

MINISTRY OF ENVIRONMENT, FOREST & CLIMATE CHANGE

1. Swachh Bharat

Environment Protection

- Introduced the Compensatory Afforestation Fund Bill, 2015 in Parliament to ensure expeditious and transparent utilization of compensatory levies realised in lieu of forest land diverted for non-forest purpose, which presently is of the order of about Rs. 42,000 crore.
- Two schemes, namely Nagar Vana-Udyan Yojana and School Nursery Yojana have been launched. Nagar Vana-Udyan Yojana aims to create at least one city forest in each city with a minimum area of 25 ha. The School Nursery Yojana aims to build a lasting bond of student with nature.
- The Green India Mission (GIM) Implementation Guidelines were finalized and convergence Guidelines of Green India Mission with Mahatma Gandhi National Rural Employment Guarantee Scheme (MGNREGS) and Compensatory Afforestation Fund Management and Planning Authority (CAMPA) were issued.
- Perspective and Annual Plan of Operations under GIM approved for States of Uttarakhand, Punjab, Karnataka, Chhattisgarh, Odisha, Karnataka, Mizoram, Manipur, Jharkhand and Kerala and financial outlay allocated during the current financial has been sanctioned.
- 275 Eco-sensitive Zones (ESZs) around 404 Protected Areas in the country have been approved / notified.
- Management Action Plans (MAPs) for taking up conservation works in 40 identified wetlands in the states of Uttar Pradesh, Haryana, Mizoram, Manipur and Tamil Nadu, sanctioned at a cost of Rs. 13.43 crore.
- India submitted Intended Nationally Determined Contribution (INDC) on 2nd October, 2015. It provides for sustainable lifestyle, clean development, increasing share of non-fossil fuel based electricity, enhancing carbon sink, adaptation, capacity building, etc. The INDC aims to reduce the emission intensity of GDP by 33 to 35% by 2030 from 2005 level.
- A scheme titled Climate Change Action Programme, with a budget allocation of Rs. 290 crore for the 12th Plan period is being implemented. A National Adaptation Fund for Climate Change has been established to assist National and State level activities to meet the cost of adaptation measures. Sixteen (16) States have already prepared and submitted adaption projects at a proposed cost of Rs. 331 crore.
- River basin cumulative impact analysis and carrying capacity studies have been completed in respect of Bichom, Siang, Tawang and Subansiri River basins in North Eastern India to aid the environmental appraisal process for development of hydro power projects.
- During the Swachhta Pakhwada for the fortnight 1-15th August, 2016 by Ministry of Environment, Forest & Climate Change, about 1, 38, 630 youth volunteers sensitized citizens and slum dwellers about safe sanitary practices. More than 5.5 lakh youth took Pledge, 1,36,190 cleanliness drives conducted and more than 11 lakh participants were involved in tree plantation, water conservation, rally programme, awareness on low carbon lifestyle, solid waste management etc.

Pollution Control

- Twenty (20) draft notifications of various industrial categories standards were reviewed and new environment standards are being evolved so as to minimize the industrial pollution in the country.
- During the year 2015-16, standards for 6 categories i.e. thermal power plants, Common Effluent Treatment Plants, sugar industry, diesel and LPG/CNG Gensets, petrol and LPG/CNG Gensets, dedicated LPG/CNG Gensets have been notified.
- Standards in respect of cement plants with co-processing have been approved for notification. Draft Standards in respect of textile, paint, pulp and paper, fertilizer, slaughter house and manmade fibre have been published and are now under consideration of the Expert Committee constituted for the purpose.
- Draft Notification, inviting public comments, has been published for standards of brick kiln, bathing water quality, Sewage Treatment Plants (STP) and automobile industries.
- Standards in respect of four (4) industries - automobile service stations and bus depots, fermentation industry, coffee industry, iron and steel industry have been placed on the website of MoEF&CC for seeking stakeholder and public comments.
- Emission norms for cement industry have been made more stringent to ensure lesser pollution and cleaner air.
- Industries falling in distillery, tannery, textile, sugar and pulp and paper sector, located in Ganga basin, have been directed to achieve Zero Liquid Discharge, or to reduce water consumption.
- Regulation of lead contents in paints was taken up and draft notification viz. "Regulation on Lead contents in Household and Decorative Paints Rules, 2016" has been approved for issuing notification for public comments.
- To make the CEPI formula rational and objective, CPCB revisited the criteria for calculation of CEPI and has formulated revised criteria for CEPI calculation. The revised CEPI criteria have been approved for implementation.
- Revised categorization criteria of Red/Orange/Green/White industries have been formulated based on the pollution potential assessment of these industries. Least polluting/ non-polluting industries have been categorised as White. In respect of White categories, no approval of CPCB/ SPCB is required.
- The Government has decided to integrate the environmental conditions with the building permission (except for hospitals) being granted by the local authorities. The States adopting the objective and monitorable environmental conditions in their building bye-laws and incorporating these conditions in the approvals given for building construction and makes it legally enforceable shall not require a separate environmental clearance for individual buildings.
- Comprehensively reviewed and notified following waste management rules:
 - The Solid Waste Management Rules, 2016
 - The Plastic Waste Management Rules, 2016
 - The Biomedical Waste Management Rules, 2016
 - The E- Waste Management Rules, 2016
 - The Hazardous Waste (Management, Handling and Tran boundary Movement) Rules, 2016
 - A new Construction and Demolition Waste Management Rules, 2016 formulated
 - The Fly Ash Utilisation Amendment Notification, 2016.

- Air Quality Index launched in 16 cities (31 stations). The index will transform the way common man understands the quality of air and how rising air pollution can cause health hazards. The basic purpose of this index is that the people can understand about the level of pollution in the air on a daily basis in real-time and environment protection and development can go hand in hand.
- Operation and maintenance of 16 continuous ambient air quality monitoring stations (CAAQMS) of CPCB.
- In order to implement action plans and for prevention, control or abatement of air pollution and improvement of Ambient Air Quality in Delhi and National Capital Region (NCR), CPCB has issued directions under section 18(1)(b) of Air (Prevention and Control of Pollution) Act, 1981 to neighbouring states and Union Territory of Delhi. This includes vehicular emission, burning of biomass, crop residues, municipal solid waste and garbage, road dust, construction and demolitions, industrial emission, etc.
- Effective measures have been taken to eliminate stubble burning and Punjab has achieved a reduction in burning of crop residue upto 38.9 % approx and Haryana government by 17% as compared to last year.
- In view of the alarming rise in the vehicular population and rising level of air pollution it has been decided, in consultation with all stakeholders, for leapfrogging to BS-VI emission norms by 01.04.2020.
- Installation of real-time (24x7) online monitoring of 17 categories of Highly Polluting Industries. Out of 3380 Industrial Units; 1529 industries have installed 24x7 devices; 780 industries are in the process of installation; 760 are under various stages of examination; and 311 units have been closed. The purpose of the direction is to create self-regulation and monitoring by the industries themselves for complying with the stipulated standards.
- Real-time monitoring of Water Quality of River Ganga initiated at eight centres on the main course.
- National River Conservation Plan (excluding National Ganga River Basin Authority) is under implementation in 199 towns covering polluted stretches of 42 rivers spread over 21 States at a sanctioned cost of Rs. 11212 crore. Sixty three (63) lakes in 4 States at a cost of Rs. 1096.09 crore have been taken up for conservation. Similarly, 80 Wetlands have been identified for conservation and Rs. 158.21 crore has been released to the States.
- “Sabarmati River Conservation Phase-II at Ahmedabad” project sanctioned at cost of Rs. 444.44 crore. Project includes setting up of new STPs of 210.5 MLD capacity and allied sewerage works.
- Under the National Plan for Conservation of Aquatic Eco-systems (NPCA) the project of “Pollution prevention and conservation of Laxmi Tal” in Jhansi, U.P. sanctioned at a cost of Rs. 54.13 crore. Project includes setting up of 26 MLD STP capacity and other conservation works.
- CPCB has finalized standards for Sewage Treatment Plants (STPs) which stipulate that treated effluent from STP shall be utilized for non-potable use and if such effluents are to be disposed off into surface water body of ground in such case, STPS will have to meet stricter standards.
- GPS installation completed for 29, 800 industries under Management Structure of Hazardous Substance Scheme.

- Two more CETPs commissioned in Pulsana and New Pulsana in Gujarat to mitigate water pollution.
- Additional capacity of 500 mld created for sewage treatment.
- Operation of 2500 Water Quality Monitoring Stations (WQMS) at various aquatic resources. Time series data of water quality was analyzed and identified the issue of sewage disposal in 302 river polluted stretches.
- 70 National Ambient Noise Monitoring Network (NANMN) stations have been installed spreading over 10 cities and data is being disseminated.

Conservation of Water Bodies

National River Conservation Plan:

- Pollution abatement of River Satluj & Beas: In 11 towns of Punjab for pollution abatement of rivers Satluj and Beas are under implementation with envisaged STP capacity of 187 mld. At present, physical progress under these projects is around 88% & STP capacity of 187 mld has already been created.
- Pollution Abatement of River Ghaggar: 4 projects for the towns of Lehragaga, Khanauri, Moonak and Patran in Punjab, under which STPs having total treatment capacity of 15 mld will be created. The projects are under implementation & at present the physical progress is around 68%.
- Sabarmati River Conservation Project Phase-II at Ahmedabad: Sabarmati River Conservation Project Phase-II at Ahmedabad, Gujarat. The project is under implementation & and physical progress of about 16 % has been achieved so far.
- Pollution Abatement of River Mindhola at Surat, Gujarat : Under the project, physical progress is around 83% & STP capacity of 53 mld has already been created.
- The project of "Pollution abatement of River Mula- Mutha at Pune under NRCP", has been sanctioned in January, 2016. Loan assistance of 19.064 billion yen is being provided by Japan International Cooperation Agency (JICA) for the project. The project cost will be shared between Government of India and State Government/Pune Municipal Corporation (PMC), the implementing agency for the project, in 85:15 ratio respectively. The project is scheduled for completion by January, 2022. Acquisition of balance land requirement for STP is in the final stages of completion.
- Under NRCP, 7 projects were sanctioned for conservation and pollution abatement of river Rani Chu in Sikkim in 3 towns of Gangtok, Ranipool and Singtam. The works sanctioned under the projects pertain to interception & diversion of sewage, sewage treatment plants, rehabilitation of sewer mains, low-cost sanitation, river front development and improved wood crematoria. Works on 4 projects have been completed and 8 mld STP capacity has been created so far.

- For pollution abatement of rivers Diphu and Dhansiri at Dimapur, Nagaland, works have been sanctioned under NRCP. The works envisaged under the project pertain to construction of sewage treatment plants (25.43 mld), allied sewerage works, low-cost sanitation, afforestation, etc.

Measures for improved implementation: Several measures have been taken to improve implementation of projects under National River Conservation Plan (NRCP), which include; (i) Signing of Tripartite Memorandum of Agreements (MoAs) with the State Governments/Urban Local Bodies, (ii) Independent appraisal of Detailed Project Reports by reputed professional/ academic institutions, (iii) Third Party Inspection for projects.

2. Ease of doing business

Policy

- To promote ease of doing business including start-ups, the necessity of obtaining consent to operate for White category industries has been dispensed with.
- Forest clearance procedures realigned to augment power transmission by exempting transmission projects of all capacities from providing non-forest land for compensatory afforestation.
- Forest clearance procedure amended to dispense with requirement of compensatory afforestation and NPV for mine prospecting except for the cases where forest land undergoes permanent change in land use.
- Mine prospecting projects exempted from the requirement of FRA certificate for grant of Forest Clearance (FC).
- Relaxation in FC procedure for projects of mine prospecting by dispensing site inspection in case the forest land is less than 100 ha. for construction of new roads/ paths, and drilling of bore holes/ sample collection pits.
- Rationalized the guidelines for diversion of forest land for entry/ exit of petrol pumps/ fuel stations to make it compatible with the guidelines issued by the Ministry of Road Transport and Highways, keeping in view the safety of passengers.
- Extended the general approval under the FC Act for underground laying of optical fibre cables, telephone lines and drinking water supply pipelines along the roads within existing right of way not falling in National Parks and Wildlife Sanctuaries, without felling of trees, where the maximum size of the trench is not more than two (2) meter depth and one (1) meter width to the underground laying of CNG/ PNG pipelines also.
- The National Board for Wildlife and the Standing Committee of National Board for Wildlife re-constituted in July 2014 & September 2014 respectively. The Standing Committee of NBWL held 6 meetings, considered 445 proposals submitted to the Ministry and cleared 336 of them. 271 cases pending in June, 2014 have been cleared and pendency has been brought down to Nil.

Procedures

- Standardised the Terms of Reference (ToR) for 38 Sectors in the process of Environmental Clearance (EC) and mandated automatic approval of ToR in 30 Days.

- A compendium of all notifications/ OMs issued under EIA Notification, 2006 for the use of project proponents and decision makers.
- District Environment Impact Assessment Authority (DEIAA) constituted to grant EC for mining of minor minerals for 5 ha. of individual lease and 25 ha. in cluster.
- Industrial sheds, educational institutions exempted from EC.
- Validity of EC increased from 5 years to 7 years.
- Expeditious transfer of EC/FC to new allocatees of cancelled coal blocks.
- The Gazette notification regarding Integration of environment conditions in building and construction sector has been issued on 9.12.2016.
- Guideline dated 19.01.2017 issued on diversion of forest land for non-forest purpose with respect to provision of transferring equivalent non-forest land by Government Departments for compensatory afforestation under the Forest (Conservation) Act, 1980.

Delegation of Powers

- Delegated powers to Regional Empowered Committees (RECs) to finally dispose off proposals
 - involving diversion of 5 to 40 hectares of forest land (except the proposals relating to mining, regularisation of encroachments and hydel projects) and
 - all proposals involving diversion of forest land for linear projects irrespective of area of forest land involved.
- Delegated the powers to competent authority in the State Government to issue permission for tree felling and commencement of work for a period of one year of linear projects without waiting for final approval under the FC Act, once compensatory levies have been realised and land for Compensatory Afforestation, wherever required, has been transferred and mutated in favour of the State Forest Department.
- Amendments in Environmental Impact Assessment (EIA) Notification, 2006 delegating powers to State Level Environment Impact Assessment Authorities (SEIAAs) in respect of category B projects.
- Six thousand (6000) km of border roads granted immediate go-ahead to help in expeditious clearance of strategic projects in border areas and to ensure establishment of infrastructure in border states.
- Accorded general approval under the Forest (Conservation) Act, 1980 (FC Act) for diversion of forest land required for construction and widening of two-lane roads by the BRO / other agencies and widening of link roads, between border roads and national highways/state highways/other state roads in the area falling within 100 km aerial distance from the Line of Actual Control (LAC).
- Accorded general approval under the FC Act for diversion of forest land required for creation of border security related infrastructure such as, border roads, fencing, border outposts, floodlights, surveillance infrastructure, and power infrastructure, within five kilometres aerial distance from the International Border by paramilitary organizations of the Ministry of Home Affairs (MHA), such as BSF and SSB from funds provided by the MHA.
- Accorded general approval under the FC Act for diversion of forest land required for construction of two-lane roads within 117 Left Wing Extremism (LWE) affected districts, irrespective of area of forest land involved.

- Accorded general approval under the FC Act for underground laying of optical fibre cables, telephone lines, drinking water supply pipeline and CNG/ PNG pipelines along the petroleum pipelines within existing right of way not falling in National Parks and Wildlife Sanctuaries, without felling of trees, where the maximum size of the trench is not more than two (2) meter depth and one (1) meter width.
- Mandate for EC in housing sector has been delegated to urban local bodies. The new framework and institutional structure for EC for building and construction sector seeks to integrate the conditions for EC with building permissions accorded by states under the respective building bylaws which enhances ease of doing business while protecting the environment.

Digital India – Technology and transparency

- Web portal launched for online submission of applications for Terms of Reference (ToR) and Environmental Clearance (EC) for decision making.
- ToRs approved for one thousand two hundred and eight projects. Environmental Clearance accorded to one thousand and forty nine projects, having an approximate investment of 7.4 lakh crore and with an employment generation for 2.7 lakh persons.
- Introduction of GIS-based Decision Support System to facilitate decision on proposals for forest clearance and a web portal for online submission and monitoring of status of forest clearance.
- The online submission of proposals relating to wildlife clearance has been made operational and has been integrated with the Forest and Environmental Clearance.
- Mandated online submission of applications for ToRs and EC by SEIAA for Category 'B' Projects.
- Online portal of Central Zoo Authority launched for recognition, monitoring and evaluation of Zoos of India.
- Integrated web-based portal for expeditious import consignment clearance of the commodities regulated under Hazardous Waste Rules, and for non-wildlife and non-CITES products through risk-based assessment.
- The weighted average time for grant of EC has come down from 599 days to 192 days and for grant of FC from 430 days to 170 days.
- Implemented eOffice Premium in the Ministry for online processing of files. Till date 60,586 files processed through eOffice, out of which Electronic files are 50,601 and physical files are 9,985.
- Implemented SPARROW-Scientist for online submission of APAR of Scientists in the Ministry.
- Implemented GEAC Portal for online submission of applications.
- Implemented Online Stationary Request Management System
- To increase the transparency, the following measures have been taken to curb corruption - Online process for issuing Environmental, Forest and CRZ Clearances, delegation of powers to state level/district level Environment Impact Assessment authorities, the system of classification of industries into Red, Orange, Green and White has been made completely transparent, 24X7 Real Time Monitoring of industrial pollution, grant of consent have been brought in digital mode, developed a Corruption Mitigation Action Plan during 2015.

International Conventions

Submission of India's Intended Nationally Determined Contributions (now called NDCs) to UNFCCC- 2 October 2015

- India submitted Intended Nationally Determined Contributions (now called NDC) on 2nd October, 2015. It provides for sustainable lifestyle, clean development, increasing share of non-fossil fuel based electricity, enhancing carbon sink, adaptation, capacity building, etc. The INDC aims to reduce the emission intensity of GDP by 33 to 35% by 2030 from 2005 level.
- An Implementation committee and six Sub-committees, dealing with specific issues, have been constituted, involving key Ministries and Departments to advice and guide for implementation of India's NDCs. First consultation meeting of the NDC Implementation committee was held on 23rd June 2016 in the Ministry of Environment, Forest and Climate Change. Meetings of sub-committee on Mitigation and sub-committee on Adaptation was organised in September 2016 and a meeting of sub-committee on Technology & Capacity building was held in October 2016. These consultations would enable to evolve a roadmap for implementation of NDCs.

Biennial Update Report (BUR) submitted to the United Nations Framework Convention on Climate Change (UNFCCC)

- India released its Biennial Update Report (BUR) on 22 January 2016 encompassing information on national circumstances, Greenhouse Gas (GHG) inventories for the year 2010, mitigation actions, analysis of constraints, gaps, and related financial, technical and capacity needs and other related information along with information on domestic Monitoring, Reporting and Verification (MRV) arrangements.

International Cooperation – Bilateral matters: The Ministry has entered into Agreements / Memorandum of Understanding (MoUs) with 21 countries like Norway, Sweden, France, Finland, Canada, Bangladesh, Egypt, Morocco, Brazil, Russia and others on various environmental issues of mutual benefits. Most of these MoUs/agreements are operated through the Joint Working Groups (JWGs) thus, providing an opportunity for dialogue and to work with the international community. A number of Joint Working Groups (with Germany, European Union, etc.) have also been constituted which flows from Agreements / MoUs / Joint Statements entered into by other Ministries.

Working Group (WG) meetings:

- BRICS (Brazil, Russia, India, China & South Africa) Environment Ministers meeting: India being BRICS Chair for the year 2016, from environment perspective, the Ministry of Environment, Forest and Climate Change (MoEFCC) hosted the second BRICS Environment Ministers meeting at Goa on 15 – 16 September 2016.
- The Environment Ministers /representatives of the BRICS nations, accompanied by their senior officials participated in a two-day long event held in Goa to discuss the global climate change and other environmental issues. During the meeting, the Ministers agreed to enhance cooperation in the areas of abatement

and control of air, and water pollution, efficient management of liquid and solid waste, climate change and conservation of bio-diversity.

- The BRICS nations agreed upon entering into a joint Memorandum of Understanding on Environmental Cooperation. A Text of the Memorandum of Understanding (MoU) on Environmental Cooperation between the BRICS countries covering the priority areas of air quality, water, biodiversity, climate change, waste management, Agenda 2030 for Sustainable Development Goals and other areas of mutual interest as agreed to by the countries was finalised during the meeting. The Ministers announced the setting up of a Joint Working Group on Environment composed of the relevant official representatives of BRICS Environment Ministries, institutionalizing their mutual cooperation on environment-related issues. The Joint Working Group which shall meet annually will be instrumental for the implementation of the MoU.
- BRICS nations join hands to save environment: The BRICS Environment Ministers adopted a Goa Statement on Environment during the BRICS Environment Meeting and called upon the developed countries to honour their commitments related to means of implementation and facilitate its operationalisation with a clear road-map for the successful achievement of various global environmental agreements and sustainable development goals.
- The BRICS countries resolved to develop a 'BRICS platform on Green Technology' for sharing environmentally sound technologies as a new international mechanism for public private partnership that can assist in addressing environmental challenges in our countries and promote innovations, knowledge management and capacity building including by means of a common website, a network of technical institutions and to undertake joint projects in areas of mutual interest.
- Indo-German WG: The second meeting of Indo-German Working Groups (WGs) on Water; and Waste Management & Circular Economy was held in New Delhi from April 5 to 7, 2016. There were presentations followed by discussions on varied topics viz. water conservation/pollution abatement and waste area, water management development of Best Available Technology (BAT) standards on Water Management for future cooperation, waste management challenges and opportunities in waste water and solid waste management, waste to energy rapid technology assessment tool. In the meeting it was agreed that Germany would like to invest €5 to 6 billion for developmental initiatives in India to build enabling systems and addressing capacity gaps effectively. The BAT Project can be operationalized immediately for three identified sectors, namely, textiles, tannery and chemical production (pharmaceutical and dyes) and the milestones may be mutually worked out. It was agreed to develop an E-platform to exchange experience and technical expertise of mutual interest on an on-going basis. CPCB will interact from the Indian side. The Indian side welcomed the proposed cooperation in three cities, namely, Coimbatore, Bhubaneswar and Kochi as well as in Uttarakhand (city of Haridwar) in water and waste management while requesting the German side to consider Patna, Kolkata and Kanpur for future cooperation.
- Indo-Bangladesh Working Group: The first meeting of India - Bangladesh Joint Working Group (JWG) on "Conservation of the Sundarbans" was held in New Delhi on July 21, 2016. Both the sides expressed keen interest in

comprehensive biodiversity mapping of Sunderban following a common approach and methodology through identified agencies to develop baseline data for improved understanding of diversity of flora and fauna in the Sunderban region. The Central Pollution Control Board (CPCB) made a presentation on the national water quality monitoring programme in context of rivers in West Bengal especially in Sunderban. It was agreed that a study may be conducted to arrive at a set of indicators to measure health of the ecosystem of Sunderban. The two sides noted the agreement related to joint study of biodiversity mapping of Sunderban, compilation of good practices, common approach towards monitoring of river pollution, management of marine ecosystem and the proposed study on indicators for assessment of the health of the ecosystem of Sunderban. It was agreed to designate one nodal officer each at senior level for wildlife crime control in Sunderban. The Bangladesh delegation expressed interest in enhancement of number of seats with scholarship in Wildlife Institute of India (WII).

- United Nations Environment Programme (UNEP): India is a member of UNEP and provides annual financial contribution of USD 100,000 to UNEP Environment Fund. Three of the thirty three members on UNEP's International Resource Panel (IRP) are currently from India. The Ministry is a member of the IRP Steering Committee. IRP supports UNEP'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 18th meeting of International Resource Panel (IRP) and Steering Committee was held in Cape Town on 6-10 June 2016. The 19th Meeting of the International Resource Panel and Steering Committee was held in Paris, France on 14-18 November, 2016. MoEFCC represented in both the meetings.
- United Nations Environment Assembly (UNEA) is the governing body of UNEP. The second session of UNEA was in Nairobi, Kenya from 23 to 27 May, 2016 focusing on 'Delivering on the Environmental Dimension of the Agenda 2030 for Sustainable Development'. A delegation from this Ministry actively participated in the 2nd Session of United Nations Environment Assembly along with concerned stakeholders. This Ministry also represented in the "Second Open-ended Meeting of the Committee of Permanent Representative (OECPR-2) held in Nairobi, Kenya from 15-19 February, 2016 convened to firm up the agenda of the UNEA-2.
- 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. In 2016-2017, two projects were completed successfully. The major impacts of these projects are as follows:
- "Energy Efficiency Improvements in Indian Brick Industry" is a UNDP/ GEF project aimed at promoting production and use of resource efficient bricks (REBs) and reduce energy consumption, soil use and GHG emissions. The project had supported 12 REB production units of which 3 new units were set in 2015-2016. Investment plans were developed for 26 units and knowledge products for architects, engineers, builders and government officials was prepared and disseminated. REB has been included in procurement schedule by

Public Works Department of Punjab. The project provided technical inputs for the revision of BIS code on perforated bricks.

- “Promoting Clean Energy Technology Innovations and Competitiveness of SMEs in India is a UNIDO/ GEF project for small and medium enterprises (SMEs) that develops innovation and entrepreneurship by enhancing emerging clean technology start-ups to address energy, environmental and economic challenges. This project was a part of global initiative with 8 countries participating. In India, in last three years, the project reached out to more than 500 innovators out of which 69 were semi-finalist from 41 cities were shortlisted through a competitive process. The Cleantech Open (CTO) USA which is the knowledge partner for the project, trained the innovators on the commercialization of their product and provides a global platform for exchange of ideas and learning. CTO, in form of webinars, guided the innovators on various aspects of clean tech business and business models, to bring them at par with the Silicon Valley Start-ups. The webinars gave the innovators a virtual connect to many startups, investors, experts, mentors from all over the globe. After the guidance and assessment which continues throughout the year, the final winners are given the opportunity to pitch in the Cleantech Open Global Forum in Silicon Valley, California, where they receive recognition, awards and connections to potential partners, customers and investors world-wide. These market-ready innovators have been connected to potential investors, customers, and partners.
- The entire allocated grant of USD 3.691 million has been committed through nine National Steering Committee meetings held so far, out of which two were held in the reporting year. About 18 projects were approved this year. About 44 projects have been completed relating to biodiversity conservation, climate change mitigation and adaptation, land degradation and waste management. The achievements of the project completed this year are as follows:
 - 645 biogas units, 118 vermi-compost pits, 116 water harvesting systems, 112 water tanks set up, 3,000 meters of ‘door bandi’ constructed, more than 100 dry wells re-activated, 9 grain banks established and 50 energy-efficient jagery furnaces set up.
 - 12,110 energy-efficient smokeless cook-stoves set up so far. From these cook-stoves alone, about 27,000 MTs of CO₂ emission reduced. In addition, 324 large size cook-stoves also reduced 1134 MTs of CO₂ emission.
 - 16,731 MTs of CO₂ emission also reduced through adoption of renewable energy technologies, against the target of 12,277 MTs by the end of the project.
 - 93,000 hectares of land brought under sustainable land and resource management so far against the target of 100,000 hectares.
 - 198 panchayats adopted village level resource use planning.
 - A total of 1,750 women Self Help Groups have been formed in projects with 24,174 women members, benefitting about 2,29,614 households directly and indirectly. These women meet regularly every month and save nearly Rs.50-Rs.100 per month and majority of these SHGs have been linked through Banks, NABARD for credit/grants for taking up economic enterprise and technology interface in a sustainable manner.
 - 8 GEF-SGP NGO partners won various awards this year.

National and State Action Plan on Climate Change

- A meeting of the Prime Minister's Council on Climate Change (PMCCC) was held in January 2015 for regular monitoring of the eight National missions under the National Action Plan on Climate Change (NAPCC) along with other initiatives on Climate Change. Some of the important decisions taken by the PMCCC are:
- Revisiting of all National Missions under NAPCC in the light of new scientific information especially Fifth Assessment Report (AR5) and technological advances;
- Setting up new missions on wind energy, health, waste to energy, coastal areas;
- Revisit deliverables of the National Water Mission and National Mission on Sustainable Agriculture.
- A meeting of Executive Committee on Climate Change (ECCC) for coordination of PMCCC decisions was held in June 2016.
- Under the State Action Plan on Climate Change (SAPCC), 32 SAPCC have been prepared by the respective states.
- Climate Change Action Programme (CCAP) - Ministry of Environment, Forest and Climate Change is implementing a scheme titled 'Climate Change Action Programme' with an objective 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. Total budget for the scheme is Rs. 290 crore for the 12th plan period.
- National Adaptation Fund (NAF) on Climate Change is a Central Sector Scheme under implementation in the 12th Five Year Plan with National Bank for Agriculture and Rural Development (NABARD) as the National Implementing Entity (NIE). The Ministry has approved 18 Projects under NAF till date.
- First Phase of Science Express Climate Action Special (SECAS) train with the aim to create awareness among various sections of society, especially students, as to how climate change can be combated through mitigation and adaptation was completed in May, 2016. The second phase of SECAS train was flagged off on February 17, 2017. The train is expected to cover 68 locations, in 20 states.
- Modelling Studies on Greenhouse Gas Emissions and Emission Intensity of Indian Economy - The Ministry launched the "Modelling Studies on Greenhouse Gas Emissions and Emission Intensity of Indian Economy" with the aim to obtain the projections of the GHG emissions in various time slices from 2010 to 2050 in a decadal fashion.

Green Climate Fund (GCF)

- Two GCF Empowered Committee Meetings were held on March 17, 2016 and September 27, 2016 respectively. One project by Groundwater Division of Department of Water Resources, along with Department of Science and Technology has been submitted to GCF on Ground water recharge and solar micro-irrigation to ensure food security and enhance resilience in vulnerable tribal areas of Odisha for the Grant of an amount of \$ 37.45 million.

International Negotiations on Climate Change

- The 20th Conference of the Parties (COP-20) of the UNFCCC and 10th Meeting of the Parties to Kyoto Protocol (CMP) held in Lima, Peru from December 1-14, 2014. It agreed to address all the elements, that is, mitigation, adaptation, finance, technology development and transfer, capacity building and transparency of action and support in a balanced manner in new agreement. India made significant progress in elevating adaptation onto the same level as mitigation and ensured that Nationally Determined Contributions are comprehensive, as per country priorities and countries may provide information in accordance with their developmental imperatives.
- Ministry of Environment, Forest and Climate Change organized the meeting of Climate Change Negotiators of Like Minded Developing Countries (LMDC) in New Delhi on September 14-15, 2015. The meeting was organized to take stock of climate change negotiations under UNFCCC and provide an alternative roadmap by the LMDC for the Paris Agreement. India communicated its Nationally Determined Contributions (NDC) in response to the decision of the COP to UNFCCC on 2nd October 2015. India's NDC is fair, ambitious; comprehensive and balanced, addressing both mitigation and adaptation. It consists of eight **(8)** climate change targets to be achieved in the time period 2021 to 2030.
- India played a constructive and proactive role in finalising the Paris Agreement in COP-21 held in Paris, France. The salient features of the Agreement include - recognition of Climate Justice and sustainable lifestyles and recognition of the Principle of Equity and Common But Differentiated Responsibilities (CBDRs), mobilization of US \$ 100 billion per year by developed countries with scaling up after 2020.
- An India Pavilion was set up at CoP 21 to showcase and share information on India's actions on Climate Change. The pavilion hosted 25 sessions, 150 speakers, 130 representations, over 80 films, 13 books/reports/CDs/films/brochures/releases and was viewed by nearly 6500 visitors from different countries.
- Ministry of Environment, Forest and Climate Change organized the 22nd BASIC Ministerial Meeting on Climate Change in New Delhi, India on 6th and 7th April 2016.
- India signed the Paris Agreement on April 22, 2016 at the High-Level Signature ceremony of the Paris Agreement in New York. India ratified the Paris Agreement to the UNFCCC on October 2, 2016. The Paris Agreement entered into force on November 4, 2016. The action plan for implementation of Paris Agreement and its components is being developed.
- The 22nd Conference of Parties (COP-22) under the UNFCCC was held in Marrakesh, Morocco from November 7-18, 2016. Minister of State (Independent Charge) of Environment, Forest and Climate Change, Shri Anil Madhav Dave, led an inter-ministerial delegation that participated in the Marrakesh Conference. A total of 22 sessions were held with participation of about 200 speakers/panellists. During the events, 100+ presentations were made and about 110 films were screened in the Indian Pavilion. The Pavilion had a footfall of nearly 4, 000 visitors.
- One of the key outcomes of COP-22 was "Marrakesh Action Proclamation for Our Climate and Sustainable Development". The call affirmed world's commitment to full implementation of Paris Agreement and emphasized the need to strengthen and

support efforts to eradicate poverty, ensure food security and enhance resilience of agriculture.

- An India Pavilion was set up at CoP 22 to showcase and share information on India's actions on Climate Change. There were 22 sessions, 200 speakers/panelists, 100+ presentations, 1100 participants, 110 Films screened in Indian Pavilion. The Pavilion was appreciated and viewed by nearly 4000 visitors from different countries.
- On the sidelines of COP-22, the Framework Agreement of International Solar Alliance (ISA) was opened for signature on November 15, 2016. So far, 24 countries have signed the ISA Framework Agreement. It will be a unique international and intergovernmental treaty-based organization to be registered under Article 102 of the United Nations (UN) Charter and will come into operation with ratification by 15 parties.
- National Adaptation Fund on Climate Change (NAFCC) was approved in 2015 with a budget provision of Rs 350 Crores for 2015-16 and 2016-17. The overall aim of the fund is to support concrete adaptation activities that reduce the adverse effects of climate change facing community, sector and states and are not covered under on-going activities through the schemes of State and National Government. Till 28.02.17, 19 projects have been approved; of which 7 projects submitted by Andhra Pradesh, Madhya Pradesh, Karnataka, Haryana, Assam, West Bengal and Maharashtra are approved in the current Financial Year at a total cost Rs. 154.51 Crore.

Book Launch at COP-22

- Two books were released on November 14, 2016 during COP-22 by the Minister of Environment, Forest and Climate Change, Shri Anil Madhav Dave:
 - 1) 'LOW CARBON LIFESTYLES - RIGHT CHOICES FOR OUR PLANET'
 - 2) LIFESTYLE FOR MINIMUM CARBON FOOTPRINT.
- The 22nd BASIC Ministerial meeting on Climate Change was organised by the Ministry. Representatives from Brazil, South Africa and China attended the meeting.
- A new website - <http://www.ncdmaindia.gov.in> has been launched by the National Clean Development Mechanism Authority (NCDMA) in the Ministry of Environment, Forest and Climate Change. The website will capture the entire life cycle of CDM Projects at different stages. This web-based application will promote transparency in operation and monitor sustainable development activities relating to the CDM projects in the country.
- This MIS is a web-based collation and monitoring tool functioning in a module-wise manner. It will capture all information provided by the project proponents in various modules starting from user registration, prior intimation, submission of projects, host country approval, validation, registration, issuance and Transaction of CERs. Based on the submission, it will undergo approval workflow, documenting all events relating to host country approval; NCDMA meetings, Issuance of Letter of Authority. The reporting module will generate various reports displaying the status of projects.
- The National Clean Development Mechanism Authority (NCDMA) was established in December 2003 for according Host Country Approval (HCA) to the CDM projects. Till Feb, 2017, it has accorded HCA to 3,011 projects. These projects are in sectors

of energy efficiency, fuel switching, industrial processes, municipal solid waste, renewable energy and forestry which spread across the country (covering all states in India).

- The online uploading of project related information in a module wise pattern will help to capture the entire life cycle of CDM projects. It will also enable monitoring of the projects at different stages. This web-based application will promote transparency in operation and monitor sustainable development activities relating to the CDM projects in the country. It will be the first such web-based application developed globally in this direction. The initiative to further streamline the working of India's National CDM Authority. The NCDMA is reckoned as one of the most efficient and pro-active Designated National Authority (DNA).
- Kigali Amendment to the Montreal Protocol for phase-down of HFCs
- The 28th Meeting of Parties to the Protocol held in Kigali adopted an amendment to the Protocol, which is historic and aimed at phasing down the HFCs that contribute to global warming.
- In the Kigali Amendment, it has been agreed that the developing countries will have two set of baselines – one for the early movers, in which case it will be 2020-2021-2022 and the other for those whose national circumstances were different and the manufacturing of HFCs and consumption in whose case was still rising in the absence of clear alternative technologies. In case of such countries the agreed baseline years are 2024, 2025 and 2026.
- India piloted a realistic baseline of 2024-2026 for production and consumption of HFCs in developing countries for phase-down of HFCs. As per the agreement reached in Kigali, India will freeze its manufacturing and consumption of HFCs in 2028 with reference to the baseline years 2024, 2025 and 2026. The Freeze year is subject to technology review and could be further deferred to 2030. India will complete its phase down in 4 steps from 2032 onwards with cumulative reduction of 10% in 2032, 20% in 2037, 30% in 2042 and 85% in 2047.
- On India's initiative, it was agreed in Kigali that the Multilateral Fund under the Montreal Protocol will provide funds for maintaining or increasing the energy efficiency with new technology. Funding for R&D and servicing sector in developing countries has also been included in the agreed solutions on finance.
- India has been able to secure an agreement that provides adequate space for growth of our economy, while providing adequate time for industry to shift to sustainable alternatives in the interest of environment. The agreed arrangements will minimize the cost to consumers in transitioning away from HFCs and provide for domestic innovation to develop in the sector of new generation refrigerants and related technologies.
- India has met the following compliance targets either on or ahead of the control schedule of the Montreal Protocol:-
- The Ex-Com of the MLF so far has approved a total of 305 projects involving MLF funding of US \$ 327,657,464 to the Indian industry for phase-out of production and consumption of 59,749.49 ODP tonne of the ODSs in India.
- Phase-out of production and consumption of virgin halons as early as 2002, eight years prior to the Montreal Protocol schedule, being high ODP ODSs.
- Phase-out of production of CFCs with effect from 1.8.2008, 17 months prior to the Montreal Protocol schedule except use of Pharmaceutical grade CFCs in manufacturing of MDIs.

- Complete phase-out of production and consumption of CFCs, CTC and halons with effect from 1.1. 2010.
- Successful implementation of the National Strategy for transition to non-CFC MDIs and plan for phase-out of CFCs in the manufacture of MDIs in India.
- The production and consumption of Methyl Chloroform has been phased out globally as on 1.1.2015, with possible essential use exemptions.
- The production and consumption of Methyl Bromide has been phased out globally as on 1.1.2015, except use in quarantine and pre-shipment applications
- India in consultation with the MDI manufacturers withdrew the EUN of pharma grade CFCs for 2011 and beyond EUN for pharmaceutical grade CFCs. India was one of the first countries to withdraw the EUN, for which India was congratulated by the MOP.
- The implementation of National MDI Transition Strategy has resulted successful phase-out of pharmaceutical grade CFCs in manufacturing of MDIs as of December, 2012, 11 months prior to the schedule approved by the Ex-Com of the MLF for the Implementation of the Montreal Protocol.
- India has successfully met the freeze as on 1.1.2013 and 10% reduction of production and consumption of HCFCs as on 1.1.2015 in line with the accelerated phase out schedule of the Montreal Protocol.
- The Ozone Depleting Substances (Regulation and Control) Rules, 2000 have been amended to align with the accelerated phase-out of HCFCs. The Ozone Depleting Substances (Regulation and Control) Amendment Rules, 2014 had been notified in the Gazette of India in March, 2014.
- Continuation of the Institutional Strengthening (IS) project implemented by UNDP as lead implementing agency.
- The 74th Ex-Com approved a proposal for survey on ODS alternatives in India with a funding of US\$ 1, 80, 000.
- India has been elected as a Member of the Ex-Com of the MLF for the implementation of the Montreal Protocol for the year 2016.
- The 77th Meeting of the Ex-Com of the MLF approved HPMP Stage-II, with a total funding of US \$48,315,261 for reduction of 769.49 ODP tonnes of HCFCs from the remaining HCFC consumption eligible for funding.
- The Parties to the Montreal Protocol on Substances that Deplete the Ozone Layer reached agreement at the 28th Meeting of the Parties on 15 October 2016 in Kigali, Rwanda to phase-down HFCs.
- Desertification and Land degradation Atlas of India: “Desertification and Land Degradation Atlas of India (Based on IRS AWiFS data of 2011-13 and 2003-05)” was prepared by the Space Application Centre, Department of Space, Government of India in collaboration with MoEF&CC and other State level institutions and was released on 17th June, 2016. This Atlas presents Desertification /Land Degradation Status Maps depicting Land Use, Process of Degradation and Severity Level along with area statistics consolidated for entire country as well state-wise for 2011-13 and 2003-05 time frame and reports the changes.

Conventions

- **Basel Convention:** India remained successful in retaining the hegemony of national legislation in the treatment of trans-boundary movement of e-waste during COP 12 by ensuring the “non-legally binding” clause in ‘Technical guidelines on transboundary movements of electrical and electronic waste’. India assumed the position as Bureau Member of the Open-Ended Working Group (OEWG), a technical subsidiary body under the Basel Convention.
- **Rotterdam Convention:** India successfully defrayed the move by the EU to list Chrysotile Asbestos under the mandatory requirement of prior informed consent for trade.
- **Stockholm Convention:** India obtained specific exemption for use of DDT for Dicofol production until 2024. India also obtained specific exemption of production of DDT for disease vector control until 2024.
- **Strategic Approach to International Chemical Management (SAICM)** - India was nominated to the Bureau of SAICM.
- **Minamata Convention on Mercury:** India became a signatory of the Convention in September, 2014 which is aimed at minimising use of mercury and developing environmental safeguards for the use of mercury.
- **Convention on Biodiversity:** India steered the implementation of CoP-11 decisions, as well as preparation for CoP-12 during the Presidency of CoP. India facilitated ratifications by requisite number of Parties to the CBD’s Nagoya Protocol on Access and Benefit Sharing (ABS) for its entry into force on 12th October, 2014. **India was invited to preside over the historic first MoP to the Nagoya Protocol, since the host country, Republic of Korea has not yet ratified this Protocol. Presiding over of a meeting hosted by another country is unprecedented in the UN system.** As a major step forward towards operationalisation of the Nagoya Protocol and the global Aichi biodiversity target 16, India became the first country to publish information relating to an ABS agreement on the ABS Clearing House, thus constituting the first Internationally Recognised Certificate of Compliance (IRCC) under the Nagoya Protocol. Government of India’s commitment and leadership towards implementation of the Nagoya Protocol by publishing the information to constitute the first IRCC has been acknowledged by the CBD Secretariat.

Endangered Species Recovery Programme – CAMPA assistance

- Rapidly growing anthropogenic pressures and incompatible land uses outside protected areas threatens the ecological integrity of broader land- and seascapes. Realizing the need of immediate conservation efforts to reverse the declining trend of several terrestrial and marine species, the Ministry of Environment, Forest and Climate Change (MoEFCC) entrusted Wildlife Institute of India (WII) to develop guidelines for species conservation action plans. Subsequently in 2015, the MoEFCC tasked WII to prepare Endangered Species Recovery Plans (ESRP) for identified nationally and globally important species such as Great Indian Bustard, Manipuri Deer - Sangai, Gangetic Dolphin and Dugong. The MoEFCC has funded this programme for an initial period of five years under the National Compensatory Afforestation Fund Management and Planning Advisory Council.

- The four species targeted for the ESRP are declining and have small population, that makes them vulnerable to stochastic extinction events. Although the exact causes of endangerment of these species are highly nuanced and even site-specific, some of the common threats these species face are - habitat loss due to economic activities, poaching, and other human induced mortality factors. Highly k-selected life history of these species (long living, slow breeders, high parental investment etc.) exacerbates the impact of these threats. To recover such extremely small populations from imminent extinction risk, well-informed, specialized and site- and species- specific interventions are urgently needed. Advanced *ex-situ* measures such as conservation breeding exploring latest biotechnological options needs to be considered along with a series of intensive *in-situ* conservation actions.
- The Endangered Species Recovery Programmes will adopt a multi-pronged approach that includes conservation research, technology aided management support, training and capacity building of the implementing agencies, monitoring of population and habitat, stakeholder sensitization and mobilization, and mitigation of threats in priority habitats. The goal of this programme is to ensure long-term persistence of these species in wild through multi-stakeholder partnerships wherein the conservation contribution of local community is recognized and incentivized. The programme envisages close cooperation and collaboration between different State Governments, where these species occur, and WII, key civil society organizations and MoEFCC for effective and timely implementation of the proposed conservation measures.

Augmentation of fodder & water in Protected Areas:

- The Ministry, with financial assistance from Ad-hoc Compensatory Afforestation Fund Management and Planning Authority (CAMPA), has formulated a scheme to provide assistance to the States for 'Augmentation of Fodder and Water in Protected Areas/Forest Areas'. The scheme aims at improving habitat in Protected Areas by making provision for augmenting grass, fodder and water where degraded habitat is known to be the cause of significant human-wildlife conflict. Such areas would need to be prioritized for taking up silvi-pasture development under the scheme. The scheme is a pilot initiative with an initial outlay of Rs. 5 crore and based on the learning and outcomes of the habitat improvement intervention, it would be considered for up-scaling.

Biodiversity

- **Completion of India's Presidency of CoP to CBD, and participation in CoP-12** : Having hosted the Eleventh Conference of the Parties (CoP-11) to the Convention on Biological Diversity (CBD) in Hyderabad in October 2012, India was the President of CoP for the two year biennium from October 2012 to October 2014. India steered the implementation of CoP-11 decisions, as well as preparation for CoP-12 during this period. As President of CoP, India formally opened CoP-12, and handed over the Presidency of CoP to the Republic of Korea at CoP-12 to the CBD, held in Pyeongchang, Republic of Korea from 6th to

17th October 2014. A document on 'A Panoramic View of India's Presidency of CoP to CBD 2012-2014' giving information on important activities undertaken during India's Presidency of CoP was brought out. The document is available at www.cbd.int/cop/cop-11/doc/panoramic-view-india-presidency-cop-2012-2014-en.pdf and

<http://envfor.nic.in/sites/default/files/Panoramic%20view%20of%20India's%20Presidency%20of%20CoP%20to%20CBD%202012-2014.pdf>.

- **Entry into force of Nagoya Protocol on ABS and chairing of its first meeting** : During India's Presidency of CoP, India facilitated ratifications by requisite number of Parties to the CBD's Nagoya Protocol on Access and Benefit Sharing (ABS) for its entry into force on 12th October, 2014. The first Meeting Parties (MoP) to the Nagoya Protocol was held concurrently with CoP-12 to the CBD in Pyeongchang from 13-17 October 2014.
- **Internationally Recognized Certificate of Compliance (IRCC) issued under Nagoya Protocol:** Nagoya Protocol on Access and Benefit Sharing (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. The Protocol further requires that Parties make information on the permit or its equivalent available to the ABS Clearing House for it to constitute an Internationally Recognised Certificate of Compliance (IRCC). The IRCC of compliance is a major innovation of the Nagoya Protocol, and one of the cornerstones of the ABS system. As a major step forward towards operationalisation of the Nagoya Protocol and the Global Aichi Biodiversity Target 16, **India became the first country to publish information relating to an ABS agreement on the ABS Clearing House on 1st October 2015**, thus constituting the first IRCC under the Nagoya Protocol. Government of India's commitment and leadership towards implementation of the Nagoya Protocol by publishing the information to constitute the first IRCC has been acknowledged by the CBD Secretariat. So far, India has published 47 IRCCs on the ABS CH, out of the total 49 IRCCs published (<https://www.cbd.int/doc/press/2015/pr-2015-10-07-abs-en.pdf>).
- **NBAP Addendum 2014:** A National Biodiversity Action Plan (NBAP) Addendum 2014 has been brought out. The document includes 12 national biodiversity targets developed through an extensive consultative process with stakeholders, alongwith indicators for monitoring using the global Aichi targets as a framework. Submitted to the CBD Secretariat in October 2014, it is available on its website at <http://www.cbd.int/countries/?country=in>, and on MoEFCC's website at – <http://envfor.nic.in/sites/default/files/NBAP%20Addendum%202014.pdf>
- **Fifth National Report to CBD** : The Fifth National Report to CBD was prepared and released by MEFC on World Environment Day on 5th June 2014. The document provides an update on biodiversity status, trends and threats in India, updating of NBAP, and India's progress towards Aichi targets. The document is available on CBD's website at <http://www.cbd.int/doc/world/in/in-nr-05-en.pdf> and on MoEFCC's website at

http://envfor.nic.in/sites/default/files/India's%20Fifth%20National%20Report%20o%20CBD%20_0.pdf.

- **Hosting of CBD's meetings, and letter from MEFCC to Ministers of Environment of South, Central and West Asian countries :** Even though India is no longer the President of CoP, but recognizing India's contribution and commitment to biodiversity, at the request of the Secretariat of the CBD, this Ministry hosted three meetings of CBD during the period, namely:
 - (i) Sub-regional capacity building workshop on financial reporting and resource mobilization for South Asia, held in New Delhi from 16-18 September 2015; and
 - (ii) Sub-regional capacity building workshop on achieving Aichi Biodiversity Targets 11 and 12 for financial reporting and resource mobilization for South, Central and West Asia, held in New Delhi from 7th to 10th December, 2015; and
 - (iii) Expert Group meeting for assessing funds for biodiversity for GEF-7 period, held in New Delhi on 17-18 February 2016.
- Following the hosting of the CBD's sub-regional capacity building workshop on Aichi Target 11 on protected areas and Target 12 on threatened species, letters signed jointly by the Minister for EF&CC and the Executive Secretary, CBD Secretariat were sent in March 2016 to the Ministers of Environment for all South, Central and West Asian countries to seek political support and leadership for implementation of their roadmaps on achieving these targets.
- **Revision of Notification on Normally Traded Commodities under Section 40 of the Biological Diversity Act :** Section 40 of the BD Act empowers the Central Government to exempt from its purview, any items including biological resources, normally traded as commodities (NTACs), in consultation with NBA. The Ministry of Environment, Forest & Climate Change (MOEF&CC) had accordingly issued a notification under Section 40 dated October 26th, 2009, listing 190 biological resources to be exempted from the purview of the Act 2002 provided they are traded as commodities. After extensive consultations over a period of more than three years, including through an Expert Committee of NBA with all stakeholders viz., Ministries/Departments, State Biodiversity Boards, industry, experts and public, the list of 190 species notified earlier has been augmented to 385 species to be exempted from the purview of the Act, when traded as commodities, through a Notification issued on 7th April, 2016 in supersession of the earlier notification.
- **Notification of Guidelines on ABS :** The Biological Diversity Act was enacted by India in 2002 to give effect to the provisions of the CBD, including those relating to ABS. The National Biodiversity Authority set up under the Biological Diversity Act has been in the process of formulating guidelines on ABS in pursuance to the provisions of the Act. This long pending exercise was completed, and Guidelines on ABS were notified in November 2014. The ABS Guidelines describe the scheme of processing the applications, alongwith template and terms for benefit sharing.

- **Notification on exemption of ITPGRFA crops** : A notification for exempting crops covered by the International Treaty on Plant Genetic Resources for Food and Agriculture (ITPGRFA) from the purview of Biological Diversity Act has been issued in December 2014.
- **Centre for Biodiversity Policy and Law (CEBPOL)** : The Government of India in collaboration with the Norwegian Government has established a “Centre for Biodiversity Policy and Law (CEBPOL)” in the National Biodiversity Authority (NBA), Chennai, to develop professional expertise in biodiversity policies and laws and develop capacity building. The CEBPOL became fully operational, through organization of a two-day workshop on “Consolidating CEBPOL - Sharing of experience on Access and Benefit Sharing (ABS)” on 3-4 February 2015 in Chennai. The Centre aims at contributing to strengthening the implementation of India's Biological Diversity Act.
- **Biodiversity Finance Initiative (BIOFIN) – India under the GoI-UNDP Project entitled ‘Strengthening Natural Resource Management’** : The Ministry joined UNDP managed global initiative on Biodiversity Finance Initiative (BIOFIN) in 2015. The initiative is hosted by the National Biodiversity Authority (NBA), and technical assistance is being provided by the Wildlife Institute of India (WII) and National Institute of Public Finance and Policy (NIPFP) in implementation of BIOFIN. The first National Stakeholder Consultation on BIOFIN-India was held on 14-15 January 2016.
- **Indo-German Access and Benefit Sharing (ABS) Partnership Project under the Indo-German Biodiversity Programme** : A project proposal on 'Capacity Development of Statutory Institutions for Effective Implementation of the Access and Benefit Sharing (ABS) Mechanism in India' under Indo-German Biodiversity Programme for Euro 3 million has been approved in the 2015 Indo-German negotiations on development cooperation. The project will be implemented at the national level with NBA and in three pilot states of Maharashtra, Tamil Nadu and Uttarakhand with the respective State Biodiversity Boards.
- **Meetings of State Biodiversity Boards** : The Tenth National Meeting of State Biodiversity Boards (SBBs) was organized by the National Biodiversity Authority (NBA) on 25th -26th August 2015 in the Ministry of Environment, Forest and Climate Change, New Delhi. The 11th Meeting of State Biodiversity Boards was organized by the NBA on 30th September & 1st October 2016, in Chennai. These meetings are aimed at providing continuous engagement and constant dialogue among the SBBs as well as strengthening of institutional framework for the effective implementation of the Biological Diversity Act.
- **Celebration of International Day for Biological Diversity on 22nd May** : The International Day for Biological Diversity (IDB) is celebrated all over the country on 22nd May. The national level events for celebrating IDB were held in Port Blair in 2014, Srinagar in 2015 and Mumbai in 2016. The day on which the text of the Convention on Biological Diversity was adopted in 1992, is celebrating to enhance

awareness about the threats to and importance of biodiversity is sustaining life on this planet.

- **Participation in thirteenth meeting of the Conference of the Parties to the Convention on Biological Diversity, and of the meetings of the Conference of the Parties to the Nagoya and Cartagena Protocols held in Cancun, Mexico, 2016 :** Being a party to the CBD, India actively participated in the Thirteenth Conference of the Parties (CoP-13) to the CBD, Eighth Conference of the Parties to the CBD serving as Meeting of the Parties (CoP-MoP 8) to the Cartagena Protocol on Biosafety (CPB), and Second CoP-MoP to Nagoya Protocol on Access and Benefit Sharing (ABS) held from 2-17 December, 2016 in Cancun, Mexico.
- India also organized 12 side events during CoP-13 to the CBD which has received appreciation and accolades from all participants.
- NBA released a Beta version of ABS-E Filing software on 7th November 2016 which allows the applicant to file their applications through online. This initiative is towards expedite the process of the applications. 127 ABS Agreements have been signed during the year. NBA has introduced Form-C for providing the intimation for depositing the Microorganisms by Indian researchers/scientist in other country repositories for claim of his novel species for publication in journals.
- About 3,35,000 ha in the four landscapes have been brought under improved management through interventions on human-wildlife conflict mitigation, crop fencing, organic farming, as well as, convergence with other line departments.
- Bilateral meetings with Nepal, Bhutan, Bangladesh and Russia were held on 14-15 March, 2016; 14-15 February, 2016; 27-29 January, 2016 and September, 2016 respectively to strengthen cross border co-operation besides sharing of important learnings in tiger conservation.

Biosafety

- India participated in COP-MOP 8 held in Cancun (Mexico) from 4th – 17th December, 2016. COP-MOP8 adopted 19 decisions and the main outcomes of COP-MOP8 were consideration of the report of the Compliance Committee; review of Framework and Action Plan for Capacity Building; guidance on the operation and activities of the Biosafety Clearing-House; and issues on RARM, including a coordinated approach on the issue of synthetic biology, and socio-economic considerations, among other items.
- **Communication Education and Public Awareness (CEPA) Fair :** India also participated in Communication Education and Public Awareness (CEPA) Fair held concurrently to COP-MOP8 on December 7, 2016. The theme of the presentation was ***“Enhancing Public Participation and Awareness on Biosafety: Indian Experience”***.
- **Side Event on Biosafety :** MoEF&CC in association with United Nations Environment Programme (UNEP) and Biotech Consortium India Limited (BCIL) also organized a side event titled ***“Strengthening Biosafety Management System in India: Sharing of Indian Experience”*** on December 16, 2016. The objective of the side event was to apprise the international agencies and participants of the COP-MOP about the biosafety activities being undertaken by MoEF&CC. A presentation about the key features of the Indian Biosafety Regulatory Framework was made.

Guidelines, manuals etc. which are in place for ensuring the safety of Genetically Modified (GM) products and guidance on Environmental Risk Assessment (ERA) developed under UNEP-GEF Phase-II capacity building project on biosafety were shared.

Capacity Building in Biosafety:

- MoEF&CC is implementing UNEP-GEF supported Phase II Capacity Building Project on Biosafety with an objective to strengthen the biosafety management system in India with special emphasis on Risk Assessment and Risk Management (RARM), Handling Transport, Packaging & Identification of Living Modified Organisms (LMOs) and Public awareness to ensure adequate protection of human health and biodiversity from potential harm arising from all LMO related activities.
- India organized and hosted the 21st National Project Coordinator's meeting during September 2016 in Taj Krishna at Hyderabad.
- MoEF&CC circulates the quarterly Biosafety Newsletters covering important aspects of Biosafety happening in International and National level on a regular basis as an ongoing activity of the Biosafety Project.
- A *“Workshop on Phase-II Capacity Building Project on Biosafety: Outcomes and Way Forward”* was organized in Ministry of Environment, Forest and Climate Change (MoEF&CC) on March 15, 2017. Secretary, Ministry of Environment, Forest and Climate Change launched the online Genetic Engineering Appraisal Committee (GEAC) Website and also released two books – ‘Cartagena Protocol on Biosafety (CPB): Journey So Far’ and another booklet – ‘Biosafety Clearing House’ (BCH) in the workshop. It was also decided that from GEAC would be accepting applications through online mode only (www.geacindia.gov.in)

Other achievements

- India State of Forest Report 2015 reported forest and tree cover at 7.94 lakh sq km, as compared to 7.90 lakh sq km in 2013.
- Increase in the number of Tigers – 2014 census shows a count of 2, 226 Tigers in the country, an increase of 30% over the last count. The Project Tiger coverage has been expanded with 49 Tiger Reserves in 18 Tiger Range States. Modern technologies like e-eye surveillance, Unmanned Aerial Vehicle, radio collaring, etc have been introduced.
- Monitoring Effectiveness Evaluation (3rd cycle) has been carried out, which have categorized 17 Tiger Reserves as very good (40%), 16 (37%) as good and 10 (23%) as fair.
- Dandeli Elephant Reserve (2321.12 sq Kms) has been notified in March, 2015 and area of Mysore Elephant Reserve has been increased by 1331.94 Sq. km.
- Wildlife Institute of India, Dehradun, has been accorded recognition by UNESCO as its Category 2 Centre. (C2C) considering WII's work in the field of natural heritage conservation.
- For effective Implementation of PLI Act, 1991, PLI policy and ERF contribution are being made a prerequisite to CTO/CTE being granted/ renewed to the industries and IRDA has been requested to develop a PLI policy on the line policy for vehicles

insurance and State Governments/UT Administration have been requested for ensuring implementation.

- Notification of 'Regulation on Polychlorinated Biphenyls Order, 2016' issued.
- Study on economics of desertification, land degradation and drought has been commissioned in line with the goal of making India land degradation neutral by 2030.
- Ministry organized India ICIMOD week at MoEF&CC New Delhi in December, 2015 where G.B. Pant Institute of Himalayan Environment and Development showcased its activities on trans-boundary Landscape Conservation and Development Initiative.
- A Memorandum of Understanding (MoU) was signed between the Ministry of Environment, Forest and Climate Change and NOIDA for the development of Botanical Garden of Indian Republic (BGIR) in NOIDA on June 5, 2015.
- This Ministry is executing project titled "Centre for Biodiversity Policy and Law (CEBPOL)" to establish a centre with a view to undertake strategic research and review biodiversity policy and law in India with Norwegian support during the period 2013-2017.
- Revision in the Notification on Normally Traded Commodities under Section 40 of the Biological Diversity Act increasing the number of commodities from 190 in 2009 to 385 in 2016.
- In the case of disposal of Union Carbide waste, about 350 tonnes of hazardous waste is lying in Union Carbide, Bhopal. CPCB supervised and successfully executed safe disposal of 10 tonnes of hazardous waste of Union Carbide Industries Limited (UCIL), paving the way for complete disposal. The incineration of the UCIL hazardous waste will help resolve the problem of its disposal persisting for more than three decades.

Contribution of Institutions.

- Forest Survey of India (FSI), has launched web-GIS based decision support system application enabling all the stakeholders to make judicious and quick decisions. FSI has also started the e-Green Watch, a web-based system capable of showing the Compensatory Afforestation, diverted land, plantations, on Google earth. A new sampling design has been developed by FSI for National Forest Inventory (NFI), which will reduce the revisit time of the NFI from 20 years to 5 years.
- Indian Council of Forestry Research and Education (ICFRE) Dehradun, has developed techniques for rapidly generating transgenic roots on non-transgenic shoots making possible quick screening of genes. This has potential application in development of plant varieties tolerant to drought, salt and flooding stress that will lead to improved rural livelihood.
- The Institute of Forest Genetics and Tree Breeding (IFGTB), Coimbatore has developed a rapid, low cost, high recovery technology for isolation of nucleic acids from difficult tissues like needles, roots, wood, dry leaves of tree and crop species. The nucleic acid isolation kit developed by IFGTB has been licensed on 10th July, 2014 to Rapid Genomix Solutions, Coimbatore on a non-exclusive basis.
- New bio-pesticide 'Crawl Clean' has been developed from leaf powders of various plant species, which is used by farmers in control of mealy bug of papaya.
- A Biopesticide based on endophytic fungus isolated from teak leaves has been formulated, which is effective against defoliators.

- Released 25 superior clones of *eucalyptus* and *casuarina* & commercial propagation of five high-yielding clones of *casuarinas*.
- Indian Institute of Forest Management (IIFM) Bhopal, has been ranked as Number 8 in National Institutional Ranking Framework amongst management institutions of the country, brought out by Ministry of HRD. The Institute has been awarded the ISO 9001:2008 Certification. IIFM has been honoured with the “B-School Leadership Award” by ABP News.
- Directorate of Forest Education (DFE) Dehradun, has started an electronic journal of Field Forestry, to document good field forestry practices, or well-profiled role models in forestry sector, or successful field stories.
- Indian Plywood Industries Research & Training Institute (IPRITI) Bangalore, has developed a technology for manufacturing bamboo strand lumber of bamboo for housing application. This lumber product is capable of replacing wood in structural applications from a load-carrying standpoint. Comprehensive coloured veneer (very thin, high density coloured wood sheets) for special application has been developed by IPRITI. This innovative and durable material is suited to be used as surface material in parquets, decorative panels, ceilings, furniture, fitted furniture and interior doors and for other handicraft items. IPRITI has worked out a technology for making panel products that can be further transformed into many value added toys/household items from toy dusts generated by the wooden toy manufacturers of Channapatna, Karnataka. IPRITI has also developed Medium density Fibre board (MDF) from Plantation grown timber and Polyurethane based adhesives for bonding wood based products.
- ICFRE has developed various products in the last two years namely, organic bioboosters, microbial insecticides, plant based bio pesticides and organic growth enhancer for enhancement of growth of tree series.
- A total of 8 patents were filed/ obtained by various institutions under the MoEF, namely, IPRITI, IFGTB, ISWT, and TFRI.

ZSI (Zoological Survey of India)

- Discovery of New Taxa/Species & New Record to India: Altogether 1863 species were identified by the scientists of ZSI Headquarters and regional centres during the period under report. Out of which, 36 species new to science have been described and 55 species were added new record to India.
- The ZSI as a national repository of Zoological collections maintains identified species belonging to all animal groups in the country. The National Zoological collections were further enriched by the addition of examples of 24, 833 specimens (unnamed) and 33277 identified specimens pertaining to 1, 863 species.

Foundation for Revitalization of Local Health Traditions (FRLHT), Bengaluru a CoE of MoEFCC has contributed the following:

- Carried out botanical surveys in Tamil Nadu and Uttarakhand, and collected 400 voucher specimens of medicinal plants.
- Critical identification of the voucher specimens from the previous surveys, revealed many new botanical records to Tamil Nadu and southern India, as well as 24 new records to Nagaland.
- Around 1500 authentic plant images were added to the digital collections.

- The team also collected >150 authentic botanical drugs (from critically identified plant sources in the wild) and >250 samples (from raw drug markets) and added to the raw drug repository.
- The garden team added 56 species of plants to the live repository at the Ethno Medicinal garden.
- Two new thematic plant assemblages were created within the garden.
- Extracts of *Cyperus scariosus* & endophyte culture filtrate were prepared as a part of Abhava Pratinidhi Dravya studies.
- Anti-inflammatory study of *Aconitum heterophyllum* and *Cyperus rotundus* was repeated and the results obtained during 2015-16 were confirmed.
- 250 Geo distribution maps with datasheets were prepared.
- Eco geographic maps with datasheets were prepared for 25 prioritized species.
- The conservation training team conducted Capacity building training course for the frontline forestry staff of Chhattisgarh at Jagdalpur, Chhattisgarh during October 2016.
- Profiles (containing Sanskrit sloka, and its English translation) of 505 Medicinal plants from Kaideva Nighantu were prepared.
- CAMP (Conservation Assessment and Management Prioritisation) Workshops for Tripura and Manipur states were held at Agartala and Imphal respectively, during 3-5th August 2016 and 9-11th November 2016.
- Two MPCAs (Savanadurga and Kollur) in Karnataka were identified for the population studies of Red listed species. Preliminary field survey to locate the populations of *Decalepis hamiltonii* completed in Savanadurga MPCA.

Public Grievances and office improvements.

- A total number of 19, 498 public grievances were redressed during the period. The total pendency has been brought down to 760 as on March 16, 2017.
- As part of improving office keeping and record management, continuous drives were conducted for weeding out of old records and a total of 10,497 records were weeded out.
- A Green Platform, i.e. Environmental Information Management Analysis Framework is being developed to maintain a centralised repository of Environmental Information and to disseminate the same to the stakeholders to facilitate a reliable and informal decision making.
- Three (3) 'Chintan Shivir' were organized in order to enable officers to share their experiences and suggest measures towards good governance.
- The number of umbrella schemes reduced from 18 to 9 by merger of schemes.
- Land measuring 6.5 acres was got allotted for setting up of National Museum of Natural History near Pragati Maidan and the process for constructing a National level Institution has been commenced. The Museum building complex will be an energy efficient, green building having all modern amenities with Platinum LEED and Five Star GRIHA Rating.

Important Court Orders/Judgments

- The Ministry, through effective representation has got the following powers to the Ministry of Environment, Forest and Climate Change restored from Supreme Court:
 - Regulation of the Wood Based industrial Units.
 - Grant of grant of permissions for implementation of projects in areas falling in National parks/sanctuaries, including rationalization of boundaries etc. Earlier such proposals required prior leave of the Supreme Court. Supreme Court in their said order directed that all such proposal will be considered by the Standing Committee of the National Board for Wildlife (“NBWL”) on its own merits and in conformity with the orders and directions passed by the Supreme Court from time to time.
 - Exemption of certain projects from the payment of Net Present Value (NPV).

Sector-wise details of EC and FC granted

- A total of 1, 313 EC was granted to projects for the period up to February 28, 2017.
- A total of 2, 109 in Stage I (in-principle) and 1, 360 in Stage II (Approved) FC was granted to projects for the period April 1, 2014 to February 28, 2017.
