

Forests & Protected Areas

List of Tables

- 10.1:** Assessment of Recorded Forest Area
- 10.2:** Assessment of Forest Cover
- 10.3:** Year-wise Forest Cover
- 10.4:** District-wise Forest Cover
- 10.5:** Forest Cover Change Matrix
- 10.6:** Altitude-wise Forest Cover
- 10.7:** Forest Cover within/outside Green Wash
- 10.8:** Estimates of Tree Cover
- 10.9:** Growing Stock in different Forest Area
- 10.10:** Forest Types
- 10.11:** Forest Cover Informatics in Different Patch Size Class
- 10.12:** Grants-in-Aids for Forests by 13th Finance Commission
- 10.13:** Detail of National Parks and Wildlife Sanctuaries

Table 10.1: Assessment of Recorded Forest Area

| Forest | Year of Assessment | | |
|---|--------------------|-------|-------|
| | 2011 | 2013 | 2015 |
| Reserved Forests (sq. km.) | 1,113 | 1,113 | 1,113 |
| Protected Forest (sq. km.) | 12 | 12 | 12 |
| Un classed Forest (sq. km.) | 8,371 | 8,371 | 8,371 |
| Total Forest Area (sq. km.) | 9,496 | 9,496 | 9,496 |
| % of Forest Area to State's Geographical Area | 42.34 | 42.34 | 42.34 |
| % of India's Forest Area | 1.23 | 1.23 | 1.23 |

Table 10.2: Assessment of Forest Cover

| Forest | Year of Assessment | | |
|--|--------------------|--------|--------|
| | 2011 | 2013 | 2015 |
| Very Dense Forest (sq. km.) | 433 | 449 | 449 |
| Moderate Dense Forest (sq. km.) | 9,775 | 9,689 | 9,584 |
| Open Forest (sq. km.) | 7,067 | 7,150 | 7,184 |
| Total Forest Cover (sq. km.) | 17,275 | 17,288 | 17,217 |
| % of Forest Cover to State's Geographical Area | 77.23 | 77.08 | 76.76 |
| % of India's Forest Cover | 2.50 | 2.48 | 2.45 |

Table 10.3: Year-wise Forest Cover

(in sq. km.)

| Year of Assessment | Total Forest Cover |
|--------------------|--------------------|
| 2001 | 16,535 |
| 2003 | 16,925 |
| 2005 | 16,988 |
| 2007 | 17,321 |
| 2009 | 17,321 |
| 2011 | 17,275 |
| 2013 | 17,288 |
| 2015 | 17,217 |

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 16.02.2017)

Table 10.4: District-wise Forest Cover

(in sq. km.)

| District | Geo-graphical | Very Dense Forest | Mod. Dense Forest | Open Forest | Total | Percent of GA | Change | Scrub |
|--------------------|---------------|-------------------|-------------------|--------------|---------------|---------------|------------|------------|
| East Garo Hills | 2,603 | 61 | 1,068 | 1,095 | 2,224 | 85.44 | -17 | 33 |
| Easst Khasi Hills | 2,820 | 0 | 1,061 | 722 | 1,783 | 63.23 | -33 | 90 |
| Jaintia | 3,819 | 100 | 1,557 | 910 | 2,567 | 67.22 | 21 | 59 |
| Ribhoi | 2,376 | 162 | 1,129 | 801 | 2,092 | 88.05 | -4 | 19 |
| South Garo Hills | 1,849 | 43 | 988 | 611 | 1,642 | 88.80 | -6 | 19 |
| West Garo Hills | 3,715 | 0 | 1,277 | 1,652 | 2,929 | 78.84 | -17 | 59 |
| West Khasi Hills | 5,247 | 83 | 2,504 | 1,393 | 3,980 | 75.85 | -15 | 69 |
| Grand Total | 22,429 | 449 | 9,584 | 7,184 | 17,217 | 77.217 | -71 | 348 |

Table 10.5: Forest Cover Change Matrix

(in sq. km.)

| Class | 2015 Assessment | | | | | Total ISFR 2013 |
|-------------------------|-----------------|------|------|-------|------|-----------------|
| | VDF | MDF | OF | Scrub | NF | |
| Very Dense Forest | 449 | 0 | 0 | 0 | 0 | 449 |
| Moderately Dense Forest | 0 | 9457 | 47 | 0 | 185 | 9689 |
| Open Forest | 0 | 42 | 6814 | 26 | 268 | 7150 |
| Scrub | 0 | 0 | 74 | 250 | 48 | 372 |
| Non Forest | 0 | 85 | 249 | 72 | 4363 | 4769 |
| Total ISFR 2015 | 449 | 9584 | 7184 | 348 | 4864 | 22429 |
| Net Change | 0 | -105 | 34 | -24 | 95 | |

Table 10.6: Altitude-wise Forest Cover

(in sq. km.)

| Altitude Zone | 2015 Assessment | | | |
|---------------|-----------------|--------------|--------------|---------------|
| | VDF | MDF | OF | Total |
| 0-500 | 249 | 4196 | 4123 | 8568 |
| 500-1000 | 192 | 2785 | 2206 | 5183 |
| 1000-2000 | 8 | 2603 | 855 | 3466 |
| Total | 1,296 | 4,695 | 6,975 | 12,966 |

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

Source (Tables 10.4-10.6): 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 20.02.2017)

Table 10.7: Forest Cover within/outside Green Wash

| Forest Cover within Green Wash | |
|--|--------------|
| Very Dense Forest | 416 sq km |
| Moderately Dense Forest | 7,877 sq km |
| Open Forest | 6,458 sq km |
| Sub Total | 14,751 sq km |
| Forest Cover outside Green Wash | |
| Very Dense Forest | 33 sq km |
| Moderately Dense Forest | 1,707 sq km |
| Open Forest | 726 sq km |
| Sub Total | 2,466 sq km |
| Total Forest Cover | 17,217 sq km |
| Tree Cover | 710 sq km |
| Total Forest Tree Cover | 17,927 sq km |
| Per Capita Forest & Tree Cover | 0.606 ha |
| Of State's Geographical Area | 79.93 % |
| Of India's Forest & Tree Cover | 2.26 % |

Table 10.8: Estimates of Tree Cover

| Year | Tree Cover | |
|-------------|-----------------------|------------------|
| | Area (sq. km.) | % of G.A. |
| 2011 | 578 | 2.58 |
| 2013 | 668 | 2.98 |
| 2015 | 710 | 3.17 |

Source (Tables 10.7-10.8): 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 16.02.2017)

Table 10.9: Growing Stock in different Forest Area

| Growing Stock | 2015 Assessment |
|---------------------------------------|-------------------------|
| | (volume in million cum) |
| Growing Stock in Recorded Forest Area | 39.72 |
| Growing Stock in TOF | 19.08 |

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 16.02.2017)

Table 10.10: Forest Types

| Forest Types | Area (sq. km.) | Percent (%) |
|--|-----------------|---------------|
| 1B/C3 Cachar Tropical Evergreen Forest | 1611.79 | 9.39 |
| 1B/2S1 Pioneer Euphorbiaceous Scrub | 181.54 | 1.06 |
| 2B/C1a Assam Alluvial Plains Semi-Evergreen Forest | 148.21 | 0.86 |
| 2/2S1 Secondary Moist Bamboo Brakes | 182.75 | 1.07 |
| 3C/C1a (ii) Khasi Hill Sal Forest | 1527.69 | 8.90 |
| 3C/C3b East Himalayan Moist Mixed Deciduous Forest | 9052.23 | 52.72 |
| 8B/C2 Khasi Subtropical Wet Hill Forest | 3041.18 | 17.71 |
| 9/C2 Assam Subtropical Pine Forest | 1423.61 | 8.29 |
| Total | 17169.00 | 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 17.02.2017)

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 | 6979 | 370 | 2.15 |
| > 1.0 <= 10 | 85 | 229 | 1.33 |
| >10 <= 100 | 4 | 79 | 0.46 |
| >100 <= 500 | 0 | 0 | 0.0 |
| >500 <= 1000 | 0 | 0 | 0.0 |
| >1000 <= 5000 | 1 | 1201 | 6.98 |
| >5000 <= 10000 | 0 | 0 | 0.0 |
| >10000 | 1 | 15338 | 89.08 |
| Total | 7070 | 17217 | 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 17.02.2017)

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

(in Rs. Crore)

| Year | Grant-in-Aids |
|-----------|---------------|
| 2010-11 | 21.01 |
| 2011-12 | 21.01 |
| 2012-13 | 42.02 |
| 2013-14 | 42.02 |
| 2014-15 | 42.02 |
| 2010-2015 | 168.08 |

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 20.02.2017)

Table 10.13: Detail of National Parks and Wildlife Sanctuaries

| Name of District | Name of NPs /Sanctuaries/ Conservation Reserve/RAMSAR sites | Year of Establishment | Area (km ²) |
|---------------------------------|---|--------------------------|----------------------------|
| National Parks (2) | | | |
| South Garo Hills | Balphakram | 1985 | 220.00 |
| West Garo Hills | Nokrek Ridge | 1986 | 47.48 |
| Total Area | | | 267.48 |
| Wildlife Sanctuaries (1) | | | |
| South Garo Hills | Baghmara Pitcher Plant WLS | 1984 | 0.02 |
| Ri Bhoi | Nongkhyllem WLS | 1981 | 29.00 |
| South Garo Hills | Siju WLS | 1979 | 5.18 |
| Total Area | | | 34.20 |

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