**

- The Standing Committee of National Board for Wildlife has been meeting regularly. In order to enhance the efficiency of the decision making process, it has been decided to convene meetings of the Standing Committee of NBWL through Video Conference. The first Video Conference meeting of Standing Committee of NBWL was held on 7th September 2018. There is zero pendency in Wildlife Clearances. In order to build the capacity of the Veterinary doctors posted in Protected Areas, on management of wildlife, the Wildlife Division has initiated short term training programmes at the Indian Veterinary Research Institute (IVRI), Bareilly. As a first step, 20 Veterinary Doctors from 10 States were trained in wildlife health management.
- The Ministry released the 'National Action Plan for conservation of Migratory birds along the Central Asian Flyway (CAF)', signaling the leadership role India will play in conservation of migratory species.
- The Ministry released the 'Policy for Eco-tourism in Forest and Wildlife Areas'. The Eco-tourism policy has been formulated in consultation with the Ministry of Tourism. The Eco-tourism policy will provide

livelihood opportunities for the local communities, as well as educate visitors and enhance their understanding of nature.

- The Ministry launched the “Asiatic Lion Conservation Project” with an aim to protect and conserve the world’s last ranging free population of Asiatic Lion and its associated ecosystem. The Project will strengthen the ongoing measures for conservation and recovery of Asiatic Lion with the help of state-of-the-art techniques/ instruments, regular scientific research studies, disease management, Modern surveillance/ patrolling techniques etc.
- Considering the need of immediate assistance to farmers whose crops are being damaged by wild animals such as Blue bulls, Wild boars etc., the Wildlife Division of the Ministry requested of the Ministry of Agriculture and Farmers Welfare to include the crop damage by wild animals within the ambit of the ‘Pradhan Mantri Fasal Bima Yojna’. Taking into consideration, the Ministry of Agriculture and Farmers Welfare agreed to the request.
- For the first time in the country that scientific methods like Immuno-Contraception for population control of problematic animals, which are responsible for Human wildlife conflict has been initiated. The project is being assisted by WII and the National Immunology Institute, Delhi.
- With a view to provide focused protection to the critically endangered species, the Standing Committee of National Board for Wildlife in its 49th meeting held on 13th June 2018, recommended for inclusion of four more species for taking up ‘Recovery programme’ under the Centrally Sponsored Scheme of ‘Development of Wildlife Habitat’. The species include: Batagur Baska; Red Panda; Clouded Leopard and Arabian Sea Humpback Whale.
- The number of Protected Areas in the country has increased from a total of 769 in 2017 to 828 in 2018. The total area under PA is now 1,62,454.3457 Sq.kms. With greater impetus on community participatory approach in wildlife conservation, the number of Community Reserves in the country has risen. The number of Community Reserves has increased from 46 in the year 2017 to 103 in 2018.
- As part of celebration of World Environment Day, 2018, the Wildlife Division of this Ministry issued directions to all States & UT Governments to organize awareness generation programmes to sensitize people to avoid the usage of plastic in any form in all Protected Areas and declare them as “Plastic Free Zones”. Protected Areas in States like West Bengal, Odisha, Delhi, Uttarakhand etc. have been declared as “Plastic free zones”.
- On the occasion of the International Day of Forests, 21 st March, 2018, a Foundation Stone for the start of Redevelopment and Upgradation works of Okhla Bird Sanctuary was laid down by Dr. Harsh Vardhan, Hon’ble Minister for Environment, Forest and Climate Change in the august presence of Dr. Mahesh Sharma, Hon’ble Minister of State in the Ministry of Environment, Forest and Climate Change and other Dignitaries and Officials from Ministry, NOIDA and Uttar Pradesh Forest Department.
- A new Indo-German Technical Cooperation project on ‘Human-Wildlife Conflict Mitigation in India’ was conceptualized on 5th February, 2018. Eco-Sensitive Zones (ESZ) are notified for conservation of the Eco sensitive zone of Sanctuaries and National Parks. Out of 662 NP/WLS during the year 2018, 206 were Draft notified and 289 NP/WLS were finally notified.
- The Government has also introduced guidelines named “Eco-friendly measures to mitigate impacts of linear infrastructure on wildlife” to ensure that any linear project like roads, railway tracks and transmission line passing through Protected Areas and other Wildlife rich areas are designed in eco-friendly manner

**Centrally Sponsored Scheme - Development of Wildlife Habitat:** The Ministry provides financial assistance to the State/ UT Governments for conservation and protection of wildlife and its habitat apart from providing legislative and policy support. The allocation under the Centrally Sponsored Scheme of Development of Wildlife Habitats has also significantly increased. The scheme has following three components:

- Support to Protected Areas (National Parks, Wildlife Sanctuaries, Conservation Reserves and Community Reserves)
- Protection of Wildlife Outside Protected Areas
- Recovery programmes for saving Critically Endangered Species and habitats.

## 2.12 Wildlife Crime Control Bureau (WCCB):

The Wild Life Crime Control Bureau (WCCB) was constituted by Government of India on 6th June, 2007 under Section 38 Y of the Wild Life (Protection) Act, 1972, and it became operational in the year 2008. The Bureau has been envisaged as a multi-disciplinary body with officials from Police, Forest/ WL, Customs and other Intelligence & Enforcement agencies

**Activities undertaken:** In line with its mandate, the Bureau has undertaken the following activities:

- Collection, collation and dissemination of intelligence on wildlife crime and criminals to the central / state agencies concerned for apprehension of criminals.
- Collection of wildlife crime data from the States/UTs by creation of online data management system in WCCB website base.
- Wildlife Crime Enforcement under the provisions of Wild Life (Protection) Act, 1972:-
  - Detection/ search/ seizures/apprehensions
  - Investigation of offences detected by the officers of the Bureau
  - Filing complaints in courts in cases detected by the Bureau.
- Capacity building in dealing with wildlife crimes and investigation of wildlife offences:-
- Coordination and cooperation to combat organized wildlife crimes with trans – border ramifications.
- Sensitization and awareness campaigns on wildlife and wildlife crimes to public and other stakeholders.
- Assistance in investigation and prosecution of important wildlife offences being investigated by other agencies.
- Assist the Customs Department in inspection of consignments in respect of violations of WLP Act, CITES and FTP. Assist and advise Customs department in identification of wildlife articles and issues related to CITES. Regulate legal trade under CITES.
- Issue Alerts and Advisories to the stakeholders on the issues pertaining to wildlife crime enforcement, policy and legislations.
- Published 3 Purple Notices on Illegal poaching & smuggling of Live tokay gecko (Gecko gecko), Agarwood smuggling from India and Unauthorized export of Dried Sea horse through courier mode
- Other activities - Enrolment of volunteers to assist WCCB in performance of its mandated tasks pertaining to intelligence collection, capacity building and awareness generation on wildlife and wildlife crime issues.

**WCCB received UNEP Award:** Excellent work done in combating trans-boundary environmental crime by WCCB has been recognized by United Nation Environment Programme by awarding Asia Environment Enforcement

Awards, 2018.

### **2.13 Central Zoo Authority (CZA)**

The CZA has prescribed following standards for the housing and upkeep of animals housed in captivity:

- a. Recognition of Zoo Rules
- b. Guidelines for the Scientific Management of the Zoos

#### **Activities undertaken:**

- During the period, the CZA has evaluated 37 large, medium, small and mini zoos and Rescue Centre.
- Granted recognition to 41 zoos/deer parks/rescue centres.
- Coordinating planned Conservation Breeding Programme of 73 identified critically endangered wild animal species in Indian zoos.
- Prioritized 26 endangered animal species of total 73 identified species and already launched the programme for 23 animal species.
- During the financial year 2017-18, the authority provided financial assistance for carrying forward the conservation breeding programme for Vultures, Mouse deer, Hoolock gibbon and Blyth's tragopan etc.
- Has approved 29 exchange proposals of animals between Indian Zoos and 03 exchange proposals between Indian and Foreign Zoos.
- During the current financial year, CZA has recommended the approval of Master (Layout) Plans of the 2 Zoos. Further, the CZA has also recommended in-principal approval of establishment of new 2 new Zoos/Rescue Centre.
- Has conducted/conducting various training programme during 2018-19 for the human resource development in the zoos
- During the period besides assisting in ongoing research projects the Central Zoo Authority has published Annual "Inventory of animals in Indian Zoos 2017-18".

### **2.14 Project Elephant**

Project Elephant (PE) was launched by the Government of India in the year 1991-92 as a Centrally Sponsored Scheme with the following objectives:

- To protect elephants, their habitat and corridors
- To address issues of man-elephant conflict
- Welfare of domesticated elephants

There are 30 notified and 1 proposed Elephant Reserve in the country (Khasi Hills Elephant Reserve in Meghalaya).

#### **Activities undertaken:**

- Government of Nagaland has declared Singphan Wildlife Sanctuary as "Singphan Elephant Reserve" with the approval of Government of India on 16th August 2018.
- The second meeting of the "Expert Committee to suggest ways to deal with cases of Anthrax and Herpes diseases in wild elephants" was held on 25.5.2018 at Bhubaneswar, Odisha. A SoP was developed for sample collection in the field for anthrax cases and issues related to elephant port mortem was also

discussed during the meeting.

- A meeting was held to discuss the eco-friendly measures being adopted for mitigation of wildlife conflict along the linear infrastructure.
- The 3rd Dialogue between Indo-Bangladesh on Trans-boundary Conservation of Elephant held on 29th November, 2018 at Dhaka, Bangladesh. The draft Standard Operation Procedures (SoPs) and Protocol for Trans-boundary Conservation and Management of Elephants in India-Bangladesh landscape drafted during the 2nd Dialogue has been finalized and agreed by both the countries for further action.
- The World Elephant Day was conducted at Indira Gandhi National Centre for the Arts (IGNCA), 11, Mansingh Road in New Delhi on 12th August 2018. The programme included activities with school children where school children prepared clay models of elephants, brought in paintings on elephants and went on a walk and took pledge to conserve the species along with the Hon'ble Minister, Railways. During this event, the Hon'ble Minister also released the (a) All India Elephant Census Report, 2017 (b) Agreed Points of Action on Trans-boundary conservation of elephants in India and Bangladesh (c) Elephant corridor document "Right of Passage" and (d) Launched the Gaj Yatra campaign by unveiling an art piece of elephant made of glass fibre and recycled materials. Ministry also has partnered with Wildlife Trust of India for the Gaj Yatra Campaign.

### 2.15 Project Tiger / National Tiger Conservation Authority (NTCA)

The National Tiger Conservation Authority is a statutory body under the Ministry of Environment, Forests and Climate Change constituted under enabling provisions of the Wildlife (Protection) Act, 1972, as amended in 2006, for strengthening tiger conservation, as per powers and functions assigned to it under the said Act.

The National Tiger Conservation Authority has been fulfilling its mandate within the ambit of the Wildlife (Protection) Act, 1972 for strengthening tiger conservation in the country by retaining an oversight through advisories/normative guidelines, based on appraisal of tiger status, ongoing conservation initiatives and recommendations of specially constituted Committees. 'Project Tiger' is a Centrally Sponsored Scheme of the Ministry of Environment, Forests and Climate Change, providing funding support to tiger range States, for in-situ conservation of tigers in designated tiger reserves, and has put the endangered tiger on an assured path of recovery by saving it from extinction, as revealed by the recent findings of the All India tiger estimation using the refined methodology.

**Activities undertaken:** Under the Centrally Sponsored Scheme of Project Tiger, which is administered by the National Tiger Conservation Authority, following 17 overarching activities are undertaken:

- Stepping up protection: (antipoaching squad/Tiger Protection Force deployment)
- Deciding inviolate spaces for wildlife and relocation of villagers from core or critical tiger habitats in Tiger Reserves within a timeframe and settlement of rights.
- Strengthening of infrastructure within Tiger Reserves.
- Habitat improvement and water development.
- Addressing man-animal conflict (ensuring uniform, timely compensation for human deaths due to wild animals, livestock depredation by carnivores, crop depredation by wild ungulates) (compensation for crop loss is a new component):
- Co-existence agenda in buffer or fringe areas.
- Rehabilitation of traditional hunting tribes living around tiger reserves.

- Research and field equipments.
- Staff development and capacity building.
- Mainstreaming wildlife concerns in tiger bearing forests and fostering corridor conservation through restorative strategy involving locals to arrest fragmentation of habitats.
- Safeguards and Retrofitting measures in the interest of wildlife conservation.
- Providing basic infrastructure.
- Independent monitoring and evaluation of tiger reserves.
- Establishment and development of new tiger reserves.
- Provision of Project Allowance to staff of Project Tiger.
- Staff welfare activities.
- Fostering regulated Ecotourism in tiger reserves.

### 2.16 Animal Welfare

The mandate of the Animal Welfare Division is to prevent the infliction of needless pain or suffering on animals, in terms of the provision of the Prevention of Cruelty to Animals (PCA) Act, 1960. The provisions of the PCA Act are general in nature, and rules dealing with specific situations have to be notified from time to time.

The three organs of Animal Welfare Division are:-

- i. **Animal Welfare Board of India:** The Animal Welfare Board of India (AWBI) was set up in 1962 in accordance with Section 4 of the Prevention of Cruelty to Animals Act 1960 (No.59 of 1960). The AWBI is presently functioning under the aegis of Ministry of Environment, Forest and Climate Change, Government of India.
- ii. **The Committee for Purpose of Control and Supervision of Experiments on Animals (CPCSEA):** established under Section 15(1) of the Prevention of Cruelty to Animals (PCA) Act 1960. CPCSEA is a statutory Committee, which is duty bound to take all such measures as may be necessary to ensure that animals are not subjected to unnecessary pains or suffering before, during or after performance of experiments on them. For this purpose, the Committee formulated the “Breeding of and Experiments on Animals (Control & Supervision) Rules, 1998” (amended in 2001 and 2006) to regulate the experiments on animals. Till date 1738 establishments are registered with CPCSEA (upto 31.10.2018).
- iii. **National Institute of Animal Welfare:** is a subordinate office of Government of India under the Ministry of Environment, Forest & Climate Change, set up in a sprawling campus on 8 Acres of land at Ballabhgarh, Faridabad, Haryana. Its objective is to create enabling environment for fulfilment of the statutory requirement as laid down in the Prevention of Cruelty to Animals Act, 1960.

#### Activities undertaken:

- Animal Welfare Board of India has granted recognition to 3,246 Animal Welfare Organisations (AWOs) up to the year 2017-18. During the year 2018-19, the Board has granted recognition to 31 AWOs as on 15.11.2018.
- The AW Board has made a Grievance Redressal Cell to handle the complaints / grievances received from all over India on animal welfare and protection issues so that the grievances / complaints may be taken care-of immediately.

- Performing Animals Sub-Committee (PASC) has been reconstituted and is made more transparent and accountable. The Chairman conducted a meeting with the producers at Mumbai and their suggestions for making the process simplified have been incorporated in the system for providing clearance at the earliest.
- The Board has nominated the Inspection Committee for checking the case of illegal slaughtering, sacrifice, killing and transportation of animals in violation of law, rules and regulations on the eve of Dussehra, Bakrid etc.
- The Board has conducted 327 events of Jallikattu successfully under the surveillance of the inspection committee of experts in every event in the current year without any report of cruelty in the State of Tamil Nadu which is a historical achievement of the Board.
- Free Mobile Animal Clinic: The Board is providing free, on the spot veterinary treatment to sick and injured animals belonging to poor people through its Mobile Animal Clinic (MAC) programme operating from its regional office at Chennai.. During the year 2018-19, 611 animals are treated / rescued by AWBI Mobile Clinic in Chennai till 15th November, 2018.
- The Board has so far conducted 7 training programmes wherein 192 Honorary State / Legal / District Animal Welfare Officers have been trained from July to November, 2018.
- The Board has so far issued a total number of 38 Honorary State Animal Welfare Officers, 152 Honorary District Animal Welfare Officers, 2 Honorary Legal Animal Welfare Officers ID CARDS and imparted training to them to carry out animal welfare activities and create awareness on the issues of animal welfare and their protection throughout the country.
- During the year 2018-19 (up to 15.11.18) 642 Films / Ad films were granted No Objection Certificates and 621 Films / Ad films have been granted pre-shoot permission for using animals in their Films / Ad films.
- 2 Training programmes for selection of Nominees of CPCSEA conducted at TANUVAS, Chennai and Indira Paryavaran Bhawan, New Delhi where 85 Candidates/ Nominees and 173 Candidates/ Nominees were trained respectively before their induction into the IAECs of various establishments.
- Memorandum of Association (MoA) has been signed between this Ministry and Lala Lajpat Rai University of Veterinary and Animal Sciences (LUVAS), Hissar (Haryana).for running the training courses at National Institute of Animal Welfare (NIAW).

## Chapter-3

### Environmental Impact Assessment

#### 3.1 Environmental Impact Assessment

Hon'ble PM has launched a single window hub PARIVESH (Pro-Active and Responsive facilitation by Interactive, Virtuous and Environmental Single-window Hub) on 10th August, 2018. PARIVESH automates the entire process starting from submission of application, preparation of agenda, preparation of Minutes as well as grant of clearances. It facilitates the single registration for all types of clearances (Environment, Forest, Wildlife, CRZ). This portal facilitates greater transparency and user friendly feature such as SMS alerts, Auto generation of Agenda and Minutes, Online tracking of proposals, Single registration for all types of clearances (Environment, Forest, Wildlife, CRZ) etc.

During the year 2018, Ministry accorded 410 Environmental Clearances and 670 Terms of References. Average time taken to grant Environmental Clearances had reduced from 600 days (prior to 2014) to 140 days significantly improving the ease in obtaining the green nod.

Some of the important Policy Decisions taken during the year are as follows :

- Powers to appraise and accord Environment clearance for category B violation proposals are delegated to concerned SEIAAs and SEACs. (March 2018)
- S.O. 3977 dated 14th August, 2018 regarding Mining and Hydro Electric Power delegating Powers to appraise at state level was issued.
- A draft Notification inviting the objections or suggestions vide S.O. 4721(E), dated 10th September, 2018, regarding empanelment of government institutions of national repute for carrying out compliance monitoring of Environment Clearance conditions of projects and activities was published.
- S.O.5845(E) dated 26th November, 2018 on submission of soft copy of EC compliance report was issued.

#### 3.2 Coastal Regulation Zone (CRZ)

With the objective of conservation and protection of the coastal environment, the Ministry of Environment and Forest and Climate Change notified the Coastal Regulation Zone (CRZ) Notification in 1991, which was subsequently revised in 2011. The Ministry of Environment, Forest & Climate Change constituted a Committee in June 2014 under the Chairmanship of Dr. Shailesh Nayak (Secretary, Ministry of Earth Sciences) to examine the various issues and concerns of Coastal States/UTs and other stakeholders for recommending appropriate changes in the CRZ Notification, 2011. Based on the recommendations of the Committee, a draft notification viz. CRZ Notification, 2018 was issued in April, 2018 for inviting comments from public at large. A number of suggestions and comments were received by the Central Government and based on overall imperative of sustainable development of coastal areas and need for conserving the coastal environment, the Government has approved the Coastal Regulation Zone Notification, 2018 which is expected to go a long way in meeting the aspirations of coastal communities besides ensuring welfare of poor and vulnerable populations after it is finally notified.

#### 3.3 Society of Integrated Coastal Management (SICOM)

National Coastal Management Programme (NCMP): To conserve, protect and manage the coastal and marine



environment, Ministry is implementing the ICZM Project with the World Bank assistance. For the implementation of the above project MoEF &CC has established a Society of Integrated Coastal Management [SICOM] as nodal Body under the Society Registration Act, in Delhi. Under the above World Bank assisted ICZM Project, the above issues have been given a huge thrust for implementation both at the regional and national levels. The ICZM Project is being implemented as Pilot investments in the coastal States of Gujarat, Orissa and West Bengal. National activities are implemented through SICOM along with monitoring of activities carried out by three selected States. The project has four implementing agencies – MoEF&CC at the national level with lead responsibilities, and the Departments of Forests and Environment (DoFE) of the three participating states.

**Activities undertaken:**

- Preparation of ICZM Plan for three States (Gujarat, Odisha and West Bengal) was undertaken during the year and the draft reports are under the process of obtaining necessary approvals from their respective State Govts in the case of Gujarat and Odisha. In the case of West Bengal, it is still under preparation. A National Workshop to review the draft plan was also organized on 30th November 2018 wherein officials from the three States, external International Experts and The World Bank participated.
- With regard to Establishment of 3 Data Centers, Preliminary survey has been completed and the work is under process. Data center will be established by 30th June 2019.
- With regard to preparatory activities of Phase-II of the ICZM: - DEA, MoF has given an in principal approval for Phase-II on 10.04.2018 and posed to The World Bank for external assistance.
- SICOM and NCSCM is working on preparation of PPRs with all 13 Coastal States and UTs. Necessary support, advisory, guidance has been provided to all the 13 Coastal States/UTs. Revised PPR of 7 States/UTs i.e. States of Odisha, Gujarat, Puducherry, Andhra Pradesh, Tamil Nadu, Goa and Lakshadweep has been submitted to The World Bank for their concurrence.
- Beach Environment and Aesthetic Management Services (BEAMS) programme:- An initiative for pollution abatement, beautification & development of beaches under ICZM Project, MOEFCC has initiated a Beach Environment and Aesthetic Management Services Programme termed as BEAMS in 13 pilot beaches across the country. This programme is to prepare and develop Indian beaches for Blue Flag Certification. Process for Beach nomination by the State Govts/UTs; thereafter a National Workshop and National Jury review meeting was also held by SICOM between the Nodal Officers of the States/UTs and contractors on 11.09.2018. Contracts for development preliminary beach facilities are awarded for seven beaches i.e for Shivrajpur beach Gujarat, Ghoghala beach Diu, Bhogave beach Maharashtra, Padubidri beach Karnataka, Kappad beach Kerala, Chandrabhaga beach Odisha and Rishikonda beach Andhra Pradesh.

## Chapter-4

### Abatement of Pollution

#### 4.1 Control of Pollution

The concern for environmental quality has become the top most issue in the present scenario of rising population, increasing urbanization, industrial pollution, shipping, aviation and vehicular emission as well as pollution of water courses due to discharge of industrial effluents and sewage without conforming to the environmental norms and standards apart from agricultural run-off. To give effect to various measures and policies for pollution control, various steps have been initiated which include stringent regulations, development of environmental standards and periodical revision therein, control of vehicular, air, noise and water pollution.

CPCB is the major organization whose administrative and financial matter along with pollution control activities are dealt in CP Division. During the year 2018, several initiatives have been taken for prevention and control of pollution. The initiatives taken have been based on the identified key issues and accordingly drawing action plan. Some of the key actions taken are summarized as under:

#### I. Measures to improve the air quality of Delhi-NCR

- Due to extensive efforts by all stakeholders, there has been marginal improvement in overall air quality in 2018 in Delhi. As per Air Quality Index (AQI) data, the number of good, satisfactory and moderate days in 2018 is 159 as compared to 152 in 2017 during the corresponding period.
- **Prevention of stubble burning in Punjab, Haryana, Uttar Pradesh and Delhi-** To stop burning of crop residue that may lead to higher level of air pollution in Delhi NCR especially during adverse meteorological conditions in early winter in North India, the Central Government has approved a new Central Sector Scheme on 'Promotion of Agricultural Mechanization for in-situ management of Crop Residue in the States of Punjab, Haryana, Uttar Pradesh and NCT of Delhi for the period from 2018-19 and 2019-20 with an outlay of Rs. 1151.80 crore. This year's allocation of Central funds of Rs. 591.65 crore has been released to the concerned States except Delhi.
- Notifications have been issued regarding regulation of sale and use of fuels like pet coke and FO to improve air quality in Delhi and NCR States. Notification regarding mandatory implementation of dust mitigation measures for construction and demolition activities as well as notification regarding emission norms for industrial boilers have also been issued.
- Thermal power plants in Delhi NCR will comply with new emission norms by December, 2019 and in rest of the country by December 2022. Badarpur thermal power plant has been closed from 15th October, 2018.
- Eastern Peripheral Expressway got operational in May 2018 and Western Peripheral Expressway got operational in November 2018. This will ease congestion and divert non-destined traffic from Delhi.
- Various measures for abatement of air pollution including notification of Comprehensive Air Plan for Delhi NCR have been undertaken. A total 55 agencies have been directed under section 3 and 5 of E (P) Act, 1986 to ensure strict implementation of Comprehensive Action Plan for prevention, control and mitigation of air pollution in Delhi NCR. They include Ministry of Petroleum & Natural Gas, Ministry of Road Transport & Highways, Ministry of Housing & Urban Affairs, Delhi Police, Delhi NCR – Chief

Secretaries, Environment Departments, Transport Departments, Urban Local Bodies, Industry Departments, etc.

- In order to address the increasing air pollution across the country in a comprehensive manner, Ministry has formalized a National Clean Air Program (NCAP) as a pan India time bound national level strategy to tackle the increasing air pollution problem across the country in comprehensive manner.
- The main components of NCAP include city specific air pollution abatement action plan for 102 non-attainment cities, increasing number of monitoring stations, creation of Technical Assessment Cell, technology support, public participation in planning and implementation, setting up of Air Information Centres for data analysis, source apportionment studies, setting up of national inventory, guidelines for indoor air pollution and setting up of rural monitoring stations etc.
- The Central Government had notified a Graded Response Action Plan (GRAP) on 12th January 2017 for Delhi and NCR, which comprises measures such as prohibition on entry of trucks into Delhi; ban on construction activities, introduction of odd and even scheme for private vehicles, shutting of schools, closure of brick kilns, hot mix plants and stone crushers; ban on diesel generator sets, garbage burning in landfills and plying of visibly polluting vehicles etc. The nature, scope and rigor of measures to be taken is linked to levels of pollution viz. severe + or emergency, severe, very poor, moderate to poor and moderate, after due consideration by authorities concerned. The actions are to be implemented in the entire NCR.
- The Government of India has taken several steps to address air pollution which inter alia, include notification of National Ambient Air Quality Standards; setting up of monitoring network for assessment of ambient air quality; introduction of cleaner / alternate fuels like gaseous fuel (CNG, LPG, etc.), ethanol blending; launching of National Air Quality Index; leapfrogging from BS-IV to BS-VI fuel standards from 1st April, 2018 in NCT of Delhi; notification of Construction and Demolition Waste Management Rules; banning of burning of biomass; promotion of public transport network; streamlining the issuance of Pollution Under Control Certificate; installation of on-line continuous (24x7) monitoring devices by major industries; collection of Environmental Protection Charge on more than 2000 CC diesel vehicles etc.
- A comprehensive set of directions have been issued under section 18 (1) (b) of Air (Prevention and Control of Pollution) Act, 1986 for implementation of 42/31 measures to mitigate air pollution in major cities including Delhi and NCR cities comprising of control and mitigation measures related to vehicular emissions, re-suspension of road dust and other fugitive emissions, bio-mass/municipal solid waste burning, industrial pollution, construction and demolition activities, and other general steps.
- **Technological Initiatives taken for Air Pollution Mitigation:** Several new/ innovative technologies are being proposed towards air quality management. So, far three pilot projects have been sanctioned for deployment in Delhi under EPC funds- (i) To demonstrate the effectiveness of Air Pollution Mitigation by Pariyayantra Filtration” in 30 buses by Manav Rachna International University, (ii) Deployment and Evaluation of 54 units Air Purification Units (WAYU) for 5 Traffic Junction Pollution Abatement in Delhi by NEERI and (iii) Control of Dust Emission using Dust Suppressant at three locations.
- Public Complaints regarding air polluting activities- Public Complaints regarding prominent air pollution incidents in Delhi NCR can be reported through ‘Sameer App’, ‘Emails’(Aircomplaints.cpcb@gov.in) and ‘Social Media Networks’ (Facebook and Twitter). Every complaint lodged is immediately forwarded to the concerned agency.

- **Field Inspections and Feedback:** In view of anticipated poor air quality conditions during winter months, rigorous ground level actions were initiated as early as September 15, 2018, including deployment of 41 CPCB teams for field feedback on pollution activities. Waste dumping/burning, traffic congestion, construction activity, open storage of construction material, unpaved road, open dumping of C & D waste and road dust resuspension have been identified as major concerns. Scoring method has been developed for assessing the effectiveness of action taken on reported incidents.
- **Clean Air Campaign:** Ministry of Environment, Forest & Climate Change and Delhi Government launched Clean Air for Delhi Campaign from 10th – 23rd Feb 2018. The campaign aimed at sensitizing ground-level functionaries and general public about their roles in making the air quality better in Delhi along with enforcement of various measures for improving air quality. Also, to check air polluting activities pre and post Diwali, a special campaign called “Clean Air Campaign” was organized during November 01, 2018 to November 10, 2018. For the purpose, 52 teams had been constituted that included members from Ministry of Environment, Forest & Climate Change, Central Pollution Control Board and Government of Delhi and NCR towns (Noida, Gurugram, Greater Noida, Faridabad and Ghaziabad) to take on-spot ground actions to control air polluting activities and sensitizing public to ensure their effective participation. 2619 complaints lodged during Clean Air Campaign held in November 2018 and 454 challans were issued.
- Review meetings have been held with all concerned Central Government Ministries and State Governments under the chairmanship of Hon’ble Minister, EF&CC as well as Secretary, MoEF&CC to ensure that various measures for prevention, control and mitigation of air pollution in Delhi NCR are taken in a coordinated and effective manner.
- Directions have been given to initiate criminal prosecution against agencies who fail to take corrective actions to prevent, control and mitigate air pollution despite being warned.
- An early warning system has been implemented in October 2018 by IMD to issue timely alerts to implementing agencies for facilitating them to take preemptive actions during critical episodes.

## II. Development of Environmental Standards

- **Emission Standards for SO<sub>2</sub> & NO<sub>x</sub> for five industries i.e Ceramic, Foundry, Glass, Lime-Kiln and Reheating furnace G.S.R. 1267(E), dated 22/03/2018.**  
Ministry has notified emission standard for SO<sub>2</sub> & NO<sub>x</sub> for five industries i.e Ceramic, Foundry, Glass, Lime-Kiln and Reheating furnace G.S.R. 1267(E), dated 22/03/2018. The emission standard for all five Industries was proposed based on present emission levels, emission standards prescribe by SPCBs/PCCs, available technology for control of SO<sub>2</sub> and NO<sub>x</sub>, control efficiency, cost, international standards and actual sample data results by CPCB. The brief on each industry sectors as:
  - **Ceramic Industry:** The Ceramic Industry earlier notification was notified for Kilns( PM, Fluoride, Chloride), Raw Material Handling (Process and Operations), Automatic Spray Unit (PM) and Stack Height criteria. Presently, Ceramic Industry SO<sub>2</sub> limit stipulated is 400 mg/Nm<sup>3</sup> and NO<sub>x</sub> is 600 mg/Nm<sup>3</sup> for the first time.
  - **Foundry Industries (Furnaces based on fuel):** Foundry Industry earlier notification was notified for Cupola capacity and Arc Furnace for Particulate Matters and stack height criteria. Now, notified emission for SO<sub>2</sub> limit is 300 mg/Nm<sup>3</sup> and NO<sub>x</sub> is 400 mg/Nm<sup>3</sup> for the first time.
  - **Glass:** Glass Industry earlier notification was notified for Sodalime & Borosilicate and Lead Glass for

Particulate Matters and stack height criteria. Now, presently notified emission for SO<sub>2</sub> limit is 500 mg/Nm<sup>3</sup> (for natural gas firing, 1500 mg/Nm<sup>3</sup>), for other fuels and NO<sub>x</sub> is 1000 mg/Nm<sup>3</sup> for the first time.

- **Lime Kiln:** Lime Kiln Industry earlier notification was notified for Particulate Matters and stack height criteria. Now, notified emission for SO<sub>2</sub> limit is 400 mg/Nm<sup>3</sup> and NO<sub>x</sub> is 500 mg/Nm<sup>3</sup> for the first time vide aforesaid notification.
- **Reheating Furnace:** Reheating furnace Industry earlier notification was notified for Particulate Matters. Now, notified emission for SO<sub>2</sub> limit is 300 mg/Nm<sup>3</sup> and NO<sub>x</sub> is 1000 mg/Nm<sup>3</sup> for the first time vide aforesaid notification.
- **Ambient Air Quality Standards with respect to Airport Noise Zone G.S.R. 568(E), dated 18/06/2018 :** Before finalization of the aforesaid notification the Ministry has taken detail consultation with lined Ministries / Departments i.e. DGCA, MoCA, AAI DIAL, Ministry of Housing and Urban Affairs, Ministry of Health and Family Welfare Central Pollution Control Board. The notification envisages noise level limits for Busy Airports Limits in day time is 70 dB(A) Leq and for night time is 65 dB(A) Leq and for all other Airports excluding proposed Airports Limit is 65 dB (A) Leq and for night time is 60 dB (A) Leq.
- **Thermal Power Plants (TPPs) Amendment, Gazette Notification S.O. 593(E) dated 28/06/2018:** The amendment of notification includes: specific water consumption shall not exceed maximum of 3.0 m<sup>3</sup>/MWh for new plants installed after 1st January, 2017 and these plants shall also achieve zero waste water discharge. The above specific condition shall not apply to plants which are using sea water. The criteria for Stack Height have been prescribed for TPPs with wet Flue Gas Desulphurization. For TPPs Power generation capacity 100 MW and above the Stack Height should be 100 m minimum and TPPs less than 100 MW the Stack Height should be 30 m whichever is more. These standards shall apply to coal / lignite based Thermal Power Plants.
- **Effluent and Emission Standards for Man-Made Fibre Industry, G.S.R. 1025(E), dated 09/11/2018.**
- **Further** six draft notifications have been issued as per Environment (Protection) Act, 1986 inviting public consultation that includes: Brick Kiln Industry, Paint Industry, Coffee Processing Industry, Automobile Service Station Bus Depot, Fermentation Industry and Tannery Industry.

### III. Recognition of Environmental Laboratories under the Environment (Protection) Act, 1986

The Ministry has been recognizing environmental laboratories and Government Analysts under Environment (Protection) Act, 1986 with the aim of increasing facilities for analysis of environmental samples. While the recognition of private laboratories is done by the Ministry, those of government/ semi government/ autonomous/ institutional laboratories are done by CPCB. During 2018, 37 private laboratories were notified under the Environment (Protection) Act, 1986.

### IV. Scheme of Assistance for Abatement of Pollution

- Financial support was extended under the scheme to 4 on-going environmental health research projects. Also initiated the 3-year National Environmental Health Profile study, which is a collaborative effort of medical institutions and Pollution Control Boards to study the health effects of air pollution in 20 cities. Approximately around Rs. 2.80 crore has been sanctioned so far for these projects.

- An allocation of Rs. 2.00 crore (approx.) have been made for competition of three demonstration projects on Clean Technology and final report accepted by the Ministry.
- Ministry provided funding of Rs. 2.88 crore for one 40 MLD Common Effluent Treatment Plant by M/s Punjab Dyers Association in the state of Punjab under the Scheme of Common Effluent Treatment Plants

#### V. New Scheme of Control of Pollution:

- The Central Sector scheme of 'Control of Pollution' has been conceptualized on the basis of existing schemes through rationalization and merger of existing schemes to provide financial assistance to Central Pollution Control Board (CPCB) and State Pollution Control Boards/ Pollution Control Committee (SPCBs/ PCCs) in lieu of Water Cess funds; National Clean Air Programme (NCAP), other CPCB's schemes and Outreach programmes.
- The scheme has an allocation of ₹ 5.00 Cr for the year 2018-19 and Rs. 460.00 crores for the FY 2019-2020.
- The EFC of the scheme has been approved by the Hon'ble Finance Minister vide MoF(Exp.) ID No. 54(5)/PF.II/2017 dated 22.11.2018.

**4.2 Central Pollution Control Board:** Outcome of various activities of CPCB during year 2018 is briefed as below:

#### Assessment and Monitoring of Pollution

- Operation and maintenance of 731 manual Ambient Air Quality Monitoring Stations (AAQMS)
- Operation and maintenance of 136 continuous ambient air quality monitoring stations (CAAQMS)
- CPCB has developed a network of real time data from CAAQM stations being operated by CPCB, SPCBs and PCCs. This data is provided to all stakeholders and published in public domain for taking corrective measures in time. In the beginning of the year 2017, CPCB network has data connected from 54 stations in 33 cities spread, which has been expanded to total 136 stations located in 72 cities during 2017-18. CPCB is responsible for operation and maintenance of 15 continuous ambient air quality monitoring stations (CAAQMS).
- "Clean Air Campaign" was organized from November 01, 2018 to November 10, 2018 where in 52 joint teams including members from Ministry of Environment, Forest & Climate Change, Central Pollution Control Board and Government of Delhi and NCR States (Noida, Gurugram, Greater Noida, Faridabad and Ghaziabad) took on-spot ground actions to control air polluting activities.
- Operation of 3500 Water Quality Monitoring Stations (WQMS) at various aquatic resources.
- CPCB has installed Real Time Water Quality Monitoring Systems (RTWQMS) on river Ganga at 36 locations bring the total number of RTWQMS to 46 (44 on Ganga and 2 on Yamuna)
- A Water Quality Management Plan on River Hindon has been prepared based on assessment of water quality of the river and its tributaries. Quantification of municipal and industrial wastewater load reaching from the urban centres has been incorporated
- 70 National Ambient Noise Monitoring Network (NANMN) stations have been installed spreading over 10 cities.

#### Industrial Pollution Control

- During the year 2018, standards for 9 industrial sectors i.e., SO<sub>2</sub> and NO<sub>x</sub> standards for- Industrial

Boilers, Ceramic, Foundry, Glass, Lime Kiln and Reheating Furnaces, Airport Noise Man-made fibre (revision) and Thermal Power Plant (Water consumption and stack height) have been notified.

- Further, draft notification for Paint, Brick Kiln (revision), Fermentation, Coffee Industry (revision) and Tannery Industry (revision) have been published during the year 2018
- Standard for Pulp & Paper Industry (revision), Diesel Locomotive, Automobile Service Stations and Bus Depots, Iron & Steel Industry (revision) and Pharmaceutical Industry (revision and addition) have been presented before the expert committee of MoEF&CC and are under the process of finalization.
- CPCB, Delhi, has undertaken a project on 'Monitoring, sampling and analysis for ambient air quality, surface water quality and ground water quality in around 100 Polluted Industrial Areas (PIAs)' during 2017-18 in order to assess the present environmental quality status by engaging third party monitoring agencies. The monitored data will be applied for evaluation of Comprehensive Environmental Pollution Index (CEPI) as per the 'Revised CEPI Concept-2016'. All the monitoring agencies have already completed the monitoring of ambient air, surface water and ground water quality in all the identified 100 PIAs located across the country.
- Out of 3527 targeted industries under 17 categories, 2773 industries have installed the Online Continuous Effluent / Emission Monitoring System (OCEMS) and connected with server.
- CPCB started a scheme of inspection of 17 categories of highly polluting industries based on computer generated SMS alerts due to violation of effluent and emission standards recorded in OCEMS. On monthly basis these SMS alerts are assessed sector wise and high SMS alerts generating industries are selected for further inspection to verify the compliance status. Further those industries which did not submit data in last 48 hours (off line mode) and whose data variation does not exceed more than  $\pm 5\%$  are also selected for further inspection to verify the compliance status
- A joint declaration of intent (JDI) has been signed between CPCB, GIZ GMBH and the German federal environment agency, UBA on 30th January, 2018 for the development of BREF/COIND document for the textile industry sector covering the best available techniques adapted to the Indian context.
- CPCB has prepared revised COINDS on Slaughter Houses. The document on "Characterization, Waste Management Practices and best Available Pollution Control Technologies in Slaughter Houses" been prepared and also uploaded in CPCB website.
- Compendium of Indian Standards on Slaughter Houses" has been finalized by MoEF&CC in consultation with CPCB to ensure compliance by the Slaughter Houses in the country.

### **Control of pollution in Ganga**

- All the 961 Grossly Polluting Industries (GPIs) in the Ganga Basin have been inspected and action has been taken against non-complying unit. 795 GPIs have connected their OCEMS to CPCB Server.
- Adequacy assessment of all the Distillery and Sugar units have been carried out. Draft Charter for Sugar and Distillery have been prepared.

### **Waste Management:**

- Prepared 13 Standard Operating Procedures (SOP) for utilization of hazardous wastes (generated from various industrial process) as resource or energy recovery after conducting trial studies. The SOPs outline utilization process details, operational parameters, pollution control measures, environmental standards, checklist of minimal requisite facilities etc.

- As mandated in the E-Waste (Management) Rules, 2016 mandate CPCB prepared guidelines on implementation of E-Waste Rules, which included specific guidelines for extended producer responsibility, collection centres, storage, transportation, environmentally sound dismantling and recycling, and refurbishment. Also, SoPs for evaluation of EPR Applications was finalized during this year. EPR authorisations (1087 granted).
- Prepared technical guidelines to help stakeholders in implementing the Bio-medical Waste Management Rules, 2016
- Capacity Building Programme on Implementation of Waste Management Rules, 2016 was launched during 2017-18
- Published Consolidated Guidelines, for Segregation, Collection, Treatment & disposal of plastic waste.

#### **Training, Mass Awareness and Environment Data Bank:**

- Implementation of Raj-Bhasha (Hindi) in CPCB and organizing Hindi Diwas, Workshop and Training Programmes for CPCB officials.
- Published technical and scientific reports and mass awareness.
- Conducted national training programmes on various environmental pollution and prevention areas. During the year 2017-18, twenty-two training programmes were scheduled & organized by Environmental Training Unit (ETU) through reputed training/R&D/Professional institutes in various priority areas related to environment

#### **4.3 Hazardous Substance Management (HSM)**

- The E-Waste (Management) Rules 2016 have been amended on 22nd March 2018. The amendment has been done with the objective of channelizing the e-waste generated in the country towards authorized dismantlers and recyclers in order to formalize the e-waste recycling sector. The collection targets under the provision of Extended Producer Responsibility (EPR) in the rules have been revised.
- The Hazardous and Other Wastes (Management and Transboundary Movement) Rules, 2016 have also been amended on 11th June, 2018 in order to facilitate ease of doing business in the country.
- Bio-Medical Waste Management Rules, 2016 have been amended vide notification GSR 234 (E) dated 16th March, 2018. As per amendment, bio-medical waste generators will have to phase out chlorinated plastic bags (excluding blood bags) and gloves by 27th March, 2019. Bar coding and global positioning system for handling of bio-medical to be done by 27th March, 2019.
- The Plastic Waste (Amendment) Rules, 2018 have been notified on 27th March, 2018 in which Multi-layered plastic in products are to be phased out if they are non-recyclable, non-energy recoverable or having no alternative uses.
- MoEF&CC has also issued notification on Regulation on Persistent Organic Pollutants Rules, 2018. The purpose of the said rule is to prohibit the manufacture, trade, use, import and export of the seven listed POPs under Stockholm Convention viz. (i) Chlordecone, (ii) Hexabromobiphenyl, (iii) Hexabromodiphenyl ether and heptabromodiphenyl ether (commercial octa-BDE), (iv) Tetrabromodiphenyl ether and pentabromodiphenyl ether (commercial penta-BDE), (v) Pentachlorobenzene, (vi) Hexabromocyclododecane and (vii) Hexachlorobutadine.
- The Government of India also ratified the Minamata Convention on Mercury on 18 June 2018. The Convention came into force on 16 September 2018. The second meeting of the Conference of the Parties



to the Minamata Convention was held from 19 to 23 November 2018.

- India was the global host of World Environment Day 2018. The theme of this year edition is "Beat the plastic pollution". In this regard, the Ministry conducted several programmes and activities. On 5th June 2018 which is World Environment Day all the success of activities was showcased along with other exhibits and functions at Vigyan Bhawan, New Delhi. Some of the major activities included cleaning of identified beaches, river stretches and Mini- marathon on 3.6.2018. For this purpose, the Ministry engaged the Ecoclub schools who are being provided assistance from MoEF&CC under National Green Corps programme. In every State, State Nodal Agencies (SNAs) who were the nodal points for implementing the above programme of Ministry were appointed. For the purpose of cleaning of above water bodies, the Ministry had identified the stretches in consultation with SNAs and Institutional heads from college of Fisheries which are nearby the water bodies in each of the State.
- The Ministry of Environment, Forest and Climate Change (MoEF&CC), Government of India implemented the World Bank aided "Capacity Building for Industrial Pollution Management (CBIPM) Project" from October 2010 to March 2018. The project supported closure and containment of two identified polluted sites in Andhra Pradesh (Kadapa) and West Bengal (Dhapa), on pilot basis. West Bengal State Pollution Control Board is carrying out remediation of waste dumpsite of 12.14 hectare at Dhapa with the project cost of Rs. 57.44 Crore. Andhra Pollution Control Board is implementing closure and containment of dumpsite of 10.38 acre at Kadapa with the project cost of Rs. 30.17 Crore. Expected date of completion is 31st January, 2019.
- MoEF&CC has awarded project titled "Capacity building of academic institutions to support remediation initiatives" to IIT Delhi under the HSM Scheme. The project has the following five components: (i) Establish National Network of Resource Persons; (ii) Establish International Network of Resource Persons; (iii) Procurement of Advanced Field Equipment; (iv) Demonstration Project; and (v) Research Activities.
- Regional stakeholder consultation meetings on waste management have been conducted in Bangalore and Ranchi.

A Workshop was held on 'Minamata Convention and Mercury' under the GEF-UNDP-MoEF&CC project 'Improve Mercury Management in India' on 11-12 December 2018 in IIT Madras.

#### **4.4 Development and Promotion of Clean Technology and Waste Minimization Strategies**

Clean Technologies, are distinct from "end-of-pipe" abatement technologies, minimizing the generation of waste streams in the production processes and utilize waste from other consumption goods and production processes, rather than treating the waste after generation. In general, clean technologies are less intensive in use of raw materials and energy, than conventional technologies, which rely on pollution abatement after generation. For this reason, they may also offer significant cost advantages to the producer.

The Scheme was reviewed by Evaluation Committee on Review of Plan Schemes implemented in XIIth Five Year Plan and has been discontinued by the Ministry on the basis of committee recommendations and funding to only ongoing projects is to be provided. The emphasis of the Division is to complete the ongoing projects under the Scheme.

**Activities undertaken:**

- The progress of ongoing projects is monitored and the Project Monitoring Committee meetings under the demonstration projects were organized to review the projects followed by field visits. Separate site visits of demonstration projects have been done by MoEF&CC and CPCB officials to expedite the completion of project and emphasis has been laid on expediting the completion of ongoing projects.
- A workshop on demonstration project entitled “A novel system for absorbing and separating suspended gaseous impurities from effluent gases and thereby recovery of value added products from Jaggery unit” was organized in Ministry during Clean Air Campaign in February, 2018.
- The following two projects have been completed till date during this financial year:
  - “Waste Minimization Studies in Moradabad Brassware Industry Cluster” by The Energy Research Institute, New Delhi.
  - “Promotion of Cleaner & environment friendly technology in highly polluting small scale Glass Industry in Firozabad, UP” was sanctioned to M/s Winrock International India (presently M/s Inspire), Gurgaon, Haryana.

## Chapter-5

### Conservation of Water Bodies

#### 5.1 National River Conservation Directorate (NRCD)

The National River Conservation Directorate, functioning under the Ministry is providing financial assistance to the State Governments for conservation of rivers, lakes and wetlands under the Centrally Sponsored Schemes of 'National River Conservation Plan (NRCP)' and 'National Plan for Conservation of Aquatic Eco-systems (NPCA)'.

**5.2 National River Conservation Plan:** The river conservation programme was initiated with the launching of the Ganga Action Plan (GAP) in 1985. The Ganga Action Plan was expanded to cover other rivers under National River Conservation Plan (NRCP) in the year 1995. The objective of NRCP is to improve the water quality of rivers, which are major water sources in the country, through implementation of pollution abatement works in various towns along identified polluted stretches of rivers on cost sharing basis between the Central & State Governments.

Presently NRCP (excluding Ganga and its tributaries) has covered polluted stretches on 33 rivers in 76 towns spread over 15 States. An amount of Rs. 2337.73 crore has been released to various State Governments for implementation of various pollution abatement schemes and a treatment capacity of 2520.43 million litres per day (mld) has been created so far under NRCP (excluding Ganga and its tributaries).

#### Activities undertaken

- Project for pollution abatement of river Rani Chu in Zone-III, Gangtok, Sikkim sanctioned at a cost of Rs. 94.66 crore for creation of 3.25 mld sewage treatment capacity and allied sewerage works.
- Project for pollution abatement of river Devika and Tawi at Udhampur, Jammu & Kashmir sanctioned at a cost of Rs.186.74 crore for creation of 13.06 mld sewage treatment capacity and allied sewerage works.
- As a new initiative, works for development of web based GIS to strengthen the monitoring system taken-up for Sabarmati river conservation project at Ahmedabad and Devika-Tawi rivers conservation project at Udhampur.

#### 5.3 National Plan for Conservation of Aquatic Eco-systems (NPCA)

- Under the NPCA, grant for 32 Management Action Plans for conservation and management of identified wetlands and 3 Lakes have been released during the reported calendar year for the activities such as survey and assessment, catchment area treatment, protection and monitoring, restoration measures, desilting and dredging, water management, biodiversity conservation etc. for conservation and management of wetlands, and interception and diversion of sewage, providing sewerage system and sewage treatment plants, desilting, catchment area treatment, storm water management for restoration and conservation of lakes.
- In the calendar year 2018, a total of Rs. 48.59 crore has been released as central share to the concerned State Government for conservation and management of 35 wetlands (including lakes). This amount includes Rs. 41.086 lakh released for R&D and other activities related to the conservation and management of wetlands and lakes under NPCA.
- **World Wetlands Day:** National level celebration of World Wetlands Day (WWD) was celebrated on 2nd

February at Deepor Beel (Assam) in 2018 in collaboration with the concerned State Government to raise awareness among all sections of the society about values and functions of wetlands and utilization of their resources.

- **Capacity Building:** 4 regional workshops/training programmes on conservation and management of wetlands have been organized for Wetland Managers and Stakeholders.
- **Ramsar Convention:** The 13th meeting of the Conference of Contracting Parties (COP-13) to the Ramsar Convention on Wetlands of International Importance was held from 21st-29th October, 2018 in Dubai, United Arab Emirates (UAE) on the theme “Wetlands for a Sustainable Urban Future”. In the COP-13 Meeting, 3 members Indian delegation headed by Additional Secretary had participated.
- Five meetings for online updation of Ramsar Site Information sheets (RSIS) of Ramsar sites of India were convened in the Ministry wherein updation of RSIS of 10 Ramsar sites have been completed and submitted online to Ramsar Secretariat.

## Chapter-6

### Regeneration and Eco-development

#### 6.1 National Afforestation and Eco-Development Board (NAEB)

In order to promote afforestation, tree planting, ecological restoration and eco-development activities in the country, the National Afforestation and Eco-Development Board (NAEB) was set up in August 1992. Special attention is also given by NAEB to the regeneration of degraded forest areas and lands adjoining forest areas. NAEB operates the following two major schemes:

- **National Afforestation Programme (NAP) Scheme**
- **Eco-Development Forces (EDF) Scheme**

**National Afforestation Programme (NAP) Scheme:** National Afforestation Programme (NAP) is a major Afforestation scheme of the NAEB in the Government of India. Launched in 2000-02, the scheme has acquired a Pan India ambit over the last sixteen years of its implementation. The programme is now implemented through a three tier system of State Forests Development Agency (SFDA) at the state level, Forest Development Agency (FDAs) at the district/forest division level and Joint Forest Management Committees (JFMCs) at the village level. Under Entry Point Activities, community assets are created with a 'care and share' concept.

#### Activities undertaken:

- 28 SFDA Projects have been operationalised in the country at an expenditure of Rs. 3778.63 crore to treat an area of 21.78 lakh hectares since inception of the NAP scheme till 2018-19.

**Eco-Development Forces (EDF) Scheme:** Eco-Development Forces Scheme was established in 1980s as a scheme implemented through Ministry of Defence for ecological restoration of terrains, rendered difficult either due to severe degradation or remote location or difficult law and order situation. The scheme of Eco-Development Forces is based on twin objectives of ecological regeneration in difficult areas, and promotion of meaningful employment to ex-servicemen.

Under this scheme, the establishment and operational expenditure on the Eco Task Force (ETF) Battalions raised by Ministry of Defence is reimbursed by Ministry of Environment and Forests while the inputs like sapling, fencing, etc. and also the professional and managerial guidance is provided by the State Forest Departments.

All ETF Battalions have undertaken works like raising nursery and plantation and protection measures to protect the plantation area. They have also constructed stone dams and also other soil and moisture conservation works.

#### 6.2 National Mission for a Green India (GIM)

The National Mission for a Green India (GIM), one of the eight Missions under the National Action Plan on Climate Change aims at protecting and enhancing India's forest cover to counter the perils of climate change. It envisages a holistic view of greening and focuses on multiple ecosystem services along with carbon sequestration and emission reduction as co-benefit.

**Activities undertaken:**

- National Executive Council meeting was organized to review the progress and approval of new Perspective Plan of Sikkim, Madhya Pradesh, Himachal Pradesh and Maharashtra under the Chairmanship of Secretary, EF&CC.
- Fund amounting to Rs. 50.65 Cr. has been released so far as the 1st and 2nd installment to nine States namely Andhra Pradesh, Chhattisgarh, Odisha, Karnataka, Sikkim, Maharashtra, Madhya Pradesh, Punjab and Manipur in the year 2018.
- National Project Steering Committee meeting was organized to review the progress and approval of Annual Plan of Operation of Madhya Pradesh, Chhattisgarh and Indian Council of Forestry Research and Education (ICFRE) under the Ecosystems Services Improvement Project (ESIP) on 26th March, 2018.
- The Project Launch Workshop for the “Ecosystems Services Improvement Project (ESIP)” under GIM was organized on 13th July, 2018.
- Rs. 50.0 Lakh was released to Indian Council of Forestry Research and Education (ICFRE), Dehradun to set up Project Implementing Unit for ESIP. Additional Rs. 95.78 Lakh was also released to ICFRE to carry out ESIP activities in 2018.
- The State Government of Madhya Pradesh has organized the National Level Implementation Workshop under ESIP on 23rd August, 2018.
- GIM participated in 4th India International Science Festival at Lucknow jointly organized by Ministry of Science and Technology and Ministry of Earth Sciences during 5-8 October, 2018. About 10,000 saplings were distributed to the visitors during the Festival.

## Chapter-7

### Research

#### 7.1 Research in Environment

The R&D Scheme is an important Decision Support System for Policy and Planning of the Ministry's programmers and activities incorporating the key objectives for addressing environmental problems and measures for conservation and protection of environment by building indigenous capacities and strengthen manpower in multi-disciplinary aspects and new and emerging areas of environment and ecology, generating information for taking policy decisions, preparedness and basis for international negotiations, supporting basic and applied research in environment, ecology and related fields, and to facilitate database management on Research projects undertaken under the Scheme on relevant thematic areas of the Ministry.

#### The major thematic areas for funding are:

- i. Biodiversity Conservation
  - Alien and invasive species
  - Human-wildlife Interface
- ii. Ecosystems Conservation & Management (Mountain, Forest, Coastal, Wetlands, Pastoral, etc) and Evaluation of Ecosystem Services.
- iii. Socio-economic issues of environment and Sustainable Development.
- iv. Conservation and Management of Landscapes and Ecologically sensitive areas including issues of sustainable livelihoods.
- v. Sustainable Management of Natural Resources
- vi. Climate Change: Vulnerability & Risk Assessment, Process, Mitigation and Adaptation
- vii. Pollution prevention - Clean Technologies and Processes, Cleaner Production, 3Rs, Resource Efficiency, Waste Minimisation and Management, Environmental health, etc.
- viii. Use of remote sensing technology for inventorisation, assessment and monitoring of country's natural resources such as land, water, forests, wetlands, glaciers etc. for environmental conservation and protection.

#### Activities undertaken:

- Revamping of the MIS portal of the RE division.
- Five Steering Committee meetings have been conducted for:
  - Review of Final Technical Reports (FTRs) of projects, whose tenure got completed during the XIth & XIIth Five-Year Plan,
  - Review of Annual Progress Reports (APRs) of ongoing projects of XIIth Five-Year Plan and Consideration of new R&D projects for release of fund under the R&D Scheme.
- About 119 projects have been placed in the above steering committee meetings. These are under various stages of process for release of Grants.

#### 7.2 Eco-Sensitive Zone

**Declaring Ecologically Sensitive Zones (ESZs) around Protected Areas in the country:** The National Environment Policy, 2006 defines Eco-Sensitive Zones as areas/zones, 'with identified environmental resources

having incomparable values which require special attention for their conservation'. The purpose of declaring Eco-sensitive Zone (ESZ) is to create some kind of "Shock Absorber" for specialized Ecosystems such as Protected Areas which include National Parks and Wildlife Sanctuaries. The ESZs act as transition zones for areas requiring high protection to areas where development may be permitted.

The Ministry of Environment, Forest and Climate Change notifies Eco-sensitive Zones under Section 3 of the Environment (Protection) Act, 1986, wherein, inter alia certain identified projects/activities are regulated/prohibited as the case may be. Rule 5(1) of the Environment (Protection) Rules, 1986, stipulates, inter alia factors which may be taken into consideration while prohibiting or restricting the location of industries and the carrying on of processes and operations within such ESZs.

**Activities Undertaken:****2017-18**

Number of Draft Notification published: 50 (52 PAs) + 12 (17 PAs re-notified)

Number of Final Notification published: 86 (93 PAs)

**2018-19 (upto November 2018):**

Number of Draft Notification published: 36 (38 PAs) + 16 (17 PAs re-notified)

Number of Final Notification published: 10 (10 PAs)

**Declaring Eco-Sensitive Areas in Western Ghats:** The Western Ghats is a global biodiversity hotspot and a treasure trove of biological diversity harbouring many endemic species of flowering plants, fishes, amphibians, reptiles, birds, mammals and invertebrates. The concept of Ecologically Sensitive Area (ESA) provides a mechanism to conserve biological diversity of an area while allowing for sustainable development to take place.

The Western Ghats not only harbour rich biodiversity, but also supports a population of approximately fifty million people and also include areas of high human population density and therefore, there is a need to conserve and protect the unique biodiversity of Western Ghats while allowing for sustainable and inclusive development of the region; the ESZ Division constituted a High Level Working Group to study the preservation of the ecology, environmental integrity and holistic development of the Western Ghats in view of their rich and unique biodiversity and it was also tasked with the mandate to take a holistic view of the issue and to bring synergy between protection of environment and biodiversity and needs and aspirations of the local and indigenous people, sustainable development and environmental integrity of the region and to suggest steps and the way forward to prevent further degradation of the fragile ecology of the Western Ghats.

It was earlier resolved to reassure the local people that nothing substantial will change within the ESA as far as their livelihoods and day to day activities are concerned. There would be no dislocation of people living within the ESA. As such no fresh regulations have been proposed on existing land use, agriculture, plantation and continued occupation of land in possession of the local people.

To resolve the state specific issues and to proceed with the Notification Process, a meeting was held in this Ministry on 11.04.2018 with the State Government's representatives of the Western Ghats region. In this meeting, it was decided that a coherent and consistent approach in notifying the Ecologically Sensitive Areas (ESAs) of the Western Ghats is needed which would require more time. It was emphasised that the Draft Notification dated 27.02.2017,



would be the basis for moving forward through a consultative process involving State Governments and other stakeholders to redress the concerns of people living in the Western Ghats region and for conservation of the Western Ghats. Accordingly, a draft notification to declare Ecologically Sensitive Area (ESA) around Western Ghats was re-published on 03.10.2018.

### 7.3 National Natural Resources Management System (NNRMS)

The Scheme “National Natural Resources Management System (NNRMS)” of the Ministry was a part of an umbrella scheme of the erstwhile Planning Commission-Planning Committee-National Natural Resources Management System (PC-NNRMS) and is in operation since, 1985. This scheme has now been merged with R&D scheme of RE division.

The prime objective of PC-NNRMS is utilization of Remote Sensing Technology for Inventorization, Assessment and Monitoring of country’s natural resources.

The procedure for evaluating and sanctioning of the proposals under this scheme are executed through the Technical and Financial Appraisal Committee (TFAC) and Steering Committee.

#### Activities undertaken:

- Technical and Financial Appraisal Committee (TFAC) was constituted.
- Monitoring of a project “Biodiversity Assessment of Central Gujarat using Geospatial and Conventional Approach with Emphasis on Conservation of important Threatened Taxa” was carried out.
- A workshop was conducted under a project “Biodiversity Assessment of Central Gujarat using Geospatial and Conventional Approach with Emphasis on Conservation of important Threatened Taxa” at MSU, Vadodra, Gujarat.
- A workshop “Eco tourism & it’s role in the development of tourism industry in Gujarat” was organized on 8th March, 2018 at M. G. Science Institute, under a project Natural Resources Assessment of selected Eco-tourism sites of Gujarat and its associated environments using Remote Sensing and GIS” sponsored by MoEF&CC under NNRMS scheme.
- Final technical reports (FTR) of the ongoing 11 projects under NNRMS scheme has been submitted by the Principal Investigators.
- Based on Annual progress report submitted by the concerned Principal Investigator under this scheme, following achievements/progress have been made:
  - The Climate Change Conundrum and the Himalayan Forests: The Way Forward into the Future. Published in: Proc. Natl. Acad. Sci., India, Sect. B Biol. Sci., 4, pp.1-5, 2017.
  - An indicator-based approach to assess village-level social and biophysical vulnerability of agriculture communities in Uttarakhand, India. Published in: Journal of Mountain Science, 4, 1-5, 2017.
  - Vulnerability of agro-ecological zones in India under the earth system climate model scenarios. Published in: Mitigation and Adaptation Strategies for Global Change, 22 (3), 399, 2017.
  - The spatial and temporal changes in land use and land cover in moist tropical forest ecosystems as well as structure, composition and diversity of tropical forests of Achanakmar-Amarkantak Biosphere reserve of India were determined.
  - Desertification and Land Degradation Atlas of selected Districts of India has been prepared based on IRS LISS III data of 2011-13 and 2003-05.

#### 7.4 G.B. Pant National Institute of Himalayan Environment and Sustainable Development (GBPNIHESD)

G.B. Pant National Institute of Himalayan Environment and Sustainable Development (GBPNIHESD) was established in August 1988 by the Ministry of Environment and Forests, Government of India, as an autonomous Institute, with a mandate of achieving sustainable development and environmental conservation in the Indian Himalayan Region (IHR). The Institute attempts to execute its mandate through its Headquarters at Kosi-Katarmal, Almora (Uttarakhand), and five regional center located at Mohal - Kullu (Himachal Pradesh), Srinagar-Garhwal (Uttarakhand), Pangthang (Sikkim), Itanagar (Arunachal Pradesh) and the Mountain Division regional center (MoEF&CC, New Delhi). The Institute designs and implements R&D activities on priority environmental problems; develops and demonstrates best practices and delivers technology packages for improved livelihood options for the people of IHR. The four center of eminence like: (i) Center for Land and Water Resource Management (CLWRM); (ii) Center for Socio-Economic Development (CSED); (iii) Center for Biodiversity Conservation and Management (CBCM); and (iv) Center for Environmental Assessment and Climate Change (CEA&CC) are working on the different thematic areas while researches on regional priorities are being conducted by regional centers like (i) Himachal Regional Centre; (ii) Garhwal Regional Centre; (iii) Sikkim Regional Centre; (iv) North-East Regional Centre. To look into mountain issues more holistically and bring in synergies for mountain perspective in plans and policies, the fifth center, Mountain Division Regional Centre is established by the MoEF&CC. Research, demonstration and dissemination are essential underlying elements of all activities in the Institute. In addition, GBPNIHESD also provides evidence based inputs having wider policy.

##### Activities undertaken:

- Towards promoting research and developmental activities across IHR, the Institute through Integrated Eco-development Research Programme (IERP) supports location-specific/action-oriented projects to different Universities/Institutions/NGOs/Voluntary agencies.
- The Institute regularly publishes ENVIS Newsletter, ENVIS Bulletin, and State Specific Statistical Databases in the form of State at a Glance. The Statistical databases covers the temporal trends across important segments, e.g., demography, literacy, land, water, agriculture, horticulture, forest cover, protected areas, weather profiles, etc., which would help in crucial decision-making and policy planning proactively of Indian Himalayan states.
- Central Laboratory facilities in the Institute has been strengthened for the analysis of physico-chemical, biological, heavy metal of drinking, raw, waste water and quantification of volatile compounds of soil and plant samples. The Institute has extended these services for other organizations (NGO's and other Government Organization) on payment basis.
- The Institute is strengthening and maintaining Central Library and providing number of services such as Article Alert, Current Awareness, Selective Dissemination of Information, Reprography, Reference, Indexing, Bibliography, Web Services (Online Journals) etc., for the development of the human resources. The Library of the Institute is accessible through the Institute's web site (<http://gbpihed.gov.in>). The library is having 17015 books and subscribing 83 periodicals (44 Foreign and 39 Indian). For management of Library and Information Centre, a network version of the software PALMS is available.
- **National Initiatives**
  - Under the National Mission on Himalayan Studies (NMHS), a total of 103 projects are ongoing

under in the various organizations of 12 Indian Himalayan States. Also, Himalayan Fellowship granted to 12 Universities/Institutions in the IHR, which engaged a total of 157 (38 Research Associates (RAs) and 119 Junior Research Fellow/Project Fellows (JRFs/JPFs) and actively involved in various demand driven research and development issues.

- The Institute also facilitates funding to various projects through National Mission for Sustaining Himalayan Ecosystem, as a nodal organization for implementing Task Force 3: Forest resources and plant diversity and also a network partner for Task Force 5: Traditional Knowledge System. The Institute also provided inputs in (i) technical committee of National Water Mission, (ii) National Forest Policy, and (iii) preparing State Specific Action Plan for Water Resources (SSAP) for Uttarakhand.
- The final report on NITI-Aayog Work Group- V on "Data/Information for Informed Decision taking by Multiple Stakeholders for Sustainable development in mountains of Indian Himalayan region" was prepared for NITI Aayog.

#### ● Transboundary Initiatives

As coordinating Institute for MoEF&CC for the three transboundary landscape programmes of the International Centre for Integrated Mountain Development (ICIMOD), the Institute continued to contribute for Regional cooperation through scientific researches. In this regard, A National Coordination Committee for Transboundary Landscape (TBL) Initiatives in the Indian Himalayan Region (IHR) has also been setup by the MoEF&CC. For Kailash Sacred Landscape Conservation and Development Initiative (KSLCDI), the Institute completed the first phase of the project and as an extension a project from National Mission on Himalayan studies was received to continue the phase I activities of the project. Implementation Phase of Khangchendzonga Landscape Conservation and Development Initiative (KLCDI)-India has been started and various research activities like stakeholder's consultation, promotion of livelihood improvement, skill and capacity building, promotion of ecotourism, etc. are initiated and some field based data collection have been started.

### 7.5 Forestry Research

**Indian Council of Forestry Research & Education:** The Indian Council of Forestry Research and Education (ICFRE) was established after reorganization of erstwhile FRI and Colleges in 1986. Subsequently, in 1991, ICFRE was declared as autonomous body registered as a society under the Societies Registration Act, 1860. It is an apex body at the national level and has been undertaking holistic development of forestry research through need based planning, promoting, conducting and coordinating research, education and extension covering all aspects of forestry. The Council 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 sustainable management and development of resources. The field based forestry research by the Council enhances public confidence in the ability of forest managers and researchers to successfully handle challenges related to natural resource management.

ICFRE provide services in the following field:

#### a) Forestry Research

- ICFRE is acclaimed for its pioneering forestry research contribution in many niche areas. The Council

has developed silvicultural systems suitable to the Indian conditions for management of forests for timber, social forestry/agroforestry, pioneer in developing environment friendly technologies for wood seasoning, pulp and paper making, wood composite, wood products, value addition to Non Timber Forest Produce, Planting stock Improvement of different forest species, biodiversity conservation eco-restoration of ecologically fragile and disturbed areas and technologies for reclamation of waste land.

- ICFRE/FRI has over a period of more than 100 years of its existence has made significant contribution in the field of forestry research which helped the forest managers to manage the different types of forests effectively and efficiently. The forestry research has also made significant contribution towards improving rural livelihoods through agroforestry and NTFP based interventions.
- The Council has also undertaken research on emerging issues like biodiversity, climate change, hydrology, wood technologies, policy research, developing high quality germplasm after progeny trials, molecular characterization of forestry species etc. The country, as a signatory to international conventions on biodiversity conservation, climate change and desertification is obliged to address these issues based on the critical research inputs from ICFRE. The Council also has internationally acclaimed repository of wood, plants, fungi and insects samples that serves as reference/information bank to the various research /implementation organization at national and international level.

#### **b) Forestry Education**

- The ICFRE promotes forestry education and ensures delivery of quality forestry education in the universities through system of accreditation on the pattern of AICTE. Till date, 18 Universities have been accredited by the ICFRE. FRI Deemed University is fully supported by ICFRE which runs a number of courses at post graduate and doctorate level. FRI Deemed University also caters to foreign students including those of SAARC countries.

#### **c) Forestry Extension**

- Twenty eight Van Vigyan Kendra (VVKs) and nine Demo Villages (DVs) located at various locations of the country provide training, awareness, information and knowledge regarding recent developments in forestry sector of various stakeholders including farmers.
- The Extension Divisions of the ICFRE Institutes provide services for dissemination of technologies developed by organizing various training programmes, kisan melas, workshop, etc. at various places for the benefit of all stakeholders like the State Forest Departments, forest industries, farmers etc. The consultancy services for effective implementation of mitigation measures under Environment Management, EIA studies etc. are contributing in the development activities of the country.

#### **Activities Undertaken**

- **Research Activities**
  - Implementation of 167 ongoing research projects
  - Implementation of 23 new research projects

- Other activities other than research projects.
  - To make research goal oriented and addressing National and Regional issues meaning fully, 22 AICP have been formulated covering different themes within 4 thrust areas of council.
  - Conducting of RAG/RPC during 2018-19.
  - Skill up-gradation of labs, equipment, accreditation laboratories and skill up-gradation of the scientists and technical staff.
- **Education**
    - Financial support to Universities
    - Training of Scientist & Staff of ICFRE/Institutes/Centres as per HRD plan
    - Organizing and attending seminars/ conferences in various Institutes/ Centers of ICFRE.
    - Implementation of projects & other expenditure related to Policy Research Centre.
  - **Extension**
    - Implementation of Direct to Consumer scheme at Institutes and Centres
    - Farmer's/tree growers melas at Institutes/centers of ICFRE.
    - Organizing training in 28 Van Vigyan Kendras under Institutes/ centres of ICFRE
    - Technology demonstration at 8 demo-villages
    - Publication of Annual Report of ICFRE of 2017-18, Hindi magazine "Taruchintan", Newsletter, "Vaniki samachar", other publications.
    - A new strategy having essence of earlier strategies along with new initiatives is formulated incorporating the inputs from the ICFRE institutes which has the following new features:-
      - Technologies specific
      - Identification of technology
      - Periodic planning
      - Periodic impact assessment
      - Nodal officers
      - Updation and development of online access through ICFRE website.
      - New Innovative methods
      - Innovations in the existing extension schemes
      - Pan-Indian Involvement
      - Involvement of ICFRE Institutes
      - Tangible deliverables
      - Planning and monitoring & Revision
      - ICFRE has formulated Extension strategy in the forestry research to ensure visible impact of ICFRE research activities. Efforts will make to commercialize technologies and identify target groups.

**Indira Gandhi National Forest Academy (IGNFA):** Indira Gandhi National Forest Academy (IGNFA) was constituted in the year 1987 by renaming the erstwhile India Forest College, which was originally established in 1938 for training senior forest officers. IGNFA is currently functioning as the Staff College for the officers of the Indian Forest Service (FS). The primary mandate of the Academy is to impart knowledge and skills to the

professional foresters and help them to develop competence for managing the country forest and wildlife resources on a sustainable basis. In the Academy training is provided at different levels of seniority in the Indian Forest Service besides training the new entrants to the service.

### Activities undertaken

IFS Professional Training Programme:

- 85 IFS Probationers of 2016 Batch have been trained as per IFS course curriculum and sent to respective state cadres.
- 95 IFS Probationers of 2017 Batch are undergoing their training from December, 2017 as per IFS course curriculum and will pass out during April, 2019.
- Mid career training (MCT) programme for 110 in-service IFS Officers was conducted.
- Professional Skill Up-gradation Course (PSUC) (Induction Training Programme for 36 officers inducted into IFS from SFS).

**Directorate of Forest Education:** The Directorate of Forest Education (DFE) under the Ministry is responsible for imparting professional/technical training of direct recruit of the State Forest Service (SFS) Officers and Forest Range Officers (FROs). The Directorate also supplements the efforts of various States for the training and capacity building of the Forest Frontline Staff (Deputy Rangers, Foresters and Forest Guards) through the respective Forest Training Institutes. There are 4 (four) Academies under the Directorate. The names and intake capacity (Per batch) of these Academies are as under:

- |  |   |    |
|--|---|----|
| ➤ Central Academy for State Forest Service, Dehradun   | - | 40 |
| ➤ Central Academy for State Forest Service, Coimbatore | - | 40 |
| ➤ Central Academy for State Forest Service, Burnihat   | - | 40 |
| ➤ Central Academy of Forest Education, Kurseong        | - | 40 |

Besides this Directorate also conducts Forest Range Officers induction training through Forestry Training Institute/Academy under the control of State Government viz.:

- Uttarakhand Forest Training Academy, Haldwani, Uttarakhand
- Telangana State Forest Academy, Dulapally, Hyderabad
- Forest Training Institute and Rangers College, Sunder Nagar, Himachal Pradesh
- Tamil Nadu Forest Academy, Coimbatore, Tamil Nadu
- Kundal Academy of Development, Administration and Management (Forest), Maharashtra
- Gujarat Forest Rangers College, Rajpipla, Gujarat
- Karnataka Forest Academy, Gungargatti, Dharwad
- Odhisa Forest Rangers College, Angual

**Institutions under the Directorate:** To cater to the increasing demand of the State Forest Departments and Central forestry organization for trained Officers, three State Forest Service Colleges were established by the Central Government at Burhihat (Assam) in 1976, Coimbatore (Tamil Nadu) in 1980 and Dehradun (Uttarakhand) in 1981 for imparting training to the State Forest Service Officers of two years duration. And one Eastern Forest Ranger College at Kurseong (West Bengal) for imparting training of Forest Range Officer course for two years.

**Activities undertaken:**

- Three batches of State Forest Service Officers 2018-2020 courses are undergoing training at CASFOS, Dehradun (Uttarakhand) and CASFOS, Coimbatore (Tamil Nadu), respectively.
- 08 batches of Ranger Course in the form of Eighteen months Certificate Course for the newly recruited FROs are undergoing training at the Forestry Training Academics/Institutes
- Refresher Course/Theme based Workshops for In-service State Forest Service Officers & Senior Forest Range Officers were conducted

**Indian Plywood Industries Research & Training Institute (IPIRTI):** Indian Plywood Industries Research & Training Institute (IPIRTI) conducts research on all aspects of manufacturing plywood and other allied engineered and reconstituted wood and lignocellulosic products, including improvement of materials, manufacturing processes, machines and appliances and conditions of work standard of factories. The Institute has its headquarters at Bangalore spread over an area of about 7 hectares where the most modern R&D, testing & training facilities are housed. It has outreach field station (FS) located at Kolkata. Recently a IPIRTI Centre has been established at Mohali in Punjab to cater the needs of the industries in the North-West regions.

IPIRTI is continuously engaged in Research & Development, Training & Education, Testing & Standardization and Extension on all aspects related to plywood and panel products from wood, bamboo and other lignocellulosic materials.

**Activities undertaken**

- **Research**

There were in about 80 projects of which 46 projects were funded by the Institute and 15 projects sponsored by various organizations and 19 consultancy projects. There are 33 ongoing projects & 8 new institution projects have been approved by 62nd RAC.

- Of the 46 Institute funded projects, 13 projects have been completed (12 Research Reports published and 1 project under vetting/report writing).
- Of the 15 sponsored projects, 14 are completed and 1 is being continued. 6 new sponsored projects are received from various factories and organizations since last RAC.
- Of the 19 consultancy projects, 17 are completed and 2 are ongoing.

- **Training and Education**

Training has been imparted from executives to skilled workers in the field of Wood Science and Technology. Newer courses on processing of bamboo, product development and bamboo-based housing have been added depending on requirements and changed scenario prevailing in the country.

- **Testing and Standardization**

The Institute has been able to provide testing services to get high level of confidence among the consumers in quality requirements of the wood and wood-based panel products.

Total Number of Samples tested and received for testing from 01.01.2018 & 30.11.2018 is 416.

- **Research, Training & Extension Achievements of IPIRTI**

Sl. No.		Nos.
1	Research Report Published	12
2	Sponsored projects completed	14
3	Consultancy projects completed	17
4	Patents obtained	03
5	NO of students completed on year PG Diploma course	33
6	NO of short-term training courses	09
7	MoU signed	04

### 7.6 Wildlife Institute of India (WII)

Wildlife Institute of India (WII) was established in 1986 as an autonomous institute of the Ministry of Environment, Forest & Climate Change, Government of India. The Institute has emerged as a premier training and research institution in the field of wildlife and protected area management in South and South East Asia. Its primary mandates are to: (i) carry out scientific and applied research on various issues of wildlife and biodiversity conservation, (ii) develop wildlife science as a discipline through academic activities, (iii) build capacity in the field of wildlife management and conservation planning, (iv) provide technical inputs to MoEF&CC and other stakeholders. The Institute has been generating quality information and knowledge products in the field of wildlife science through research and mainstreaming it in capacity building programmes for various target groups.

- **Research Projects during 2018-19**

Projects funded by WII's Grants in Aid	:	11
NTCA funded projects	:	14
Externally aided projects	:	74
Department of Science & Technology	:	9
MoEF&CC/ NMHS	:	9
<b>Total</b>	:	<b>117</b>

- **Higher Education and Academic Activities**

- 16th M.Sc. Course in Wildlife Science The XVI batch of the 2 year M.Sc. in Wildlife Sciences (2017-19) began on the 26 June 2017 at WII. A total of 20 students joined the course after a rigorous selection process.

- **Training Programmes**

- XXXIX P.G. Diploma Course in Advanced Wildlife Management Concluded, 1st September, 2017 to 30th June, 2018.
- XL P.G. Diploma Course in Advanced Wildlife Management commenced, Dehradun, 1st September, 2018 – 30th June, 2019.
- XXXIV Certificate Course in Wildlife Management Commenced, Dehradun, November 1, 2018 to January 31, 2019.



- Workshops, Seminars, Meetings and Other Activities
  - Special Course on Protected Area Management Planning and Plan Implementation for Sri Lankan Forest Officers, Dehradun, 2-9 April, 2018.
  - World Heritage Day Celebrations at WII, Dehradun, 18 April, 2018.
  - Sensitization Workshop on Managing Aquatic Macro-Fauna along Ganga River, Dehradun, 26-28 April, 2018.
  - Workshop on Status of Tiger Habitat in High Altitude Ecosystems in Bhutan, India and Nepal, Dehradun, 27 April, 2018.
  - Workshop on “Integrating Precipitation Forecasts and Climate Predictions with Basin-Scale Hydrological Modelling in the Himalayas”, Dehradun, 2-4 May, 2018.
  - WCPA-Asia Steering Committee Meeting, Dehradun, 7-9 May, 2018.
  - One-Week special course on Wildlife Protection, Law and Forensic Science for the Officer Trainees of 69th Batch of Indian Revenue Services (Custom and Central Excise) Group-A Service, Dehradun, 7-12 May and 14-19 May, 2018.
  - Study Tour of Wildlife Officials from Sri Lanka, Dehradun, 23 May-13 June, 2018.
  - WII participated in World Environment Day Celebrations at New Delhi, 31 May-6 June, 2018.
  - Workshop on ‘Public Participation in Generating Biodiversity Information’, Dehradun, 20-21 June, 2018.
  - Sensitization Workshop on Managing Aquatic Macro-Fauna along Ganga River, Dehradun, 27-29 June, 2018.
  - Certificate Course on ‘Nature Interpretation for Rural Youth under Green Skill Development Programme’, Manas Tiger Reserve, Assam, 8-28 July, 2018.
  - Consultative Workshop on ‘Standardization of the Process of Preparation of State Biodiversity Strategy and Action Plan (SBSAP) and Development of Resource Mobilization Strategy for Implementation of SBSAP’ Dehradun, 20 July, 2018.
  - Certificate Course on ‘Ganga Prahari Livelihood Enhancement’ under Green Skill Development Programme, Sarnath, Uttar Pradesh, 23 July – 12 August, 2018.
  - Training Workshop on “Management Effectiveness Evaluation (MEE) of Protected Areas” for IFS Officers, Dehradun, 2-3 August, 2018.
  - Capacity Building-cum-Planning Workshop on Ecotourism and Visitor-Use Management in Protected Areas’, Dehradun, 8-10 August, 2018.
  - Inception Workshop on WII-GIZ Human-Wildlife Conflict Project, Dehradun, 24 August, 2018.
  - National Consultation Workshop for ‘Recommending the Future Status of Sea Cucumber Conservation in India’, Dehradun, 3 September, 2018.
  - 3rd Himalayan Research Seminar (HRS), Dehradun, 10 September, 2018.
  - Celebration of World Ozone Day, 2018 at WII, Dehradun, 14 September, 2018.
  - XIV Internal Annual Research Seminar (IARS), Dehradun, 11 September, 2018.
  - Seminar on Biodiversity Conservation and Ganga Rejuvenation, Dehradun, 17 September, 2018.
  - Seminar on Endangered Species Recovery Programme, Dehradun, 18 September, 2018.
  - XXXII Annual Research Seminar (ARS), Dehradun, 19-20 September, 2018.

- Meeting of Chief Wildlife Wardens of States and Union Territories of Government of India, Dehradun, 21-22 September, 2018.
- Wildlife Week Celebrations at WII, Dehradun, 6 October, 2018.
- 2018 Ecosystem Services Partnership (ESP) Asia Conference, Dehradun, 9-12 October, 2018.
- Two-day Writing Workshop for the Development of the Structure and Framework of the National Human-Wildlife Conflict Mitigation Strategy and Action Plan (N-HWCM-SAP) and Standard Operating Procedure (SOPs), Dehradun, 15-16 October, 2018.
- Training Programme on Dossier Preparation for Natural World Heritage, Mixed and Cultural Landscapes Nomination of World Heritage Sites, Dehradun, 23 October, 2018.
- Symposium on Culture-Nature Journey: Beyond Borders in Asia and the Pacific, Dehradun and New Delhi, 24-26 October, 2018.
- The BIOFIN Technical Partner's Meeting, UNDP, New Delhi, 25 October, 2018.
- Planning Meeting Regional Expert Committee (REC) for Management Effectiveness Evaluation (MEE) of National Parks and Wildlife Sanctuaries in 2018-19, New Delhi, 31 October, 2018.
- National Training Workshop on Biodiversity Conservation and Ganga Rejuvenation of Ganga States”, Dehradun, 14-18 November, 2018.
- Two-day Training Workshop on “Mainstreaming Biodiversity in Impact Assessment”, Dehradun, 15-16 November, 2018.
- Interaction Meeting for Management Effectiveness Evaluation (MEE) of Fourth Cycle of Tiger Reserves in India, New Delhi, 20 November, 2018.
- Stakeholders’ Workshop on “Forests for Water”, Dehradun, 28 November, 2018.
- One Week Compulsory Training Programme for IFS Officers on "Illegal Trade in Wildlife and Role of Wildlife Forensics in Dealing with Wildlife Crime", Port Blair, 3-7 December, 2018.
- Inception Meeting on UNDP Project SECURE Himalaya, Dehradun, 11 December, 2018.
- Training Program on Monitoring of Outstanding Universal Value of Natural World Heritage Sites, Kudremukh National Park, 14-15 December, 2018.
- Training course on Eco-development planning for Biodiversity Conservation, Dehradun, 19-26 December, 2018.
- Three-day Module on 'Wildlife Management' for IFS officers, Dehradun, 26-28 December, 2018.

## Chapter-8

### Education and Awareness

#### 8.1 Environmental Education, Awareness and Training

Under Environmental Education, Awareness and Training (EEAT) scheme, there are five programmes namely:

- National Green Corps (NGC) – “Ecoclub” Programme
- National Nature Camping Programme (NNCP)
- Capacity Building Activities (CBA) on EEAT scheme
- Global Learning and Observations to Benefit the Environment (GLOBE)
- Green Good Deeds (GGDs)

#### Activities undertaken:

- **National Green Corps (NGC) Programme:** MoEF&CC embarked upon a major initiative for creating environmental awareness among children by formulating National Green Corps (NGC) in 2001-02. There are around 1,00,000 Eco clubs across the country. A financial assistance of Rs 5,000/- per school and college is provided under this programme. The following activities are undertaken:
  - Awareness on solid waste management through waste segregation (biodegradable and non-biodegradable) and on concept of 4Rs i.e. ‘Reduce, Reuse, Recycle and Recover’ amongst students through establishing 2-Bins in schools– (1) Blue Bin for dry waste like Paper waste, Glass waste, E-waste and (2) Green Bin for wet waste.
  - Celebration of important environmental days in schools such as World Environment Day, World Wetland Day, Earth Day, etc. by organising debates, quiz, slogan competitions, drawing/poster competitions etc, on the related theme.
  - Plantation drives in and around the school campus, organised in the district/locality, preferably during the monsoon season.
  - Cleanliness drives to be conducted twice a year i.e. October and December (preferably post examination period during October & December holidays).
- The students also participated in “**Prakriti Khoj**” – online Environment Quiz which is a fun filled interactive learning mode for triggering a sense of awareness towards environment protection and conservation. A separate web portal [www.pkeq.nic.in](http://www.pkeq.nic.in) containing information on the quiz has been developed by Ministry.
- **National Nature Camping Programme:** The ‘Nature experience’ to children and teachers has huge potential to trigger the sensitivity towards nature appreciation and conservation, leading to positive environmental actions at different levels. Under this programme field visits (nature camps) are organised in different protected areas/ Nature parks/Tiger Reserves of the country for 3 days to create awareness amongst school/college students on environment and nature. The following activities are undertaken:
  - ‘Apna Paryavaran Janiye’ (Know your Environment) by preparing small checklist of flora and fauna seen/spotted by them in the nature trail,
  - Bird watching
  - Trekking
  - Green Pledges

- Group Discussion involving record/sharing of experiences and
- Other nature based activities
- **Capacity Building Activities:** The objective of this programme is to support capacity building activities and to impart skills to students (schools and colleges) and teachers of Eco-club on various thematic areas like Bio-diversity conservation, Waste Management and concept of 4Rs – Reduce, Reuse, Recycle & Recover; 17 Sustainable Development Goals, Climate Change related issues with focus on Adaptation and Mitigation, Control of pollution and any other related theme of MoEF&CC.
- **Globe Programme:** The Global Learning and Observations to Benefit the Environment (GLOBE) Programme – an international Science and Education programme – provides a unique opportunity to the school students to carry out various measurements so that they can learn about scientific protocols and perform environmental learning activities. GLOBE provides grade level appropriate, in disciplinary activities and inventions about the atmosphere, biosphere, hydrosphere and pedosphere, which have been developed by the scientific community and validated by teachers.
- **Green Good Deeds:** Green Good Deed movement is a social movement with an aim to bring about mass environmental awareness among society. Ministry intends to reach every citizen in the country who shall adopt green good deeds in his daily life. With this preamble, the GGDs shall be initiated through schools/colleges under National Green Corps “Eco-club” programme of Ministry. As a part of the above programme and to undertake the implementation of Green Good Deeds in a mission mode, the Ministry has developed broad thematic areas as detailed below. The ten - point agenda programme includes the following thematic areas:
  - **Plantation drive:** Under this activity, school and college children are encouraged to undertake plantation on identified areas within their institutional, premises or residential area in identified open spaces.
  - **Plastic free National Parks/Sanctuaries:** The tourists are advised to carry waste paper bags so that they can collect the waste in the bags and return them to the forest official after visiting the national parks.
  - **Adoption of beach / river/ lakes / parks:** Each of the school/institution is encouraged to identify a river or a park or a lake/pond adjacent to their institutions and adopt them so that they can clean up the area and also teach the children about water conservation and importance of water bodies.
  - **Garbage management:** The children are educated and encouraged to segregate waste, collect them and use the biodegradable as compost which can be further used for the plantation drive being undertaken by the schools. Non-biodegradable wastes such as metals and plastics are collected and are sold to the waste recyclers. Thus through this mechanism, children not only learn about recycling of waste but also adopt them as a part of their lives.
  - **Promote renewable energy:** Schools and institutions are encouraged to adopt renewable energy including conservation of energy in the schools.
  - **Air pollution:** Children are encouraged to adopt cleaner and greener celebration of various festivals including Diwali. Ministry has issued advisories encouraging school children to promote Harit Diwali that include activities such as gifting plants, distributing seeds, distributing old clothes/used clothes to shelter homes, etc.
  - **Awareness of open defecation:** As part of the Swachh Bharat Abhiyan, initiative by the Hon'ble Prime Minister, the Ministry has initiated steps to provide for suitable toilets and water facility.

- The mechanism is being worked out with the Ministry of Drinking Water and Sanitation.
- **Hygiene and Sanitation:** Awareness programmes shall be taken up as it is our endeavour to provide adequate toilets and water facilities to all schools and colleges in the country with.
  - **Adoption of village for clean habitation:** Schools and colleges are encouraged to adopt nearby villages and educate the villagers with regard to cleanliness, open defecation, clean water, waste segregation etc. Through these process, the children not only learn about rural areas their lifestyle, but also encourage the villagers to adopt environment friendly methods in their daily lives.
  - **Plastic free schools and colleges:** Each of the Eco Club is advised to make their schools plastic free and such schools which have been declared as plastic free are provided with certificates issued by Hon'ble Minister of Environment, Forest and Climate Change.
  - **Clean Air Campaign:** Union Minister for Environment, Forest & Climate Change, Dr. Harsh Vardhan launched a joint campaign, with Delhi Government, NDMC, CPCB and other municipal agencies, for clean air in Delhi from 10-23 Feb 2018. The campaign aimed to sensitise ground-level functionaries and general public to enforce the habit of environmental protection. 66 teams were formed led jointly by one officer each from the Ministry of Environment, Forest and Climate Change and one officer from the State Government of Delhi. These officers were assisted by officers from Central Pollution Control Board (CPCB), DPCC and respective municipal corporations. The teams were provided with check lists focussed on activities on mitigation of pollution, including effective measures for dust mitigation, solid waste management and prevention of garbage burning. Keeping in view of the success of the campaign, a second round was also initiated for 10 day in held on November 2018.
  - **Harit Diwali:** Ministry undertook a "Harit Diwali - Swasth Diwali" campaign which was launched on 22.10.2018 in MoEF&CC wherein around 500 students from schools in Delhi/NCR region participated. Advisories were issued to Nodal agencies implementing the Eco-club programme to celebrate environmental-friendly Diwali include cleaning of houses, renovating and decorating homes with diyas, lighting up candles, lamps; donating clothes/books to needy; making colourful rangoli etc.
  - **Celebration of World Environment Day 2018** through Eco-clubs in States/UTs. Some of the major activities undertaken were includes cleaning of identified beaches, river stretches and Mini-marathon on 3.6.2018. In consultation with State Nodal Agencies implementing the Eco-club programme 24 beaches and 24 river stretches were identified for intensive cleaning drives which began with a mega inaugural ceremony at Goa on 14.5.2018 inaugurated Sh. A.K Jain, Additional Secretary, MoEF&CC. Students from various schools and colleges participated in this drive. Various cultural programmes, quiz competition, debate, awareness rallies etc were organized. Besides the above mentioned cleanliness drives, Mini Marathon was held at Vinay Marg, New Delhi on 3.6.2018 to spread awareness on proper utilization of plastic. The marathon attended by around 10,000 Ecoclub students from Delhi - NCR. Also mini- marathons were also organized in other five cities namely Bangalore, Ahmedabad, Gangtok, Bhopal and Bhubaneswar. List of beaches and riverfronts has been annexed.
  - **Green Good Deeds Initiative:** Students under Eco-clubs are implementing the Green Good Deeds (GGDs) initiative which seeks to transform the people's behaviour into Green Good Behaviour and

fulfil Green Social Responsibility. A ten point agenda has been developed to implement the GGDs through Nodal agencies in State/UTs implementing the Ecoclub programme. Various activities covered under GGDs like cleanliness drives within the school campus, carry out waste segregation into biodegradable and non-biodegradable, paper re-cycling and conducting tree plantation drives etc are being implemented across the country by the students.

Further GREEN GOOD DEEDS event was successfully organised on 6.10.2018 at **India International Science Festival (IISF) 2018 held at Indira Gandhi Prathishthan**, Lucknow. Event was inaugurated by Dr. A.K. Mehta Additional Secretary, MoEFCC. Exhibition showcasing the success stories under Ecoclub programme was displayed. Around 200 Ecoclub students from Uttar Pradesh participated in the Drawing and Essay competitions. Four eminent speakers Dr Anil Prakash Joshi, HESCO; Dr Ashok Kumar, Director Bureau of Energy Efficiency; Prof C R Babu, University of Delhi and Dr S P Yadav Uttar Pradesh Biodiversity Board delivered the lectures during the session.

- **Trainings provided to Ecoclub Coordinators on ZIKA virus under GLOBE programme:** Global Learning and Observations to Benefit the Environment (GLOBE) programme is an international science and education programme that provides students and the public worldwide with the opportunity to participate in data collection and the scientific process, and contribute meaningfully to our understanding of the Earth system and global environment. Under the GLOBE, three trainings have been provided in Delhi, Madhya Pradesh and Gujarat to the Ecoclub Coordinator on Zika virus.

### **National Museum of Natural History (NMNH)**

The National Museum of Natural History, a subordinate office of Ministry of Environment, Forest and Climate Change, Government of India, was open to public on 5th June, 1978 at Mandi House, coinciding symbolically with the World Environment Day with AN objective to create environmental awareness on nature and environment through non formal medium such as thematic galleries, exhibitions, film shows and educational activities to all masses of society in respect to promote environmental awareness.

NMNH, New Delhi has its four Regional Museums of Natural History (RMNH) in different parts of the country viz. Mysuru, Bhopal, Bhubaneswar and RGRMNH, Sawai Madhopur. Another RMNH at Gangtok is under construction to cover North-East region.

### **Activities Undertaken**

- The NMNH its Regional centres has been undertaking day related out-door and in-door Environmental educational programmes/ activities round the year to all masses of the society as, International Day for disable, World Environment Day, orientation workshop for teachers, Ozone Day, Youth Nature Camp and Wildlife week etc.
- more than 32 thematic exhibitions such as Tribes of India, Seeds of India, Heritage sites of India, Textiles of India, Plastic Pollution, Conservation of Scared Grooves of India, fossils, Green Good Deeds, Wetland Habitat, Birds of Karaji lake etc. has been developed and opened the same to the general public.
- Some of the signature programme/activities such as World Environment Day, Van Mahotsav, International Tiger Day, Summer Vacation Programme, Winter Nature Camp, Wildlife Week, Teachers

Training Workshops, programme for under-privileged children, programme for specially challenged children, School Biodiversity Programme were conducted.

- Puppet Shows and film Show etc. has been conducted by NMNH Delhi (HQ) and its regional centres.
- Organised various theme-based activities as street play, debates, quiz, declamation contest, essay writing, slogan writing, poster making, rallies, pledges, Swachh Bharat mission, Green Good Deeds and Clean Air campaign etc. to the students towards environmental education.
- Organised various orientation workshop for teachers, National Conferences, School Biodiversity Programme, lectures, collaborative programmes with different institution/NGOs/Government departments etc. for the betterment of users.
- Organised various programme on Swachhta Hi Sewa Campaign, Harit Diwali-Swasth Diwali Campaign, Mini Clean Air Campaign at IISF-2018 – Lucknow, Green Good Deeds Campaign at Varanasi and UNCCD Asia Pacific Regional Workshop organised by Desertification Cell etc.

## 8.2 Swachh aur Swastha Bharat Cell

Swachh Aur Swasth Bharat Cell of the Ministry is involved in raising awareness on Swachh Bharat Abhiyan through Information, Education and communication (IEC) activities. To implement IEC a Swachhta Action Plan has been prepared and is being implemented in States/UTs through State Nodal Agencies. The aim is to create awareness on Swachh Bharat with respect to the mandate of the Ministry which is environment conservation and protection. The achievement of the current financial year is given below.

### Activities undertaken:

- **Creation of Swachhta Action Plan Budget Head:**
  - During 2018-19, Ministry has created a separate budget head with 96 generic code for expenditures related to Swachh Bharat Abhiyan.
  - A fund of Rs 7.00 crore is allotted for the year 2018-19.
- Implementation of Swachhta Action Plan in 13 States:
  - For the first time with the specific Swachhta budget , Swachhta Action Plan of this Ministry is being implemented in thirteen states the details are given in annexure I
- **Riverfront and Beach Cleaning:**
  - During World Environment Day Celebration 2018, Ministry of Environment, Forest and Climate Change undertook riverfront and Beach Cleaning activities in 19 States.
  - 24 beaches and 24 riverfronts were cleaned.
  - The cleaning activity was carried out during 15 May -5th June 2018
  - The Ministry involved school students, NGOs, RWAs in this activity.
  - This initiative helped in making people aware on keeping water bodies clean and the importance of Aquatic Flora and Fauna. The list of river front is given in annexure II and beaches in annexure III.

- **Mini- Marathon on 3.06.2018 in five states namely Delhi, Bhubaneswar, Ahmedabad, Bangalore and Gangtok:**
  - Envithon spreading awareness, ensuring concern and ownership about World Environment Day 2018 was organized in five cities on June 03, 2018 (New Delhi, Ahmedabad, Bhubaneswar, Bengaluru, Gangtok) to spread awareness on plastic pollution. More than 25000 students participated across five cities participated in these mini-marathons along with the members of civil societies, NGOs, NCC, Scout & Guides and paramilitary forces.
  - In New Delhi alone 10000 school students participated in the mini-marathon “Envithon” which was celebrated along with the “Cyclothon” on the eve of World Bike Day i.e. 3rd June 2018. Dr. Harsh Vardhan, Hon’ble Minister for Environment Forest and Climate Change flagged off the Marathon and Cyclothon from Vinay Marg. Students from Delhi Eco schools performed nukkad nataks and songs on the theme of plastic pollution.

### 8.3 Media Cell

MoEFCC is the nodal agency in the administrative structure of the Central Government for planning, promotion, coordination and overseeing the implementation of environmental and forestry programs and policies. Media Cell of MoEF&CC is mandated with taking up awareness campaigns using print, electronic and other mass media to enhance awareness about various environmental issues which would in turn facilitate better compliance with environmental regulations.

#### Activities Undertaken:

**World Environment Day:** The World Environment Day (WED) is celebrated globally on 5th June every year. During 2018, the theme of World Environment Day was ‘Beat Plastic Pollution’ and India was global host.

The entire media out reach of the event was carried out by the Media Division. Many audio-visual creatives were produced to spread message of beat plastic pollution. Massive outdoor publicity campaign was also launched.

- **Production of audio-video creatives to spread message on protection of environment:** Audio-Visual Creatives have been prepared by Media Cell for protecting environment and uploaded on MoEF&CC’s website at link: <http://envfor.nic.in/content/download-green-good-deed-audio-visual-creatives>
- **Airing of audio-visual creatives:** MoEF&CC is running media campaign through various audio-visual creatives on topics like save water, no plastic, green good deeds on Lok Sabha TV, Prasar Bharti, Doordarshan, TV News Channels and on Digital Cinemas.
- Media Division publishes advertisements in the print media
- Calendar printing for 2018 on the theme of Waste Management. It was done for the first time in the Ministry.
- Organise visits of students/professions of different educational institution to Indira Paryavaran Bhawan to explain its green features.



## Chapter-9

### Centre of Excellence

**The MoEF&CC awarded the following 10 Research projects to SACON for conservation of avian biodiversity:**

Developing Conservation and Management Plans for Select Important Bird and Biodiversity Areas (IBAs) of the Country, (2) Assessing the population status of synanthropic bird species of India, including House Sparrow and House Crow, and their response to urbanization, (3) Assessing the distribution, population and habitat use of three endangered species to develop conservation plan for species and their habitats, (4) Assessment of status, distribution and threats to the population of threatened Sarus Crane *Antigone antigone* in Gujarat, (5) Assessment of status, distribution and threats to the population of threatened Sarus Crane *Antigone antigone* in Uttar Pradesh, (6) Developing a conservation action plan for Forest Owlet (*Heteroglaux blewitti*), a Critically Endangered species endemic to central India, (7) In-situ and Ex-situ conservation of Endemic Andaman Edible-nest Swiftlet in the Andaman and Nicobar Islands, (8) A study on bird hazards in select Indian civil airfields, (9) Establishment of National Avian Forensic Laboratory at SACON for National Certification for Illegal Trafficking of Birds and (10) National centre for surveillance and monitoring of impact of environmental contaminants on ecosystem components with special focus on birds in India. These are on-going.

Apart from the above projects SACON had undertaken several other projects as given below:-

- Division of Conservation Ecology has been undertaking projects on (1) Identifying Indian cavity nesters most vulnerable to the loss of large trees (2) In-situ and ex-situ Conservation of the Endemic Andaman Edible-nest Swiftlet in the Andaman and Nicobar Islands, India and (3) Assessing anthropogenic threats to large carnivore population in the Western Ghats part of Tamil Nadu.
- The Division of Conservation Biology is engaged in (1) Survey for small cats in Sanjay Gandhi National Park, Mumbai. As part of the study, a training programme was conducted for volunteers and forest staff in wildlife monitoring procedures. (2) A comprehensive study of the potential ecological impact of windmill farms on wildlife with special emphasis to avifauna in Karnataka to assess the potential risks to avifauna (3) Ecology of elephants (*Elephas maximus*) in South-West Bengal including population dynamics, migratory pattern, feeding habits and human-elephant conflict. The data on elephant movement and habitat use are being collected.
- The Division of Landscape Ecology is undertaking a project on 'Ecological investigations on five selected endemic trees and their conservation strategies in the forests of Tamil Nadu' to investigate the distribution and abundance and suggest future conservation strategies for these species.
- The Division of Ecotoxicology is undertaking a project to assess the Polycyclic Aromatic Hydrocarbons (PAHs) contamination in Palikaranai wetland, Chennai with fish as an indicator. The results obtained so far from the muscle tissue of 48 individuals of the *Oreochromis* sp., belonging to 3 sub-species (*O. mossambicus*, *O. niloticus* and *O. aureus*) indicate that naphthalene and phenanthrene were present in all individuals.
- The Wetland Ecology Division is currently engaged in conducting a project on (1) Criteria for wetland prioritization and framework for wetland monitoring in Tamil Nadu, and (2) 'Ecological exploration and

socioeconomic valuation of pit-lakes in eastern coal fields of India: Implications for Conservation and Sustainable use.

- Apart from awareness programs, the Nature Education Division is engaged in conducting a Study on Bird Hazards and its Mitigation Measures required at the Multi-Sector Special Economic Zone (SEZ) located near Rajiv Gandhi International (RGI) Airport, Hyderabad’.
- The EIA Division of SACON is undertaking an EIA study on The ongoing projects include (1) Additional study of less than 10 MW Hydroelectric Projects under the Cumulative Impact Assessment of Hydroelectric projects in Sutlej river Basin in Himachal Pradesh, and (2) Supplementary Environmental Impact Assessment (EIA) study for the proposed High-Level Bridge across Pulicat Lake, Tamil Nadu with a special focus on birds.
- In 2017-18, SACON published 33 research articles, 08 popular articles, 13 technical reports, 02 book chapters, 04 books.
- During 2017-18, SACON completed 05 research projects and submitted Final Technical Reports to the respective funding agencies.
- During the reporting period, SACON established (1) Avian Forensic laboratory, (2) National Ornithological Databank (NOD) Cell to create and manage a data-portal on Indian ornithology and conducted Training Programme on (a) Ornithology and Wildlife studies, (b) Green Skill Development Program, (c) Monitoring and Management of Wetlands for officers of Southern Indian States Forest Department and Smart India Hackathon – 2018 at Coimbatore, Tamil Nadu.

## Chapter-10

### Environmental Information

#### 10.1 Environmental Information System

ENVIS, a Central Sector Scheme is being implemented through a network of 67 ENVIS Hubs and Resource Partners (RPs) of which 32 Hubs dealing with 'State of the Environment and Related Issues' are hosted by the respective State Government /UT Administration and 35 RPs are hosted by environment-related governmental and non-governmental organizations/ institutes of professional excellence, with varied thematic mandates pertaining to environment, forests, climate change, pollution abatement, health/ hygiene etc. The primary mandate of the scheme to collect and disseminate information relating to a variety of themes associated with Environment, Forest, Wildlife and Climate Change sectors has been expanded after the termination of the XII Five Year Plan period in 2016-17 to include skilling in 'green' sectors, Community based sustainable development of villages, District level grid-based survey for sustainable management of natural resources, etc.

#### Activities undertaken:

##### i) Existing Activities:

- **Green Skill Development Programme (GSDP)** - for skilling the youth in the country. - for skilling the youth in the country. Under the programme, more than 40 Courses are being conducted throughout the country by ENVIS Hubs/ Resource Partners/ GSDP Partner institutions with duration varying from 80 hours to 550 hours covering diverse fields – pollution monitoring (air/water/soil), emission inventory, waste management , environmental impact assessment etc.
- **National Environment Survey (NES)-a Grid-based Resource Information and Decision Support System (GRIDSS) for sustainable management of natural resources:** In order to ascertain the status of environment at district level and facilitate policy decisions, the ENVIS Hubs /Resource Partners would carry out environmental survey of the country through a grid-based approach, for grids measuring 5’x5’ or a suitable measurement, depending on the requirement, for effective survey of various environmental parameters such as air, water, noise, soil quality, solid, hazardous & e-waste, forest & wildlife, flora & fauna, wetlands, lakes, rivers & other water bodies, public health etc. The ENVIS Hubs and RPs have identified the districts based on different eco-sensitive zones.
- **Community-driven Environmentally Sustainable Village Program (CESVP)-** Under the programme, Delhi based 7 ENVIS RPs (hosted by JNU, WWF, IIHH (Sulabh), CPCB, CMS, SPA, and TERI) carried out coordinated activities since October, 2017 till March 2018 aimed at creation of awareness about major environmental issues covering pollution, waste management, water management, setting up of community driven projects, such as solar energy, health status, etc. in three villages, viz., Dheerpur, Ghoga and Singhola in Delhi. Further, a preliminary Preliminary Survey was undertaken by these RPs in April, 2018 in three villages – Neemka (Gautam Budh Nagar, UP), Oledha (Bulandshehar,UP) and Kachaida (Gautam Budh Nagar, UP) was prepared.
- **Information and Knowledge Products of ENVIS:** ENVIS regularly brings out value-added information products relating to Environment, Forest, Wildlife and Climate Change which include theme based newsletters, special publications, e-newsletters, thematic bulletins, technical reports, Discussion Forum,

mobile apps, directories of information at State/regional/ National level, Bibliography, information products developed on parks and sanctuaries , desertification maps, flora and fauna species distribution maps.

- On the occasion of World Environment Day, various programmes such as Paryavaran Sanrakshan Rally, Green Pledge, Nature Walk, Plantation Drive, Slogan Writing, Nukkad Natak, Debate Competition, Film Shows on Environment Conservation, etc., were organized by ENVIS Hubs and RPs, across the country.
- For FY 2018-19, Regional Evaluation Workshops-cum-training programme on GIS/Geo- mapping for ENVIS Hubs and RPs based on the bio-geographic zones - namely, Himalayan; North-Eastern; Gangetic Plains; Semi-Arid/Desert; Western Ghats, Islands & Coastal; and the Deccan Peninsula) have been conducted during November-December, 2018.
- ENVIS Hubs and RPs were actively involved in the promotion of Swachh Bharat Abhiyaan in their respective areas. They had undertaken various activities during this period - cleanliness and sensitization drives, planting tree saplings, collection of garbage, litter and trash, administering Green Pledge, etc.

#### ii) Projected Activities:

- **GSDP-** In the next phase of GSDP, it would be expanded further at the district/local/village level wherein the Master Trainers would train the local youth. The ambit of GSDP would be expanded further by including new courses and partnership with more institutes like National Accreditation Board for Testing and Calibration Laboratories (NABL), Central Zoo Authority (CZA), International Centre for Integrated Mountain Development (ICIMOD) etc.
- **NES-GRIDSS:** The ENVIS Hubs and RPs have identified 64 districts, for which secondary data collection is underway and will be uploaded in the ISBEID portal. The primary survey work will commence from 2019-20.

#### Progress /Achievement

- Hon'ble Minister, EF&CC launched the full-fledged programme as well as the Mobile app on GSDP on May 14, 2018. The app (gsdp-envis) contains all basic information about the training programmes being conducted under GSDP. 1264 youth have been trained in 30 courses conducted during 2018.
- During the year, ENVIS Network printed, published and uploaded more than 650 Knowledge products including newsletters, books, theme based special publications, e-books, e-bulletins, booklets, environment calendars, brochures, pamphlets, DVDs, CDs, Mobile Apps, etc.
- During the year, one new ENVIS Hub on "Status of Environment and related issues" was established for the State of Haryana in Department of Environment and Climate Change, Haryana. The ENVIS Hubs at Bihar State Pollution Control Board and Rajasthan State Pollution Control Board were revived.

#### 10.2 Statistics Division

The increasing prominence of evidence based approaches to informing policy decisions emphasize the need for high quality statistics in support of the policy making process. With countries now on the path of 2030 agenda for sustainable development, the ambit of environment statistics needs to cover all components of environmental issues.

- The functional responsibilities of the Statistics Division are as follows:
- Identification of existing data gaps and advice on bridging them in order to strengthen the process of

planning, monitoring and decision-making in the Ministry.

- Development and management of an efficient centralised statistical database on environment and forestry sectors with the assistance of various Divisions of the Ministry and Environment Centres, with a view to meeting the requirements of various Divisions and other overall requirements.
- Liaison with Ministry of Statistics & Programme Implementation and other Ministries on all types of statistical matters.
- Liaison with State Governments and UT Administrations, and where necessary, subordinate and attached offices and autonomous bodies of Ministry of Environment & Forests to strengthen the processes of data collection, validation, processing and interpretation of statistical data.
- Rendering advice to all Divisions on statistical matters and providing interpretations of statistical data and implementation of statistical components of various Conventions and Agreements.
- Preparation of State of Environment Report (SoER) for States/UTs/Hotspots and at national level. It is envisaged that the State of Environment Report (SoER) for each State/UT will be published with a periodicity of two years followed by a national SoER.

#### **Activities undertaken:**

- The State of Environment Report (SoER) aims to provide concrete guidance for environmental action planning, policy setting and resource allocation for the coming decades, based on a sound integrated analysis of the state and trends of the environment. It also clearly selects key issues and set priorities from the range of environmental concerns that the State is facing. It is envisaged that the State of Environment Report (SoER) for each State/UT will be published with a periodicity of two years followed by a national SoER.
  - State of Environment Reports for the States of Karnataka, Mizoram, Tamil Nadu and Telangana were completed.
  - The India State of Environment Report was released by the Hon'ble Minister during the World Environment Day Celebration.
- Annual Report of the Ministry for the year 2017-18 was compiled and submitted to the Parliament.
- The Annual publication on Environment Statistics is published by Ministry of Statistics and Programme Implementation (MoS& PI). The revamped publication EnViStats 2018 incorporating various data on Environment and Climate Statistics has been compiled and published by MoS&PI. The Ministry supported MoS&PI in compilation of the various environment related data for the publication.
- It also provides information for periodic publications produced as per the recommendations of the National Statistical Commission and Statistical Abstracts and other publications of Central Statistical Organization (CSO).
- Rendered advice to other Divisions on statistical matters and providing interpretations of statistical data and implementation of statistical components of various Conventions and Agreements.

#### **10.3 Non-Governmental Organization (NGO) Cell**

- A Non-Governmental Organization (NGO) Cell has been set up in the Ministry to handle various policy matters relating to the NGOs working in diverse fields of environment. The basic functions of the Cell are:
  - Liaison with the NITI Aayog and other Government Ministries in respect of various guidelines /directions concerning NGOs.

- Formulating replies to Parliament Questions.
- Responding to various Public Grievances received from PMO, Cabinet Secretariat, Individuals etc.
- Handling RTI applications.
- As per directions of NITI Aayog an IT software for end-to-end processing of applications for sanction/release of grants/financial assistance to NGOs has been developed. It provides the facility to NGOs to apply online to avail grants etc. under various schemes of this Ministry. It has been linked with NITI Aayog NGO-Darpan Portal for the Non-Governmental Organizations (NGOs) with the objective of bringing in transparency in their operations.

## Chapter-11

### Legislation and Institutional Support

#### 11.1 Policy and Law

The Policy and Law Division is allocated funds under "National Green Tribunal "and the budget under this is allocated to:-

- National Green Tribunal
- Loss of Ecology Authority.
- Dahanu Taluka Environment Protection Authority.

However, only administrative issues of NGT are dealt in this Division and ESZ and CP Division are administrative incharge of Dahanu Taluka Environment Protection Authority and Loss of Ecology Authority respectively.

#### 11.2 National Green Tribunal (NGT)

The National Green Tribunal was set up on 18th October, 2010 under the NGT Act, 2010, for the purpose of effective and expeditious disposal of cases relating to environmental protection and conservation of forests and other natural resources including enforcement of any legal right relating to environment and giving relief and compensation for damages to persons and property and for matters connected therewith or incidental thereto.

NGT has five places of sitting i.e., the Principal Bench at New Delhi and Zonal Benches at Pune, Kolkata, Bhopal and Chennai.

During the period 1.1.2018 to 31.12.2018, the Tribunal had a carry over of 2,867 pending cases from 31.12.2017 and a total of 3868 cases were instituted during the year. Out of the total of 6735 cases, 3421 cases have been disposed of and 3314 cases were pending, at the end of 31.12.2018.

**Legal Monitoring Cell (LMC):** A Legal Monitoring cell was constituted to monitor the progress of court cases and also to act as an effective coordinator with various Divisions of the Ministry regarding court cases. The total no of cases in which the Ministry is a Party in matters pending before the Supreme Court of India, High Courts, National Green Tribunal (all Benches), Central Administrative Tribunal etc. as on 19.12.2018 is 2087 and no reply was pending beyond three months, for filing.

**Eco-labelling Scheme:** Ecomark Scheme was launched in 1991 by Ministry of Environment, Forest & Climate Change vide Government of India Resolution dated 21.02.1991. A Steering Committee to be chaired by Secretary, MoEF&CC was constituted vide Ministry's order dated 06.03.1991 to decide the products to be taken up for labelling as environmental friendly and to formulate the strategies for the promotion and future development of the scheme.

The Eco-labelling Scheme, has been given an impetus to align it with emerging market demands and increased environmental awareness among the consumers and producers/ manufacturers. Self Certification has been initially envisaged for enabling faster Eco-labelling process. The products are required to adhere to compulsory quality standards specified by BIS, as a pre-requisite to Eco-labelling.

The composition of the Steering Committee was substituted by Resoluřion dated 19.12.2016.

A Technical Committee to be chaired by Chairman, CPCB was also constituted vide Ministry's order dated 06.03.1991 to identify the specific products to be selected and the individual criteria to be adopted. The Technical Committee was reconstituted vide Ministry's order dated 17.01.2017. Ecomark Scheme is administered by BIS under the BIS Act, 1986 with support of Central Pollution Control Board (CPCB) to assess and certify the products.

Ecomark Scheme initially launched the following 17 product categories: -

- Soaps and Detergents
- Paints
- Paper
- Plastic
- Cosmetics
- Textiles
- Batteries
- Wood Substitutes
- Propellants and aerosols
- Food items (edible oils- including Vanaspati, tea and coffee)
- Electrical and electronic goods
- Packing/packaging materials
- Lubricating/speciality oils
- Drugs
- Food preservatives and additives
- Pesticides
- Leather

The Steering Committee on Ecomark held a meeting on 3rd August, 2018 under the Chairmanship of Secretary, EF&CC for consideration and finalisation of Ecomark Criterion on Coir and Coir Products recommended by the Technical Committee, based on the recommendations of the Technical Sub-Committee. The Steering Committee approved the criteria after deliberating on it. The Notification for the revised Ecomark Criterion on Coir and Coir Products was published in the Gazette of India dated 18.09.2018.

#### **Regulatory Acts/Rules governing the programme and promulgation of new acts, if any, along with details.**

PL Division notified the National Green Tribunal (Recruitment, Salaries and Other Terms and Conditions of Service of Senior Accountant) Rules, 2018 vide G.S.R. No. 589(E) on 26.06.2018 .

Justice Shri Adarsh Kumar Goel, Judge of the Supreme Court of India was appointed as the Chairperson of the National Green Tribunal with effect from 06.07.2018 for a period of five years or till he attains the age of seventy years, whichever is earlier, vide Notification dated 06.07.2018.

#### **11.3 Economic Cell**

Economic Cell of the Ministry is headed by the Economic Adviser working under the supervision of the Principal Adviser. It is the nodal Division for matters referred by the Department of Economic Affairs, including Notes for



Cabinet/ Cabinet Committees/ Committee of Secretaries. All matters having a bearing on internal and external economic management in the Ministry and reforms in the environment and forest sectors are dealt in the Economic Cell.

**Activities undertaken:**

- Drafted and finalised comments on different economic and environmental issues, particularly on Cabinet Notes, EFC Memos, parliament matters, NITI Aayog references etc.
- Coordinated and contributed comments on Cabinet Notes and different Memorandum of Understanding documents referred to the Ministry by the Ministry of Finance. Most prominent amongst these include the Cabinet Note on Socio Economic and Caste Census 2011 (SECC 2011) Data from Ministry of Rural Development.
- Nodal Division to monitor implementation of specific announcements in the Union Budget concerning Ministry.

**11.4 Trade & Environment**

Trade and Environment Division provides technical inputs in the areas of Trade and Environment for policy formulation and amendments in existing Trade Policy of the Government. It helps in formulation of Ministry's views/ position on trade-related matters referred to it by other Ministries, including issues related to Regional/ Bilateral/ Multilateral Trade Agreements and other trade-related issues. It is also the nodal Division within the Ministry to deal with references received from M/o Commerce & Industry relating to Trade & Environment.

**Activities undertaken**

- The Division furnished comments/inputs on behalf of the Ministry on action points of National Trade Facilitation Action Plan (NTFAP).
- The Division has been actively engaged with DIPP, M/o Commerce and Industry in consultations regarding OECD Investment Policy Review. The Division also consolidated inputs on certain items related to environment and forest sector, identified by Ministry of Commerce which involves high value of imports and contribute to trade deficit.
- The Division also coordinated and contributed comments on Cabinet Notes and different Memorandum of Understanding documents referred to the Ministry by the Ministry of Commerce and Industry. Most prominent amongst these include the Cabinet Note on National Logistics Policy and Industrial Policy.

**11.5 Direct Benefit Transfer (DBT) Cell**

DBT Cell is responsible for ensuring the following for the DBT Applicable schemes of the Ministry:

- 100% Electronic transfer of benefits
- 100% Aadhaar based transfers
- Capture and maintenance of MIS for all DBT schemes of the Ministry
- Curbing pilferage and duplication

DBT Cell constantly engages with the DBT Mission, Cabinet Secretariat for making schemes of the Ministry DBT compliant.

**Activities undertaken**

- MIS has been prepared for all DBT on-boarded Schemes
- Test level integration of all DBT on-boarded Schemes has been completed
- Integration of one DBT on-boarded Scheme with DBT Bharat Portal has been completed.

**11.6 Goods and Services Tax (GST) Cell**

The Goods and Service Tax (GST) has been implemented in the country w.e.f. July 1, 2017. As per the directions of the Cabinet Secretary, a ‘GST Facilitation Cell’ has been created in the Ministry under the Economic Adviser, to serve as the first point of contact for addressing issues being faced by any sector related to the Ministry. It consists of members from CS-III Division, Wildlife Division, Project Elephant and SU Division as well as Wildlife Crime Control Bureau (WCCB) and National Biodiversity Authority (NBA).

**The functions of the GST Cell are as follows:**

- The GST Cell is responsible for examining requests received on increase/ decrease of applicable tax rates in the post-GST period compared to the pre-GST tax regime and taking up the same with GST Council.
- The GST Cell consolidates comments on representations received from various industries, associations, institutes and organizations. The proposals are examined in the Ministry by the Divisions concerned and recommendations are forwarded to GST Council for consideration.
- The Cell also offers support/ training material for GST that may be requested from time to time by various stakeholders and acts as a liaison between the Ministry and GST Council/ Department of Revenue.

## Chapter-12

### 12.1 Climate Change

India is a Party to the United Nations Framework Convention on Climate Change (UNFCCC), Paris Agreement and Kyoto Protocol. The Ministry of Environment, Forest and Climate Change (MoEF&CC) is the nodal Ministry for international climate change negotiations under UNFCCC. The Climate Change Division of the Ministry looks after the issues related to climate change and the related domestic policies and actions. The Division is also responsible for submission of National Communications (NATCOMs) and the Biennial Update Reports (BURs) to UNFCCC. In order to create and strengthen the scientific and analytical capacity for assessment of climate change in the country, different studies have been initiated under the Climate Change Action Programme (CCAP), including National Carbonaceous Aerosols Programme (NCAP), Long Term Ecological Observatories (LTEO) Programme, and GHG Modelling Studies.

During the year 2018, many important bilateral and multilateral meetings and negotiations on climate change, in the run up to the 24th Conference of the Parties to UNFCCC (COP-24) which was held during 2nd to 15th December, 2018 in Katowice, Poland. Hon'ble Minister, EF&CC and senior officials of the Ministry participated in the COP-24. The Ministry also hosted international meetings of the Like Minded Developing Countries (LMDC) on 1st and 2nd November, 2018 and BASIC (Brazil, South Africa, India and China) countries on 19th – 20th November, 2018.

India's climate action and estimates show a positive trend. India had taken a voluntary pledge in 2009 to reduce the emissions intensity of its GDP by 20-25% from 2005 levels by 2020 and is already on path to achieve this goal. According to India's second BUR, India's emissions intensity of its GDP has decreased by 21% between 2005 and 2014.

The estimates also indicate that India's forest cover has increased from 21.23% in 2013 to 21.54% in 2017.

#### Other achievements:

- Solar installed capacity has increased from 3.7 GW (2015) to 23 GW (2018);
- 31 million tonnes of CO<sub>2</sub> eq emissions have been avoided due to 1st cycle of PAT Scheme;
- 7 million tonnes of CO<sub>2</sub> eq. emissions have been avoided in 2016-17 due to increase in no. of supercritical thermal power plants;
- Annual growth rate of renewable energy capacity is 29% compared to 9% annual growth rate of coal based electricity generation;
- Around 137 million tonnes of CO<sub>2</sub> eq has been sequestered due to National Horticulture Mission from 2010 to 2016.

In year 2018, Shri Narendra Modi, Hon'ble Prime Minister of India, was bestowed with Champions of the Earth Award 2018, UN's highest environmental honour, for pioneering the International Solar Alliance (ISA) and for his leadership in the fight against plastic pollution in India.

**National communication and Biennial Update Report submitted to the UNFCCC:** India furnished its second Biennial Update Report (BUR-1) on 31st December 2018 containing information on National Circumstances, National Greenhouse Gas Inventory, Mitigation Actions, Domestic Monitoring, Reporting and Verification (MRV) arrangements, Finance, Technology and Capacity Building Needs, and Support Received.

Currently the Ministry is preparing India's Third National Communication to be submitted to UNFCCC.

**National Action Plan on Climate Change (NAPCC):** Government of India is implementing the National Action Plan on Climate Change (NAPCC), launched in 2008, formulated in the backdrop of India's voluntary commitment to reduce emission intensity of its GDP by 20-25 % by 2020 over 2005 levels. It was also meant to focus on key adaptation requirements and creation of scientific knowledge and preparedness for dealing with climate change. NAPCC encompasses eight core missions on specific areas of Solar Energy, Enhanced Energy Efficiency, Sustainable Habitat, Water, Sustaining the Himalayan Ecosystem, Strategic knowledge for Climate Change, Green India and Sustainable Agriculture which are anchored by Ministry of New and Renewable Energy, Bureau of Energy Efficiency (Ministry of Power), Ministry of Urban Development and Housing Affairs, Ministry of Water Resources, River Development and Ganga Rejuvenation, Department of Science and Technology, Ministry of Environment, Forests & Climate Change, and Ministry of Agriculture and Farmers Welfare respectively.

All national missions were approved by the Prime Minister's Council on Climate Change (PMCCC) and are being implemented now. The Missions are under constant review by the Prime Minister's Council on Climate Change. An Executive Committee on Climate Change (ECCC) under the Chairmanship of Principal Secretary to Prime Minister has been set up for assisting the Prime Minister's Council on Climate Change in evolving a coordinating response to issues relating to climate change with regular monitoring of the eight National missions along with other initiatives on Climate Change and coordinating with various agencies.

**State Action Plan on Climate Change (SAPCC):** With the formulation of the NAPCC, it became imperative to achieve coherence between the strategies and actions at national and sub-national level. Therefore, the Ministry motivated the State Governments to prepare their State Action Plans on Climate Change (SAPCC) based on the broad objectives of NAPCC. So far, 32 States/UTs have put in place their SAPCCs with an attempt to mainstream climate change concerns in their planning process.

In year 2018, the States/UTs have been requested to revise their SAPCCs to re-orient their ongoing action to facilitate the achievement of country's post 2020 targets.

**National Adaptation Fund on Climate Change (NAFCC):** National Adaptation Fund on Climate Change (NAFCC) was launched in 2015 with an initial outlay of Rs. 350 crore to meet the cost of adaptation to climate change for the State and Union Territories of India that are particularly vulnerable to the adverse effects of climate change. The overall aim of the fund is to support concrete adaptation activities which are not covered under on-going activities through the schemes of State and National Government that reduce the adverse effects of climate change facing community, sector and states. The Scheme will be continuing beyond 12th Five Year Plan till 31st March, 2020 with an additional outlay of Rs. 364 Crore. The Fund is meant to assist National and State level activities to meet the cost of adaptation measures in areas that are particularly vulnerable to the adverse impacts of climate Change. The Scheme has been taken as Central Sector Scheme with National Bank for Agriculture and Rural Development (NABARD) as the National Implementing Entity (NIE). Till date 27 projects have been approved at a total cost of Rs. 673 Crores and Rs. 355 Crores have been sanctioned.

**Climate Change Action Programme (CCAP):** Climate Change Action Programme (CCAP) is a central scheme which was approved by the Cabinet in January 2014 at a total cost of Rs. 290 crore for duration of five years. Its objective is to create and strengthen the scientific and analytical capacity for assessment of climate change in the country, putting in place appropriate institutional framework for scientific and policy initiatives and implementation

of climate change related actions in the context of sustainable development. Some of the components of the CCAP scheme include the National Carbonaceous Aerosols Programme (NCAP), Long Term Ecological Observatories (LTEO), and Coordinated Studies on Climate Change for North East Region (CSCCNER).

**India's post-2020 climate goals:** For post-2020 period, in response to the decisions of the Conference to the Parties, India submitted its Nationally Determined Contribution (NDC) to the UNFCCC on 2nd October, 2015, outlining the climate actions intended to be taken under the Paris agreement. The eight goals put forth by India in its NDC are:

1. To put forward and further propagate a healthy and sustainable way of living based on traditions and values of conservation and moderation.
2. To adopt a climate friendly and a cleaner path than the one followed hitherto by others at corresponding level of economic development.
3. To reduce the emissions intensity of its GDP by 33 to 35 percent by 2030 from 2005 level.
4. To achieve about 40 percent cumulative electric power installed capacity from non-fossil fuel based energy resources by 2030 with the help of transfer of technology and low cost international finance including from Green Climate Fund (GCF).
5. To create an additional carbon sink of 2.5 to 3 billion tonnes of CO<sub>2</sub> equivalent through additional forest and tree cover by 2030.
6. To better adapt to climate change by enhancing investments in development programmes in sectors vulnerable to climate change, particularly agriculture, water resources, Himalayan region, coastal regions, health and disaster management.
7. To mobilize domestic and new & additional funds from developed countries to implement the above mitigation and adaptation actions in view of the resource required and the resource gap.
8. To build capacities, create domestic framework and international architecture for quick diffusion of cutting edge climate technology in India and for joint collaborative R&D for such future technologies.

The period of implementation for India's NDC is 2021-2030. For preparing the roadmap for implementation of India's NDC in post-2020 period, in the year 2016, MoEF&CC is holding inter-Ministerial consultations through an NDC Implementation committee Chaired by Secretary, EF&CC, and six thematic Sub-committees, involving key Ministries and Departments of the Government of India. The committee and sub-committees are working on to identify specific policies and actions aimed at achieving the NDC goals. They are also working on to indicate the financial outlays and technology interventions needed from domestic and international sources at various stages to achieve these goals.

To support the work of the sub-committees, MoEF&CC has launched a number of studies, to be conducted by research institutions/ organizations working in climate change domain and expertise, for developing roadmaps for NDC goals.

**International Negotiations:** The year 2018 witnessed a number of bilateral and multilateral meetings on climate change where Hon'ble Minister, Environment, Forest and Climate Change and senior officials of the Ministry participated. These meetings were crucial in run up to the 24th Conference of Parties to UNFCCC held from 2nd to 15th December, 2018 in Katowice, Poland.

Delegates participated in the UNFCCC Subsidiary Bodies Inter-sessional meetings from 30th April to 10th May, 2018 in Bonn, Germany and from 3rd to 9th September, 2018 in Bangkok, Thailand; Like Minded Developing

Countries (LMDC) meeting held during 19th – 21st March, 2018 at Penang, Malaysia; 26th BASIC Ministerial Meeting on Climate Change held on 19th – 20th May, 2018 in Durban, South Africa; Ministerial meeting on Climate Action held on 20th – 21st June, 2018 in Brussels, Belgium; 9th Petersberg Climate Dialogue held on 18th – 19th June, 2018 in Berlin, Germany; and Pre-COP 24 Ministerial Meeting of the UNFCCC held on 23rd – 24th October, 2018 in Krakow, Poland. Ministry of Environment, Forest and Climate Change also hosted international meetings of group the of LMDC on 1st – 2nd November, 2018 and BASIC (Brazil, South Africa, India and China) on 19th – 20th November, 2018.

The 24th Session of the of the Conference of the Parties to the United Nations Framework Convention on Climate Change (COP 24) was held in Katowice, Poland on 02nd – 15th December 2018. The conference was a significant one which focused on key issues including finalization of guidelines for the implementation of Paris Agreement in the post 2020 period. Dr. Harsh Vardhan, Hon'ble Minister, EF&CC led an inter-ministerial delegation that participated in the COP 24. A number of bilateral meetings were also held during the COP 24 including with Poland, European Union, United States of America, Philippines, United Kingdom, Australia etc. India participated in the meetings with a constructive and positive approach with the aim to protect India's long-term interests and its developmental priorities.. India also underscored the importance of fulfilling the commitment of developed countries to achieve the goal of mobilizing USD 100 billion annually by 2020 and further scaling up thereafter.

Decisions on various elements under Paris Agreement Work Programme (PAWP) were adopted in COP 24. The adopted decisions recognize different starting points of developed and developing countries and need for support to developing countries for implementation of Paris Agreement; provides flexibilities for developing countries and gives consideration to principles of equity, Common but Differentiated Responsibilities and Respective Capabilities (CBDR-RC) etc. The work on setting up a new collective finance goal also progressed and Parties agreed to initiate in November 2020 deliberations on setting a new collective quantified goal from a floor of USD 100 billion per year.

**Cooperation with bilateral and multilateral donors on climate change:** The Ministry has been implementing several projects with the assistance of bilateral and multilateral funding agencies such as Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH, The Department for International Development (DFID) and United Nations Development Programme (UNDP).

**Clean Development Mechanism (CDM):** The Clean Development Mechanism (CDM) has been a flagship programme addressing climate change mitigation and simultaneously giving an opportunity to developing countries in meeting their sustainable development objectives. CDM allows emission reduction or removal projects in developing countries to generate carbon offset credit, each equivalent to one tonne of carbon dioxide. These certified emission reduction credits (CERs) could be traded, sold and used by industrialized countries to meet part of their emission reduction targets under Kyoto Protocol.

The Government of India has set up a National CDM Authority (NCDMA) in December 2003 with Secretary, Environment, Forest and Climate Change as the Chairman and it consists of various Secretaries, such as of External Affairs, Finance, Power, Industrial Policy and Promotion, New and Renewable Energy, Planning Commission, and Department of Science and Technology as Members to consider various projects for grant of Host Country Approval (HCA) from Sustainable Development point of view. Some of India's achievements in CDM are:

- As on 5th November, 2018, 1667 out of total 7805 projects registered by the CDM Executive Board are from India, which so far is the second highest in the world.

- As on date, Certified Emission Reductions (CERs) issued to Indian projects is 240 million (12.16%) of the total 1973 million CERs issued.
- The National CDM Authority (NCDMA) in the Ministry has accorded Host Country Approval to 3028 projects. These projects are in the sectors of energy efficiency, fuel switching, industrial processes, municipal solid waste, renewable energy and forestry spread across the country (covering all states in India).
- Most of the CDM projects are developed by private sectors which has facilitated huge private sector investments in the country.
- The NCDMA started first paperless operation for the approval of the CDM projects in July 2010.

**World Bank Partnership for Market Readiness (PMR):** India's proposal to develop a voluntary carbon market was approved under Partnership for Market Readiness (PMR). The PMR Project aims to support and incentivize a market and piloting new approaches that allow emission reductions in a cost effective manner, while also addressing other priorities such as incentivizing waste, energy security, growth and development in the country.

The 8 million US Dollar grant allotted to India under the PMR Project will be utilised to develop voluntary carbon market in waste management and Micro, Small and Medium Scale Enterprises (MSME) sectors with carbon credits. These sectors have been identified to have significant mitigation potential and the ability to contribute to India achieving its NDC targets. Background work regarding the same has been initiated, and the Project is aimed to be completed in 2020.

## **12.2 Ozone Layer Protection**

The stratospheric ozone layer, which acts as a shield protecting plant and animal life from harmful ultraviolet-B (UV-B) radiation from the sun, is present between 10 to 50 kms from the Earth's surface. The depletion of Stratospheric Ozone Layer by Ozone Depleting Substances (ODSs) has the potential to cause skin cancer, eye cataract, suppress body's immune system, decrease crop yield etc. In order to respond to the depletion of Stratospheric Ozone Layer, the Vienna Convention for the Protection of the Ozone Layer in 1985 and the Montreal Protocol on Substances that Deplete the Ozone Layer in 1987, were adopted by the global community.

The Montreal Protocol has been recognized as the most successful international environmental treaty in history enjoying universal ratification from all the 197 United Nations Member countries and has led to phase out of 98 % of ODSs globally.

The MoEF&CC has set up the Ozone Cell as a National Ozone Unit (NOU) to render necessary services for effective and timely implementation of the Protocol and its ODSs phase-out program in India. The Empowered Steering Committee (ESC) constituted by the Ministry and chaired by the Secretary (EF&CC) is responsible for overall implementation of the Montreal Protocol in the country.

In order to comply with the requirements of the Montreal Protocol, the Ministry had brought out comprehensive Ozone Depleting Substances (Regulation and Control) Rules, 2000 under the Environment (Protection) Act, 1986 for phasing out of various ODSs. The ODS Rules have been amended in 2001, 2003, 2004, 2005, 2007 and 2014 to implement ODS phase-out activities in the country.

### **Implementation of Hydrochlorofluorocarbons (HCFC) Phase-out Management Plan (HPMP) Stage II**

The phase out of HCFCs is ongoing under the Montreal Protocol through the implementation of HPMP Stage II. The

Local Project Appraisal Committee, chaired by Department of Economic Affairs, Ministry of Finance has given “in principle” approval for HPMP Stage-II.

Memorandum of Agreements have been entered with some enterprises after third party verification and recommendation of UNDP in Refrigeration and Air Conditioning (RAC) and foam manufacturing sector for conversion from HCFC to non-HCFC technologies.

The request for second tranche of approximately USD 18 million was submitted by UNDP on behalf of India for the consideration of 82nd meeting of the Executive Committee (Ex-Com) of the Multilateral Fund (MLF). Based upon the discussions held in 82nd meeting of the Ex-Com in December, 2018 the second tranche of US \$18,190,815 was approved under HPMP Stage-II.

### **Kigali Amendment to the Montreal Protocol - Energy Efficiency**

India piloted Decision XXIX/10 in the 29th Meeting of Parties (MOP) on Issues related to energy efficiency while phasing down hydrofluorocarbons (HFCs), which was a significant first step in dovetailing energy efficiency and refrigerant transition under the Montreal Protocol resulting in enhancement of overall climate benefit.

Based upon the inputs provided by the Indian delegation during the 40th Open Ended Working Group (OEWG) held in Vienna in July 2018 on the report of the Technology and Economic Assessment Panel (TEAP) of the Montreal Protocol, the Updated final report of TEAP presented in the 30th MOP acknowledged that by the use of more energy-efficient equipment during phase down of HFCs will lead to doubling the total reduction of greenhouse gases emissions both from direct and indirect sources.

### **Upskilling air-conditioner service technicians under Pradhan Mantri Kaushal Vikas Yojana**

A Memorandum of Understanding (MoU) was signed between the Ministries of Environment, Forest and Climate Change and Skill Development and Entrepreneurship on 2nd August, 2018 in the presence of Hon’ble Ministers Dr. Harsh Vardhan and Shri Dharmendra Pradhan. Under the MoU, upskilling and certification of 100,000 RAC service technicians on good servicing practices and knowledge of alternative refrigerants to ozone-depleting chemicals would be carried out under the Skill India Mission - Pradhan Mantri Kaushal Vikas Yojana (PMKVY). The skilling and certification of technicians under PMKVY will have twin benefits of significant environmental benefits and a positive influence on the livelihoods of technicians.

### **Competency Enhancement of System Houses and Micro, Small and Medium enterprises (MSMEs) in foam manufacturing sector**

A Memorandum of Agreement (MOA) has been signed between the Central Institute of Plastics Engineering & Technology (CIPET), Department of Chemicals & Petrochemicals, Ministry of Chemicals & Fertilizers, Govt. of India and the Project Management Unit, Ozone Cell, Ministry of Environment Forest and Climate Change (MoEF&CC), Government of India for Competency Enhancement of System Houses and foam manufacturing enterprises especially MSMEs participating in HPMP. The agreement between CIPET and Ozone Cell, MoEF&CC shall facilitate the smooth and sustainable phase out of HCFC 141 b in the foam manufacturing sector of the country by 1.1.2020.

### **Awareness generation and consultation Activities**

Ozone Cell has made available awareness generation material to the public on its website. Instructional training



videos for RAC service technicians in 6 different languages viz. English, Hindi, Bengali, Kannada, Tamil and Gujarati have also been made available. Separately, as part of awareness generation and information dissemination activities the ozone cell has set up YouTube channel, Facebook and Twitter pages.

The Ozone Cell, MoEF&CC along with UNDP, UN Environment and GIZ participated in ACREX 2018, one of the largest international industry exhibition in HVACR sector in South Asia in February, 2018. In addition, the Ozone Cell, MoEF&CC had also set up a separate stall on Protection of Ozone Layer at the exhibition held in the lawn of India Gate as part of World Environment Day 2018 celebrations.

Several consultative meetings were organized on a regular basis for interaction with industry, Government departments etc., on issues relating to Montreal Protocol Implementation.

### **24th World Ozone Day, 2018**

The following publications were launched by the Hon'ble Minister on the occasion (i) Booklet on "Montreal Protocol : India's Success Story", posters, stickers are published every year on the occasion of International Day for the Preservation of the Ozone Layer giving latest information on ODS phase-out in the country and technologies adopted for phasing-out of ODSs, (ii) refurbished website and Management Information System (MIS) for Ozone Cell, (iii) Guide for Integration of Topics related to HCFC Phase Out and Energy Efficiency in Architectural Curriculum, (iv) Technicians and Trainers Handbook for Good Service Practices and Installation of Room Air-conditioners with HCFC-22 and Flammable Refrigerants.

### **Launch of draft India Cooling Action Plan (ICAP)**

India is the first country in world to develop a draft Cooling Action Plan, which addresses cooling requirement across sectors and lists out actions which can help reduce the cooling demand. On 24th World Ozone Day, 2018, Dr. Harsh Vardhan, Minister of Environment, Forest and Climate Change (MoEF&CC) released the draft India Cooling Action Plan (ICAP). The thrust of the draft ICAP is to look for synergies in actions for securing both environmental and socio-economic benefits. The overarching goal of draft ICAP is to provide sustainable cooling and thermal comfort for all, while securing environmental and socio-economic benefits for the society.

### **Activities related to the implementation of ODS Rules, 2000 and its amendments and Montreal Protocol**

Activities related to the implementation of ODS Rules, 2000 and its amendments were carried out inter alia including registration, Regulation of export/import, issuance of production quota, monitoring and reporting. The statutory reporting under the Montreal Protocol under Article 7 has been completed and the Country Program Progress Report (CPPR) submitted to the Secretariat of the Multilateral Fund for the implementation of the Montreal Protocol. The Indian delegation actively participated in the following Montreal Protocol meeting during the year (i) Open Ended Working Group, (ii) Meeting of parties, and (iii) Executive Committee of the Multilateral Fund.

### **12.3 United Nations Convention to Combat Desertification**

Desertification was addressed for the first time in 1977 in the United Nations Conference on Desertification, held in Nairobi, Kenya. In 1992, an intergovernmental negotiating committee was established and the United Nations Convention to Combat Desertification (UNCCD) Convention was adopted in Paris on 17th June 1994, which is commemorated as the World Day to Combat Desertification, Land degradation and Drought (DLDD). The Convention entered into force in December 1996. It is one of the three Rio Conventions along with United Nations Framework Convention on Climate Change (UNFCCC) and Convention on Biological Diversity (CBD).

India became a signatory to the Convention on 14 October 1994 and ratified it on 17 December 1996. The Ministry of Environment, Forest and Climate Change (MoEF&CC) is the nodal Ministry to co-ordinate all issues pertaining to the Convention.

**Activities undertaken:**

- The four-day Asia Pacific Regional Workshop of the United Nations Convention to Combat Desertification (UNCCD) jointly hosted by the UNCCD Secretariat and the MoEF&CC to build the capacity in the Asia Pacific Region to monitor and report on land degradation was held during 24th to 27th April 2018. The Workshop trained the participants in the use of an innovative land degradation monitoring tool for the reporting process of the UNCCD.
- In continuation and during the last quarter of the year, the first National Workshop on Land Degradation Neutrality – Target Setting Programme (LDN-TSP) jointly organized by the MoEF&CC and UNCCD was held on 4th -5th December 2018. This two-day national expert group workshop was organized to set the national Land Degradation Neutrality (LDN) targets.
- The country is a signatory to United Nation Convention to Combat Desertification (UNCCD) which is in alignment with the Sustainable Development Goals. Keeping in view the Future Strategic Framework of the Convention (2018-2030), the country is committed to achieve the Land Degradation Neutrality under the LDN-TSP. The Ministry is in the process of setting baseline for LDN.
- UNCCD National Reporting 2018: Through the trends in the three indicators viz. land-use, soil organic carbon and land productivity obtained from NRSC and SAC, the land degradation has been calculated as 27.62% i.e. this much of India's land is degraded and the country needs to set in targets to neutralize this. However, the degradation status as per the Land Degradation Atlas prepared by Space application Centre and National Remote Sensing Centres are 29.32% and 27% respectively.

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## Chapter-13

### International Cooperation and Sustainable Development

#### 13.1 International Cooperation

International Cooperation and Sustainable Development (IC&SD) Division of the Ministry coordinates matters related to international environmental cooperation and sustainable development including Sustainable Development Goals (SDGs) & Partnership for Action on Green Economy (PAGE). The major achievements of the division in the year 2018-2019 are as follows:

**International Cooperation - Multilateral Matters:** The Division is nodal for the United Nations Environment Programme, Global Environment Facility (GEF), United Nations Development Programme (UNDP), International Resource Panel (IRP), the World Bank (WB) and regional bodies like Economic & Social Commission for Asia & Pacific (ESCAP), Brazil-Russia-India-China-South Africa (BRICS); South Asian Association for Regional Cooperation (SAARC), South Asia Cooperative Environment Programme (SACEP), Association of South-East Asian Nations (ASEAN), Asian Development Bank (ADB), European Union (EU), India-Brazil-South Africa (IBSA) Summit on Environment amongst others. The Division supports annual contributions to various UN and other international bodies working on environmental matters. The Division directly contributes USD 31,850 annually to South Asia Cooperative Environment Programme (SACEP).

- **UN Environment Programme (UNEP):**

India is a member of UNEP and provides annual financial contribution of USD 100,000 to UNE Environment Fund. The Ministry is a member of the International Resource Panel (IRP) Steering Committee. IRP supports UNE's Resource Efficiency/Sustainable Consumption and Production (SCP) sub-programme and is carrying out assessments of the world's most critical resource issues with a view to developing practical solutions for government policymakers, industry and society. The 23rd meeting of International Resource Panel (IRP) and Steering Committee was held at Yokohama, Japan from 23-26 October, 2018.

The United Nations Environment Assembly (UNEA) is the world's highest-level decision-making body on the environment. It addresses the critical environmental challenges facing the world today. The Environment Assembly meets biennially to set priorities for global environmental policies and develop international environmental law. The fourth Session of the Assembly is scheduled to be held in Nairobi, Kenya during 11-15 March, 2019 which will focus on "Innovative solutions for environmental challenges and sustainable consumption and production"

- **World Environment Day, 2018**

The World Environment Day is celebrated globally on 5th June every as an important vehicle to stimulate worldwide awareness of the environment with a view to give human face to environmental issues, promote an understanding that communities are pivotal to changing attitudes towards environmental issues. India was declared the global host for celebration of World Environment Day, 2018 (WED 2018) by the United Nations Environment Programme. India's leadership in the field of environment & its conservation was showcased in a grand manner. World Environment Day has always been a day of special importance to India. The day has been celebrated as rededication of national efforts for sustainable development and mainstreaming environmental concerns in the national

developmental agenda. The theme for World Environment Day, 2018 was “Beat Plastic Pollution”.

The WED 2018, at international level, was celebrated through the UN Environment Programme and Indian Embassies across the globe. Pan India activities were celebrated involving various stakeholder Ministries/Departments, all States and UTs, districts, local bodies, organizations, civil societies etc. across the length and breadth of the country, thus giving it the widest possible geographical and demographic coverage.

Among other pan India activities, the entire celebration of WED 2018 was divided in following events:

- (a) Plenary Session on 5th June, 2018 in Vigyan Bhawan, New Delhi
- (b) The Knowledge Coalition-Thematic Sessions, 1-4 June, Vigyan Bhawan, New Delhi
- (c) Sambandh" – People & Environment- The Technology Exhibition, 2-5 June 2018, Vigyan Bhawan Back Lawns
- (d) ‘Green India’-State Ministers Conference, 4th June, 2018, Vigyan Bhawan
- (e) ENVITHON - The Green Run on 3rd June, 2018
- (f) Cultural Programme “Wave Upon Wave” 4-5 June, 2018 Back lawns of Vigyan Bhawan, New Delhi.

**Main event on 5th June, 2018 in Vigyan Bhawan, New Delhi:** The Plenary Session on 5th June, 2018 was presided over by Shri Narendra Modi, Hon’ble Prime Minister of India. The Plenary session was attended by more than 3000 individuals including State Ministers, Secretaries of Union Ministries/Departments, Resident Commissioners, Diplomats, Counsellors, UN Agencies, officers & staff of MOEFCC, its attached and subordinate offices, representative of Research Institutes, Civil Societies, Academicians, NGOs, PSUs, industries & business world and various other invitees. The Prime Minister said that India is delighted to be a global host for this year’s World Environment Day celebrations. The Prime Minister also appealed the nation to understand the importance of the day, understand the theme, say no to the use of single-use plastic and save our planet from ill-effects of plastic pollution.

Hon’ble Prime Minister further mentioned that with the exemplary celebration of the World Environment Day, India yet again demonstrated tremendous global leadership on climate change and the need to shift to a low carbon economy, and how it is galvanizing greater action on plastics pollution. India recognizes that 'Beating Plastic Pollution' is a global emergency affecting every aspect of our lives, and India will now be leading the push to save our oceans and planet.

On this occasion, CEOs of ONGC, Hindustan Unilever Ltd, NBCC, Procter & Gamble, ITC Ltd and Cement Manufactures Association took pledge to eliminate single use plastic in its work centres across India by the year 2020, all the plastic packaging will be designed to be re-usable, re-cyclable or compostable by 2025, ensure zero discharge of waste i.e. by recycling of sewage waste, water, solid waste including plastic waste and construction and demolition waste in all over construction projects by 2022, use of re-usable and re-cyclable packaging by 2030, use all the segregated plastic waste in cement manufacturing.

On this occasion, Hon’ble Prime Minister released the following books:

- (a) Compendium of Traded Indian Medicinal Plants
- (b) Plant Discovery 2017
- (c) Single Use Plastics: A Roadmap for Sustainability

Prime Minister also released a set of commemorative postage stamp on 'Beat Plastic Pollution' in presence of Dr. Harsh Vardhan, Minister for Environment, Forest and Climate Change, Shri Manoj Sinha, Minister of Communications & IT, Dr. Mahesh Sharma, Minister of State for Environment, Forest and Climate Change, Shri C. K. Mishra, Secretary, Ministry of Environment, Forest and Climate Change.

**The Knowledge Coalition-Thematic Sessions, 1-4 June, Vigyan Bhawan:** During the celebration of the World Environment Day, 2018, a number of thematic sessions / conferences / workshops were organized on different thematic areas over four days from June 1-4 June, 2018 at Vigyan Bhawan, New Delhi.

The four days thematic conferences covered a wide spectrum of the thematic areas on environment for knowledge sharing and showcasing of case studies and best practices with stakeholders from Business & Industry, Research Institutions, Multilateral & Bilateral organizations, Media, NGOs, Universities and others.

An exhibition titled "Sambandh"- People & Environment – the Technology Exhibition was staged during 2-5 June, 2018 at Vigyan Bhawan Back lawns in an area of approximate 15,000 sqm. to provide a platform for the National and International level technology and equipment manufacturers to explore new business opportunities worldwide. The main aim of the event was to raise awareness for the environment, efficient and effective use of technologies for environmental protection and scope for research & development for new environmental protection technologies.

This Ministry also put a Theme Pavilion in the Exhibition. 18 other Ministries/Departments put their exhibitions. 8 States participated in the Exhibition. 11 NGOs participated in the event. There was participation from over 98 exhibitors comprising a mix of participants.

**'Green India'- State Ministers' Conference, 4th June, 2018, Vigyan Bhawan:** State Ministers' Conference titled "Green India" was convened on 4th June, 2018 at Vigyan Bhawan, New Delhi. The State Environment Ministers' Conference comprised four themes – State Action Plan on Climate Change; Environment Impact Assessment; Waste to Wealth and National Clean Air Programme.

**Envithon – The Green Run on 3rd June, 2018:** To raise awareness towards environment among the masses with particular focus on children, a mini-marathon titled "ENVITHON" was conducted on 3rd June, 2018.

The same was inaugurated by Dr. Harsh Vardhan, Hon'ble Minister. Over 10,000 children from nearly 200 schools of Delhi NCR participated.

A cultural programme with street play, songs and dance performances around the theme of plastic pollution and river conservation was also put together for this event.

**Cultural Programme "Wave Upon Wave" 4-5 June, 2018 Back lawns of Vigyan Bhawan, New Delhi:** On the occasion of World Environment Day, 2018, a cultural programme "Wave Upon Wave" was organized at Vigyan Bhawan back lawns from 7-9 PM on 4-5 June, 2018.

**Enviro Quiz:** On this occasion Enviro Quiz was organized by the Ministry in collaboration with TERI, CMS and TCE. Students from 150 Schools of Delhi-NCR participated in Enviro Quiz competitions, out of 150 only eight schools were selected for the final round of Quiz competition. Dr. Harsh Vardhan, Minister for Environment, Forest and Climate Change distributed the Enviro Quiz Award to the winners.

**Films on World Environment Day:**

The following films were produced on the occasion of World Environment Day, 2018:

- (i) PrakritiPrakritiRakshatiRakshita
- (ii) Sambandh
- (iii) Green India

**International Cooperation – Bilateral Matters**

**International Cooperation – Bilateral matters:** This year, the International Cooperation Division in the Ministry entered into four new Agreements / Memorandum of Understanding/Cooperation (MoUs/MoCs) with BRICS, Japan, Cyprus and France, now making it a total of 25 Agreements / MoUs / MoCs with countries/associations on various environmental issues of mutual benefits.

The Hon'ble Ministers met with the following Ministers / dignitaries, among others, and discussed environmental issues:

- Mr. Nikolai Astrup, Hon'ble Minister of International Development, Ministry of Foreign Affairs, Norway on 27th June, 2018
- Mr. Mukhtar Babayev, Hon'ble Minister, Ministry of Ecology and Natural Resources, Government of Azerbaijan was held on 12th October, 2018
- Mr. João Pedro Matos Fernandes, Hon'ble Minister of Environment, Government of Portugal was held on 1st October, 2018
- Mr. Tsukasa Akimoto, Hon'ble State Minister of Environment, Japan on 30th November, 2018

**Memorandum of Understanding (MoU) among BRICS Nations on Environment:** An MoU was signed among BRICS Nations and exchanged on 26.07.2018 during the Hon'ble Prime Minister's visit to the 10th BRICS Leadership Summit in Johannesburg, South Africa. The MoU shall facilitate exchange of experiences, best practices and technical knowhow through both public and private sectors among the participating BRICS nations and shall contribute to sustainable development, protection and preservation of Environment. The Memorandum of Understanding also provides the possibility to have projects in areas of mutual interest.

**The MoU identifies the following areas of cooperation:**

- Air quality;
- Water;
- Biodiversity;
- Climate Change;
- Waste Management;
- Agenda 2030 for Sustainable Development and Sustainable Development Goals; and
- Other areas of mutual interest as agreed to by the Participants.

**India-Cyprus Memorandum of Understanding (MoU):** A Memorandum of Understanding between the Ministry and the Ministry of Agriculture, Rural Development and Environment of the Government of the Republic of Cyprus on Cooperation in the areas of Environment was signed on 3rd September, 2018. Keeping in view the bilateral

interest of both sides and mutually agreed priorities, the draft text of the Memorandum of Understanding has been developed for cooperation in the following areas of environment:

- Water pollution control;
- Air pollution control;
- Waste Management;
- Biodiversity conservation including:
  - ➔ Bio-safety
  - ➔ Survey of Bio-resources
  - ➔ Wetland management
- Harmful chemicals management;
- Clean technologies including:
  - ➔ Clean water and air technologies
  - ➔ Waste handling technologies
  - ➔ Environmental monitoring technologies
  - ➔ Technologies to support substitution of harmful chemicals in processes and products
- Climate Change; and
- Any other areas jointly decided upon.

The MoU shall facilitate exchange of experiences, best practices and technical knowhow through both public and private sectors and shall contribute to sustainable development. The Memorandum of Understanding also provides the possibility to have joint projects in areas of mutual interest. It will, therefore, be beneficial for India and Cyprus to share the knowledge, management practices and experiences, and develop cooperative endeavours or projects for sustainable management.

**India-Japan Memorandum of Cooperation (MoC):** An India-Japan Memorandum of Cooperation (MoC) in the field of Environmental Cooperation was signed on 29th October, 2018 during the visit of Hon'ble Prime Minister of India to Japan in the last week of October, 2018. The mutually agreed areas of cooperation under the MoC are as follows:

- Pollution Control (Air, Soil and Water);
- Chemical and Waste Management including integrated Solid Waste Management (including Environmentally Sustainable Cities) and Hazardous Substance Management;
- Coastal and marine ecosystems;
- Environmental Technology;
- Climate change;
- Conservation and sustainable use of biodiversity including Natural Parks and other nature conservation areas;
- Wastewater management; and
- Other areas related to protection of environment as mutually decided upon.

**India-France Joint Working Group meeting:** 1st meeting the India-France Joint Working Group on Environment (JWGe) was held during 27-28 September, in Paris, France. Presentation on respective thematic areas viz. Climate

Change, Air Quality, Biodiversity and Protected Areas were made during the 2 day meeting. Two projects were envisaged to be supported by AFD, the French Development Agency: (i) Second phase of Assam Project on Forest and Biodiversity Conservation (APFBC); and (ii) a project on Air Quality within the ambit of NCAP.

**India-Denmark Joint Working Group meeting:** The 1st India-Denmark Joint Working Group meeting was held from 29-31 October, 2018 in Denmark. The priority areas included: (i) Waste water, (ii) Air Pollution, (iii) Solid Waste Management, (iv) Circular Economy/Resource Efficiency. Both countries agreed to promote mutually beneficial partnership on environmental sustainability. The two countries agreed to promote mutually beneficial partnership on environment sustainability."

**Technical Cooperation (TC) projects under Indo-German Bilateral Development Cooperation:** The Sustainable and Environment-friendly Industrial Production (SEIP) project is being implemented by GIZ under the German Development Cooperation jointly with the .The project has a duration of March 2015 to February 2019 with a funding of 6.5 million EUR from the German side. The overall objective of the project is, "Private and public actors jointly implement strategies for an efficient, environment and climate-friendly industrial development."

To disseminate results, successful models and experiences of the SEIP project and to enable their replication by concerned agencies across the country, a two-day National Conference was conducted. Workshop showcased outcomes of project which was The conference had around 190 participants from around 20 Government and 50 non-government organisations.

In its efforts to combat air pollution, Ministry has taken one more step by joining hands with German Government and conducted high level deliberations to take stock of planning and implementation of NCAP and for information exchange on international experiences in combatting air pollution. The roundtable brought together over 70 experts from Germany, Mexico and several governmental as well as national and international organisations. Major takeaways from roundtable were- India is ready to take off the National Clean Air Programme in a big way; Germany, jointly with Mexico offered to support exchange of experiences to support implementation of NCAP; and several national and international organizations have expressed solidarity to contribute to the implementation of NCAP.

**EU and India 'Circular Economy Mission' from September 4-7, 2018:** A Joint Declaration of Intent was signed between MoEF&CC and the European Union Delegation to India for implementation of its Resource Efficiency Initiative (EU-REI) on June 2, 2018. European Union's Resource Efficiency Initiative (EU-REI) for India is a three-and-a-half year project (until July 2020), and aims to support India in the implementation of the United Nations global Sustainable Consumption and Production (SCP) agenda by way of adapting international standards and best practices in business on resource efficiency and fostering the efficient and sustainable use of natural resources. The European Union's Delegation to India under its Resource Efficiency Initiative hosted the Circular Economy Mission to India from Sept 4-7, 2018. The delegation engaged with the ministries of the Indian government and over 300 businesses, entrepreneurs and NGOs for knowledge and policy exchange and towards exploring partnerships for circular economy transition. Indian and EU stakeholders expressed interest in collaborating and partnering in various areas with over 140 business to business meetings facilitated between EU and Indian stakeholders.

**Indo-German Annual Negotiation Meeting (ANM) 2018 on Bilateral Development Cooperation with Germany** was organised by DEA in New Delhi on 28th November 2018 wherein second phase of one of ongoing project of MoEF&CC with GIZ (named as SEIP- Sustainable and Environment-friendly Industrial Production) was



approved which will commence from March 2019 and also negotiations accepted future cooperation between India-Germany on National Clean Air Programme (NCAP) to combat Air Pollution in India and MoEF&CC is conceptualizing a bilateral project with GIZ on the same.

**The Global Environment Facility (GEF) India:** India is a founder member of the Global Environment Facility (GEF). Set up in 1991, GEF is the designated multilateral funding mechanism of 183 countries to provide incremental finance for addressing global environmental benefits which are also identified national priorities. The Ministry of Environment, Forest and Climate Change is India's GEF Operational Focal Point (OFP) responsible for all in-country coordination. The Department of Economic Affairs (DEA) is India's GEF Political Focal Point. India is both a donor and recipient of GEF grant.

The GEF mandate is decided as per the guidance provided by the Conference of the Parties of the multilateral environmental conventions namely Convention on Biological Diversity (CBD), United Nations Framework Convention on Climate Change (UNFCCC), United Nations Convention to Combat Desertification (UNCCD), Stockholm Convention on PoPs and Minamata Convention on Mercury.

The 55th GEF Council Meeting took place at the World Bank Headquarters, Washington DC from 17 – 20 December, 2018. The Indian Delegation participated in the Council and other bilateral meetings

This Ministry organized the National Dialogue on Global Environment Facility (GEF), for initiating the GEF-7 programming cycle for 2018-22. The objective of the National Dialogue was to deliberate the efforts taken under the previous GEF programs and other initiatives by different bodies, to demonstrate the direct- indirect causes and effects and to further project the potential solutions to be considered under the GEF-7 Impact Programs.

### **13.2 Sustainable Development**

The United Nations General Assembly (UNGA) adopted, the Resolution titled: '**Transforming our World: The 2030 Agenda for Sustainable Development**', in September, 2015, consisting of 17 Sustainable Development Goals (SDGs) to be achieved by 2030. The SDGs contain 169 targets. The universal goals and targets are important for both the developed and the developing countries. The inclusive agenda of SDGs lay balanced emphasis on the three pillars of sustainable development viz. economic growth, social development and environmental protection. The emerging development agenda is unique in that it calls for action by all countries, poor, rich and middle-income. The 'five Ps': People, Planet, Prosperity, Peace, and Partnership-capture the broad scope of the agenda.

#### **Sustainable Development Goals**

1. No Poverty
2. Zero Hunger
3. Good Health and Well-being
4. Quality Education
5. Gender Equality
6. Clean Water and Sanitation
7. Affordable and Clean Energy
8. Decent Work and Economic Growth
9. Industry, Innovation and Infrastructure
10. Reduced Inequalities

11. Sustainable Cities and Communities
12. Responsible Consumption and Production
13. Climate Action
14. Life below Water
15. Life on Land
16. Peace and Justice Strong Institutions
17. Partnership for the Goals

As SDGs are cross-cutting in nature, NITI Aayog has been given the task of coordinating the achievement of these targets with the concerned ministries and line departments.

As per tabulation of responsibilities prepared by NITI Aayog, the Ministry of Environment, Forest and Climate Change (MoEF&CC), Government of India (GoI) is the nodal Ministry for SDGs 12, 13, 15 (fully) and for 3, 6, 8, 9, 11, 14 and 17 (partially) working with the concerned Ministries.

- Goal 12 Ensure sustainable consumption and production patterns
- Goal 13 Take urgent action to combat climate change and its impacts
- Goal 15 Protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, and halt and reverse land degradation and halt biodiversity loss

The Division is actively working with Ministry of Statistics and Programme Implementation (MoS&PI) by contributing in the development of national indicators for each of the SDG and targets. Development of indicators for achieving the targets under the SDGs is delicate and intricate process requiring a series of consultations with stakeholder Ministries, concern divisions and State Governments to assess their appropriateness and implementability.

This Ministry is of the view that the primary 'focus of India should be on means of implementation, capacity building and transfer of technology. Through a study commissioned by this Ministry, it has been estimated that roughly an additional amount of RS.35 lakh crores per annum will be required for achieving the targets under the SDGs. The developed countries should be asked to assist the developing countries in achieving these targets through financial assistance and transfer of cutting edge technology.

In order to firm up the national indicators the Ministry had conducted consultation meeting with concerned divisions. The information on meta-data and baseline data for priority indicators as listed by NITI Aayog was collected.

**Partnership for Action on Green Economy (PAGE):** With respect to SDG 12, Ministry of Environment, Forest and Climate Change had submitted the application for country support to India to Partnership for Action on Green Economy (PAGE). India's application to PAGE got approved. The inception workshop for PAGE was held on 29-30th November, 2018. The objective of the inception workshop was to engage national stakeholders, donors and UN agencies regarding priority policymaking and capacity building activities that, with the support of PAGE, can make substantial contributions to India's national targets regarding Inclusive Green Economy, Nationally Determined Contributions to the Paris Agreement, Sustainable Development Goals (SDGs) initiatives.

### **13.3 Externally Aided Projects**

Externally Aided Projects Division of the Ministry deals with Forestry related Externally Aided Projects in

coordination with the State Governments, donor agencies (JICA, French Development Agency, GIZ, KfW, World Bank etc.) other line ministries in the Government of India such as Ministry of Finance, Ministry of Home Affairs, Ministry of External Affairs, NITI Aayog, etc.

At present, there are 12 Externally Aided Projects under implementation in the country by the respective State Governments. The broad objectives of these forestry projects are increasing forest cover, biodiversity conservation, rehabilitation of degraded forest areas, Soil & Moisture Conservation measures, Capacity Building of Forest Officials and other stakeholders, creation of income & livelihood opportunities to fringe area forest village people and other measures for Sustainable Management of Forest and its resources.

**Lists of ongoing forestry based projects are given below:**

<b>S. No.</b>	<b>Name of Projects</b>	<b>States</b>	<b>Funding Agency</b>
1	Assam Project on Forest and Biodiversity Conservation	Assam	AFD
2	West Bengal Forestry and Biodiversity Conservation Project	West Bengal	JICA
3	Rajasthan Forestry and Biodiversity Project (Phase-II)	Rajasthan	JICA
4	Tamil Nadu Biodiversity Conservation and Greening Project	Tamil Nadu	JICA
5	Sikkim Biodiversity Conservation and Forest Management Project	Sikkim	JICA
6	Odisha Forestry Sector Development Project Phase-II	Odisha	JICA
7	Uttarakhand Forest Resource Management Project	Uttarakhand	JICA
8	Japanese Technical Cooperation Project for Natural Disaster Management in Forest Areas of Uttarakhand	Uttarakhand	JICA
9	Himachal Pradesh Forest Eco-Systems Climate Proofing Project	Himachal Pradesh	KfW
10	Himachal Pradesh Forest Ecosystem Services (HPFES) – Technical Cooperation Project	Himachal Pradesh	GIZ
11	Himachal Pradesh Forest Ecosystem Management & Livelihood	Himachal Pradesh	JICA
12	Nagaland Forest Management Project	Nagaland	JICA

## Chapter-14

### Administration and Civil Construction

#### 14.1 Administration

There are three sections in Administration viz. P-I, P-II and P-III. Section-wise brief description is given here under:

- **P-I Section**

- Cadre Management of scientific posts of the Ministry and 10 Regional Offices, creation of scientific posts of Ministry. Establishment/service matters of all scientific posts of the Ministry (Main) viz. appointment, promotion, work allocation, court cases, leave cases and retirement benefits (only of those posted in Ministry Main). Disciplinary proceedings of Group 'A' 'B' and 'C' officials of Ministry other than IFS officers under Central Staffing Scheme of the Ministry;
- Cadre management of Technical posts of the Ministry viz. creation, appointment, promotion, work allocation, establishment/service matters, Recruitment Rules, court cases, retirement benefits and leave cases (only of those posted in Ministry Main);
- Cadre management of canteen staff of the Ministry viz. creation, appointment, promotion, establishment/service matters Recruitment Rules, leave cases, retirement benefits, court cases, etc;
- Maintenance of ACRs/APARs of Group 'A' 'B' and 'C' officials of MoEF&CC other than IFS officers of the Ministry;
- Processing of LTC, GPF, House Building Advance, Computer Advances of all personnel of the Ministry;
- Issue of Foreign Deputation Orders in respect of Environment Wing of the Ministry;
- Processing of medical advance and reimbursement cases of scientific, technical and canteen staff;
- Processing and finalization of complaints, suspension cases and disciplinary proceedings having administrative angle;
- Framing of training policy for Scientists and 360 degree evaluation policy;
- Internship Scheme of Ministry of Environment, Forest and Climate Change; and
- Review of services under FR 56(j).

- **P- II Section**

- Cadre management of CSS/CSSS/CSCS;
- Establishment/service matters of Secretariat Group 'A', 'B' and 'C' posts (except Officers working at the strength of IFS, NRCDD and NAEB Divisions) viz. appointment, review cases, leave cases, retirement and retirement benefits, medical claims, tuition fee reimbursement, leave encashment, children education allowance, court cases etc.;
- Training cases of All India Services and Central Secretariat Services Officers;
- Personnel matters relating to Minister's staff.

- **P-III Section**

- Recruitment of Group 'A' Scientists in the Ministry, including regional and attached/subordinate offices;
- Review/assessment of Group 'A' Scientists for promotion under Flexible Complementing Scheme in the Ministry, including regional and attached/subordinate offices;
- Framing/Amendment of Recruitment Rules relating to Ministry of Environment, Forest and Climate Change, Group 'A' Scientific Posts; and
- Policy matters of Group 'A' Scientific Posts in connection with Flexible Complementing Scheme.

**Activities undertaken:**

During the year, the major activities undertaken by Administration Division are as under:-

- **Promotion:**

The details of cases considered for in situ promotion of Scientists of the Ministry including its attached/subordinate offices, under Flexible Complementing Scheme, during the year 2018-19, are hereunder:-

- 01 case of promotion from the grade of Scientist 'E' to 'F'.
- 57 cases of promotion from the grade of Scientist 'D' to 'E'.
- 11 cases of promotion from the grade of Scientist 'C' to 'D'.
- 18 cases of promotion from the grade of Scientist 'B' to 'C'.

- **Recruitment:**

The details of Direct Recruitment of Group 'A' Scientists undertaken in various grades in the Ministry, including its Regional and attached/subordinate offices, during the year 2018-19 have been tabulated hereunder:-

Grade	Ministry (Main)	ZSI	NMNH	NRCD	Total
Scientist 'B'	01	03	-	01	05
Scientist 'C'	04	-	-	-	04
Scientist 'D'	01	-	-	01	02
Scientist 'E'	-	-	-	01	01
Scientist 'F'	04	-	-	-	04
<b>Total</b>	<b>10</b>	<b>03</b>	<b>Nil</b>	<b>02</b>	<b>16</b>

- Services of 150 officers (32 Group 'A', 38 Group 'B' Gazetted, 30 Group 'B' Non- Gazetted and 50 Group 'C') has been reviewed under FR 56(j) till date;
- Introduction of online recording of APARs in respect of Scientists in the Ministry (including Regional Offices in the SPARROW platform for the year 2016-2017 onwards;
- Sanction Orders of 70 delegations of foreign tours of Minister and officers were issued upto 11/01/2019;

Formulation of "Internship Scheme" of Ministry and implementation of "Summer Internship schedule" - 2018-19 wherein 35 students in 22 disciplines joined the Ministry. For "Winter Internship schedule"- 2018-19, a total of 43 interns have been shortlisted in 22 disciplines;

## **14.2 Indian Forest Service (IFS) Cadre Management**

Ministry of Environment Forest & Climate Change is the Cadre Controlling Authority for the Indian Forest Service (one of the three All India Service). The total authorized cadre strength of the Indian Forest Service as on 1st January, 2018 is '3191' (three thousand one hundred ninety one) which includes '2224' Direct Recruits and '967' Promotion posts. The Total Senior Duty Posts (SDP) in the Indian Forest Service are 1960 and remaining under various reserves. Besides serving the 31 Forest Departments in the States and Union Territories managing the country's natural resources, a large number of the IFS officers are in various Ministries and institutions both in the State and at the Cadre.

### **Achievements**

- Vacancy determination and Cadre Allocation for Indian Forest Service (IFS) Examination, 2017 is under process. However, vacancies for induction of State Forest Service officers into Indian Forest Service have been determined in respect of 13 cadres during the year 2018.
- Cadre review completed in respect of Andhra Pradesh during January to December, 2018. Cadre Review of Karnataka, Himachal Pradesh and Chhattisgarh are under process for approval of Department of Personnel & Training.
- Smart Performance Appraisal Report Recording Online Window (SPARROW) implementation for online filing of PAR in respect of around '1900' IFS Officers has been processed.
- Up-to- date Civil List of IFS officers as on 01.01.2018 is available on the website of this Ministry at <http://www.ifs.nic.in>. The website also has updated information pertaining to the vacancy/deputation (under CSS-MoEF) circulars, training programme circulars, Rules and Regulations concerning IFS. Further, website also has Performance Appraisal Report (PAR), availability status of IFS officers which can be accessed by concerned officer. Each and every members of the Service has been provided facility to have his unique Email account through NIC on this site and members of Service have been provided facility to update data relating to their posting details online for periodical up gradation.
- The re-structuring of the Content Management Based IFS Website (<http://www.ifs.nic.in>) has been completed and will be launched shortly.
- Fifty-four State Forest Service officers were included into the Indian Forest Service under IFS (Appointment by Promotion) Regulations, during January– December, 2019.
- 24 (Twenty-four) IFS officers joined at various levels under the Central Staffing Scheme of the Ministry and 21 (Twenty-one) IFS officers joined under the Central Staffing Scheme of the Department of Personnel & Training. 64(Sixty-four) IFS officers have been empaneled at the level of Joint Secretary and equivalent at the centre.
- Around '12' Court Cases pending in various Courts across the Country were liquidated.

## **14.3 Vigilance Division**

- The Vigilance Division interact with Central Bureau of Investigation (CBI) in various matters and facilitate CBI for obtaining the information/documents from various Divisions of the Ministry.
- Vigilance complaints regarding misconduct of Officers and officials (including all IFS officers) under MoEF&CC received from the General Public/Organisations/Central Vigilance Commission (CVC)/PMO's office etc. During the calendar year 2018, 174 complaints were received and examined

and 209 complaints were closed/filed including old ones.

- Conducting and appointing of Inquiry Officer (I.O.) and Presenting Officer (P.O.) for Preliminary Information and Inquiry. During calendar year 2018, 2 (Two) Inquiry Officers were appointed.
- Identification of Sensitive Posts and to ensure periodical rotation of staff holding such sensitive posts. Matter is under process.
- Disciplinary proceedings (involving vigilance angle) against all retired Officers and officials under the MoEF&CC including all IFS officers.
- Disciplinary proceedings (involving vigilance angle) against all IFS officers of AGMUT Cadre and other Officers and officials under the MoEF&CC. 2 (Two) disciplinary proceeding cases were disposed of during the period.
- Examination of cases of imposition of major penalties of dismissal/compulsory removal etc. (involving vigilance angle) on IFS officers referred to by State Governments.
- Appeals (including appeals against suspension) Review preferred by officers/officials under the MoEF&CC including all IFS officers. 2 (Two) Appeals have been disposed of during the period.
- All Court cases having vigilance angle.
- Sanction of Prosecution including those under the Prevention of Corruption Act (PC Act), 1988 against IFS Officers and Officers/officials serving/retired from service under the MoEF&CC. I (One) case of sanction for prosecution was disposed of during the period.
- According clearance from vigilance angle in respect of officers and officials of the Ministry. 1276 vigilance clearance were accorded during the calendar year.
- Receipt and Scrutiny of Annual Immovable Property Returns (AIPRs) of All Officers and officials (including IFS officers) of MoEF&CC.
- Permission/Intimation of Movable/Immovable property under Conduct Rules, 1964 and All India Service (Conduct) Rules, 1968.
- Prevention Measures to check corruption.
- Organizing Vigilance Awareness Week as per CVC directions.
- Introduction of Single Window System in the MoEF&CC for receiving proposals of disciplinary proceedings/appeal/revision/review and sanction for prosecution cases of IFS officers/Scientists, etc. w.e.f. 15.08.2018.

#### 14.4 Parliament Section

The Parliament Division in the Ministry is responsible for co-ordination of all parliament matters related to the Ministry of Environment, Forest and Climate Change (MoEF&CC). During the year 2018-19 (upto winter session), a total number of 1068 Parliament Questions pertaining to various aspects of environment were answered by the Ministry (678 questions in the Lok Sabha, out of which 44 were starred and 634 were un-starred. A total of 390 questions were asked in the Rajya Sabha, out of which 38 were starred and 352 were un-starred). The questions covered a wide range of issues with which the Ministry is concerned, prominent among them being questions related to Pollution, Wildlife Management, Forest Conservation, Environmental Conservation, Climate Change, Waste Management, Environment Impact Assessment, Environmental Education, Freshwater and Marine Conservation, Water Management, Biosafety, Medicinal Plants and Disaster Management etc.

During the year 2018-19, Parliament Section coordinated nine meetings of Department related Parliamentary Standing Committee of Science and Technology, Environment, Forest and Climate Change and three meetings of Consultative Committee of the Ministry.

### 14.5 Information Technology (IT) and e-Governance

Government working is based on intensive knowledge and information sharing. Effective communication and sound Information and Communication Technology (ICT) go hand in hand. For speedy implementation and monitoring of various programmes / schemes and to make most of ICT to secure efficiency in working, Ministry has embarked up on a comprehensive exercise to implement various e-Governance activities / projects.

#### Progress/Achievements

- Continued the implementation of e-Office in the Ministry under Digital India Programme (collected details of officers and staff, Registered 1124 Users in eOffice portal, Posting and Promotion, Role Post, Setting of Workflow, Updation of Leave Balance details, Provided Training, updation in Notice Board).
- Created email IDs in @gov.in domain for all the users of eOffice.
- Management of Wi-Fi System at Indira Paryavaran Bhawan including addition/deletion of users, configuration in mobile phones, installation of certificates in iPhones.
- Management of Biometric Attendance System including sending reports to all divisional heads.
- Photographic digitization of 4200 images (including Dorsal, Ventral, Lateral) of Faunal Type Specimens at Zoological Survey of India, Kolkata has been completed.
- Monitored the regular updation of material in Social Media sites (<http://twitter.com/moefcc> & <http://facebook.com/moefcc>).
- Developed and implemented Online Application inhouse for inviting applications and selection / rejection of applicants under Internship Scheme for students (<http://164.100.160.232/internship/>). This Scheme seeks to engage students with Graduation/ Post Graduation Degrees and Research Scholars enrolled in recognized University/Institution within India or abroad, as "Interns". These "Interns" shall be given exposure to various Divisions/Units of the Ministry. These "Interns", in turn, would be expected to supplement the process of analyzing within Ministry through empirical collection and collation of details in-house. For the "Interns" the exposure to the functioning of the Ministry may be an add-on in furthering their future interests.
- Management of Budget Expenditure Management System for IFD, PAO, B&A, PC and other Divisions.
- Management of Online Stationary Request Management System for submitting the request for stationary.
- Management of Smart Performance Appraisal Report Recording Online Window (SPARROW) for online submission of APAR of IAS, IES, ISS, IPS, CSS & CSSS Officers.
- Management of Smart Performance Appraisal Report Recording Online Window for submission of APAR of Scientists in the Ministry.
- Arrangement of Video Conferencing System for PRAGATI and other meetings.
- IT infrastructure of the Ministry was strengthened.
- Examination of all policy issues pertaining to Information Technology.
- Online Consent Management & Monitoring System: Online Consent Management & Monitoring System (OCMMS) developed for State Pollution Control Boards (SPCBs) / Pollution Control Committees (PCCs) to automate the existing workflow which allows the industries for the online submission of application for Consent to Establish (CTE) / Consent to Operate (CTO), authorization for various categories of Industries / Institutions / Hotels / Hospitals. This system helps the officials of SPCB for online processing of industries application for CTE/CTO, Authorization as well as monitoring of various activities of SPCBs/PCCs. Online Consent Management & Monitoring System (OCMMS) has been



implemented in 22 States/UTs. Development of OCMMS is under process in Assam and Uttarakhand. The OCMMS is integrated with DIPP / State Government Single Window System for seven (10) States.

- Parivesh: Single-Window Integrated Environmental Management System named PARIVESH (Pro-Active and Responsive facilitation by Interactive, Virtuous and Environmental Single window Hub) has been launched by Ministry in August 2018. This system has been designed, developed and hosted on cloud environment by NIC, New Delhi. This web-based application is unique amongst all such portals of regulatory agencies. This initiative will bring the Ministry closer to the industry and citizens alike. After the introduction of e-communication in the first phase, this is the second phase of reforms towards e-Governance in its real spirit. The launch of 'PARIVESH' is a great propeller and revolutionary step for Ease of Doing Business with responsibilities by bringing in utmost transparency and accountability.

#### **14.6 Right to Information (RTI) Cell**

As per RTI-MIS Portal, the MoEF&CC has received total 4041 RTI applications and total 318 appeals under RTI Act, 2005 during the year 2018-19 (1.4.2018 to 31.12.2018).

Central Public Information Officers (CPIOs) and Appellate Authority (AAs) have been designated for effective implementation of RTI Act, 2005. The notification designating CPIOs/AAs is revised periodically as and when there is change in allocation of work among CPIOs/AAs. All the subordinate offices/Institutions/Autonomous bodies have been requested to periodically revise the Notification for CPIOs/AAs.

Directions from the Central Information Commission (CIC) and DOPT, relevant to this Ministry are being circulated to the CPIOs/AAS for better understanding and implementation of RTI Act. Periodical report being sent regularly to DoPT and Central Information Commission.

#### **14.7 General Administration (GA) Section**

The General administration (GA) Division of the Ministry is entrusted with the responsibility of providing logistics and support services to senior officers and staff for discharging their duties and smooth functioning of the Office. It includes procurement and supply of stationery, maintaining stores, disposal of obsolete materials, equipments, support services to the officials of the Ministry including provision of transport, communication and general upkeep etc. The Ministry is housed in a new building at Jor Bagh Road, New Delhi which is a green building, with net zero energy consumption. It has the unique distinction of getting LEED India Platinum & GRIHA-5 Star Green Building ratings.

#### **14.8 Public Grievance Cell**

A Public Grievance Cell has been functioning in the Ministry to attend to the complaints of public regarding forestry and environmental matters etc. Presently Smt. Geeta Menon, Joint Secretary (PG) is the Nodal Public Grievance Officer of the Ministry.

As on 31st December, 2018, out of total 29599 public grievances, 29172 grievances had been disposed of online and 431 grievances are pending for disposal. The rate of disposal is 99%. Efforts are however, being continued by the Public Grievance Cell to raise the disposal rate up to 100% by issuing periodical reminders to the Division / Sections concerned for settlement / disposal of pending grievance.

### 14.9 Implementation of Official Language Policy

Sustained efforts were made to ensure proper compliance of the Official Language Policy of the Union as enshrined in the Constitution of India, the Official Languages Act, 1963 (As amended, 1967), the Official Language Rules, 1976 (as amended 1987, 2007 & 2011), the Annual Programme and orders issued by the Govt. of India from time to time. All documents coming under the purview of Sec 3(3) of the O.L. Act, such as General Orders, notifications, Press Communiques/Releases, Resolutions, Rules Official Papers laid before a House or both the Houses of Parliament etc. were translated, typewritten, vetted and thereafter got issued bilingually in Hindi and English. The letters received in Hindi and representations/appeals signed in Hindi were replied to in Hindi ensuring 100% compliance of Rule 5 and Rule 7 (2) of the O.L. Rules.

#### Activities undertaken:

- Meeting of Official Language Implementation Committee -Four quarterly meetings of Official Language Implementation Committee were organized under the chairmanship of Scientist 'G' (O.L. Incharge) wherein position of implementation of Official Language Policy in the Divisions/Sections of the Ministry were reviewed.
- Hindi Workshops-Hindi workshops were organised for the officers and staff to enable them to carry out their day to day work in Hindi. Officials were trained to type in Hindi with the help of Unicode so that they may do their work originally in Hindi.
- Inspections-The Committee of Parliament on Official Language inspected the attached/subordinate offices viz. ICFRE, Dehradun, IIRTI, Bengaluru and CZA, New Delhi.
- In addition to above, with a view to review the position of implementation of Official Language Policy of the Union, inspections of attached/subordinate offices under the administrative control of the Ministry of Environment, Forest & Climate Change were also carried out by officer(s) of Official Language Division of the Ministry.
- Revival of Medini Award Scheme -To promote writing of books originally in hindi ' Medini Award Scheme' has been reintroduced from 01st April, 2018.
- Publication of Paryavaran Magazine -69th issue of the Ministry's Hindi magazine 'Paryavaran', a special number dedicated to birds, is ready for publication.
- Hindi Pakhwara-Hindi fortnight was organized in the Ministry from 01.09.2018 to 15.09.2018. During this period various Hindi competitions aimed to increase progressive use of Official Language Hindi were organised. Employees of the Ministry, NAEB, NRCD and CCU participated in these competitions.

### 14.10 Civil Construction Unit (CCU)

Civil Construction Unit (CCU), headed by Chief Engineer (Civil), was set up in the Ministry of Environment & Forests in March, 1987 for taking up important works of the Ministry on priority basis.

The works being taken up by CCU consist of construction of office -cum laboratory building, herbariums, national regional museums of natural history, staff quarters and other building works relating to various units of the Ministry of Environment, Forests and Climate change viz. Botanical Survey of India, Zoological Survey of India, National Museum of Natural History, State Forest Service Colleges, Indira Gandhi National Forest Academy, Forest Survey of India, National Zoological Park, New Delhi and Regional Offices of Ministry located in different part of the

country. The CCU also undertakes works of renovation /up-gradation of existing Residential as well as Non residential buildings as per requirement.

In order to avoid use of wood in the buildings constructed by CCU as number of alternatives have been adopted. For doors, windows and cupboards mostly steel sections, bamboo jute composite, UPVC, pressed steel frames, aluminum sections are being used depending on importance of the buildings.

Similarly, solar energy is being used in various areas like street lighting, power generation etc. Solar water heating system for heating water in the hostel buildings also being used. To affect savings in energy, LED bulbs/tubes are being used in place of conventional fluorescent lights/CFL in offices, houses and guest house. Important buildings are also being designed on solar passive architecture. The Economy Measure- a Mandate of Govt. of India is being Monitored by this unit to provide LED light and efficient electrical fittings in all buildings of Ministry and also being executed by this unit. This unit is coordinating with all institute under this ministry to replaced existing lighting with LED lights through EESL and CPWD, as per Govt. of India directives.

The following buildings costing more than 100 lacs have been completed during this period.

- Construction of International Hostel for wild life institute of India, Dehradun
- Construction of VVIP Guest House of GBPIHED at KosiKatarmal, Almora
- Construction of Guest House for Visiting Scientists of WII at Dehradun
- Construction of Faunal Repository of ZSI at Solan.

Important Works in progress under Civil Construction Unit:-

- Construction of Zonal office for CPCB at Bhopal.  
(Sanction amount - Rs. 6.59 Cr.)
- Construction of Girls Hostel for FRI (Deemed) University at FRI, Dehradun  
(Sanction amount - Rs. 1.68 Cr.)
- Extension of Executive Hostel for IGNFA, Dehradun.  
(Sanction amount - Rs. 11 Cr.)
- Construction of seminar hall and Trainees Hostel for G.B.P. Institute of Himalayan Environment & Development at Kullu, H.P.
- Construction of Regional Museum of Natural History at Gangtok.  
(Sanction amount - Rs. 57.59 Cr.)
- Construction of Type-III (10 nos.), Type-V (Duplex) (4 nos.) and Type-VI (Duplex) (1 nos.) residential quarters for Central Academy for State Forest Service (CASFOS) at Burnihat (Assam).  
(Sanction amount - Rs. 11.43 Cr.)
- Construction of Faunal repository of ZSI at Port Blair.  
(Sanction amount - Rs. 1.75 Cr.)

## Chapter-15

### Development Monitoring & Evaluation, Budget and Accounts

#### 15.1 Development Monitoring & Evaluation

The work of DMED is linked with the Development, Monitoring, Evaluation Office (DMEO) in NITI Aayog. DMED would also function towards convergence of efforts through Government Funded Programmes to achieve Sustainable Development Goals (SDG) and Nationally Determined Contributions (NDCs). The work of DMED is detailed as under:

- To carry out monitoring and impact Evaluation of the Ministry's funded programmes.
- To focus on outcomes and take it into account during appraisal for continuation of the ongoing schemes.
- To constitute Evaluation Monitoring Committee (EMC).
- To prepare TOR for Evaluation Monitoring Committee (EMC).
- To get TOR vetted by Inter Ministerial Group (IMG).
- Coordination with NITI Aayog.
- Nodal Division for coordination with NITI Aayog in the matter of monitoring and evaluation of programmes of the Ministry.
- Any other matter as assigned by the competent authority in the Ministry.

DMED is preparing the road map and strategy to create a mechanism for monitoring and evaluating the Government funded schemes of the Ministry. The Division is also examining the evaluation method opted in the Ministry's schemes as per their SFC/EFC memos, finalized for continuation of the Schemes beyond the 12th Five Year Plan Period, i.e. from 2017-18 to 2019-20 so as to align it with the ongoing Fourteenth Finance Commission cycle (2015-16 to 2019-20).

#### Activities undertaken:

Third Party Evaluation of Schemes of the Ministry is due for 2019-20.

- The Schemes have been categorized under 5 broad heads.
  - Environment protection and Climate Change
  - Wildlife related Schemes
  - Afforestation and Carbon Sink related projects
  - Aquatic protection and conservation related schemes.
  - Environment awareness and information schemes
- It is decided that the total number of schemes which may undergo evaluation will be 22.
  - 08-Central Sponsored Schemes (CSS)
  - 14- Centre Sector (CS)
- An Evaluation and Monitoring Committee (EMC) has been constituted on 21.12.2018 with Principal Advisor, MoEF&CC as chairperson and AS & FA and other officials as Members including officers handling the

schemes to monitoring the 3rd Party Evaluation exercise.

## **15.2 Budget and Accounts**

Budget Division is entrusted with the planning and coordination of all Schemes and Non-schemes of the Ministry of Environment, Forest and Climate Change. It functions as the nodal Division for issues and matters related to Ministry of Finance (Department of Economic Affairs' Budget Division and the Department of Expenditure). The work handled in the Division cover preparation, monitoring and review of the Ministry's Annual Plans and the tasks associated with the Union Budget and the Outcome Budget of the Ministry. The responsibility of monitoring of the progress in utilization of allocated funds released for implementation of various Schemes is also assigned to the Division. The work of the Budget Division is detailed as under:

- Preparation of Statement of Budget Estimates (SBE), Revised Estimates (RE), Supplementary and Reappropriation proposals
- Preparation of Detailed Demands for Grants (DDG)
- Preparation of Saving Note
- Coordination with Department-related Parliamentary Standing Committee
- Compliance of Cash Management (MEP/QEP)
- Monitoring of Expenditure
- Preparation of Outcome-Output Framework for Schemes
- Monitoring and reporting to nodal Ministries/NITI Aayog on Scheduled Caste Sub Plan (SCSP), Tribal Sub Plan (TSP), North Eastern Region (NER), Gender and Child Budgeting
- Allocation of funds under Advances to Government Servants

**Annual Plan 2018-19**

The Ministry has been allocated an outlay of Rs 2675.42 crore in the Budget Estimates (BE) for the Financial Year 2018-19 and retained at the same level at Revised Estimates (RE) stage.

The financial outlays and expenditure during 2018-19 (up to 31st December, 2018) is given in the following Table:

**Umbrella Scheme-wise Allocation (2018-19)****(Rs in Crore)**

Sl. No	Name of the Scheme	BE 2018-19	RE 2018-19	Actual Expenditure
1	Environmental Knowledge and Capacity Building (CS)	82.50	141.45	80.92
2	Environment Protection, Management and Sustainable Development (CS)	235.00	238.00	124.75
3	National Coastal Management Programme (CS)	165.00	130.10	89.84
4	Decision Support System for Environmental Awareness, Policy, Planning and Outcome Evaluation (CS)	120.70	125.65	93.49
5	National Mission for a Green India (CSS)	210.00	210.00	160.09
6	Integrated Development of Wildlife Habitats(CSS)	555.00	555.00	409.42
7	Conservation of Natural Resources and Ecosystems (CSS)	80.50	80.50	56.17
8	National River Conservation Programme (CSS)	173.50	150.50	120.37
	<b>Total</b>	<b>1622.20</b>	<b>1631.20</b>	<b>1135.05</b>

**Umbrella Non Scheme-wise Allocation (2018-19)****(Rs in Crore)**

Sl. No	Name of the Scheme	BE 2018-19	RE 2018-19	Actual Expenditure
1	Secretariat	131.17	136.99	101.22
2	Attached/ Subordinate offices	467.25	427.31	290.48
3	Assistance to Autonomous Bodies	301.50	313.50	230.58
4	Statutory & Regulatory Bodies	153.30	166.42	111.68
	<b>Total</b>	<b>1053.22</b>	<b>1044.22</b>	<b>733.96</b>
	<b>Umbrella Scheme-wise Total</b>	<b>1622.20</b>	<b>1631.20</b>	<b>1135.05</b>
	<b>Grand Total (Scheme + Non Scheme)</b>	<b>2675.42</b>	<b>2675.42</b>	<b>1869.01</b>

**Important Activities during 2018-19**

- Focus on Medium Term Expenditure Framework (MTEF) to give greater resource predictability to Ministry outlay.
- Focus on Scheme based Output-Outcome Monitoring Framework (OOMF).
- A new Scheme, Control of Pollution is proposed to be introduced in the financial year 2018-19.
- Green Skill Development Programme (GSDP) presently under ENVIS Scheme is proposed to be introduced as a separate scheme in the financial year 2019-20.

**Ministry of Environment, Forest & Climate Change**  
**List of pending C&AG Paras (up to 31st December, 2018)**

<i>SL. No.</i>	<i>Report No. &amp; Year</i>	<i>Para No.</i>	<i>Brief Subject</i>
1	21 of 2012- 13	Entire Report	<i>Report on Compensatory Afforestation in India</i>
2	27 of 2014	6.3	<i>Wasteful expenditure on hiring of office accommodation</i>
3	30 of 2015	7.1	<i>Implementation of E-waste (Management and Handling) Rules, 2011 by Central Pollution Control Board – regarding</i>
4	30 of 2015	7.2	<i>Inordinate delay in completion for pilot projects for sewage treatment- regarding</i>
5	39 of 2016	Entire Report	<i>Environment and Sustainable Development</i>

**List of C&AG Paras settled during 2018-19**

<i>SL. No.</i>	<i>Report No. &amp; Year</i>	<i>Para No.</i>	<i>Brief Subject</i>
1	3B of 2001 CA 1 of 2001	1	<i>Implementation of Environment Acts relating to water pollution</i>
2	27 of 2014	6.4	<i>Non-establishment of model facilities for management of Municipal Solid Wastes</i>

**Principal Accounts Office:** Under the Departmentalized Accounting System, the Secretary is the Chief Accounting Authority in the Ministry and performs duties with the assists of Financial Advisor (FA) and Chief Controller of Accounts (CCA). The role of CCA is to advise and assist the Ministry on matters relating to Budget, Expenditure Management, Accounting, Establishment Matters and Personal claims of the employees. The Accounting Organization in the Ministry under Chief Controller of Accounts includes the Principal Accounts Office, Pay and Accounts Offices (PAOs) and Drawing and Disbursing Offices (DDOs).

The Principal Accounts Office is entrusted with the responsibility of collecting receipts, making payments and maintaining accounts for the Ministry, conduct Internal Audit and Scheme Audit, ensure Cash Management System through Monthly/Quarterly Expenditure Plan (MEP/QEP) and monitoring of Assets and Liabilities. The Internal Audit Wing (IAW) under CCA conducts Internal Audit of PAOs, DDOs, Autonomous Bodies and performance audit of Schemes of the Ministry and reports to the Chief Accounting Authority.

The new initiatives includes implementation of Public Financial Management System (PFMS) in the PAOs and roll out of PFMS for enabling electronic transfer of funds in the Cheque Drawing DDOs; online collection of Non-Taxes of the Ministry through Non-Tax Receipts Portal (NTRP) to eliminate delay and digitize all receipts; introduction of an online Pension Sanction and Payment Tracking System called BHAVISHYA to facilitate the retiring employee to fill the forms online and the Administrative Authority to process the online claim and communicate to Pay and Accounts Offices for issuance of Pension Payment Order (PPO). Employee Information System (EIS) has been successfully implemented in all NCDDOs/CDDOs under the Ministry. Further, the roll out of Expenditure, Advance & Transfer (EAT) module for implementing agencies receiving Grants-in-aid under Central Sector Schemes/Centrally Sponsored Schemes from the Ministry has been implemented.