

Forests & Protected Areas

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Table 10.1: Assessment of Recorded Forest Area

Forest	Year of Assessment		
	2011	2013	2015
Reserved Forests (sq. km.)	1,467	1,467	1,467
Protected Forest (sq. km.)	4,171	4,171	4,171
Un classed Forest (sq. km.)	11,780	11,780	11,780
Total Forest Area (sq. km.)	17,418	17,418	17,418
% of Forest Area to State's Geographical Area	78.01%	78.01%	78.01%
% of India's Forest Area	2.28%	2.28%	2.28%

Table 10.2: Assessment of Forest Cover

Forest	Year of Assessment		
	2011	2013	2015
Very Dense Forest (sq. km.)	730	728	727
Moderate Dense Forest (sq. km.)	6,151	6,094	5,925
Open Forest (sq. km.)	10,209	10,168	10,342
Total Forest Cover (sq. km.)	17,090	16,990	16,994
% of Forest Cover to State's Geographical Area	76.54	76.10	76.11
% of India's Forest Area	2.47	2.44	2.42

Table 10.3: Year-wise Forest Cover

(in sq. km.)

Year of Assessment	Total Forest Cover
2001	17,889
2003	17,259
2005	17,086
2007	17,280
2009	17,280
2011	17,090
2013	16,990
2015	16,994

Source (Tables 10.1-10.3): Forest Survey of India, Dehradun, Uttarakhand, Ministry of Environment, Forest and Climate Change, Govt. of India (India State of Forest Report, 2011, 2013, 2015). <http://fsi.nic.in/>; (Accessed on 16.08.2016)

Table 10.4: District-wise Forest Cover

(in sq. km.)

District	Geographical Area (G.A.)	2015 Assessment				Percent of G.A. (%)	Change	Scrub
		Very Dense Forest	Mod. Dense Forest	Open Forest	Total			
Bishnupur	496	0	1	20	21	4.23	0	1
Chandel	3,313	0	710	2,097	2,807	84.73	18	156
Churachandpur	4570	36	1,633	2,626	4,295	93.98	9	70
Imphal East	669	0	52	190	242	36.17	22	11
Imphal West	559	0	17	39	56	10.02	1	1
Senapati	3,271	229	822	1,126	2,177	66.55	4	308
Tamenglong	4,391	281	1,707	1,766	3,754	85.49	-111	84
Thoubal	514	0	3	97	100	19.46	45	10
Ukhrul	4,544	181	980	2,381	3,542	77.95	16	541
Grand Total	22,327	727	5,925	10,342	16,994	76.11	4	1182

Table 10.5: Forest Cover Change Matrix

(in sq. km)

2013 Assessment	2015 Assessment					Total (ISFR 2013)
	VDF	MDF	OF	Scrub	NF	
Very Dense Forest (VDF)	725	0	1	1	1	728
Moderately Dense Forest	1	5,869	69	34	121	6,094
Open Forest	0	13	9,489	259	407	10,168
Scrub	0	0	0	1	0	1
Non Forest (NF)	1	43	783	887	3,622	5,336
Total (ISFR 2015)	727	5,925	10,342	1,182	4,151	22,327
Net Change	-1	-169	174	1,181	-1,185	-

Source (Tables 10.4-10.5): Forest Survey of India, Dehradun, Uttarakhand, Ministry of Environment, Forest and Climate Change, Govt. of India (India State of Forest Report, 2011, 2013, 2015). <http://fsi.nic.in/>; (Accessed on 20.08.2016)

Table 10.6: Altitude-wise Forest Cover

(in sq. km.)

Altitude Zone	2015 Assessment			
	VDF	MDF	OF	Total
0-500	7	781	2,260	3,048
500-1000	18	1,844	4,140	6,002
1000-2000	389	3,128	3,854	7,371
2000-3000	313	172	88	573
Total	1,296	4,695	6,975	12,966

VDF=Very Dense Forest; MDF= Moderate Dense Forest; OF= Open Forest

Table 10.7: Forest Cover within/outside Green Wash

Forest Cover within Green Wash	
Very Dense Forest (sq. km.)	721
Moderately Dense Forest (sq. km.)	5,426
Open Forest (sq. km.)	8,795
Sub Total (sq. km.)	14,942
Forest Cover outside Green Wash	
Very Dense Forest (sq. km.)	6
Moderately Dense Forest (sq. km.)	505
Open Forest (sq. km.)	1,541
Sub Total (sq. km.)	2,052
Total Forest Cover (sq. km.)	16,994
Tree Cover (sq. km.)	243
Total Forest & Tree Cover (sq. km.)	17,237
Per capita Forest & Tree Cover (ha)	0.671
% of State's Geographical Area	77.20
% of India's Forest & Tree Cover	2.17

Source (Tables 10.6-10.7): Forest Survey of India, Dehradun, Uttarakhand, Ministry of Environment, Forest and Climate Change, Govt. of India (India State of Forest Report, 2011, 2013, 2015). <http://fsi.nic.in/>; (Accessed on 16.08.2016)

Table 10.8: Estimates of Tree Cover

Year	Tree Cover	
	Area (sq. km.)	% of G.A.
2011	193	0.86
2013	224	1.00
2015	243	1.09

Source: Forest Survey of India, Dehradun, Uttarakhand, Ministry of Environment, Forest and Climate Change, Govt. of India (India State of Forest Report, 2011, 2013, 2015).
<http://fsi.nic.in/>; (Accessed on 16.08.2016)

Table 10.9: Growing Stock in different Forest Area

Growing Stock	2015 Assessment
	(volume in million cum)
Growing Stock in Recorded Forest Area	51.38
Growing Stock in TOF	9.02

TOF= Tree outside Forests

Source: Forest Survey of India, Dehradun, Uttarakhand, Ministry of Environment, Forest and Climate Change, Govt. of India (India State of Forest Report, 2015).
<http://fsi.nic.in/>; (Accessed on 16.06.2016)

Table 10.10: Forest Types

Forest Types	(Area in km ²)	
	Area	Percent
2B/C2 Cachar Tropical Semi-Evergreen Forest	2783.43	16.25
2/2S1 Secondary Moist Bamboo Brakes	1414.02	8.26
2B/2S1 Pioneer Euphorbiaceous Scrub	52.75	0.31
3/3C3b East Himalayan Moist Mixed Deciduous Forest	522.89	3.05
8B/C1 East Himalayan Subtropical Wet Hill Forest	8640.52	50.46
8B/C2 Khasi Subtropical Wet Hill Forest	387.11	2.26
8B/2S1 Assam Subtropical Pine Forest	38.22	0.22
9/C2 Assam Subtropical Pine Forest	1374.24	8.03
9/C2 Assam Subtropical Pine Savannah	76.02	0.44
11B/C1b Buk Oak Forest	1791.23	10.46
Plantation/TOF	44.57	0.26
Total	17125.00	100.00

Source: Atlas Forest Types of India, 2011, Ministry of Environment, Forest & Climate Change, Forest Survey of India, Govt. of India (India State of Forest Report 2015).
<http://fsi.nic.in/isfr-2015/isfr-2015-forest-and-tree-resources-in-states-and-union-territories.pdf>
 (Accessed on 17.08.2016)

Table 10.11: Forest Cover Informatics in Different Patch Size Class

Patch Size Range in (sq km)	No. of Patches	Area (sq km)	% age
>=0.01 <= 1.0	414	305	1.80
> 1.0 <= 10	113	280	1.65
>10 <= 100	4	176	1.04
>100 <= 500	1	196	1.14
>500 <= 1000	1	703	4.14
>1000 <= 5000	0	0	0
>5000 <= 10000	0	0	0
>10000	1	15334	90.23
Total	534	16994	100

Source: Ministry of Environment, Forest & Climate Change, Forest Survey of India (India State of Forest Report 2015).

<http://fsi.nic.in/isfr-2015/isfr-2015-forest-and-tree-resources-in-states-and-union-territories.pdf>
(Accessed on 17.06.2016)

Table 10.12: Grants-in-Aids for Forests by 13th Finance Commission

(in Rs. Crore)

Year	Grant-in-Aids
2010-11	18.79
2011-12	18.79
2012-13	37.58
2013-14	37.58
2014-15	37.58
2010-2015	150.32

Source: Indian Council Forestry Research Education (ICFRE), MoEF & CC, Govt. of India; State Forest Departments (Forestry Statistics India, 2011).

<http://www.icfre.org/UserFiles/File/Institute-ICFRE/2013/Stat/Forestry-stat-07Mar13.htm>
(Accessed on 20.06.2016)

Table 10.13: Outturn and Value of Forest Production

(Value: Rs. in lakhs)

Name of Product	Unit	2010-11		2011-12		2012-13		2013-14	
		Quantity	Value	Quantity	Value	Quantity	Value	Quantity	Value
Major Forest Product									
Teak	Cum.	-	-	-	-	-	-	-	-
Timber other than teak	Cum.	51502.322	124.35	21574.154	193.35	2975.35	108.26	5216.8	139.30
Fire wood	Ton	18961.778	18.95	22255.38	28.34	24777.455	40.30	20662.82	32.90
Sub-Total		70464.10	143.30	43829.53	221.69	27752.81	148.56	25879.62	172.2
Minor Forest Product									
Cane	Rm.	30675	1.26	282000	1.94	232000	1.83	104900	0.73
Stone	Cum.	134563.32	22.04	176509.02	44.48	113934	40.47	161977.3	47.28
Sand	Cum.	95355.49	10.90	134680.55	28.16	168300	40.53	45544.2	16.95
Earth	Cum.	2029	0.44	13026.61	2.32	8946	2.68	5216	1.56
Thatching Grass	Bdls.	-	-	-	-	-	-	-	-
Bamboo	Nos.	15,08,010	5.78	9,85,653	10.42	1642050	16.89	2111420	27.47
Charcoal	Qtl.	653	0.35	1267	0.49	401	0.55	400	0.68
Broom	Kg.	-	0.26	-	0.19	160010	1.82	312360	2.39
Agar	Qtl.	-	-	-	-	-	-	-	-
Dalchini	Qtl.	-	-	-	-	-	-	-	-
Others	-	-	-	-	-	-	-	-	-
Sub-Total		1771285.81	41.03	1593136.18	88	2325641	104.77	2741818	97.06

- Not Available

Source: Forest Department, Government of Manipur, Directorate of Economics & Statistics, Lamphelpat, Govt. of Manipur (Economic Survey, Manipur 2015-16)

<http://desmanipur.gov.in/files/NewsFiles/16Mar2016121358ESM,15-16%20FINAL%20-%20Copy%20PDF.pdf>; (Accessed on 22.07.2016)

Table 10.14: Revenue Collected from various Forest Product

Year	Revenue Collected (Rs. Lakhs)
2009-10	202.65
2010-11	198.36
2011-12	324.29
2014-15	383.19

Table 10.15: Revenue Receipts and Expenditure on Forestry and Wild life

(Rs. in lakhs)

Year	Receipts	Expenditure	Net Revenue/Deficit
2011-12	345.60	6804.13	(-)6458.53
2012-13	293.74	7117.76	(-)6824.02
2013-14	271.27	7933.09	(-)7561.82
2014-15(RE)	400.97	11247.13	(-)10846.16
2015-16(BE)	433.00	12987.52	(-)12554.52

RE=Revised Estimates; BE=Budget Estimates

Source (Tables 10.14-10.15): Annual Administrative report, Department of Forest. Directorate of Economics & Statistics, Lamphelpat, Govt. of Manipur (Economic Survey, Manipur 2015-16). <http://desmanipur.gov.in/files/NewsFiles/16Mar2016121358ESM,15-16%20FINAL%20-%20Copy%20PDF.pdf>; (Accessed on 22.07.2016)

Table 10.16: Details of National Parks, Wildlife Sanctuaries and RAMSAR Sites

Name of District	Name of NPs /Sanctuaries/ Conservation Reserve/RAMSAR sites	Year of Establishment	Area (km ²)
National Parks (1)			
Bishnupur	Keibul-Lamjao	1977	40.00
Total Area			40.00
Wildlife Sanctuaries (1)			
Chandel	Yangoupokpi Lokchao WLS	1989	184.00
Total Area			184.00
RAMSAR Wetlands Sites (1)			
Imphal	Loktak Lake	1990	945

Source: Wildlife Institute of India, MoEF & CC, Govt. of India.http://wii.gov.in/images//images/documents/n_parks_nov_2015.pdfhttp://wii.gov.in/images//images/documents/wls_nov_2015.pdf; (Accessed on 22.06.2016)