

FORESTRY STATISTICS INDIA 2021





**DIVISION OF FORESTRY STATISTICS, DIRECTORATE OF ADMINISTRATION
INDIAN COUNCIL OF FORESTRY RESEARCH AND EDUCATION**

(An autonomous body under Ministry of Environment, Forest and Climate Change, GoI)

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PREFACE

Forests of India cover around 21.71% land of the country and are integral to the socio-economic development of country. Forest resources therefore have to be managed and conserved efficiently for achieving the sustainability of socio-ecological systems. This requires a broader understanding about the functioning of the forests under the changing climatic conditions and anthropogenic pressures, and a long term temporal evaluation of various features of the forestry sector.

Statistical database is important for the forestry sector for devising planning and policy perspective for the growth and development of the sector. ICFRE has been collecting, collating and disseminating forestry statistics by publishing the biennial publication namely *Forestry Statistics India (FSI)*, since 1994. However, the present issue *FSI 2021*, is being published after a gap of a decade and contains the data for the period 2010-11 to 2019-20 so that the interval may be covered.

The present report *FSI 2021* contains information and data on various forestry parameters of the country on a time scale and provides an opportunity to analyze the forestry sector at the National level. The Division of Forestry Statistics (DFS) at the ICFRE Headquarters ensures collection and compilation of forestry data by sourcing from SFDs (State/UT Forest Departments) and other associated departments and ministries such as Ministry of Environment, Forest and Climate Change (MoEF&CC), New Delhi; Ministry of Statistics and Programme Implementation, New Delhi; Directorate General of Commercial Intelligence and Statistics, Kolkata; Forest Survey of India, Dehradun; Department of Land Resources, New Delhi; Indira Gandhi National Forest Academy, Dehradun; Department of Forest Education, Dehradun; National Biodiversity Agency, Chennai; Wildlife Institute of India, Dehradun and others.

The data collection from States/UTs has been channelized with assistance of Nodal Officers of the various institutes of the ICFRE, who coordinate and liaise with the SFDs through the Nodal Officers of the SFDs of the respective states. The data collection mechanism revolves around the retrieving of the data from respective Departments through the customized formats or from the statistical reports of the States/UTs. The data obtained from the SFDs has also been cleaned (desk-review) and the unusual data figures were cross checked and validated with the help from the States/UTs before inclusion in the report.

The *FSI 2021* focuses on the various important themes of the forestry sector as Forest Resources, Vulnerability and Mitigation, Establishment, Production, Wildlife, Eco-tourism, Social and Economic Aspects, Silviculture, Wood Based Industries and International Trade (Export and Import) of Wood-Based Products and these themes are organized as seven chapters. Each chapter has an introductory note for a comprehensive visualization of the theme of the chapter. The *FSI 2021* would complement the other report i.e. *Forest Sector Report India (FSRI)*, of the ICFRE published by the DFS, ICFRE to give a holistic picture of the sector.

Credit is due to all the SFDs for their support and for contribution to the report and also to the DFS, ICFRE and Nodal Officers of the all Institutes of ICFRE who have facilitated and supported for the publication. We acknowledge the MoEF&CC, Gol for providing financial support for the publication. The support received from the other departments who facilitated for the data collection and provided the information is also acknowledged.

The team of DFS has been disseminating forestry statistics for analyzing various fundamental areas of the forestry sector of the country. The DFS tries its best to cross-check the data through various means of validation. The final draft compilation has also been circulated to SFDs again in December 2021 to cross-check and confirm the accuracy of the data furnished by them, and the suggestions/ changes received have been suitably incorporated.

Improvement is a continuous process and the DFS endeavors to bring qualitative and quantitative changes in the Forestry Statistics. We are sure this compilation will be of immense use as a one source reference for the use of forestry statistics. We request the stakeholders of forestry statistics to assist us in strengthening the processes of periodical compilation of forestry databases and building a databank for the sector so that the long felt gap in the reliable forestry statistics is bridged.



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HEAD OF FOREST
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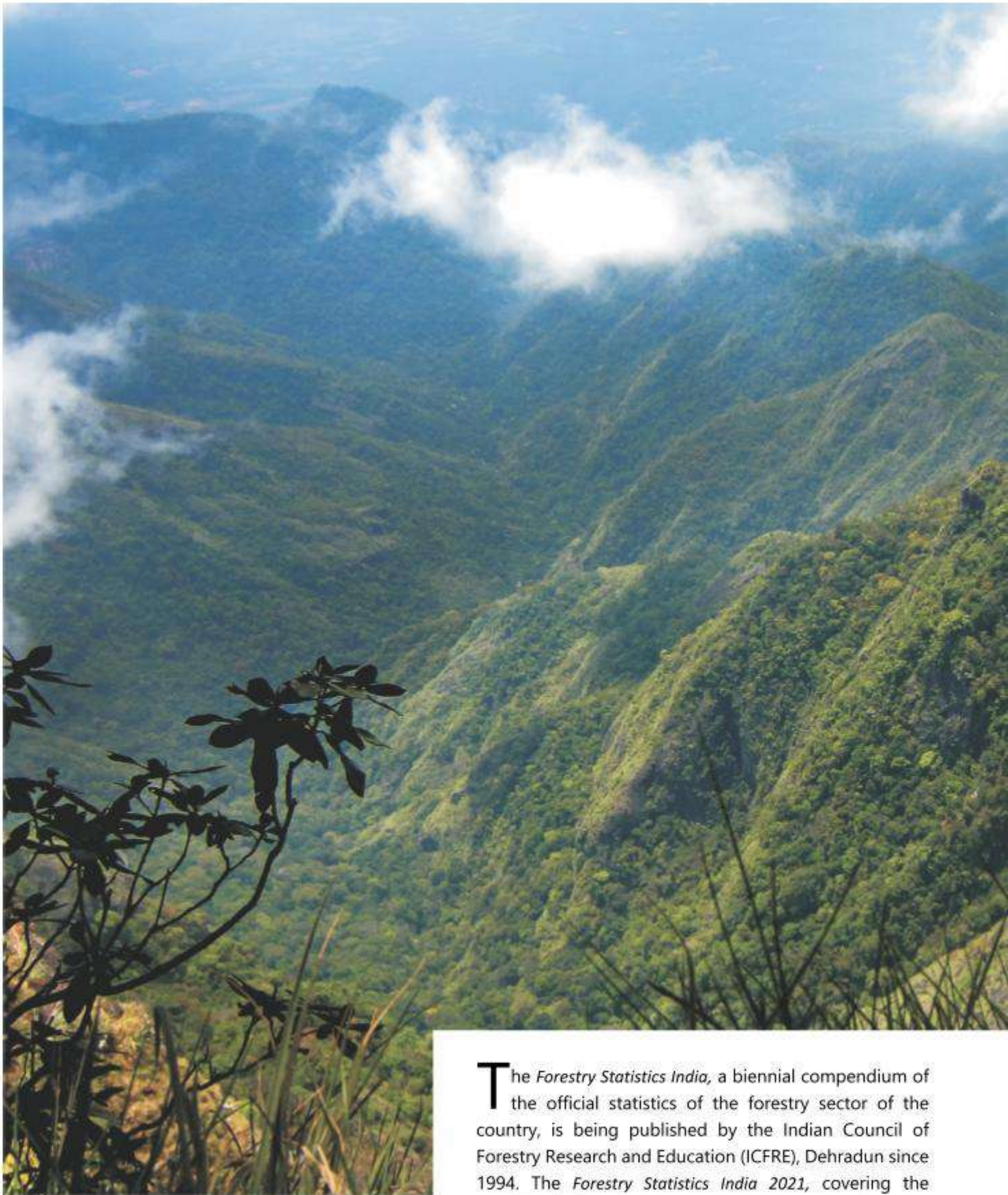


List of Acronyms

ACF	:	Assistant Conservator of Forests
ADC	:	Autonomous District Council
AFRI	:	Arid Forest Research Institute
APCCF	:	Additional Principal Chief Conservator of Forests
B	:	Billion
BHS	:	Biodiversity Heritage Site
BMC	:	Biodiversity Management Committee
CAMPA	:	Compensatory Afforestation Fund Management and Planning Authority
CASFOS	:	Central Academy of State Forest Service
CCF	:	Chief Conservator of Forests
CF	:	Conservator of Forests
CITES	:	Convention on International Trade in Endangered Species
Cr	:	Crore
CSO	:	Clonal Seed Orchard
CSS	:	Centrally Sponsored Scheme
cum	:	Cubic Metre
DCF	:	Deputy Conservator of Forests
DFE	:	Directorate of Forest Education
DGCIS	:	Directorate General, Commercial Intelligence and Statistics
ENVIS	:	Environmental Information System
FAO	:	Food and Agriculture Organization
FDC	:	Forest Development Corporation
FRA	:	Forest Rights Act
FRI	:	Forest Research Institute
FRO	:	Forest Range Officer
FSI	:	Forest Survey of India
FSRI	:	Forest Sector Report India
GIM	:	Green India Mission
Ha	:	Hectare
HFRI	:	Himalayan Forest Research Institute
HoFF	:	Head of the Forest Forces
ICFRE	:	Indian Council of Forestry Research and Education
IDWH	:	Integrated Development of Wildlife Habitats
IFB	:	Institute of Forest Biodiversity
IFGTB	:	Institute of Forest Genetics and Tree Breeding
IFP	:	Institute of Forest Productivity



IFS	:	Indian Forest Service
IGNFA	:	Indira Gandhi National Forest Academy
IUCN	:	International Union for Conservation of Nature
IWST	:	Institute of Wood Science and Technology
JFM	:	Joint Forest Management
JFMC	:	Joint Forest Management Committee
km ²	:	Square kilometre
LSB	:	Lakh Standard Bags
M	:	Million
MAB	:	Man and Biosphere
MoEF&CC	:	Ministry of Environment, Forest and Climate Change
MoSPI	:	Ministry of Statistics and Programme Implementation
NA	:	Not Available
NAEB	:	National Afforestation and Eco-Development Board
NAP	:	National Afforestation Programme
NT	:	Notional Tonnes
NTCA	:	National Tiger Conservation Authority
NTFP	:	Non-Timber Forest Product
PBR	:	People's Biodiversity Register
PCCF	:	Principal Chief Conservator of Forests
q	:	Quintal
RF	:	Reserve Forest
RFRI	:	Rain Forest Research Institute
SBB	:	State Biodiversity Board
SFD	:	State Forest Department
SPA	:	Seed Production Area
SSO	:	Seedling Seed Orchard
t	:	Tonne
TFRI	:	Tropical Forest Research Institute
TOF	:	Trees Outside Forests
UNEP	:	United Nations Environment Programme
UNESCO	:	United Nations Educational, Scientific and Cultural Organization
UT	:	Union Territory
VMG	:	Vegetative Multiplication Garden
WII	:	Wildlife Institute of India
₹	:	Indian Rupee



EXECUTIVE SUMMARY

The *Forestry Statistics India*, a biennial compendium of the official statistics of the forestry sector of the country, is being published by the Indian Council of Forestry Research and Education (ICFRE), Dehradun since 1994. The *Forestry Statistics India 2021*, covering the Statistics for the years 2010-11 to 2019-20, contains seven chapters and is being published after a decade. The chapters are (i) Forests: Resources, Vulnerability and Mitigation (ii) Forests: Human and Financial Resources (iii) Forest Production: Timber, Non-Timber Forest Products and Bamboo (iv) Protected Areas, Wildlife and Ecotourism



Rakesh Kumar Dogra

(v) Social and Economic Aspects of Forestry (vi) Silviculture (vii) Wood Based Industries and International Trade.

India has a forest cover of 21.71% of India's geographical area and spreads across the States and UTs of the country in 7,13,789 km², as reported by Forest Survey of India (FSI), Dehradun. The density wise forest cover proportion in respect of country's geographical area of Very Dense Forest, Moderately Dense Forest, Open Forest and Scrub are 3.03%, 9.33%, 9.34% and 1.41%, respectively. India's forests are classified into 16 forest type groups, in addition to two categories of plantations/ToF. The group Tropical Dry Deciduous Forests has the maximum area (40.86%) among all the forest type groups. India's forest cover and ToF contain 4,388.15 M cum and 1,779.35 M cum of growing stock, respectively.

The forest resources have been continuously under tremendous pressure. The encroachments on forest land; unrecorded removal of timber, fuel wood and non-timber forest products (NTFPs); invasion of species, and unregulated tourism led to degradation of forests and deforestation. Forests and forest resources are also vulnerable



to various stresses, as illicit removal of wood, poaching of wildlife, forest fires, encroachments, etc. Forest lands are also being diverted for various developmental activities like road construction, mining, electric power projects etc. Various measures for conservation and development of forests through management and forestry interventions are being implemented for mitigating the challenges faced by the forests.

The area of forests by ownership of the land under the State Forest Departments (SFDs) classified into three broad categories *i.e.* Reserved Forests, Protected Forests and Unclassed Forests. The total area classified as Reserved Forests is 4,42,276 km², that classified as Protected Forests is 2,12,259 km² and Unclassed Forests area is 1,20,753 km², reported by Forest Survey of India, Dehradun. Twelve States/UTs of the country have Mangroves with an estimated area of 4,992.32 km². The report also contains the wasteland statistics which are potential lands for various restorative purposes.

The SFDs are organised into the territorial and functional classification for managing the forests. Territorial classification organizes the States/UTs forests into various spatial units in descending order of size *viz.*, Circle, Divisions, Ranges, Blocks/Sections and Beats. The Divisions, Ranges, Sections and Beats are headed by Deputy Conservator of Forests, Forest Range Officers/Rangers, Foresters/Dy Foresters and Forest Guards, respectively. Government of India recruits Indian Forest Service Officers through Union Public Service Commission on annual basis depending upon the vacancies, who are trained in Indira Gandhi National Forest Academy, Dehradun. The recruitment to all other categories of forest staffs is being made by the state Governments where the training of State Forest Statistics Officer is conducted at the three Central Academies of State Forest Service (CASFoS). A total of eleven training schools (including three CASFoSs) exist in the country for the training of FROs.

The country is classified into ten bio-geographical zones based on the flora and fauna, namely, Trans-Himalayan, Himalayan, Indian Desert, Semi-Arid, Western Ghats, Deccan Peninsula, Gangetic Plains, Coasts, North-East and Islands. Various programmes are in place for conservation of forests and related aspects like wildlife and biodiversity. A special force known as the Eco-Task Force has also been made under the Territorial Army of the Indian Army to contribute in conservation as special measures.

The important tangible services being provided from the forests are timber, NTFPs (Tendu leave, Gum, Resin, Rattan/Cane and Lac), fuelwood, bamboo and fodder which contribute to socio-economic development by providing employment and income to many forest dependent communities.

Various protected area like National Parks, Sanctuaries, Community Reserves, Conservation Reserves offer important measures for *in-situ* conservation of forests, while zoos are important for *ex-situ* conservation. National Parks are at the highest level of protection, followed by Wildlife Sanctuaries. The adoption of a *National Policy for Wildlife Conservation* in 1970 and the enactment of the *Wildlife (Protection) Act* in 1972 have lead to a significant growth in the protected areas network of the country and at present 5.23% of geographic area is under terrestrial and inland water protected areas and an additional 0.27% area is under marine protected areas network.

The terrestrial and inland water network of protected areas is spread over 1,71,921 km². There are 148 zoos in India established and managed under Section 38 H(1) of the *Wildlife (Protection) Act*, 1972 and closely monitor by Central Zoo Authority. National Tiger Conservation Authority monitors the tiger conservation through SFDs and is also responsible for allocating funds to States/UTs under the Project Tiger. There are 51 Tiger Reserves in India spread over 18 States/UTs. While under the Project Elephant, the population of elephants has been estimated to be 29,964 in 2017. The Government of India has also established a network of 18 Biosphere Reserves to *in-situ* conserve all forms of life along with its support system, to serve as a referral system for monitoring and evaluating changes in natural ecosystems. Ecotourism originated in 1980 as a mechanism to channel tourism revenues into conservation and development and generate support and awareness for protection. All the protected areas, Biosphere Reserves, and UNESCO heritage sites also permit various degrees of ecotourism to meet the objective of conservation education.

Communities residing in areas adjoining forests also participate in various forest management programmes for achieving various goals of forest conservation through various participatory approaches such as Joint Forest Management (JFM). Participatory Forest Management and Eco-development mechanism. Various externally aided projects, Central and State schemes are implemented through JFM mechanism. The institutions of JFM have also been central in implementing the Green India Mission by further strengthening JFM Committees (JFMCs) by revamping them as bodies of *Gram Sabha*.



Biodiversity Management Committees (BMCs) are created for promoting conservation, sustainable and equitable use documentation of biological diversity by local bodies across the country. The *People's Biodiversity Register (PBR)* is a document which contains comprehensive information on locally available bio-resources including landscape and demography of a particular area or village are developed through the BMC's.

The Twenty Point Programme aims at plantation with a targeted approach, however, afforestation scheme as National Afforestation Programme is implemented to increase tree and forest cover. The Green India Mission is one of the eight missions outlined under the National Action Plan on Climate Change that aims at protecting, restoring and enhancing India's forest cover and responding to climate change. The Compensatory Afforestation Funds Management and Planning Authority (CAMPA) was constituted in April 2004 by Central Government. States/UTs have also established and setup CAMPA under *Compensatory Afforestation Fund Act, 2016* and *Compensatory Afforestation Rules, 2018*.

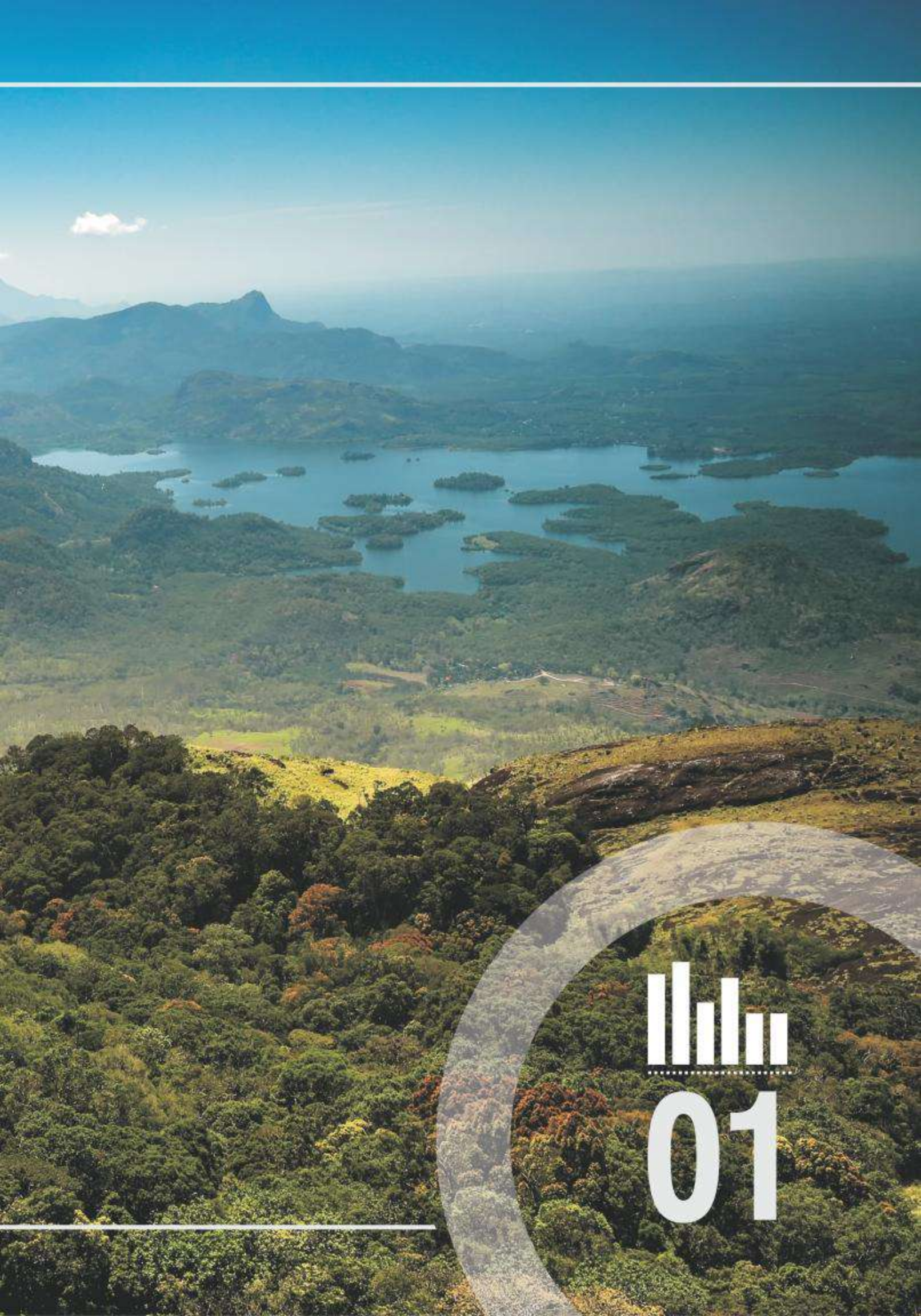
Establishment of Clonal Seed Orchards, Seedling Seed Orchards, Vegetative Multiplication Gardens (VMGs) and Nurseries are important for providing quality planting stock for the various ongoing afforestation programmes. Established with scientific input by ICFRE and its Institutes and now handed over to the SFDs, Seed Production Areas have been raised for important species like Teak, Emblica, Neem, Chirpine, Deodar, Kail, Fir, Bamboo, Acacias, Tun, Simarouba, Shisham, Eucalyptus, etc. Similarly VMGs and Seed Orchards have also been established for the important timber species and for those tree species which provide seeds and other NTFPs.

The Forestry and Logging sector is included under the Agriculture, Forestry and Fishing Section (Section A) of the National Industrial Classification (NIC-2008) at Division 02 and covers activities pertaining to the forestry sector. NIC is used to collect the data on different aspects of the economy to facilitate their use for National Economic Policy and is used in classifying the economically active population, industrial production and distribution, labour statistics, national income etc. of the country. Important wood-based industries are covered under Division 16 and 17 of NIC-2008 and categorized wood-based industries in four broad categories namely; saw milling and planing units, panel, solid wood and pulp and paper industries.

Total registered sawmills under 2m(i) and 2m(ii) of the Factory Act 1948 are 1,374 in number in the country which are very less in numbers compared with the actual number of saw mills present. *Annual Survey of Industries* reports a total of 2,353 panel industries, 952 solid wood industries and 7,180 pulp, paper and paperboard industries in the country. The Directorate General of Commercial Intelligence and Statistics is responsible for collection, compilation and dissemination of India's trade statistics and commercial information. The export and import statistics and trade related information of the importers and exporters are useful for policy formulations to the Government and other users such as researchers. Various important wood products viz. Wood in Rough, Sawn Wood, Veneers, Plywood, Particle Board and Fuel-wood are also detailed in the present report.

The report contained secondary data sourced by the SFDs and other departments. Some of the data, not reported by the States/UTs or not available with States/UTs is shown as "NA" (Not Available).





01

FORESTS: RESOURCES, VULNERABILITY AND MITIGATION

Forests contribute to the well-being of humans by supplying various ecosystem services. They provide direct consumption goods such as timber, fuel wood, fodder and value added products such as non-timber forest produces (NTFPs) including *tendu* leaves, *sal* seeds, tannins, gums, drugs, spices, insecticides, waxes, honey etc. NTFPs from forests are vital for livelihood of tribal communities and rural inhabitants living in and around the forests. Services from forests support productive purposes such as improvement and conservation of soil, thereby increasing soil fertility; protective purposes from natural calamities such as landslides, flash-floods; mitigation of climate change; adaptation to impacts of climate change and hydrological services.

The forests are spread on nearly one third of the terrestrial land (4.06 B ha) of the globe with 0.52 ha per capita forest (FAO, 2020). The total forest cover of India as of 2021 is 7,13,789 km² (21.71% of India's geographical area) with an increase of 1,540 km² forest cover over the cover in 2019. The shares of Very Dense Forest, Moderately Dense Forest, Open Forest and Scrub forest cover are 3.03%, 9.33%, 9.34% and 1.41%, respectively (ISFR 2021). The recorded forest area of the country is 7,75,288 km² (ISFR 2021). The composition of Indian forests includes tropical, subtropical and temperate and alpine forests. Mangrove forests are also found along the coastal regions of the country and have a high biodiversity and are spread across Sundarbans, Mahanadi, Krishna Godavari, Gujarat, Ratnagiri, Goa, Cauvery Deltaic and Andaman and Nicobar Islands. India's forest cover and Trees Outside Forest contains 4,273.47 M cum and 1,642.29 M cum of growing stock, respectively.

The land statistics in respect of wastelands is part of the *Report* as these lands are potential lands for restorative intervention. Wastelands, barren or overgrown with vegetation, are economically unproductive, ecologically unsuitable and subject to environmental deterioration; but have potential for forestry interventions. Wastelands are formed by both natural and man-made reasons such as snow-covered areas, coastal saline area, forest blank, barren hill-ridges, etc. Forests and forest resources are also vulnerable to various stresses such as illegal removal of wood, poaching of wildlife, forest fires, insect pest attacks, encroachments, etc. Forest lands are also being diverted for various developmental activities like road construction, mining, electric power projects etc. under the provisions of *Forest Conservation Act, 1980*. Various measures through management and forestry interventions are being implemented for mitigating the challenges faced by the forests.

Table 1.1. Area (km²) under forest cover

S. No.	State/UT	Year					
		2011	2013	2015	2017	2019	2021
1.	Andhra Pradesh	46,389.00	46,116.00	24,424.00	28,147.00	29,137.00	29,784.00
2.	Arunachal Pradesh	67,410.00	67,321.00	67,248.00	66,964.00	66,688.00	66,431.00
3.	Assam	27,673.00	27,671.00	27,623.00	28,105.00	28,327.00	28,312.00
4.	Bihar	6,845.00	7,291.00	7,288.00	7,299.00	7,306.00	7,381.00
5.	Chhattisgarh	55,674.00	55,621.00	55,586.00	55,547.00	55,611.00	55,717.00
6.	Delhi	176.00	179.81	189.00	192.41	195.44	195.00
7.	Goa	2,219.00	2,219.00	2,224.00	2,229.00	2,237.00	2,244.00
8.	Gujarat	14,619.00	14,653.00	14,660.00	14,757.00	14,857.00	14,926.00
9.	Haryana	1,608.00	1,586.00	1,584.00	1,588.00	1,602.00	1,603.00
10.	Himachal Pradesh	14,679.00	14,683.00	14,696.00	15,100.00	15,434.00	15,443.00
11.	Jammu & Kashmir	22,539.00	22,538.00	22,988.00	23,241.00	23,612.00	23,659.00
12.	Jharkhand	22,977.00	23,473.00	23,478.00	23,553.00	23,611.00	23,721.00
13.	Karnataka	36,194.00	36,132.00	36,421.00	37,550.00	38,575.00	38,730.00
14.	Kerala	17,300.00	17,922.00	19,239.00	20,321.00	21,144.00	21,253.00
15.	Madhya Pradesh	77,700.00	77,522.00	77,462.00	77,414.00	77,482.00	77,493.00
16.	Maharashtra	50,646.00	50,632.00	50,628.00	50,682.00	50,778.00	50,798.00
17.	Manipur	17,090.00	16,990.00	16,994.00	17,346.00	16,847.00	16,598.00
18.	Meghalaya	17,275.00	17,288.00	17,217.00	17,146.00	17,119.00	17,046.00
19.	Mizoram	19,117.00	19,054.00	18,748.00	18,186.00	18,006.00	17,820.00
20.	Nagaland	13,318.00	13,044.00	12,966.00	12,489.00	12,486.00	12,251.00
21.	Odisha	48,903.00	50,347.00	50,354.00	51,345.00	51,619.00	52,156.00
22.	Punjab	1,764.00	1,772.00	1,771.00	1,837.00	1,849.00	1,847.00
23.	Rajasthan	16,087.00	16,086.00	16,171.00	16,572.00	16,630.00	16,655.00
24.	Sikkim	3,359.00	3,358.00	3,357.00	3,344.00	3,342.00	3,341.00
25.	Tamil Nadu	23,625.00	23,844.00	26,345.00	26,281.00	26,364.00	26,419.00
26.	Telangana	NA	NA	21,591.00	20,419.00	20,582.00	21,214.00
27.	Tripura	7,977.00	7,866.00	7,811.00	7,726.00	7,726.00	7,722.00
28.	Uttar Pradesh	14,338.00	14,349.00	14,461.00	14,679.00	14,806.00	14,818.00
29.	Uttarakhand	24,496.00	24,508.00	24,240.00	24,295.00	24,303.00	24,305.00
30.	West Bengal	12,995.00	16,805.00	16,828.00	16,847.00	16,902.00	16,832.00
31.	Andaman and Nicobar Islands	6,724.00	6,711.00	6,751.00	6,742.00	6,743.00	6,744.00
32.	Chandigarh	17.00	17.26	22.03	21.56	22.03	22.88
33.	Dadra & Nagar Haveli	211.00	213.00	206.00	207.00	207.00	227.75*
34.	Daman & Diu	6.00	9.27	19.61	20.49	20.49	227.75*
35.	Lakshadweep	27.00	27.06	27.06	27.10	27.10	27.10
36.	Puducherry	50.00	50.06	55.38	53.67	52.41	53.30
Total		6,92,027.00	6,97,898.00	7,01,673.08	7,08,273.00	7,12,249.47	7,13,789.00

Source: India State of Forest Report (2011 to 2021)

*The figure includes both Dadra & Nagar Haveli and Daman & Diu



Table 1.2. Per-capita forest cover (ha)

S. No.	State/UT	Population	Year					
			2011	2013	2015	2017	2019	2021
1.	Andhra Pradesh*	4,95,76,777	0.055	0.055	0.049	0.057	0.059	0.060
2.	Arunachal Pradesh	13,83,727	4.872	4.865	4.860	4.839	4.819	4.801
3.	Assam	3,12,05,576	0.089	0.089	0.089	0.090	0.091	0.091
4.	Bihar	10,40,99,452	0.007	0.007	0.007	0.007	0.007	0.007
5.	Chhattisgarh	2,55,45,198	0.218	0.218	0.218	0.217	0.218	0.218
6.	Delhi	1,67,87,941	0.001	0.001	0.001	0.001	0.001	0.001
7.	Goa	14,58,545	0.152	0.152	0.152	0.153	0.153	0.154
8.	Gujarat	6,04,39,692	0.024	0.024	0.024	0.024	0.025	0.025
9.	Haryana	2,53,51,462	0.006	0.006	0.006	0.006	0.006	0.006
10.	Himachal Pradesh	68,64,602	0.214	0.214	0.214	0.220	0.225	0.225
11.	Jammu & Kashmir	1,25,41,302	0.180	0.180	0.183	0.185	0.188	0.189
12.	Jharkhand	3,29,88,134	0.070	0.071	0.071	0.071	0.072	0.072
13.	Karnataka	6,10,95,297	0.059	0.059	0.060	0.061	0.063	0.063
14.	Kerala	3,34,06,061	0.052	0.054	0.058	0.061	0.063	0.064
15.	Madhya Pradesh	7,26,26,809	0.107	0.107	0.107	0.107	0.107	0.107
16.	Maharashtra	11,23,74,333	0.045	0.045	0.045	0.045	0.045	0.045
17.	Manipur	28,55,794	0.598	0.595	0.595	0.607	0.590	0.581
18.	Meghalaya	29,66,889	0.582	0.583	0.580	0.578	0.577	0.575
19.	Mizoram	10,97,206	1.742	1.737	1.709	1.657	1.641	1.624
20.	Nagaland	19,78,502	0.673	0.659	0.655	0.631	0.631	0.619
21.	Odisha	4,19,74,218	0.117	0.120	0.120	0.122	0.123	0.124
22.	Punjab	2,77,43,338	0.006	0.006	0.006	0.007	0.007	0.007
23.	Rajasthan	6,85,48,437	0.023	0.023	0.024	0.024	0.024	0.024
24.	Sikkim	6,10,577	0.550	0.550	0.550	0.548	0.547	0.547
25.	Tamil Nadu	7,21,47,030	0.033	0.033	0.037	0.036	0.037	0.037
26.	Telangana*	3,50,04,000	NA	NA	0.062	0.058	0.059	0.061
27.	Tripura	36,73,917	0.217	0.214	0.213	0.210	0.210	0.210
28.	Uttar Pradesh	19,98,12,341	0.007	0.007	0.007	0.007	0.007	0.007
29.	Uttarakhand	1,00,86,292	0.243	0.243	0.240	0.241	0.241	0.241
30.	West Bengal	9,12,76,115	0.014	0.018	0.018	0.018	0.019	0.018
31.	Andaman and Nicobar Islands	3,80,581	1.767	1.763	1.774	1.772	1.772	1.772
32.	Chandigarh	10,55,450	0.002	0.002	0.002	0.002	0.002	0.002
33.	Dadra & Nagar Haveli	3,43,709	0.061	0.062	0.060	0.060	0.060	0.060
34.	Daman & Diu	2,43,247	0.002	0.004	0.008	0.008	0.008	0.008
35.	Lakshadweep	64,473	0.042	0.042	0.042	0.042	0.042	0.042
36.	Puducherry	12,47,953	0.004	0.004	0.004	0.004	0.004	0.004

Source: India State of Forest Report (2011 to 2021)

Population: Registrar General of India census 2011.

*From 2013-14 onwards, total population of Andhra Pradesh and Telangana was taken from respective State government official websites.

Table 1.3. Recorded forest area (km²)

S. No.	State/UT	Year					
		2011	2013	2015	2017	2019	2021
1.	Andhra Pradesh	63,814.00	63,814.00	37,258.00	37,258.00	37,258.00	37,258.00
2.	Arunachal Pradesh	51,540.00	51,541.00	51,407.00	51,407.00	51,407.00	51,540.00
3.	Assam	26,832.00	26,832.00	26,832.00	26,832.00	26,832.00	26,836.00
4.	Bihar	6,473.00	6,473.00	6,493.00	6,877.00	6,877.00	7,442.00
5.	Chhattisgarh	59,772.00	59,772.00	59,772.00	59,772.00	59,772.00	59,816.00
6.	Delhi	85.00	85.00	102.00	102.00	102.00	103.00
7.	Goa	1,224.00	1,225.00	1,225.00	1,225.00	1,225.00	1,271.00
8.	Gujarat	18,927.00	21,647.00	21,647.00	21,647.00	21,647.00	21,870.00
9.	Haryana	1,559.00	1,559.00	1,559.00	1,559.00	1,559.00	1,559.00
10.	Himachal Pradesh	37,033.00	37,033.00	37,033.00	37,033.00	37,033.00	37,948.00
11.	Jammu & Kashmir	20,230.00	20,230.00	20,230.00	20,230.00	20,230.00	20,206.00
12.	Jharkhand	23,605.00	23,605.00	23,605.00	23,605.00	23,605.00	25,118.00
13.	Karnataka	38,284.00	38,284.00	38,284.00	38,284.00	38,284.00	38,284.00
14.	Kerala	11,265.00	11,309.00	11,309.00#	11,309.00	11,309.00	11,522.00
15.	Madhya Pradesh	94,689.00	94,689.00	94,689.00	94,689.00	94,689.00	94,689.00
16.	Maharashtra	61,939.00	61,357.00	61,579.00	61,579.00	61,579.00	61,952.00
17.	Manipur	17,418.00	17,418.00	17,418.00	17,418.00	17,418.00	17,418.00
18.	Meghalaya	9,496.00	9,496.00	9,496.00	9,496.00	9,496.00	9,496.00
19.	Mizoram	16,717.00	16,717.00	5,641.00	5,641.00	5,641.00	7,479.00
20.	Nagaland	9,222.00	9,222.00	9,222.00	8,623.00	8,623.00	8,623.00
21.	Odisha	58,136.00	58,136.00	58,136.00	61,204.00*	61,204.00	61,204.00
22.	Punjab	3,084.00	3,084.00	3,084.00	3,084.00	3,084.00	3,084.00
23.	Rajasthan	32,639.00	32,737.00	32,737.00	32,737.00	32,737.00	32,863.00
24.	Sikkim	5,841.00	5,841.00	5,841.00	5,841.00	5,841.00	5,841.00
25.	Tamil Nadu	22,877.00	22,877.00	22,877.00	22,877.00	22,877.00	23,188.00
26.	Telangana	NA	NA	26,904.00	26,904.00	26,904.00	27,688.00
27.	Tripura	6,294.00	6,294.00	6,294.00	6,294.00	6,294.00	6,294.00
28.	Uttar Pradesh	16,583.00	16,583.00	16,582.00	16,582.00	16,582.00	17,384.00
29.	Uttarakhand	34,651.00	34,651.00	38,000.00	38,000.00	38,000.00	38,000.00
30.	West Bengal	11,879.00	11,879.00	11,879.00	11,879.00	11,879.00	11,879.00
31.	Andaman and Nicobar Islands	7,171.00	7,171.00	7,171.00	7,171.00	7,171.00	7,171.00
32.	Chandigarh	34.00	35.00	35.00	35.00	35.00	35.00
33.	Dadra & Nagar Haveli	204.00	204.00	204.00	204.00	204.00	214.00@
34.	Daman & Diu	8.00	8.00	8.00	8.00	8.00	214.00@
35.	Lakshadweep	0.00	0.00	0.00	0.00	0.00	0.00
36.	Puducherry	13.00	13.00	13.00	13.00	13.00	13.00
Total		7,69,538.00	7,71,821.00	7,64,566.00	7,67,419.00	7,67,419.00	7,75,288.00

Source: India State of Forest Report (2011 to 2021)

#The figure include 295 km² of proposed Reserved Forest and 1,838 km² of deemed Reserved Forest (vested forest and ecologically fragile land)

*Reserved Forest in Odisha includes 9,175 km² of the proposed Reserved Forest, Protected Forest in Odisha includes 15,117 km² revenue forest/deemed forest and 191 km² of private forest.

@The figure includes both Dadra & Nagar Haveli and Daman & Diu



Table 1.4. Percent recorded forest area in respect of State geographical area

S. No.	State/UT	Geographical area	Year					
			2011	2013	2015	2017	2019	2021
1.	Andhra Pradesh	1,62,968.00	23.20	23.20	13.54	22.86	22.86	22.86
2.	Arunachal Pradesh	83,743.00	61.55	61.55	61.39	61.39	61.39	61.55
3.	Assam	78,438.00	34.21	34.21	34.21	34.21	34.21	34.21
4.	Bihar	94,163.00	6.87	6.87	6.90	7.30	7.30	7.90
5.	Chhattisgarh	1,35,192.00	44.21	44.21	44.21	44.21	44.21	44.25
6.	Delhi	1,483.00	5.73	5.73	6.88	6.88	6.88	6.95
7.	Goa	3,702.00	33.06	33.09	33.09	33.09	33.09	34.33
8.	Gujarat	1,96,244.00	9.66	11.05	11.04	11.03	11.03	11.14
9.	Haryana	44,212.00	3.53	3.52	3.93	3.53	3.53	3.53
10.	Himachal Pradesh	55,673.00	66.52	66.52	66.52	66.52	66.52	68.16
11.	Jammu & Kashmir	2,22,236.00	9.10	9.10	9.10	9.10	9.10	9.07
12.	Jharkhand	79,716.00	29.61	29.61	29.61	29.61	29.61	31.51
13.	Karnataka	1,91,791.00	19.96	19.96	19.96	19.96	19.96	19.96
14.	Kerala	38,852.00	28.99	29.10	29.10	29.11	29.11	29.66
15.	Madhya Pradesh	3,08,252.00	30.72	30.72	30.72	30.72	30.72	30.72
16.	Maharashtra	3,07,713.00	20.13	19.94	20.01	20.01	20.01	20.13
17.	Manipur	22,327.00	78.01	78.01	78.01	78.01	78.01	78.01
18.	Meghalaya	22,429.00	42.34	42.34	42.34	42.34	42.34	42.34
19.	Mizoram	21,081.00	79.30	79.30	26.76	26.76	26.34	35.48
20.	Nagaland	16,579.00	55.62	55.62	55.62	52.01	52.01	52.01
21.	Odisha	1,55,707.00	37.34	37.34	37.34	39.31	39.31	39.31
22.	Punjab	50,362.00	6.12	6.12	6.12	6.12	6.12	6.12
23.	Rajasthan	3,42,239.00	9.54	9.57	9.57	9.57	9.57	9.60
24.	Sikkim	7,096.00	82.31	82.31	82.31	82.31	82.31	82.31
25.	Tamil Nadu	1,30,068.00	17.59	17.59	17.59	17.59	17.59	17.83
26.	Telangana	1,12,077.00	NA	NA	23.42	24.00	24.00	24.70
27.	Tripura	10,486.00	60.02	60.02	60.02	60.02	60.02	60.02
28.	Uttar Pradesh	2,40,928.00	6.88	6.88	6.88	6.88	6.88	7.22
29.	Uttarakhand	53,483.00	64.79	64.79	71.05	71.05	71.05	71.05
30.	West Bengal	88,752.00	13.38	13.38	13.38	13.38	13.38	13.38
31.	Andaman and Nicobar Islands	8,249.00	86.93	86.93	86.93	86.93	86.93	86.93
32.	Chandigarh	114.00	29.82	30.70	30.70	30.70	30.70	30.70
33.	Dadra & Nagar Haveli	491.00	41.55	41.55	41.55	41.55	41.55	35.55*
34.	Daman & Diu	111.00	7.38	7.38	7.14	7.21	7.21	35.55*
35.	Lakshadweep	30.00	0	0	0	0	0	0
36.	Puducherry	490.00	2.71	2.71	2.71	2.65	2.65	2.65

Source: India State of Forest Report (2011 to 2021)

*The figure includes both Dadra & Nagar Haveli and Daman & Diu

Table 1.5. Area (km²) under Reserved Forests

S. No.	State/UT	Year					
		2011	2013	2015	2017	2019	2021
1.	Andhra Pradesh	50,479.00	50,479.00	31,959.00	31,959.00	31,959.00	31,959.00
2.	Arunachal Pradesh	10,546.00	10,723.00	10,589.00	10,589.00	10,589.00	12,371.00
3.	Assam	17,864.00	17,864.00	17,864.00	17,864.00	17,864.00	17,864.00
4.	Bihar	693.00	693.00	693.00	693.00	693.00	693.00
5.	Chhattisgarh	25,782.00	25,782.00	25,782.00	25,782.00	25,782.00	25,897.00
6.	Delhi	78.00	78.00	78.00	78.00	78.00	78.00
7.	Goa	253.00	253.00	253.00	253.00	253.00	119.00
8.	Gujarat	14,122.00	14,373.00	14,373.00	14,373.00	14,373.00	14,574.00
9.	Haryana	249.00	249.00	249.00	249.00	249.00	249.00
10.	Himachal Pradesh	1,898.00	1,898.00	1,898.00	1,898.00	1,898.00	1,883.00
11.	Jammu & Kashmir	17,643.00	17,643.00	17,643.00	17,643.00	17,643.00	17,655.00
12.	Jharkhand	4,387.00	4,387.00	4,387.00	4,387.00	4,387.00	4,500.00
13.	Karnataka	28,690.00	28,690.00	28,690.00	28,690.00	28,690.00	28,690.00
14.	Kerala	11,123.00	11,309.00	11,309.00	11,309.00	11,309.00	11,522.00
15.	Madhya Pradesh	61,886.00	61,886.00	61,886.00	61,886.00	61,886.00	61,886.00
16.	Maharashtra	49,226.00	51,548.00	49,546.00	49,546.00	49,546.00	50,865.00
17.	Manipur	1,467.00	1,467.00	1,467.00	1,467.00	1,467.00	984.00
18.	Meghalaya	1,113.00	1,113.00	1,113.00	1,113.00	1,113.00	1,113.00
19.	Mizoram	7,909.00	7,909.00	4,483.00	4,483.00	4,483.00	4,499.00
20.	Nagaland	86.00	86.00	86.00	234.00	234.00	234.00
21.	Odisha	26,329.12	26,329.00	26,329.00	36,049.00	36,049.00	36,049.00
22.	Punjab	44.00	44.00	44.00	44.00	44.00	44.00
23.	Rajasthan	12,454.00	12,475.00	12,475.00	12,475.00	12,475.00	12,176.00
24.	Sikkim	5,452.00	5,452.00	5,452.00	5,452.00	5,452.00	5,452.00
25.	Tamil Nadu	19,388.00	19,388.00	20,293.00	20,293.00	20,293.00	20,523.00
26.	Telangana	NA	NA	20,353.00	20,353.00	20,353.00	25,800.00
27.	Tripura	4,175.00	4,175.00	4,175.00	4,175.00	4,175.00	3,588.00
28.	Uttar Pradesh	11,660.00	11,660.00	12,071.00	12,071.00	12,071.00	11,560.00
29.	Uttarakhand	24,643.00	24,643.00	26,547.00	26,547.00	26,547.00	26,547.00
30.	West Bengal	7,054.00	7,054.00	7,054.00	7,054.00	7,054.00	7,054.00
31.	Andaman and Nicobar Islands	5,613.00	5,613.00	5,613.00	5,613.00	5,613.00	5,613.00
32.	Chandigarh	31.00	32.00	32.00	32.00	32.00	32.00
33.	Dadra & Nagar Haveli	199.00	199.00	199.00	199.00	199.00	203.00*
34.	Daman & Diu	0.24	0.24	0.00	0.00	0.00	203.00*
35.	Lakshadweep	0.00	0.00	0.00	0.00	0.00	0.00
36.	Puducherry	0.00	0.00	0.00	0.00	0.00	0.00
Total		4,22,536.36	4,25,494.24	4,24,985.00	4,34,853.00	4,34,853.00	4,42,276.00

Source: India State of Forest Report (2011 to 2021)

*The figure includes both Dadra & Nagar Haveli and Daman & Diu


 Table 1.6. Area (km²) under Protected Forests

S. No.	State/UT	Year					
		2011	2013	2015	2017	2019	2021
1.	Andhra Pradesh	12,365.00	12,365.00	5,069.00	5,069.00	5,069.00	5,069.00
2.	Arunachal Pradesh	9,528.00	9,779.00	9,779.00	9,779.00	9,779.00	11,847.00
3.	Assam	0.00	0.00	0.00	0.00	0.00	0.00
4.	Bihar	5,779.00	5,779.00	5,799.00	6,183.00	6,183.00	6,183.00
5.	Chhattisgarh	24,036.00	24,036.00	24,036.00	24,036.00	24,036.00	24,036.00
6.	Delhi	7.00	7.00	24.00	24.00	24.00	25.00
7.	Goa	845.00	0.00	0.00	0.00	0.00	755.00
8.	Gujarat	479.00	2,886.00	2,886.00	2,886.00	2,886.00	2,886.00
9.	Haryana	1,158.00	1,158.00	1,158.00	1,158.00	1,158.00	1,158.00
10.	Himachal Pradesh	33,130.00	33,130.00	33,130.00	33,130.00	33,130.00	28,887.00
11.	Jammu & Kashmir	2,551.00	2,551.00	2,551.00	2,551.00	2,551.00	2,551.00
12.	Jharkhand	19,185.00	19,185.00	19,185.00	19,185.00	19,185.00	18,922.00
13.	Karnataka	3,931.00	3,931.00	3,931.00	3,931.00	3,931.00	3,931.00
14.	Kerala	142.00	0.00	0.00	0.00	0.00	0.00
15.	Madhya Pradesh	31,098.00	31,098.00	31,098.00	31,098.00	31,098.00	31,098.00
16.	Maharashtra	8,195.00	6,727.00	6,733.00	6,733.00	6,733.00	6,433.00
17.	Manipur	4,171.00	4,171.00	4,171.00	4,171.00	4,171.00	3,254.00
18.	Meghalaya	12.00	12.00	12.00	12.00	12.00	12.00
19.	Mizoram	3,568.00	3,568.00	0.00	0.00	0.00	1,823.00
20.	Nagaland	508.00	508.00	508.00	0.00	0.00	0.00
21.	Odisha	15,525.00	15,525.00	15,525.00	25,133.00	25,133.00	25,133.00
22.	Punjab	1,137.00	1,137.00	1,137.00	1,137.00	1,137.00	1,137.00
23.	Rajasthan	17,416.00	18,217.00	18,217.00	18,217.00	18,217.00	18,543.00
24.	Sikkim	389.00	389.00	389.00	389.00	389.00	389.00
25.	Tamil Nadu	2,183.00	2,183.00	1,782.00	1,782.00	1,782.00	1,053.00
26.	Telangana	NA	NA	5,939.00	5,939.00	5,939.00	1,592.00
27.	Tripura	2.00	2.00	2.00	2.00	2.00	2.00
28.	Uttar Pradesh	1,420.00	1,420.00	1,157.00	1,157.00	1,157.00	296.00
29.	Uttarakhand	9,885.00	9,885.00	9,885.00	9,885.00	9,885.00	9,885.00
30.	West Bengal	3,772.00	3,772.00	3,772.00	3,772.00	3,772.00	3,772.00
31.	Andaman and Nicobar Islands	1,558.00	1,558.00	1,558.00	1,558.00	1,558.00	1,558.00
32.	Chandigarh	0.00	0.00	0.00	0.00	0.00	0.00
33.	Dadra & Nagar Haveli	5.00	5.00	5.00	5.00	5.00	5.00*
34.	Daman & Diu	0.00	0.00	0.00	0.00	0.00	5.00*
35.	Lakshadweep	0.00	0.00	0.00	0.00	0.00	0.00
36.	Puducherry	2.00	2.00	2.00	2.00	2.00	0.00
Total		2,13,982.00	2,14,986.00	2,09,440.00	2,18,924.00	2,18,924.00	2,12,259.00

Source: India State of Forest Report (2011 to 2021)

*The figure includes both Dadra & Nagar Haveli and Daman & Diu

Table 1.7. Area (km²) under unclassified forests

S. No.	State/UT	Year					
		2011	2013	2015	2017	2019	2021
1.	Andhra Pradesh	970.00	970.00	230.00	230.00	230.00	230.00
2.	Arunachal Pradesh	31,466.00	31,039.00	31,039.00	31,039.00	31,039.00	27,312.00
3.	Assam	8,968.00	8,968.00	8,968.00	8,968.00	8,968.00	8,972.00
4.	Bihar	1.00	1.00	1.00	1.00	1.00	566.00
5.	Chhattisgarh	9,954.00	9,954.00	9,954.00	9,954.00	9,954.00	9,863.00
6.	Delhi	0.00	0.00	0.00	0.00	0.00	0.00
7.	Goa	126.00	972.00	972.00	972.00	972.00	397.00
8.	Gujarat	4,326.00	4,388.00	4,388.00	4,388.00	4,388.00	4,398.00
9.	Haryana	152.00	152.00	152.00	152.00	152.00	152.00
10.	Himachal Pradesh	2,005.00	2,005.00	2,005.00	2,005.00	2,005.00	7,178.00
11.	Jammu & Kashmir	36.00	36.00	36.00	36.00	36.00	0.00
12.	Jharkhand	33.00	33.00	33.00	33.00	33.00	1,696.00
13.	Karnataka	5,663.00	5,663.00	5,663.00	5,663.00	5,663.00	5,663.00
14.	Kerala	0.00	0.00	0.00	0.00	0.00	0.00
15.	Madhya Pradesh	1,705.00	1,705.00	1,705.00	1,705.00	1,705.00	1,705.00
16.	Maharashtra	4,518.00	3,082.00	53,100.00	5,300.00	5,300.00	4,654.00
17.	Manipur	11,780.00	11,780.00	11,780.00	11,780.00	11,780.00	13,180.00
18.	Meghalaya	8,371.00	8,371.00	8,371.00	8,371.00	8,371.00	8,371.00
19.	Mizoram	5,240.00	5,240.00	1,158.00	1,158.00	1,158.00	1,157.00
20.	Nagaland	8,628.00	8,628.00	8,628.00	8,389.00	8,389.00	8,389.00
21.	Odisha	16,282.00	16,282.00	16,282.00	22.00	22.00	22.00
22.	Punjab	1,903.00	1,903.00	1,903.00	1,903.00	1,903.00	1,903.00
23.	Rajasthan	2,769.00	2,045.00	2,045.00	2,045.00	2,045.00	2,144.00
24.	Sikkim	0.00	0.00	0.00	0.00	0.00	0.00
25.	Tamil Nadu	1,306.00	1,306.00	802.00	802.00	802.00	1,612.00
26.	Telangana	NA	NA	612.00	612.00	612.00	296.00
27.	Tripura	2,117.00	2,117.00	2,117.00	2,117.00	2,117.00	2,704.00
28.	Uttar Pradesh	3,503.00	3,503.00	3,354.00	3,354.00	3,354.00	5,528.00
29.	Uttarakhand	123.00	123.00	1,568.00	1,568.00	1,568.00	1,568.00
30.	West Bengal	1,053.00	1,053.00	1,053.00	1,053.00	1,053.00	1,053.00
31.	Andaman and Nicobar Islands	0.00	0.00	0.00	0.00	0.00	0.00
32.	Chandigarh	3.00	3.00	3.00	3.00	3.00	3.00
33.	Dadra & Nagar Haveli	0.00	0.00	0.00	0.00	0.00	6.00*
34.	Daman & Diu	8.03	8.03	8.00	8.00	8.00	6.00*
35.	Lakshadweep	0.00	0.00	0.00	0.00	0.00	0.00
36.	Puducherry	11.00	11.00	11.00	11.00	11.00	11.00
Total		1,33,020.03	1,31,341.03	1,77,941.00	1,13,642.00	1,13,642.00	1,20,753.00

Source: India State of Forest Report (2011 to 2021)

*The figure includes both Dadra & Nagar Haveli and Daman & Diu


 Table 1.8. Area (km²) by species composition in selected States/UTs

State/UT	Type	Species	Year		
			2010-11	2011-12	2012-13
Himachal Pradesh	Coniferous	All	9,026.00	9,014.00	9,014.00
	Non coniferous	All	7,382.00	7,375.00	7,375.00
	Non coniferous	Mixed	20,625.00	20,644.00	20,644.00
Jammu and Kashmir	Coniferous	Deodar	1,075.27	1,075.27	1,075.27
		Kail	1,968.37	1,968.37	1,968.37
		Fir	3,400.93	3,400.93	3,400.93
		Chir	1,825.52	1,825.52	1,825.52
	Non coniferous	Broad leave	1,885.24	1,885.24	1,885.24
Jharkhand	Non coniferous	Sal	NA	22,771.00	22,781.00
Kerala	Non-coniferous	Teak	767.20	768.14	772.59
		Mangrove	3.43	3.66	3.66
Madhya Pradesh	Non coniferous	Teak	NA	NA	NA
		Sal	NA	NA	NA
		Mixed	NA	NA	NA
		other	NA	NA	NA
Punjab	Coniferous	NA	NA	NA	11.00
	Non Coniferous	NA	NA	NA	1,495.00
		Mixed	NA	NA	936.00
Sikkim	Non Coniferous	Mixed	2.50	3.10	4.18
		Mixed fodder	3.80	2.55	3.65
		Mixed grass	12.55	12.10	13.80
		Broom grass	3.60	3.50	3.30
Tamil Nadu	Non-coniferous	Teak	77.90	NA	NA
		Mangrove	39.00	NA	NA
		Mixed	313.38	NA	NA
Tripura	Non coniferous	Bamboo	70.29	140.41	72.31
		Cane	0.26	0.00	0.11
		Medicinal/Grass	2.69	2.11	3.44
		Mixed (Teak, Gamar, Sal, Gurjan)	95.44	91.57	113.04



Year						
2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20
9,026.00	NA	NA	NA	NA	NA	NA
7,382.00	NA	NA	NA	NA	NA	NA
20,625.00	NA	NA	NA	NA	NA	NA
1,075.27	1,075.27	1,075.27	1,075.27	1,075.27	1,075.27	NA
1,968.37	1,968.37	1,968.37	1,968.37	1,968.37	1,968.37	NA
3,400.93	3,400.93	3,400.93	3,400.93	3,400.93	3,400.93	NA
1,825.52	1,824.82	1,824.82	1,824.82	1,824.82	1,824.82	NA
1,885.24	1,885.24	1,885.24	1,885.24	1,885.24	1,885.24	NA
22,794.50	22,794.52	22,818.71	22,945.38	NA	NA	NA
748.37	767.35	774.00	758.47	772.38	767.11	765.3
3.77	3.73	3.73	3.73	3.73	3.71	3.71
18,332.00	NA	18,332.00	NA	18,332.00	NA	18,332.00
3,932.00	NA	3,932.00	NA	3,932.00	NA	3,932.00
55,436.00	NA	55,436.00	NA	55,436.00	NA	55,436.00
16,989.00	NA	16,989.00	NA	16,989.00	NA	16,989.00
11.00	11.00	11.00	11.00	11.00	11.00	11.00
1,495.00	1,495.00	1,495.00	1,495.00	1,495.00	1,495.00	1,495.00
936.00	936.00	936.00	936.00	936.00	936.00	936.00
5.50	NA	NA	NA	NA	NA	NA
4.90	NA	NA	NA	NA	NA	NA
16.50	NA	NA	NA	NA	NA	NA
3.90	NA	NA	NA	NA	NA	NA
NA	NA	NA	NA	NA	NA	NA
NA	NA	NA	NA	NA	NA	NA
NA	NA	NA	NA	NA	NA	NA
62.29	13.64	7.68	6.29	1.15	16.01	15.30
0.00	0.85	0.50	0.00	0.00	0.00	0.00
2.27	9.31	5.86	3.22	0.29	0.00	0.00
114.61	0.00	0.00	3.85	0.00	0.00	0.00



State/UT	Type	Species	Year		
			2010-11	2011-12	2012-13
Uttarakhand	Coniferous	Chir pine	NA	NA	NA
		Deodar	NA	NA	NA
		Blue pine	NA	NA	NA
		Fir and spruce	NA	NA	NA
		Cypress	NA	NA	NA
	Non-coniferous	Sal	NA	NA	NA
		Teak	NA	NA	NA
		Sissoo	NA	NA	NA
		Catechu	NA	NA	NA
		Eucalyptus	NA	NA	NA
		Oak	NA	NA	NA
West Bengal	Coniferous	Chir pine	NA	NA	NA
	Non-coniferous	Sal and associates	NA	NA	NA
		Mangrove	NA	NA	NA
		Mixed	NA	NA	NA
Andaman and Nicobar Islands	Non-coniferous	Mixed	NA	NA	NA
Chandigarh	Non-coniferous	Teak	NA	NA	NA
		Sal	NA	NA	NA
		Mixed	NA	NA	NA
		Open	NA	NA	NA
Dadra and Nagar Haveli	Non-coniferous	Mixed	198.76	198.76	198.76

Source: SFDs



Year						
2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20
NA	3,973.84	3,973.84	3,973.84	3,973.84	NA	NA
NA	187.83	187.83	187.83	187.83	NA	NA
NA	185.49	185.49	185.49	185.49	NA	NA
NA	927.65	927.65	927.65	927.65	NA	NA
NA	29.65	29.65	29.65	29.65	NA	NA
NA	3,130.54	3,130.54	3,130.54	3,130.54	NA	NA
NA	202.09	202.09	202.09	202.09	NA	NA
NA	151.14	151.14	151.14	151.14	NA	NA
NA	57.97	57.97	57.97	57.97	NA	NA
NA	214.12	214.12	214.12	214.12	NA	NA
NA	3,830.88	3,830.88	3,830.88	3,830.88	NA	NA
NA	301.75	301.75	301.75	301.75	301.75	301.75
NA	2,928.00	2,928.00	2,928.00	2,928.00	2,928.00	2,928.00
NA	2,032.24	2,032.24	2,032.24	2,032.24	2,032.24	2,032.24
NA	11,566.01	11,566.01	11,566.01	11,585.01	11,585.01	11,639.52
NA	703.60	703.60	703.60	703.60	703.60	703.60
5,633.13	NA	NA	NA	NA	NA	NA
24,244.88	NA	NA	NA	NA	NA	NA
26,018.38	NA	NA	NA	NA	NA	NA
3,876.01	NA	NA	NA	NA	NA	NA
198.76	NA	NA	NA	NA	NA	NA


 Table 1.9. Area (km²) under various Forest Type Groups of India

Group No.	Forest Type Group	Area (km ²)	% of Grand Total
1.	Tropical Wet Evergreen Forests	20,054	2.61
2.	Tropical Semi Evergreen Forests	71,171	9.27
3.	Tropical Moist Deciduous Forests	1,35,492	17.65
4.	Littoral & Swamp Forests	5,596	0.73
5.	Tropical Dry Deciduous Forests	3,13,617	40.86
6.	Tropical Thorn Forests	20,877	2.72
7.	Tropical Dry Evergreen Forests	937	0.12
8.	Subtropical Broadleaved Hill Forests	32,706	4.26
9.	Subtropical Pine Forests	18,102	2.36
10.	Subtropical Dry Evergreen Forests	180	0.02
11.	Montane Wet Temperate Forests	20,435	2.66
12.	Himalayan Moist Temperate Forests	25,743	3.35
13.	Himalayan Dry Temperate Forests	5,627	0.73
14.	Sub Alpine Forests	14,995	1.96
15.	Moist Alpine Scrub	959	0.13
16.	Dry Alpine Scrub	2,922	0.38
	Plantation/TOF	64,839	8.45
	Total (Forest Cover + Scrub)	7,54,252	98.26
	Grass land in different forest type groups (without forest cover)	13,329	1.74
	Grand Total	7,67,581	100.00

Source: India State of Forest Report 2019




 Table 1.10. Area (km²) under various Forest Type Groups in States/UTs

S. No.	State/UT	Group 1	Group 2	Group 3	Group 4	Group 5	Group 6	Group 7	Group 8
1.	Andhra Pradesh	0.00	0.00	1,752.05	456.07	30,920.40	1,694.08	452.55	0.00
2.	Arunachal Pradesh	2,354.70	15,280.30	854.83	0.00	0.00	0.00	0.00	16,921.31
3.	Assam	2,115.36	12,839.42	7,088.15	154.80	24.19	0.00	0.00	9.79
4.	Bihar	0.00	2.61	458.66	18.27	4,885.79	0.00	0.00	0.00
5.	Chhattisgarh	0.00	0.00	22,604.45	0.00	33,005.65	0.00	0.00	0.00
6.	Delhi	0.00	0.00	0.00	0.00	20.51	62.95	0.00	0.00
7.	Goa	506.33	483.38	906.80	26.00	0.50	0.00	0.00	0.00
8.	Gujarat	0.00	0.00	2,694.44	1,177.27	7,679.73	3,904.41	0.00	0.00
9.	Haryana	0.00	0.00	0.00	0.00	723.23	448.08	0.00	0.00
10.	Himachal Pradesh	0.00	0.00	208.63	0.00	2,848.42	0.00	0.00	0.00
11.	Jharkhand	0.00	0.00	630.52	0.00	22,212.69	0.00	0.00	0.00
12.	Karnataka	5,143.60	4,850.22	8,173.92	10.04	9,112.66	5,111.79	0.00	431.28
13.	Kerala	3,343.83	2,664.21	2,440.58	10.46	343.36	1.03	0.00	0.00
14.	Madhya Pradesh	0.00	0.00	6,586.34	15.07	74,394.46	882.97	0.00	1.35
15.	Maharashtra	0.00	6,659.15	17,068.21	322.56	28,662.37	219.22	0.00	661.19
16.	Manipur	0.00	5,440.38	4,413.95	135.48	0.00	0.00	0.00	6,623.69
17.	Meghalaya	2,000.61	504.69	9,869.20	0.00	0.00	0.00	0.00	3,593.38
18.	Mizoram	0.00	12,254.39	5,648.50	0.00	0.00	0.00	0.00	7.94
19.	Nagaland	722.19	2,900.07	5,030.79	0.00	0.00	0.00	0.00	2,148.80
20.	Odisha	0.00	276.61	21,383.34	385.66	30,117.26	0.00	0.00	0.00
21.	Punjab	0.00	0.00	0.00	0.00	1,283.09	87.20	0.00	0.00
22.	Rajasthan	0.00	0.00	0.00	0.00	15,979.03	2,459.57	0.00	0.00
23.	Sikkim	0.00	0.00	264.33	0.00	0.00	0.00	0.00	905.73
24.	Tamil Nadu	787.57	852.80	1,794.32	92.06	11,392.86	3,885.54	385.74	195.62
25.	Telangana	0.00	0.00	49.23	0.00	23,076.14	321.21	0.00	0.00
26.	Tripura	0.00	2,718.15	3,249.43	0.00	0.00	0.00	0.00	0.00



Group 9	Group 10	Group 11	Group 12	Group 13	Group 14	Group 15	Group 16	Plantation/TOF	Total*
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2,469.17	37,744.32
754.89	0.00	16,531.13	4,986.83	540.45	7,810.33	5,605.56	481.74	652.68	72,774.75
119.72	0.00	0.00	0.00	0.00	0.00	0.00	0.00	6,302.34	28,653.77
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2,195.82	7,561.15
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	609.99	56,220.09
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	112.28	195.74
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	314.48	2,237.49
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2,395.59	17,851.44
12.94	0.00	0.00	0.00	0.00	0.00	0.00	0.00	572.48	1,756.73
2,841.11	0.00	0.00	8,084.32	502.51	661.47	3,779.78	335.70	1,213.17	20,475.11
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1,456.25	24,299.46
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	10,343.97	43,177.48
0.00	0.00	453.10	0.00	0.00	0.00	0.00	0.00	12,061.62	21,318.19
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1,651.45	83,531.64
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1,441.35	55,034.05
693.01	0.00	774.36	13.49	0.00	0.00	0.00	0.00	129.64	18,224.00
1,889.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	581.44	18,438.32
92.75	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.83	18,006.41
761.50	0.00	1,446.16	9.16	0.00	0.00	0.00	0.00	129.39	13,148.06
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3,792.21	55,955.08
27.76	0.00	0.00	0.00	0.00	0.00	0.00	0.00	483.52	1,881.57
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2,950.95	21,389.55
0.00	0.00	874.93	231.20	0.00	912.14	463.85	0.00	133.24	3,785.42
0.00	0.00	401.99	0.00	0.00	0.00	0.00	0.00	7,825.20	27,613.70
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	859.73	24,306.31
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1,786.80	7,754.38



S. No.	State/UT	Group 1	Group 2	Group 3	Group 4	Group 5	Group 6	Group 7	Group 8
27.	Uttar Pradesh	0.00	21.75	2,927.42	295.81	7,482.63	799.27	0.00	0.00
28.	Uttarakhand	0.00	0.00	5,288.20	0.76	1,658.92	0.00	0.00	0.00
29.	West Bengal	0.00	357.90	1,462.56	2,157.69	3,280.08	0.00	0.00	469.60
30.	Andaman and Nicobar Islands	3,268.63	2,061.92	570.06	624.30	0.00	0.00	0.00	0.00
31.	Chandigarh	0.00	0.00	0.00	0.00	10.25	0.00	0.00	0.00
32.	Dadra & Nagar Haveli	0.00	0.00	0.00	0.00	14.30	0.00	0.00	0.00
33.	Daman & Diu	0.00	0.00	0.00	4.45	0.40	3.19	0.00	0.00
34.	Jammu & Kashmir	0.00	0.00	0.00	0.00	2,072.63	0.00	0.00	0.00
35.	Ladakh	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
36.	Lakshadweep	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
37.	Puducherry	0.00	0.00	0.00	1.64	0.00	0.00	0.00	0.00
Total		20,242.82	70,167.95	1,33,601.55	5,888.39	3,11,201.55	19,880.51	838.29	31,969.68

Source: Atlas Forest Types of India 2020, Forest Survey of India, Dehradun

*Includes forest cover, scrub and grassland without forest cover





Group 9	Group 10	Group 11	Group 12	Group 13	Group 14	Group 15	Group 16	Plantation/ TOF	Total*
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3,966.66	15,493.54
7,746.54	0.00	0.00	8,394.89	266.67	1,001.45	1,645.12	32.70	487.09	26,522.34
0.00	0.00	195.28	333.06	0.00	12.63	0.00	0.00	8,819.74	17,088.54
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	219.00	6,743.91
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	11.88	22.13
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	15.15	212.09
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	12.64	20.68
4,107.29	170.18	0.00	8,917.31	2,593.20	2,949.83	2,729.57	684.33	1,585.50	25,809.84
0.00	0.00	0.00	140.96	456.92	1,133.80	213.96	1,214.12	42.96	3,202.72
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	27.10	27.10
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	50.77	52.41
19,046.51	170.18	20,676.95	31,111.22	4,359.75	14,481.65	14,437.84	2,748.59	77,706.08	7,78,529.51





Table 1.11. Total growing stock (M cum) of forests and ToF

S. No.	State/UT	Year					
		2011	2013	2015	2017	2019	2021
1.	Andhra Pradesh	370.77	297.98	212.39	218.39	186.70	188.87
2.	Arunachal Pradesh	567.21	527.45	502.22	511.49	533.08	492.47
3.	Assam	214.83	189.99	176.69	163.32	138.36	136.62
4.	Bihar	82.38	70.99	66.54	65.99	67.19	71.56
5.	Chhattisgarh	404.45	423.42	444.96	410.01	458.88	506.94
6.	Delhi	2.75	1.52	1.65	1.78	2.23	2.26
7.	Goa	11.61	14.24	13.47	13.35	15.19	17.02
8.	Gujarat	166.25	159.63	164.91	166.02	130.91	129.96
9.	Haryana	20.16	19.58	20.76	20.90	21.78	23.57
10.	Himachal Pradesh	342.46	338.06	338.58	338.78	372.26	373.92
11.	Jammu & Kashmir	375.13	377.25	383.90	378.92	416.77	429.60
12.	Jharkhand	167.62	159.68	183.83	181.48	168.15	175.15
13.	Karnataka	416.89	384.16	383.58	417.12	437.11	423.86
14.	Kerala	191.64	198.06	204.05	218.98	202.36	221.57
15.	Madhya Pradesh	334.77	333.98	368.80	383.09	449.01	492.49
16.	Maharashtra	440.70	348.20	383.03	417.12	408.88	423.19
17.	Manipur	81.57	59.66	60.40	60.95	48.10	60.09
18.	Meghalaya	66.38	59.93	58.80	55.97	50.12	56.36
19.	Mizoram	77.43	67.52	69.50	61.81	65.41	74.92
20.	Nagaland	53.64	48.97	49.05	48.32	43.24	45.88
21.	Orissa	358.82	310.26	323.88	339.52	394.06	383.65
22.	Punjab	35.02	30.08	31.15	32.95	29.68	32.92
23.	Rajasthan	115.95	113.26	123.24	128.14	113.46	117.19
24.	Sikkim	20.85	26.26	27.31	28.23	37.26	35.64
25.	Tamil Nadu	214.73	178.18	186.35	194.07	173.27	174.48
26.	Telangana	NA	NA	94.98	100.12	122.41	123.96
27.	Tripura	29.26	29.78	29.81	28.24	26.50	30.59
28.	Uttarakhand	205.08	210.62	219.87	224.19	193.66	211.14
29.	Uttar Pradesh	481.01	492.42	460.28	438.19	425.21	419.41
30.	West Bengal	138.21	125.04	122.01	114.73	87.50	99.89
31.	Andaman and Nicobar Islands	53.85	58.50	58.87	56.51	93.57	127.27
32.	Chandigarh	0.37	0.34	0.43	0.42	0.79	0.50
33.	Dadra & Nagar Haveli	4.83	2.53	2.56	2.64	1.90	1.54*
34.	Daman & Diu	0.12	0.11	0.12	0.12	0.24	1.54*
35.	Lakshadweep	0.05	0.05	0.06	0.06	0.07	0.05
36.	Puducherry	0.41	0.38	0.39	0.36	0.45	0.41
Total		6,047.17	5,658.05	5,768.39	5,822.27	5,915.76	6,167.50

Source: India State of Forest Report (2011 to 2021)

*The figure includes both Dadra & Nagar Haveli and Daman & Diu

Table 1.12. Area (km²) under different mangrove sites

S. No.	State/UT	No. of mangrove sites	Name of mangrove sites*	Year#					
				2011	2013	2015	2017	2019	2021
1.	Andhra Pradesh	3	Coringa, East Godavari, Krishna	352.00	352.00	367.00	404.00	404.00	404.78
2.	Goa	1	Goa	22.00	22.00	26.00	26.00	26.00	27.34
3.	Gujarat	3	Gulf of Kutchh, Gulf of Khambhat, Dumas-Ubhrat	1,058.00	1,103.00	1,107.00	1,140.00	1,177.00	1,175.07
4.	Karnataka	4	Coondapur, Dakshin Kannada/ Honnavar, Karwar, Manglore Forest Division	3.00	3.00	3.00	10.00	10.00	12.61
5.	Kerala	2	Vembanad, Kannur (Northern Kerala)	6.00	6.00	9.00	9.00	9.00	9.36
6.	Maharashtra	10	Achra-Ratnagiri, Devgarh-Vijay Durg, Veldur, Kundalika-Revdanda, Mumbra-Diva, Vikroli, Shreevardhan, Vaitarna, Vasai-Manori, Malvan	186.00	186.00	222.00	304.00	320.00	324.29
7.	Odisha	7	Bhaitarkanika, Mahanadi, Subernarekha, Devi, Dhamra, Mangrove Genetic Resources Centre, Chilka	222.00	213.00	231.00	243.00	251.00	258.98
8.	Tamil Nadu	5	Pichavaram, Muthupet, Ramnad, Pulicat, Kazhuveli	39.00	39.00	47.00	49.00	45.00	44.94
9.	West Bengal	1	Sunderbans	2,155.00	2,097.00	2,106.00	2,114.00	2,112.00	2,113.77
10.	Andaman and Nicobar Islands	2	North Andaman and Nicobar, South Andaman and Nicobar	617.00	604.00	617.00	617.00	616.00	616.45
11.	Daman and Diu	1	Daman Diu	1.56	1.63	3.00	3.00	3.00	3.09
12.	Puducherry	1	Yanam	1.00	1.00	2.00	2.00	2.00	1.64
Total		40		4,662.56	4,627.63	4,740.00	4,921.00	4,975.00	4,992.32

Source: *Annual Report 2021 of MoEF&CC.
#India State of Forest Reports (2011 to 2021)


 Table 1.13. Area (km²) under Very Dense Forest

S. No.	State/UT	Year					
		2011	2013	2015	2017	2019	2021
1.	Andhra Pradesh	850.00	850.00	375.00	1,957.00	1,994.00	1,994.00
2.	Arunachal Pradesh	20,868.00	20,828.00	20,804.00	20,721.00	21,095.00	21,058.00
3.	Assam	1,444.00	1,444.00	1,441.00	2,797.00	2,795.00	3,017.00
4.	Bihar	231.00	247.00	248.00	332.00	333.00	333.00
5.	Chhattisgarh	4,163.00	4,153.00	4,152.00	7,064.00	7,068.00	7,068.00
6.	Delhi	7.00	6.76	6.94	6.72	6.72	6.72
7.	Goa	543.00	543.00	542.00	538.00	538.00	538.00
8.	Gujarat	376.00	376.00	376.00	378.00	378.00	378.00
9.	Haryana	27.00	27.00	27.00	28.00	28.00	28.00
10.	Himachal Pradesh	3,224.00	3,224.00	3,224.00	3,110.00	3,113.00	3,163.00
11.	Jammu & Kashmir	4,140.00	4,140.00	4,061.00	4,075.00	4,281.00	4,157.00
12.	Jharkhand	2,590.00	2,587.00	2,588.00	2,598.00	2,603.00	2,601.00
13.	Karnataka	1,777.00	1,777.00	1,781.00	4,502.00	4,501.00	4,533.00
14.	Kerala	1,442.00	1,529.00	1,523.00	1,663.00	1,935.00	1,944.00
15.	Madhya Pradesh	6,640.00	6,632.00	6,629.00	6,563.00	6,676.00	6,665.00
16.	Maharashtra	8,736.00	8,720.00	8,712.00	8,736.00	8,721.00	8,734.00
17.	Manipur	730.00	728.00	727.00	908.00	905.00	905.00
18.	Meghalaya	433.00	449.00	449.00	453.00	489.00	560.00
19.	Mizoram	134.00	138.00	138.00	131.00	157.00	157.00
20.	Nagaland	1,293.00	1,298.00	1,296.00	1,279.00	1,273.00	1,272.00
21.	Odisha	7,060.00	7,042.00	7,023.00	6,967.00	6,970.00	7,213.00
22.	Punjab	0.00	0.00	0.00	8.00	8.00	11.00
23.	Rajasthan	72.00	72.00	76.00	78.00	78.00	78.00
24.	Sikkim	500.00	500.00	500.00	1,081.00	1,102.00	1,102.00
25.	Tamil Nadu	2,948.00	2,948.00	2,993.00	3,672.00	3,605.00	3,593.00
26.	Telangana	NA	NA	513.00	1,596.00	1,608.00	1,624.00
27.	Tripura	109.00	109.00	113.00	656.00	654.00	647.00
28.	Uttar Pradesh	1,626.00	1,623.00	2,195.00	2,617.00	2,617.00	2,627.00
29.	Uttarakhand	4,762.00	4,785.00	4,754.00	4,969.00	5,047.00	5,055.00
30.	West Bengal	2,984.00	2,971.00	2,948.00	2,994.00	3,019.00	3,037.00
31.	Andaman and Nicobar Islands	3,761.00	3,754.00	5,686.00	5,678.00	5,678.00	5,678.00
32.	Chandigarh	1.00	1.36	1.36	1.36	1.36	1.36
33.	Dadra & Nagar Haveli	0.00	0.00	0.00	0.00	0.00	1.40*
34.	Daman & Diu	0.00	0.00	1.40	1.40	1.40	1.40*
35.	Lakshadweep	0.00	0.00	0.00	0.00	0.00	0.00
36.	Puducherry	0.00	0.00	0.00	0.00	0.00	0.00
Total		83,471.00	83,502.12	85,903.70	98,158.48	99,278.48	99,779.00

Source: India State of Forest Report (2011 to 2021)

*The figure includes both Dadra & Nagar Haveli and Daman & Diu

Table 1.14. Area (km²) under Moderate Dense Forest

S. No.	States/ UT	Year					
		2011	2013	2015	2017	2019	2021
1.	Andhra Pradesh	26,242.00	26,079.00	13,093.00	14,051.00	13,938.00	13,929.00
2.	Arunachal Pradesh	31,519.00	31,414.00	31,301.00	30,955.00	30,557.00	30,176.00
3.	Assam	11,404.00	11,345.00	11,268.00	10,192.00	10,279.00	9,991.00
4.	Bihar	3,280.00	3,380.00	3,376.00	3,260.00	3,280.00	3,286.00
5.	Chhattisgarh	34,911.00	34,865.00	34,846.00	32,215.00	32,198.00	32,279.00
6.	Delhi	49.00	49.38	57.15	56.24	56.42	56.60
7.	Goa	585.00	585.00	580.00	576.00	576.00	576.00
8.	Gujarat	5,231.00	5,220.00	5,220.00	5,200.00	5,092.00	5,032.00
9.	Haryana	457.00	453.00	452.00	452.00	451.00	445.00
10.	Himachal Pradesh	6,381.00	6,381.00	6,381.00	6,705.00	7,126.00	7,100.00
11.	Jammu & Kashmir	8,760.00	8,760.00	8,815.00	8,579.00	8,612.00	8,629.00
12.	Jharkhand	9,917.00	9,667.00	9,663.00	9,686.00	9,687.00	9,689.00
13.	Karnataka	20,179.00	20,179.00	20,063.00	20,444.00	21,048.00	20,985.00
14.	Kerala	9,394.00	9,401.00	9,301.00	9,407.00	9,508.00	9,472.00
15.	Madhya Pradesh	34,986.00	34,921.00	34,902.00	34,571.00	34,341.00	34,309.00
16.	Maharashtra	20,815.00	20,770.00	20,747.00	20,652.00	20,572.00	20,589.00
17.	Manipur	6,151.00	6,094.00	5,925.00	6,510.00	6,386.00	6,228.00
18.	Meghalaya	9,775.00	9,689.00	9,584.00	9,386.00	9,267.00	9,160.00
19.	Mizoram	6,086.00	5,900.00	5,858.00	5,861.00	5,801.00	5,715.00
20.	Nagaland	4,931.00	4,736.00	4,695.00	4,587.00	4,534.00	4,449.00
21.	Odisha	21,366.00	21,298.00	21,470.00	21,370.00	21,552.00	20,995.00
22.	Punjab	736.00	736.00	735.00	806.00	801.00	793.00
23.	Rajasthan	4,448.00	4,424.00	4,426.00	4,340.00	4,342.00	4,369.00
24.	Sikkim	2,161.00	2,161.00	2,160.00	1,575.00	1,552.00	1,551.00
25.	Tamil Nadu	10,321.00	10,199.00	10,469.00	10,979.00	11,030.00	11,034.00
26.	Telangana	NA	NA	12,712.00	8,738.00	8,787.00	9,119.00
27.	Tripura	4,686.00	4,641.00	4,609.00	5,246.00	5,236.00	5,212.00
28.	Uttar Pradesh	4,559.00	4,550.00	4,060.00	4,069.00	4,080.00	4,029.00
29.	Uttarakhand	14,167.00	14,111.00	13,602.00	12,884.00	12,805.00	12,768.00
30.	West Bengal	4,646.00	4,146.00	4,172.00	4,147.00	4,160.00	4,208.00
31.	Andaman and Nicobar Islands	2,416.00	2,413.00	685.00	684.00	684.00	683.00
32.	Chandigarh	10.00	9.66	14.09	13.82	14.24	13.51
33.	Dadra & Nagar Haveli	114.00	114.00	80.00	80.00	80.00	85.56*
34.	Daman & Diu	0.62	1.87	5.82	5.82	5.69	85.56*
35.	Lakshadweep	17.18	17.18	17.22	17.04	16.09	16.09
36.	Puducherry	35.37	35.23	29.68	17.60	17.66	17.53
Total		3,20,736.17	3,18,745.32	3,15,373.96	3,08,317.52	3,08,472.10	3,06,890.00

Source: India State of Forest Report (2011 to 2021)

*The figure includes both Dadra & Nagar Haveli and Daman & Diu


 Table 1.15. Area (km²) under Open Forest

S. No.	State/UT	Year					
		2011	2013	2015	2017	2019	2021
1.	Andhra Pradesh	19,297.00	19,187.00	10,956.00	12,139.00	13,205.00	13,861.00
2.	Arunachal Pradesh	15,023.00	15,079.00	15,143.00	15,288.00	15,036.00	15,197.00
3.	Assam	14,825.00	14,882.00	14,914.00	15,116.00	15,253.00	15,304.00
4.	Bihar	3,334.00	3,664.00	3,664.00	3,707.00	3,693.00	3,762.00
5.	Chhattisgarh	16,600.00	16,603.00	16,588.00	16,268.00	16,345.00	16,370.00
6.	Delhi	120.00	123.67	124.68	129.45	132.30	131.68
7.	Goa	1,091.00	1,091.00	1,102.00	1,115.00	1,123.00	1,130.00
8.	Gujarat	9,012.00	9,057.00	9,064.00	9,179.00	9,387.00	9,516.00
9.	Haryana	1,124.00	1,106.00	1,105.00	1,108.00	1,123.00	1,130.00
10.	Himachal Pradesh	5,074.00	5,078.00	5,091.00	5,285.00	5,195.00	5,180.00
11.	Jammu & Kashmir	9,639.00	9,638.00	10,112.00	10,587.00	10,719.00	10,873.00
12.	Jharkhand	10,470.00	11,219.00	11,227.00	11,269.00	11,321.00	11,431.00
13.	Karnataka	14,238.00	14,176.00	14,577.00	12,604.00	13,026.00	13,212.00
14.	Kerala	6,464.00	6,992.00	8,415.00	9,251.00	9,701.00	9,837.00
15.	Madhya Pradesh	36,074.00	35,969.00	35,931.00	36,280.00	36,465.00	36,619.00
16.	Maharashtra	21,095.00	21,142.00	21,169.00	21,294.00	21,485.00	21,475.00
17.	Manipur	10,209.00	10,168.00	10,342.00	9,928.00	9,556.00	9,465.00
18.	Meghalaya	7,067.00	7,150.00	7,184.00	7,307.00	7,363.00	7,326.00
19.	Mizoram	12,897.00	13,016.00	12,752.00	12,194.00	12,048.00	11,948.00
20.	Nagaland	7,094.00	7,010.00	6,975.00	6,623.00	6,679.00	6,530.00
21.	Odisha	20,477.00	22,007.00	21,861.00	23,008.00	23,097.00	23,948.00
22.	Punjab	1,028.00	1,036.00	1,036.00	1,023.00	1,040.00	1,043.00
23.	Rajasthan	11,567.00	11,590.00	11,669.00	12,154.00	12,210.00	12,208.00
24.	Sikkim	698.00	697.00	697.00	688.00	688.00	688.00
25.	Tamil Nadu	10,356.00	10,697.00	12,883.00	11,630.00	11,729.00	11,792.00
26.	Telangana	NA	NA	8,366.00	10,085.00	10,187.00	10,471.00
27.	Tripura	3,182.00	3,116.00	3,089.00	1,824.00	1,836.00	1,863.00
28.	Uttar Pradesh	8,153.00	8,176.00	8,206.00	7,993.00	8,109.00	8,162.00
29.	Uttarakhand	5,567.00	5,612.00	5,884.00	6,442.00	6,451.00	6,482.00
30.	West Bengal	5,365.00	9,688.00	9,708.00	9,706.00	9,723.00	9,587.00
31.	Andaman and Nicobar Islands	547.00	544.00	380.00	380.00	381.00	383.00
32.	Chandigarh	6.00	6.24	6.58	6.38	6.43	8.01
33.	Dadra & Nagar Haveli	97.00	99.00	126.00	127.00	127.00	140.79*
34.	Daman & Diu	5.53	7.40	12.39	13.27	13.40	140.79*
35.	Lakshadweep	9.88	9.88	9.84	10.06	11.01	11.01
36.	Puducherry	14.69	14.83	25.70	36.07	34.75	35.77
	Total	2,87,820.10	2,95,651.02	3,00,395.19	3,01,797.23	3,04,498.89	3,07,120.00

Source: India State of Forest Report (2011 to 2021)

*The figure includes both Dadra & Nagar Haveli and Daman & Diu

Table 1.16. Forest Area (km²) under Scrub

S. No.	States/ UT	Year				
		2013	2015	2017	2019	2021
1.	Andhra Pradesh	10,465.00	8,562.00	9,560.00	8,255.00	8,276.00
2.	Arunachal Pradesh	121.00	264.00	247.00	229.00	797.00
3.	Assam	182.00	384.00	217.00	173.00	228.00
4.	Bihar	115.00	120.00	228.00	250.00	236.00
5.	Chhattisgarh	117.00	117.00	552.00	610.00	615.00
6.	Delhi	2.24	2.00	0.67	0.30	0.38
7.	Goa	0.00	0.00	0.00	0.00	0.00
8.	Gujarat	1,492.00	1,490.00	2,194.00	2,994.00	2,828.00
9.	Haryana	150.00	151.00	154.00	154.00	159.00
10.	Himachal Pradesh	298.00	301.00	308.00	315.00	322.00
11.	Jammu & Kashmir	2,105.00	625.00	573.00	548.00	563.00
12.	Jharkhand	670.00	685.00	669.00	688.00	584.00
13.	Karnataka	3,216.00	3,191.00	4,484.00	4,484.00	4,611.00
14.	Kerala	29.00	36.00	23.00	13.00	30.00
15.	Madhya Pradesh	6,389.00	6,383.00	6,279.00	6,002.00	5,457.00
16.	Maharashtra	4,157.00	4,157.00	4,160.00	4,256.00	4,224.00
17.	Manipur	1.00	1,182.00	1,111.00	1,181.00	1,215.00
18.	Meghalaya	372.00	348.00	505.00	600.00	663.00
19.	Mizoram	0.00	0.00	0.00	1.00	1.00
20.	Nagaland	2.00	622.00	503.00	635.00	824.00
21.	Odisha	4,424.00	4,499.00	4,306.00	4,327.00	4,924.00
22.	Punjab	37.00	37.00	33.00	33.00	34.00
23.	Rajasthan	4,211.00	4,302.00	4,579.00	4,760.00	4,809.00
24.	Sikkim	311.00	311.00	307.00	307.00	296.00
25.	Tamil Nadu	1,212.00	414.00	657.00	715.00	758.00
26.	Telangana	NA	1,874.00	3,238.00	3,615.00	2,911.00
27.	Tripura	66.00	55.00	15.00	29.00	33.00
28.	Uttar Pradesh	806.00	803.00	551.00	587.00	563.00
29.	Uttarakhand	262.00	307.00	383.00	383.00	392.00
30.	West Bengal	111.00	133.00	136.00	146.00	156.00
31.	Andaman and Nicobar Islands	57.00	1.00	1.00	1.00	1.00
32.	Chandigarh	0.56	0.03	0.02	0.10	0.38
33.	Dadra & Nagar Haveli	1.00	5.00	5.00	5.00	4.85*
34.	Daman & Diu	0.96	0.55	0.27	0.19	4.85*
35.	Lakshadweep	0.00	0.00	0.00	0.00	0.00
36.	Puducherry	0.00	0.00	0.00	0.00	0.00
Total		41,382.76	41,361.58	45,978.96	46,296.59	46,539.00

Source: India State of Forest Report (2013 to 2021)

*The figure includes both Dadra & Nagar Haveli and Daman & Diu


 Table 1.17. Area (km²) under encroachment in the selected States/UTs

S. No.	State/UT	Year			
		2010-11	2011-12	2012-13	2013-14
1.	Andhra Pradesh	0.57	NA	0.44	NA
2.	Assam	0.00	NA	NA	NA
3.	Goa	0.00	0.78	0.07	0.01
4.	Haryana	NA	NA	NA	NA
5.	Himachal Pradesh	15.88	15.61	43.11	39.17
6.	Jammu & Kashmir	183.47	133.60	133.13	NA
7.	Karnataka	1,028.70	1,017.72	1,006.39	1,028.51
8.	Kerala	45.19	45.19	54.99	54.99
9.	Madhya Pradesh	20.61	50.39	37.00	31.40
10.	Maharashtra	817.54	862.12	700.77	678.90
11.	Meghalaya	1.85	80.71	10.29	9.79
12.	Mizoram	0.32	0.01	0.09	0.08
13.	Rajasthan	NA	NA	96.98	72.58
14.	Sikkim	NA	NA	5.68	NA
15.	Tamil Nadu	143.52	NA	NA	NA
16.	Telangana	NA	NA	NA	NA
17.	Uttar Pradesh	NA	NA	NA	261.36
18.	Uttarakhand	NA	96.57	96.57	96.53
19.	West Bengal	125.06	127.54	134.96	NA
20.	Andaman and Nicobar Islands	33.27	33.27	33.27	30.98
21.	Chandigarh	NA	NA	NA	NA
22.	Dadra & Nagar Haveli	6.13	6.13	6.13	6.13
23.	Daman & Diu	0.87	0.87	0.87	0.87
24.	Puducherry	NA	NA	NA	NA

Source: SFDs



Year					
2014-15	2015-16	2016-17	2017-18	2018-19	2019-20
299.35	300.59	291.11	291.45	292.24	323.26
NA	NA	NA	NA	NA	3,641.45
NA	NA	NA	NA	NA	NA
0.96	5.39	3.32	2.93	4.56	5.73
NA	NA	NA	NA	NA	NA
NA	NA	121.49	113.07	129.29	131.09
1,008.51	1,023.39	1,024.68	1,019.74	1,038.21	1,039.05
48.60	78.01	78.01	78.01	78.01	50.22
26.22	26.22	21.05	13.76	19.73	30.60
716.27	586.22	637.19	619.41	596.64	600.58
NA	NA	NA	NA	NA	NA
0.08	0.08	1.42	0.35	0.09	0.82
115.34	101.51	108.43	100.18	131.83	NA
NA	NA	NA	NA	NA	NA
152.64	148.21	151.08	150.52	150.10	157.67
9.41	8.72	12.43	10.57	14.31	13.09
233.78	235.08	235.38	257.30	258.49	NA
96.53	96.47	36.18	96.24	118.92	117.86
137.79	102.15	101.34	93.51	7.69	97.05
20.98	20.96	18.63	18.50	18.50	18.49
0.14	0.14	0.14	0.14	0.14	0.14
0.02	0.08	0.00	0.00	0.00	0.00
0.87	0.87	0.87	0.87	0.48	0.48
0.00	0.00	0.00	0.00	0.00	0.00



Table 1.18. Area (km²) under grazing land in the selected States/UTs

S. No.	State/UT	Year			
		2010-11	2011-12	2012-13	2013-14
1.	Gujarat	NA	NA	NA	NA
2.	Jammu & Kashmir	4,584.18	NA	NA	NA
3.	Karnataka	912.00	908.00	908.00	906.00
4.	Madhya Pradesh	25.76	7.63	8.18	7.50
5.	Maharashtra	32,202.45	31,483.92	32,247.23	30,610.71
6.	Meghalaya	NA	NA	NA	81.38
7.	Uttar Pradesh	5,407.00	5,827.00	6,288.00	5,994.00
8.	Chandigarh	NA	NA	NA	NA
9.	Lakshadweep	NA	NA	NA	542.16
10.	Puducherry	NA	NA	NA	NA

Source: SFDS





Year					
2014-15	2015-16	2016-17	2017-18	2018-19	2019-20
8,510.00	8,510.00	8,510.00	8,510.00	8,510.00	8,510.00
4,584.18	4,584.18	4,584.18	4,584.18	4,584.18	4,584.18
9,040.00	9,040.00	9,040.00	9,040.00	9,040.00	9,040.00
NA	NA	NA	NA	NA	NA
28,132.08	25,421.48	28,462.80	26,352.03	23,355.58	24,197.25
NA	NA	NA	NA	NA	NA
5,583.00	5,467.00	5,676.00	5,573.00	4,786.00	NA
0.00	0.00	0.00	0.00	0.00	0.00
NA	NA	NA	NA	NA	NA
0.00	0.00	0.00	0.00	0.00	0.00





Table 1.19. Number of forest fire incidents

S. No.	State/UT	Year			
		2010-11	2011-12	2012-13	2013-14
1.	Andhra Pradesh	1,119	2,559	NA	2,143
2.	Arunachal Pradesh	485	560	26	501
3.	Assam	1,321	2,172	NA	1,608
4.	Bihar	81	196	NA	273
5.	Chhattisgarh	1,074	3,448	NA	1,530
6.	Delhi	1	0	2	0
7.	Goa	3	0	4	4
8.	Gujarat	101	146	890	179
9.	Haryana	5	42	NA	5
10.	Himachal Pradesh	870	168	1,798	397
11.	Jammu & Kashmir	7	127	355	23
12.	Jharkhand	192	307	43	554
13.	Karnataka	370	724	587	169
14.	Kerala	10	223	564	98
15.	Madhya Pradesh	1,451	3,076	1,126	753
16.	Maharashtra	882	3,329	2,716	1,433
17.	Manipur	1,275	1,507	NA	1,303
18.	Meghalaya	879	911	1,714	804
19.	Mizoram	1,691	2,218	76	2,259
20.	Nagaland	919	927	1	846
21.	Odisha	780	3,022	NA	2,221
22.	Punjab	10	83	105	36
23.	Rajasthan	87	83	NA	75
24.	Sikkim	1	3	4	0
25.	Tamil Nadu	34	262	NA	89
26.	Telangana	NA	NA	NA	NA
27.	Tripura	634	1,233	NA	588
28.	Uttar Pradesh	198	560	NA	237
29.	Uttarakhand	85	1,265	245	119
30.	West Bengal	197	117	94	118
31.	Andaman and Nicobar Islands	0	12	13	9
32.	Chandigarh	0	0	NA	0
33.	Dadra & Nagar Haveli	0	1	13	3
34.	Daman & Diu	NA	NA	NA	NA
35.	Lakshadweep	NA	NA	NA	NA
36.	Puducherry	0	0	NA	0

Source: SFDs for the year 2012-13 and 2019-20.
Forest Sector Report India 2019 for remaining years.



Year					
2014-15	2015-16	2016-17	2017-18	2018-19	2019-20
2,458	1,075	1,699	1,877	1,785	10,012
535	358	293	733	491	13
2,536	1,656	1,766	1,887	1,660	NA
140	45	321	272	223	NA
1,018	1,272	2,808	4,373	3,331	NA
0	0	2	5	4	NA
3	0	10	32	9	47
74	117	262	574	572	775
5	6	43	185	43	NA
725	672	1,832	1,164	2,544	1,445
74	13	217	113	742	321
202	457	740	1,133	666	NA
589	913	925	985	169	NA
114	91	165	456	128	359
534	294	2,675	4,781	4,929	NA
702	721	1,874	3,487	3,919	5,270
1,774	1,286	1,105	1,094	1,606	NA
1,123	1,373	966	1,454	1,664	82
2,189	2,468	1,318	1,587	2,339	251
886	722	678	930	935	NA
1,904	1,467	2,763	4,416	3,735	NA
20	7	45	320	487	NA
53	90	66	260	292	NA
0	3	0	8	1	23
284	95	113	301	221	2,125
994	1,512	1,390	13,002	13,991	12,442
1,160	476	346	431	861	NA
218	130	691	1,170	1,165	NA
379	207	1,501	376	1,385	2,158
116	138	142	364	125	418
4	1	5	15	6	24
0	0	0	1	0	NA
1	0	0	0	0	11
NA	NA	NA	NA	NA	NA
NA	NA	NA	NA	NA	NA
0	0	0	9	4	1



Table 1.20. Area (ha) damaged due to forest fires

S. No.	State/UT	Year			
		2010-11	2011-12	2012-13	2013-14
1.	Andhra Pradesh	NA	836.78	1,106.09	NA
2.	Arunachal Pradesh	30.00	1,850.00	2,485.00	85.00
3.	Assam	NA	NA	NA	NA
4.	Bihar	NA	NA	NA	NA
5.	Chhattisgarh	NA	NA	NA	NA
6.	Delhi	0.01	0.02	0.01	0.02
7.	Goa	NA	12.00	28.00	3.05
8.	Gujarat	NA	NA	NA	33,130.00
9.	Haryana	NA	9.91	447.82	20.38
10.	Himachal Pradesh	7,837.00	1,758.15	20,774.05	3,237.52
11.	Jammu & Kashmir	664.63	410.70	1,260.15	398.87
12.	Jharkhand	666.00	400.00	4,607.00	20,808.00
13.	Karnataka	NA	NA	NA	58,682.30
14.	Kerala	2,364.41	5,640.26	2,359.68	2,633.15
15.	Madhya Pradesh	19,322.00	15,090.00	5,045.00	3,425.00
16.	Maharashtra	38,467.00	72,247.00	34,148.00	16,504.00
17.	Manipur	NA	NA	NA	NA
18.	Meghalaya	NA	NA	21.31	274.60
19.	Mizoram	1,431.50	1,845.50	1,056.71	5,563.10
20.	Nagaland	1,188.00	NA	500.00	25.00
21.	Odisha	NA	NA	NA	NA
22.	Punjab	3,200.00	1,717.33	2,616.00	1,598.40
23.	Rajasthan	1,379.01	535.16	NA	NA
24.	Sikkim	523.60	21.00	272.30	881.00
25.	Tamil Nadu	1,510.47	NA	NA	NA
26.	Telangana	NA	NA	NA	NA
27.	Tripura	NA	NA	NA	NA
28.	Uttar Pradesh	NA	NA	NA	NA
29.	Uttarakhand	231.80	2,826.30	384.05	930.33
30.	West Bengal	1,827.14	1,420.36	792.12	646.28
31.	Andaman and Nicobar Islands	310.42	34.27	2,061.06	2,369.25
32.	Chandigarh	0.00	0.00	NA	0.0
33.	Dadra & Nagar Haveli	169.95	77.62	51.11	60.50
34.	Daman & Diu	NA	NA	NA	NA
35.	Lakshadweep	NA	NA	NA	NA
36.	Puducherry	0.10	0.10	NA	0.20

Source: SFDs



Year					
2014-15	2015-16	2016-17	2017-18	2018-19	2019-20
1,800.45	6,181.31	11,683.42	7,554.78	8,455.90	6,381.91
10.50	11.00	NA	NA	NA	NA
NA	NA	NA	NA	NA	39.00
68,050.00	73,030.00	81,610.00	49,570.00	73,410.00	NA
NA	NA	NA	NA	NA	NA
NA	NA	NA	NA	NA	NA
30.00	25.00	27.22	113.86	34.30	89.82
3,922.00	5,513.00	3,188.00	6,141.00	3,606.00	2,361.00
23.64	19.30	207.00	90.00	788.00	NA
6,726.49	5,749.95	19,535.76	9,408.00	25,858.00	8,961.70
704.80	776.00	2,499.00	1,403.00	1,007.00	556.00
285.06	843.69	862.00	NA	NA	NA
168.67	279.00	6,976.85	3,160.00	1,350.00	NA
1,696.42	1,975.37	3,290.00	1,115.00	1737.394	1148.626
3,490.00	2,082.00	9,439.00	17,039.00	9,861.00	13,951.00
26,560.00	25,553.00	33,067.00	40,390.00	33,693.61	19,572.00
NA	NA	NA	NA	NA	NA
202.00	161.00	520.00	1,335.00	40.00	70.50
4,542.75	228.45	523.56	641.54	953.04	873.49
NA	NA	NA	NA	NA	NA
NA	NA	NA	NA	NA	NA
628.00	600.00	1,800.00	1,400.00	5,800.00	NA
NA	NA	NA	NA	NA	NA
502.00	502.00	307.30	328.71	305.50	95.00
1,410.66	956.07	2,131.42	1,345.13	2,104.10	3,060.35
1,865.00	2,418.00	6,226.00	19,214.00	17,314.00	12,556.00
NA	NA	NA	NA	NA	NA
NA	NA	NA	NA	NA	NA
930.33	701.36	4,433.75	1,244.64	4,520.24	2,981.53
3,166.26	3,673.43	2,23,054.41	1,361.61	1,770.05	1,793.39
492.50	0.02	16.24	26.78	92.32	5,229.34
0.00	0.00	0.00	80.00	0.00	0.00
114.87	75.97	23.71	104.96	70.90	29.98
NA	NA	NA	NA	NA	NA
NA	NA	NA	NA	NA	NA
0.10	0	0	0	1.80	2.10



Table 1.21. Economic loss (₹ lakh) due to forest fires in selected States/UTs

S. No.	State/UT	Year									
		2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20
1.	Arunachal Pradesh	4.28	24.54	2.60	NA	NA	NA	NA	NA	NA	NA
2.	Gujarat	NA	NA	344.96	NA	5.17	15.28	12.94	23.06	16.22	13.20
3.	Himachal Pradesh	97.69	43.08	276.83	52.31	113.27	134.78	350.68	196.41	325.48	167.40
4.	Kerala	0.69	1.89	1.04	2.46	1.11	0.25	2.96	0.53	1.53	0.62
5.	Maharashtra	18.28	35.43	21.61	21.27	26.38	20.65	32.00	67.83	100.13	134.58
6.	Mizoram	5.83	26.73	0.51	0.19	12.35	0.50	0.64	0.05	NA	NA
7.	Nagaland	0.06	NA	NA	NA	NA	NA	NA	NA	NA	NA
8.	Tamil Nadu	NA	NA	NA	NA	0.00	0.00	0.00	0.00	0.00	0.00
9.	Uttarakhand	0.29	3.03	4.28	4.39	4.39	7.94	46.50	18.34	90.57	55.92
10.	West Bengal	70.02	NA	158.53	21.65	NA	59.03	NA	61.15	48.31	64.23
11.	Andaman and Nicobar Islands	0.00	0.00	0.00	0.00	NA	NA	0.00	0.00	0.00	NA
12.	Dadra & Nagar Haveli	NA	NA	NA	NA		0.00	0.00	0.00	0.00	0.00

Source: SFDs

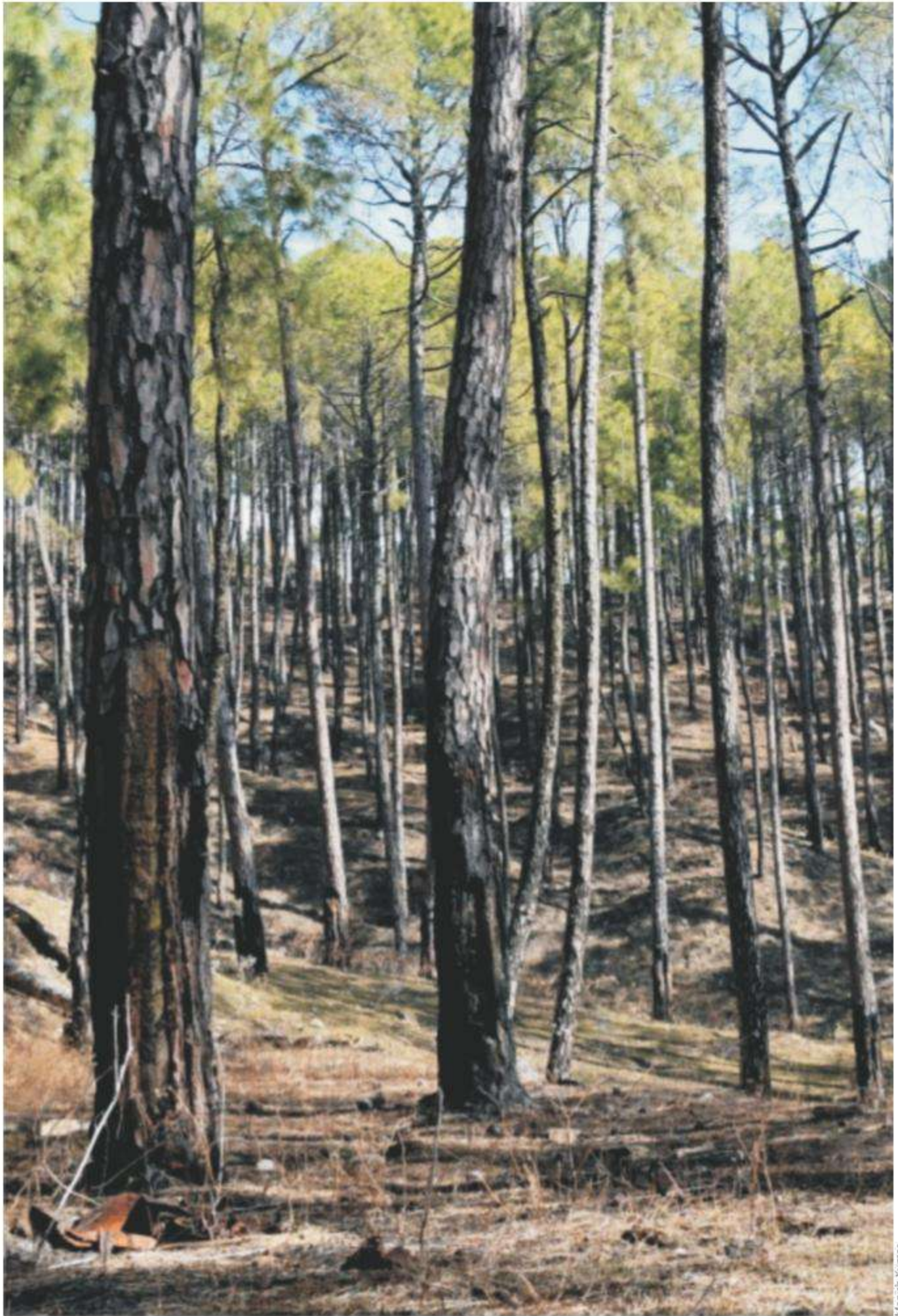




Table 1.22. Approved number of cases for diversion of forests land for non-forestry purposes under FCA 1980

S. No.	State/UT	Year			
		2010-11	2011-12	2012-13	2013-14
1.	Andhra Pradesh	16	18	8	5
2.	Arunachal Pradesh	18	14	6	15
3.	Assam	6	4	2	1
4.	Bihar	37	14	4	11
5.	Chhattisgarh	19	13	4	5
6.	Delhi	2	0	0	4
7.	Goa	4	1	0	0
8.	Gujarat	115	38	23	27
9.	Haryana	285	239	188	225
10.	Himachal Pradesh	124	82	11	7
11.	Jammu & Kashmir	0	0	0	0
12.	Jharkhand	35	37	15	11
13.	Karnataka	21	17	5	12
14.	Kerala	2	2	6	4
15.	Madhya Pradesh	39	39	16	33
16.	Maharashtra	49	36	21	13
17.	Manipur	2	4	1	3
18.	Meghalaya	2	2	1	1
19.	Mizoram	0	0	0	1
20.	Nagaland	0	0	0	0
21.	Odisha	13	14	7	20
22.	Punjab	238	182	176	179
23.	Rajasthan	29	17	11	5
24.	Sikkim	21	45	14	28
25.	Tamil Nadu	18	11	6	4
26.	Telangana	7	7	7	8
27.	Tripura	21	12	13	5
28.	Uttar Pradesh	106	84	36	22
29.	Uttarakhand	282	52	11	11
30.	West Bengal	11	6	1	2
31.	Andaman and Nicobar Islands	0	2	1	7
32.	Chandigarh	3	4	0	1
33.	Dadra & Nagar Haveli	6	4	0	2
34.	Daman & Diu	0	1	0	0
35.	Lakshadweep	0	0	0	0
36.	Puducherry	0	0	0	0
Total		1,531	1,001	594	672

Source: MoEF&CC, Govt.



Year					
2014-15	2015-16	2016-17	2017-18	2018-19	2019-20
9	5	8	10	11	5
10	5	4	4	0	1
0	0	0	0	1	0
19	12	18	45	59	20
9	15	8	7	7	0
0	0	0	0	0	0
0	0	0	6	3	0
38	31	22	17	65	280
188	189	201	297	259	331
2	6	20	47	74	67
0	0	0	0	0	0
6	7	5	8	16	16
15	24	20	15	7	23
0	1	2	1	4	3
29	40	20	48	196	228
12	9	10	9	4	3
3	3	2	1	0	1
1	0	1	0	0	2
1	0	1	0	1	3
0	0	0	0	0	0
26	13	17	14	17	23
121	129	124	280	192	144
12	8	21	30	32	43
3	6	3	1	0	0
4	6	2	1	4	7
2	8	3	8	12	29
6	4	2	1	2	13
3	2	1	2	3	55
9	14	60	73	140	59
2	1	3	4	3	2
0	5	1	0	0	0
2	0	1	0	0	0
1	0	1	6	11	14
0	0	0	0	0	0
0	0	0	0	0	0
0	0	0	0	0	0
533	543	581	935	1,123	1,372



Table 1.23. Extent of forests land (ha) diverted for non-forestry purposes under FCA 1980

S. No.	State/UT	Year			
		2010-11	2011-12	2012-13	2013-14
1.	Andhra Pradesh	3,841.94	928.82	270.98	409.29
2.	Arunachal Pradesh	605.20	694.48	326.45	1,992.79
3.	Assam	16.18	100.92	121.60	8.88
4.	Bihar	843.50	2,190.20	96.41	247.81
5.	Chhattisgarh	997.58	4,642.67	250.24	1,269.78
6.	Delhi	3.74	0.00	0.00	3.43
7.	Goa	166.68	11.10	0.00	0.00
8.	Gujarat	1,237.27	598.72	862.09	148.50
9.	Haryana	351.22	331.36	111.35	609.99
10.	Himachal Pradesh	1,336.79	318.72	565.24	22.52
11.	Jammu & Kashmir	0.00	0.00	0.00	0.00
12.	Jharkhand	3,059.01	1,888.87	1,768.06	496.18
13.	Karnataka	776.08	233.49	2.52	77.12
14.	Kerala	5.03	6.63	0.58	31.20
15.	Madhya Pradesh	2,593.78	1,534.44	1,561.94	2,744.36
16.	Maharashtra	1,718.76	634.45	646.26	1,234.45
17.	Manipur	36.00	7.88	205.00	1,325.82
18.	Meghalaya	0.16	123.87	114.02	0.98
19.	Mizoram	0.00	0.00	0.00	384.03
20.	Nagaland	0.00	0.00	0.00	0.00
21.	Odisha	1,064.47	1,278.71	2,770.80	807.14
22.	Punjab	333.71	93.05	157.53	590.49
23.	Rajasthan	1,909.06	154.84	558.37	317.55
24.	Sikkim	187.14	82.70	14.11	97.51
25.	Tamil Nadu	14.76	39.54	25.57	32.80
26.	Telangana	216.24	147.34	1,415.37	6,089.94
27.	Tripura	399.19	31.19	26.00	65.20
28.	Uttar Pradesh	563.67	170.14	226.48	812.13
29.	Uttarakhand	970.41	174.46	703.65	208.36
30.	West Bengal	177.67	35.61	2.60	6.00
31.	Andaman and Nicobar Islands	0.00	4.14	8.43	10.57
32.	Chandigarh	1.44	0.31	0.00	0.07
33.	Dadra & Nagar Haveli	2.63	1.58	0.00	5.38
34.	Daman & Diu	0.00	3.95	0.00	0.00
35.	Lakshadweep	0.00	0.00	0.00	0.00
36.	Puducherry	0.00	0.00	0.00	0.00
Total		23,429.31	16,464.18	12,811.64	20,050.26

Source: MoEF&CC, Govt.



Year					
2014-15	2015-16	2016-17	2017-18	2018-19	2019-20
376.63	1,751.08	16.29	1,215.87	502.15	196.93
277.52	62.41	182.30	222.86	0.00	4,577.84
0.00	0.00	0.00	0.00	1.00	0.00
144.55	35.53	165.68	571.67	330.86	427.11
907.34	2,100.61	752.08	294.12	641.86	0.00
0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	42.49	1.19	0.00
384.95	529.94	310.03	24.68	1,153.37	1,758.53
110.36	340.52	360.98	322.10	531.77	566.18
284.37	216.83	31.81	294.44	666.22	414.22
0.00	0.00	0.00	0.00	0.00	0.00
1,313.31	271.87	303.82	351.73	1,448.05	903.90
238.43	247.10	199.20	320.71	140.64	389.16
0.00	9.53	4.16	0.17	2.88	0.80
2,139.14	2,609.11	896.63	4,548.37	6,148.83	2,095.89
1,222.21	1,243.80	1,519.78	1,365.08	431.39	183.79
324.70	86.14	96.00	58.56	0.00	24.50
138.11	0.00	4.82	0.00	0.00	0.03
74.49	0.00	0.24	0.00	17.50	46.48
0.00	0.00	0.00	0.00	0.00	0.00
3,990.22	902.97	296.56	1,934.73	3,635.74	4,075.63
277.67	186.27	45.87	649.30	630.99	283.83
1,706.91	110.68	2,176.63	130.69	801.37	511.03
0.99	27.99	12.28	0.61	0.00	0.00
21.86	512.42	9.77	0.76	32.33	27.95
161.38	2,420.46	2.49	4,891.81	2,309.08	377.94
33.23	61.05	11.12	3.33	8.48	294.38
390.66	212.32	123.83	6.96	138.11	21.67
164.43	1,401.94	171.57	1,067.97	295.10	169.48
6.31	78.00	124.87	75.99	26.91	102.33
0.00	14.97	5.26	0.00	0.00	0.00
40.23	0.00	0.02	0.00	0.00	0.00
0.01	0.00	1.50	4.18	5.43	11.70
0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00
14,730.01	15,435.54	7,825.59	18,399.17	19,901.24	17,461.30



Table 1.24. Category wise diversion (ha) of forests land for non-forestry purposes under FCA 1980

S. No.	Category	Year				
		2010	2011	2012	2013	2014
1.	Approach access	0.00	0.00	0.00	0.00	0.00
2.	Borehole prospecting	0.00	0.00	0.00	0.00	45.99
3.	Canal	0.00	0.00	0.00	0.00	0.00
4.	Defense	2,084.15	19.90	538.93	931.57	1,647.67
5.	Dispensary/Hospital	1.60	0.00	0.01	0.55	39.86
6.	Drinking water	19.42	19.42	14.63	5.81	2.51
7.	Forest village conversion	0.00	0.00	0.00	0.00	0.00
8.	Hydel	3,916.86	122.60	225.26	1,731.70	447.92
9.	Industry	9.20	0.00	0.00	5.94	1.11
10.	Irrigation	2,158.37	2,996.90	450.93	803.85	2,824.98
11.	Mining	7,007.95	6,459.90	4,004.87	5,509.47	9,762.99
12.	Optical fiber cable	0.00	0.00	0.00	0.00	0.00
13.	Others	661.64	681.42	739.30	1,711.22	306.06
14.	Quarrying	0.00	0.00	0.00	0.00	0.00
15.	Railway	438.61	59.12	187.41	359.86	251.91
16.	Rehabilitation	0.00	1.01	200.00	11.59	242.39
17.	Road	4,264.92	2,276.92	2,216.71	2,807.39	1,587.38
18.	School	1.71	11.55	2.86	11.14	1.00
19.	Thermal	590.61	42.55	130.36	47.72	395.85
20.	Transmission Line	1,566.19	2,258.06	2,221.15	1,323.50	1,921.43
21.	Village Electricity	0.09	4.96	0.01	0.00	0.00
22.	Wind Power	493.95	113.14	83.83	127.86	147.34
Total		23,215.27	15,067.44	11,016.26	15,389.15	19,626.38

Source: MoEF&CC, Gov.
 *Data from 01.01.2019 to 07.11.2019.



Year					Total area diverted
2015	2016	2017	2018	2019*	
0.00	0.00	0.00	2.35	5.93	8.28
5.00	153.11	0.00	0.00	0.00	204.10
0.00	0.00	0.00	0.00	0.00	0.00
203.00	0.98	3,164.75	4,158.09	0.00	12,749.04
0.00	2.05	0.34	0.86	40.51	85.78
69.54	26.81	16.69	15.72	158.60	349.15
966.20	0.00	929.04	285.70	0.00	2,180.94
56.69	42.27	5.11	36.65	167.96	6,753.02
66.46	1.21	37.08	153.64	29.03	303.67
2,110.97	2,219.18	5,643.49	3,169.14	4,287.50	26,665.31
3,980.49	2,131.84	3,399.40	7,105.24	3,846.09	53,208.24
0.00	0.00	0.00	3.80	74.12	77.92
802.30	1,622.51	1,631.47	519.96	321.62	8,997.50
0.00	10.48	8.66	10.30	2.00	31.44
577.81	191.35	225.74	841.84	386.06	3,519.71
0.00	300.20	0.00	0.00	0.00	755.19
2,007.04	1,169.49	1,991.07	1,788.98	1,487.82	21,597.72
1.62	1.45	2.06	13.31	4.38	51.08
2,037.55	0.00	114.36	0.00	49.83	3,408.83
2,105.11	312.48	250.38	1,259.02	578.67	13,795.99
0.00	0.49	2.20	25.33	9.72	42.80
4.19	154.25	10.76	12.00	18.00	1,165.32
14,993.97	8,340.15	17,432.59	19,401.94	11,467.83	1,55,951.03


 Table 1.25. Area (km²) under wastelands

S. No.	State/UT	Total Wasteland		Geographical Area	% of geographical area	
		2008-09	2015-16		2008-09	2015-16
1.	Andhra Pradesh	24,785.92	23,981.74	1,62,989.00	15.21	14.71
2.	Arunachal Pradesh	13,738.70	13,906.16	83,743.00	16.41	16.61
3.	Assam	8,596.39	9,003.08	78,438.00	10.96	11.48
4.	Bihar	8,815.45	7,685.39	94,171.00	9.36	8.16
5.	Chhattisgarh	10,501.83	10,875.37	1,35,194.00	7.77	8.04
6.	Delhi	80.50	81.27	1,483.00	5.43	5.48
7.	Goa	514.55	515.66	3,702.00	13.90	13.93
8.	Gujarat	21,810.55	21,740.39	1,96,024.00	11.13	11.09
9.	Haryana	1,766.47	1,658.96	44,212.00	4.00	3.75
10.	Himachal Pradesh	22,832.19	22,831.91	55,673.00	41.01	41.01
11.	Jammu & Kashmir	1,76,080.25	1,75,697.00	2,22,236.00	79.23	79.06
12.	Jharkhand	11,774.36	11,767.08	79,706.00	14.77	14.76
13.	Karnataka	13,329.62	13,229.68	1,91,791.00	6.95	6.90
14.	Kerala	2,500.35	2,288.32	38,863.00	6.43	5.89
15.	Madhya Pradesh	39,934.63	39,536.62	3,08,252.00	12.96	12.83
16.	Maharashtra	36,167.54	36,075.15	3,07,690.00	11.75	11.72
17.	Manipur	5,564.90	5,651.89	22,327.00	24.92	25.31
18.	Meghalaya	4,076.43	4,135.77	22,429.00	18.17	18.44
19.	Mizoram	4,877.55	4,300.66	21,081.00	23.14	20.40
20.	Nagaland	5,105.86	5,064.17	16,579.00	30.80	30.55
21.	Odisha	17,956.54	18,422.36	1,55,707.00	11.53	11.83
22.	Punjab	741.51	462.37	50,362.00	1.47	0.92
23.	Rajasthan	83,654.88	78,851.33	3,42,239.00	24.44	23.04
24.	Sikkim	3,225.09	3,294.79	7,096.00	45.45	46.43
25.	Tamil Nadu	8,228.74	8,222.24	1,30,058.00	6.33	6.32
26.	Telangana	13,863.42	14,241.21	1,12,079.00	12.37	12.71
27.	Tripura	931.27	920.52	10,486.00	8.88	8.78
28.	Uttarakhand	12,711.69	12,726.16	53,483.00	23.77	23.79
29.	Uttar Pradesh	9,619.35	8,537.06	2,40,928.00	3.99	3.54
30.	West Bengal	1,973.87	1,654.99	88,752.00	2.22	1.86
31.	UTs	309.95	306.23	9,490.00	3.27	3.23
	Total	5,66,070.36	5,57,665.51	32,87,263.00	17.22	16.96

Source: Waste Land Atlas of India-2019 (<https://dolr.gov.in/documents/wasteland-atlas-of-india>)

Table 1.26. Area (km²) under different category of wastelands

S. No.	Category	Wasteland		% of total geographical area	
		2008-09	2015-16	2008-09	2015-16
1.	Gullied/Ravinous land-Medium	6,585.81	6,484.17	0.20	0.20
2.	Gullied/Ravinous land-Deep	3,117.48	3,108.89	0.09	0.09
3.	Land with dense scrub	80,645.55	73,972.04	2.45	2.25
4.	Land with open scrub	97,319.61	99,601.55	2.96	3.03
5.	Waterlogged and Marshy land-Permanent	1,784.93	1,627.15	0.05	0.05
6.	Waterlogged and Marshy land-Seasonal	6,265.27	5,199.45	0.19	0.16
7.	Land affected by salinity/alkalinity-Medium	5,168.68	4,723.43	0.16	0.14
8.	Land affected by salinity/alkalinity-Strong	1,633.93	1,585.66	0.05	0.05
9.	Shifting cultivation area-Current Jhum	4,396.85	3,871.27	0.13	0.12
10.	Shifting cultivation area-Abandoned Jhum	4,050.80	4,575.49	0.12	0.14
11.	Under utilised/degraded forest-Scrub dominated	86,953.78	86,411.09	2.65	2.63
12.	Under utilised/degraded forest(Agriculture)	20,821.43	21,691.08	0.63	0.66
13.	Degraded pastures/grazing land	6,867.33	6,450.07	0.21	0.2
14.	Degraded land under plantation crops	251.87	248.81	0.01	0.01
15.	Sands- Riverine	3,165.48	3,121.21	0.10	0.09
16.	Sands-Coastal sand	709.70	671.24	0.02	0.02
17.	Sands-Desert Sand	8,323.55	8,191.52	0.25	0.25
18.	Sands-Semi-stabilized to stabilized (>40m) dune	9,487.83	9,345.48	0.29	0.28
19.	Sands-Semi-stabilized to stabilized moderately high (15-40m) dune	13,044.60	11,800.79	0.40	0.36
20.	Mining Wastelands	1,818.77	2,256.33	0.06	0.07
21.	Industrial wastelands	204.55	317.20	0.01	0.01
22.	Barren rocky/Stony waste	92,165.73	94,483.78	2.80	2.87
23.	Snow cover and/or glacial area	1,11,286.82	1,07,927.78	3.39	3.28
Total		5,66,070.36	5,57,665.51	17.22	16.96

Source: Waste Land Atlas of India-2019 (<https://dolr.gov.in/documents/wasteland-atlas-of-india>)

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02

FORESTS: HUMAN AND FINANCIAL RESOURCES

In India, all the forests are spatially classified into territorial units in descending order of size i.e., *Circles, Divisions, Ranges, Blocks/Sections and Beats*. A separate functional classification has also been made for catering to the specific tasks in the Forest Department. Various cadres of human resources are required for managing and conserving the forest resources of each State. At the State Forest Departments (SFDs) the following is the order of personnel: Principal Chief Conservator of Forests (PCCF) (HoFF), PCCFs, Additional PCCFs (APCCFs), Chief Conservator of Forests (CCFs), Conservator of Forests (CFs), Deputy Conservator of Forests (DCFs), Assistant Conservator of Forests (ACFs), Forest Range Officers (FROs), Deputy Rangers, Foresters, Forest Guards and Forest Watchers. Apart from these, States also have statistical officers, ministerial staffs, and other staffs for the administrative support. The Circles, Divisions, Ranges, and Beats are headed by Chief Conservator of Forests/ Conservator of Forests, Deputy Conservator of Forests, Forest Range Officers/Rangers and Forest Guards, respectively.

The human resources for the SFDs are recruited through both the Centre and State Governments. Government of India conducts yearly examinations through Union Public Service Commission (UPSC) to recruit Indian Forest Service (IFS) officers similar to the other two All India Services of IAS and IPS. The probationer IFS officers are professionally trained at Indira Gandhi National Forest Academy (IGNFA), Dehradun and they join the SFDs as per their allocated Cadre States in the country. Varied numbers of IFS officers are recruited on annual basis depending upon the vacancy. State Governments also recruit manpower for other posts of the Department. These officers are also trained to perform their duties with excellence in respective training schools. A total of eleven training schools exist in the country for the training of FROs recruited by the State. Out of the eleven, three training schools are being supervised and managed by Central Government namely Central Academy for State Forest Service (CASFOS) Coimbatore; CASFOS, Burnihat and Central Academy of Forest Education, Kurseong and the remaining training schools are being managed by the concerned State Governments.

All the training schools for the Deputy Rangers are being managed by the concerned State Governments. The State Forest Service Officers are also promoted into IFS and the training for State Government Officers is conducted at CASFOS located at the three places namely Dehradun, Coimbatore and Burnihat. The induction and mid career training of human resources of Forest Department at IGNFA Dehradun is an integral part of human resource development. Forests play a vital role in providing numerous tangible and intangible benefits, resulting into revenue generation. However, for conserving the forest resources, government also incurs expenditure on human resources, infrastructure and other resources.



Table 2.1. Territorial organizational structure

S.No.	State/UT	Circles	Divisions	Ranges	Blocks	Beats
1.	Andhra Pradesh	7	23	109	NA	NA
2.	Arunachal Pradesh	4	25	96	NA	160
3.	Assam	7	33	170	NA	NA
4.	Bihar	8	30	120	NA	NA
5.	Chhattisgarh	NA	NA	NA	NA	NA
6.	Delhi	NA	NA	NA	NA	NA
7.	Goa	1	1	4	NA	NA
8.	Gujarat	6	24	160	NA	NA
9.	Haryana	4	22	65	227	606
10.	Himachal Pradesh	13	44	198	576	2,061
11.	Jammu & Kashmir	6	31	95	NA	NA
12.	Jharkhand	14	36	142	NA	NA
13.	Karnataka	13	80	258	NA	NA
14.	Kerala	8	36	103	NA	NA
15.	Madhya Pradesh	16	63	473	NA	NA
16.	Maharashtra	11	51	375	1,478	5,555
17.	Manipur	NA	NA	NA	NA	NA
18.	Meghalaya	NA	NA	NA	NA	NA
19.	Mizoram	4	13	71	0	207
20.	Nagaland	2	11	43	NA	28
21.	Odisha	8	37	221	NA	NA
22.	Punjab	5	16	94	206	709
23.	Rajasthan	NA	NA	NA	NA	NA
24.	Sikkim	1	4	26	NA	NA
25.	Tamil Nadu	8	45	215	471	1,374
26.	Telangana	12	56	188	NA	NA
27.	Tripura	NA	NA	59	NA	NA
28.	Uttar Pradesh	2	16	124	NA	NA
29.	Uttarakhand	11	29	177	NA	NA
30.	West Bengal	7	23	243	NA	NA
31.	Andaman and Nicobar Islands	1	6	20	NA	145
32.	Chandigarh	NA	1	2	NA	NA
33.	Dadra & Nagar Haveli	0	1	5	NA	NA
34.	Daman & Diu	NA	1	2	NA	NA
35.	Lakshadweep	NA	NA	NA	NA	NA
36.	Puducherry	0	0	0	NA	NA

Source: SFDs



Table 2.2. Functional organizational structure

S. No.	State/UT	Circles	Divisions	Ranges	Blocks/sections	Beats
1.	Andhra Pradesh	0	13	117	NA	NA
2.	Arunachal Pradesh	2	15	39	NA	NA
3.	Assam	4	39	91	NA	NA
4.	Bihar	4	3	18	NA	NA
5.	Chhattisgarh	NA	NA	NA	NA	NA
6.	Delhi	NA	NA	NA	NA	NA
7.	Goa	1	6	15	0	0
8.	Gujarat	9	40	252	NA	NA
9.	Haryana	NA	NA	NA	NA	NA
10.	Himachal Pradesh	12	14	24	NA	NA
11.	Jammu & Kashmir	6	31	95	NA	NA
12.	Jharkhand	12	29	120	NA	NA
13.	Karnataka	13	80	258	NA	NA
14.	Kerala	7	43	33	NA	NA
15.	Madhya Pradesh	NA	NA	NA	NA	NA
16.	Maharashtra	12	11	NA	NA	NA
17.	Manipur	NA	NA	NA	NA	NA
18.	Meghalaya	NA	6	3	NA	NA
19.	Mizoram	1	6	0	0	0
20.	Nagaland	4	2	5	NA	NA
21.	Odisha	8	37	221	NA	NA
22.	Punjab	4	9	NA	NA	NA
23.	Rajasthan	NA	NA	NA	NA	NA
24.	Sikkim	1	5	13	NA	NA
25.	Tamil Nadu	7	16	NA	NA	NA
26.	Telangana	3	2	NA	NA	NA
27.	Tripura	0	4	1	NA	NA
28.	Uttar Pradesh	13	70	359	NA	NA
29.	Uttarakhand	6	15	110	NA	NA
30.	West Bengal	4	17	71	NA	NA
31.	Andaman and Nicobar Islands	3	10	29	NA	168
32.	Chandigarh	NA	NA	NA	NA	NA
33.	Dadra & Nagar Haveli	0	1	5	NA	NA
34.	Daman & Diu	NA	NA	NA	NA	NA
35.	Lakshadweep	NA	NA	NA	NA	NA
36.	Puducherry	0	0	0	NA	NA

Source: SFDs



Table 2.3. PCCFs to ACFs in State Forest Departments

S. No.	State/UT	PCCFs Including HoFF	APCCFs	CCFs	CFs	DCFs	ACFs
1.	Andhra Pradesh	7	10	6	9	40	57
2.	Arunachal Pradesh	6	1	6	5	44	22
3.	Assam	4	9	13	13	70	46
4.	Bihar	2	5	8	10	33	20
5.	Chhattisgarh	NA	NA	NA	NA	NA	NA
6.	Delhi	NA	NA	NA	1	NA	NA
7.	Goa	1	1	1	NA	7	14
8.	Gujarat	2	7	13	16	120	130
9.	Haryana	2	4	6	1	9	41
10.	Himachal Pradesh	6	7	14	18	29	160
11.	Jammu & Kashmir	1	1	6	NA	53	91
12.	Jharkhand	3	10	17	24	67	NA
13.	Karnataka	5	20	17	17	110	231
14.	Kerala	6	4	11	9	35	100
15.	Madhya Pradesh	5	22	26	15	69	288
16.	Maharashtra	7	14	12	14	64	204
17.	Manipur	NA	NA	NA	NA	NA	NA
18.	Meghalaya	4	4	4	9	25	17
19.	Mizoram	2	1	1	4	15	21
20.	Nagaland	2	2	NA	5	22	14
21.	Odisha	1	4	16	20	134	341
22.	Punjab	2	3	8	11	19	44
23.	Rajasthan	NA	NA	NA	NA	NA	NA
24.	Sikkim	1	NA	2	4	40	53
25.	Tamil Nadu	3	20	22	8	40	47
26.	Telangana	2	4	6	11	26	61
27.	Tripura	3	1	4	4	20	38
28.	Uttar Pradesh	6	18	55	26	63	177
29.	Uttarakhand	3	4	14	17	31	90
30.	West Bengal	3	7	20	13	35	87
31.	Andaman and Nicobar Islands	4	3	3	3	12	33
32.	Chandigarh	NA	NA	1	NA	2	NA
33.	Dadra & Nagar Haveli	0	0	1	1	2	2
34.	Daman & Diu	NA	NA	1	1	1	NA
35.	Lakshadweep	NA	NA	NA	1	NA	NA
36.	Puducherry	0	0	0	1	2	0

Source: SFDs



Table 2.4. Forest Range Officers and other staffs in State Forest Department

S. No.	State/UT	Forest Range officers	Deputy Rangers	Foresters	Forest Guards	Statistical officers	Ministerial staff	Drivers	Others
1	Andhra Pradesh	226	181	597	1,292	0	1,152	115	1,490
2	Arunachal Pradesh	172	210	193	564	0	322	85	380
3	Assam	237	135	1,638	2,500	3	750	180	678
4	Bihar	63	NA	146	952	NA	NA	17	NA
5	Chhattisgarh	NA	NA	NA	NA	NA	NA	NA	NA
6	Delhi	NA	NA	NA	NA	NA	NA	NA	NA
7	Goa	35	16	72	329	2	89	45	212
8	Gujarat	539	NA	1,799	3,905	5	NA	293	NA
9	Haryana	61	64	255	637	0	1,100	71	33
10	Himachal Pradesh	296	801	NA	2,581	1	790	107	4,061
11	Jammu & Kashmir	298	NA	1,154	3,775	4	457	71	NA
12	Jharkhand	NA	NA	NA	NA	NA	NA	NA	NA
13	Karnataka	802	2,787	NA	NA	8	4,472	245	486
14	Kerala	193	159	903	2,476	1	1,462	209	1,558
15	Madhya Pradesh	NA	NA	NA	NA	NA	NA	NA	NA
16	Maharashtra	867	NA	2,542	8,715	11	2,298	461	1,411
17	Manipur	NA	NA	NA	NA	NA	NA	NA	NA
18	Meghalaya	23	NA	40	75	1	126	22	NA
19	Mizoram	2	54	135	154	2	129	20	238
20	Nagaland	52	48	257	421	1	186	53	233
21	Odisha	551	282	2,530	5,376	3	1,046	252	863
22	Punjab	107	42	240	980	1	432	58	344
23	Rajasthan	NA	NA	NA	NA	NA	NA	NA	NA
24	Sikkim	67	173	148	161	1	160	81	612
25	Tamil Nadu	542	NA	1,286	2,454	NA	1,284	242	NA
26	Telangana	268	313	734	3,652	1	1,171	120	429
27	Tripura	72	0	299	582	0	222	25	NA
28	Uttar Pradesh	935	572	2,345	3,647	168	1,228	606	4,065
29	Uttarakhand	08	408	1,729	3,650	16	781	250	1,879
30	West Bengal	586	1,284	NA	2,458	2	856	146	1,733
31	Andaman and Nicobar Islands	76	64	232	331	1	610	81	269
32	Chandigarh	1	1	5	1	NA	4	1	6
33	Dadra & Nagar Haveli	2	1	5	65	0	17	2	4
34	Daman & Diu	2	NA	NA	26	NA	2	NA	NA
35	Lakshadweep	NA	NA	14	31	NA	NA	2	3
36	Puducherry	0	0	0	0	0	0	1	NA

Source: SFDs



Table 2.5. Number of IFS probationers

S. No.	State/UT	Year									
		2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
1.	Andhra Pradesh	2	0	3	3	1	0	3	3	3	4
2.	Arunachal Pradesh	2	1	1	2	4	1	3	2	2	2
3.	Assam	1	2	4	3	2	4	3	2	1	3
4.	Bihar	1	1	1	2	1	2	5	3	3	2
5.	Chhattisgarh	2	2	1	2	2	5	3	6	4	1
6.	Delhi	0	0	0	1	0	0	0	0	0	0
7.	Goa	0	0	0	0	0	0	0	1	1	0
8.	Gujarat	3	3	3	3	4	1	4	3	3	2
9.	Haryana	1	1	1	1	0	1	2	3	0	0
10.	Himachal Pradesh	2	3	2	3	2	1	3	5	4	2
11.	Jammu & Kashmir	4	0	3	3	1	1	2	0	1	0
12.	Jharkhand	2	2	3	4	2	4	4	11	4	3
13.	Karnataka	3	5	3	1	2	2	5	2	3	3
14.	Kerala	3	3	3	2	0	3	2	2	2	2
15.	Madhya Pradesh	5	6	6	3	4	6	8	4	9	7
16.	Maharashtra	5	5	6	6	7	3	6	12	8	7
17.	Manipur	2	1	2	2	2	1	1	3	0	2
18.	Meghalaya	0	1	1	2	2	0	2	1	1	0
19.	Mizoram	1	1	0	1	0	0	0	0	0	0
20.	Nagaland	2	1	2	4	2	1	0	0	1	1
21.	Odisha	4	3	4	3	3	2	3	6	3	3
22.	Punjab	1	0	2	1	2	1	2	1	1	
23.	Rajasthan	6	5	4	4	3	1	5	4	1	4
24.	Sikkim	0	1	1	0	0	0	0	0	1	1
25.	Tamil Nadu	2	5	4	4	2	4	3	6	7	1
26.	Telangana	0	2	0	0	1	1	1	3	4	4
27.	Tripura	2	2	3	2	1	1	1	0	0	2
28.	Uttar Pradesh	6	5	4	8	4	2	6	0	2	7
29.	Uttarakhand	6	1	2	0	1	1	1	5	0	2
30.	West Bengal	2	1	4	3	3	4	3	1	5	3
31.	Andaman and Nicobar Islands	2	1	3	1	1	1	2	0	1	0
32.	Chandigarh	0	0	1	0	0	0	0	0	0	0
33.	Dadra & Nagar Haveli	0	0	0	0	0	0	0	0	0	0
34.	Daman & Diu	0	0	0	0	0	0	0	0	0	0
35.	Lakshadweep	0	0	0	0	0	0	0	0	0	0
36.	Puducherry	0	0	0	0	0	0	0	0	0	0
Total		72	64	77	74	59	54	83	89	75	68

Source: IGNTA, Dehradun



Table 2.6. Number of training schools for Forest Range Officers and Deputy Rangers/Foresters/ Forest Guards

S. No.	State/UT	Forest Range Officers	Deputy Rangers/ Foresters/ Forest Guards
1.	Andhra Pradesh	0	1
2.	Arunachal Pradesh	0	1
3.	Assam	1	2
4.	Bihar	0	2
5.	Chhattisgarh	0	3
6.	Delhi	0	0
7.	Goa	0	1
8.	Gujarat	1	2
9.	Haryana	0	2
10.	Himachal Pradesh	1	2
11.	Jammu & Kashmir	0	1
12.	Jharkhand	0	2
13.	Karnataka	1	2
14.	Kerala	0	2
15.	Madhya Pradesh	0	7
16.	Maharashtra	1	4
17.	Manipur	0	1
18.	Meghalaya	0	0
19.	Mizoram	0	1
20.	Nagaland	0	1
21.	Odisha	1	3
22.	Punjab	0	1
23.	Rajasthan	0	2
24.	Sikkim	0	1
25.	Tamil Nadu	2	1
26.	Telangana	1	1
27.	Tripura	0	1
28.	Uttar Pradesh	0	1
29.	Uttarakhand	1	2
30.	West Bengal	1	2
31.	Andaman and Nicobar Islands	0	1
32.	Chandigarh	0	0
33.	Dadra & Nagar Haveli	0	0
34.	Daman & Diu	0	0
35.	Lakshadweep	0	2
36.	Puducherry	0	0
Total		11	55

Source: DFE, Dehradun



Table 2.7. Number of ACFs as trainees

S. No.	State/UT	Year									
		2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20
1.	Andhra Pradesh	17	19	17	15	0	0	0	0	1	1
2.	Arunachal Pradesh	0	0	0	0	0	7	7	0	0	0
3.	Assam	0	0	0	0	0	15	15	0	0	0
4.	Bihar	0	0	0	0	0	0	0	0	0	8
5.	Chhattisgarh	14	0	0	0	0	0	0	12	16	17
6.	Delhi	0	0	0	0	0	0	0	0	0	0
7.	Goa	0	0	4	4	0	0	0	0	1	1
8.	Gujarat	0	0	0	0	0	0	40	42	3	1
9.	Haryana	0	0	0	0	0	0	0	0	0	0
10.	Himachal Pradesh	0	2	6	4	0	0	0	0	0	6
11.	Jammu & Kashmir	0	25	39	14	0	0	1	1	0	0
12.	Jharkhand	0	0	0	0	0	0	0	0	0	0
13.	Karnataka	6	9	9	0	0	0	0	0	25	25
14.	Kerala	9	28	61	0	0	0	27	0	0	0
15.	Madhya Pradesh	9	33	33	12	3	3	2	22	39	31
16.	Maharashtra	35	17	15	30	30	31	12	11	12	12
17.	Manipur	0	0	0	0	0	11	11	2	2	0
18.	Meghalaya	0	4	7	3	0	0	0	0	0	0
19.	Mizoram	1	1	0	0	0	0	0	0	0	5
20.	Nagaland	0	0	0	0	0	0	1	2	1	2
21.	Odisha	0	0	0	0	0	0	0	2	46	44
22.	Punjab	0	0	0	0	0	0	0	0	0	0
23.	Rajasthan	0	0	0	0	0	33	34	1	0	0
24.	Sikkim	0	0	19	19	0	0	0	0	0	0
25.	Tamil Nadu	2	0	0	6	6	6	0	2	2	12
26.	Telangana	0	0	0	0	0	0	0	0	0	0
27.	Tripura	25	0	0	0	0	0	0	0	0	0
28.	Uttar Pradesh	0	0	0	0	0	0	0	13	13	27
29.	Uttarakhand	0	0	0	0	0	0	0	0	0	1
30.	West Bengal	10	10	8	8	0	0	0	19	19	0
31.	Andaman and Nicobar Islands	0	0	0	0	0	0	0	0	0	0
32.	Chandigarh	0	0	0	0	0	0	0	0	0	0
33.	Dadra & Nagar Haveli	0	0	0	0	0	0	0	0	0	0
34.	Daman & Diu	0	0	0	0	0	0	0	0	0	0
35.	Lakshadweep	0	0	0	0	0	0	0	0	0	0
36.	Puducherry	0	0	0	0	0	0	0	0	0	0
	Total	119	120	157	115	39	107	124	129	180	193

Source: DFE, Dehradun



Table 2.8. Number of Forest Range Officers as trainees

S. No.	State/UT	Year									
		2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20
1.	Andhra Pradesh	22	9	5	65	64	0	0	0	0	0
2.	Arunachal Pradesh	10	0	0	6	6	0	6	0	0	0
3.	Assam	0	6	6	0	9	9	0	37	37	0
4.	Bihar	0	0	0	0	0	0	0	0	0	2
5.	Chhattisgarh	0	0	0	0	0	0	0	0	19	34
6.	Delhi	0	0	0	0	0	0	0	0	0	0
7.	Goa	0	0	0	12	12	0	0	0	0	0
8.	Gujarat	0	0	0	0	0	0	78	23	5	4
9.	Haryana	0	0	0	0	0	0	0	0	0	0
10.	Himachal Pradesh	0	0	0	20	1	0	0	0	0	0
11.	Jammu & Kashmir	0	0	14	6	13	2	0	0	2	2
12.	Jharkhand	0	0	0	0	0	0	0	0	0	0
13.	Karnataka	0	0	68	9	0	60	92	48	46	69
14.	Kerala	30	4	8	0	13	14	20	0	0	26
15.	Madhya Pradesh	117	75	26	44	4	0	4	58	184	246
16.	Maharashtra	19	14	14	29	98	2	195	212	61	27
17.	Manipur	0	0	0	0	0	0	0	0	0	35
18.	Meghalaya	6	0	10	9	0	0	0	0	0	0
19.	Mizoram	1	0	0	2	1	1	7	0	0	7
20.	Nagaland	0	3	3	7	3	0	0	0	5	3
21.	Odisha	0	0	0	0	0	0	0	0	99	0
22.	Punjab	0	0	0	0	0	0	0	0	0	0
23.	Rajasthan	0	0	0	0	0	0	0	0	0	0
24.	Sikkim	0	0	0	0	0	0	0	0	0	0
25.	Tamil Nadu	2	3	3	1	2	73	5	1	1	0
26.	Telangana	0	0	0	0	0	0	0	0	0	53
27.	Tripura	4	0	6	0	0	16	0	0	0	0
28.	Uttar Pradesh	0	0	0	0	0	0	0	0	0	0
29.	Uttarakhand	0	0	0	0	22	49	3	0	54	5
30.	West Bengal	7	0	0	14	0	0	0	20	23	3
31.	Andaman and Nicobar Islands	0	0	0	0	0	0	13	0	0	0
32.	Chandigarh	0	0	0	0	0	0	0	1	1	0
33.	Dadra & Nagar Haveli	0	0	0	0	0	0	0	0	0	0
34.	Daman & Diu	0	0	0	0	0	0	0	0	0	0
35.	Lakshadweep	0	0	0	0	0	0	0	0	0	0
36.	Puducherry	0	0	0	0	0	0	0	0	0	0
	Total	198	110	175	224	235	218	416	400	538	491

Source: DFE, Dehradun



Table 2.9. Number of Foresters as trainees

S. No.	State/UT	Year									
		2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20
1.	Andhra Pradesh	NA	NA	NA	NA	0	0	27	31	30	30
2.	Arunachal Pradesh	8	10	11	NA	NA	NA	0	0	0	0
3.	Assam	55	55	117	108	78	119	35	109	26	29
4.	Bihar	NA	NA	NA	NA	NA	NA	NA	NA	NA	0
5.	Chhattisgarh	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
6.	Delhi	0	0	0	0	NA	NA	NA	NA	NA	NA
7.	Goa	15	NA	NA	6	NA	NA	NA	NA	NA	NA
8.	Gujarat	NA	NA	NA	NA	761	127	0	0	0	521
9.	Haryana	NA	NA	NA	NA	20	30	29	17	78	25
10.	Himachal Pradesh	75	185	79	111	149	41	90	144	95	233
11.	Jammu & Kashmir	21	16	11	39	43	21	0	118	39	31
12.	Jharkhand	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
13.	Karnataka	NA	NA	NA	NA	166	111	68	201	581	567
14.	Kerala	52	120	24	0	0	25	29	0	36	0
15.	Madhya Pradesh	722	655	789	324	NA	NA	NA	NA	NA	NA
16.	Maharashtra	323	283	157	353	334	279	390	402	236	171
17.	Manipur	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
18.	Meghalaya	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
19.	Mizoram	32	43	18	50	50	NA	5	0	5	0
20.	Nagaland	NA	NA	25	NA	NA	NA	NA	NA	NA	NA
21.	Odisha	722	655	789	216	276	80	312	123	45	88
22.	Punjab	17	0	29	NA	NA	NA	NA	NA	NA	NA
23.	Rajasthan	122	32	486	30	86	0	32	143	45	NA
24.	Sikkim	NA	NA	NA	NA	0	30	0	0	0	0
25.	Tamil Nadu	101	NA	NA	NA	53	50	136	264	59	265
26.	Telangana	NA	NA	NA	NA	56	52	48	NA	27	42
27.	Tripura	17	19	19	20	49	18	32	16	20	20
28.	Uttar Pradesh	71	98	77	56	79	45	67	68	83	60
29.	Uttarakhand	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
30.	West Bengal	NA	NA	161	77	78	137	135	123	31	6
31.	Andaman and Nicobar Islands	26	0	0	0	22	20	0	0	0	0
32.	Chandigarh	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
33.	Dadra & Nagar Haveli	0	0	0	0	0	0	0	0	0	0
34.	Daman & Diu	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
35.	Lakshadweep	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
36.	Puducherry	0	0	0	0	0	0	0	0	0	0

Source: SFDs



Table 2.10. Number of Forest Guards as trainees

S. No.	State/UT	Year									
		2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20
1.	Andhra Pradesh	NA	NA	NA	NA	0	0	44	28	60	30
2.	Arunachal Pradesh	32	25	NA	29	0	0	39	35	30	0
3.	Assam	269	112	206	269	84	70	80	102	67	64
4.	Bihar	NA	NA	NA	NA	NA	NA	NA	NA	NA	39
5.	Chhattisgarh	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
6.	Delhi	0	0	0	0	NA	NA	NA	NA	NA	NA
7.	Goa	30	50	NA	NA	NA	NA	NA	84	79	NA
8.	Gujarat	NA	NA	NA	NA	610	198	0	324	1144	1278
9.	Haryana	NA	NA	NA	NA	461	38	30	25	50	21
10.	Himachal Pradesh	515	636	261	485	255	209	291	457	544	750
11.	Jammu & Kashmir	18	57	31	46	86	140	210	97	92	92
12.	Jharkhand	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
13.	Karnataka	18	136	526	554	279	297	295	364	777	777
14.	Kerala	463	664	395	973	284	246	230	446	297	598
15.	Madhya Pradesh	978	802	791	556	620	616	496	457	NA	83
16.	Maharashtra	690	240	266	1007	949	1329	1181	974	744	464
17.	Manipur	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
18.	Meghalaya	NA	NA	NA	NA	17	15	11	12	13	15
19.	Mizoram	107	65	25	56	15	NA	15	0	25	60
20.	Nagaland	23	NA	NA	23	23	23		25	25	NA
21.	Odisha	998	802	791	666	353	386	175	238	236	83
22.	Punjab	38	NA	54	NA	NA	NA	NA	NA	NA	NA
23.	Rajasthan	115	505	570	27	73	0	33	146	127	NA
24.	Sikkim	NA	NA	NA	NA	0	163	0	0	0	0
25.	Tamil Nadu	122	NA	NA	NA	212	219	172	9	90	673
26.	Telangana	NA	NA	NA	NA	121	67	64	76	88	91
27.	Tripura	20	20	20	18	0	0	0	20	0	20
28.	Uttar Pradesh	67	73	69	44	54	30	139	241	143	355
29.	Uttarakhand	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
30.	West Bengal	NA	NA	0	82	70	60	109	44	241	161
31.	Andaman and Nicobar Islands	0	59	28	11	20	0	17	0	0	0
32.	Chandigarh	NA	NA	NA	NA	NA	NA	NA	2	NA	NA
33.	Dadra & Nagar Haveli	0	0	0	0	0	0	0	0	0	0
34.	Daman & Diu	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
35.	Lakshadweep	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
36.	Puducherry	0	0	0	0	0	0	0	0	0	0

Source: SFDs



Table 2.11. Revenue (₹ Cr.) from forests

S. No.	State/UT	Year									
		2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20
1.	Andhra Pradesh	128.74	148.86	168.22	205.61	420.79	473.65	240.70	335.56	406.40	48.41
2.	Arunachal Pradesh	10.83	6.65	6.19	11.89	NA	NA	13.86	13.44	14.72	6.52
3.	Assam	63.03	58.58	34.23	29.06	113.86	114.25	237.05	277.69	364.27	416.06
4.	Bihar	7.59	9.72	12.42	16.22	NA	NA	NA	NA	NA	NA
5.	Chhattisgarh	NA	344.08	358.96	381.00	399.00	410.23	NA	NA	NA	NA
6.	Delhi	7.00	8.36	9.20	8.5	NA	NA	NA	NA	NA	NA
7.	Goa	3.10	2.51	3.18	2.15	4.32	4.26	3.83	7.54	5.88	4.62
8.	Gujarat	42.88	39.54	51.71	61.50	46.70	130.36	153.08	480.25	43.24	72.28
9.	Haryana	NA	39.58	41.31	35.91	39.11	52.29	56.27	32.56	26.61	22.92
10.	Himachal Pradesh	65.44	106.54	63.90	357.83	115.78	34.47	18.50	46.87	76.32	83.61
11.	Jammu & Kashmir	44.23	49.29	47.97	55.07	63.86	59.05	66.00	8.89	9.98	11.08
12.	Jharkhand	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
13.	Karnataka	164.68	168.29	171.51	161.12	174.11	155.47	286.81	310.62	306.49	168.84
14.	Kerala	274.10	220.52	237.33	329.95	300.40	290.21	296.85	245.42	287.20	255.84
15.	Madhya Pradesh	837.14	871.25	989.66	1,104.82	1,073.94	699.85	NA	NA	NA	NA
16.	Maharashtra	245.05	263.34	251.66	184.96	211.99	227.20	175.19	153.52	314.69	277.27
17.	Manipur	1.99	3.27	2.82	3.09	3.85	NA	NA	NA	NA	NA
18.	Meghalaya	17.74	NA	24.34	47.53	68.55	72.08	79.30	NA	NA	NA
19.	Mizoram	2.06	1.79	1.87	2.38	5.20	3.10	2.54	3.66	3.75	4.97
20.	Nagaland	5.17	3.86	3.70	5.78	5.53	5.73	5.11	4.66	4.91	6.05
21.	Odisha	NA	NA	NA	NA	0.0024	0.0027	0.0006	0.0306	0.005	0.0144
22.	Punjab	12.30	5.07	5.33	20.82	19.44	31.79	20.20	48.58	15.54	13.54
23.	Rajasthan	82.09	73.76	90.06	76.27	87.23	131.81	111.00	180.89	144.01	NA
24.	Sikkim	11.00	12.53	9.20	10.67	9.34	12.47	16.02	14.21	15.02	15.78
25.	Tamil Nadu	89.25	105.86	82.53	98.65	304.81	289.96	280.58	324.52	361.80	409.94
26.	Telangana	NA	96.78	114.50	148.28	82.08	108.21	95.37	104.70	111.07	53.88
27.	Tripura	7.43	6.98	6.56	7.70	9.83	11.86	11.01	9.76	11.96	13.38
28.	Uttar Pradesh	280.33	284.97	331.31	355.09	412.92	629.40	NA	NA	NA	NA
29.	Uttarakhand	229.85	237.82	231.02	363.80	349.06	358.50	322.21	311.4	NA	NA
30.	West Bengal	75.33	91.47	104.24	113.46	135.69	86.74	126.22	93.80	72.70	61.04
31.	Andaman and Nicobar Islands	15.41	14.47	16.85	17.97	20.80	25.20	26.12	26.03	18.90	22.83
32.	Chandigarh	NA	NA	NA	NA	0.01	0.08	0.06	0.02	0.01	0.01
33.	Dadra & Nagar Haveli	4.61	9.94	2.97	1.70	0.03	0.03	0.04	0.03	0.04	0.05
34.	Daman & Diu	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
35.	Lakshadweep	NA	NA	NA	NA	NA	NA	NA	1.22	2.81	2.20
36.	Puducherry	0.02	0.01	0.05	0.01	0.01	0.01	0.01	0.01	0.01	0.02

Source: SFDs





Table 2.12. Expenditure (₹ Cr.) on forests

S. No.	State/UT	Year									
		2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20
1.	Andhra Pradesh	277.28	331.15	356.23	336.95	165.45	302.59	298.47	342.04	351.98	355.26
2.	Arunachal Pradesh	87.88	86.99	84.65	97.51	NA	NA	NA	NA	NA	NA
3.	Assam	247.22	303.13	370.38	398.07	331.41	330.37	520.21	NA	NA	NA
4.	Bihar	453.01	461.67	496.27	537.04	573.02	277.63	NA	NA	NA	NA
5.	Chhattisgarh	277.28	331.15	356.23	336.95	271.65	206.52	NA	NA	NA	NA
6.	Delhi	6.92	7.48	8.55	7.90	NA	NA	NA	NA	NA	NA
7.	Goa	34.75	52.03	37.60	44.71	47.41	55.72	69.15	63.48	79.55	74.33
8.	Gujarat	628.96	722.53	780.55	884.47	1,025.67	787.58	1,069.67	1,151.94	1,237.38	1,293.74
9.	Haryana	NA	221.14	262.06	260.22	314.46	326.17	288.54	314.71	302.44	334.48
10.	Himachal Pradesh	367.42	367.07	381.75	439.91	449.49	430.57	441.12	433.70	480.44	515.94
11.	Jammu & Kashmir	206.25	253.65	272.71	289.56	297.03	346.09	362.49	355.89	479.23	225.04
12.	Jharkhand	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
13.	Karnataka	555.10	665.40	852.12	1,015.766	1,164.36	1,253.81	1,391.25	1,425.31	1,536.22	913.76
14.	Kerala	214.48	298.53	373.24	399.19	456.07	444.76	607.16	587.15	569.89	551.18
15.	Madhya Pradesh	786.73	853.38	1,050.86	1,077.69	1,121.91	636.96	NA	NA	NA	NA
16.	Maharashtra	916.80	1,120.17	1,331.97	1,545.30	1,772.11	2,536.38	3,053.88	2,968.15	4,177.14	3,909.97
17.	Manipur	32.31	49.84	46.49	48.65	72.25	NA	NA	NA	NA	NA
18.	Meghalaya	NA	NA	NA	NA	11.72	8.51	10.20	11.65	14.08	12.43
19.	Mizoram	103.67	63.23	82.18	92.86	121.65	80.15	88.72	83.98	69.16	80.66
20.	Nagaland	62.47	80.66	86.90	47.92	87.90	57.96	62.99	68.79	84.95	86.18
21.	Odisha	NA	NA	NA	NA	1.07	0.08	0.07	0.21	0.76	0.56
22.	Punjab	63.38	72.91	13.70	89.53	105.41	112.57	136.34	141.28	164.41	212.73
23.	Rajasthan	NA	529.76	671.88	1,672.04	916.48	1,076.82	956.44	NA	NA	NA
24.	Sikkim	158.14	59.14	57.71	41.11	96.89	71.67	NA	NA	NA	NA
25.	Tamil Nadu	272.17	NA	561.61	651.57	186.40	113.81	96.70	161.61	121.34	127.89
26.	Telangana	NA	153.30	204.74	187.99	239.16	376.94	194.17	359.09	356.67	799.00
27.	Tripura	60.61	64.85	86.92	74.39	64.96	75.74	55.09	22.17	2.80	33.73
28.	Uttar Pradesh	467.27	489.65	591.40	723.40	795.51	860.63	NA	NA	NA	NA
29.	Uttarakhand	307.28	320.42	391.55	423.14	533.22	547.77	545.89	615.36	NA	NA
30.	West Bengal	35.79	330.57	338.46	425.57	410.61	485.66	536.27	579.99	604.81	586.14
31.	Andaman and Nicobar Islands	131.84	144.18	155.91	163.79	177.84	199.35	232.66	252.50	272.04	282.82
32.	Chandigarh	NA	NA	NA	NA	15.65	16.08	15.77	21.34	28.79	30.85
33.	Dadra & Nagar Haveli	5.05	5.72	10.68	17.62	7.607	3.200	2.704	1.946	2.830	2.966
34.	Daman & Diu	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
35.	Lakshadweep	NA	NA	NA	NA	NA	NA	NA	6.41	8.44	11.42
36.	Puducherry	NA	NA	NA	NA	0.60	3.13	2.05	4.68	5.15	5.44

Source: SFDs





03

FOREST PRODUCTION: TIMBER, NON-TIMBER FOREST PRODUCTS AND BAMBOO

The products and services provided by forests contribute to socio-economic development by providing employment and income for tens of millions of people (FAO and UNEP, 2020). Among the various products provided by forests, an important resource is timber, which is used for a variety of household and industrial purposes. The current pace of development leads to the exuberated demand for timber and timber products, which further increases pressure on forests. Besides this, forest area is being brought under the protected area network and restriction in green felling as well as a declined timber production from forests makes the situation more critical. The additional requirement of timber and other timber products demands are met by Trees outside Forests (ToF) and through import of timber. Besides the timber, the other important resources are Non-Timber Forest Products (NTFPs), fuelwood, bamboo and fodder.

Non-Timber Forest Products can be defined as 'forest products consisting of goods of biological origin other than wood, derived from forests, other wooded lands and trees outside forests' (FAO, 1999). NTFPs have been considered as the livelihood support for the rural communities and are a traditional source of food, fiber, medicine, etc. for the forest dwellers. Forest products are the main source of income for the forest dwelling population in the country. India is very rich in biodiversity and about 45,000 plant species are spread across the 16 agro-climatic zones. These include medicinal plants, edible plants, starches, gums and mucilages, oils & fats, resins & oleo-resins, essential oils, spices, drugs, tannins, insecticides, natural dyes, bamboos & canes, fibers & flosses, grasses, tendu leaves, animal products and edible products.

Gums are one of the most valuable NTFPs in India and exude from the stems or other parts of trees of different species. Basically they are plant exudations that result partly from natural phenomena and partly from injury to the bark or stem in response to injuries to seal the wound. It is also extracted from seeds, seaweeds, micro-organisms, etc. The most important gum is Karaya, obtained from *Sterculia urens* or *S. villosa* trees of deciduous forests. They are mainly used in textiles, cosmetics, confectionery, medicines, inks, pastes, cigar, etc. The major gum producing States are Andhra Pradesh, Chhattisgarh, Gujarat, Madhya Pradesh, Maharashtra and Uttar Pradesh. Maharashtra contributes the



maximum (30%) in gum production in the country followed by Madhya Pradesh (21%), Jharkhand (16%) and Telangana (10%). A large proportion of Indian gums are exported to the USA, the UK and France.

Resin is a secondary product which is produced by normal metabolic processes in trees. Mostly, it is collected through tapping from pine tree in the country. Arunachal Pradesh, Himachal Pradesh, Jammu and Kashmir and Uttarakhand are the major resin producing States. In India, during the last few years, the total annual production of resin has declined due to the policy to reduce the number of trees being tapped. The major portion of the demand for resin is fulfilled by import, mostly from China.

Tendu (*Diospyros melanoxylon*) leaves are one of the most important NTFP species and are largely distributed in Central India such as Madhya Pradesh, Orissa, Chhattisgarh, Jharkhand, part of Maharashtra and Andhra Pradesh. The leaves of tendu are used for wrapping bidi (Indian tobacco cigarette). It is estimated that around 3.5 lakhs tonnes of leaves worth \$200 M are collected annually from forests in India. Madhya Pradesh is the largest producing State (25%) of *tendu* leaves in the country followed by Chhattisgarh (20%), Odisha (15-20%), and Maharashtra (10%). Madhya Pradesh was first to nationalize *tendu* leaves collection in 1964 followed by Andhra Pradesh (1971) and Odisha (1973).

Rattan and cane, a climbing palm, is an important NTFP and one of the important sources of livelihood for the poor rural community, particularly in the hilly regions like the North-East. It is mainly used in furniture-making, sports goods, handicraft, mat making, wicker work, for stuffing and packing, etc. besides for various domestic uses by local tribals, apart from the conventional uses, such as medicinal uses.

India is one of the leading producers of lac across the world. About 90% of Indian lac is collected from the states of Bihar, Jharkhand, West Bengal, Madhya Pradesh, Chhattisgarh, Eastern Maharashtra and Northern Odisha. Jharkhand is the highest producer of lac followed by Chhattisgarh, Madhya Pradesh, Maharashtra and Odisha. The total production of lac was 14,222 t in 2017-18 (FSRI, 2019) and more than 75% of its production is exported to hundreds of the countries. Mostly it is used in plastics, electrical goods, adhesives, leather, wood finishing, lacquer work, printing, polish and varnish, ink and a number of other industries. The lac also yields an edible dye, which is used in colouring soft drinks and foods.




 Table 3.1. Production (m³) of timber

S. No.	State/UT	Year			
		2010-11	2011-12	2012-13	2013-14
1.	Andhra Pradesh	12,302.55	12,142.16	10,696.45	8,733.00
2.	Arunachal Pradesh	23,859.88	30,542.53	21,669.10	17,570.32
3.	Assam	34,140.00	19,782.16	10,803.73	4,702.11
4.	Bihar	6,920.00	NA	NA	NA
5.	Chhattisgarh	1,43,075.00	96,550.00	1,56,812.00	1,51,631.00
6.	Delhi	0.00	0.00	0.00	0.00
7.	Goa	11,468.50	9,462.30	11,358.30	NA
8.	Gujarat	18,662.00	24,308.00	31,318.00	30,616.00
9.	Haryana	NA	50,577.00	52,243.00	50,248.00
10.	Himachal Pradesh	2,45,404.00	1,46,057.00	2,07,041.00	2,45,083.00
11.	Jammu & Kashmir	86,564.60	87,215.88	1,20,205.01	1,21,705.80
12.	Jharkhand	5,422.58	7,404.24	5,869.34	4,292.72
13.	Karnataka	89,468.59	59,691.51	45,220.86	57,218.75
14.	Kerala	21,059.40	17,304.68	44,822.45	32,054.91
15.	Madhya Pradesh	2,78,083.00	2,43,357.00	2,52,808.00	2,35,456.00
16.	Maharashtra	89,718.00	77,399.00	40,580.00	66,062.00
17.	Manipur	57,502.32	28,329.22	2,975.35	5,216.80
18.	Meghalaya	NA	NA	NA	NA
19.	Mizoram	369.00	1,460.00	554.00	922.00
20.	Nagaland	NA	NA	52,699.63	7,669.62
21.	Odisha	NA	NA	28,435.00	38,156.00
22.	Punjab	34,855.00	34,023.00	84,607.00	78,316.00
23.	Rajasthan	49,466.67	NA	21,333.33	51,466.67
24.	Sikkim	179.00	3,345.69	240.41	NA
25.	Tamil Nadu	6,752.99	NA	NA	NA
26.	Telangana	NA	NA	NA	5,228.05
27.	Tripura	1,639.03	1,540.34	27,922.74	1,396.89
28.	Uttar Pradesh	2,75,956.00	2,74,414.00	3,09,082.00	3,85,441.00
29.	Uttarakhand	2,01,900.00	2,35,236.00	1,16,532.43	2,18,739.14
30.	West Bengal	58,086.00	95,612.00	1,49,150.00	1,32,733.02
31.	Andaman and Nicobar Islands	12,321.93	11,928.31	12,139.19	13,790.82
32.	Chandigarh	NA	NA	NA	NA
33.	Dadra & Nagar Haveli	0.00	0.00	0.00	0.00
34.	Daman & Diu	NA	NA	NA	NA
35.	Lakshadweep	NA	NA	NA	NA
36.	Puducherry	0.00	0.00	0.00	0.00

Source: SFDS



Year					
2014-15	2015-16	2016-17	2017-18	2018-19	2019-20
2,812.52	4,030.29	4,427.88	1,653.00	1,905.44	668.15
21,148.01	NA	27,750.76	NA	NA	NA
NA	14,074.53	24,543.54	14,274.97	29,199.30	NA
NA	NA	NA	NA	NA	NA
1,71,769.00	1,34,981.00	73,465.00	75,553.00	80,225.00	1,20,230.00
NA	NA	NA	NA	NA	NA
20,962.70	9,901.23	8,315.73	7,239.18	7,230.72	8,746.30
18,881.00	22,719.00	1,00,969.40	18,883.68	18,412.71	19,316.56
80,570.00	1,29,184.00	78,038.00	74,641.00	86,365.00	74,350.00
2,42,888.00	1,48,198.00	2,25,071.00	2,26,494.00	1,87,570.00	2,30,827.00
1,45,670.35	1,62,960.62	1,05,890.85	1,14,906.93	87,853.01	65,511.03
5,176.32	1,628.00	4,383.00	2,791.00	2,169.00	NA
45,522.53	48,182.87	95,721.66	94,773.00	58,424.62	34,908.62
30,302.02	40,773.89	39,317.30	28,640.80	28,286.08	26,034.74
2,40,667.00	2,07,551.00	1,85,124.00	1,74,842.00	2,70,732.00	2,09,210.00
56,135.00	92,269.00	39,174.00	48,075.00	61,616.00	72,326.00
4,428.42	3,190.00	NA	NA	NA	NA
NA	NA	NA	NA	NA	NA
NA	NA	NA	NA	NA	NA
NA	NA	NA	NA	NA	NA
46,905.00	59,133.00	34,232.00	15,805.00	NA	NA
74,289.00	63,414.00	65,638.00	32,509.00	26,505.00	57,000.00
65,066.67	34,266.67	54,000.00	39,700.00	28,900.00	
428.29	185.16	344.98	199.55	228.48	475.04
NA	NA	NA	NA	NA	NA
4,630.24	2,410.59	2,022.83	2,173.25	4,063.19	1,567.62
2,116.60	8,837.32	6,174.86	4,701.19	5,981.90	5,187.04
3,50,068.00	2,69,728.00	2,55,956.00	1,98,261.00	1,74,466.00	1,21,696.00
2,39,521.00	3,08,885.00	1,84,149.21	1,93,467.04	7,828.71	2,21,667.35
31,801.00	39,018.00	24,391.00	21,872.00	58,138.00	26,947.00
15,296.16	11,881.32	18,052.26	6,193.98	12,458.00	8,974.01
0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00
NA	NA	NA	NA	NA	NA
NA	NA	NA	NA	NA	NA
0.00	0.00	0.00	0.00	0.00	0.00



Table 3.2. Production (t) of fuel-wood in the selected States/UTs

S. No.	State/UT	Year			
		2010-11	2011-12	2012-13	2013-14
1.	Andhra Pradesh	11,211.43	16,383.85	10,908.52	NA
2.	Arunachal Pradesh	17,687.54	6,714.13	3,065.60	3,719.90
3.	Assam	NA	585.48	334.19	1,428.07
4.	Bihar	NA	NA	NA	NA
5.	Chhattisgarh	49,661.78	14,681.80	9,448.00	8,049.71
6.	Delhi	NA	NA	NA	NA
7.	Goa	14,227.74	7,045.70	15,241.02	NA
8.	Gujarat	79,079.00	59,135.00	95,088.00	1,10,221.00
9.	Haryana	11,315.80	10,371.85	10,157.98	8,871.10
10.	Himachal Pradesh	NA	NA	166.03	183.43
11.	Jammu & Kashmir	15,186.00	17,740.00	17,397.30	17,366.00
12.	Jharkhand	7,348.57	11,233.65	16,319.84	6,701.54
13.	Karnataka	1,20,204.54	1,64,523.12	20,715.24	1,80,187.21
14.	Kerala	11,362.31	4,114.00	11,440.00	22,066.00
15.	Madhya Pradesh	44,906.27	43,065.45	36,712.00	30,150.72
16.	Maharashtra	1,33,360.85	1,55,155.08	74,838.85	70,988.38
17.	Manipur	65.30	126.70	40.10	40.00
18.	Mizoram	NA	55.50	64.10	123.50
19.	Nagaland	NA	NA	962.76	899.33
20.	Odisha	28,619.92	24,547.17	24,505.14	29,386.00
21.	Rajasthan	24,900.00	28,700.00	28,900.00	40,000.00
22.	Sikkim	248.50	271.00	276.00	294.50
23.	Tamil Nadu	20,091.74	NA	1,240.00	NA
24.	Tripura	8,162.09	62,845.12	3,148.05	23,937.64
25.	Uttar Pradesh	13,590.13	15,491.80	22,536.63	26,263.85
26.	Uttarakhand	17,640.76	16,141.74	14,673.39	14,860.74
27.	West Bengal	1,12,994.20	74,856.25	NA	1,08,489.00
28.	Andaman and Nicobar Islands	685.85	555.35	569.13	366.85

Source: Forest Sector Report India 2019.

*unit in stack

**upto December 2015

#unit in pile

\$unit in cubic mt. stack

@unit in NAG

Fuelwood conversion: 1m³ =725kg



Year					
2014-15	2015-16	2016-17	2017-18	2018-19	2019-20
NA	NA	NA	NA	64.53	16.68
3,137.25	2,599.07	3,679.97	10,919.65	NA	NA
NA	10,984.81	7,547.55	1,005.37	3,805.69	NA
NA	NA	NA	NA	NA	NA
8,309.99	8,581.63	96,450.00*	84,847.00*	84,067.00*	1,26,618.00*
NA	NA	NA	NA	NA	NA
15,539.83	10,928.60	13,057.86	1,006.77	NA	NA
68,943.00	1,79,777.32	1,28,510.80	35,642.16	1,15,492.86	NA
13,521.98	21,462.18	12,194.50	8,915.33	12,876.73	NA
1,054.15	0.00	0.00	0.00	NA	0.00
16,400.00	51,548.50	300.47	34.80	NA	NA
4,836.41	NA	NA	NA	NA	NA
1,45,500.16	2,64,806.12	3,90,544.52	5,52,323.20	1,93,877.80	80,922.34
14,818.00	5,831.00	5,756.89	5,487.26	5,269.60	4,322.95
22,736.59	10,610.43**	1,19,000.00@	1,24,000.00@	NA	NA
51,760.65	88,958.95	53,541.25	54,440.25	NA	NA
80.20	NA	NA	NA	NA	NA
41.30	1,566.00	1,568.90	2,851.12	NA	NA
NA	NA	NA	NA	NA	NA
34,073.00	32,247.00	30,404.00	5,134*	998.75*	NA
44,200.00	57,200.00	38,500.00	47,200.00	48,800.00	NA
NA	212.00	NA	NA	NA	NA
NA	NA	16,910.47	NA	NA	NA
239.58	5,133.32	1,707.71	509.94	692.51	24.90
21,480.30	19,862.83	22,538.08	15,432.35	16,980.26	10,511.05
14,415.32	15,623.75	54,577.79\$	61,821.02\$	40,75,981\$	NA
54,280.49	74,791.07	33,079.98	77,164.02	25,19,384.00	NA
416.15	735.88	847.53	737.87	1,076.66	1,030.59



Table 3.3. Production of tendu leaves in the selected States

S. No.	State	Unit	Year									
			2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20
1.	Andhra Pradesh	LSB	3.0	3.49	3.97	NA	0.00	0.00	0.00	0.51	0.44	0.27
2.	Chhattisgarh	LSB	15.45	13.57	17.15	14.71	14.27	13.01	16.64	13.88	13.25	10.90
3.	Gujarat	LSB	1.23	1.26	1.77	1.16	0.77	0.21	1.39	1.48	1.27	0.99
4.	Jharkhand	LSB	5.68	4.19	7.69	4.33	2.94	3.05	7.60	7.96	5.55	NA
5.	Karnataka	t	132.23	0.50	57.87	66.18	NA	8.00	14.74	260.02	0.00	NA
6.	Madhya Pradesh	LSB	21.24	17.06	26.05	19.93	16.99	16.05	NA	NA	NA	NA
7.	Maharashtra	LSB	6.39	6.30	6.46	4.54	4.81	4.58	2.86	3.13	2.12	2.24
8.	Odisha	t	43,970.00	37,800.00	42,630.00	44,000.00	39,200.00	37,500.00	32,700.00	NA	NA	NA
9.	Rajasthan	LSB	2.99	2.56	4.57	2.63	1.77	2.60	3.15	4.84	3.58	2.70
10.	Telangana	LSB	NA	NA	NA	2.93	1.97	1.96	2.30	3.33	1.21	1.01
11.	Uttar Pradesh	LSB	2.68	1.67	NA	2.00	1.86	1.75	1.79	2.52	1.76	1.49
12.	West Bengal	t	112.55	211.51	443.99	NA	483.00	561.65	561.65	93.05	174.17	43.40

Source: SFDS

Table 3.4. Value (₹ lakh) of tendu leaves in the selected States

S. No.	State	Year									
		2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20
1.	Andhra Pradesh	2,056.00	7,346.41	12,662.20	NA	0.00	0.00	0.00	834.58	363.64	376.93
2.	Chhattisgarh	33,529.88	35,531.03	73,039.23	34,530.67	32,348.19	33,960.40	63,872.00	1,07,984.70	81,545.97	55,670.00
3.	Gujarat	543.00	604.26	1,412.06	928.29	613.94	955.38	1,000.24	1,629.57	1,394.77	1,084.13
4.	Jharkhand	2,106.18	2,912.60	4,124.40	2,404.40	1,629.17	1,912.00	5,895.00	12,977.00	6,704.00	NA
5.	Madhya Pradesh	327.28	309.96	634.12	400.58	305.56	329.27	NA	NA	NA	NA
6.	Maharashtra	8,952.17	10,262.92	13,681.04	6,291.99	4,576.94	6,457.36	5,473.20	17,303.21	5,069.07	3,847.65
7.	Odisha	36,424.00	41,341.00	42,235.00	41,800.00	38,483.00	54,045.00	66,837.00	NA	NA	NA
8.	Rajasthan	1,171.00	1,056.79	1,933.80	968.73	598.15	698.50	2,122.11	8,282.41	3,349.42	1,066.77
9.	Telangana	NA	NA	NA	6,701.00	4,139.00	4,579.00	2,882.42	3,791.52	1,828.44	1,772.43
10.	Uttar Pradesh	3,832.69	4,101.16	NA	2,552.23	2,849.92	3,937.13	7,792.40	8,981.90	NA	NA
11.	West Bengal	NA	NA	NA	NA	NA	122.19	122.19	0.34	1.92	1.30

Source: SFDS



Table 3.5. Production (t) of gum in the selected States

S. No.	State	Year								
		2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19
1.	Andhra Pradesh	23.97	34.49	29.87	42.53	26.17	19.84	10.30	5.00	4.00
2.	Chhattisgarh	41.64	20.30	23.61	2.54	4.03	139.00	73.00	15.00	13.00
3.	Gujarat	27.85	33.57	42.62	54.72	51.50	16.05	16.10	6.10	6.10
4.	Jharkhand	240.60	270.40	207.30	90.00	56.00	56.30	64.00	19.00	14.00
5.	Madhya Pradesh	286.48	292.28	232.39	207.50	120.00	113.00	113.00	30.00	30.00
6.	Maharashtra	200.00	203.40	350.77	539.11	323.79	221.00	158.00	66.00	53.00
7.	Telangana	99.67	159.55	102.19	65.02	42.26	33.64	40.00	12.00	4.00
8.	Others	103.00	134.60	155.20	143.00	87.00	85.00	95.00	35.00	35.00

Source: Indian Institute of Natural Resin and Gums, Ranchi

Table 3.6. Value (₹ lakh) of gum in the selected States

S. No.	State	Year									
		2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20
1.	Andhra Pradesh	174.55	325.29	211.81	NA	NA	NA	NA	NA	NA	NA
2.	Chhattisgarh	107.12	56.86	NA	NA	NA	4.85	0.83	0.55	0.84	NA
3.	Gujarat	57.57	35.45	NA	NA	69.53	60.91	16.71	13.75	0.12	0.40
4.	Maharashtra	86.40	139.31	298.18	134.21	295.39	347.84	23.79	22.47	14.53	16.38

Source: SFDS

Table 3.7. Production (t) of lac in the selected States

S. No.	State	Year								
		2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19
1.	Andhra Pradesh	20.00	120.00	93.00	113.00	170.00	172.00	88.00	9.00	10.00
2.	Assam	50.00	100.00	130.00	150.00	285.00	315.00	105.00	9.00	21.00
3.	Chhattisgarh	NA	NA	3,260.00	3,381.00	2,336.00	3,187.00	2,693.00	2,252.00	3,450.00
4.	Gujarat	NA	NA	55.00	47.00	45.00	48.00	22.00	22.00	16.00
5.	Jharkhand	3,980.00	10,240.00	11,020.00	12,207.00	8,630.00	9,950.00	8,926.00	7,746.00	10,551.00
6.	Madhya Pradesh	685.00	1,300.00	2,524.00	2,497.00	2,586.00	2,222.00	2,274.00	2,236.00	2,136.00
7.	Maharashtra	255.80	399.60	538.40	354.90	384.90	470.70	259.70	865.00	722.00
8.	Meghalaya	5.00	5.00	150.00	168.00	160.00	127.00	20.00	6.00	6.00
9.	Odisha	230.00	350.00	310.00	673.00	715.00	623.00	354.00	279.00	646.50
10.	Uttar Pradesh	175.00	200.00	100.00	90.00	75.00	55.00	15.00	12.00	16.00
11.	West Bengal	1,435.00	1,400.00	780.00	500.00	451.00	582.00	980.00	794.00	962.00

Source: Indian Institute of Natural Resin and Gums, Ranchi



Table 3.8. Value (₹ lakh) of lac in the selected States

S. No.	State	Year									
		2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20
1.	Assam	NA	NA	NA	NA	0.05	0.05	NA	NA	NA	NA
2.	Chhattisgarh	NA	NA	NA	NA	NA	31.95	549.98	318.05	98.93	80.63
3.	Gujarat	NA	NA	NA	NA	NA	NA	84.96	1.02	1.76	0.82
4.	Maharashtra	127.64	797.67	1,072.93	706.76	766.23	941.37	51.94	0.00	6.00	0.00

Source: SFDs

Table 3.9. Production of resin in the selected States

S. No.	State	Unit	Year									
			2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20
1.	Andhra Pradesh	t	NA	NA	NA	NA	249.40	188.40	NA	NA	NA	NA
2.	Arunachal Pradesh	Blaze	2,800.00	950.00	34,910.00	20,785.00	NA	NA	NA	NA	NA	NA
3.	Himachal Pradesh	t	5,847.00	5,825.00	5,577.00	5,389.00	5,258.00	5,360.00	5,841.00	5,914.00	5,842.00	5,708.00
4.	Jammu & Kashmir	t	1,422.00	940.00	850.00	1,237.00	1,805.00*	NA	NA	NA	NA	NA
5.	Uttarakhand	t	17,641.00	16,142.00	14,673.00	14,861.00	14,415.00	15,624.00	17,189.00	13,700.43	9,649.84	4,338.72

Source: SFDs

Indian Institute of Natural Resin and Gums, Ranchi

*upto January 2015.

Table 3.10. Value (₹ lakh) of resin in the selected States

S. No.	State	Year									
		2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20
1.	Andhra Pradesh	NA	NA	NA	NA	40.17	1,924.62	NA	NA	NA	NA
2.	Arunachal Pradesh	0.06	0.44	6.28	5.20	NA	NA	NA	NA	NA	NA
3.	Himachal Pradesh	1,032.58	1,024.57	762.78	854.51	832.62	942.49	844.34	746.55	588.09	595.10
4.	Jammu & Kashmir	1,025.65	799.77	302.73	770.19	139.21*	NA	NA	NA	NA	NA
5.	Uttarakhand	6,493.06	5,974.51	3,697.25	6,653.18	7,271.57	4,938.74	3,976.01	5,123.37	5,152.66	1,720.84

Source: SFDs

Indian Institute of Natural Resin and Gums, Ranchi.

*upto January 2015.



Table 3.11. Production of canes in the selected States/UT

S. No.	State/UT	Unit	Year									
			2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20
1.	Arunachal Pradesh	KAP	NA	68,009.00	1,04,219.43	46,988.43	NA	NA	NA	NA	NA	NA
2.	Goa	Nos. in lakh	NA	NA	NA	NA	0.00	0.00	0.00	0.16	0.00	0.00
3.	Karnataka	Nos. in lakh	2.63	0.17	0.05	0.05	0.10	0.76	0.37	0.14	0.77	0.72
4.	Kerala	t	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	52.95	0.00
5.	Manipur	RMT	30,675.00	2,82,000.00	2,32,000.00	1,04,900.00	81,885.00	NA	NA	NA	NA	NA
6.	Mizoram	RMT	1,214.00	NA	139.00	28.00	NA	NA	NA	NA	NA	NA
7.	Nagaland	t	2,283.17	NA	3,505.70	388.14	NA	NA	NA	NA	NA	NA
8.	Tripura	Nos. in lakh	NA	NA	NA	NA	94.99	86.51	116.76	72.76	71.34	13.82
9.	Andaman and Nicobar Islands	RMT	7,26,807.00	6,61,667.00	7,23,809.00	7,11,709.80	1,26,303.00	5,41,597.00	2,94,806.00	7,985.00	1,22,215.00	1,55,581.00

Source: SFDs

RMT: Running Meter

Table 3.12. Value (₹ lakh) of canes in the selected States/UT

S. No.	State/UT	Year										
		2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20	
1.	Arunachal Pradesh	NA	6.71	7.66	19.05	NA	NA	NA	NA	NA	NA	NA
2.	Manipur	1.26	1.94	1.83	0.73	0.66	NA	NA	NA	NA	NA	NA
3.	Mizoram	0.43	NA	0.04	0.01	NA	NA	NA	NA	NA	NA	NA
4.	Nagaland	21,920.00	NA	NA	NA	22,090.00	11,790.00	48,350.00	NA	3,800.00	NA	NA
5.	Andaman and Nicobar Islands	NA	NA	NA	NA	0.56	14.80	5.05	0.13	2.03	2.73	NA

Source: SFDs



Table 3.13. Production of other NTFPs in the selected States

State	NTFP	Unit	Year		
			2010-11	2011-12	2012-13
Andhra Pradesh	Myrobolans	t	497.96	536.24	432.73
	Nuxvomica	t	127.19	368.50	64.97
	Seeded Tamarind	t	2,154.55	2,632.38	1,803.80
	Deseeded Tamarind	t	312.33	116.46	413.78
	Tamarind Seed	t	5.69	1.29	6.87
	Pungam Seed	t	79.86	50.12	88.06
	Cleaning nuts	t	7.25	10.51	3.47
	Marking nuts	t	91.53	357.95	130.35
	Mohwa Seed	t	44.23	256.99	14.39
	Mohwa Flower	t	122.26	864.14	226.10
	Honey	t	162.41	341.79	155.56
	Sheekakai	t	78.73	35.61	60.36
	Soap nuts	t	153.35	78.15	139.64
	Hill Brooms	t	126.08	90.46	50.83
	Wild Brooms	t	0.00	33.11	17,443.50
	Adda leaf	t	113.47	113.47	0.00
	Naramamidi Bark	t	9.00	240.12	96.08
	Maredugeddalalu	t	31.04	12.32	27.75
	Others	t	74.55	0.00	0.00
	Medicinal Herbs	t	NA	NA	NA
	Flower Tamarind	t	NA	NA	NA
	Ariary honey	t	NA	NA	NA
	Soap nuts (Akkaram)	t	NA	NA	NA
	Hill brooms	Nos.	NA	NA	NA
	Naramamidi Bark	t	NA	NA	NA
	Teipods	t	NA	NA	NA
	Bees wax	t	NA	NA	NA
	Dry amala	t	NA	NA	NA
	Rellabark	t	NA	NA	NA
	Bamboo industrial cuts	t	NA	NA	NA
	Gachakayalu	t	NA	NA	NA
	Seeded Tamarind	t	NA	NA	NA
	Cashew	t	NA	NA	NA
	Coffee	m ³	NA	NA	NA
	Pepper	t	NA	NA	NA
	Honey rock bee	t	NA	NA	NA
	Palmyrah leaves	t	NA	NA	NA
	Tanikayalu	t	NA	NA	NA
	Gillakayalu	t	NA	NA	NA
	Pattudu karralu	Nos.	NA	NA	NA
Green Amala	t	NA	NA	NA	
Cuttings	t	NA	NA	NA	
Nuxvomica seed	t	NA	NA	NA	
Rajmah (Red)	t	NA	NA	NA	
Thippathiga	t	NA	NA	NA	



Year						
2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20
NA	450.09	562.26	472.52	244.73	961.06	126.35
NA	39.27	79.66	34.55	87.01	1,478.68	52.54
NA	1,202.51	974.55	0.00	151.47	3,064.97	490.88
NA	34.95	72.21	94.91	27.93	104.52	101.16
NA	0.00	3.20	38.28	20.00	23.65	0.00
NA	29.45	2.98	5.13	9.58	21.71	6.77
NA	0.31	2.01	0.67	5.50	0.51	2.29
NA	146.21	389.69	881.68	731.86	602.34	89.76
NA	8.95	22.90	21.34	31.36	4.63	54.89
NA	0.00	0.00	0.76	0.00	0.15	0.00
NA	302.06	418.57	333.08	71.48	212.32	147.16
NA	23.16	17.93	19.78	32.39	122.47	23.13
NA	42.44	56.65	38.08	50.73	1,116.17	106.18
NA	0.00	0.00	0.00	41,946.40	0.00	174.86
NA	2,002.80	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	200.00	200.00	0.00
0.00	120.48	183.24	207.43	505.63	963.40	60.27
0.00	9.05	13.76	5.20	16.44	492.25	2.43
0.00	0.00	0.00	0.00	0.00	0.00	0.00
NA	6,053.80	96.94	NA	NA	NA	NA
NA	35.78	56.22	6.96	7.19	2467.65	0.00
NA	0.00	0.00	0.00	0.00	0.00	28.78
NA	10.12	0.00	0.00	25.20	993.00	0.00
NA	1,01,772.00	98,500.00	4,46,938.00	2,19,376.00	1,51,115.00	0.00
NA	120.48	183.24	207.43	505.63	963.40	60.27
NA	1.54	0.00	0.00	0.00	0.00	0.00
NA	0.10	0.04	0.00	40.00	0.03	0.03
NA	74.78	58.20	18.99	16.71	359.50	3.29
NA	127.37	58.90	509.00	893.61	0.17	0.00
NA	0.00	0.00	0.00	486.00	192.00	323.00
NA	0.00	0.00	0.00	151.47	3,064.97	490.88
NA	0.00	0.00	0.00	1,478	59.35	26.311
NA	0.00	0.00	0.00	14.78	593.55	263.11
NA	0.00	0.00	0.00	21.95	439.22	269.14
NA	0.00	0.00	0.00	6.09	34.06	35.70
NA	0.00	0.00	0.00	632.56	342.53	90.91
NA	0.00	0.00	0.00	3,000.00	15.17	0.00
NA	0.00	0.00	0.00	88.08	7.40	2.76
NA	0.00	0.00	0.00	202.80	0.41	0.00
NA	0.00	0.00	0.00	87.00	42,880.00	30,180.00
NA	0.00	0.00	0.00	0.00	16.00	0.08
NA	0.00	0.00	0.00	0.00	6.25	1.86
NA	0.00	0.00	0.00	1.30	0.00	52.54
NA	0.00	0.00	0.00	125.42	0.00	78.73
NA	0.00	0.00	0.00	0.00	0.00	15.57



State	NTFP	Unit	Year		
			2010-11	2011-12	2012-13
Arunachal Pradesh	Hand sticks	Nos.	NA	NA	NA
	Guggilam	t	NA	NA	NA
	Chirota	t	3,380.00	90.00	190.00
	Laneru	t	2,000.00	19.60	4,500.00
	Lichi seeds	t	NA	3,220.00	20.60
	Taxus leave	t	16,510.00	8,000.00	NA
	Sunglass	Bundles	19,810.00	19.60	NA
	Thatch	Bundles	1,000.00	NA	NA
	Toko Leaves	Nos.	2,902.00	1,46,000.00	1,40,785.00
	Broo Stick	Bundles	1,550.00	8,000.00	10,940.00
	Jeng Leaves	Nos.	NA	NA	NA
	Poles	Nos.	NA	NA	NA
Rubia cordifolia	t	NA	NA	2,600.00	
Chhattisgarh	Harad	t	1,634.38	7,149.03	NA
	Sal seed	t	3,920.00	71,300.00	130.00
Goa	Medicinal Plants	Ha	20.00	40.00	40.00
Gujarat	Grass	t	4.09	6,243.41	25,745.51
	Kadaya Gum	t	0.06	0.00	0.00
	Other Gum	t	27.84	40.11	42.74
	Aritha	t	0.70	1.76	3.18
	Amla	t	1.97	10.64	78.02
	Karanj Seeds	t	1.56	0.17	0.71
	Puwad seeds	t	11.24	56.47	72.47
	Mahuda Fruits (Doli)	t	174.70	124.26	131.32
	Mahuda Flowers	t	854.50	938.51	739.77
	Wax	t	2.32	3.53	3.72
	Honey	t	114.27	362.18	403.71
	Limbodi Seeds	t	0.00	32.06	0.00
	Ratanjyot	t	4.09	1.51	3.12
	Fruits	t	0.38	0.01	103.00
	Others (Misc.)	t	101.26	304.68	211.40
	Teak Stumps	Nos.	84,000.00	0.00	50,001.0
Timru Leaves	LSB	1.23	1.26	1.76	
Himachal Pradesh	Bhabar Grass	t	211.00	524.00	460.00
	Khair	t	1,991.00	971.00	3,042.00
	Medicinal Plants	t	1,241.00	694.00	253.00
Jammu & Kashmir	Others	t	1,525.54	1,712.10	268.74
Karnataka	Honey	t	55.06	70.11	3,256.30
	Wax	t	2.18	4.85	296.95
	Fruits	t	737.00	19.00	6.90
	Kappe huli	t	5.40	0.00	0.50
	Kasaga	t	8.00	NA	6.00
	Seegekai	t	44.39	123.88	88.54



Year						
2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20
NA	0.00	0.00	0.00	0.00	0.00	31,750.00
NA	0.00	0.00	0.00	0.00	0.08	0.00
70.00	120.00	130.00	30.00	40.00	NA	NA
2,527.00	3,000.00	23,100.00	39,500.00	NA	NA	NA
0.15	360.00	100.00	30.00	NA	NA	NA
NA	NA	NA	NA	NA	NA	NA
NA	22,130	NA	NA	NA	NA	NA
20.00	6,050	NA	NA	NA	NA	NA
160,371.00	78,450	78,914.00	23,292.00	78,644.00	NA	NA
	NA	25,450.00	5,314.00	13,854.00	NA	NA
85,150.00	NA	NA	NA	NA	NA	NA
5,647.00	NA	190.00	1,930.00	2,114.00	NA	NA
	NA	NA	NA	NA	NA	NA
NA	NA	NA	NA	NA	NA	NA
12,570.00	11,200.00	280.00	12,320.00	120.00	NA	NA
10.00	NA	NA	NA	NA	NA	NA
10.80	135.13	16,171.64	2,681.22	24,295.26	20,786.00	26,081.00
0.10	1.92	0.12	0.12	0.00	0.04	0.05
66.95	142.96	45.03	28.03	16.27	0.08	0.06
3.96	0.00	0.00	0.14	0.00	0.26	0.65
9.19	0.60	0.65	0.00	0.00	12.10	0.00
0.51	3.11	4.93	0.00	0.00	0.00	0.00
0.00	2.05	0.00	0.00	0.00	0.00	11.72
986.74	120.95	910.04	221.26	143.94	13.11	256.51
1,564.71	385.13	924.35	426.50	1,719.86	0.00	0.00
0.53	0.97	0.47	1.24	0.54	0.08	0.80
41.52	51.53	41.30	19,132.62	86.33	27.82	26.78
0.00	53.58	0.00	0.00	0.30	0.33	0.00
0.24	0.63	0.00	0.03	0.30	0.00	0.00
0.00	0.00	0.00	367.60	0.00	0.00	0.00
178.34	218.95	929.52	0.30	1.42	26.41	10.13
3,70,600.00	0.00	0.00	0.00	0.00	0.00	0.00
1.16	0.77	0.21	1.39	1.48	1.27	0.98
NA	NA	NA	NA	NA	NA	NA
2,131.00	1,586.00	2,989.00	3,056.00	3,427.00	4,012.00	3,274.00
1,243.00	1,558.00	6,102.00	4,240.00	1,791.00	3,392.00	4,657.00
4,060.58	267.78	59.60	151.80	96.06	87.18	135.54
749.88	3,090.71	3,464.72	509.28	16,043.49	359.03	16.41
66.58	4.90	0.41	0.42	0.68	0.00	0.52
4.20	NA	NA	NA	2.24	0.34	0.00
21.00	NA	NA	NA	NA	NA	NA
6.97	NA	4.84	NA	NA	NA	NA
90.41	175.95	87.55	127.83	10,538.43	49,143.57	114.59



State	NTFP	Unit	Year		
			2010-11	2011-12	2012-13
	Halmaddi	t	190.7	185	182.3
	Cashew nut	t	9.92	39.75	31.55
	Alaekai	t	136.68	268.91	48.55
	Ramapatre	t	10.07	4.47	1.50
	Kaisaraka	t	NA	13.48	NA
	Suragi hoovu	t	22.70	0.75	18.10
	Uppigehuli	t	613.24	324.51	152.48
	Tamrind	t	71.89	448.30	68.80
	Ganapekai	t	4.90	96.00	NA
	Muruganahuli	t	78.99	NA	9.47
	Amasole	t	29.00	82.50	NA
	Dupadarala	t	2.00	1.40	3.90
	Antuvalakai	t	210.49	75.88	16.82
	Maradapachi	t	1.51	19.10	6,013.52
	Other seeds	t	2.00	85.00	12.00
	Others	t	2.00	498.05	0.70
	Muragalu	t	78.99	NA	90.47
	Dalchini leaves	t	408.59	1229.87	525.65
	Rosha grass	t	20.00	NA	NA
	Ramgot	t	NA	12.00	NA
Kerala	Honey	t	41.80	29.73	61.69
	wax	t	0.29	0.11	0.11
	Spieces	t	34.98	23.29	3.76
	Herbs	t	1,088.95	927.02	728.63
Madhya Pradesh	Fruit of B.Lanzan	t	NA	NA	0.32
	Harra	t	NA	NA	111.57
	Baal harra	t	NA	NA	0.01
	Mahua Flower	t	NA	NA	96.98
	Mahua Gulli	t	NA	NA	1.83
	Neem Seed	t	NA	NA	6.72
	Sal seed	t	171.37	3,774.18	18.60
Maharashtra	Grass	t	17,629.00	1,584.00	972.00
	Hirda	t	173.90	236.80	239.10
	Mahua	t	661.00	330.90	481.80
Manipur	Thatching grass	Bundles	1,000.00	0.00	0.00
	Charcoal	t	65.30	126.70	40.10
	Smilex	t	9.00	2.00	1.60
	Rubber	t	1.00	1.16	0.80
	Broom	t	684.91	223.50	160.01
Mizoram	Charcoal	t	735.70	55.50	64.10
	Broom sticks	t	178.00	374.20	5,755.50



Year						
2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20
NA	NA	NA	NA	NA	NA	12.36
78.79	41.00	935.30	1042.90	22.12	17.57	9.73
34.08	NA	0.02	NA	2.11	NA	0.60
1.48	0.23	0.13	1.80	11.10	163.16	NA
NA	NA	NA	NA	NA	NA	NA
45.50	0.20	0.20	NA	NA	NA	19.97
785.60	806.16	88.95	206.50	360.57	1,210.45	862.61
93.90	252.43	45.25	85.30	169.76	14,637.90	NA
NA	NA	NA	100.00	15.00	24.00	11.00
53.84	111.23	151.23	228.13	50.03	31.63	45.82
NA	60.00	30.00	NA	NA	2.00	9.00
28.00	2.00	1.00	1.00	14.00	1.52	2.00
20.57	1,590.20	74.30	918.06	1,633.84	1,05,054.70	83.30
171.55	360.92	4,000.15	1,785.00	14,188.00	4,892.00	0.29
400.00	NA	NA	0.25	1,49,215.00	49,015.00	0.00
0.00	970.10	14.50	2.50	2.83	15.00	75.90
53.84	111.23	151.23	228.13	50.03	31.63	0.00
275.80	NA	119.00	194.69	66.09	151.20	107.00
NA	NA	0.40	0.40	NA	NA	0.50
NA	NA	NA	6.32	NA	0.00	0.50
49.68	61.32	56.18	60.39	41.73	39.02	NA
0.20	0.22	0.27	1.61	0.43	0.24	NA
NA	1.77	4.75	8.35	1.23	41.06	NA
888.14	1,038.88	732.56	287.02	881.31	497.99	NA
	NA	NA	NA	NA	NA	NA
140.50	NA	NA	NA	NA	NA	NA
NA	NA	NA	NA	NA	NA	NA
NA	NA	NA	NA	NA	NA	NA
NA	NA	NA	NA	NA	NA	NA
NA	NA	NA	NA	NA	NA	NA
316.47	1,165.48	NA	NA	NA	NA	NA
656.00	483.00	633.00	66,771.00	17,164.00	1,440.00	495.00
139.20	390.30	154.20	381.60	17.30	135.60	7.00
887.20	990.50	986.00	798.63	62.50	802.30	0.90
1,702.00	0.00	NA	NA	NA	NA	NA
40.00	80.20	NA	NA	NA	NA	NA
0.15	2.50	NA	NA	NA	NA	NA
0.48	0.83	NA	NA	NA	NA	NA
312.36	NA	NA	NA	NA	NA	NA
168.00	274.85	2.00	NA	NA	NA	NA
558.00	41.30	NA	NA	NA	NA	NA



State	NTFP	Unit	Year			
			2010-11	2011-12	2012-13	
Tamil Nadu	Cashew nut	t	49.84	NA	NA	
	Tamarind	t	355.78	NA	NA	
	Other	t	2,315.97	NA	NA	
Telangana	Gum Karaya	t	NA	NA	NA	
	Gum kondagogu	t	NA	NA	NA	
	Gum Tiruman	t	NA	NA	NA	
	Bees wax	t	NA	NA	NA	
	Cleaning Nuts	t	NA	NA	NA	
	Dry Amla	t	NA	NA	NA	
	Honey Rock Bee	t	NA	NA	NA	
	Maredugaddalu	t	NA	NA	NA	
	Marking Nuts	t	NA	NA	NA	
	Mohwa Flower	t	NA	NA	NA	
	Mohawa seed	t	NA	NA	NA	
	Myrobolans	t	NA	NA	NA	
	Naramamidi Bark	t	NA	NA	NA	
	Nuxvomica	t	NA	NA	NA	
	Pungam seed	t	NA	NA	NA	
	Seeded Tamarind	t	NA	NA	NA	
	Deseeded Tamarind			NA	NA	NA
	Flower Tamarind	t	NA	NA	NA	
	Soapnuts	t	NA	NA	NA	
	Soapnuts (Akkaram)	t	NA	NA	NA	
	Tamarind Seed	t	NA	NA	NA	
Wild Brooms	t	NA	NA	NA		
Other	t	NA	NA	NA		
Gatchakayalu	t	NA	NA	NA		
Uttar Pradesh	Medicinal Plants	t	188.50	101.40	NA	
	Sal seed	t	0.00	0.00	0.00	
Uttarakhand	Grass	t	NA	NA	544.05	
	Medicinal Plants	t	NA	NA	2,928.70	
West Bengal	Honey	t	592.40	27.76	NA	
	Wax	t	33.43	1.47	NA	
	Citronella grass	t	327.30	NA	NA	
	Sal seed	t	2,046.01	2,360.68	4,139.40	

Source: SFDs

1 Hill broom = 0.4 kg



Year						
2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20
NA	NA	NA	NA	NA	NA	NA
NA	NA	NA	NA	NA	NA	NA
NA	NA	NA	NA	NA	NA	NA
NA	172.10	81.25	NA	NA	NA	NA
NA	0.00	0.02	NA	NA	NA	NA
NA	0.00	0.00	NA	NA	NA	NA
NA	0.00	0.39	NA	NA	NA	NA
NA	24.90	2.50	NA	NA	NA	NA
NA	0.00	1.94	NA	NA	NA	NA
NA	110.5	64.58	NA	NA	NA	NA
NA	4.60	4.01	NA	NA	NA	NA
NA	0.40	1.28	NA	NA	NA	NA
NA	423.10	164.47	NA	NA	NA	NA
NA	279.50	181.86	NA	NA	NA	NA
NA	2.50	3.55	NA	NA	NA	NA
NA	14.70	15.52	NA	NA	NA	NA
NA	287.70	155.81	NA	NA	NA	NA
NA	27.40	10.02	NA	NA	NA	NA
NA	152.80	10.68	NA	NA	NA	NA
NA	57.50	84.85	NA	NA	NA	NA
NA	0.00	0.00	NA	NA	NA	NA
NA	19.40	28.19	NA	NA	NA	NA
NA	0.00	15.88	NA	NA	NA	NA
NA	1.90	0.00	NA	NA	NA	NA
NA	3,703.00	22.55	NA	NA	NA	NA
NA	0.00	0.00	NA	NA	NA	NA
NA	0.00	0.48	NA	NA	NA	NA
NA	3,481.00	5,555.00	7,471.00	7,210.00	NA	NA
0.00	0.00	1.00	NA	NA	NA	NA
31.00	NA	NA	NA	NA	NA	NA
1,982.43	481.66	45.30	113.37	4.98	NA	NA
NA	NA	NA	NA	NA	NA	NA
NA	NA	NA	NA	NA	NA	NA
NA	NA	NA	NA	NA	NA	NA
0.00	0.00	37.85	NA	NA	NA	NA



Table 3.14. Value (₹ lakh) of other NTFPs in the selected States

State	NTFP	Year			
		2010-11	2011-12	2012-13	2013-14
Andhra Pradesh	Myrobolans	28.20	40.95	33.10	NA
	Nuxvomica	25.43	80.12	14.01	NA
	Seeded Tamarind	399.44	393.24	279.94	NA
	Deseeded Tamarind	95.03	45.09	135.39	NA
	Tamarind Seed	0.29	0.08	0.48	NA
	Pungam Seed	7.61	4.86	8.47	NA
	Cleaning nuts	0.64	1.21	0.42	NA
	Marking nuts	3.03	17.73	7.35	NA
	Mohwa Seed	4.01	30.36	1.89	NA
	Mohwa Flower	7.99	60.54	15.83	NA
	Honey	174.53	409.15	185.64	NA
	Sheekakai	4.72	2.14	3.62	NA
	Soap nuts	30.13	14.21	12.68	NA
	Hill Brooms	141.01	93.91	39.31	NA
	Wild Brooms	0.00	10.89	21.59	NA
	Adda leaf	8.51	8.51	0.00	NA
	Naramamidi Bark	34.56	67.13	26.79	NA
	Maredugeddal	21.73	8.65	27.76	NA
	Others	10.03	2.11	0.63	NA
	Medicinal Herbs	8.29	8.65	27.76	NA
	Flower Tamarind	NA	NA	NA	NA
	Ariary honey	NA	NA	NA	NA
	Soap nuts (Akkaram)	NA	NA	NA	NA
	Hill brooms	NA	NA	NA	NA
	Naramamidi Bark	NA	NA	NA	NA
	Teipods	NA	NA	NA	NA
	Bees wax	NA	NA	NA	NA
	Dry amala	NA	NA	NA	NA
	Rellabark	NA	NA	NA	NA
	Bamboo industrial cuts	NA	NA	NA	NA
	Gachakayalu	NA	NA	NA	NA
	Seeded Tamarind	NA	NA	NA	NA
	Cashew	NA	NA	NA	NA
	Coffee	NA	NA	NA	NA
	Pepper	NA	NA	NA	NA
	Honey rock bee	NA	NA	NA	NA
	Palmyrah leaves	NA	NA	NA	NA
	Tanikayalu	NA	NA	NA	NA
	Gillakayalu	NA	NA	NA	NA
	Pattudu karralu	NA	NA	NA	NA
Green Amala	NA	NA	NA	NA	
Cuttings	NA	NA	NA	NA	
Nuxvomica seed	NA	NA	NA	NA	
Rajmah (Red)	NA	NA	NA	NA	
Thippathiga	NA	NA	NA	NA	



Year					
2014-15	2015-16	2016-17	2017-18	2018-19	2019-20
27.00	33.74	28.35	15.91	93.95	14.12
11.78	25.04	11.41	29.8	292.04	26.2
233.12	214.40	0.00	4.33	518.89	156.94
11.21	28.38	42.44	12.6	60.67	69.82
0.00	0.19	7.89	4.30	1.49	0.00
2.94	0.31	0.98	1.93	2.07	1.29
0.06	0.37	0.14	1.21	0.14	0.91
17.56	46.75	105.79	91.48	59.71	7.37
1.33	3.53	4.68	7.06	0.44	13.72
0.00	0.00	0.08	0.00	0.02	0.00
402.79	599.69	499.62	16.54	265.40	283.05
1.40	3.56	5.52	9.23	16.83	10.18
4.12	5.65	3.97	5.66	184.17	15.67
0.00	0.00	0.00	184.56	0.00	71.00
2.06	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	16.00	16.20	0.00
38.89	58.63	66.38	167.36	274.58	13.30
9.66	17.89	6.76	21.54	351.96	7.30
0.00	0.00	0.00	0.00	0.00	0.00
4.31	16.05	NA	NA	NA	NA
19.14	28.12	4.45	4.64	1,990.16	0
0.00	0.00	0.00	0.00	0.00	44.8
4.12	5.65	3.97	5.66	184.17	15.67
34.03	46.40	188.29	10.12	7.55	0.00
38.89	58.63	66.38	167.36	274.58	13.30
0.19	0.00	0.00	0.00	0.00	0.00
0.12	0.05	0.00	0.5	0.03	0.04
33.58	21.15	8.54	7.69	127.01	2.33
8.69	4.05	0.35	0.63	0.01	0.00
0.00	0.00	0.00	22.12	7.04	12.00
0.00	0.00	0.05	3.67	0.00	0.00
0.00	0.00	0.00	4.33	518.89	156.94
0.00	0.00	0.00	13.19	569.80	779.42
0.00	0.00	0.00	47.26	1190.27	501.79
0.00	0.00	0.00	22.87	143.96	110.83
0.00	0.00	0.00	961.49	518.42	170.19
0.00	0.00	0.00	0.28	0.45	0.00
0.00	0.00	0.00	29.07	1.07	0.28
0.00	0.00	0.00	2.74	0.08	0.00
0.00	0.00	0.00	0.12	1.87	2.05
0.00	0.00	0.00	0.00	0.08	0.01
0.00	0.00	0.00	0.00	1.87	0.61
0.00	0.00	0.00	0.52	0.00	26.20
0.00	0.00	0.00	5.34	0.00	37.56
0.00	0.00	0.00	0.00	0.00	1.27



State	NTFP	Year			
		2010-11	2011-12	2012-13	2013-14
Arunachal Pradesh	Hand sticks	NA	NA	NA	NA
	Guggilam	NA	NA	NA	NA
	Chirotia	1.38	2.11	0.63	NA
	Laneru	0.01	8.65	1.82	NA
	Lichi Seeds	NA	0.21	0.42	0.16
	Taxus Leave	0.05	NA	0.15	1.27
	Sunglass	0.39	0.10	0.95	0.47
	Thatch	0.03	0.19	NA	NA
	Toko Leaves	0.13	2.15	NA	NA
	Broo Stick	0.36	NA	NA	0.06
	Jeng Leaves	NA	NA	0.04	0.06
	Poles	NA	NA	0.39	NA
	Rubia cordifolia	NA	NA	NA	0.02
Chhattisgarh	Harad	98.03	553.82	NA	2.56
Goa	Medicinal Plants	NA	NA	0.66	NA
Gujarat	Grass	102.51	272.01	400.04	780.91
	Kadaya Gum	0.09	0.00	0.00	0.22
	Other Gum	57.48	35.75	43.18	35.38
	Aritha	0.00	0.03	0.34	0.42
	Amla	12.30	7.23	37.06	4.33
	Karanj Seeds	0.21	0.25	0.08	0.07
	Puwad seeds	0.21	0.33	7.39	0.00
	Mahuda Fruits (Doli)	26.80	21.85	26.39	207.31
	Mahuda Flowers	137.55	152.98	114.39	309.10
	Wax	5.10	4.29	2.83	0.41
	Honey	117.80	165.39	229.96	23.35
	Limbodi Seeds	1.76	1.61	0.00	0.00
	Ratanjyot	4.81	0.12	0.36	0.03
	Fruits	0.30	0.30	0.58	0.00
	Others (Misc.)	42.68	52.67	161.49	0.07
	Teak Stumps	8.13	0.00	1.15	7.27
	Timru Leaves	543.00	604.26	1,412.06	928.29
Himachal Pradesh	Fodder	8.81	9.47	9.18	8.78
	Bhabar Grass	1.03	3.32	0.37	1.12
	Khair	793.05	419.81	1,315.08	920.92
	Medicinal Plants	288.60	331.90	333.23	1,183.86
Madhya Pradesh	Fruit of B.Lanzan	NA	NA	0.02	NA
	Harra	NA	NA	0.68	1.61
	Mahua Flower	NA	NA	5.19	NA
	Neem Seed	NA	NA	0.25	NA
Maharashtra	Grass	34.81	18.31	12.35	11.46
	Hirda	12.43	1.60	8.33	4.68
	Mahua	51.88	63.45	60.17	166.18



Year					
2014-15	2015-16	2016-17	2017-18	2018-19	2019-20
0.00	0.00	0.00	0.00	0.00	2.25
0.00	0.00	0.00	0.00	0.06	0.00
NA	NA	NA	NA	NA	NA
NA	NA	NA	NA	NA	NA
NA	NA	NA	NA	NA	NA
NA	NA	NA	NA	NA	NA
NA	NA	NA	NA	NA	NA
NA	NA	NA	NA	NA	NA
NA	NA	NA	NA	NA	NA
NA	NA	NA	NA	NA	NA
NA	NA	NA	NA	NA	NA
NA	NA	NA	NA	NA	NA
NA	NA	NA	NA	NA	NA
NA	NA	NA	NA	NA	NA
992.80	1,261.85	1,718.07	1,899.39	1,733.55	2,342.07
4.19	0.24	0.15	0.00	0.04	0.05
55.34	60.67	16.6	46.59	0.08	0.44
0.00	0.00	1.50	1.18	0.02	0.08
0.27	0.29	0.00	1.09	17.52	0.00
0.65	1.36	0.00	0.45	0.00	0.00
0.28	0.00	0.00	0.00	0.00	1.71
20.03	161.01	99.50	29.87	2.69	64.56
61.24	182.77	184.95	138.71	0.00	0.00
0.76	0.46	1.11	1.32	0.08	0.07
29.11	31.27	92.84	110.24	26.87	132.34
3.56	0.00	0.00	0.00	0.10	0.00
0.07	0.00	0.00	0.03	0.00	0.00
0.00	0.00	61.52	NA	NA	0.00
38.64	78.43	88.42	23.53	8.43	4.07
0.00	0.00	0.00	NA	NA	0.00
613.94	185.45	1,332.35	5,838.43	1,394.77	1,084.13
10.35	5.42	3.82	6.46	4.01	5.82
3.50	0.41	1.18	2.15	2.13	6.53
685.40	1,478.88	1,309.25	1,616.17	1,367.94	1,198.52
1,594.44	4,196.26	3,008.97	1,843.63	2,720.57	5,078.64
NA	NA	NA	NA	NA	NA
NA	NA	NA	NA	NA	NA
NA	NA	NA	NA	NA	NA
NA	NA	NA	NA	NA	NA
12.35	3.15	7.94	13.41	16.99	11.45
2.57	4.42	8.07	1.14	3.81	0.19
181.49	179.13	157.91	13.20	55.58	0.07



State	NTPF	Year			
		2010-11	2011-12	2012-13	2013-14
Manipur	Thatching grass	0.00	0.00	0.00	0.01
	Charcoal	0.35	0.49	0.55	0.68
	Smilex	0.04	0.10	0.06	0.01
	Rubber	1.96	1.74	1.12	0.62
	Broom	2.01	0.91	1.82	2.39
Mizoam	Charcoal	1.47	0.14	0.13	0.30
	Broom sticks	12.09	16.22	0.21	16.45
Odisha	Sal Leaves	NA	93.52	93.52	93.52
Tamil Nadu	Cashew nut	24.31	121.05	92.78	98.66
	Tamarind	30.04	NA	NA	NA
	Other	68.44	NA	NA	NA
Telangana	Gum Karaya	NA	NA	NA	NA
	Gum kondagogu	NA	NA	NA	NA
	Gum Tiruman	NA	NA	NA	NA
	Bees wax	NA	NA	NA	NA
	Cleaning Nuts	NA	NA	NA	NA
	Dry Amla	NA	NA	NA	NA
	Honey Rock Bee	NA	NA	NA	NA
	Maredugaddalu	NA	NA	NA	NA
	Marking Nuts	NA	NA	NA	NA
	Mohwa Flower	NA	NA	NA	NA
	Mohawa seed	NA	NA	NA	NA
	Myrobolans	NA	NA	NA	NA
	Naramamidi Bark	NA	NA	NA	NA
	Nuxvomica	NA	NA	NA	NA
	Pungam seed	NA	NA	NA	NA
	Seeded Tamarind	NA	NA	NA	NA
	Deseeded Tamarind	NA	NA	NA	NA
	Flower Tamarind	NA	NA	NA	NA
	Soapnuts	NA	NA	NA	NA
	Soapnuts (Akkaram)	NA	NA	NA	NA
	Tamarind Seed	NA	NA	NA	NA
	Wild Brooms	NA	NA	NA	NA
	Other	NA	NA	NA	NA
Gatchakayalu	NA	NA	NA	NA	
Uttar Pradesh	Medicinal Plants	1.95	0.96	NA	NA
Uttarakand	Grass	NA	NA	154.35	0.18
	Medicinal Plants	NA	NA	2,326.18	1,808.54
West Bengal	Honey	29,620.00	NA	NA	NA
	Wax	2,674.12	NA	NA	NA

Source: SFDs



Year					
2014-15	2015-16	2016-17	2017-18	2018-19	2019-20
0.00	NA	NA	NA	NA	NA
1.36	NA	NA	NA	NA	NA
0.13	NA	NA	NA	NA	NA
0.66	NA	NA	NA	NA	NA
NA	NA	NA	NA	NA	NA
3.48	NA	NA	NA	NA	NA
NA	NA	NA	NA	NA	NA
NA	NA	NA	NA	NA	NA
NA	NA	NA	NA	NA	NA
NA	NA	NA	NA	NA	NA
NA	NA	NA	NA	NA	NA
308.39	111.84	NA	NA	NA	NA
0.00	0.02	NA	NA	NA	NA
0.00	0.00	NA	NA	NA	NA
0.00	0.45	NA	NA	NA	NA
4.49	0.46	NA	NA	NA	NA
0.00	0.92	NA	NA	NA	NA
145.73	90.42	NA	NA	NA	NA
4.81	5.21	NA	NA	NA	NA
0.05	0.15	NA	NA	NA	NA
42.30	17.27	NA	NA	NA	NA
45.06	28.03	NA	NA	NA	NA
0.14	0.20	NA	NA	NA	NA
5.46	5.24	NA	NA	NA	NA
67.94	49.98	NA	NA	NA	NA
2.37	1.01	NA	NA	NA	NA
26.64	2.85	NA	NA	NA	NA
19.95	30.87	NA	NA	NA	NA
0.00	0.00	NA	NA	NA	NA
2.08	2.82	NA	NA	NA	NA
0.00	2.06	NA	NA	NA	NA
0.45	0.00	NA	NA	NA	NA
17.67	2.84	NA	NA	NA	NA
3.44	0.00	NA	NA	NA	NA
0.00	0.12	NA	NA	NA	NA
44.08	25.23	36.63	59.33	NA	NA
NA	NA	NA	NA	NA	NA
144.79	80.00	7.28	2.41	NA	NA
NA	NA	NA	NA	NA	NA
NA	NA	NA	NA	NA	NA



Table 3.15. Production (t) of bamboo in the selected States/UTs

S. No.	State/UT	Year			
		2010-11	2011-12	2012-13	2013-14
1.	Andhra Pradesh	99,251.87	1,25,517.50	1,51,877.78	60,931.76
2.	Arunachal Pradesh	252.40	554.44	587.61	385.53
3.	Chhattisgarh	23,509.40	2,82,984.0	1,61,733.00	3,56,619.00
4.	Delhi	0.00	0.00	0.00	0.00
5.	Goa	1,215.00	513.37	378.48	808.31
6.	Gujarat	115.00	9,225.07	1,353.40	1,600.62
7.	Himachal Pradesh@	416.00	675.00	508.00	NA
8.	Jharkhand	2,22,300.00	NA	NA	NA
9.	Karnataka	406.88	283.03	35.14	247.19
10.	Kerala	4,754.10	5,590.33	19,006.39	5,939.00
11.	Madhya Pradesh	49,658.78	53,637.92	54,034.43	59,376.00
12.	Maharashtra	62,011.00	1,41,445.00	3,99,189.00	10,872.00
13.	Manipur	10,064.08	7,901.22	13,136.40	16,891.36
14.	Mizoram	2,128.80	2,836.80	555.00	5,580.00
15.	Nagaland	265.10	NA	5,550.70	11,829.00
16.	Odisha	69,079.89	70,924.44	3,736.69	10,957.21
17.	Rajasthan	15,648.00	16,812.00	18,948.00	18,660.00
18.	Sikkim@	925.00	100.00	600.00	500.00
19.	Tamil Nadu	3,625.73	NA	NA	NA
20.	Tripura	44,858.32	50,375.17	23,203.47	52,906.66
21.	Uttar Pradesh	23,941.68	15,207.84	NA	7,247.28
22.	Uttarakhand*	NA	NA	NA	1,731.44
23.	West Bengal	NA	NA	NA	4,239.60
24.	Andaman and Nicobar Islands	5,223.61	5,680.84	5,142.54	5,000.74
25.	Chandigarh	NA	NA	NA	NA
26.	Dadra & Nagar Haveli	NA	NA	NA	NA
27.	Puducherry	NA	NA	NA	NA

Source: SFDS

*unit in score

@unit in ha

Bamboo conversion:

 1 bamboo =6kg (*Malocanna* spp of Tripura, Mizoram, etc) =12kg (*Dendrocalamus* spp found in many states)

1 notional tonne =2,400 running meters=0.75t.

1 score=20 numbers



Year					
2014-15	2015-16	2016-17	2017-18	2018-19	2019-20
47,666.49	58,954.13	NA	NA	2,21,729.99	21,399.98
194.82	252.35	480.36	329.05	NA	NA
1,70,243.25	3,42,470.25	73,890.75	NA	NA	NA
NA	NA	NA	NA	NA	NA
787.14	278.40	308.40	334.80	96.00	NA
7,351.55	0.00	2,681.22	0.00	0.00	0.00
NA	7,912.00	NA	NA	NA	NA
NA	NA	NA	NA	NA	NA
169.92	2,718.22	1,756.12	1,080.86	1,482.55	681.93
8,751.93	5,718.30	4,125.31	7,130.40	25,448.00	1,986.57
31,393.50	27,064.50	12,600.00	21,196.50	25,692.00	20,329.50
9,110.00	8,773	10,603	14,544	10,831	4,397.00
16,094.54	11,609.41	NA	NA	NA	NA
47,509.08	6,355.57*	NA	NA	NA	NA
NA	NA	NA	NA	NA	NA
3,037.83	25,774.50	NA	NA	NA	NA
15,648.00	13,824.00	21,660.00	13,224.00	13,956.00	12,600.00
NA	NA	NA	NA	NA	NA
NA	NA	NA	NA	NA	NA
56,994.00	51,906.00	70,056.00	43,656.00	42,804.00	8,292.00
25,446*	28,780*	51,789*	11,558*	NA	NA
148.44	NA	NA	NA	NA	NA
4,485.12	7,476.93	5,830.40	1,080.16	3,216.24	2,140.02
4,957.26	3,246.56	3,083.47	998.34	1,497.00	1,400.03
0.00	NA	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00



Table 3.16. Value (₹ lakh) of bamboo in the selected States/UTs

S. No.	State/UT	Year									
		2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20
1.	Andhra Pradesh	NA	NA	NA	0.91	0.38	NA	NA	NA	NA	NA
2.	Arunachal Pradesh	0.32	0.23	0.76	NA	NA	0.81	0.89	58.06	NA	NA
3.	Delhi	0.00	0.00	0.00	0.00	NA	NA	NA	NA	NA	NA
4.	Gujarat	51.80	71.96	19.88	NA	485.38	0.00	215.16	0.00	0.00	0.00
5.	Haryana	NA	NA	NA	NA	0.02	0.01	NA	0.01	0.01	0.01
6.	Himachal Pradesh	76.93	29.01	7.38	NA	NA	11.93	NA	NA	0.14	NA
7.	Madhya Pradesh	462.88	606.99	570.11	606.60	NA	NA	NA	NA	NA	NA
8.	Maharashtra	1,275.94	2,254.03	1,534.40	606.6	607.05	796.62	999.18	949.29	599.08	481.10
9.	Manipur	5.79	10.43	16.89	27.47	19.49	NA	NA	NA	NA	NA
10.	Mizoram	70.07	7.32	1.40	2.70	NA	NA	NA	NA	NA	NA
11.	Nagaland	NA	NA	NA	286.60	12,618.00	194.75	NA	NA	4,545.20	NA
12.	Odisha	NA	471.70	499.29	NA	NA	NA	NA	NA	NA	NA
13.	Rajasthan	NA	NA	NA	NA	102.09	517.10	294.41	318.22	286.75	306.75
14.	Tripura	183.43	173.55	20.45	175.00	17.26	NA	NA	NA	NA	NA
15.	Uttar Pradesh	65.58	50.80	NA	3.78	0.25	22.95	47.64	8.55	NA	NA
16.	West Bengal	NA	NA	NA	NA	2.75	7.20	5.70	0.68	4.71	2.66
17.	Andaman and Nicobar Islands	1.04	1.14	1.03	1.00	2.75	8.65	3.19	0.83	1.25	1.17
18.	Chandigarh	NA	NA	NA	NA	0.00	0.00	0.00	0.00	0.00	0.00
19.	Dadra & Nagar Haveli	NA	NA	NA	NA	0.00	0.00	0.00	0.00	0.00	0.00
20.	Puducherry	NA	NA	NA	NA	0.00	0.00	0.00	0.00	0.00	0.00

Source: SFDs

References:

- FAO and UNEP (2020). The State of the World's Forests 2020. Forests, biodiversity and people, Rome. <https://doi.org/10.4060/ca8642en>.
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04

PROTECTED AREAS, WILDLIFE AND ECOTOURISM

Protected areas are the foundation for biodiversity conservation and address it over a geographical domain, along with other effective area-based conservation measures. The International Union for Conservation of Nature (IUCN) defines a protected area as 'a clearly defined geographical space, recognised, dedicated and managed, through legal or other effective means, to achieve the long-term conservation of nature with associated ecosystem services and cultural values'. IUCN Protected Areas Categories System identifies six distinct categories of protected areas according to their management objectives. These are (Ia) Strict Nature Reserve (Ib) Wilderness Areas (II) National Parks (III) Natural monuments or features (IV) Habitat/Species Management Areas (V) Protected Landscape/Seascape and (VI) Protected Areas with sustainable use of natural resources.

Aichi Biodiversity Target 11 calls for the conservation of 'at least 17% of terrestrial and inland water areas and 10% of coastal and marine areas, especially areas of particular importance for biodiversity and ecosystem services, through effectively and equitably managed, ecologically representative and well-connected systems of protected areas and other effective area-based conservation measures, and integrated into the wider landscape and seascape'. So far 16.64% of terrestrial and inland water and 7.74% of the marine area has been brought under the network of protected areas at the global level as per *World Database on Protected Areas (WDPA) 2021*.

In India, the forests and wildlife are managed under the policy framework of MoEF&CC, GoI, and by SFDs under respective States. The major causes and threats to wildlife species and habitats were habitat changes, use of pesticides, commercial exploitation, introduction of exotic species, poaching, biotic interference, use of crop protection measures and lack of organisation and guidelines for management. The specific recommendation of policy for conservation of wildlife was establishment of a central organisation to maintain territorial integrity of wildlife areas and suggested that 4% of total land area be managed as National Parks. Following the 1970 policy, several major initiatives were implemented during the 70s and early 80s. One of the initiatives was the enactment of the *Wildlife (Protection) Act in 1972*. The Act categorizes the protected areas as: National Parks, Sanctuaries, Community Reserves, Conservation Reserves, Tiger Reserves and Closed Areas as per the levels of protection afforded and the degrees of restriction on human activities.

National Parks are at the highest level of protection, with no grazing and no private land holding or rights permitted to continue. Sanctuaries are at a lower level of protection, and certain activities may be permitted within for better protection of wildlife or for any other good and sufficient reason. The adoption of a *National Policy for Wildlife Conservation* in 1970 and the enactment of the *Wildlife (Protection) Act in 1972* lead to a significant growth in the protected areas network.



There is a network of 1,110 protected areas across India, of which 981 are terrestrial and inland water protected areas. Wildlife Sanctuaries comprise 57.69% of the total terrestrial and inland water-protected areas. The terrestrial and inland water network of protected areas is spread over 1,71,921 km², approximately 5.23% of the total geographical area. In the last ten years (2010-20), the protected area in India has increased by an additional 16,391.23 km². In 2020, there were 104 National Parks, 566 Wildlife Sanctuaries, 214 Community Reserves, and 97 Conservation Reserves, spread over 1,71,921 km² representing the terrestrial and inland network of protected areas and 129 marine protected areas spread over 8,717 km². Madhya Pradesh had the highest number of National Parks, while Andaman and Nicobar Islands have the highest number of Sanctuaries. Jammu and Kashmir (undivided) had the largest percentage of geographical area under National Parks (13.23% of the total area under national parks), while Gujarat had the highest proportion of geographical area under sanctuaries (13.57% of the total area under Sanctuaries).

National parks and Sanctuaries are important for *in-situ* conservation, while the zoos are equally important for *ex-situ* conservation. As on March 2021, there were 148 zoos in India under the Section 38 H(1) of the *Wildlife (Protection) Act, 1972*. The classification of these zoos comprises large category (17), medium category (24), small category (33), mini category (60) and rescue centers (14). Conservation Reserves and Community Reserves are not found in all the States. The numbers of Community Reserves have increased from 5 to 214 in the last ten years (2010-2020). The geographical area protected as a Community Reserve was 1,301.51 km² in 2020, 1,281 km² more than the area under Community Reserve in 2010. The area under Wildlife Sanctuaries has been additionally increased by another 8,577.13 km² over the last decade.

Under the *Wildlife (Protection) Act, 1972*, initiatives were taken to conserve keystone species in the project mode. *Project Tiger* was launched in the year 1973 following the recommendations of the Special Task Force of the Indian Board of Wildlife to maintain a viable population of tigers in India for scientific, economic, aesthetic, cultural, and ecological values and to preserve the habitat of the tiger. National Tiger Conservation Authority (NTCA) closely monitors the tiger population through SFDs and is also responsible for allocating funds to States under the *Project Tiger*. There are 51 Tiger Reserves in India spread over 18 States as on February 2021. With 3,296.31 km² area, Nagarjunsagar Srisailem National Park of Andhra Pradesh is the largest Tiger Reserve in India with the largest core/critical tiger habitat. As of 2018, there were 2,967 tigers in the forests of India.

Project Elephant was launched in 1992 to protect the elephants, their habitats, and corridors, to address man-animal conflict and the welfare of captive elephants. The Project provides financial support to States with elephant populations for management intervention to protect the species and the habitat. As of 2017, the population of elephants was 29,964 spread in 23 States of India. Funds for Integrated Development of Wildlife and Habitat (IDWH) are allocated along with the union budget of Ministry of Environment, Forest and Climate change. Project Tiger and Project Elephant are funded from the budget allotted under IDWH.

The Government of India has also established a network of 18 Biosphere Reserves to conserve all forms of life *in-situ*, along with its support system, in its totality, to serve as a referral system for monitoring and evaluating changes in natural ecosystems. The Biosphere Reserves aim to promote sustainable development with people's participation and scientific management. Nilgiri Biosphere Reserve was the first Biosphere Reserve in India, notified in 1986. Based on the UNESCO Man and Biosphere (MAB) Programme, 12 of the 18 Biosphere Reserves in India are part of the World Network of Biosphere Reserves. As of 2020, there are 714 sites across globe under the World Network of Biosphere Reserves.

UNESCO adopted the international treaty '*Convention for the Protection of the World Cultural and Natural Heritage*' in 1972. The treaty aims at promoting the identification, protection, and preservation of the cultural and natural heritage of exceptional value to humanity. The world heritage sites are further classified as Natural, Cultural, and Mixed heritage sites. The UNESCO World Heritage convention identifies 38 World Heritage Sites in India with cultural and natural importance. Seven of World Heritage Sites of the country, *viz.*, the Western Ghats, Sundarbans National Park, Great Himalayan National Park Conservation Area, Kaziranga National Park, Manas Wildlife Sanctuary, Nanda Devi, and Valley of Flowers National park, are identified as natural heritage sites and one site *viz.* Kangchendzonga National Park is recognized as both a cultural and natural heritage site. Kaziranga National Park is the first Natural Heritage Site recognized by UNESCO in India.

Ecotourism originated in 1980 as a mechanism to channel tourism revenues into conservation and development (*Stronza et al., 2019*) and generate support and awareness for protection. All the protected areas, Biosphere Reserves, and UNESCO heritage sites are potential ecotourism sites. With the increase in the inflow of national and international tourists, the protected areas, apart from generating revenue, also provide livelihood opportunities for the people living around the forests while promoting conservation. Several sites are developed and promoted for ecotourism by the states.



Table 4.1. Number and area under Protected Area Network in India (as on December 2020)

S.No.	Component of Protected Area Network	Number	Area (km ²)	Coverage % of the country area
Terrestrial and inland water protected areas				
1.	National Parks	104	43,716	1.33
2.	Wildlife Sanctuaries	566	1,22,420	3.72
3.	Conservation Reserves	97	4,483	0.14
4.	Community Reserves	214	1,302	0.04
	Sub total	981	1,71,921	5.23
Marine protected areas				
5.	Marine Protected Areas	129	8,717	0.27
	Grand total	1,110	1,80,638	5.50

Source: National Wildlife Database Cell, Wildlife Institute of India; http://wienvs.nic.in/Database/Protected_Area_854.aspx

Table 4.2. Number and area of Protected Areas in India

Year	National Parks		Wild Life Sanctuaries		Community Reserves		Conservation Reserves		Total Protected Areas	
	Number	Area (km ²)	Number	Area (km ²)	Number	Area (km ²)	Number	Area (km ²)	Number	Area (km ²)
2010	102	40,283.62	516	1,13,842.87	5	21.00	47	1,382.28	670	1,55,529.77
2011	102	40,283.62	518	1,13,998.75	5	21.00	52	1,801.29	677	1,56,104.66
2012	103	40,500.13	526	1,14,933.44	5	21.00	59	2,012.93	693	1,57,467.50
2013	102	40,500.13	532	1,17,123.63	19	30.94	64	2,232.61	717	1,59,887.31
2014	103	40,500.13	535	1,18,290.66	43	58.22	64	2,232.61	745	1,61,081.62
2015	103	40,500.13	541	1,18,866.44	44	59.51	71	2,548.82	759	1,61,974.90
2016	103	40,500.13	543	1,18,917.71	45	59.66	72	2,566.20	763	1,62,043.70
2017	103	40,500.13	544	1,18,931.80	46	72.61	76	2,587.95	769	1,62,092.49
2018	104	40,501.13	544	1,18,931.80	46	72.61	77	2,594.03	771	1,62,099.47
2019	101	40,564.03	553	1,19,756.97	163	833.34	86	3,858.25	903	1,65,012.59
2020	104	43,716.00	566	1,22,420.00	214	1,302.00	97	4,483.00	981	1,71,921.00

Source: National Wildlife Database Cell, Wildlife Institute of India, Dehradun. http://www.wienvs.nic.in/Database/Protected_Area_854.aspx.

Note: These data are based on the availability of data from forest departments and gazette notification notified by the ministries.



Table 4.3. Number and area of National Parks, Wildlife Sanctuaries and Zoos in India (as on December 2020)

S. No.	State/UT	National Park		Wildlife Sanctuary		Zoos*
		Number	Area (km ²)	Number	Area (km ²)	Number
1.	Andhra Pradesh	3	1,368.87	13	6,771.40	5
2.	Arunachal Pradesh	2	2,290.82	13	7,614.56	4
3.	Assam	5	1,977.79	18	1,840.14	3
4.	Bihar	1	335.65	12	2,901.68	1
5.	Chhattisgarh	3	2,899.08	11	3,760.28	3
6.	Delhi	0	0.00	1	19.61	2
7.	Goa	1	107.00	6	647.91	1
8.	Gujarat	4	480.12	23	16,618.42	9
9.	Haryana	2	48.25	7	118.21	6
10.	Himachal Pradesh	5	2,256.28	28	6,115.97	7
11.	Jammu & Kashmir	5	5,782.45	16	10,729.03	0
12.	Jharkhand	1	226.33	11	1,955.82	4
13.	Karnataka	5	2,794.05	35	7,923.23	15
14.	Kerala	6	706.16	18	2,729.37	6
15.	Madhya Pradesh	11	4,349.14	24	7,046.19	4
16.	Maharashtra	6	1,273.60	48	7,592.30	11
17.	Manipur	2	140.00	7	708.14	1
18.	Meghalaya	2	267.48	4	94.11	2
19.	Mizoram	2	150.00	9	1,359.75	2
20.	Nagaland	1	202.02	4	43.91	1
21.	Odisha	2	990.70	19	7,094.65	10
22.	Punjab	0	0.00	13	326.60	5
23.	Rajasthan	5	3,947.07	8	5,592.38	4
24.	Sikkim	1	1,784.00	7	399.10	1
25.	Tamil Nadu	5	827.51	30	6,240.56	7
26.	Telangana	3	19.62	9	5,672.70	7
27.	Tripura	2	36.71	4	603.64	1
28.	Uttar Pradesh	1	490.00	26	5,829.20	8
29.	Uttarakhand	6	4,915.02	7	2,690.12	3
30.	West Bengal	6	1,981.48	16	1,440.18	13
31.	Andaman and Nicobar Islands	6	1216.95	96	389.39	1
32.	Chandigarh	0	0.00	2	26.01	0
33.	Dadra and Nagar Haveli	0	0.00	1	92.16	1
34.	Daman and Diu	0	0.00	1	2.19	0
35.	Lakshadweep	0	0.00	1	0.01	0
36.	Puducherry	0	0.00	1	3.90	0
Total		104	43,716.15	566	1,22,419.66	148

Source: National wildlife database cell, Wildlife Institute of India; https://wii.gov.in/national_wildlife_database.
Central Zoo Authority, GoI; <http://cza.nic.in/uploads/documents/reports/english/ar%202019-20.pdf>

*all the categories 'large', 'medium', 'small', 'mini' and 'rescue centres' are considered



Table 4.4. Number and area of Conservation and Community Reserves in India (as on December 2020)

S. No.	State/UT	Conservation Reserve		Community Reserve	
		Number	Area (km ²)	Number	Area (km ²)
1.	Arunachal Pradesh	0	0.00	9	131.60
2.	Gujarat	1	227.00	0	0.00
3.	Haryana	2	48.72	5	115.84
4.	Himachal Pradesh	3	19.17	0	0.00
5.	Jammu and Kashmir	37	941.88	0	0.00
6.	Karnataka	14	171.92	1	3.12
7.	Kerala	0	0.00	1	1.50
8.	Maharashtra	7	490.05	0	0.00
9.	Manipur	0	0.00	10	103.72
10.	Meghalaya	0	0.00	71	64.93
11.	Nagaland	0	0.00	114	851.78
12.	Punjab	4	25.71	3	29.02
13.	Rajasthan	14	655.37	0	0.00
14.	Sikkim	1	0.06	0	0.00
15.	Tamil Nadu	2	4.88	0	0.00
16.	Uttarakhand	4	212.45	0	0.00
17.	West Bengal	5	1,415.91	0	0.00
18.	Lakshadweep	3	270.05	0	0.00
Total		97	4,483.17	214	1,301.51

Source: National Wildlife Database, Wildlife Institute of India; http://wiienviis.nic.in/Database/cr1_8229.aspx

Table 4.5. Number and area of Marine Protected Areas in India (as on December 2020)

S. No.	State/UT	Number	Area (km ²)
1.	Andhra Pradesh	3	1,030.51
2.	Goa	1	1.78
3.	Gujarat	3	463.97
4.	Kerala	1	1.50
5.	Maharashtra	2	46.03
6.	Odisha	5	2,192.25
7.	Tamil Nadu	4	821.02
8.	West Bengal	5	2,292.20
9.	Andaman and Nicobar Islands	100	1,594.78
10.	Daman & Diu	1	2.18
11.	Lakshadweep	4	270.06
Total		129	8,716.28

Source: National Wildlife Database, Wildlife Institute of India; http://wiienviis.nic.in/Database/MPA_8098.aspx



Table 4.6. Estimated number of tiger population

S. No.	State	Year		
		2010	2014	2018
1.	Andhra Pradesh	72	68	48#
2.	Arunachal Pradesh	-	28*	29*
3.	Assam	143	167	190
4.	Bihar	8	28	31
5.	Chhattisgarh	26	46*	19
6.	Goa	-	5*	3
7.	Jharkhand	10	3*	5
8.	Karnataka	300	406	524
9.	Kerala	71	136	190
10.	Madhya Pradesh	257	308*	526
11.	Maharashtra	168	190*	312
12.	Mizoram	5	3*	0
13.	Odisha	32	28*	28
14.	Rajasthan	36	45	69
15.	Tamil Nadu	163	229	264
16.	Telangana	-	-	26#
17.	Uttar Pradesh	118	117	173
18.	Uttarakhand	227	340	442
19.	West Bengal	70	79	88
Total		1,706	2,226	2,967

Source: National Tiger Conservation Authority, MoEF&CC, GoI. https://ntca.gov.in/assets/uploads/Reports/AITM/Status_Tigers_India_summary_2018.pdf; <https://ntca.gov.in/tiger-mortality/#state-wise>

*Estimated through scat DNA.

For comparison with the previous estimates of the Andhra Pradesh, combined Andhra Pradesh and Telangana population estimates of the current year



Table 4.7. Estimated number of tiger mortality

S. No.	State/UT	Year									
		2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
1.	Andhra Pradesh	0	0	0	0	3	0	0	1	2	1
2.	Arunachal Pradesh	0	0	1	0	0	0	0	0	0	0
3.	Assam	8	6	6	8	6	5	7	16	1	5
4.	Bihar	1	1	1	0	3	2	4	0	0	1
5.	Chhattisgarh	2	2	1	0	2	1	2	2	1	1
6.	Delhi	0	1	0	0	0	0	2	0	0	0
7.	Goa	0	0	0	0	0	0	0	0	0	0
8.	Gujarat	0	0	0	0	0	0	0	0	0	1
9.	Haryana	0	0	1	0	0	0	0	0	0	0
10.	Himachal Pradesh	0	0	0	0	0	0	0	0	0	0
11.	Jammu & Kashmir	0	0	0	0	0	0	0	0	0	0
12.	Jharkhand	0	0	0	0	0	0	0	0	0	0
13.	Karnataka	7	6	14	15	6	16	17	16	15	12
14.	Kerala	3	4	5	6	4	6	5	3	5	1
15.	Madhya Pradesh	8	5	14	10	16	15	32	27	28	31
16.	Maharashtra	8	6	14	11	10	12	17	22	21	18
17.	Manipur	0	0	0	0	0	0	0	0	0	0
18.	Meghalaya	0	0	0	0	0	0	0	0	0	0
19.	Mizoram	0	0	0	0	0	0	0	0	0	0
20.	Nagaland	0	0	0	0	0	0	1	0	1	0
21.	Odisha	0	1	1	1	0	1	1	1	2	0
22.	Punjab	0	0	0	0	0	0	0	0	0	0
23.	Rajasthan	4	1	1	1	0	1	4	1	6	3
24.	Sikkim	0	0	0	0	0	0	0	0	0	0
25.	Tamil Nadu	4	3	7	2	17	6	8	3	4	7
26.	Telangana	0	0	0	0	1	0	2	0	0	2
27.	Tripura	0	0	0	0	0	0	0	0	0	0
28.	Uttar Pradesh	2	1	6	1	2	4	4	8	6	4
29.	Uttarakhand	5	17	13	12	8	10	14	17	8	7
30.	West Bengal	1	3	3	1	0	3	1	0	1	2
31.	Andaman and Nicobar Islands	0	0	0	0	0	0	0	0	0	0
32.	Chandigarh	0	0	0	0	0	0	0	0	0	0
33.	Dadra & Nagar Haveli	0	0	0	0	0	0	0	0	0	0
34.	Daman & Diu	0	0	0	0	0	0	0	0	0	0
35.	Lakshadweep	0	0	0	0	0	0	0	0	0	0
36.	Puducherry	0	0	0	0	0	0	0	0	0	0
	Total	53	57	88	68	78	82	121	117	101	96

Source: National Tiger Conservation Authority, MoEF&CC, Govt.



Table 4.8. List and area of tiger reserves in India (as on February 2021)

S. No.	Year of creation	Name of tiger reserve	State	Area (km ²)		
				Core/critical tiger habitat	Buffer/peripheral	Total
1.	1973-74	Bandipur	Karnataka	626.19	287.82	914.02
2.	1973-74	Corbett	Uttarakhand	821.99	466.32	1,288.31
		Amangarh (buffer of Corbett TR)	Uttar Pradesh	-	80.60	80.60
3.	1973-74	Kanha	Madhya Pradesh	917.43	1,134.36	2,051.79
4.	1973-74	Manas	Assam	526.22	2,310.88	2,837.10
5.	1973-74	Melghat	Maharashtra	1,500.49	1,268.03	2,768.52
6.	1973-74	Palamau	Jharkhand	414.08	715.85	1,129.93
7.	1973-74	Ranthambore	Rajasthan	1,113.36	297.93	1,411.29
8.	1973-74	Similipal	Odisha	1,194.75	1,555.25	2,750.00
9.	1973-74	Sunderbans	West Bengal	1,699.62	885.27	2,584.89
10.	1978-79	Periyar	Kerala	881.00	44.00	925.00
11.	1978-79	Sariska	Rajasthan	881.11	332.23	1,213.34
12.	1982-83	Buxa	West Bengal	390.58	367.32	757.90
13.	1982-83	Indravati	Chhattisgarh	1,258.37	1,540.70	2,799.07
14.	1982-83	Namdapha	Arunachal Pradesh	1,807.82	245.00	2,052.82
15.	1982-83	Nagarjunsagar Srisaillam (part)	Andhra Pradesh	2,595.72	700.59	3,296.31
16.	1987-88	Dudhwa	Uttar Pradesh	1,093.79	1,107.98	2,201.77
17.	1988-89	Kalakad-Mundanthurai	Tamil Nadu	895.00	706.54	1,601.54
18.	1988-89	Valmiki	Bihar	598.45	300.93	899.38
19.	1989-90	Pench	Madhya Pradesh	411.33	768.30	1,179.63
20.	1992-93	Tadoba-Andhari	Maharashtra	625.82	1,101.77	1,727.59
21.	1993-94	Bandhavgarh	Madhya Pradesh	716.90	820.04	1,536.94
22.	1993-94	Panna	Madhya Pradesh	576.13	1,021.97	1,598.10
23.	1994-95	Dampa	Mizoram	500.00	488.00	988.00
24.	1988-99	Bhadra	Karnataka	492.46	571.83	1,064.29
25.	1998-99	Pench	Maharashtra	257.26	483.96	741.22
26.	1999-2000	Pakke	Arunachal Pradesh	683.45	515.00	1,198.45
27.	1999-00	Nameri	Assam	320.00	144.00	464.00
28.	1999-00	Satpura	Madhya Pradesh	1,339.26	794.04	2,133.31
29.	2008-09	Anamalai	Tamil Nadu	958.59	521.28	1,479.87
30.	2008-09	Udanti-Sitanadi	Chhattisgarh	851.09	991.45	1,842.54
31.	2008-09	Satkosia	Odisha	523.61	440.26	963.87
32.	2008-09	Kaziranga	Assam	625.58	548.00	1,173.58
33.	2008-09	Achanakmar	Chhattisgarh	626.195	287.82	914.017



S. No.	Year of creation	Name of tiger reserve	State	Area (km ²)		
				Core/critical tiger habitat	Buffer/peripheral	Total
34.	2008-09	Kali	Karnataka	814.88	282.63	1,097.51
35.	2008-09	Sanjay-Dubri	Madhya Pradesh	812.57	861.93	1,674.50
36.	2008-09	Mudumalai	Tamil Nadu	321.00	367.59	688.59
37.	2008-09	Nagarahole	Karnataka	643.35	562.41	1,205.76
38.	2008-09	Parambikulam	Kerala	390.89	252.77	643.66
39.	2009-10	Sahyadri	Maharashtra	600.12	565.45	1,165.57
40.	2010-11	Biligiri Ranganatha Temple	Karnataka	359.10	215.72	574.82
41.	2011-12	Bor	Maharashtra	138.12	678.15	816.27
42.	2012-13	Kawal	Telangana	892.23	1,123.21	2,015.44
43.	2013-14	Sathyamangalam	Tamil Nadu	793.49	614.91	1,408.40
44.	2013-14	Mukandra Hills	Rajasthan	417.17	342.82	759.99
45.	2013-14	Nawegaon-Nagzira	Maharashtra	653.67	1,241.27	1,894.94
46.	2014-15	Amrabad	Telangana	2,166.37	445.02	2,611.39
47.	2014-15	Pilibhit	Uttar Pradesh	602.80	127.45	730.25
48.	2015-16	Rajaji Tiger Reserve	Uttarakhand	819.54	255.63	1,075.17
49.	2015-2016	Orang	Assam	79.28	413.18	492.46
50.	2016-17	Kamlang	Arunachal Pradesh	671.00	112.00	783.00
51.	2020-21	Srivilliputhur Megamalai	Tamil Nadu	641.86	374.70	1,016.57
Total				39,092.91	31,847.42	70,940.35

Source: National Tiger Conservation Authority, MoEFCC, GoI; <https://ntca.gov.in/tiger-reserves/#tiger-reserves-2> (accessed on July 15, 2021).



Table 4.9. Fund (₹ lakh) released to the selected States/UTs under Project Tiger

S. No.	State/UT	Year									
		2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20
1.	Andhra Pradesh	155.65	154.41	208.68	121.35	131.66	0.00	173.49	232.49	217.99	114.48
2.	Arunachal Pradesh	226.70	236.79	616.30	827.47	710.91	429.54	597.29	641.94	929.76	846.31
3.	Assam	1,509.47	947.51	373.89	807.98	1,509.39	1,425.41	1,510.92	2,309.61	1,919.62	2,198.76
4.	Bihar	158.36	172.19	311.06	284.77	317.10	223.55	487.84	552.27	570.90	562.84
5.	Chhattisgarh	1,813.73	702.73	532.46	539.64	609.83	398.95	626.57	1315.08	536.14	358.53
6.	Jharkhand	130.62	156.35	107.44	251.17	199.08	47.98	323.76	338.62	367.00	1,432.07
7.	Karnataka	1,66.05	1,830.65	933.53	1,985.07	1,565.77	1,378.19	3,203.61	2,263.85	2,267.43	2,252.03
8.	Kerala	323.46	295.13	286.96	480.93	517.54	396.60	783.44	649.14	705.62	600.18
9.	Madhya Pradesh	3,962.73	5,352.71	5,772.36	4,796.14	4,335.12	1,421.01	12,885.60	11,271.64	5,343.89	3,501.91
10.	Maharashtra	2,789.06	3,622.34	848.41	3,365.13	3,425.52	3,923.08	8,229.72	6,419.17	11,049.59	7,220.39
11.	Mizoram	187.69	225.29	468.31	233.68	232.19	187.98	301.55	215.31	318.84	337.70
12.	Nagaland*	0.00	0.00	0.00	0.00	0.00	0.00	0.00	496.90	24.86	0.00
13.	Odisha	815.29	555.08	163.76	748.19	707.39	544.80	917.17	1,604.43	1,022.33	1,303.32
14.	Rajasthan	2,368.93	67.21	4,090.57	512.85	627.19	1,257.81	381.30	773.09	719.83	1,203.19
15.	Tamil Nadu	520.79	605.96	445.98	753.68	864.32	1,950.17	949.87	2,551.06	2,366.82	1,586.91
16.	Telangana	0.00	0.00	0.00	0.00	0.00	214.82	239.26	294.04	1,115.65	359.91
17.	Uttar Pradesh	407.46	446.13	334.06	525.88	760.93	624.55	1,057.05	820.07	685.34	1,242.49
18.	Uttarakhand	339.95	399.76	160.69	377.69	391.19	683.99	1,023.40	1,166.44	1,417.26	2,289.18
19.	West Bengal	502.48	157.66	404.92	347.81	596.88	376.51	536.14	597.58	719.01	758.47
	Total	17,872.42	16,062.54	16,287.26	16,958.17	17,502.01	15,484.94	34,224.77	34,500.00	32,245.29	28,175.56

Source: National Tiger Conservation Authority, MoEF&CC, GoI

*For All India Tiger Estimation (AITE)



Table 4.10. Population (in number) of Elephant

S. No.	State/UT	Year	
		2012	2017
1.	Andhra Pradesh	41	65
2.	Arunachal Pradesh	890	1,614
3.	Assam	5,620	5,719
4.	Bihar	NA	25
5.	Chhattisgarh	247	247
6.	Haryana	NA	7
7.	Himachal	NA	7
8.	Jharkhand	688	679
9.	Karnataka	5,648-6,488	6,049
10.	Kerala	6,177	5,706*
11.	Madhya Pradesh	NA	7
12.	Maharashtra	4	6
13.	Manipur	NA	9
14.	Meghalaya	1,811	1,754
15.	Mizoram	NA	7
16.	Nagaland	212	446*
17.	Odisha	1,930	1,976
18.	Tamil Nadu	4,015	2,761
19.	Tripura	59	102*
20.	Uttar Pradesh	291	232
21.	Uttarakhand	1,346	1,839
22.	West Bengal	647	682
23.	Andaman and Nicobar Islands	NA	25
Total		29,391-30,711	29,964

Source: Project elephant division, MoEF&CC, Govt.

*Results are based on the indirect (dung) count method as direct counts could not be carried out.



Table 4.11. List and area of Elephant Reserves

S. No.	Elephant Reserve	State	Total Area (km ²)
1.	Mayurjharna ER	West Bengal	414.00
2.	Singhbhum ER	Jharkhand	4,530.00
3.	Mayurbhanj ER	Odisha	3,214.00
4.	Mahanadi ER	Odisha	1,038.00
5.	Sambalpur ER	Odisha	427.00
6.	Badalkhol - Tamorpingla ER	Chhattisgarh	1,048.30
7.	Kameng ER	Arunachal	1,892.00
8.	Sonitpur ER	Assam	1,420.00
9.	Dihing-Patkai ER	Assam	937.00
10.	South Arunachal ER	Arunachal	1,957.50
11.	Kaziranga-Karbi Anglong ER	Assam	3,270.00
12.	Dhansiri-Lungding ER	Assam	2,740.00
13.	Intanki ER	Nagaland	202.00
14.	Singphan ER	Nagaland	23.57
15.	Eastern Dooars ER	West Bengal	978.00
16.	Chirang-Ripu ER	Assam	2,600.00
17.	Garo Hills ER	Meghalaya	3,500.00
18.	Mysore ER	Karnataka	8,055.94
19.	Dandeli ER	Karnataka	2,321.11
20.	Wayanad ER	Kerala	1,200.00
21.	Nilgiri ER	Tamil Nadu	4,663.00
22.	Rayala ER	Andhra Pradesh	766.00
23.	Nilambur ER	Kerala	1,419.00
24.	Coimbatore ER	Tamil Nadu	566.00
25.	Anamalai ER	Tamil Nadu	1,457.00
26.	Anamudi ER	Kerala	3,728.00
27.	Periyar ER	Kerala	3,742.00
28.	Srivilliputhur ER	Tamil Nadu	1,249.00
29.	Shivalik ER	Uttarakhand	5,405.00
30.	Uttar Pradesh ER	Uttar Pradesh	744.00
		Total	65,507.42

Source: Project elephant division, MoEF&CC, Govt.



Table 4.12. Budget outlay and release (₹ lakh) for Project Elephant

S. No.	Project Elephant	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21
1.	Outlay (BE)	2,258.00	3,258.00	3,458.00	1,610.00	2,500.00	2,750.00	3,000.00	3,000.00	3,500.00
	(RE)	-	-	1,900.00	1,696.00	2,000.00	2,750.00	3,000.00	3,304.00	2,500.00
2.	Expenditure	1,834.53	1,882.53	1,850.43	1,214.45	2,120.30	2,562.15	2,976.45	3,285.41	2,495.80
(a)	Central Sector	38.00	39.00	83.00	79.00	60.24	70.83	64.24	203.38	42.45
(b)	CSS	1,796.53	1,843.53	1,767.43	1,135.45	2,060.05	2,491.33	2,912.21	3,082.03	2,453.35

Source: Project Elephant Division, MoEFCC, GoI

Table 4.13. Funds (₹ lakh) released under Project Elephant

S. No.	State/UT	Year										
		2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21
1.	Andhra Pradesh	15.00	NA	11.28	NA	13.52	0.00	13.62	17.39	29.02	127.03	77.28
2.	Arunachal Pradesh	10.00	55.00	0.00	83.48	97.71	61.21	100.06	118.85	0.00	103.27	282.26
3.	Assam	139.55	200.00	250.00	173.00	236.66	0.00	275.67	0.00	354.35	0.00	35.28
4.	Bihar	0.00	0.00	0.00	0.00	0.00	3.01	16.29	154.40	165.32	57.03	39.08
5.	Chhattisgarh	75.00	150.00	60.29	49.62	43.75	21.91	61.16	48.00	65.28	0.00	0.00
6.	Haryana	100.00	0.00	0.00	30.97	0.00	10.00	0.00	17.76	8.39	13.44	11.04
7.	Jharkhand	80.00	105.87	59.51	95.66	88.43	53.45	95.77	105.52	116.46	161.44	111.87
8.	Karnataka	300.76	261.83	240.30	325.41	225.32	181.05	254.80	355.55	353.91	319.65	330.40
9.	Kerala	265.39	301.75	294.89	297.89	240.52	208.89	429.87	482.55	517.80	599.29	574.56
10.	Madhya Pradesh	0.00	0.00	0.00	0.00	0.00	0.00	6.84	0.00	4.76	13.70	0.00
11.	Maharashtra	29.00	20.29	20.47	18.68	38.20	8.06	14.34	27.00	46.54	44.19	17.98
12.	Manipur	0.00	0.00	0.00	0.00	0.00	0.00	0.00	10.80	9.07	10.94	0.00
13.	Meghalaya	103.84	128.52	106.88	101.00	118.84	81.39	130.27	162.85	217.88	177.90	9.36
14.	Nagaland	41.30	25.00	18.75	21.75	44.81	15.44	20.31	25.20	141.22	213.95	92.50
15.	Odisha	113.50	214.60	210.00	257.60	153.35	105.63	284.03	124.84	197.28	319.13	577.99
16.	Punjab	0.00	0.00	0.00	0.00	0.00	0.00	1.83	0.00	0.00	0.00	0.00
17.	Rajasthan	0.00	0.00	0.00	0.00	0.00	0.00	15.84	14.45	12.66	35.28	0.00
18.	Tamil Nadu	226.88	228.49	250.31	211.00	251.21	160.53	25.80	291.92	383.11	275.16	0.00
19.	Tripura	NA	6.00	5.77	9.77	6.03	26.11	22.46	10.08	43.92	45.38	24.71
20.	Uttar Pradesh	80.15	49.30	14.76	0.00	5.16	15.33	14.17	30.67	20.24	37.74	0.00
21.	Uttarakhand	206.82	141.99	161.46	115.07	103.91	82.61	175.46	341.56	192.17	417.31	204.85
22.	West Bengal	410.21	224.50	91.87	97.63	103.81	105.17	101.45	79.93	83.94	113.25	64.20
	Total	2,197.39	2,093.94	1,796.53	1,843.53	1,767.43	1,135.45	2,060.05	2,419.33	2,912.21	2,798.07	2,453.35

Source: Project Elephant Division, MoEFCC, GoI



Table 4.14. Funds released (₹ lakh) under Eco-Development Plan in the selected States/UTs

S. No.	State/UT	Year									
		2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20
1.	Goa	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2.	Gujarat	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
3.	Haryana	NA	NA	NA	NA	0.00	0.00	0.00	0.00	0.00	0.00
4.	Himachal Pradesh	0.00	0.00	0.00	0.00	NA	NA	NA	NA	NA	NA
5.	Jammu & Kashmir	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
6.	Kerala	NA	NA	NA	NA	300.00	250.00	346.00	350.00	350.00	NA
7.	Maharashtra	NA	NA	NA	NA	2,153.12	2,713.02	NA	NA	NA	NA
8.	Odisha	NA	NA	NA	NA	NA	NA	1,000.00	NA	NA	NA
9.	Tripura	23.07	41.01	146.00	26.45	NA	NA	NA	NA	NA	NA
10.	Uttar Pradesh	NA	NA	298.40	438.00	NA	NA	NA	NA	NA	NA
11.	Andaman and Nicobar Islands	NA	NA	NA	NA	0.00	0.00	0.00	0.00	0.00	0.00
12.	Chandigarh	NA	NA	NA	NA	0.00	0.00	0.00	0.00	0.00	0.00
13.	Dadra & Nagar Haveli	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
14.	Puducherry	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Source: SFDS





Table 4.15. Details of Funds released (₹ lakh) under Integrated Development of Wildlife Habitats

S. No.	State/UT	Year			
		2010-11	2011-12	2012-13	2013-14
1.	Andhra Pradesh	64.34	71.50	180.34	0.00
2.	Arunachal Pradesh	213.20	168.11	162.38	220.44
3.	Assam	186.63	234.17	146.00	138.88
4.	Bihar	19.89	0.00	64.69	34.87
5.	Chhattisgarh	281.97	241.78	449.57	408.74
6.	Delhi	0.00	0.00	0.00	0.00
7.	Goa	32.88	21.46	148.12	0.00
8.	Gujarat	1,106.75	1,126.59	517.93	537.84
9.	Haryana	15.11	28.70	52.00	0.00
10.	Himachal Pradesh	253.80	242.11	318.97	475.85
11.	Jammu & Kashmir	537.34	445.09	515.96	485.75
12.	Jharkhand	63.64	64.26	81.62	97.77
13.	Karnataka	412.25	335.85	434.50	351.00
14.	Kerala	366.79	941.79	1,210.08	505.78
15.	Madhya Pradesh	635.37	506.16	467.71	454.35
16.	Maharashtra	343.32	322.39	425.88	470.77
17.	Manipur	88.32	86.65	73.93	80.80
18.	Meghalaya	58.03	43.80	22.08	25.56
19.	Mizoram	707.76	153.45	96.39	210.33
20.	Nagaland	33.60	30.33	25.86	15.38
21.	Odisha	315.33	331.27	368.21	341.74
22.	Punjab	25.12	0.00	0.00	0.00
23.	Rajasthan	348.07	291.39	478.25	430.88
24.	Sikkim	183.78	131.79	177.58	129.28
25.	Tamil Nadu	334.45	256.03	258.48	277.79
26.	Telangana	0.00	0.00	0.00	0.00
27.	Tripura	2.84	0.00	0.00	0.00
28.	Uttar Pradesh	296.18	204.37	319.09	323.53
29.	Uttarakhand	134.90	201.14	220.27	326.28
30.	West Bengal	276.39	246.43	164.14	184.37
31.	Andaman and Nicobar Islands	87.87	127.06	109.50	150.00
32.	Chandigarh	12.29	19.98	0.00	0.00
33.	Dadra & Nagar Haveli	0.00	0.00	0.00	0.00
34.	Daman & Diu	0.00	0.00	0.00	0.00
35.	Lakshadweep	0.00	0.00	0.00	0.00
36.	Puducherry	0.00	0.00	0.00	0.00
Total		7,438.18	6,873.64	7,489.49	6,678.00

Source: Wildlife Division, MOEF&CC, Govt.



Year					
2014-15	2015-16	2016-17	2017-18	2018-19	2019-20
63.31	0.00	0.00	0.00	75.00	0.00
0.00	304.02	256.81	269.93	344.42	512.70
149.11	87.10	0.00	275.83	265.32	164.26
85.25	108.01	100.58	322.67	749.00	148.14
482.09	213.41	278.95	435.01	350.61	310.03
0.00	0.00	0.00	0.00	551.90	0.00
0.00	0.00	0.00	85.99	0.00	111.65
634.94	395.80	497.60	558.52	2,232.00	0.00
14.71	99.33	124.66	181.44	155.00	237.61
430.35	431.84	280.31	237.41	370.30	375.77
506.76	354.00	336.51	577.92	492.43	0.00
101.12	18.62	0.00	95.61	50.51	93.96
483.78	262.13	325.52	427.89	653.00	739.05
818.49	967.39	1,928.42	900.83	1,293.40	845.03
371.35	394.57	322.27	1,379.49	912.20	629.27
402.72	277.94	497.35	808.06	1,031.20	715.78
129.19	248.92	340.03	425.66	405.60	396.46
44.87	38.39	55.23	114.06	312.00	238.84
131.54	94.55	1,234.95	487.45	430.00	431.79
85.16	235.48	357.85	565.87	882.20	953.69
350.32	246.84	279.65	342.94	499.00	701.50
0.00	0.00	0.00	0.00	0.00	0.00
367.30	314.79	453.88	622.42	585.00	741.32
169.16	290.33	145.52	202.15	394.00	557.36
280.63	113.26	0.00	394.73	384.10	409.51
0.00	0.00	0.00	157.08	0.00	0.00
0.00	0.00	0.00	0.00	0.00	90.32
224.90	235.05	250.96	386.97	119.81	426.25
141.12	188.32	545.31	2,979.36	1,764.10	1,401.19
108.85	100.93	237.66	657.99	960.60	891.07
0.00	100.00	118.49	141.93	191.00	132.64
0.00	0.00	26.07	26.07	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00
12.00	0.00	0.00	6.71	46.30	193.27
0.00	0.00	0.00	0.00	0.00	0.00
6,589.00	6,121.00	8,994.55	14,068.00	16,500.00	12,448.43



Table 4.16. Details of Biosphere Reserves (as on March 2019)

S. No.	Name	Area (km ²)	Date of notification	Location/state/bio-geographic zones	Key fauna	Key flora
1.	*Nilgiri	5,520.00	01.08.1986/ 10.11.2000	Part of Wynad, Nagarhole, Bandipur and Mudumalai, Nilambur, Silent Valley and Siruvani hills (Tamil Nadu, Kerala and Karnataka)- Western Ghats	<i>Nilgiritragus hylocrius</i> (Nilgiri Tahr), <i>Macaca silenus</i> (Lion-tailed Macaque), <i>Trachypithecusj ohnii</i> (Nilgiri Langur)	<i>Vanda sp.</i> , <i>Liparis sp.</i> , <i>Bulbophyllum medusae</i> (Medusa's head orchid), <i>Spiranthes sp.</i> , <i>Thrixspermum saruwatari</i> . (Chitou wind orchid)
2.	*Nanda Devi	5,860.69	18.01.1988/ 29.10.2004	Part of Chamoli, Pithoragarh and Almora districts Uttarakhand-west Himalayas	<i>Hemitragus jemlahicus</i> (Himalayan Tahr), <i>Pucrasia macrolopha</i> (Koklas pheasant), <i>Ursus arctos</i> (Brown Bear)	<i>Potentilla anserina</i> (Silverweed), <i>Primula malacoides</i> (Fairy Primrose), <i>Orchis muscular</i> (Salep orchid)
3.	*Nokrek	820.00	01.09.1988/ 26.05.2009	Part of Garo Hills district-east Himalayas, Meghalaya	<i>Macaca nemestrina</i> (Pigtailed Macaque),	<i>Pandanus sp.</i> (Screw pine), <i>Nypa fruticans</i> (Nipa palm), <i>Mesua ferrea</i> (Ceylon ironwood)
4.	Manas	2,837.00	14.03.1989	Part of Kokrajhar, Bongaigaon, Barpeta, Nalbari, Kamrup and Darang districts of Assam,- east Himalayas	<i>Porcula salvania</i> (Pygmy hog), <i>Caprolagus hispidus</i> (Hispid hare), <i>Trachypithecus geei</i> (Golden langur)	<i>Acacia catechu</i> (Catechu tree), <i>Dalbergia sissoo</i> (Sissoo), <i>Albizia procera</i> (white siris)
5.	*Sunderbans	9,630.00	29.03.1989/ 10.11.2001	Part of Delta of Ganges and Brahmaputra river system of West Bengal-Gangentic Delta	<i>Panthera tigris-tigris</i> (Bengal tiger), <i>Varanus salvator</i> (Salvatorlizard), <i>Varanus bengalensis</i> (Bengal monitor lizard)	<i>Heritiera fomes</i> (Sundari), <i>Nypa fruticans</i> (Nypa), <i>Xylocarpus mekongensis</i> (Passur), <i>Ceriops tagal</i> (Tagal mangrove), <i>Soneratia caseolaris</i> (Crabapple)mangrove)
6.	*Gulf of Mannar	10,500.00	18.02.1989/ 10.11.2001	Indian part of Gulf of Mannar between India and Sri Lanka (Tamil Nadu) - Coasts	<i>Dugong dugong</i> (Sea Cow), <i>Alcyonacea sp.</i> (Sea fan)	<i>Ipomoea violacea</i> (Morning glory), <i>Halophila ovalis</i> (Halophila grass)



S. no.	Name	Area (km ²)	Date of notification	Location/state/bio-geographic zones	Key fauna	Key flora
7.	*Great Nicobar	885.00	06.01.1989/ 30.05.2013	Southern most islands of Andaman and Nicobar	<i>Spilornis cheela</i> (Serpent eagle), <i>Macaca fascicularis</i> (Crab-eating Macaque), <i>Crocodylus porosus</i> (Saltwater crocodile)	<i>Pandanus sp.</i> (Screw pine), <i>Nypa fruticans</i> (Nipa palm), <i>Mesua ferrea</i> (Ceylon iron wood)
8.	*Similipal	4,374.00	21.06.1994/ 26.05.2009	Part of Mayurbhanj district (Odisha)-Deccan peninsula	<i>Microhierax coerulescens</i> (Red breasted Falconet), <i>Herpestes smithii</i> (Ruddy mongoose)	<i>Coixlacryma-jobi</i> (Coix grass), <i>Shorea robusta</i> (Sal tree), <i>Terminalia chebula</i> (Myrobalan), <i>Dalbergia sissoo</i> (Sisso), <i>Magnolia champaca</i> (Champak)
9.	Dibru-Saikhowa	765.00	28.07.1997	Part of Dibrugarh and Tinsukhia districts-east Himalayas of Assam	<i>Trachypithecus geei</i> (Golden langur), <i>Hoolock hoolock</i> (Hoolock gibbon)	<i>Rauvolfia serpentina</i> (Rauvolfia), <i>Livistona jenkinsiana</i> (Livistona) <i>Orchid sp.</i>
10.	Dehang-Debang	5,111.50	02.09.1998	Part of Siang and Debang valley in Arunachal Pradesh-east Himalayas	<i>Ailurus fulgens</i> (Red Panda), <i>Trimeresurus sp.</i> (Green pit viper), <i>Budorcas taxicolor</i> (Takin)	<i>Cyathea sp.</i> (Tree fern), <i>Begonia sp.</i> (Begonias)
11.	*Pachmarhi	4,926.00	03.03.1999/ 26.05.2009	Part of Betul, Hoshangabad and Chindwara districts of Madhya Pradesh-Semi-Arid-Gujarat-Rajputana	<i>Rucervus duvaucelii</i> (Barasinga), <i>Bos gaurus</i> (Wild buffalo), <i>Gallus gallus</i> (Red jungle fowl)	<i>Shorea robusta</i> (Sal), <i>Selaginella sp.</i> fern, <i>Bambusa polymorpha</i> (Polymorph bamboo)
12.	*Khangchendzonga	2,619.92	07.02.2000/ 25.07.2018	Part of north and west Sikkim	<i>Panthera uncia</i> (Snow leopard), <i>Ailurus fulgens</i> (Red panda)	<i>Schima wallichii</i> (Chilauni), <i>Tsuga dumosa</i> (Hemlock) <i>Juniperous indica</i> (black Juniper), <i>Rhododendron arboretum</i> (Laal burans), <i>Rhododendron barbatum</i> , and <i>Rhododendron niveum</i> (Dwarf rhododendron)



S. no.	Name	Area (km ²)	Date of notification	Location/state/bio-geographic zones	Key fauna	Key flora
13.	*Agasthyamala	3,500.36 1,828.00 (Kerala) 1,672.36 (Tamil Nadu)	12.11.2001/ 19.03.2016	Part of Thirunelveli and Kanyakumari districts of Tamil Nadu and Thiruvananthapuram, Kollam and Pathanamthitta of Kerala	<i>Macaca Silenus</i> (Lion tailed macaque), <i>Loris tardigradus</i> (Slender Loris), <i>Buceros bicornis</i> (Great pied hornbill)	<i>Elaeocarpus ganitrus</i> (Rudraksha), <i>Diospyros malabarica</i> (Gaub tree), <i>Grewia tiliifolia</i> (Wild dhaman), <i>Syzygium cumini</i> (black plums)
14.	*Achan-kmar-Amarnatak	3,835.51	30.03.2005/ 11.07.2012	Part of Anuppur and Dindori district of Madhya Pradesh, part of Bilaspur districts (Chhattisgarh)	<i>Tetracerus quadricornis</i> (Four-horn antelope), <i>Grus antigone</i> (Saras crane), <i>Philautus sanctisilvaticus</i> (Sacred-grovebush frog), <i>Gyps africanus</i> (White backed vulture), <i>Cuon alpinus</i> (Indian wild dog)	Almost 1,500 plant species representing over 151 plant families can be found in the reserve
15.	Kachchh	12,454.00	29.01.2008	Parts of Kachchh, Rajkot, Surendranagar and Patan civil district (Gujarat)	<i>Equus hemionuskhur</i> (Indian wild ass)	<i>Prosopis juliflora</i> (Vilayati kikar), <i>Salvad oraoleoides</i> (Bad peelu), <i>Opuntia dillenii</i> (Cactus)
16.	Cold Desert	7,770.00	28.08.09	Pin Valley National Park and surroundings; Chandratal and Sarchu and Kibber Wildlife Sanctuary (Himachal Pradesh)	<i>Panthera uncia</i> (Snow leopard)	<i>Cedrus deodara</i> (Himalayan cedar)
17.	Seshachalam	4,756.00	20.09.2010	Seshachalamhill range in Eastern Ghats encompassing part of Chittoor and Kadapa districts (Andhra Pradesh)	<i>Loris tardigradus</i> (Slender loris)	<i>Pterocarpus santalinus</i> (Red sanders)
18.	*Panna	2,998.98	25.08.2011	Part of Panna and Chhattarpur district (Madhya Pradesh)	<i>Panthera tigris</i> (Tiger), <i>Axis axis</i> (Chital), <i>Gazella bennettii</i> (Chinkara), <i>Rusa unicolor</i> (Sambhar) and <i>Melursus ursinus</i> (Sloth bear)	<i>Tectona grandis</i> (Teak) and <i>Anogeissus pendula</i> (Kardhai)

Source: MAB committee, MoEF&CC, Gov.

*included in World Network of Biosphere Reserve (MAB-UNESCO)



Table 4.17. List of UNESCO Natural Heritage sites in India

Natural Heritage Site	States	Year of Designation
Western Ghats	Maharashtra, Gujarat, Goa, Tamil Nadu, Karnataka, Kerala	2012
Keoladeo National Park	Rajasthan	1985
Sundarbans National Park	West Bengal	1987
Great Himalayan National Park-Conservation Area	Himachal Pradesh	2014
Kaziranga National Park	Assam	1985
Manas Wildlife Sanctuary	Assam	1985
Nanda Devi and Valley of Flowers National Parks	Uttarakhand	2005
Khangchendzonga National Park*	Sikkim	2016

Source: United Nations Educational, Scientific and Cultural Organization; www.unesco.org

*It is identified as a mixed heritage site having both cultural and natural significance

Table 4.18. Number of Ecotourism sites in the selected States/UTs

S. No.	State/UT	Year									
		2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20
1.	Bihar	NA	NA	NA	NA	12	12	12	12	12	12
2.	Delhi	0	0	0	0	NA	NA	NA	NA	NA	NA
3.	Goa	11	11	13	13	7	7	7	7	7	7
4.	Gujarat	NA	NA	NA	NA	62	62	62	62	62	62
5.	Haryana	0	0	0	1	NA	NA	NA	NA	NA	NA
6.	Himachal Pradesh	5	5	5	5	5	5	5	5	5	5
7.	Jammu & Kashmir	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
8.	Kerala	60	60	64	54	48	55	55	60	60	NA
9.	Madhya Pradesh	24	20	19	18	NA	NA	NA	NA	NA	NA
10.	Maharashtra	NA	NA	NA	NA	20	28	25	35	27	27
11.	Odisha	NA	NA	NA	NA	0	0	26	35	38	40
12.	Sikkim	NA	NA	NA	NA	8	8	7	9	8	7
13.	Tamil Nadu	NA	NA	NA	NA	34	42	48	59	58	55
14.	Telangana	NA	NA	NA	NA	2	3	5	5	7	8
15.	Tripura	5	5	5	5	4	4	4	4	4	4
16.	Uttar Pradesh	16	16	16	16	NA	NA	NA	NA	NA	NA
17.	Uttarakhand	NA	NA	NA	NA	9	9	9	24	24	24
18.	West Bengal	NA	NA	NA	NA	NA	NA	NA	44	43	43
19.	Andaman and Nicobar Islands	24	24	42	42	42	42	42	42	42	42
20.	Dadra & Nagar Haveli	6	6	6	6	0	0	0	0	0	0
21.	Daman & Diu	2	2	2	2	2	2	2	2	2	2
22.	Puducherry	0	0	0	0	0	0	0	1	1	1

Source: SFDs



Table 4.19. Tourists inflow for Ecotourism in the selected States/UTs

S. No.	State/UT	Year									
		2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20
1.	Bihar	NA	NA	NA	NA	1,62,376	1,97,122	2,18,291	2,61,010	3,29,616	4,75,665
2.	Delhi	0	0	0	0	NA	NA	NA	NA	NA	NA
3.	Goa	1,84,699	2,25,157	2,93,089	3,63,937	3,53,635	4,34,365	5,91,074	5,25,912	5,16,802	4,54,976
4.	Gujarat	NA	NA	NA	NA	NA	21,68,441	18,67,779	43,20,604	6,83,594	13,58,249
5.	Haryana	0	0	0	32	NA	NA	NA	NA	NA	NA
6.	Himachal Pradesh	NA	NA	NA	NA	8,889	10,672	11,649	10,847	10,222	8,287
7.	Jammu & Kashmir	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
8.	Karnataka	6,42,720	6,49,544	6,05,294	6,64,813	6,62,592	11,43,768	26,93,918	8,53,016	15,04,892	6,56,196
9.	Kerala	NA	NA	49,90,366	44,95,129	53,45,704	63,36,826	1,00,27,844	63,22,340	51,82,389	NA
10.	Madhya Pradesh	11,98,551	10,96,288	10,28,697	10,90,731	NA	NA	NA	NA	NA	NA
11.	Maharashtra	NA	NA	NA	NA	10,87,000	55,70,000	41,23,000	19,91,000	21,16,000	19,56,000
12.	Meghalaya	NA	NA	NA	NA	2,615	2,167	3,979	5,025	3,881	1,360
13.	Odisha	NA	NA	NA	NA	0	0	11,500	17,148	29,024	46,019
14.	Sikkim	NA	NA	NA	NA	5,895	6,583	5,695	71,636	6,669	8,277
15.	Tamil Nadu	NA	NA	NA	NA	26,66,709	33,20,096	47,71,108	60,43,013	60,45,875	53,97,557
16.	Tripura	1,89,000	1,73,000	1,60,000	1,57,000	2,16,000	3,67,000	3,61,000	3,04,000	2,92,000	2,94,000
17.	Uttar Pradesh	90,106	1,02,464	1,41,240	1,63,902	NA	NA	NA	NA	NA	NA
18.	Uttarakhand	2,30,827	2,84,908	2,92,501	2,84,061	3,22,856	3,82,667	4,11,083	23,95,640	24,90,725	23,12,941
19.	West Bengal	NA	NA	NA	NA	9,28,084	14,76,513	12,92,544	16,13,773	20,41,917	5,49,334
20.	Andaman and Nicobar Islands	2,23,168	20,92,794	1,88,268	2,67,221	2,79,085	2,15,794	2,54,250	3,30,525	3,31,121	4,95,217
21.	Dadra & Nagar Haveli	31,840	57,494	1,12,866	82,304	0	0	0	0	0	0
22.	Puducherry	0	0	0	0	0	0	0	92,000	1,01,000	1,04,000

Source: SFDs

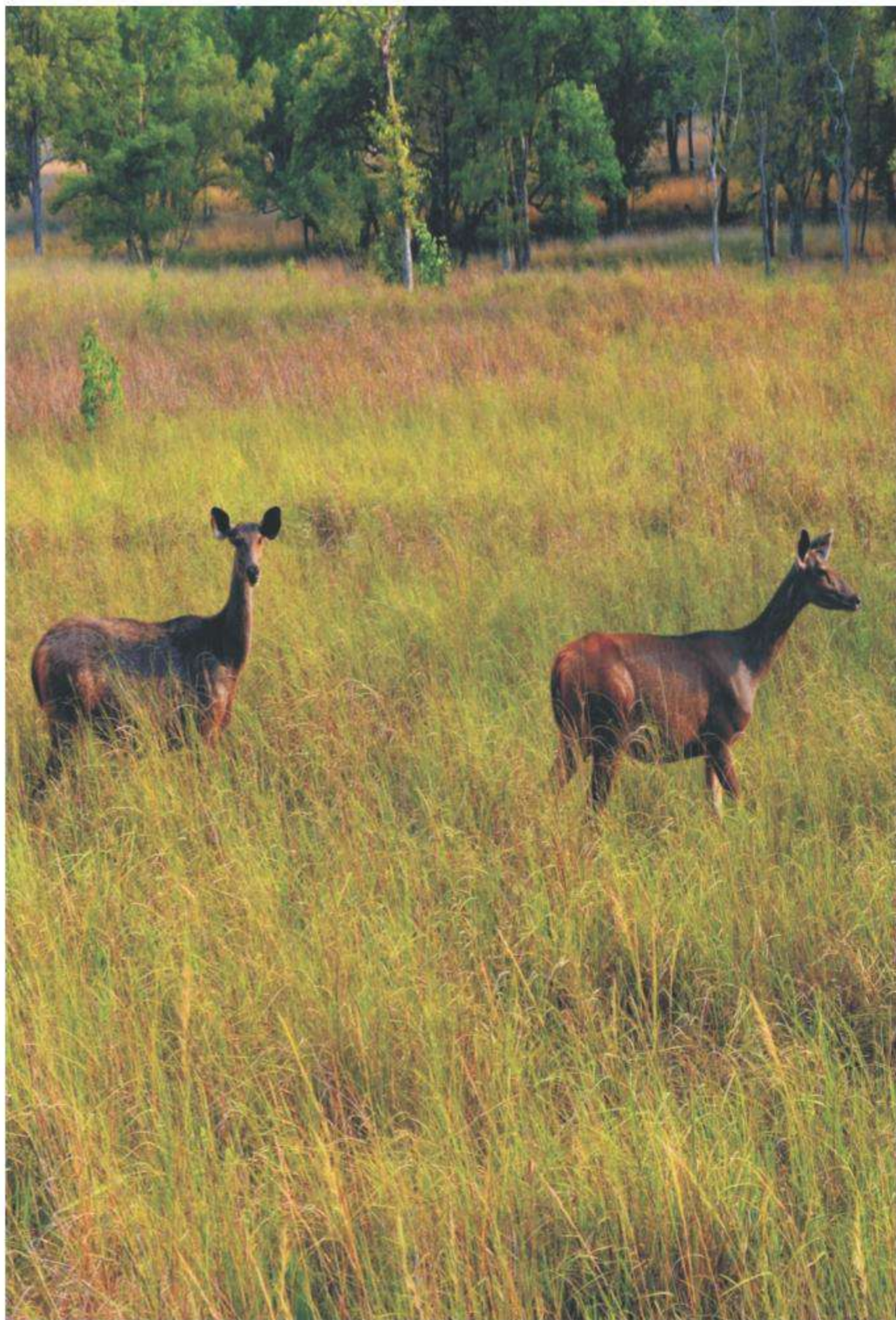




Table 4.20. Revenue (₹ lakh) from Ecotourism in the selected States/UTs

S. No.	State/UT	Year			
		2010-11	2011-12	2012-13	2013-14
1.	Bihar	NA	NA	NA	NA
2.	Delhi	0.00	0.00	0.00	0.00
3.	Goa	68.99	67.16	108.33	156.61
4.	Gujarat	NA	NA	NA	NA
5.	Haryana	0.00	0.00	0.00	0.608
6.	Himachal Pradesh	6.98	5.54	3.69	20.25
7.	Kerala	NA	NA	1,362.66	1,306.01
8.	Madhya Pradesh	1,518.31	1,844.80	1,482.84	2,068.30
9.	Maharashtra	NA	NA	NA	NA
10.	Meghalaya	NA	NA	NA	NA
11.	Odisha	NA	NA	NA	NA
12.	Sikkim	NA	NA	NA	NA
13.	Tamil Nadu	NA	NA	NA	NA
14.	Tripura	12.3	15.18	12.41	22.44
15.	Uttar Pradesh	70.21	73.99	104.45	118.68
16.	Uttarakhand	429.33	851.19	790.15	869.83
17.	West Bengal	NA	NA	NA	NA
18.	Andaman and Nicobar Islands	36.63	35.35	40.55	33.84
19.	Dadra & Nagar Haveli	5.51	8.21	8.71	8.68
20.	Puducherry	NA	NA	NA	NA

Source: SFDs

Reference:

Stronza, A.L., Hunt, C.A. and Fitzgerald, L.A. (2019). Ecotourism for Conservations? *Annual Review of Environment and Resources*, 20, 17-54.

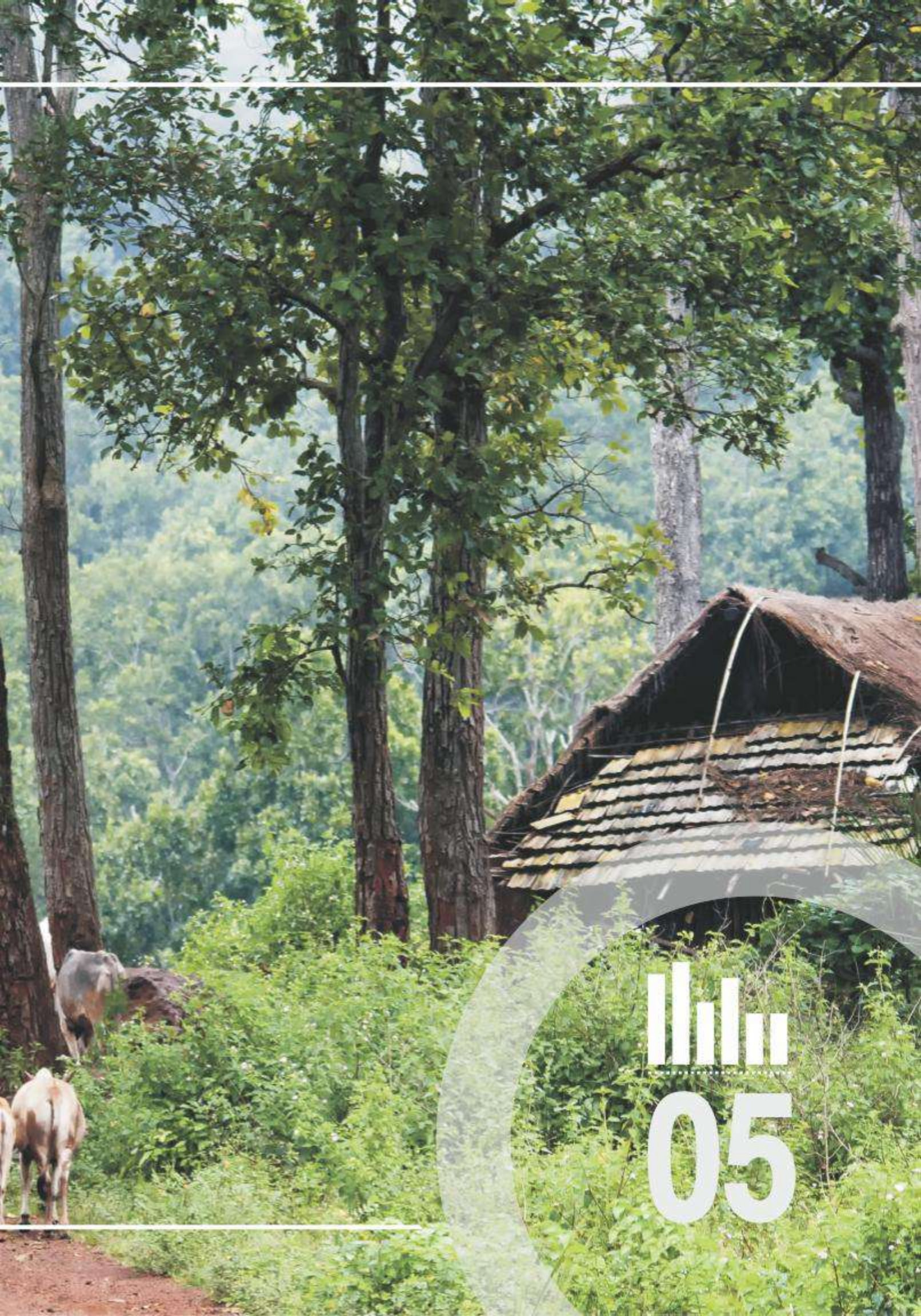




Year					
2014-15	2015-16	2016-17	2017-18	2018-19	2019-20
5.05	10.86	23.46	26.33	33.72	44.61
NA	NA	NA	NA	NA	NA
NA	NA	NA	NA	NA	NA
NA	1,424.08	1,248.64	1,184.14	453.83	1,200.26
NA	NA	NA	NA	NA	NA
NA	NA	NA	NA	NA	NA
1,644.65	3,846.01	3,200.73	3,041.05	3,662.50	NA
NA	NA	NA	NA	NA	NA
451.59	1,258.85	1,138.63	1,954.84	2,167.36	2,232.19
1.58	1.01	1.85	2.22	3.37	3.43
.00	0.00	157.00	340.00	561.00	685.00
18.07	21.97	18.63	53.76	46.23	0.52
754.48	870.86	1,269.49	1,705.72	2,013.73	2,180.57
36.53	58.47	5,625.00	46.66	69.66	84.22
NA	NA	NA	NA	NA	NA
993.15	1,156.29	1,236.48	1,969.09	2,192.29	2,418.04
456.78	676.67	627.53	3,055.71	1,464.88	575.12
39.15	31.56	46.26	48.60	58.73	49.55
NA	NA	NA	NA	NA	NA
0.00	0.00	0.00	0.00	.00	0.00







05

05

SOCIAL AND ECONOMIC ASPECTS OF FORESTRY SECTOR

Forests contribute to the social and economic aspects of communities by delivering ecosystem services. The communities residing in adjoining areas are also actively participating in various forest management programmes for achieving various goals of forest conservation through various participatory approaches such as Joint Forest Management (JFM) and Participatory Forest Management (PFM). JFM is being implemented across the States with the common philosophy that consists of partnership of local communities with forest departments for sustainable forest management. JFM, is a part of the *National Forest Policy 1988* which envisages people's involvement for forest protection and conservation through democratic governance and implementation of the schemes designed for the purpose.

Various externally aided projects, Central and State schemes; National Afforestation Programme (NAP), etc. are implemented through JFM mechanism. The institutions of JFM have also been involved in implementing the Green India Mission (GIM) by further strengthening JFM Committees (JFMCs) by revamping them as bodies of *Gram Sabha*. JFMCs are village level committees and are registered societies. There are a number of Village Forest Committees (VFCs), *Van Panchayats*, and other similar groups that work in tandem with the forest personnel in sustainably managing the forests.

In India, some villages are allowed to be located inside the Reserved Forests (RFs). These villages are termed as *Forest Villages*. They are different from forest fringe villages that are located within a specified distance (about 2km) from the forest boundaries.

As per the *Biological Diversity Act 2002*, Biodiversity Management Committees (BMCs) have been created at grassroots level for promoting conservation, sustainable use and documentation of biological diversity by local bodies across the country. The People's Biodiversity Register (PBR) is a document which contains comprehensive information on locally available bio-resources including landscape and demography of a particular area or village.

Compensatory afforestation is the process of afforestation to compensate for the forest land that has been diverted for non-forestry activities. With the priorities of the Government as contained in the National Common Minimum Programme, the Twenty-Point Programme (TPP) was restructured in 2006 (*Twenty Point Programme 2006*) in conformity. The physical targets of tree plantation under TPP are fixed by the MoEFCC and intimated to the State/UT and the



progress is monitored.

Under the afforestation schemes, the NAP was launched in 2002 with the overall objective to increase tree and forest cover. NAP also aims to support and accelerate the on-going process of forest conservation, protection, management and development functions to the JFMCs. The Green India Mission (GIM) is one of the eight missions outlined under the National Action Plan on Climate Change. It aims at protecting, restoring and enhancing India's forest cover and responding to climate change. GIM activities were started in the financial year 2015-16.

The CAMPA (Compensatory Afforestation Funds Management and Planning Authority) was constituted in April 2004 as a result of the order (IA No. 566 in WP (Civil) No. 202/1995 in *T.N. Godavarman versus Union of India, 2002*) of the Supreme Court of India (https://main.sci.gov.in/pdf/cir/2015-10-17_1445060165.pdf). States have setup CAMPA under *Compensatory Afforestation Fund Act, 2016* and *Compensatory Afforestation Rules 2018*. The funds are released to their States based on the proposals and Annual Plans of Operations.

Table 5.1. Number of forest villages in the selected States/UTs

S. No.	State/UT	Year									
		2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20
1.	Andhra Pradesh	NA	NA	NA	NA	5,228	5,228	5,228	5,228	5,228	5,228
2.	Assam	NA	NA	NA	NA	476	476	476	476	476	476
3.	Chhattisgarh	425	NA	NA	NA	NA	NA	NA	NA	NA	NA
4.	Delhi	14	14	14	14	NA	NA	NA	NA	NA	NA
5.	Goa	NA	NA	NA	NA	47	47	47	47	47	47
6.	Gujarat	NA	NA	NA	NA	201	201	201	201	201	201
7.	Kerala	NA	NA	NA	NA	NA	NA	725	725	725	NA
8.	Madhya Pradesh	925	NA	NA	NA	NA	NA	NA	NA	NA	NA
9.	Maharashtra	76	76	76	76	146	128	179	171	614	877
10.	Mizoram	85	85	85	85	NA	NA	NA	NA	NA	NA
11.	Tripura	62	62	62	62	NA	NA	NA	NA	NA	NA
12.	West Bengal	NA	NA	NA	NA	170	170	170	170	0	0
13.	Andaman and Nicobar Islands	NA	NA	NA	NA	0	0	0	0	0	0
14.	Chandigarh	NA	NA	NA	NA	0	0	0	0	0	0
15.	Dadra & Nagar Haveli	0	0	0	0	0	0	0	0	0	0
16.	Puducherry	0	0	0	0	0	0	0	0	0	0

Source: SFDs



Table 5.2. Population (number) of forest villages in the selected States/UTs

S. No.	State/UT	Year									
		2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20
1.	Andhra Pradesh	NA	NA	NA	NA	32,28,122	32,28,122	32,28,122	32,28,122	32,28,122	32,28,122
2.	Assam	NA	NA	NA	NA	NA	NA	NA	NA	NA	3,43,938
3.	Chhattisgarh	1,26,584	NA	NA	NA	NA	NA	NA	NA	NA	NA
4.	Goa	NA	NA	NA	NA	526	526	526	526	526	526
5.	Kerala	NA	NA	NA	NA	NA	NA	35,817	35,817	35,817	NA
6.	Mizoram	99,182	1,02,379	1,06,221	1,10,774	NA	NA	NA	NA	NA	NA
7.	Tripura	3,519	3,519	3,519	3,519	NA	NA	NA	NA	NA	NA
8.	West Bengal	NA	NA	NA	NA	3,534	3,534	3,534	3,534	0	0
9.	Andaman and Nicobar Islands	NA	NA	NA	NA	0	0	0	0	0	0
10.	Chandigarh	NA	NA	NA	NA	0	0	0	0	0	0
11.	Dadra & Nagar Haveli	0	0	0	0	0	0	0	0	0	0
12.	Puducherry	0	0	0	0	0	0	0	0	0	0

Source: SFDs



Table 5.3. Number of JFM Committees

S. No.	State/UT	Year									
		2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20
1.	Andhra Pradesh	NA	NA	NA	4,404	0	0	0	0	0	0
2.	Arunachal Pradesh	23	23	23	23	NA	NA	NA	NA	NA	NA
3.	Assam	NA	NA	NA	NA	23	23	23	23	25	25
4.	Bihar	NA	NA	NA	NA	821	821	821	821	821	821
5.	Chhattisgarh	7,887	7,887	7,887	7,887	7,887	7,887	7,887	7,887	7,887	7,887
6.	Delhi	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
7.	Goa	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
8.	Gujarat	3,205	3,259	3,299	NA	3,415	3,392	3,410	3,410	3,425	3,429
9.	Haryana	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
10.	Himachal Pradesh	963	963	963	963	NA	NA	NA	NA	NA	NA
11.	Jammu & Kashmir	NA	NA	NA	NA	NA	NA	NA	NA	703	723
12.	Jharkhand	10,125	10,076	7,965	7,963	NA	NA	NA	NA	NA	NA
13.	Karnataka	1,222	1,222	1,222	1,222	1,222	1,222	1,222	1,222	1,222	1,222
14.	Kerala	NA	NA	NA	NA	446	590	590	590	590	590
15.	Madhya Pradesh	NA	NA	NA	15,228	NA	NA	NA	NA	NA	15,609
16.	Maharashtra	12,648	12,679	12,593	12,546	12,512	12,489	12,285	12,194	12,291	12,084
17.	Manipur	726	726	726	726	NA	NA	NA	NA	NA	NA
18.	Meghalaya	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
19.	Mizoram	593	623	615	598	598	444	NA	NA	NA	NA
20.	Nagaland	771	791	791	791	NA	NA	NA	NA	NA	NA
21.	Odisha	NA	NA	NA	13,253	NA	NA	NA	NA	NA	NA
22.	Punjab	757	757	757	757	757	757	757	757	757	757
23.	Rajasthan	5,316	5,372	5,538	5,620	NA	NA	NA	NA	NA	NA
24.	Sikkim	NA	NA	NA	NA	59	59	64	64	66	66
25.	Tamil Nadu	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
26.	Telangana	NA	NA	NA	NA	NA	1,086	NA	NA	NA	NA
27.	Tripura	819	127	54	1,000	1,005	1,005	1,005	1,005	1,005	1,052
28.	Uttar Pradesh	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
29.	Uttarakhand	644	NA	NA	NA	NA	NA	NA	NA	NA	NA
30.	West Bengal	4,423	4,281	NA	NA	4,419	4,358	4,376	4,376	4,458	4,465
31.	Andaman and Nicobar Islands	NA	NA	NA	NA	0	0	0	0	0	0
32.	Chandigarh	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
33.	Dadra & Nagar Haveli	16	16	16	16	0	0	0	0	0	0
34.	Daman & Diu	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
35.	Lakshadweep	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
36.	Puducherry	NA	NA	NA	NA	0	0	0	0	0	0

Source: SFDs



Table 5.4. Area (ha) under JFM operations

S. No.	State/UT	Year			
		2010-11	2011-12	2012-13	2013-14
1.	Andhra Pradesh	NA	NA	NA	6,60,000.00
2.	Arunachal Pradesh	928.00	NA	1,012.50	262.00
3.	Assam	NA	NA	NA	NA
4.	Bihar	NA	NA	NA	NA
5.	Chhattisgarh	33,19,000.00	33,19,000.00	33,19,000.00	33,19,000.00
6.	Delhi	NA	NA	NA	NA
7.	Goa	NA	NA	NA	NA
8.	Gujarat	4,18,083.00	4,25,302.00	4,36,132.00	NA
9.	Haryana	NA	NA	NA	NA
10.	Himachal Pradesh	2,245.00	1,601.00	3,720.00	2,310.00
11.	Jammu & Kashmir	NA	NA	NA	NA
12.	Jharkhand	15,70,191.00	16,95,802.00	12,15,027.00	13,28,918.00
13.	Karnataka	2,69,325.00	2,69,325.00	2,69,325.00	2,69,325.00
14.	Kerala	NA	NA	NA	NA
15.	Madhya Pradesh	NA	NA	NA	66,874.00
16.	Maharashtra	26,80,867.00	26,99,360.00	26,93,105.00	27,86,767.40
17.	Manipur	NA	NA	NA	NA
18.	Meghalaya	NA	NA	NA	NA
19.	Mizoram	2,700.00	5,150.00	2,600.00	4,030.00
20.	Nagaland	NA	NA	NA	NA
21.	Odisha	NA	NA	NA	11,90,909.00
22.	Punjab	NA	NA	NA	NA
23.	Rajasthan	7,80,000.00	8,00,000.00	8,00,000.00	8,95,000.00
24.	Sikkim	NA	NA	NA	NA
25.	Tamil Nadu	4,102.00	NA	NA	NA
26.	Telangana	NA	NA	NA	NA
27.	Tripura	75,024.14	7,176.25	18,756.00	0.00
28.	Uttar Pradesh	NA	NA	NA	NA
29.	Uttarakhand	NA	NA	NA	NA
30.	West Bengal	5,821.60	5,675.99	NA	NA
31.	Andaman and Nicobar Islands	NA	NA	NA	NA
32.	Chandigarh	NA	NA	NA	NA
33.	Dadra & Nagar Haveli	0.00	0.00	0.00	0.00
34.	Daman & Diu	NA	NA	NA	NA
35.	Lakshadweep	NA	NA	NA	NA
36.	Puducherry	NA	NA	NA	NA

Source: SFDs



Year					
2014-15	2015-16	2016-17	2017-18	2018-19	2019-20
700.00	750.00	445.00	632.00	123.00	0.00
NA	NA	NA	NA	NA	NA
922.00	950.00	990.00	1,012.00	1,100.00	1,100.00
3,885.00	1,786.00	2,500.00	NA	NA	1,000.00
33,19,000.00	33,19,000.00	33,19,000.00	33,19,000.00	33,19,000.00	33,19,000.00
NA	NA	NA	NA	NA	NA
NA	NA	NA	NA	NA	NA
4,58,823.00	4,57,824.00	5,28,248.00	5,28,247.00	5,49,304.00	5,49,299.00
NA	NA	NA	NA	NA	NA
NA	NA	NA	NA	NA	NA
NA	NA	NA	NA	1,08,000.00	6,33,400.00
NA	NA	NA	NA	NA	NA
NA	NA	NA	NA	NA	NA
1,492.00	1,213.00	4,242.00	1,513.00	NA	NA
NA	NA	NA	NA	NA	79,70,500.00
27,03,869.00	26,53,302.00	27,81,500.00	26,39,189.00	26,74,101.00	27,03,403.00
NA	NA	NA	NA	NA	NA
13,23,200.00	8,48,200.00	NA	1,58,400.00	1,58,400.00	NA
3,000.00	3,135.00	NA	NA	NA	NA
NA	NA	NA	NA	NA	NA
NA	NA	NA	NA	NA	NA
NA	NA	NA	NA	NA	NA
NA	NA	NA	NA	NA	NA
NA	NA	NA	NA	NA	NA
2,258.00	750.00	1,458.00	NA	NA	NA
NA	35,65,900.00	NA	NA	NA	NA
1,19,895.88	1,19,895.88	1,19,895.88	1,19,895.88	1,19,895.88	99,619.47
NA	NA	NA	NA	NA	NA
NA	NA	NA	NA	NA	NA
6,52,59,797.00	5,85,41,641.00	6,09,55,017.00	6,43,42,023.40	6,61,85,127.90	6,62,47,683.00
0.00	0.00	0.00	0.00	0.00	0.00
NA	NA	NA	NA	NA	NA
0.00	0.00	0.00	0.00	0.00	0.00
NA	NA	NA	NA	NA	NA
NA	NA	NA	NA	NA	NA
0.00	0.00	0.00	0.00	0.00	0.00



Table 5.5. Number of projects under JFM in the selected States/UTs

S. No.	State/UT	Year									
		2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20
1.	Andhra Pradesh	NA	NA	NA	19	0	0	0	0	0	0
2.	Assam	NA	NA	NA	NA	1,140	1,140	1,140	1,140	1,140	1,140
3.	Arunachal Pradesh	23	23	23	23	NA	NA	NA	NA	NA	NA
4.	Chhattisgarh	NA	NA	NA	NA	NA	NA	NA	NA	NA	0
5.	Delhi	0	0	0	0	NA	NA	NA	NA	NA	NA
6.	Himachal Pradesh	1	1	1	1	NA	NA	NA	NA	NA	NA
7.	Karnataka	1	1	1	1	NA	NA	NA	NA	NA	NA
8.	Kerala	NA	NA	NA	NA	28	36	36	36	36	36
9.	Manipur	1	1	1	1	NA	NA	NA	NA	NA	NA
10.	Meghalaya	NA	NA	NA	NA	349	366	366	366	366	366
11.	Mizoram	28	28	28	28	28	13	NA	NA	NA	NA
12.	Sikkim	NA	NA	NA	NA	104	104	162	162	159	159
13.	Tamil Nadu	NA	NA	NA	NA	40	20	30	NA	NA	NA
14.	Andaman and Nicobar Islands	NA	NA	NA	NA	0	0	0	0	0	0
15.	Dadra & Nagar Haveli	NA	NA	NA	NA	0	0	0	0	0	0
16.	Puducherry	NA	NA	NA	NA	0	0	0	0	0	0

Source: SFDs



Table 5.6. Number of Biodiversity Management Committees

S. No.	State/UT	Year									
		2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20
1.	Andhra Pradesh		94	220	439	928	1,741	2,738	5,397	6,316	7,231
2.	Arunachal Pradesh		15	20	20	43	58	58	126	139	1,793
3.	Assam		0	57	131	171	171	205	221	229	2,549
4.	Bihar		0	0	0	0	0	0	0	0	5,837
5.	Chhattisgarh		27	27	27	27	27	45	223	242	11,301
6.	Delhi		0	0	0	0	0	0	0	0	0
7.	Goa		5	5	11	54	54	112	180	192	205
8.	Gujarat		11	902	2,124	3,405	4,834	6,900	7,596	7,596	9,383
9.	Haryana		0	0	0	0	0	0	0	1,762	6,437
10.	Himachal Pradesh		9	14	106	155	160	322	417	719	3,370
11.	Jammu & Kashmir		0	0	0	0	0	0	0	0	4,361
12.	Jharkhand		0	6	36	66	135	569	1,892	3,863	4,644
13.	Karnataka		3,844	4,263	4,384	4,636	4,636	4,900	5,092	5,514	6,500
14.	Kerala		948	978	1,043	1,043	1,034	1,034	1,034	1,034	1,200
15.	Madhya Pradesh		23,443	23,743	23,743	23,743	23,406	23,406	23,743	23,431	19,352
16.	Maharashtra		0	156	603	890	890	16,492	20,506	24,490	28,654
17.	Manipur		39	40	49	52	62	62	68	167	1,415
18.	Meghalaya	NA	0	63	84	94	105	203	266	280	3,274
19.	Mizoram		238	234	221	221	221	222	250	286	855
20.	Nagaland		10	10	10	10	10	10	110	122	987
21.	Odisha		0	0	0	230	704	1,036	1,225	2,480	6,706
22.	Punjab		51	54	55	55	55	69	74	74	13,456
23.	Rajasthan		0	19	26	31	49	95	113	119	10,283
24.	Sikkim		0	0	7	13	25	27	30	42	196
25.	Tamil Nadu		13	13	13	16	16	16	385	1,049	13,604
26.	Telangana		0	0	0	710	1,515	2,402	3,028	3,184	13,319
27.	Tripura		68	68	179	217	280	361	506	876	1,264
28.	Uttar Pradesh		5	5	9	32	32	106	263	58,782	59,407
29.	Uttarakhand		513	598	734	751	765	907	907	948	7,991
30.	West Bengal		39	49	81	176	195	205	411	435	3,514
31.	Andaman and Nicobar Islands		0	0	0	0	0	0	0	0	0
32.	Chandigarh		0	0	0	0	0	0	0	0	0
33.	Dadra & Nagar Haveli		0	0	0	0	0	0	0	0	0
34.	Daman & Diu		0	0	0	0	0	0	0	0	0
35.	Lakshadweep		0	0	0	0	0	0	0	0	10
36.	Puducherry		0	0	0	0	0	0	0	0	0
	Total	5,358	29,372	31,574	34,135	37,769	41,180	62,502	74,063	1,44,371	2,49,098

Source: National Biodiversity Authority, Chennai



Table 5.7. Number of People's Biodiversity Register

S. No.	State/UT	Year									
		2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20
1.	Andhra Pradesh		1	2	17	28	28	25	75	200	310
2.	Arunachal Pradesh		0	3	0	0	0	0	43	43	80
3.	Assam		0	0	0	6	6	12	25	136	2,489
4.	Bihar		0	0	0	0	0	0	0	0	0
5.	Chhattisgarh		0	0	0	7	7	7	0	0	72
6.	Delhi		0	0	0	0	0	0	0	0	0
7.	Goa		0	0	0	0	0	0	0	0	205
8.	Gujarat		0	1	81	133	441	957	1,164	1,164	1,382
9.	Haryana		0	0	0	0	0	0	0	0	126
10.	Himachal Pradesh		1	1	0	0	0	0	122	6	110
11.	Jammu & Kashmir		0	0	0	0	0	0	0	0	0
12.	Jharkhand		3	11	11	11	11	11	14	25	809
13.	Karnataka		240	245	267	468	468	1,970	1,777	1,958	2,093
14.	Kerala		412	290	596	758	854	854	892	932	1,034
15.	Madhya Pradesh		663	600	741	704	704	890	890	890	890
16.	Maharashtra		0	0	0	37	37	37	01	18	14,833
17.	Manipur		03	03	3	10	10	12	22	22	37
18.	Meghalaya	NA	0	0	0	0	0	0	15	45	78
19.	Mizoram		02	0	02	03	03	05	05	05	05
20.	Nagaland		0	0	0	0	0	0	0	0	18
21.	Odisha		0	0	0	76	76	76	87	104	111
22.	Punjab		0	0	0	0	0	10	11	43	1,961
23.	Rajasthan		0	0	0	0	0	0	0	0	0
24.	Sikkim		0	0	0	0	0	0	04	04	30
25.	Tamil Nadu		0	0	0	0	0	0	0	0	1,049
26.	Telangana		0	0	0	9	9	60	67	173	213
27.	Tripura		0	0	60	126	126	279	431	467	547
28.	Uttar Pradesh		2	2	6	11	11	96	256	325	59,407
29.	Uttarakhand		6	139	13	22	22	88	124	124	7,991
30.	West Bengal		29	17	66	76	76	76	121	150	713
31.	Andaman and Nicobar Islands		0	0	0	0	0	0	0	0	0
32.	Chandigarh		0	0	0	0	0	0	0	0	0
33.	Dadra & Nagar Haveli		0	0	0	0	0	0	0	0	0
34.	Daman & Diu		0	0	0	0	0	0	0	0	0
35.	Lakshadweep		0	0	0	0	0	0	0	0	0
36.	Puducherry		0	0	0	0	0	0	0	0	0
	Total	929	1,362	1,314	1,863	2,485	2,889	5,465	6,146	6,834	96,593

Source: National Biodiversity Authority, Chennai



Table 5.8. Area (ha) under Centrally Sponsored Schemes for Afforestation in the selected States/UTs

S. No.	State/UT	Year									
		2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20
1.	Assam	NA	NA	NA	NA	0.00	2,745.00	NA	0.00	0.00	0.00
2.	Delhi	0.00	0.00	0.00	0.00	NA	NA	NA	NA	NA	NA
3.	Gujarat	NA	NA	NA	NA	6,350.00	NA	5,000.00	6,280.00	1,730.00	4,059.00
4.	Haryana	NA	NA	NA	NA	2,967.00	1,769.00	0.00	45.50	0.00	0.00
5.	Jammu & Kashmir	8,488.00	3,787.00	9,086.00	454.00	NA	NA	NA	NA	NA	NA
6.	Maharashtra	NA	NA	NA	21,909.08	NA	NA	NA	NA	NA	NA
7.	Manipur	6,495.00	16,250.00	14,475.00	20,537.00	17,964.00	NA	NA	NA	NA	NA
8.	Mizoram	NA	3,100.00	4,000.00	NA	NA	NA	NA	NA	NA	NA
9.	Nagaland	NA	NA	NA	NA	4,000	NA	2,130.00	NA	2,085.00	NA
10.	Sikkim	NA	NA	NA	NA	1,578.00	1,770.00	1,430.00	0.00	3,389.00	3,194.00
11.	Tripura	3,097.77	6,243.61	5,014.26	5,100.00	4,543.40	1,751.98	0.00	0.00	2,422.00	2,030.00
12.	Andaman and Nicobar Islands	NA	NA	NA	NA	0.00	0.00	0.00	0.00	0.00	1.00
13.	Dadra & Nagar Haveli	NA	NA	NA	NA	0.00	0.00	0.00	0.00	0.00	0.00
14.	Puducherry	0.00	0.00	0.00	0.00	NA	NA	NA	NA	NA	NA

Source: SFDS

Table 5.9. Outlay (₹ lakh) of Centrally Sponsored Schemes for Afforestation in the selected States/UTs

S. No.	State/UT	Year									
		2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20
1.	Assam	NA	NA	NA	NA	0.00	1,936.00	1,715.00	0.00	0.00	0.00
2.	Gujarat	NA	NA	NA	NA	1,614.88	166.28	903.00	1,320.35	101.91	1,033.61
3.	Haryana	NA	NA	NA	NA	1,100.00	289.21	0.00	1,071.45	0.00	0.00
4.	Jammu & Kashmir	2,091.58	1,122.02	1,768.40	1,323.48	NA	NA	NA	NA	NA	NA
5.	Kerala	NA	NA	NA	NA	800.00	800.00	665.00	665.00	790.00	790.00
6.	Maharashtra	8,900.00	13,000.00	11,700.00	9,804.00	NA	NA	NA	NA	NA	NA
7.	Manipur	3,622.67	3,774.84	5,544.99	6,183.69	5,419.63	NA	NA	NA	NA	NA
8.	Nagaland	NA	NA	NA	NA	1,099.76	NA	763.41	609.35	559.49	735.78
9.	Rajasthan	9,386.98	6,565.05	6,096.74	84,560.59	1,618.73	NA	NA	NA	NA	NA
10.	Sikkim	253.48	132.70	186.00	137.65	540.06	372.58	333.24	0.00	932.10	251.56
11.	Tripura	853.44	1,479.22	672.50	1,496.79	432.94	205.93	0.00	0.00	307.50	232.53
12.	Uttarakhand	NA	NA	NA	NA	250.00	2,359.78	NA	471.92	380.98	NA
13.	Andaman and Nicobar Islands	NA	NA	NA	NA	0.00	0.00	0.00	0.00	0.00	2.03
14.	Dadra & Nagar Haveli	NA	NA	NA	NA	0.00	0.00	0.00	0.00	0.00	0.00

Source: SFDS



Table 5.10. Area (ha) under afforestation on forest land in the selected States/UTs

S. No.	State/UT	Year			
		2010-11	2011-12	2012-13	2013-14
1.	Arunachal Pradesh	NA	NA	NA	NA
2.	Assam	NA	NA	NA	NA
3.	Chhattisgarh	424.57	469.00	NA	NA
4.	Delhi	1,020.00	870.00	830.00	500.00
5.	Goa	338.00	315.00	378.50	110.50
6.	Gujarat	1,28,255.00	NA	NA	NA
7.	Haryana	NA	NA	NA	NA
8.	Himachal Pradesh	16,220.00	13,296.00	14,569.00	12,995.00
9.	Jammu & Kashmir	11,622.00	7,112.00	12,218.00	2,927.00
10.	Karnataka	520.18	692.55	756.51	96.94
11.	Kerala	NA	NA	5.70	51.50
12.	Maharashtra	30,248.98	31,407.49	65,967.18	54,728.28
13.	Manipur	8,534.00	15,997.00	14,595.00	14,402.00
14.	Meghalaya	400.00	4,800.00	3,930.00	2,982.00
15.	Mizoram	5,900.00	5,150.00	5,995.00	6,500.00
16.	Odisha	NA	NA	NA	20,369.76
17.	Punjab	4,727.00	4,964.00	8,824.00	13,804.00
18.	Rajasthan	96,356.00	54,552.00	37,857.00	58,172.00
19.	Sikkim	NA	NA	NA	NA
20.	Tamil Nadu	35,296.00	NA	NA	NA
21.	Telangana	NA	NA	NA	NA
22.	Tripura	16,868.88	23,466.88	18,756.72	18,035.24
23.	Uttar Pradesh	NA	NA	NA	NA
24.	Uttarakhand	10,561.00	17,029.00	13,838.09	NA
25.	West Bengal	14,101.30	10,374.23	10,560.00	14,864.00
26.	Andaman and Nicobar Islands	1,760.50	2,377.90	2,326.00	2,481.00
27.	Chandigarh	NA	NA	NA	NA
28.	Dadra & Nagar Haveli	175.00	155.00	165.00	120.00
29.	Daman & Diu	NA	NA	NA	NA
30.	Lakshadweep	NA	NA	NA	20.04
31.	Puducherry	5.00	3.00	2.00	2.00

Source: SFDs



Year					
2014-15	2015-16	2016-17	2017-18	2018-19	2019-20
NA	NA	NA	7.00	2,104.00	7,027.00
NA	10,624.00	2,808.00	304.10	374.00	881.00
NA	NA	NA	NA	NA	NA
NA	NA	NA	NA	NA	NA
166.50	6.00	232.40	30.00	41.00	113.00
1,46,930.20	1,40,571.10	1,57,797.30	1,77,148.00	1,77,166.00	1,71,794.60
9,499.63	7,326.09	5,135.24	3,355.84	3,367.13	1,694.64
12,693.00	11,795.00	9,632.00	9,062.00	9,618.00	8,978.00
7,781.13	6,886.82	5,628.77	6,690.48	5,596.37	7,758.80
NA	NA	NA	NA	NA	NA
NA	NA	NA	NA	NA	NA
85,356.15	51,866.15	36,457.29	26,405.37	56,993.00	1,02,847.70
14,717.00	NA	NA	NA	NA	NA
0.00	0.00	0.00	0.00	3.00	0.00
500.00	3,000.00	NA	NA	NA	NA
NA	NA	NA	NA	NA	NA
2,769.00	2,934.00	5,470.00	5,944.00	12,176.00	NA
60,416.00	64,740.00	60,388.00	38,364.00	29,588.00	19,830.00
4,095.30	1,324.76	3,376.47	364.70	40.92	2,510.13
NA	45,129.00	39,789.00	33,148.00	40,882.00	26,100.00
NA	26,399.64	35,940.59	3,00,184.41	72,669.73	80,021.71
5,656.74	2,531.11	1,377.11	1,017.49	4,389.78	3,900.21
NA	NA	NA	NA	NA	NA
13,922.06	12,799.02	12,971.20	12,431.69	13,794.54	17,402.86
29,767.16	7,833.44	7,801.44	5,810.65	4,377.12	8,303.98
767.48	436.00	578.75	1,158.50	980.00	3,024.75
65,000.00	80,595.00	81,600.00	72,600.00	77,120.00	68,850.00
240.00	225.00	220.00	200.00	215.00	225.00
2.00	NA	10.00	NA	11.00	32.34
NA	NA	NA	NA	NA	NA
6.00	7.00	6.00	6.50	6.00	7.00



Table 5.11. Area (ha) under afforestation outside forest land in the selected States/UTs

S. No.	State/UT	Year									
		2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20
1.	Assam	NA	NA	NA	NA	NA	NA	NA	NA	9,796.00	NA
2.	Delhi*	1,020.00	870.00	830.00	500.00	NA	NA	NA	NA	NA	NA
3.	Goa	2,000.00	2,000.00	2,000.00	2,000.00	NA	NA	NA	NA	NA	NA
4.	Gujarat	NA	NA	NA	NA	44,187.51	10,250.5	10,935.89	0.00	17,101.00	10,205.45
5.	Haryana	NA	NA	NA	NA	16,333.91	16,234.57	13,454.85	8,167.60	6,248.98	4,799.51
6.	Karnataka	359.92	979.95	558.30	231.38	NA	NA	NA	NA	NA	NA
7.	Kerala	57.15	25.30	26.70	18.39	NA	NA	NA	NA	NA	NA
8.	Maharashtra	4,848.92	3,915.86	2,106.29	2,528.14	530.16	1,029.08	2,787.28	3,985.24	5,635.75	21,032.17
9.	Manipur	1,998.00	2,000.00	NA	3,514.00	2,000.00	NA	NA	NA	NA	NA
10.	Meghalaya	NA	NA	NA	NA	751.00	75.00	NA	248.89	276.55	654.41
11.	Mizoram	1,600.00	1,600.00	1,600.00	2,500.00	2,000.00	1,200.00	NA	NA	NA	NA
12.	Odisha	NA	NA	NA	28,080.93	NA	NA	NA	NA	NA	NA
13.	Sikkim	NA	NA	NA	NA	685.16	390.75	473.85	140.36	71.84	105.53
14.	Tamil Nadu	16,653.00	NA	NA	NA	NA	NA	NA	NA	NA	NA
15.	Telangana	NA	NA	NA	NA	NA	1,98,892.31	4,25,861.54	4,63,692.31	4,47,446.15	5,32,938.46
16.	Tripura	NA	NA	NA	NA	41.50	NA	333.50	NA	1,074.49	77.03
17.	Uttarakhand	NA	NA	NA	NA	3,482.63	5,047.24	5,280.11	8,980.11	6,918.66	5,380.33
18.	West Bengal	NA	NA	NA	NA	0.00	0.00	0.00	0.00	0.00	0.00
19.	Andaman and Nicobar Islands	19.00	19.00	35.00	22.20	10.00	13.35	12.90	14.20	16.22	16.50
20.	Chandigarh	NA	NA	NA	NA	0.00	0.00	0.00	0.00	0.00	0.00
21.	Dadra & Nagar Haveli	NA	NA	NA	NA	0.00	0.00	0.00	0.00	0.00	0.00
22.	Lakshadweep	NA	NA	NA	0.05	NA	NA	NA	NA	NA	NA
23.	Puducherry	40.00	40.00	40.00	40.00	104.00	105.00	105.00	98.00	109.00	94.00

Source: SFDs

*both in forest land and outside forest land



Table 5.12. Area (ha) under compensatory afforestation in the selected States/UTs

S. No.	State/UT	Year									
		2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20
1.	Andhra Pradesh	NA	NA	NA	NA	5,547.00	4,672.00	4,937.00	3,093.00	4,033.00	15,829.00
2.	Assam	NA	NA	NA	NA	NA	0.00	527.13	000	374.11	880.77
3.	Bihar	NA	NA	NA	NA	75.99	502.24	56.19	236.40	796.20	189.08
4.	Goa	150.00	150.00	92.50	43.00	NA	NA	NA	NA	NA	NA
5.	Gujarat	NA	NA	NA	NA	1,777.00	2,048.00	1,183.00	847.00	746.00	1,922.42
6.	Haryana	NA	NA	NA	NA	37.88	0.00	0.00	0.00	0.00	0.00
7.	Himachal Pradesh	12.00	527.00	1,170.00	1,644.00	3,257.00	1,939.00	1,281.00	1,405.00	677.00	563.00
8.	Jammu & Kashmir	2,885.00	4,036.00	5,152.00	5,187.00	5,106.13	5,023.82	3,831.76	5,076.27	4,191.37	6,636.60
9.	Madhya Pradesh	NA	NA	NA	1,45,120.35	NA	NA	NA	NA	NA	NA
10.	Maharashtra	313.00	3,578.00	4,784.00	760.00	1,325.14	773.64	832.51	1,684.97	1,454.96	2,749.94
11.	Manipur	0.00	0.00	104.00	135.00	320.50	NA	NA	NA	NA	NA
12.	Meghalaya	96.50	96.50	411.04	200.00	NA	NA	NA	NA	NA	NA
13.	Mizoram	114.41	NA	NA	778.98	1,388.99	107.04	75.10	NA	381.72	NA
14.	Nagaland	96.50	96.50	411.04	200.00	NA	NA	NA	NA	NA	NA
15.	Odisha	NA	4,871.63	4,973.74	5,094.61	NA	NA	NA	NA	NA	NA
16.	Sikkim	NA	NA	NA	NA	3,955.74	154.44	51.16	2,226.71	5,154.69	NA
17.	Tamil Nadu	8.71	NA	NA	NA	NA	NA	NA	NA	NA	NA
18.	Tripura	0.00	0.00	194.00	259.50	552.41	385.00	649.00	572.21	125.58	484.33
19.	Uttarakhand	NA	NA	NA	NA	2,077.81	1,395.00	2,880.00	3,474.00	2,527.00	3,223.00
20.	Andaman and Nicobar Islands	NA	NA	19.50	46.37	3.13	4.20	30.00	3.13	3.13	3.13
21.	Dadra & Nagar Haveli	312.75	312.75	312.75	312.75	0.00	0.00	0.00	0.00	0.00	0.00
22.	Puducherry	NA	NA	NA	NA	0.00	0.00	0.00	0.00	0.00	0.00

Source: SFDS



Table 5.13. Target area (ha) for afforestation under Twenty Point Programme

S. No.	State/UT	Year			
		2010-11	2011-12	2012-13	2013-14
1.	Andhra Pradesh	3,40,000	3,12,000	3,85,400	3,87,760
2.	Arunachal Pradesh	10,000	6,500	10,800	5,760
3.	Assam	12,000	9,500	5,650	1,180
4.	Bihar	27,000	25,000	22,700	21,860
5.	Chhattisgarh	60,500	78,000	50,400	64,220
6.	Delhi	100	105	1,150	1,220
7.	Goa	550	500	450	225
8.	Gujarat	1,25,000	1,37,500	1,40,500	1,24,520
9.	Haryana	25,000	24,000	57,000	64,890
10.	Himachal Pradesh	24,000	20,000	28,900	25,460
11.	Jammu & Kashmir	28,000	28,000	7,250	9,050
12.	Jharkhand	50,000	30,000	46,200	22,200
13.	Karnataka	1,00,000	1,00,000	67,000	79,760
14.	Kerala	9,000	9,000	3,950	7,530
15.	Madhya Pradesh	2,70,000	2,10,000	1,10,700	1,28,370
16.	Maharashtra	1,75,000	1,80,000	1,22,900	1,57,780
17.	Manipur	10,000	10,000	18,000	11,500
18.	Meghalaya	3,000	2,500	6,850	3,940
19.	Mizoram	6,000	5,500	6,250	5,420
20.	Nagaland	6,000	5,000	10,600	1,950
21.	Odisha	1,50,000	2,15,000	1,73,300	1,00,000
22.	Punjab	7,000	8,000	6,950	9,700
23.	Rajasthan	44,000	60,000	51,000	57,000
24.	Sikkim	5,000	6,000	7,450	6,160
25.	Tamil Nadu	93,000	1,18,500	50,700	58,770
26.	Telangana	NA	NA	NA	NA
27.	Tripura	12,000	13,000	27,200	20,450
28.	Uttar Pradesh	16,000	20,000	23,000	19,920
29.	Uttarakhand	1,00,000	90,000	81,700	76,230
30.	West Bengal	22,000	20,000	16,000	7,940
31.	Andaman and Nicobar Islands	1,100	1,300	1,375	1,220
32.	Chandigarh	300	300	250	100
33.	Dadra & Nagar Haveli	200	250	250	220
34.	Daman & Diu	30	30	15	10
35.	Lakshadweep	20	20	20	20
36.	Puducherry	50	75	35	40
Total		17,31,850	17,45,580	15,41,895	14,82,375

Source: NAEB, MoEF&CC, GoI



Year					
2014-15	2015-16	2016-17	2017-18	2018-19	2019-20
3,99,600	1,48,730	2,08,591	2,38,390	2,26,180	2,33,800
5,780	210	210	210	30	35
4,060	40	40	40	45	50
22,800	22,790	30,330	67,860	40,000	23,600
60,000	50,410	60,581	93,440	1,16,760	94,700
692	850	848	1,270	1,560	1,540
305	150	154	175	50	30
1,45,400	1,39,280	1,39,283	1,60,405	1,87,250	1,82,100
40,000	57,200	35,798	41,210	33,700	26,800
20,000	18,000	20,728	15,000	13,000	11,250
13,300	8,700	8,454	9,340	9,760	10,830
22,300	3,450	3,450	5,370	15,570	24,050
47,000	66,090	41,000	58,000	40,600	70,720
7,530	3,890	3,700	2,900	18,890	18,240
1,33,000	1,10,700	7,499	50,230	1,23,077	59,000
1,63,450	1,22,880	91,413	1,20,315	69,410	49,600
14,380	14,600	11,547	10,770	9,770	7,900
4,110	4,850	1,991	7,170	2,850	3,260
5,840	4,070	4,070	4,070	4,455	4,440
3,840	1,050	1,050	1,050	1,155	1,270
1,82,270	1,07,290	1,07,287	1,62,410	2,82,755	3,50,000
10,090	6,970	2,769	6,505	4,100	5,590
53,155	57,100	57,103	42,000	33,194	66,580
6,160	4,810	4,095	3,410	3,225	1,860
55,071	70,240	70,235	61,865	56,890	43,290
NA	59,97	80,446	1,58,520	2,76,870	4,26,900
20,900	16,280	16,280	11,675	8,360	4,130
16,000	16,000	17,268	12,000	19,570	21,080
68,180	47,73	57,907	1,00,705	1,15,830	1,13,490
8,130	750	3,910	7,490	7,805	9,370
1,100	1,120	1,116	1,205	1,320	1,150
155	180	126	155	170	190
220	200	200	215	240	240
10	10	10	5	10	10
25	20	25	10	10	10
70	40	41	65	150	140
15,34,923	11,66,651	10,89,555	14,55,450	17,24,611	18,67,245



Table 5.14. Achievement for area (ha) for afforestation under Twenty Point Programme

S. No.	State/UT	Year							
		2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18
1.	Andhra Pradesh	3,83,927	4,07,700	4,07,252	3,72,962	2,08,591	1,33,618	2,74,635	2,29,409
2.	Arunachal Pradesh	6,150	10,817	378	213	42	8	0	0
3.	Assam	3,509	43	8,642	0	0	0	0	0
4.	Bihar	15,378	22,796	30,330	69,224	92,956	41,419	43,279	35,114
5.	Chhattisgarh	58,458	50,412	83,789	60,581	86,211	1,33,531	98,697	26,037
6.	Delhi	1,496	1,239	1,409	848	1,468	1,498	1,299	0
7.	Goa	488	465	471	154	346	21	38	15
8.	Gujarat	1,27,149	1,40,513	1,68,470	1,39,283	1,91,118	1,50,822	1,68,733	1,77,148
9.	Haryana	79,883	64,401	68,026	57,197	35,798	30,643	25,474	17,000
10.	Himachal Pradesh	24,710	31,938	28,902	25,595	20,728	11,449	10,052	9,200
11.	Jammu & Kashmir	15,453	10,466	13,988	8,704	8,454	10,863	7,307	11,371
12.	Jharkhand	21,914	34,214	10,746	3,450	7,296	NA	21,005	22,729
13.	Karnataka	94,376	66,091	80,385	82,925	52,805	69,093	61,686	62,108
14.	Kerala	8,463	3,971	10,154	3,891	3,700	1,117	46,695	1,923
15.	Madhya Pradesh	1,68,678	1,10,702	1,19,580	1,35,199	7,499	7,994	99,197	0
16.	Maharashtra	1,78,498	1,22,880	1,88,968	2,13,750	91,413	55,793	42,100	37,393
17.	Manipur	10,532	17,997	14,595	17,916	11,547	2,855	12,247	6,442
18.	Meghalaya	654	6,840	4,852	16,330	1,991	3,186	0	2,743
19.	Mizoram	7,197	6,240	4,071	5,253	0	NA	4,050	4,020
20.	Nagaland	4,790	1,047	5,681	10,140	0	NA	0	0
21.	Odisha	2,42,868	1,96,671	1,07,287	1,17,535	1,98,891	1,70,808	4,01,452	3,82,364
22.	Punjab	13,711	6,965	9,569	13,816	2,769	2,934	5,469	6,845
23.	Rajasthan	96,356	71,301	57,103	67,722	70,423	70,893	66,815	43,873
24.	Sikkim	2,734	6,739	9,019	4,805	4,095	1,325	3,376	365
25.	Tamil Nadu	95,499	75,492	74,844	70,235	70,235	45,129	39,790	33,147
26.	Telangana	NA	NA	NA	NA	80,446	2,36,598	4,38,059	4,89,673
27.	Tripura	16,650	25,572	20,451	16,280	16,403	2,339	4,070	4,858
28.	Uttar Pradesh	20,044	23,505	22,024	21,242	17,268	17,846	18,251	21,397
29.	Uttarakhand	84,516	83,233	67,057	78,339	57,907	1,65,867	92,128	51,513
30.	West Bengal	14,286	753	9,362	3,910	6,396	12,169	2,722	10,653
31.	Andaman and Nicobar Islands	1,377	1,583	1,116	1,128	1,184	1,300	1,125	713
32.	Chandigarh	272	316	219	175	126	167	178	176
33.	Dadra & Nagar Haveli	200	269	200	200	220	225	220	200
34.	Daman & Diu	10	14	8	0	11	0	10	15
35.	Lakshadweep	27	22	22	28	0	0	0	0
36.	Puducherry	33	82	96	41	75	86	250	63
Total		18,00,286	16,03,289	16,29,066	16,19,071	13,48,412	13,81,596	19,90,409	16,88,507

Source: NAEF, MoEF&CC, Govt



Table 5.15. Target of number of seedlings (lakh) for plantation under Twenty Point Programme

S. No.	State/UT	Year									
		2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20
1.	Andhra Pradesh	2,210.00	2,028.00	2,505.10	2,520.44	2,597.40	966.75	1,355.84	1,549.54	1,470.17	1,519.70
2.	Arunachal Pradesh	65.00	42.25	70.20	37.44	37.57	1.37	1.37	1.37	0.20	0.23
3.	Assam	78.00	61.75	36.73	7.67	26.39	0.26	0.26	0.26	0.29	0.33
4.	Bihar	175.50	162.50	147.55	142.09	148.20	148.14	197.15	441.09	260.00	153.40
5.	Chhattisgarh	385.00	507.00	327.60	417.00	417.30	327.67	393.78	607.36	758.94	615.55
6.	Delhi	0.65	0.68	7.48	7.93	4.50	5.53	5.51	8.26	10.14	10.01
7.	Goa	7.50	3.25	2.93	1.46	4.77	0.98	1.00	1.14	0.33	0.20
8.	Gujarat	812.50	893.75	913.25	809.38	945.10	905.32	905.34	1,042.63	1,217.13	1,183.65
9.	Haryana	162.50	156.00	370.50	421.79	300.00	371.80	232.69	267.87	219.05	174.20
10.	Himachal Pradesh	156.00	130.00	187.85	165.49	130.00	117.00	134.73	97.50	84.50	73.13
11.	Jammu & Kashmir	182.00	182.00	47.13	58.83	86.45	56.55	54.95	60.71	63.44	70.40
12.	Jharkhand	325.00	195.00	300.30	144.30	144.95	22.43	22.43	34.91	101.21	156.33
13.	Karnataka	650.00	650.00	435.50	518.44	443.00	429.59	266.50	377.00	263.90	459.68
14.	Kerala	58.50	58.50	25.68	48.95	48.95	25.29	24.05	18.85	122.79	118.56
15.	Madhya Pradesh	1,755.00	1,365.00	719.55	834.41	864.50	719.55	48.74	326.50	800.00	383.50
16.	Maharashtra	1,137.50	1,170.00	798.85	1,025.57	1,062.43	798.72	594.18	782.05	451.17	322.40
17.	Manipur	65.00	65.00	117.00	74.75	93.47	94.90	75.06	70.01	63.51	51.35
18.	Meghalaya	19.50	16.25	44.53	25.61	26.72	31.53	12.94	46.61	18.53	21.19
19.	Mizoram	39.00	35.75	40.63	35.23	37.96	26.46	26.46	26.46	28.96	28.86
20.	Nagaland	39.00	32.50	68.90	12.68	24.96	6.83	6.83	6.83	7.51	8.26
21.	Odisha	975.00	1,397.50	1,126.45	650.00	1,184.76	697.39	697.37	1,055.67	1,837.91	2,275.00
22.	Punjab	45.50	52.00	45.18	63.05	65.59	45.31	18.00	42.28	26.65	36.34
23.	Rajasthan	176.00	300.00	240.00	370.50	345.50	371.15	371.17	273.00	188.00	432.77
24.	Sikkim	32.50	39.00	48.43	40.04	40.04	31.27	26.62	22.17	20.96	12.09
25.	Tamil Nadu	284.00	770.25	329.55	382.01	357.96	456.56	456.53	402.12	369.79	281.39
26.	Telangana	NA	NA	NA	NA	NA	389.81	522.90	1,030.38	1,799.66	2,774.85
27.	Tripura	78.00	84.50	176.80	132.93	135.85	105.82	105.82	75.89	54.34	26.85
28.	Uttar Pradesh	140.00	130.00	149.50	129.48	104.00	104.00	112.24	78.00	127.21	137.02
29.	Uttarakhand	650.00	585.00	531.05	495.50	443.17	310.25	376.40	654.58	752.90	737.69
30.	West Bengal	143.00	130.00	104.00	51.61	52.85	4.88	25.42	48.69	50.73	60.91
31.	Andaman and Nicobar Islands	7.15	8.45	8.94	7.93	7.00	7.28	7.25	7.83	8.58	7.48
32.	Chandigarh	1.95	1.95	1.63	0.65	1.01	1.17	0.82	1.01	1.11	1.24
33.	Dadra & Nagar Haveli	1.30	1.63	1.63	1.43	1.43	1.30	1.30	1.40	1.56	1.56
34.	Daman & Diu	0.20	0.20	0.10	0.07	0.07	0.07	0.07	0.03	0.07	0.07
35.	Lakshadweep	0.13	0.13	0.13	0.13	0.16	0.13	0.16	0.07	0.07	0.07
36.	Puducherry	0.33	0.49	0.23	0.26	0.46	0.26	0.27	0.42	0.98	0.91
	Total	10,858.21	11,256.28	9,930.88	9,635.05	10,184.47	7,583.32	7,082.15	9,460.49	11,182.29	12,137.17

Source: NAEF, MoEF&CC, GoI



Table 5.16. Achievement of number of seedlings (lakh) for plantation under Twenty Point Programme

S. No.	State/UT	Year							
		2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18
1.	Andhra Pradesh	2,503.00	3,099.00	3,450.09	3,050.71	2,212.73	1,839.48	1,820.43	2,115.50
2.	Arunachal Pradesh	1.23	2.26	1.98	1.36	0.27	0.06	0.00	0.00
3.	Assam	90.00	44.40	28.93	0.00	0.00	0.00	0.00	0.00
4.	Bihar	100.00	148.17	197.14	449.95	604.21	269.22	281.32	228.24
5.	Chhattisgarh	674.55	400.71	643.54	577.79	696.00	98.70	787.00	598.74
6.	Delhi	12.30	9.57	9.16	5.51	4.50	9.74	8.72	0.00
7.	Goa	6.97	6.83	7.07	2.60	4.50	0.33	0.32	0.12
8.	Gujarat	2,221.93	2,219.69	2,011.53	995.82	1,820.39	1,689.92	1,841.46	1,177.56
9.	Haryana	512.00	501.39	501.00	444.72	279.27	238.50	191.64	165.83
10.	Himachal Pradesh	160.61	207.60	187.87	166.37	135.00	121.68	106.99	91.82
11.	Jammu & Kashmir	74.84	75.47	56.44	58.77	59.61	76.60	41.34	59.63
12.	Jharkhand	248.13	184.19	184.37	54.72	74.26	NA	192.10	159.95
13.	Karnataka	827.89	598.95	691.18	777.17	519.29	435.38	547.00	465.08
14.	Kerala	91.84	90.93	162.64	28.61	10.53	17.30	29.48	34.41
15.	Madhya Pradesh	1,096.41	7,195.60	777.27	878.79	866.87	63.94	855.37	0.00
16.	Maharashtra	1,381.57	981.16	1,575.16	1,770.58	863.12	557.50	566.62	0.00
17.	Manipur	74.14	121.18	145.76	116.55	92.02	62.06	78.09	64.61
18.	Meghalaya	23.78	45.19	39.48	1.04	45.04	33.65	0.00	13.08
19.	Mizoram	27.90	10.48	15.13	32.84	0.00	NA	26.46	24.81
20.	Nagaland	47.89	10.13	64.17	65.63	0.00	NA	0.00	0.00
21.	Odisha	1,244.44	600.01	533.58	771.81	1,242.17	960.03	874.32	312.00
22.	Punjab	134.86	49.43	99.24	110.53	18.00	19.07	35.35	44.50
23.	Rajasthan	252.64	350.95	275.85	473.13	451.96	461.14	443.57	300.67
24.	Sikkim	21.94	45.68	60.27	31.93	23.07	16.31	22.99	2.37
25.	Tamil Nadu	300.08	362.70	296.90	456.53	456.53	293.34	258.63	215.46
26.	Telangana	NA	NA	NA	NA	445.79	1,378.31	3,680.62	3,407.94
27.	Tripura	98.00	170.86	129.88	105.83	106.19	15.38	433.31	31.58
28.	Uttar Pradesh	161.33	241.58	187.96	212.17	175.09	157.76	166.58	189.07
29.	Uttarakhand	766.86	663.55	524.76	599.41	919.73	587.03	711.93	589.92
30.	West Bengal	287.27	71.52	162.66	50.75	100.18	324.19	27.51	429.69
31.	Andaman and Nicobar Islands	7.26	9.83	7.06	7.23	6.73	7.13	7.25	1.62
32.	Chandigarh	1.94	1.94	0.87	0.70	0.82	1.33	1.38	1.23
33.	Dadra & Nagar Haveli	3.96	3.78	3.28	3.33	3.52	3.03	3.83	4.55
34.	Daman & Diu	0.10	0.20	0.25	0.39	0.16	0.00	0.19	0.62
35.	Lakshadweep	0.22	0.20	0.24	0.21	0.00	0.00	0.00	0.00
36.	Puducherry	0.61	1.57	2.04	0.45	1.46	0.33	0.87	0.41
Total		13,458.49	18,526.70	13,034.75	12,303.93	12,239.01	9,738.44	14,042.67	10,731.01

Source: NAEB, MoEF&CC, GoI



Table 5.17. NAP - Advance work area (ha) approved in the selected States/UTs

S. No.	State/UT	Year									
		2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20
1.	Andhra Pradesh	2,341	5,453	0	1,605	810	913	445	1,487	1,480	0
2.	Arunachal Pradesh	3,125	0	0	0	1,000	0	0	1,010	0	0
3.	Assam	0	0	0	3,675	0	0	0	0	373	0
4.	Bihar	0	5,647	2,415	3,885	1,786	2,500	0	2,450	1,550	1,935
5.	Chhattisgarh	1,177	8,370	2,934	5,906	4,699	4,475	0	2,983	2,000	3,500
6.	Goa	0	0	0	0	0	0	0	0	0	0
7.	Gujarat	1,760	11,150	2,000	2,735	5,284	2,755	0	0	0	0
8.	Haryana	1,100	3,145	1,519	3,035	1,900	2,195	0	0	0	0
9.	Himachal Pradesh	1,646	2,566	1,450	908	2,237	0	0	2,139	0	45
10.	Jammu & Kashmir	0	4,857	4,486	2,260	1,606	0	0	2,128	0	0
11.	Jharkhand	0	4,815	0	3,975	3,924	0	0	0	0	0
12.	Karnataka	0	9,523	1,880	3,070	2,900	2,580	0	2,095	6,085	0
13.	Kerala	666	3,913	1,000	1,620	1,478	0	0	0	0	0
14.	Madhya Pradesh	13,000	10,219	5,125	5,110	4,786	3,655	0	5,255	0	0
15.	Maharashtra	0	9,854	2,900	6,850	6,647	4,135	0	4,150	0	0
16.	Manipur	3,599	4,250	3,970	2,530	1,835	0	0	1,733	0	0
17.	Meghalaya	4,800	3,930	3,000	3,000	0	0	0	0	0	0
18.	Mizoram	2,370	2,600	2,500	3,000	3,135	905	0	1,750	1,960	0
19.	Nagaland	2,000	8,000	2,910	4,000	2,130	0	0	2,085	0	6,100
20.	Odisha	0	7,410	1,975	4,910	6,535	1,980	0	4,565	3,188	6,335
21.	Punjab	0	625	0	1,347	1,628	0	0	0	0	0
22.	Rajasthan	400	3,300	1,250	2,325	2,550	800	0	1,400	0	0
23.	Sikkim	1,549	3,730	650	1,095	1,851	0	1,914	0	0	0
24.	Tamil Nadu	0	2,984	1,800	2,094	750	1,500	0	0	0	0
25.	Telangana	0	0	0	0	795	0	0	0	0	0
26.	Tripura	6,271	6,220	4,435	4,547	1,796	2,476	0	1,835	0	1,809
27.	Uttar Pradesh	5,167	12,435	4,270	4,890	8,548	2,985	0	0	0	0
28.	Uttarakhand	3,340	5,058	2,350	1,241	1,330	2,132	0	2,782	0	0
29.	West Bengal	2,815	2,360	710	970	2,495	0	0	0	0	0
	Total	57,126	1,42,414	55,529	80,583	74,435	35,986	2,359	39,847	16,636	19,724

Source: NAEF, MoEF&CC, GoI



Table 5.18. NAP - Amount released (₹ Cr.) in the selected States/UTs

S. No.	State/UT	Year									
		2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20
1.	Andhra Pradesh	10.48	15.15	2.71	3.75	4.56	0.87	1.33	3.36	6.38	0.00
2.	Arunachal Pradesh	5.52	0.00	1.66	0.00	0.15	0.00	0.00	0.86	0.00	0.00
3.	Assam	6.08	7.95	1.47	2.99	0.00	2.56	0.00	0.00	0.58	0.00
4.	Bihar	5.48	6.92	3.40	12.84	7.00	5.01	2.18	4.23	0.00	1.18
5.	Chhattisgarh	33.25	24.74	13.33	21.38	20.00	10.20	4.92	10.86	7.82	5.71
6.	Goa	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
7.	Gujarat	29.43	27.00	14.30	11.68	10.50	8.54	4.36	0.00	0.00	0.00
8.	Haryana	24.20	12.28	6.41	17.94	11.00	0.72	3.50	2.71	0.00	0.00
9.	Himachal Pradesh	3.45	3.50	3.62	2.61	0.73	0.00	0.00	1.73	2.92	0.52
10.	Jammu & Kashmir	3.99	6.89	3.37	8.11	3.59	0.00	0.00	7.20	0.00	0.00
11.	Jharkhand	8.73	10.42	4.69	9.02	8.60	0.00	0.00	0.00	0.00	0.00
12.	Karnataka	8.12	12.92	6.81	9.26	21.35	1.05	7.33	3.24	10.99	0.00
13.	Kerala	7.54	2.04	11.30	6.99	2.82	1.02	0.00	0.00	0.00	0.00
14.	Madhya Pradesh	30.39	21.43	9.15	22.10	21.00	9.45	4.00	8.74	7.78	0.00
15.	Maharashtra	16.17	28.51	28.87	32.33	35.00	14.90	4.76	6.73	15.33	0.00
16.	Manipur	10.37	12.74	9.46	12.12	8.00	3.67	1.21	3.20	4.38	0.00
17.	Meghalaya	8.79	4.31	9.10	4.50	3.61	1.35	0.00	1.65	0.74	0.00
18.	Mizoram	12.21	13.44	8.78	11.94	15.00	10.17	6.74	5.80	7.79	0.00
19.	Nagaland	10.11	11.69	10.88	9.82	11.00	0.00	5.21	5.85	6.41	2.35
20.	Odisha	11.20	7.30	3.38	5.36	17.92	9.49	4.62	3.49	11.36	8.45
21.	Punjab	0.00	0.46	0.76	2.00	1.87	0.00	0.00	0.00	0.00	0.00
22.	Rajasthan	4.94	6.23	4.14	2.81	3.35	0.75	0.00	1.40	1.95	0.00
23.	Sikkim	11.99	11.18	5.42	3.77	6.00	1.52	5.09	0.00	5.85	0.00
24.	Tamil Nadu	7.21	3.08	2.78	3.21	4.25	1.42	1.56	0.00	2.07	0.00
25.	Telangana	0.00	0.00	0.00	0.00	2.03	0.00	0.00	0.00	0.00	0.00
26.	Tripura	10.43	13.69	3.50	11.99	9.17	5.73	0.00	4.94	0.00	3.76
27.	Uttar Pradesh	21.33	26.23	15.27	20.15	12.00	2.68	2.55	0.67	0.32	0.00
28.	Uttarakhand	4.47	6.61	6.25	6.01	2.50	3.05	0.00	3.36	2.58	0.00
29.	West Bengal	4.12	6.29	2.57	2.96	0.78	0.00	0.00	0.00	0.00	0.00
	Total	309.99	303.00	193.37	257.62	243.78	94.16	59.35	80.00	95.38	21.98

Source: NAEB, MoEF&CC, GoI



Table 5.19. NAP - Number of new JFMCs involved in the selected States/UTs

S. No.	State/UT	Year									
		2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20
1.	Andhra Pradesh	NA	NA	NA	NA	0	0	0	0	0	0
2.	Assam	0	0	0	0	1,140	1,140	NA	NA	NA	NA
3.	Delhi	0	0	0	0	NA	NA	NA	NA	NA	NA
4.	Haryana	0	0	0	0	NA	NA	NA	NA	NA	NA
5.	Himachal Pradesh	0	0	0	0	NA	NA	NA	NA	NA	NA
6.	Jammu & Kashmir	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
7.	Karnataka	1,335	1,335	1,335	1,335	NA	NA	NA	NA	NA	NA
8.	Kerala	446	446	446	446	446	446	NA	NA	NA	NA
9.	Maharashtra	175	300	107	218	NA	NA	NA	NA	NA	NA
10.	Manipur	0	0	0	0	0	NA	NA	NA	NA	NA
11.	Mizoram	0	0	0	0	NA	NA	NA	NA	NA	NA
12.	Nagaland	771	791	791	791	170	112	100	67	236	271
13.	Odisha	124	50	236	128	NA	NA	NA	NA	NA	NA
14.	Tamil Nadu	121	NA	NA	NA	NA	NA	NA	NA	NA	NA
15.	Telangana	NA	NA	NA	1,086	1,333	NA	NA	NA	NA	NA
16.	Tripura	819	127	54	1,000	1,005	1,005	1,005	1,005	1,005	1,052
17.	Uttarakhand	NA	NA	NA	NA	192	251	NA	NA	189	NA
18.	Andaman and Nicobar Islands	NA	NA	NA	NA	0	0	0	0	0	0
19.	Dadra & Nagar Haveli	16	16	16	16	0	0	0	0	0	0
20.	Puducherry	0	0	0	0	0	0	0	0	0	0

Source: SFDs



Table 5.20. Details of funds released (₹ lakh) under CAMPA

S. No.	State/UT	Year									
		2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20
1.	Andhra Pradesh	120.74	118.57	119.60	92.00	135.00	85.00	89.00	97.00	104.47	322.97
2.	Arunachal Pradesh	34.16	41.19	11.76	11.76	47.50	62.00	150.00	0.00	354.15	0.00
3.	Assam	10.45	0.00	15.06	13.00	0.00	0.00	30.00	70.00	45.84	55.89
4.	Bihar	8.67	8.04	8.47	0.00	19.80	34.14	33.00	30.31	46.62	140.18
5.	Chhattisgarh	134.11	99.54	114.38	110.00	193.00	239.00	280.00	0.00	0.00	848.51
6.	Delhi	1.40	0.00	0.00	4.52	4.00	3.91	4.00	0.00	0.00	0.00
7.	Goa	10.25	0.00	0.00	23.10	0.00	0.00	0.00	0.00	0.00	17.95
8.	Gujarat	29.16	26.30	32.41	28.00	65.00	33.00	45.00	27.00	212.66	0.00
9.	Haryana	18.89	0.00	16.45	35.50	23.00	64.00	18.00	80.00	144.20	96.84
10.	Himachal Pradesh	42.17	57.13	52.40	53.50	96.00	76.98	109.62	120.00	132.52	145.82
11.	Jammu & Kashmir	0.00	0.00	23.78	18.00	34.00	31.00	102.00	69.00	0.00	0.00
12.	Jharkhand	103.16	62.50	47.98	145.48	175.00	141.00	149.00	234.00	286.25	399.29
13.	Karnataka	50.92	41.57	43.72	34.50	65.00	60.00	85.12	86.00	101.40	146.21
14.	Kerala	0.00	0.00	1.37	4.54	0.00	0.00	0.00	8.00	14.61	0.00
15.	Madhya Pradesh	50.97	53.52	0.00	61.50	89.50	213.00	140.00	200.00	268.76	506.38
16.	Maharashtra	85.49	82.63	78.21	78.00	148.00	155.00	205.00	199.00	225.00	499.38
17.	Manipur	1.34	0.00	1.91	6.47	8.27	25.00	15.00	29.50	24.85	30.36
18.	Meghalaya	0.10	0.00	0.00	0.07	0.00	16.56	0.00	7.00	0.00	0.00
19.	Mizoram	0.00	0.00	1.07	5.22	6.80	6.73	6.75	6.85	8.30	19.23
20.	Nagaland	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
21.	Odisha	140.18	166.02	215.89	0.00	180.00	322.00	426.00	509.00	554.00	592.52
22.	Punjab	26.52	22.08	19.31	21.50	41.00	49.00	49.00	64.00	79.20	64.72
23.	Rajasthan	42.07	31.89	37.43	34.50	74.0-0	48.00	140.00	179.00	182.03	267.69
24.	Sikkim	10.23	9.04	8.75	9.50	13.70	11.00	9.00	0.00	0.00	54.38
25.	Tamil Nadu	1.70	0.00	2.53	0.00	0.00	2.20	9.00	12.68	7.00	0.00
26.	Telangana	0.00	0.00	0.00	0.00	35.00	76.00	117.00	127.00	237.38	510.00
27.	Tripura	2.58	0.00	2.28	3.50	8.00	11.00	12.00	7.10	16.70	16.74
28.	Uttar Pradesh	0.00	35.35	30.48	0.00	44.91	177.00	118.00	144.00	150.60	285.68
29.	Uttarakhand	82.75	0.00	97.05	93.23	68.00	164.00	170.71	96.00	303.00	218.00
30.	West Bengal	6.28	4.84	0.00	0.00	0.00	0.00	21.00	0.00	21.22	70.07
31.	Andaman and Nicobar Islands	0.79	0.00	0.58	0.00	2.30	1.00	0.00	1.33	1.56	0.00
32.	Chandigarh	0.13	0.00	0.00	0.10	0.20	2.12	1.00	1.13	1.27	1.87
33.	Dadra & Nagar Haveli	0.00	0.15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
34.	Daman & Diu	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
35.	Lakshadweep	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
36.	Puducherry	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total		1,015.21	860.36	982.87	887.49	1,502.98	2,109.64	2,534.20	2,404.90	3,523.59	5,310.68

Source: MoEF&CC, Gol





Table 5.21. Plan outlay (₹ lakh) of the selected States/UTs - Ecology and Environment

S. No.	State/UT	Year			
		2010-11	2011-12	2012-13	2013-14
1.	Andhra Pradesh	40.00	40.00	40.00	40.00
2.	Chhattisgarh	NA	NA	NA	NA
3.	Delhi	0.00	0.00	0.00	0.00
4.	Jammu & Kashmir	NA	NA	NA	NA
5.	Karnataka	1,000.00	1,180.00	1,323.00	1,300.00
6.	Manipur	858.07	1,000.02	1,146.00	1,100.00
7.	Andaman and Nicobar Islands	NA	NA	13.00	6.50
8.	Dadra & Nagar Haveli	8.98	2.18	0.00	0.00
9.	Puducherry	0.00	0.00	0.00	0.00

Source: SFDs

Table 5.22. Plan outlay (₹ lakh) of the selected States/UTs - Forests and Wildlife

S. No.	State/UT	Year			
		2010-11	2011-12	2012-13	2013-14
1.	Andhra Pradesh	NA	NA	NA	NA
2.	Arunachal Pradesh	1,153.90	1,254.00	628.08	1,112.53
3.	Assam	NA	NA	NA	NA
4.	Delhi	0.00	0.00	0.00	0.00
5.	Goa	2,442.95	5,318.00	3,064.62	3,241.28
6.	Gujarat	NA	NA	NA	NA
7.	Jammu & Kashmir	NA	NA	NA	NA
8.	Karnataka	15,602.10	15,497.87	17,928.10	31,543.71
9.	Kerala	NA	NA	NA	NA
10.	Maharashtra	24,372.75	40,483.70	44,891.79	44,173.84
11.	Manipur	3,541.23	5,157.53	5,795.12	5,905.74
12.	Mizoram	5,530.00	2,976.22	5,940.33	5,066.00
13.	Nagaland	2,786.00	4,019.00	4,347.00	3,872.00
14.	Telangana	NA	NA	NA	NA
15.	Andaman and Nicobar Islands	2,461.00	3,127.00	4,071.00	4,078.56
16.	Dadra & Nagar Haveli	504.60	572.35	1,067.92	1,762.08
17.	Puducherry	200.00	200.00	188.00	189.00

Source: SFDs



Year					
2014-15	2015-16	2016-17	2017-18	2018-19	2019-20
40.00	40.00	40.00	40.00	41.44	20.00
1,100.00	1,253.92	1,300.00	1,250.00	1,322.00	1,454.20
NA	NA	NA	NA	NA	NA
82.50	82.50	82.50	82.50	61.43	132.80
NA	NA	NA	NA	NA	NA
1,100.00	NA	NA	NA	NA	NA
3.00	45.20	5.60	25.00	2,550.00	5.00
0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00

Year					
2014-15	2015-16	2016-17	2017-18	2018-19	2019-20
11,023	10,000	9,400	9,700	11,329	32,297
1,112.53	1,978.64	2,125.35	4,838.71	75,840.20	3,070.15
NA	NA	1,830.58	1,320.80	2,539.29	2,443.97
NA	NA	NA	NA	NA	NA
5,707.46	8,591.29	8,418.88	7,377.35	9,377.03	11,664.59
98,294.00	1,09,014.00	1,26,833.00	1,19,521.00	1,26,026.00	1,41,039.00
1,104.90	1,215.16	1,242.81	1,495.27	1,184.8	877.71
NA	NA	NA	NA	NA	NA
14,381.00	14,426.00	23,902.00	18,803.00	17,169.00	NA
72,344.00	1,36,660.00	1,62,287.00	1,67,446.00	2,81,183.00	2,03,365.00
7,604.45	NA	NA	NA	NA	NA
7,873.84	3,554.16	NA	NA	NA	NA
NA	NA	NA	NA	NA	NA
57,934.05	62,426.40	26,529.91	32,510.55	34,199.83	78,441.74
4,561.33	5,797.96	6,607.48	25,317.19	27,228.68	28,526.65
0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00



Table 5.23. Forest Offences in the selected States/UTs - Indian Forest Act 1927

S. No.	State/UT	Year									
		2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20
1.	Andhra Pradesh	NA	NA	NA	NA	0	0	0	0	0	0
2.	Chhattisgarh	NA	NA	NA	NA	22,921	21,902	24,711	21,672	22,196	23,258
3.	Delhi	0	0	0	0	NA	NA	NA	NA	NA	NA
4.	Goa	21	21	17	15	3	7	10	23	19	11
5.	Gujarat	NA	NA	NA	NA	17,057	10,944	7,413	7,204	6,854	6,597
6.	Haryana	NA	NA	NA	NA	7,323	7,993	6,649	6,827	7,590	NA
7.	Karnataka	54,290	59,274	80,084	76,352	79,244	79,180	81,199	79,484	73,839	68,744
8.	Maharashtra	19,145	19,304	19,310	15,679	16,193	15,470	14,971	16,774	13,815	13,510
9.	Punjab	4,080	2,187	3,325	4,850	4,825	4,614	4,614	4,614	4,614	4,614
10.	Tamil Nadu	29,055	NA	NA	NA	NA	NA	NA	NA	NA	NA
11.	Tripura	NA	NA	NA	NA	807	803	708	803	1,395	1,535
12.	Uttarakhand	NA	NA	NA	NA	NA	NA	NA	2,229	3,276	2,388
13.	West Bengal	NA	NA	NA	NA	11,898	11,278	10,074	10,191	8,585	9,433
14.	Andaman and Nicobar Islands	379	268	238	279	301	270	286	204	245	424
15.	Dadra & Nagar Haveli	48	73	58	80	43	28	20	10	18	3
16.	Puducherry	7	4	NA	NA	1	1	1	1	1	2

Source: SFDS



Table 5.24. Wildlife Offences in the selected States/UTs - Wildlife Act 1972

S. No.	State/UT	Year									
		2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20
1.	Arunachal Pradesh	1	NA	NA	NA	1	NA	NA	18	12	6
2.	Assam	NA	NA	NA	NA	NA	9	5	18	13	20
3.	Goa	26	27	35	37	20	21	12	6	10	10
4.	Gujarat	NA	NA	NA	NA	156	170	174	182	399	282
5.	Haryana	NA	NA	NA	NA	425	378	389	302	298	361
6.	Kerala	1,905	1,985	2,005	2,233	2,460	2,710	2,827	3,050	3,288	NA
7.	Maharashtra	4,137	2,388	2,482	1,871	3,311	2,561	1,999	2,628	2,261	3,040
8.	Meghalaya	NA	NA	NA	NA	NA	1	1	1	4	7
9.	Mizoram	17	44	37	17	36	11	NA	NA	NA	NA
10.	Punjab	67	51	7	20	20	15	15	15	15	15
11.	Sikkim	2	NA	NA	NA	NA	NA	NA	NA	NA	NA
12.	Tamil Nadu	709	NA	NA	NA	718	1,043	910	937	926	878
13.	Telangana	NA	NA	NA	NA	114	101	77	72	58	101
14.	Tripura	NA	NA	NA	NA	4	1	0	1	3	0
15.	Uttarakhand	NA	NA	NA	NA	NA	NA	NA	231	202	256
16.	West Bengal	NA	NA	NA	NA	NA	571	1,997	643	753	1,528
17.	Andaman and Nicobar Islands	172	174	110	112	125	126	155	122	133	82
18.	Dadra & Nagar Haveli	NA	NA	NA	3	0	0	10	7	3	3
19.	Daman & Diu	NA	NA	1	NA	NA	NA	NA	4	NA	NA
20.	Puducherry	NA	NA	9	NA	1	2	1	1	1	1

Source: SFDs



Table 5.25. Forest Offences in the selected States/UTs - Other State Forest Act

S. No.	State/UT	Year									
		2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20
1.	Andhra Pradesh	NA	NA	NA	NA	NA	19,072	18,390	18,090	16,598	10,812
2.	Assam	NA	NA	NA	NA	NA	NA	NA	NA	NA	3,306
3.	Delhi	0	0	0	0	NA	NA	NA	NA	NA	NA
4.	Goa	237	238	280	246	74	76	89	111	109	97
5.	Jammu & Kashmir	1,54,537	1,39,107	1,42,004	1,43,462	2,929	2,343	2,796	2,372	1,939	3,697
6.	Karnataka	NA	NA	NA	NA	79,244	79,180	81,199	79,484	73,839	68,744
7.	Kerala	3,933	3,967	3,998	4,192	4,349	4,468	4,539	4,661	4,811	NA
8.	Odisha	62,777	64,942	60,072	60,299	NA	NA	NA	NA	NA	NA
9.	Tamil Nadu	6,171	NA	NA	NA	29,745	32,124	22,274	22,679	41,053	22,085
10.	Telangana	NA	NA	NA	NA	21,360	16,017	11,269	14,303	14,614	10,971
11.	Tripura	957	157	315	832	0	0	0	0	0	0
12.	Uttarakhand	NA	NA	NA	NA	NA	NA	NA	1,031	695	675
13.	Andaman and Nicobar Islands	NA	NA	NA	NA	0	0	0	0	0	0
14.	Dadra & Nagar Haveli	NA	NA	NA	NA	9	18	17	16	9	11
15.	Daman & Diu	NA	NA	NA	NA	NA	NA	NA	4	NA	NA
16.	Puducherry	3	NA	NA	6	0	0	0	0	0	0

Source: SFDs







06



SILVICULTURE

Silviculture deals with the theory and practice of growing tree crops, and therefore is an important branch of forestry science to achieve the goal of the *National Forest Policy* that is to attain one-third of land area of the country under forest and tree cover. Maintenance of Seed Production Areas (SPAs), Seed Orchards, Nurseries is essential for the success of any afforestation program. A large number of SPAs, seed orchards (clonal as well as seedling), model nurseries, Vegetative Multiplication Gardens (VMGs) are being developed by the SFDs for various purposes such as production of quality planting stock for the afforestation and reforestation programmes.

SPA is 'a plus stand that is generally upgraded and opened by removal of undesirable trees and then cultured for early and abundant seed production'. The purpose of an SPA is to provide quality seeds of known origin from the best available phenotypes. Various specified management practices such as the removal of cut material, weeding, control of coppice growth, fertilization, stand demarcation, protection and record keeping are required for the maintenance of SPA to obtain the maximum amount of good quality seeds.

A plantation of selected clones or progenies isolated or managed to avoid or reduce pollination from outside sources and managed to produce seeds at frequent basis and in abundant quantity for easily harvested crops is Seed Orchards (*Feilberg and Soegaard 1975*). Since, a seed orchard is considered as the most common type of planted population and therefore the relevant tree improvement programs establish seed orchards to produce genetically improved seeds for practical purposes. Under the seed orchards, the seedling seed orchards (SSOs) and the clonal seed orchards (CSOs) are the most common methods of producing genetically improved seeds for forestry programs.

Typically, an SSO is established with 20 to 30 families from the best selection available and the number of offspring per family is determined by the number of trees required to meet the total seed demand for afforestation. A CSO is established with 20 to 60 clones from the best selection available and the number of trees required to meet the total seed demand for an afforestation programme determines the number of ramets per clone. Usually around 20 to 50 offspring per family and 50 to 100 ramets per clone are planted in a typical SSO and CSO, respectively.

The objective of a VMG is to provide juvenile stem cuttings from selected germplasm in hedge form near the mist



chamber for production of superior clonal planting stock. There are two possible approaches employed as (i) short-term through seeds with modest gain in productivity; and (ii) long – term through clones with greater genetic gain.

Vegetative reproduction (vegetative propagation, vegetative multiplication, vegetative cloning) is a form of asexual reproduction in plants and is a process by which new individuals grow without production of seeds or spores either naturally or by mechanical means. In India VMG's are set up for the species like *Eucalyptus*, *E. officinalis*, *G. arborea*, *T. indica*, bamboo etc.

The concept of Working Plans was introduced in the forestry sector of the country to manage the forests scientifically and systematically. These plans are prepared by Working Plan Divisions in the SFDs, at the Division level, generally for a period of 10 years after surveying, stock mapping, preparing inventories and mapping the existing status of each forest block in the division including blanks and have an important role for silviculture operations. The Plan gives prescriptions for the sustainable forest management of each area of forest including operations like aided natural regeneration, cultural operations, plantations, tree felling, etc. The *National Working Plan Code* is being implemented by MoEF&CC since 2014 which gives guidelines for preparing the Working Plans in a uniform format throughout the country.

Table 6.1. Number of locations of Seed Production Areas in the selected States/UTs

S. No.	State/UT	Year									
		2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20
1.	Andhra Pradesh	NA	NA	NA	NA	27	27	26	26	26	26
2.	Assam	4	4	4	4	NA	52	52	52	52	52
3.	Chhattisgarh	NA	NA	NA	25	18	18	18	18	18	18
4.	Delhi	0	0	0	0	NA	NA	NA	NA	NA	NA
5.	Goa	NA	NA	NA	NA	0	0	0	0	0	0
6.	Gujarat	NA	NA	NA	NA	14	14	14	14	14	14
7.	Haryana	NA	NA	NA	NA	4	4	4	4	4	4
8.	Karnataka	20	14	NA	NA	NA	NA	NA	NA	NA	NA
9.	Kerala	11	11	11	11	31	40	39	26	31	26
10.	Mizoram	3	NA	NA	NA	0	0	0	0	0	0
11.	Nagaland	NA	NA	NA	NA	15	15	15	15	16	15
12.	Odisha	NA	NA	NA	NA	5	5	6	3	3	11
13.	Telangana	NA	NA	NA	NA	9	9	9	9	9	9
14.	Tripura	NA	NA	NA	NA	0	0	0	0	7	4
15.	Uttar Pradesh	63	60	55	98	112	112	112	112	112	112
16.	West Bengal	NA	NA	NA	NA	0	0	0	0	0	0
17.	Andaman and Nicobar Islands	NA	NA	NA	NA	29	29	29	29	29	29
18.	Chandigarh	NA	NA	NA	NA	0	0	0	0	0	0
19.	Dadra & Nagar Haveli	0	0	0	0	0	0	0	0	0	0
20.	Puducherry	0	0	0	0	0	0	0	0	0	0

Source: SFDs



Table 6.2. Area (ha) under Seed Production Areas in the selected States/UTs

S. No.	State/UT	Year			
		2010-11	2011-12	2012-13	2013-14
1.	Andhra Pradesh	NA	NA	NA	NA
2.	Assam	403.00	403.00	403.00	403.00
3.	Chhattisgarh	NA	NA	NA	545.76
4.	Delhi	0.00	0.00	0.00	0.00
5.	Goa	NA	NA	NA	NA
6.	Gujarat	NA	NA	NA	NA
7.	Haryana	NA	NA	NA	NA
8.	Karnataka	89.00	84.00	NA	NA
9.	Kerala	0.00	713.25	713.25	713.25
10.	Mizoram	20.00	NA	NA	NA
11.	Nagaland	NA	NA	NA	NA
12.	Odisha	NA	NA	NA	NA
13.	Rajasthan	NA	475.00	905.00	NA
14.	Telangana	NA	NA	NA	NA
15.	Tripura	NA	NA	NA	NA
16.	Uttar Pradesh	301.50	592.25	538.50	1,004.70
17.	Uttarakhand	NA	NA	NA	NA
18.	West Bengal	NA	NA	NA	NA
19.	Andaman and Nicobar Islands	NA	NA	NA	NA
20.	Chandigarh	NA	NA	NA	NA
21.	Dadar & Nagar Haveli	0.00	0.00	0.00	0.00
22.	Puducherry	0.00	0.00	0.00	0.00

Source: SFDs





Year					
2014-15	2015-16	2016-17	2017-18	2018-19	2019-20
464.60	467.70	464.10	464.10	464.10	464.10
NA	257.00	257.00	257.00	257.00	257.00
500.86	500.86	500.86	500.86	500.86	500.86
NA	NA	NA	NA	NA	NA
0.00	0.00	0.00	0.00	0.00	0.00
170.00	170.00	170.00	170.00	170.00	170.00
2.50	2.50	2.50	2.50	2.50	2.50
NA	NA	NA	NA	NA	NA
185.32	210.55	115.20	203.55	121.80	120.32
0.00	0.00	0.00	0.00	0.00	0.00
4,000.00	2,100.00	8,000.00	4,100.00	4,000.00	4,215.00
85.16	78.66	77.16	4.16	4.16	31.46
NA	NA	NA	NA	NA	NA
264.77	264.77	264.77	264.77	264.77	264.77
0.00	0.00	0.00	0.00	12.50	4.00
2,775.98	2,775.98	2,775.98	2,775.98	2,775.98	2,775.98
130.50	130.50	130.50	130.50	130.50	130.50
0.00	0.00	0.00	0.00	0.00	0.00
79.10	79.10	79.10	79.10	79.10	79.10
0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00





Table 6.3. Quantity (kg) of seeds produced from Seed Production Areas in the selected States/UTs

S. No.	State/UT	Year			
		2010-11	2011-12	2012-13	2013-14
1.	Andhra Pradesh	NA	NA	NA	NA
2.	Assam	NA	NA	NA	5400.00
3.	Chhattisgarh	NA	NA	NA	NA
4.	Delhi	0.00	0.00	0.00	0.00
5.	Goa	NA	NA	NA	NA
6.	Gujarat	NA	NA	NA	NA
7.	Karnataka	1,900.00	1,820.00	NA	NA
8.	Kerala	0.00	9,854.70	19,419.40	8,154.56
9.	Mizoram	NA	NA	NA	NA
10.	Odisha	NA	NA	NA	NA
11.	Telangana	NA	NA	NA	NA
12.	Tripura	NA	NA	NA	NA
13.	Uttar Pradesh	1,02,538.5	1,31,616.0	1,29,048.0	1,87,261.3
14.	Uttarakhand	NA	NA	NA	NA
15.	Andaman and Nicobar Islands	NA	NA	NA	NA
16.	Dadra & Nagar Haveli	0.00	0.00	0.00	0.00
17.	Puducherry	0.00	0.00	0.00	0.00

Source: SFDS

Table 6.4. Quantity (kg) of seeds supplied by Seed Production Areas in the selected States/UTs

S. No.	State/UT	Year			
		2010-11	2011-12	2012-13	2013-14
1.	Andhra Pradesh	1,119	2,559	NA	2,143
2.	Assam	485	560	26	501
3.	Chhattisgarh	1,321	2,172	NA	1,608
4.	Delhi	81	196	NA	273
5.	Goa	1,074	3,448	NA	1,530
6.	Gujarat	1	0	2	0
7.	Haryana	3	0	4	4
8.	Jammu & Kashmir	101	146	890	179
9.	Kerala	5	42		5
10.	Mizoram	870	168	1,798	397
11.	Odisha	7	127	355	23
12.	Tripura	192	307	43	554
13.	Uttar Pradesh	370	724	587	169
14.	Uttarakhand	10	223	564	98
15.	West Bengal	1,451	3,076	1,126	753
16.	Andaman and Nicobar Islands	882	3,329	2,716	1,433
17.	Chandigarh	1,275	1,507		1,303
18.	Dadra & Nagar Haveli	879	911	1,714	804
19.	Puducherry	1,691	2,218	76	2,259

Source: SFDS



Year					
2014-15	2015-16	2016-17	2017-18	2018-19	2019-20
9,004.00	58,419.50	5,406.00	10,229.10	2,911.70	383.50
NA	NA	NA	NA	NA	NA
31,360	30,947	1,114	3,745	2,695	650
NA	NA	NA	NA	NA	NA
0.00	0.00	0.00	0.00	0.00	0.00
68,000	70,000	70,000	43,600	25,000	45,000
NA	NA	NA	NA	NA	NA
27,564.18	24,948.33	3,39,113.00	11,894.83	13,637.72	12,679.62
0.00	0.00	0.00	0.00	0.00	50.00
1,200.00	2,500.00	3,450.00	NA	NA	9.20
220	230	200	250	225	300
0.00	0.00	0.00	0.00	0.00	50.00
1,926.66	12,241.66	2,799.66	9,673.66	4,519.66	8,994.66
660.30	1,680.40	376.35	576.00	382.00	77.20
1,243.00	1,302.00	1,215.35	1,264.22	1,189.95	1,280.60
0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00

Year					
2014-15	2015-16	2016-17	2017-18	2018-19	2019-20
2,458	1,075	1,699	1,877	1,785	10,012
535	358	293	733	491	13
2,536	1,656	1,766	1,887	1,660	NA
140	45	321	272	223	NA
1,018	1,272	2,808	4,373	3,331	NA
0	0	2	5	4	NA
3	0	10	32	9	47
74	117	262	574	572	775
5	6	43	185	43	NA
725	672	1,832	1,164	2,544	1,445
74	13	217	113	742	321
202	457	740	1,133	666	NA
589	913	925	985	169	NA
114	91	165	456	128	NA
534	294	2,675	4,781	4,929	NA
702	721	1,874	3,487	3,919	5,270
1,774	1,286	1,105	1,094	1,606	NA
1,123	1,373	966	1,454	1,664	82
2,189	2,468	1,318	1,587	2,339	251



Table 6.5. Number of Vegetative Multiplication Gardens in the selected States/UTs

S. No.	State/UT	Year									
		2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20
1.	Delhi	0	0	0	0	NA	NA	NA	NA	NA	NA
2.	Goa	0	0	0	0	0	0	0	0	0	0
3.	Jharkhand	3	3	3	3	NA	NA	NA	NA	NA	NA
4.	Karnataka	62	56	64	55	NA	NA	NA	NA	NA	NA
5.	Kerala	NA	NA	NA	NA	0	0	0	0	0	0
6.	Manipur	NA	NA	NA	NA	0	0	0	0	0	0
7.	Mizoram	NA	NA	NA	NA	0	0	0	0	0	0
8.	Nagaland	NA	NA	NA	NA	3	3	3	3	3	3
9.	Odisha	NA	NA	NA	NA	6	6	7	4	4	12
10.	Punjab	2	2	2	2	2	2	2	2	2	2
11.	Tamil Nadu	99	NA	NA	NA	NA	NA	NA	NA	NA	NA
12.	Uttar Pradesh	NA	NA	NA	2	0	0	0	0	0	0
13.	West Bengal	NA	NA	NA	NA	0	0	0	1	1	1
14.	Andaman and Nicobar Islands	NA	NA	NA	NA	0	0	0	0	0	0
15.	Chandigarh	NA	NA	NA	NA	0	0	0	0	0	0
16.	Dadra and Nagar Haveli	0	0	0	0	0	0	0	0	0	0
17.	Puducherry	0	0	0	0	0	0	0	0	0	0

Source: SFDs

Table 6.6. Area (ha) under Vegetative Multiplication Gardens in the selected States/UTs

S. No.	State/UT	Year									
		2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20
1.	Delhi	0.00	0.00	0.00	0.00	NA	NA	NA	NA	NA	NA
2.	Goa	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
3.	Jharkhand	0.13	0.13	0.13	0.13	NA	NA	NA	NA	NA	NA
4.	Karnataka	362.90	361.40	359.00	379.75	NA	NA	NA	NA	NA	NA
5.	Kerala	NA	NA	NA	NA	0.00	0.00	0.00	0.00	0.00	0.00
6.	Mizoram	NA	NA	NA	NA	0.00	0.00	0.00	0.00	0.00	0.00
7.	Nagaland	NA	NA	NA	NA	2.50	2.50	2.50	2.50	2.50	2.50
8.	Odisha	NA	NA	NA	NA	90.47	83.97	82.47	9.47	9.47	36.77
9.	Punjab	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
10.	Tamil Nadu	67.00	NA	NA	NA	NA	NA	NA	NA	NA	NA
11.	Uttar Pradesh	NA	NA	NA	2.00	0.00	0.00	0.00	0.00	0.00	0.00
12.	West Bengal	NA	NA	NA	NA	0.00	0.00	0.00	1.00	1.50	2.00
13.	Andaman and Nicobar Islands	NA	NA	NA	NA	0.00	0.00	0.00	0.00	0.00	0.00
14.	Chandigarh	NA	NA	NA	NA	0.00	0.00	0.00	0.00	0.00	0.00
15.	Dadra and Nagar Haveli	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
16.	Puducherry	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Source: SFDs



Table 6.7. Number of Clonal Seed Orchards in the selected States/UTs

S. No.	State/UT	Year									
		2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20
1.	Andhra Pradesh	NA	NA	NA	NA	13	14	13	13	13	13
2.	Chhattisgarh	NA	NA	NA	14	10	10	10	10	10	10
3.	Delhi	0	0	0	0	NA	NA	NA	NA	NA	NA
4.	Goa	0	0	0	0	0	0	0	0	0	0
5.	Gujarat	NA	NA	NA	NA	57	58	59	59	59	59
6.	Haryana	NA	NA	NA	NA	1	1	1	1	1	1
7.	Jharkhand	3	3	3	3	NA	NA	NA	NA	NA	NA
8.	Karnataka	11	1	3	4	NA	NA	NA	NA	NA	NA
9.	Madhya Pradesh	12	12	12	12	NA	NA	NA	NA	NA	NA
10.	Mizoram	NA	NA	NA	NA	0	0	0	0	0	0
11.	Odisha	NA	NA	NA	NA	18	18	18	40	18	18
12.	Punjab	2	2	2	2	2	2	2	2	2	2
13.	Rajasthan	2	2	NA	NA	2	NA	13	NA	13	NA
14.	Telangana	NA	NA	NA	NA	6	6	6	6	6	6
15.	Uttar Pradesh	15	18	20	15	7	7	7	7	8	8
16.	West Bengal	NA	NA	NA	NA	0	0	0	0	0	0
17.	Andaman and Nicobar Islands	NA	NA	NA	NA	0	0	0	0	0	0
18.	Chandigarh	NA	NA	NA	NA	0	0	0	0	0	0
19.	Dadra and Nagar Haveli	0	0	0	0	0	0	0	0	0	0
20.	Puducherry	0	0	0	0	0	0	0	0	0	0

Source: SFDs



Table 6.8. Area (ha) under Clonal Seed Orchards in the selected States/UTs

S. No.	State/UT	Year									
		2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20
1.	Andhra Pradesh	NA	NA	NA	NA	38.78	3,879.00	3,878.00	3,878.00	3,878.00	3,878.00
2.	Chhattisgarh	NA	NA	NA	165.00	148.50	148.50	148.50	148.50	148.50	148.50
3.	Delhi	0.00	0.00	0.00	0.00	NA	NA	NA	NA	NA	NA
4.	Goa	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5.	Gujarat	NA	NA	NA	NA	27.00	27.12	27.14	27.14	27.14	27.14
6.	Jharkhand	0.13	0.13	0.13	0.13	NA	NA	NA	NA	NA	NA
7.	Karnataka	29.00	10.00	28.00	12.36	59.10	34.00	79.05	122.05	834.52	834.5
8.	Kerala	NA	NA	NA	NA	6.30	4.50	4.50	4.50	4.50	4.50
9.	Madhya Pradesh	155.94	155.94	155.94	155.94	NA	NA	NA	NA	NA	NA
10.	Mizoram	NA	NA	NA	NA	0.00	0.00	0.00	0.00	0.00	0.00
11.	Odisha	NA	NA	NA	NA	147.13	147.13	147.13	181.83	147.13	147.13
12.	Punjab	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00
13.	Rajasthan	15.00	15.00	15.00	15.00	15.00	NA	12.00	NA	12.00	NA
14.	Telangana	NA	NA	NA	NA	75.33	75.33	75.33	75.33	75.33	75.33
15.	Uttar Pradesh	15.50	31.25	42.50	21.75	64.58	64.58	64.58	64.58	64.58	64.58
16.	West Bengal	NA	NA	NA	NA	0.00	0.00	0.00	0.00	0.00	0.00
17.	Andaman and Nicobar Islands	NA	NA	NA	NA	0.00	0.00	0.00	0.00	0.00	0.00
18.	Chandigarh	NA	NA	NA	NA	0.00	0.00	0.00	0.00	0.00	0.00
19.	Dadra and Nagar Haveli	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
20.	Puducherry	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Source: SFDS



Table 6.9. Number of Seedling Seed Orchards in the selected States/UTs

S. No.	State/UT	Year									
		2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20
1.	Andhra Pradesh	NA	NA	NA	NA	1	1	1	1	1	1
2.	Assam	3	3	3	3	NA	NA	NA	NA	NA	NA
3.	Chhattisgarh	NA	NA	NA	12	9	9	9	9	9	9
4.	Delhi	0	0	0	0	NA	NA	NA	NA	NA	NA
5.	Goa	0	0	0	0	0	0	0	0	0	0
6.	Gujarat	NA	NA	NA	NA	4	4	4	4	4	4
7.	Haryana	NA	NA	NA	NA	3	3	3	3	3	3
8.	Jharkhand	3	3	3	3	NA	NA	NA	NA	NA	NA
9.	Karnataka	10	20	15	13	NA	NA	NA	NA	NA	NA
10.	Madhya Pradesh	7	7	7	7	NA	NA	NA	NA	NA	NA
11.	Mizoram	NA	NA	NA	NA	0	0	0	0	0	0
12.	Odisha	NA	NA	NA	NA	3	3	3	3	3	3
13.	Punjab	2	2	4	4	NA	NA	NA	NA	NA	NA
14.	Rajasthan	5	5	5	5	5	NA	25	NA	25	NA
15.	Telangana	NA	NA	NA	NA	1	1	1	1	1	1
16.	Uttar Pradesh	20	18	30	27	8	8	8	9	9	9
17.	West Bengal	NA	NA	NA	NA	4	1	2	0	0	0
18.	Andaman and Nicobar Islands	NA	NA	NA	NA	NA	2	2	2	2	2
19.	Chandigarh	NA	NA	NA	NA	0	0	0	0	0	0
20.	Dadra and Nagar Haveli	0	0	0	0	0	0	0	0	0	0
21.	Puducherry	0	0	0	0	0	0	0	0	0	0

Source: SFDS



Table 6.10. Area (ha) under Seedling Seed Orchards in the selected States/UTs

S. No.	State/UT	Year									
		2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20
1.	Andhra Pradesh	NA	NA	NA	NA	1.00	1.00	1.00	1.00	1.00	1.00
2.	Assam	10.00	10.00	10.00	10.00	NA	NA	NA	NA	NA	NA
3.	Chhattisgarh	NA	NA	NA	205.50	188.00	188.00	188.00	188.00	188.00	188.00
4.	Delhi	0.00	0.00	0.00	0.00	NA	NA	NA	NA	NA	NA
5.	Goa	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
6.	Gujarat	NA	NA	NA	NA	1.77	1.77	1.77	1.77	1.77	1.77
7.	Haryana	NA	NA	NA	NA	27.20	27.20	27.20	27.20	27.20	27.20
8.	Himachal Pradesh	NA	NA	NA	NA	27.00	15.00	0.00	0.00	0.00	0.00
9.	Jharkhand	0.13	0.13	0.13	0.13	NA	NA	NA	NA	NA	NA
10.	Karnataka	16.00	238.50	125.05	109.76	59.10	34.00	79.05	122.05	834.52	834.35
11.	Kerala	NA	NA	NA	NA	14.01	14.01	14.01	14.01	14.01	14.01
12.	Madhya Pradesh	3.85	3.85	3.85	3.85	NA	NA	NA	NA	NA	NA
13.	Mizoram	NA	NA	NA	NA	0.00	0.00	0.00	0.00	0.00	0.00
14.	Odisha	NA	NA	NA	NA	1.75	1.75	1.75	1.75	1.75	1.75
15.	Punjab	3.04	3.04	3.84	3.84	NA	NA	NA	NA	NA	NA
16.	Rajasthan	48.00	48.00	48.00	48.00	48.00	NA	47.26	NA	47.26	NA
17.	Telangana	NA	NA	NA	NA	0.32	0.32	0.32	0.32	0.32	0.32
18.	Uttar Pradesh	23.15	16.65	81.65	51.65	1,418.06	1,418.06	1,418.06	1,418.06	1,418.06	1,418.06
19.	West Bengal	NA	NA	NA	NA	13.00	2.80	5.00	0.00	0.00	48.00
20.	Andaman and Nicobar Islands	NA	NA	NA	NA	NA	1.86	1.86	1.86	1.86	1.86
21.	Chandigarh	NA	NA	NA	NA	0.00	0.00	0.00	0.00	0.00	0.00
22.	Dadra and Nagar Haveli	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
23.	Puducherry	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Source: SFDs



Table 6.11. Number of Nurseries in the selected States/UTs

S. No.	State/UT	Year									
		2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20
1.	Andhra Pradesh	NA	NA	NA	NA	NA	NA	NA	1,388	1,227	1,215
2.	Assam	3	3	3	3	NA	NA	NA	NA	NA	NA
3.	Delhi	14	14	14	14	NA	NA	NA	NA	NA	NA
4.	Goa	5	5	9	5	12	9	9	14	15	17
5.	Gujarat	NA	NA	NA	NA	9	9	9	9	9	9
6.	Haryana	NA	NA	NA	NA	290	313	269	227	199	180
7.	Himachal Pradesh	NA	671	707	725	NA	NA	NA	NA	NA	NA
8.	Jammu & Kashmir	188	162	145	186	NA	NA	NA	NA	NA	NA
9.	Jharkhand	3	3	3	3	NA	NA	NA	NA	NA	NA
10.	Karnataka	742	742	742	742	742	742	742	742	742	742
11.	Kerala	NA	NA	NA	NA	0	0	0	0	0	0
12.	Maharashtra	NA	NA	NA	NA	3,132	3,132	3,132	3,132	3,132	3,132
13.	Meghalaya	NA	NA	NA	NA	4	4	4	4	4	4
14.	Mizoram	70	75	78	80	10	10	10	10	10	10
15.	Odisha	NA	NA	NA	NA	4	4	4	4	2	1
16.	Punjab	2	2	2	2	NA	239	240	228	220	NA
17.	Sikkim	NA	NA	NA	NA	22	22	22	22	22	24
18.	Telangana	NA	NA	NA	NA	4	4	4	4	4	4
19.	Uttar Pradesh	7	9	12	14	15	15	15	15	15	15
20.	Uttarakhand	0	506	423	451	NA	NA	NA	NA	NA	NA
21.	West Bengal	NA	NA	NA	NA	0	0	0	0	0	0
22.	Andaman and Nicobar Islands	NA	NA	NA	NA	26	26	26	26	26	26
23.	Chandigarh	8	8	8	8	0	0	0	0	0	0
24.	Dadra and Nagar Haveli	NA	NA	NA	NA	3	3	3	3	3	3
25.	Daman & DiU	3	3	3	3	3	3	3	3	3	3
26.	Lakshadweep										
27.	Puducherry	2	2	2	2	2	2	2	2	2	1

Source: SFDs



Table 6.12. Number (lakh) of plants raised in Nurseries in the selected States/UTs

S. No.	State/UT	Year									
		2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20
1.	Andhra Pradesh	NA	NA	NA	NA	NA	NA	NA	981.11	1,558.71	1,212.36
2.	Assam	1.00	1.00	0.00	0.31	NA	NA	NA	NA	NA	NA
3.	Goa	5.12	7.21	5.38	5.99	7.46	3.33	1.43	1.81	2.61	7.67
4.	Gujarat	NA	NA	NA	NA	14.33	10.00	11.13	13.38	13.12	10.00
5.	Haryana	NA	NA	NA	NA	294.06	242.66	211.72	136.92	165.86	155.78
6.	Himachal Pradesh	NA	166.60	279.10	248.40	NA	NA	NA	NA	NA	NA
7.	Jammu & Kashmir	NA	NA	NA	NA	87.52	63.91	48.58	60.76	79.13	85.77
8.	Karnataka	1.29	0.23	NA	0.29	NA	NA	NA	NA	NA	NA
9.	Kerala	NA	NA	NA	NA	0.00	0.00	0.00	0.00	0.00	0.00
10.	Maharashtra	NA	NA	NA	NA	NA	NA	NA	1,145.12	2,915.92	3,175.30
11.	Meghalaya	NA	NA	NA	NA	0.20	0.20	0.20	0.20	0.20	0.20
12.	Mizoram	14.00	15.00	16.50	16.80	88.44	36.17	19.37	39.44	37.33	25.06
13.	Odisha	NA	NA	NA	NA	19.10	22.49	17.00	4.03	0.40	1.00
14.	Punjab	1.54	0.91	1.76	2.13	NA	124.00	177.00	154.00	186.00	NA
15.	Sikkim	NA	NA	NA	NA	21.48	22.30	23.06	22.39	20.86	20.83
16.	Tamil Nadu	59.43	NA	NA	NA	NA	NA	NA	NA	NA	NA
17.	Telangana	NA	NA	NA	NA	5.00	11.23	16.00	30.25	35.75	17.20
18.	Tripura	NA	NA	NA	NA	0.00	44.82	77.04	0.00	17.36	134.67
19.	Uttar Pradesh	0.53	1.02	4.48	3.28	2.37	1.06	0.94	0.50	1.38	4.37
20.	Uttarakhand	0.00	209.28	233.91	266.80	NA	NA	NA	NA	NA	NA
21.	West Bengal	NA	NA	NA	NA	1.88	4.08	8.61	3.93	2.60	2.29
22.	Andaman and Nicobar Islands	NA	NA	NA	NA	3.17	4.90	16.66	6.75	12.79	4.90
23.	Chandigarh	2.00	2.00	2.00	2.00	0.00	0.00	0.00	0.00	0.00	0.00
24.	Dadar & Nagar Haveli	2.78	2.45	2.51	1.80	9.02	11.02	12.16	12.78	16.40	19.78
25.	Daman & Diu	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
26.	Puducherry	0.75	0.85	0.90	1.05	0.75	0.85	0.95	10.10	1.00	1.15

Source: SFDs



Table 6.13. Number (lakh) of plants supplied from Nurseries in the selected States/UTs

S. No.	State/UT	Year									
		2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20
1.	Andhra Pradesh	NA	NA	NA	NA	NA	NA	NA	569.77	1,092.56	769.42
2.	Assam	1.00	1.00	0.00	0.31	NA	NA	NA	NA	NA	NA
3.	Delhi	5.75	7.77	8.02	4.59	NA	NA	NA	NA	NA	NA
4.	Goa	4.05	3.30	5.32	3.49	2.36	2.09	2.07	1.39	2.22	3.45
5.	Gujarat	NA	NA	NA	NA	14.33	10.00	11.13	13.38	13.12	10.00
6.	Haryana	NA	NA	NA	NA	65.20	42.88	31.65	31.17	37.07	39.09
7.	Jammu & Kashmir	NA	NA	NA	NA	41.49	36.05	23.12	14.88	21.23	20.89
8.	Kerala	NA	NA	NA	NA	0.00	0.00	0.00	0.00	0.00	0.00
9.	Maharashtra	NA	NA	NA	NA	NA	NA	NA	335.16	1,149.00	1,626.57
10.	Meghalaya	NA	NA	NA	NA	0.16	0.18	0.20	0.15	0.15	0.15
11.	Mizoram	13.80	14.75	16.10	16.60	86.61	33.14	15.43	36.00	34.39	21.10
12.	Odisha	NA	NA	NA	NA	19.10	22.49	12.00	9.02	0.40	1.00
13.	Punjab	1.54	0.91	1.76	2.13	NA	65.52	15.00	34.50	79.35	NA
14.	Sikkim	NA	NA	NA	NA	10.03	12.86	13.48	10.73	11.68	9.76
15.	Telangana	NA	NA	NA	NA	5.00	11.23	16.00	30.25	35.75	16.15
16.	Tripura	NA	NA	NA	NA	1.04	0.00	0.00	31.58	52.73	1.89
17.	Uttar Pradesh	0.42	0.33	1.01	0.79	2.10	0.67	0.65	0.26	0.29	1.70
18.	West Bengal	NA	NA	NA	NA	0.44	2.22	7.01	2.53	2.09	0.70
19.	Andaman and Nicobar Islands	NA	NA	NA	NA	2.86	3.75	4.33	4.96	3.79	5.63
20.	Chandigarh	1.70	1.80	1.75	1.80	0.00	0.00	0.00	0.00	0.00	0.00
21.	Dadar & Nagar Haveli	7.58	7.58	7.58	7.58	0.00	0.00	0.00	0.00	0.00	0.00
22.	Daman & Diu	NA	NA	0.49	0.49	0.16	0.05	0.37	0.13	0.28	0.30
23.	Puducherry	0.65	0.78	0.80	0.95	0.65	0.78	0.80	0.92	0.95	0.97

Source: SFDs



Table 6.14. Species under SPA, CSO, SSO and VMG in the selected States

S. No.	State	SPA	CSO	SSO	VMG
1.	Assam	-	-	<i>Syzygium cumini</i> , <i>Terminalia arjuna</i> , <i>Prunus dulcis</i> , <i>Garcinia pedunculata</i> , <i>Phyllanthus emblica</i> , <i>Elaeocarpus serratus</i> , <i>Putranjiva roxburghii</i> , etc.	-
2.	Chhattisgarh	<i>Tectona grandis</i> , <i>Dalbergia sissoo</i> , <i>Pterocarpus marsupium</i> , <i>Terminalia tomentosa</i> and Mixed spp.	<i>Tectona grandis</i> , <i>Gmelina arborea</i> , <i>Eucalyptus Sp.</i> , <i>Phyllanthus emblica</i> , <i>Limonia acidissima</i> etc.	<i>Tectona grandis</i> , <i>Gmelina arborea</i> , <i>Albizia odoratissima</i> , <i>Eucalyptus Sp.</i> , <i>Albizia procera</i> , <i>Acacia mangium</i> , <i>Terminalia chebula</i> , <i>Terminalia bellirica</i> , <i>Milletia pinnata</i> etc.	-
3.	Gujarat	<i>Tectona grandis</i> , <i>Acacia nilotica</i> , <i>Senegalia catechu</i>	<i>Tectona grandis</i> , <i>Madhuca longifolia</i> , <i>Dalbergia sissoo</i> , <i>Eucalyptus sp.</i> , <i>Terminalia chebula</i> , <i>Terminalia bellirica</i> , <i>Sapindus trifoliatus</i> , <i>Cordia dichotoma</i> , <i>Buchanania lanzan</i> , <i>Manilkara hexandra</i> , <i>Syzygium cumini</i> , <i>Phyllanthus emblica</i> , <i>Casuarina equisetifolia</i> , <i>Azadirachta indica</i> , <i>Dalbergia sissoo</i> , <i>Annona squamosa</i>	<i>Madhuca longifolia</i> , <i>Terminalia chebula</i> , <i>Terminalia bellirica</i> , <i>Tamarindus indica</i> , <i>Acacia nilotica</i> , <i>Buchanania lanzan</i>	-
4.	Haryana	<i>Terminalia arjuna</i> , <i>Dalbergia sissoo</i> , <i>Tectona grandis</i> , <i>Prunus dulcis</i>	<i>Eucalyptus sp.</i>	<i>Dalbergia sissoo</i> , <i>Tectona grandis</i> , <i>Eucalyptus sp.</i>	-
5.	Kerala	<i>Tectona grandis</i>	-	-	-
6.	Madhya Pradesh	-	<i>Tectona grandis</i> , <i>Gmelina arborea</i> , <i>Madhuca longifolia</i>	<i>Gmelina arborea</i> , <i>Tectona grandis</i> , <i>Litsea glutinosa</i>	-
7.	Odisha	<i>Tectona grandis</i> , <i>Phyllanthus emblica</i> , <i>Pterocarpus marsupium</i> , <i>Pterocarpus santalinus</i>	<i>Tectona grandis</i> , <i>Milletia pinnata</i> , <i>Simarouba glauca</i> , <i>Acacia mangium</i> , <i>Dalbergia sissoo</i> , <i>Casuarina equisetifolia</i> , <i>Terminalia arjuna</i> , <i>Pterocarpus santalinus</i> , <i>Terminalia bellirica</i> , <i>Azadirachta indica</i> , <i>Pterocarpus marsupium</i> ,	<i>Cymbopogon flexuosus</i> , <i>Mesua ferrea</i> , <i>Careya arborea</i>	<i>Tectona grandis</i> , <i>Phyllanthus emblica</i> , <i>Pterocarpus marsupium</i> , <i>Pterocarpus santalinus</i>

Source: SFDs



S. No.	State	SPA	CSO	SSO	VMG
			<i>Sapindus mukorossi</i> , <i>Anogeissus latifolia</i> , <i>Dalbergia latifolia</i> , <i>Sida cordifolia</i> , <i>Gmelina arborea</i>		
8.	Punjab		<i>Eucalyptus Sp.</i> , <i>Dalbergia latifolia</i>	<i>Melia composita</i> , <i>Dalbergia latifolia</i>	<i>Eucalyptus Sp.</i> , <i>Dalbergia latifolia</i>
9.	Tamil Nadu	-	-	<i>Ailanthus excelsa</i> , <i>Albizia amara</i> , <i>Albizia lebbek</i> , <i>Alnus nepalensis</i> , <i>Artocarpus integrifolia</i> , <i>Azadirachta indica</i> , <i>Casuarina Junghuhniana</i> (Taimur Provenance), <i>Casuarina Junghuhniana</i> (Kapan kupang), <i>Chloroxylon swietenia</i> , <i>Derris indica</i> , <i>Eucalyptus citriodora</i> , <i>Eucalyptus ptychocarpa</i> , <i>Eucalyptus torelliana</i> , <i>Eucalyptus alba</i> , <i>Feronia elephantum</i> , <i>Gmelina arborea</i> , <i>Grevillea robusta</i> , <i>Holoptelea integrifolia</i> , <i>Melia dubia</i> , <i>Pterocarpus santalinus</i> , <i>Santalum album</i> , <i>Sapindus emarginatus</i> , <i>Sapindus laurifolia</i> , <i>Simarouba glauca</i> , <i>Swietenia macrophylla</i> , <i>Syzygium cumini</i> , <i>Tamarindus indicus</i>	<i>Acacia mangium</i> , <i>Ailanthus excelsa</i> , <i>Bambusa balcooa</i> , <i>Bambusa nutans</i> , <i>Bambusa tulda</i> , <i>Bambusa vulgaris</i> , <i>Casuarina equisetifolia</i> , <i>Casuarina junghuhniana</i> (kapan kupang), <i>Casuarina junghuhniana</i> (Male sterile), <i>Derris indica</i> , <i>Khaya senegalensis</i> , <i>Pterocarpus santalinus</i> , <i>Santalum album</i> , <i>Sapindus emarginatus</i> , <i>Simarouba glauca</i> , <i>Tectona grandis</i>
10.	Uttarakhand	<i>Bombax ceiba</i> , <i>Myrica esculenta</i> , <i>Prunus cerasoides</i> , <i>Phyllanthus emblica</i> , <i>Cedrus deodara</i> , <i>Quercus leucotrichophora</i> , <i>Rhododendron arboretum</i> , <i>Cupressus torulosa</i> , <i>Diploknema butyracea</i> , <i>Sterculia urens</i> , <i>Cinnamomum tamala</i> , <i>Fraxinus micrantha</i> , <i>Juglans regia</i>	-	-	-



Table 6.15. Number of Working Plans for Territorial Division

S. No.	State/UT	Year				
		2010-11	2011-12	2012-13	2013-14	2014-15
1.	Andhra Pradesh	NA	NA	NA	NA	22
2.	Arunachal Pradesh	NA	NA	NA	NA	NA
3.	Assam	32	32	32	32	NA
4.	Bihar	NA	NA	NA	NA	10
5.	Chhattisgarh	NA	NA	NA	NA	34
6.	Delhi	3	3	3	3	NA
7.	Goa	NA	NA	NA	NA	NA
8.	Gujarat	NA	NA	NA	NA	23
9.	Haryana	NA	NA	NA	NA	21
10.	Himachal Pradesh	37	37	37	37	37
11.	Jammu & Kashmir	30	30	30	30	NA
12.	Jharkhand	31	31	31	31	NA
13.	Karnataka	39	40	40	40	39
14.	Kerala	24	24	25	25	25
15.	Madhya Pradesh	NA	NA	NA	NA	NA
16.	Maharashtra	51	51	51	51	51
17.	Manipur	10	10	10	10	NA
18.	Meghalaya	NA	NA	NA	NA	NA
19.	Mizoram	13	13	13	13	10
20.	Nagaland	NA	NA	NA	NA	NA
21.	Odisha	NA	NA	NA	NA	NA
22.	Punjab	NA	NA	NA	NA	16
23.	Rajasthan	NA	NA	NA	NA	NA
24.	Sikkim	NA	NA	NA	NA	4
25.	Tamil Nadu	NA	NA	NA	NA	NA
26.	Telangana	NA	NA	NA	NA	20
27.	Tripura	NA	NA	NA	NA	9
28.	Uttar Pradesh	NA	NA	NA	NA	NA
29.	Uttarakhand	NA	NA	NA	NA	NA
30.	West Bengal	NA	NA	NA	NA	22
31.	Andaman and Nicobar Islands	NA	NA	NA	NA	6
32.	Chandigarh	1	1	1	1	0
33.	Dadra & Nagar Haveli	NA	NA	NA	NA	0
34.	Daman & Diu	NA	NA	NA	NA	NA
35.	Lakshadweep	NA	NA	NA	NA	NA
36.	Puducherry	0	0	0	0	0

Source: SFDs
TD=Territorial Divisions



Year					No. of TD as on 2019-20
2015-16	2016-17	2017-18	2018-19	2019-20	
22	22	22	22	22	NA
NA	NA	NA	NA	NA	25
NA	NA	NA	NA	NA	NA
10	10	10	10	10	30
34	35	35	35	35	NA
NA	NA	NA	NA	NA	NA
NA	NA	NA	NA	NA	1
23	23	23	23	23	24
21	21	21	21	22	22
37	37	37	37	37	44
NA	NA	NA	NA	NA	31
NA	NA	NA	NA	NA	31
39	39	39	39	39	80
25	25	25	25	NA	36
NA	NA	NA	NA	NA	63
51	51	51	51	51	51
NA	NA	NA	NA	NA	NA
NA	NA	NA	NA	NA	NA
10	10	10	10	10	13
NA	NA	NA	NA	NA	11
NA	NA	NA	NA	NA	NA
16	16	16	16	16	16
NA	NA	NA	NA	NA	NA
4	4	4	4	4	4
NA	NA	NA	NA	NA	NA
20	28	28	28	28	28
9	9	9	9	9	NA
NA	NA	NA	NA	NA	16
NA	NA	NA	NA	NA	29
22	22	22	23	23	23
6	6	6	6	6	6
0	0	0	0	0	1
0	0	0	0	0	1
NA	NA	NA	NA	NA	1
NA	NA	NA	NA	NA	NA
0	0	0	0	0	0



Table 6.16 Number of approved Working Plans for Territorial Division

S. No.	State/UT	Year									
		2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20
1.	Andhra Pradesh	NA	NA	NA	NA	19	18	17	15	15	14
2.	Arunachal Pradesh	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
3.	Assam	4	4	1	1	NA	NA	NA	NA	NA	NA
4.	Bihar	NA	NA	NA	NA	5	5	5	5	5	5
5.	Chhattisgarh	NA	NA	NA	NA	33	27	23	20	20	24
6.	Delhi	0	0	0	0	NA	NA	NA	NA	NA	NA
7.	Goa	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
8.	Gujarat	NA	NA	NA	NA	23	23	9	20	20	19
9.	Haryana	NA	NA	NA	NA	20	20	20	19	19	19
10.	Himachal Pradesh	22	25	26	30	17	17	19	19	19	19
11.	Jammu & Kashmir	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
12.	Jharkhand	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
13.	Karnataka	34	38	33	26	17	29	33	34	37	38
14.	Kerala	21	21	17	15	14	18	21	21	19	NA
15.	Madhya Pradesh	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
16.	Maharashtra	39	42	41	44	41	44	44	41	39	44
17.	Manipur	10	10	10	10	NA	NA	NA	NA	NA	NA
18.	Meghalaya	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
19.	Mizoram	1	1	1	4	3	3	3	3	3	3
20.	Nagaland	NA	NA	NA	4	NA	NA	NA	NA	NA	NA
21.	Odisha	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
22.	Punjab	NA	NA	NA	NA	16	16	16	16	16	16
23.	Rajasthan	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
24.	Sikkim	NA	NA	NA	NA	4	4	4	4	4	4
25.	Tamil Nadu	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
26.	Telangana	NA	NA	NA	NA	14	14	14	14	14	15
27.	Tripura	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
28.	Uttar Pradesh	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
29.	Uttarakhand	NA	NA	NA	NA	21	18	14	25	22	18
30.	West Bengal	NA	NA	NA	NA	17	17	16	14	11	11
31.	Andaman and Nicobar Islands	NA	NA	NA	NA	6	6	6	6	6	6
32.	Chandigarh	1	1	1	1	0	0	0	0	0	0
33.	Dadar & Nagar Haveli	NA	NA	NA	NA	0	0	0	0	0	0
34.	Daman & Diu	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
35.	Lakshadweep	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
36.	Puducherry	0	0	0	0	0	0	0	0	0	0

Source: SFDs

Table 6.17. Forest area (km²) under approved working plans in the selected States/UTs

S. No.	State/UT	Year									
		2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20
1.	Delhi	0.00	0.00	0.00	0.00	NA	NA	NA	NA	NA	NA
2.	Gujarat	NA	NA	NA	NA	17,067.17	17,066.78	17,066.78	14,117.84	15,919.82	15,635.05
3.	Himachal Pradesh	24,909.00	24,909.00	27,827.00	27,827.00	27,827.00	27,827.00	27,827.00	27,827.00	27,827.00	27,827.00
4.	Jammu & Kashmir	NA	NA	NA	NA	10,154.63	10,154.63	10,154.63	10,154.63	10,154.63	NA
5.	Maharashtra	51,131.00	52,261.00	53,581.00	54,036.00	55,284.10	56,028.59	51,117.21	46,587.52	46,427.70	42,471.81
6.	Odisha	37.00	37.00	37.00	37.00	NA	NA	NA	NA	NA	NA
7.	Tripura	6,294.29	6,294.29	6,294.29	6,294.29	3,740.0	3,740.0	3,740.0	3,740.0	3,740.0	3,740.0
8.	Andaman and Nicobar Islands	NA	NA	NA	NA	4,776.94	4,776.94	4,776.94	4,776.94	4,776.94	4,776.94
9.	Dadra and Nagar Haveli	NA	NA	NA	NA	0.00	0.00	0.00	0.00	0.00	0.00

Source: SFDs

Reference:

Feilberg, L. and Soegaard, B. (1975). Historical Review of Seed Orchards. Forestry Comm. Bull No. 54. Her Majesty's Stationary Office, London.





07

WOOD BASED INDUSTRIES AND INTERNATIONAL TRADE

7.1. WOOD BASED INDUSTRIES

The Central Statistical Office of Ministry of Statistics and Programme Implementation (MoSPI), GoI is a nodal office for the country and is entrusted to set up the standards for collection, compilation and dissemination of statistical data in all spheres of the categories of importance. The standard for statistical purposes is termed as National Industrial Classification (NIC) and is based on the International Standards of Industrial Classification (ISIC). NIC guides to collect the data on different aspects of the economy to facilitate their use for *National Economic Policy* and is frequently used in classifying the economically active population, industrial production and distribution, labour statistics, national income etc. of the country. The current NIC-2008 has five digit codes for achieving the national needs and it provides a basis for the standardized collection, analysis and dissemination of industry (economic activity) wise economic data for India (NIC, 2008).

The NIC-2008 classified the activities into 21 Sections (A to U), 88 divisions, 238 groups, 403 classes and 1,304 sub-classes. The Section A deals the agriculture, forestry and fisheries related activities under the title 'Agriculture, Forestry and Fishing'. The forestry is covered in Division 02 under 'Forestry and Logging' of the Section A. Important wood-based industries are covered under Division 16 and 17 of NIC 2008 and categorized wood-based industries in four broad categories namely; saw milling and planing units (code 1610), panel (code 1621), solid wood (code 1622, 1623 and 1629) and pulp, paper and paperboard (code 1701, 1702 and 1709) industries.

Sawmills in India are classified under both organized and unorganized sectors. However, under Sections 2m(i) (employing around 8 to 10 people) and 2m(ii) (employing at least 20 people with no fixed limits on electricity consumed) under the Factory Act 1948, there are 1,374 registered sawmills in the country, which is miniscule compared with the actual number of sawmills currently under operation in the country (FSRI, 2019). Most of these sawmills are in the unorganized sector. Annual Survey of Industries (ASI) 2018 reports that there are a total of 2,353 panel industries, 952 solid wood industries and 7,180 pulp, paper and paperboard industries in the country.



7.2. INTERNATIONAL TRADE

The Directorate General of Commercial Intelligence and Statistics (DGCIS), Ministry of Commerce, GoI is responsible for collection, compilation and dissemination of India's Trade Statistics and Commercial Information. The export and import statistics and trade related information of the importers and exporters are useful for policy formulations to the Government and other users. The trade data is being compiled at 8-digit Indian Trade Classification (Harmonised System) (ITC (HS)) level covering around eleven thousand products. In this Chapter, various important wood products covered under group 44 of different classes of the ITC (HS) codes are considered as Wood in Rough, Sawn Wood, Veneers, Plywood, Particle Board and Fuel-wood. The definitions of these products according to FAO/ITTO are given below:

- Wood in Rough:** The first approximation to a measure of the forest harvest taken in a period. It covers all wood raw material taken from wood in the rough, including chips produced in the forest.
- Sawn Wood:** The products of the simple processes of sawing and peeling, with the associated processes of hewing, profile chipping and slicing.
- Veneer:** The thin sheet of wood, plies, sawed or rotary cut from a log or a hitch.
- Plywood:** A panel consisting of an assembly of veneer sheets bonded together with the direction of the grain in alternative plies generally at right angles.
- Particle Board:** It is a generic term for board material manufactured from wood particles or other lignocelluloses materials and a synthetic resin consolidated under heat and pressure.
- Bamboo:** Bamboo is considered as versatile natural resource which is extensively used in cottage industry for making various household products, besides house construction.
- Fuelwood:** Wood in the rough such as branches, twigs, logs, chips, sawdust and pellets used for energy generation.



Table 7.1. Detailed industrial structure for Forestry and Logging sector according to the NIC 2008

Section	Agriculture, Forestry and Fishing
Division 02	Forestry and Logging
Group 021 Class 2010	Silviculture and other forestry activities Silviculture and other forestry activities <i>Exclusions:</i> Growing of Christmas trees; operation of tree nurseries; gathering of wild growing non-wood forest products and production of wood chips and articles
Sub-class 02101	Growing of standing timber (planting, replanting, transplanting, thinning and conserving of forests and timber tracts)
Sub-class 02102	Operation of forest tree nurseries
Sub-class 02109	Other forestry activities including growing of pulpwood, firewood, etc.
Group 022 Class 0220	Logging Logging <i>Exclusions:</i> Growing of Christmas trees; growing of standing timber: planting, replanting, transplanting, thinning and conserving of forests and timber tracts; gathering of wild growing non-wood forest products; production of wood chips and particles; production of charcoal through distillation of wood.
Sub-class 02201	Gathering and preparation of firewood
Sub-class 02202	Logging camps and loggers primarily engaged in felling timber and producing wood in the rough such as pitprops, split poles, pickets, hewn railway ties
Sub-class 02203	Production of charcoal in the forest (using traditional methods)
Sub-class 02209	Other logging activities
Group 023 Class 0230	Gathering of non-wood forest products Gathering of non-wood forest products <i>Exclusions:</i> Managed production of any of these products (except growing of cork trees); growing of mushrooms or truffles; growing of berries and nuts; gathering of firewood; production of wood chips
Sub-class 02301	Gathering of tendu leaves
Sub-class 02302	Gathering of lac, resins and rubber-like gums
Sub-class 02303	Gathering of wild growing mushrooms, truffles, berries, nuts, cork, balsams, vegetable hair, eelgrass. Mosses, lichens
Sub-class 02309	Gathering of non-wood forest products
Group 024 Class 0240	Support services to forestry Support services to forestry <i>Exclusions:</i> operation of forest tree nurseries
Sub-class 02401	Forestry service activities (forest management consulting services, forestry inventories, timber evaluation, forest pest control)
Sub-class 02402	Logging service activities such as transport of logs within the forest

Source: NIC, 2008



Table 7.2. Detailed industrial structure for wood based industry according to the NIC 2008

Division 16	Manufacture of wood and of products of wood and cork, except furniture; manufacture of articles of straw and plaiting materials
Group 161 Class 1610	Saw milling and planning of wood Saw milling and planning of wood <i>Exclusions:</i> Logging and production of wood; manufacture of veneer sheets thin enough for use in plywood, boards and panels; manufacture of shingles and shakes, beadings and mouldings.
Sub-class 16101	Sawing and planning of wood
Sub-class 16102	Manufacture of unassembled wooden flooring including parquet flooring
Sub-class 16103	Manufacture of wooden railway sleepers
Sub-class 16109	Activities related to saw milling and planning of wood
Group 162 Class 1621	Manufacture of products of wood, cork, straw and plaiting materials Manufacture of veneer sheets; manufacture of plywood, laminboard, particle board and other panels and board
Sub-class 16211	Manufacture of ply wood and veneer sheets
Sub-class 16212	Manufacture of particle board and fibre board
Sub-class 16213	Manufacture of flush doors and other boards or panels
Sub-class 16219	Manufacture of other plywood products
Class 1622	Manufacture of builders' carpentry and joinery <i>Exclusions:</i> Manufacture of unassembled wooden flooring; manufacture of kitchen cabinets, bookcases, wardrobes, etc.; manufacture of wooden partition, free standing, etc.
Sub-class 16221	Manufacture of structural wooden goods
Class 1623	Manufacture of wooden containers <i>Exclusions:</i> Manufacture of luggage; manufacture of cases of plaiting material
Sub-class 16231	Manufacture of wooden boxes, barrels, vats, tubs, packing cases, etc.
Sub-class 16232	Manufacture of plywood chests
Sub-class 16233	Manufacture of market basketry, grain storage bins and similar products of bamboo or reed
Class 1629	Manufacture of other products of wood; article of cork, straw and plaiting material <i>Exclusions:</i> Manufacture of mats or matting of textile; luggage; wooden footwear, matches, clock cases, wooden spools and bobbins, furniture, wooden toys, brushes and brooms, etc.
Sub-class 16291	Manufacture of wooden industrial goods
Sub-class 16293	Manufacture of wooden agricultural implements
Sub-class 16294	Manufacture of articles of bamboo, cane and grass
Sub-class 16299	Manufacture of other wood products
Division 17	Manufacture of paper and paper products
Group 170	Manufacture of paper and paper products



Class 1701	<p>Manufacture of pulp, paper and paperboard</p> <p><i>Exclusion:</i> Manufacture of corrugated paper and paperboard; manufacture of further-processed articles of paper, paperboard or pulp; manufacture of coated or impregnated paper, where the coating or impregnant is the main ingredient; manufacture of cork life preservers.</p>
Sub-class 17011	Manufacture of pulp
Sub-class 17012	Manufacture of newsprint
Sub-class 17013	Manufacture of paper and paper rolls not further processed
Sub-class 17014	Manufacture of packing paper
Sub-class 17015	Manufacture of other special purpose paper (excluding computer stationary)
Sub-class 17016	Manufacture of paper board, straw board
Sub-class 17017	Manufacture of hard board including false board and chip board
Sub-class 17019	Manufacture of other primary paper materials including composite paper and paper board n.e.c.
Class 1702	<p>Manufacture of corrugated paper and paperboard and containers of paper and paperboard</p> <p><i>Exclusion:</i> Manufacture of envelopes; manufacture of moulded or pressed articles of paper pulp (e.g., boxes for packing eggs, moulded pulp paper plates)</p>
Sub-class 17021	Manufacture of corrugated paper and paperboard
Sub-class 17022	Manufacture of corrugated paper board containers
Sub-class 17023	Manufacture of cardboard boxes
Sub-class 17024	Manufacture of sacks and bags of paper
Sub-class 17029	Manufacture of other containers of paper and paperboard n.e.c.
Class 1709	<p>Manufacture of other articles of paper and paperboard</p> <p><i>Exclusion:</i> - manufacture of paper or paperboard in bulk; printing on paper products; manufacture of playing cards; manufacture of games and toys of paper or paperboard</p>
Sub-class 17091	Manufacture of computer paper
Sub-class 17092	Manufacture of paper cups, saucers, plates, hoops, cones and other similar products
Sub-class 17093	Manufacture of printing, writing and photocopying paper ready for use
Sub-class 17094	Manufacture of paper pulp articles other than containers (such as egg trays)
Sub-class 17095	Manufacture of file cover/file boards, and similar articles.
Sub-class 17096	Manufacture of wallpaper
Sub-class 17097	Manufacture of carbon paper & stationary items
Sub-class 17099	Manufacture of other paper products n.e.c.

Source: NIC, 2008



Table 7.3. Number of wood-based industries under different categories of ASI frame 2017-18

S. No.	State/UT	Saw Milling and Planing Units	Panel Industry	Solid Wood Industry	Pulp, Paper and Paperboard Industry
1.	Andhra Pradesh	84	47	29	485
2.	Arunachal Pradesh	31	16	02	00
3.	Assam	72	13	22	137
4.	Bihar	28	163	03	40
5.	Chhattisgarh	14	44	05	42
6.	Delhi	02	01	05	74
7.	Goa	00	00	02	40
8.	Gujarat	168	273	180	1,009
9.	Haryana	86	246	57	254
10.	Himachal Pradesh	03	08	02	226
11.	Jammu& Kashmir	03	16	10	61
12.	Jharkhand	27	03	00	17
13.	Karnataka	50	152	71	348
14.	Kerala	271	529	54	135
15.	Madhya Pradesh	06	22	11	172
16.	Maharashtra	42	67	104	798
17.	Manipur	04	01	02	00
18.	Meghalaya	05	15	00	04
19.	Mizoram	01	02	16	03
20.	Nagaland	25	27	03	01
21.	Orissa	68	06	01	44
22.	Punjab	41	127	31	254
23.	Rajasthan	22	57	84	164
24.	Sikkim	00	00	00	05
25.	Tamil Nadu	147	78	131	1,071
26.	Telangana	67	75	30	520
27.	Tripura	01	00	12	01
28.	Uttar Pradesh	12	228	51	590
29.	Uttarakhand	03	30	04	198
30.	West Bengal	86	103	19	228
31.	Andaman and Nicobar Islands	01	00	00	00
32.	Chandigarh	00	00	03	05
33.	Dadra and Nagar Haveli	02	03	04	102
34.	Daman and Diu	00	00	02	94
35.	Lakshadweep	00	00	00	00
36.	Puducherry	02	01	02	58
Total		1,374	2,353	952	7,180

Source: Annual Survey of Industries, Kolkata (2018)



Table 7.4. Important wood-based products and their ITC (HS) code details

Products	Class with detail	Subclass with detail
Wood in Rough	4403: Wood in the rough, whether or not stripped of bark or sapwood, or roughly squared	440310: treated with paint, stains, creosote or other preservatives 440320: Other, coniferous 440341: Other, of tropical wood specified in sub heading note 1 to this chapter: 440349: Other 440399: Other: Andaman Padauk, Bonsum, Khair, Lampati, Laurel, Pali- wood and Red Sanders and Rose wood
Sawn Wood	4407: Wood sawn or chipped lengthwise, sliced or peeled, whether or not planed, sanded or end-jointed, of a thickness exceeding 6MM	440710: Coniferous 440729: Other 440799: Other
Veneers	4408: Sheets for veneering (including those obtained by slicing laminated wood), for plywood or for similar laminated wood and other wood, dawn lengthwise, sliced or peeled, whether or not planed, sanded, spliced or end jointed, of a thickness not exceeding 6MM.	440810: Coniferous 440831: Of Dark Red Meranti, Light Red Meranti and Meranti Bakau 440839: Other 440890: Other
Plywood	4412: Plywood, veneered panels and similar laminated wood	441210: Of Bamboo 441231: Other plywood, consisting of sheets of wood (other than bamboo), each ply not exceeding 6mm thickness 441232: Other, with at least one outer ply of non-coniferous wood 441239: Other 441299: Other
Particle board	4410: Particle board, oriented strand board(OSB) and similar board (for example wafer board) of wood or other ligneous materials, whether or not agglomerated with resin or other organic binding substances of	441011: Particle board 441012: Oriented strand board (OSB) 441090: Other (including veneered particle board, not having decorative veneers on any face)
Wood Charcoal	4402: Wood Charcoal (including shell or nut charcoal), whether or not agglomerated	440210: Wood charcoal (including shell or nut charcoal), whether or not agglomerated 440290: Other



Products	Class with detail	Subclass with detail
Resins	1301: Lac; Natural Gums, Resins, Gum-resins and Oleoresins (for example, balsams)	13019021: Copal 13019022: Dammar batu 13019029: Other
Bamboos and its products	1401: Vegetable materials of a kind & used primarily for plaiting (For example, bamboos, rattans, reeds, rush, osier, raffia, cleaned, bleached or dyed cereal straw and lime bark)	14011000: Bamboos
	2005: Other vegetables prepared or preserved otherwise than by vinegar or acetic acid, not frozen (excluding preserved by sugar, and tomatoes, mushrooms and truffles)	20059100: Bamboo shoots
	4402: Wood Charcoal (including shell or nut charcoal), whether or not agglomerated	44021010: Of Bamboo
	4409: Wood (including strips and friezes for parquet flooring, not assembled) continuously shaped (Tongued, Grooved, Rebated, Chamfered, V-Jointed, Beaded, Moulded, Rounded or the Like) Along any of its edges or faces, whether or not planed, sanded or end-jointed	44092100: Of Bamboo
	4412: Plywood, Veneered panels and similar laminated wood	44121000: Of Bamboo
	4601: Plaits and similar products of plaiting materials, whether or not assembled into strips; plaiting materials, plaits and similar products of plaiting materials, bound together in parallel strands or woven, in sheet form, whether or not being finished article	46012100: Of Bamboo 46019200: Of Bamboo
	4602: Basketwork, wickerwork and other articles, made directly to shape from plaiting materials or made up from goods of heading 46 01; articles of loofah	46019200: Of Bamboo 46021100: Of Bamboo
	4823: other paper, paperboard, support of paper pulp, paper or paperboard (whether or not perforated or hardened)	48236100: Of Bamboo
Fuel-wood	4401: Fuel wood, in logs, in billets, in twigs, in faggots or in similar form; Sawdust and wood waste and scrap, whether or not agglomerated in logs, briquettes, pellets or similar forms.	44011010: Others Fuel wood, in logs, in billets, in twigs, in faggots or in similar form;



Table 7.5. Export and import of wood in rough

Year	Export		Import	
	Quantity ('000 m ³)	Value (₹ Cr)	Quantity ('000 m ³)	Value (₹ Cr)
2010-11	26.64	6.83	4,664.28	5,968.25
2011-12	10.34	11.89	6,167.56	9,370.82
2012-13	5.61	10.71	6,536.29	11,423.94
2013-14	8.40	24.21	6,078.67	12,156.68
2014-15	4.85	12.73	6,112.09	11,462.59
2015-16	7.19	550.69	5,622.15	9,730.35
2016-17	3.08	300.59	4,703.27	7,801.00
2017-18	5.80	275.05	4,877.55	8,314.77
2018-19	8.07	630.14	4,707.92	7,631.48
2019-20	5.58	145.84	3,991.21	6,426.68
2020-21	81.85	30.99	2,699.09	4,231.63

Source: DGCIS, Kolkata

Table 7.6. Export and import of sawn-wood

Year	Export		Import	
	Quantity ('000 m ³)	Value (₹ Cr)	Quantity ('000 m ³)	Value (₹ Cr)
2010-11	17.18	82.47	192.20	308.26
2011-12	32.38	100.80	495.24	696.75
2012-13	34.15	170.14	499.52	900.37
2013-14	50.26	166.17	524.81	1,070.21
2014-15	26.73	192.00	605.46	1,383.64
2015-16	39.24	164.91	764.60	1,933.05
2016-17	23.41	119.42	708.85	1,805.55
2017-18	12.19	50.42	1,044.66	2,615.15
2018-19	6.35	33.47	1,238.40	3,092.05
2019-20	3.34	20.69	1,716.16	3,120.87
2020-21	5.29	21.74	1,497.59	2,239.83

Source: DGCIS, Kolkata



Table 7.7. Export and import of veneer

Year	Export		Import	
	Quantity (t)	Value (₹ Cr)	Quantity (t)	Value (₹ Cr)
2010-11	13,173.63	71.84	27,773.42	133.54
2011-12	9,363.19	69.84	1,44,145.22	245.02
2012-13	6,072.03	86.71	90,727.52	323.60
2013-14	3,483.88	80.33	1,38,466.31	417.05
2014-15	8,404.86	94.45	2,04,406.49	714.67
2015-16	5,750.17	93.95	2,89,517.86	1,140.85
2016-17	4,803.96	103.17	3,12,186.80	1,338.16
2017-18	4,463.71	105.48	3,25,562.11	1,510.35
2018-19	14,733.37	158.85	3,12,015.32	1,749.37
2019-20	10,858.58	152.17	2,92,163.48	1,843.12
2020-21	26,182.47	130.89	1,79,974.74	1,044.39

Source: DGCIS, Kolkata

Table 7.8. Export and import of plywood

Year	Export		Import	
	Quantity ('000 m ³)	Value (₹ Cr)	Quantity ('000 m ³)	Value (₹ Cr)
2010-11	175.94	62.94	328.72	286.22
2011-12	84.12	97.59	386.42	547.77
2012-13	52.09	89.78	301.72	494.64
2013-14	131.24	146.41	186.45	469.80
2014-15	120.77	179.00	204.05	552.26
2015-16	149.22	270.73	181.54	533.97
2016-17	226.74	184.71	158.57	516.09
2017-18	228.78	209.87	216.30	675.50
2018-19	96.301	223.47	237.60	740.97
2019-20	114.48	239.83	292.10	639.85
2020-21	347.91	208.09	182.82	388.70

Source: DGCIS, Kolkata



Table 7.9. Export and import of particle board

Year	Export		Import	
	Quantity (t)	Value (₹ Cr)	Quantity (t)	Value (₹ Cr)
2010-11	1,499.26	7.41	1,36,347.59	275.47
2011-12	243.49	3.45	1,66,737.91	392.34
2012-13	683.21	4.41	1,16,645.43	316.27
2013-14	351.89	6.45	1,11,649.86	244.30
2014-15	919.79	14.33	1,13,189.16	192.05
2015-16	3,287.39	16.42	1,13,451.09	236.27
2016-17	1,923.88	23.64	1,23,508.19	222.50
2017-18	2,767.41	28.75	1,11,804.81	208.15
2018-19	7,109.91	46.82	1,60,522.01	280.18
2019-20	3,682.25	28.75	1,85,696.31	308.24
2020-21	3,679.88	32.47	95,286.02	175.91

Source: DGCIIS, Kolkata

Table 7.10. Export and import of wood charcoal

Year	Export		Import	
	Quantity (t)	Value (₹ Cr)	Quantity (t)	Value (₹ Cr)
2010-11	20,473	37.59	2,337	1.95
2011-12	29,096	77.21	1,277	2.10
2012-13	32,995	66.66	1,09,192	2.84
2013-14	41,215	85.72	11,721	25.59
2014-15	80,817	132.53	15,313	41.89
2015-16	22,220	49.66	17,467	45.55
2016-17	39,072	87.88	2,776	3.90
2017-18	26,919	79.82	1,627	5.83
2018-19	1,21,837	178.99	24,632	92.55
2019-20	1,13,329	226.15	13,193	35.74
2020-21	91,733	199.30	1,27,378	37.21

Source: DGCIIS, Kolkata



Table 7.11. Export and import of resin

Year	Export		Import	
	Quantity (t)	Value (₹ Cr)	Quantity (t)	Value (₹ Cr)
2010-11	568.95	16.30	12,974.52	33.25
2011-12	1,457.99	46.71	16,647.95	43.62
2012-13	257.28	13.00	16,697.90	51.99
2013-14	339.23	3.66	16,301.55	59.88
2014-15	245.00	4.26	15,908.41	61.99
2015-16	347.80	3.68	18,710.06	71.06
2016-17	177.20	2.04	16,477.45	66.28
2017-18	333.28	2.29	22,800.04	116.43
2018-19	418.90	3.24	18,676.20	121.24
2019-20	59.20	1.58	18,293.60	118.89
2020-21	175.20	4.12	20,654.26	150.77

Source: DGCIS, Kolkata

Table 7.12. Export and import of bamboos and bamboo products

Year	Export		Import	
	Quantity (t)	Value (₹ Cr)	Quantity (t)	Value (₹ Cr)
2010-11	24,003.29	2.77	48,714.93	58.67
2011-12	2,416.08	5.47	43,786.76	109.98
2012-13	1,758.79	5.28	31,718.22	123.43
2013-14	492.32	3.14	30,885.02	146.52
2014-15	6,957.64	10.47	29,379.75	175.69
2015-16	7,497.04	13.21	30,399.85	205.08
2016-17	5,952.70	4.98	30,693.56	234.46
2017-18	11,991.33	9.74	29,338.36	203.51
2018-19	13,992.30	12.05	32,123.53	236.76
2019-20	8,392.03	11.24	58,645.49	459.55
2020-21	8,117.65	12.60	74,465.21	613.18

Source: DGCIS, Kolkata



Table 7.13. Export and import of fuel-wood

Year	Export		Import	
	Quantity (t)	Value (₹ lakh)	Quantity (t)	Value (₹ lakh)
2010-11	67	9.02	428	82.54
2011-12	40	23.19	539	265.99
2012-13	39	11.34	4,380	201.07
2013-14	34	1.66	3,682	203.50
2014-15	115	15.46	129	27.98
2015-16	25	0.31	182	61.02
2016-17	4	1.07	2,346	178.56

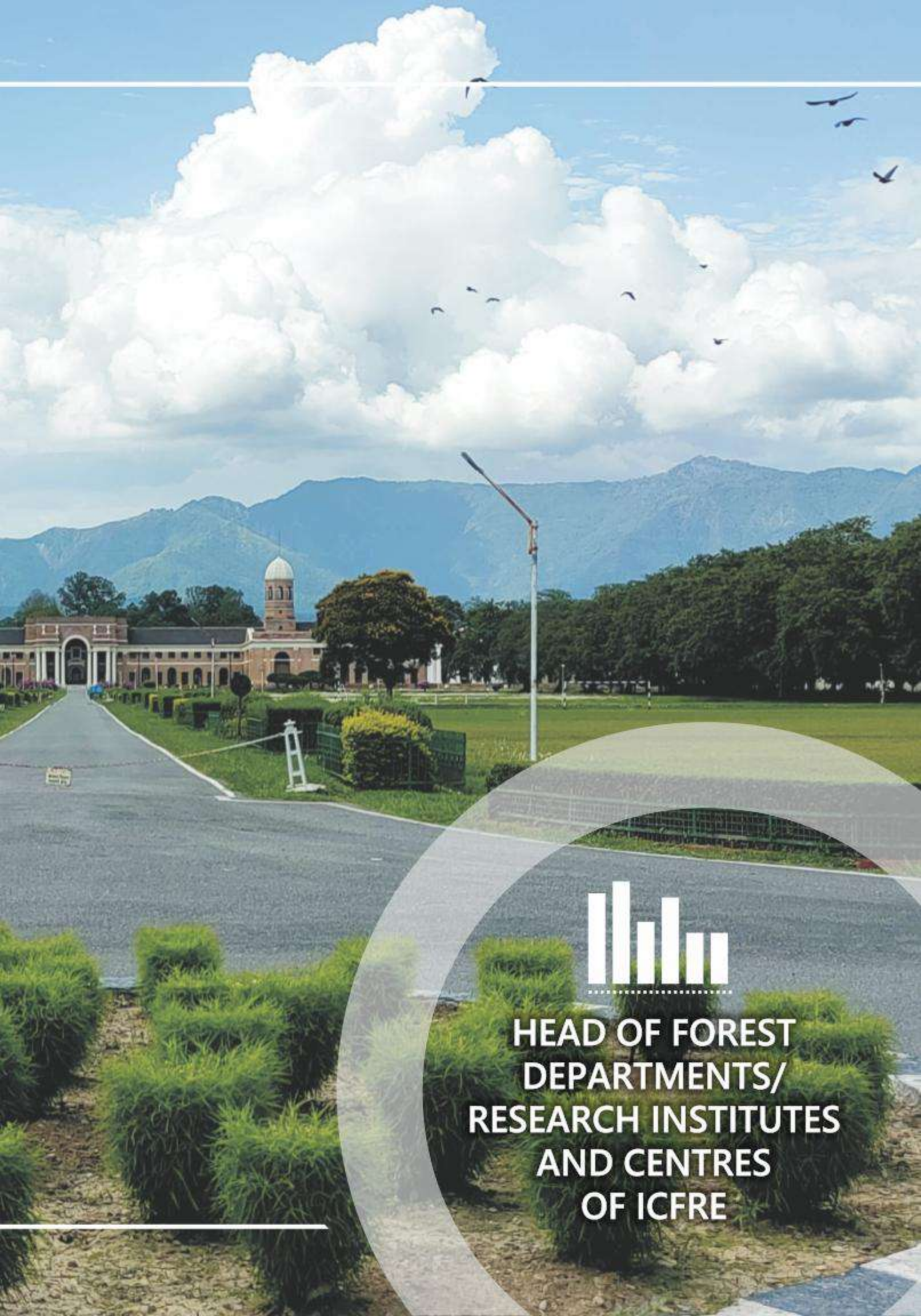
Source: DGCI, Kolkata

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**HEAD OF FOREST
DEPARTMENTS/
RESEARCH INSTITUTES
AND CENTRES
OF ICFRE**



Heads of Forest Departments of States/UTs

State/UT	Address	State/UT	Address
Andhra Pradesh	The Principal Chief Conservator of Forests (HoFF), Andhra Pradesh State Forest Department, Aranya Bhavan, Nagarampalem Guntur-522004, Andhra Pradesh Email: prlccf_hf_apfd@ap.gov.in	Mizoram	The Principal Chief Conservator of Forests (HoFF), Mizoram State Forest Department Tuikhuatlang, Aizwal, (Mizoram) 796001 Email: mizoramforest@yahoo.co.in
Arunachal Pradesh	The Principal Chief Conservator of Forests (HoFF) Arunachal Pradesh State Forest Department, Papum Pare district, Itanagar-791111, Arunachal Pradesh Email: pccfnsecy-arn@nic.in	Nagaland	The Principal Chief Conservator of Forests (HoFF) Nagaland State Forest Department, 797001, Nagaland Email: madirajul@yahoo.com
Assam	The Principal Chief Conservator of Forests (HoFF), Assam State Forest Department, Aranya Bhawan, Panjabari Guwahati-781037, Assam Email: hoff_assam@gov.in	Odisha	The Principal Chief Conservator of Forests (HoFF), Odisha State Forest Department, Aranya Bhawan Chadrashekharpur, Bhubaneswar- 751023, Odisha Email: pccfodisha@gmail.com
Bihar	The Principal Chief Conservator of Forests (HoFF) Bihar State Forest Department, Aranya Bhawan, Shahid Peer Ali Khan Marg, Patna-800014, Bihar Email: pccfbihar@gmail.com	Punjab	The Principal Chief Conservator of Forests (HoFF), Department of Forests & Wildlife Preservation Punjab Forest Complex, Sector- 68, Sahibzada Ajit Singh Nagar, Mohali-160062 Punjab Email: pccfjb@punjab.gov.in
Chhattisgarh	The Principal Chief Conservator of Forests-cum - MD, Rajya Van Vikash Nigam Chhattisgarh State Forest Department Lokesh Plaza, Shankar Nagar Raipur-492007, Chhattisgarh Email: cgpccf.forest@gmail.com	Rajasthan	The Principal Chief Conservator of Forests (HoFF) Rajasthan State Forest Department Jhalana Industrial Area, Aranya Bhawan, Jaipur- 302004, Rajasthan Email: pccf.raj.forest@rajasthan.gov.in
Delhi	The Principal Chief Conservator of Forests, Department of Forest and Wildlife, 2 nd Floor, A- Block, Vikas Bhawan, I.P. Estate, New Delhi-110002 Email: apccfgnctd@gmail.com	Sikkim	The Principal Chief Conservator of Forests Cum-Secretary-Cum Member secretary SMPB, Department of Forest, Environment & Wildlife, Government of Sikkim, East Sikkim- 737101 Email: pccf-fewd@sikkim.gov.in



State/UT	Address	State/UT	Address
Goa	The Principal Chief Conservator of Forests Goa State Forest Department, Goa Van Bhawan, Near IT Hub Altinho-403001, Goa Email: pccf-fore.goa@gov.in	Tamil Nadu	The Principal Chief Conservator of Forests (HoFF) Tamil Nadu State Forest Department No.1, Jeenis Road, Panagal Maligai Building Saidapet, Chennai- 600015, Tamil Nadu Email: pccf-tn@nic.in
Gujarat	The Principal Chief Conservator of Forests (HoFF), Gujarat State Forest Department, A/1, Aranya Bhawan, Near CH-3 circle, Sector-10A, Gandhinagar-382010, Gujarat Email: pccf-gj@nic.in	Telangana	The Principal Chief Conservator of Forests (HoFF) Telangana State Forest Department, Aranya Bhawan, Saifabad-500004, Hyderabad Telangana Email: prlccf_hf_tsfd@telangana.gov.in
Haryana	The Principal Chief Conservator of Forests (HoFF), Haryana State Forest Department, Van Bhawan, Sector-6, Plot no. C-18, Panchkula-134109, Haryana Email: pccf-hry@nic.in	Tripura	The Principal Chief Conservator of Forests (HoFF), Tripura State Forest Department, Aranya Bhawan, Pandit Nehru Complex, Gorkha Basti PO Kurja Van, Agartala-799006, Tripura Email: tr011@ifs.nic.in
Himachal Pradesh	The Principal Chief Conservator of Forests (HoFF), Himachal Pradesh State Forest Department, Talland, Shimla-171001, Himachal Pradesh Email: pccf-hp@nic.in	Uttar Pradesh	The Principal Chief Conservator of Forests (HoFF), Uttar Pradesh State Forest Department, 17, Rana Pratap Marg Lucknow- 226001, Uttar Pradesh Email: pccf-up@nic.in
Jammu & Kashmir	The Principal Chief Conservator of Forests (HoFF), Jammu & Kashmir State Forest Department Forest Complex, Shekh Bagh, Lal Chowk, Sri Nagar-190001 Email: pccf-jk@nic.in	Uttarakhand	The Principal Chief Conservator of Forests (HoFF), Uttarakhand State Forest Department, Rajpur Road, Dehradun-248001, Uttarakhand Email: pccf-forest-uk@nic.in; pccfuk@gmail.com
Jharkhand	The Principal Chief Conservator of Forests (HoFF), Jharkhand State Forest Department, Van Bhawan, Doranda,Ranchi-834002, Jharkhand Email: pccfjhk@jharkhandmail.gov.in	West Bengal	The Principal Chief Conservator of Forests (HoFF) West Bengal State Forest Department Aranya Bhawan, Block No. LA-10A Sector III, Salt lake City, Kolkata - 700098, West Bengal Email: pccfwb@vsnl.net



State/UT	Address	State/UT	Address
Karnataka	The Principal Chief Conservator of Forests (HoFF), Karnataka State Forest Department, Aranya Bhawan, 18 th Cross, Malleshwaram, Banglore-560003, Karnataka Email: pccfkar@gmail.com	Andaman and Nicobar Islands	The Principal Chief Conservator of Forests Andaman & Nicobar State Forest Department, Van Sadan, P.O. HADDO Port Blair-744102, A&N Islands Email: pccfani@gmail.com
Kerala	The Principal Chief Conservator of Forests (HoFF), Kerala Forest Department, State Forests Headquarters, Vazuthacaud Thiruvanthpuram-695014, Kerala Email: pccf.for@kerala.gov.in	Chandigarh	The Chief Conservator of Forests ParyavaranBhawan, 2 nd Floor, Madhya Marg, Sector-19 B Chandigarh- 160019 Email: cf.chandigarh@gmail.com
Madhya Pradesh	The Principal Chief Conservator of Forests (HoFF) Madhya Pradesh State Forest Department, Satpuda Bhawan, 1 st Floor, Bhopal-46200, Madhya Pradesh) Email: pccfmp@mp.gov.in	Dadra & Nagar Haveli	The Chief Conservator of Forests Dadra & Nagar Haveli Forest Department, Moti Daman, Fort Area Secretariat,Silvasa- 396230 Email: dcft-dnh@nic.in
Maharashtra	The Principal Chief Conservator of Forests (HoFF), Maharashtra State Forest Department, Van Bhawan, Civil Lines, Nagpur-440001, Maharashtra Email: pccfhoffms@gmail.com	Daman & Diu	The Chief Conservator of Forests Daman and Diu Forest Department, Moti Daman, Fort Area Secretariat, Silvasa-396230 Email: dcft-dnh@nic.in
Manipur	The Principal Chief Conservator of Forests (HoFF), Manipur State Forest Department, Sanjenthong, Imphal-795001, Manipur Email: pccf-mn@nic.in	Lakshadweep	The Conservator of Forests Lakshadweep Forest Department, Kavaratti Islands (Via I.P.O.) Calicut – 673355, Lakshadweep Email: cf-ld@nic.in
Meghalaya	The Principal Chief Conservator of Forests (HoFF), Meghalaya State Forest Department, Sylvan House, Lower Lachumiere Shillong- 793001, Meghalaya Email: pccfmegh@gmail.com	Puducherry	The Conservator of Forest Puducherry Forest Department Government of Puducherry No.1 Beach Road, Puducherry-605001 Email: dc.pon@nic.in



Research Institutes and Centres of ICFRE

Institute/Centre	Jurisdiction State	Address
Indian Council of Forestry Research and Education (ICFRE HQ), Dehradun	PAN India	The Director General, Indian Council of Forestry Research and Education, P.O. New Forest, Dehradun - 248006 Email: dg@icfre.org Web: https://icfre.gov.in
Arid Forest Research Institute, Jodhpur	Dadra and Nagar Haveli Daman & Diu Gujarat Rajasthan	The Director, Arid Forest Research Institute, New Pali Road, Jodhpur - 342005 Email: dir_afri@icfre.org Web: http://afri.icfre.org
Forest Research Institute, Dehradun	Chandigarh Delhi Haryana Punjab Uttarakhand Uttar Pradesh	The Director, Forest Research Institute, P.O. New Forest, Dehradun - 248006 Email: dir_fri@icfre.org Web: http://fri.icfre.gov.in
Himalayan Forest Research Institute, Shimla	Himachal Pradesh Jammu and Kashmir	The Director, Himalayan Forest Research Institute, Panthaghati, Shimla - 171009 Email: dir_hfri@icfre.org Web: http://hfri.icfre.gov.in
Institute of Forest Biodiversity, Hyderabad	Odisha Telangana	The Director, Institute of Forest Biodiversity, Dulapally, Kompally (SO), Hyderabad - 500100 Email: director_ifb@icfre.org Web: http://ifb.icfre.gov.in
Institute of Forest Genetics and Tree Breeding, Coimbatore	Andaman and Nicobar Islands Kerala Lakshadweep Puducherry Tamil Nadu	The Director, Institute of Forest Genetics and Tree Breeding, R.S. Puram, Coimbatore - 641002 Email: dir_ifgtb@icfre.org Web: http://ifgtb.icfre.gov.in
Institute of Forest Productivity, Ranchi	Bihar Jharkhand West Bengal	The Director, Institute of Forest Productivity, Lalgutwa, Ranchi - 835303 Email: dir_ifp@icfre.org Web: http://ifp.icfre.org
Institute of Wood Science and Technology, Bengaluru	Andhra Pradesh Goa Karnataka	The Director, Institute of Wood Science and Technology, 18th Cross, Malleshwaram, Bengaluru - 560003 Email: dir_iwst@icfre.org Web: http://iwst.icfre.org



Institute/Centre	Jurisdiction State	Address
Rain Forest Research Institute, Jorhat	Arunachal Pradesh Assam Manipur Meghalaya Mizoram Nagaland Sikkim Tripura	The Director, Rain Forest Research Institute, A.T. Road (East), Jorhat - 785101 Email: dir_rfri@icfre.org Web: http://rfri.icfre.gov.in
Tropical Forest Research Institute, Jabalpur	Chhattisgarh Madhya Pradesh Maharashtra Odisha	The Director, Tropical Forest Research Institute, Mandla Road, Jabalpur - 482021 Email: dir_tfri@icfre.org Web: http://tfri.icfre.org
Forest Research Center for Skill Development, Chhindwara	Centre of Tropical Forest Research Institute, Jabalpur	The Head, Forest Research Center for Skill Development Parasia Road, Chhindwara - 480001 Email: cfrhrd@icfre.gov.in Web: https://fresd.icfre.org
Forest Research Centre for Bamboo and Rattan, Aizawl	Centre of Rain Forest Research Institute, Jorhat	The Head, Forest Research Centre for Bamboo & Rattan Bethlehem Vengthlang, Aizawl - 796007 Email: dir_arcbr@icfre.org
Forest Research Centre for Eco-Rehabilitation, Allahabad	Centre of Forest Research Institute, Dehradun	The Head, Forest Research Centre for Eco-Rehabilitation, 3/1, Lajpat Rai Road, New Katra, Allahabad - 211002 Email: dir_csfer@icfre.org Web: https://frcer.icfre.org
Forest Research Centre for Livelihood Extension, Agartala	Centre of Rain Forest Research Institute, Jorhat	The Head, Forest Research Center for Livelihood Extension Agartala Shal Bagan Forest Campus, Gandhigram, Agartala, Tripura - 799012 Email: head_frele@icfre.org
Forest Research Centre for Coastal Ecosystem, Visakhapatnam	Centre of Institute of Forest Biodiversity, Hyderabad	The Head, Forest Research Centre for Coastal Ecosystem, Via Yoga Village, Beach Road, Visakhapatnam - 530003 Email: head_FRCCE_Vizag@icfre.org



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