

7.24
SIKKIM

| | |
|---|-------------------------|
| Geographical Area | 7,096 sq km |
| Population (as per Census 2011) | 0.611 million |
| Urban | 0.145 million (25.20%) |
| Rural | 0.457 million (74.80%) |
| Tribal | 0.206 million (33.72 %) |
| Average Population Density | 86 per sq km |
| Livestock population (as per 18th Live Stock Census) | 0.270 million |
| No. of Districts (as per Census 2001) | 4 |
| No. of Hill Districts | 4 |
| No. of Tribal Districts | 4 |

Land Use Pattern

| Land Use | Area in '000 ha | Percentage |
|--|-----------------|------------|
| Total Geographical Area | 710 | |
| Reporting area for land utilization | 693 | 100 |
| Forests | 584 | 84.31 |
| Not available for cultivation | 11 | 1.54 |
| Permanent pastures and other grazing lands | 0 | 0 |
| Land under Misc. Tree crops and groves | 8 | 1.13 |
| Culturable wasteland | 3 | 0.48 |
| Fallow lands other than current fallows | 4 | 0.65 |
| Current fallows | 5 | 0.72 |
| Net area sown | 77 | 11.17 |

Source: Landuse Statistics, Ministry of Agriculture, GOI, 2012-13.

| Forest Cover Within Green Wash | |
|--|--------------------|
| Very Dense Forest | 390 sq km |
| Moderately Dense Forest | 1,323 sq km |
| Open Forest | 252 sq km |
| Sub Total | 1,965 sq km |
| Forest Cover Outside Green Wash | |
| Very Dense Forest | 110 sq km |
| Moderately Dense Forest | 837 sq km |
| Open Forest | 445 sq km |
| Sub Total | 1,392 sq km |
| Total Forest Cover | 3,357 sq km |
| Tree Cover | 35 sq km |
| Total Forest & Tree Cover | 3,392 sq km |
| Per capita Forest & Tree Cover | 0.556 ha |
| Of State's Geographical Area | 47.80 % |
| Of India's Forest & Tree Cover | 0.43 % |

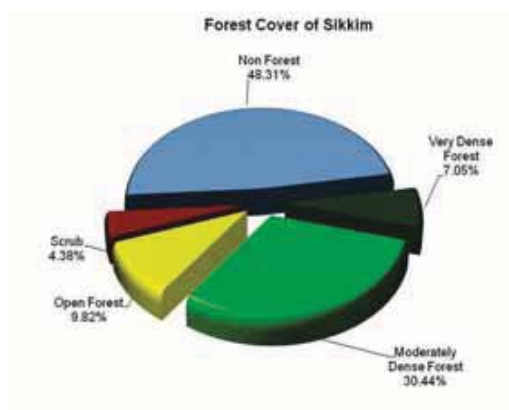
Forest Cover Informatics in Different Patch Size Class

| S.No. | Patch Size Range in (sq km) | No. of Patches | Area (sq km) | %age |
|-------|-----------------------------|----------------|--------------|------------|
| 1. | <= 0.01 <=1.0 | 647 | 41 | 1.22 |
| 2. | > 1.0 <= 10 | 10 | 23 | 0.68 |
| 3. | > 10 <= 100 | 2 | 109 | 3.24 |
| 4. | > 100 <= 500 | 0 | 0 | 0.00 |
| 5. | > 500 <= 1000 | 0 | 0 | 0.00 |
| 6. | > 1000 <= 5000 | 1 | 3,184 | 94.86 |
| 7. | > 5000 <= 10000 | 0 | 0 | 0.00 |
| 8. | > 10000 | 0 | 0 | 0.00 |
| | Total | 660 | 3,357 | 100 |

Forest Types

| Forest Type | (Area in km ²) | |
|--|----------------------------|---------------|
| | Area | Percent |
| 3C/C1a (i) East Himalayan Sal | 40.29 | 1.11 |
| 3C/C3b East Himalayan Moist Mixed Deciduous Forest | 146.44 | 4.04 |
| 8B/C1 East Himalayan Subtropical Wet Hill Forest | 911.89 | 25.15 |
| 11B/C1b Buk Oak Forest | 898.17 | 24.78 |
| 12/C3a East Himalayan Mixed Coniferous Forest | 232.63 | 6.42 |
| 12/DS1 Montane Bamboo Brakes | 1.05 | 0.03 |
| 14/C2 East Himalayan Sub-Alpine Birch/Fir Forest | 978.63 | 27.00 |
| 15/C1 Birch/Rhododendron Scrub | 139.63 | 3.85 |
| 15/E1 Dwarf Rhododendron Scrub | 55.38 | 1.53 |
| 15/E2 Dwarf Juniper Scrub | 149.08 | 4.11 |
| Plantation/TOF | 71.81 | 1.98 |
| Total | 3,625.00 | 100.00 |

Source: Atlas Forest Types of India, 2011



Growing Stock

| | |
|---------------------------------------|-------------------|
| Growing Stock in Recorded Forest Area | 25.28 million cum |
| Growing Stock in TOF | 2.04 million cum |

Recorded Forest Area

| | |
|------------------------------|--------------------|
| Reserved Forest | 5,452 sq km |
| Protected Forest | 389 sq km |
| Unclassed Forest | 0 sq km |
| Total | 5,841 sq km |
| Of State's Geographical Area | 82.31 % |
| Of India's Forest Area | 0.76 % |

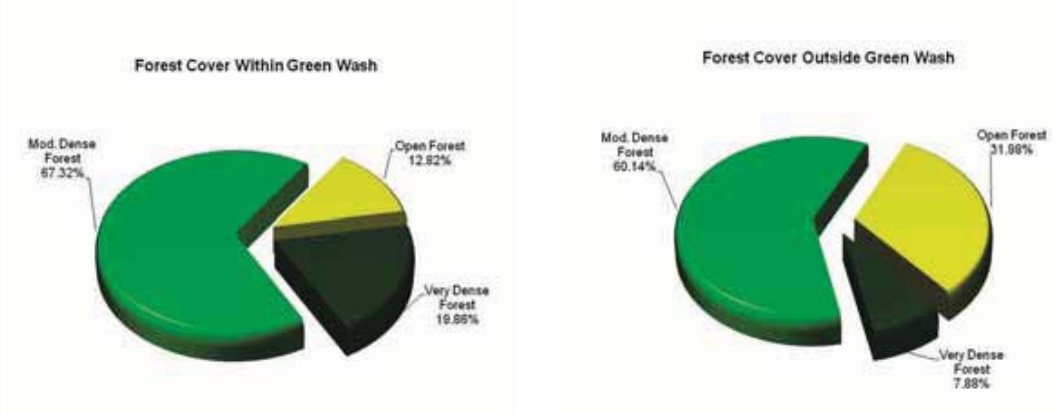


Table 7.24a: District-wise Forest Cover of Sikkim

| District-wise Forest Cover (Area in km²) | | | | | | | | |
|--|--------------------|-------------------|-------------------|-------------|--------------|---------------|-----------|------------|
| District | Geo-graphical Area | Very Dense Forest | Mod. Dense Forest | Open Forest | Total | Percent of GA | Change | Scrub |
| East Sikkim TH | 954 | 162 | 411 | 126 | 699 | 73.27 | 0 | 67 |
| West Sikkim TH | 1,166 | 110 | 489 | 173 | 772 | 66.21 | 0 | 42 |
| North Sikkim TH | 4,226 | 135 | 889 | 291 | 1,315 | 31.12 | -1 | 198 |
| South Sikkim TH | 750 | 93 | 371 | 107 | 571 | 76.13 | 0 | 4 |
| Total | 7,096 | 500 | 2,160 | 697 | 3,357 | 47.31 | -1 | 311 |

Figure 7.24: Forest Cover Map of Sikkim

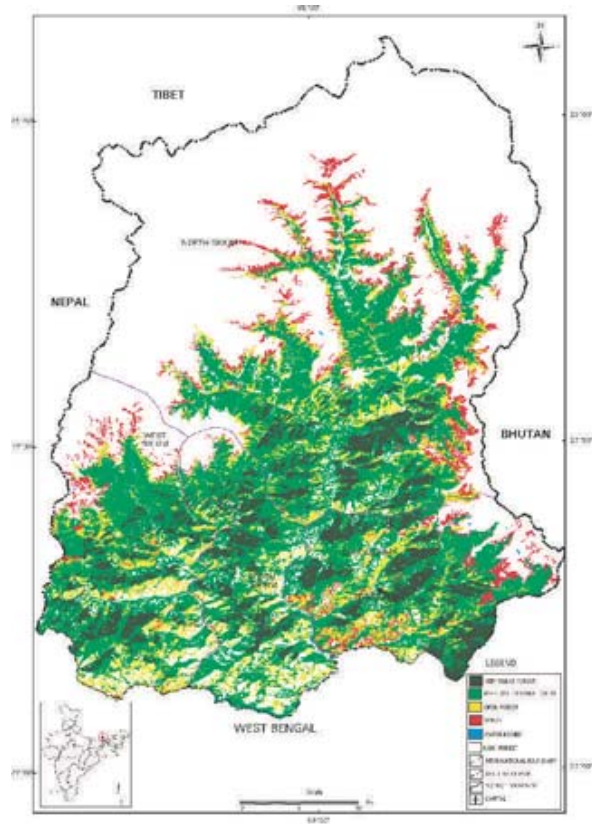


Table 7.24b Change Matrix of Sikkim

Forest Cover Change Matrix

(Area in km²)

| Class | 2015 Assessment | | | | | Total ISFR 2013 |
|-------------------------|-----------------|--------------|------------|------------|--------------|-----------------|
| | VDF | MDF | OF | Scrub | NF | |
| Very Dense Forest | 500 | 0 | 0 | 0 | 0 | 500 |
| Moderately Dense Forest | 0 | 2,160 | 0 | 0 | 1 | 2,161 |
| Open Forest | 0 | 0 | 697 | 0 | 0 | 697 |
| Scrub | 0 | 0 | 0 | 311 | 0 | 311 |
| Non-Forest | 0 | 0 | 0 | 0 | 3,427 | 3,427 |
| Total ISFR 2015 | 500 | 2,160 | 697 | 311 | 3,428 | 7,096 |
| Net Change | 0 | -1 | 0 | 0 | 1 | |

Table 7.24c: Altitude-wise Forest Cover of Sikkim

Altitude-wise Forest Cover

(Area in km²)

| Altitude Zone | VDF | MDF | OF | Total |
|---------------|------------|--------------|------------|--------------|
| 0-500 | 0 | 25 | 12 | 37 |
| 500-1000 | 5 | 158 | 93 | 256 |
| 1000-2000 | 184 | 643 | 265 | 1,092 |
| 2000-3000 | 297 | 682 | 106 | 1,085 |
| 3000-4000 | 14 | 610 | 151 | 775 |
| >4000 | 0 | 42 | 70 | 112 |
| Total | 500 | 2,160 | 697 | 3,357 |

(Based on SRTM, Digital Elevation Model)

Reasons for change detected in 2015 assessment:

The main reasons for decrease in forest cover are road construction, shifting cultivation and landslides.