



Mizoram

9.19.1 Introduction

Mizoram State covering an area of 21,081 sq km, constitutes 0.64% of the geographical area of the country. Physiographically, the State is comprised of rugged, steep hill ranges and interspersed valleys. Mizoram experiences the moist tropical to moist subtropical climate. During winter, the temperature varies from 11°C to 24°C and during summer it varies between 18°C to 29°C. The average annual rainfall varies from 2,160 mm to 3,500 mm. The state is drained by number of rivers, which includes Barak and Dhaleshwari. As per the 2011 census, Mizoram has a population of 1.09 million accounting to 0.09 percent of India's population. The rural and urban population constitute 47.89% and 52.11% respectively. The population density of the state is 52 per sq km, which is lower than the national average of 382 persons per sq km. The state has 8 districts, all of which are tribal and hill districts. The 19th Livestock census 2012 has reported a total livestock population of 0.31 million.

Table 9.19.1 Land Use Pattern

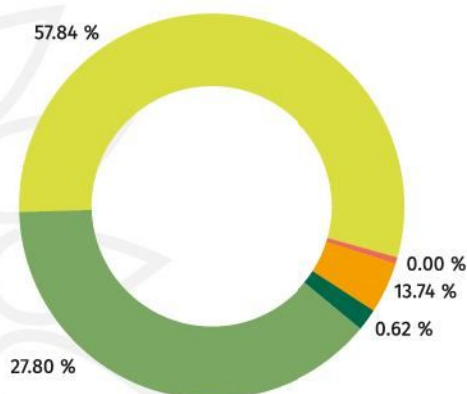
| Land Use Types | Area (in 000' ha) | Percentage |
|--|-------------------|------------|
| Total Geographic Area | 2,108 | |
| Reporting area for land utilization | 2,093 | 100.00 |
| Forests | 1,585 | 75.73 |
| Not available for land cultivation | 100 | 4.78 |
| Permanent pastures and other grazing lands | 5 | 0.24 |
| Land under misc. tree crops and groves | 74 | 3.54 |
| Culturable wasteland | 7 | 0.33 |
| Fallow land other than current fallows | 161 | 7.69 |
| Current fallows | 47 | 2.24 |
| Net area sown | 114 | 5.45 |

Source: Land Use Statistics, Ministry of Agriculture, GOI, 2013-14.

9.19.2

Forest Cover

Based on interpretation of satellite data pertaining to Oct - Dec 2015, the forest cover in the State is 18,186 sq km which is 86.27% of the state's geographical area. In terms of forest canopy density classes, the state has 131 sq km under very dense forest, 5,861 sq km under moderately dense forest and 12,194 sq km under open forest.



**Forest cover
of Mizoram**

Pie Chart
showing forest
cover of
Mizoram

Non Forest Scrub Open Forest Mod. Dense Forest Very Dense Forest

9.19.3

Forest Cover within and outside Green Wash Area

The State has reported a recorded forest area of 5,641 sq km amounting to 26.76% of its geographical area. The Reserved and Unclassed Forests are 79.47% and 20.53% respectively of the recorded forest area. Due to non-availability of digitized boundary of recorded forest area from the State, the updated green wash which is 20,001 sq km has been used and the analysis of forest cover within and outside this area is depicted below.

Table 9.19.2 Forest Cover within and outside Green Wash Area

Forest Cover within Green Wash (Area in sq km)

| | |
|-------------------------|---------------|
| Very Dense Forest | 126 |
| Moderately Dense Forest | 5,592 |
| Open Forest | 11,578 |
| Total | 17,296 |

Forest Cover outside Green Wash

| | |
|-------------------------|------------|
| Very Dense Forest | 5 |
| Moderately Dense Forest | 269 |
| Open Forest | 616 |
| Total | 890 |

Total Forest Cover **18,186**

Tree Cover **467**

Total Forest & Tree Cover **18,653**

Of State's Geographical Area 88.48 %

Of India's Forest & Tree Cover 2.33 %

Per capita Forest & Tree Cover 1.71 ha

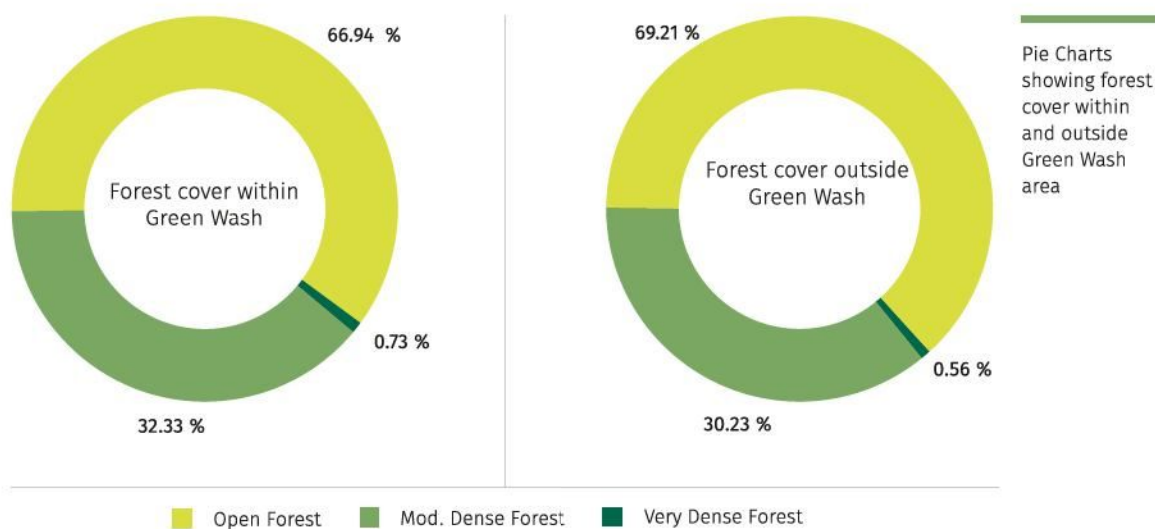


Table 9.19.3 Altitude-wise Forest Cover (Area in sq km)

| Altitude Zone(m) | Geographical Area | VDF | MDF | OF | Total |
|------------------|-------------------|------------|--------------|---------------|---------------|
| 0-500 | 9,163 | 0 | 1,698 | 6,249 | 7,947 |
| 500-1000 | 8,205 | 37 | 2,684 | 4,386 | 7,107 |
| 1000-2000 | 3,710 | 93 | 1,478 | 1,559 | 3,130 |
| 2000-3000 | 3 | 1 | 1 | 0 | 2 |
| Total | 21,081 | 131 | 5,861 | 12,194 | 18,186 |

(Based on SRTM, Digital Elevation Model)

Table 9.19.4 Forest Cover in different Patch Size Classes

| S.No. | Patch Size Range in (sq km) | No. of Patches | Area (sq km) | %age |
|-------|-----------------------------|----------------|---------------|------------|
| 1. | >=0.01 <=1.0 | 1,225 | 79 | 0.44 |
| 2. | > 1.0 <= 10 | 16 | 28 | 0.15 |
| 3. | > 10 <= 100 | 0 | 0 | 0 |
| 4. | > 100 <= 500 | 0 | 0 | 0 |
| 5. | > 500 <= 1000 | 0 | 0 | 0 |
| 6. | > 1000 <= 5000 | 0 | 0 | 0 |
| 7. | > 5000 <= 10000 | 0 | 0 | 0 |
| 8. | > 10000 | 1 | 18,079 | 99.41 |
| | Total | 1,242 | 18,186 | 100 |

Table 9.19.5 Growing Stock

| | Growing Stock | % Contribution to country |
|---|---------------------|---------------------------|
| Growing Stock in Recorded Forest Area | 19,052 m cum | 0.45 |
| Growing Stock in TOF | 42,762 m cum | 2.67 |
| Potential Production of industrial wood from TOF | 1.21 m cum | 1.62 |
| Bamboo bearing area within forest area of the state | 3,267 sq km | 2.08 |
| Total number of culms | 716 millions | 2.55 |
| Total green weight equivalent of culms | 6,217 (000' tonnes) | 3.29 |

9.19.4

Carbon Stock in forest

The total Carbon stock of forests in the State is 95,041 million tonnes (348,484 million tonnes of CO₂ equivalent) which is 1.34% of the total forest carbon of the country.

9.19.5

Decadal Change in water bodies within Forest

An increase of 52 sq km has been observed in the water body coverage within forest compared to 2005. The graphical and tabular comparison is depicted below.

Extent of
water bodies
within forest

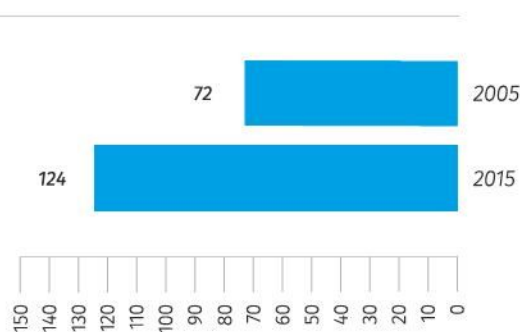


Table 9.19.6 Water bodies within Forest for the years 2005 and 2015

| Area/Coverage | 2005 | 2015 |
|--|------|------|
| Extent of water bodies (sq km) within Forest | 72 | 124 |
| % of water bodies to Forest Cover | 0.39 | 0.68 |

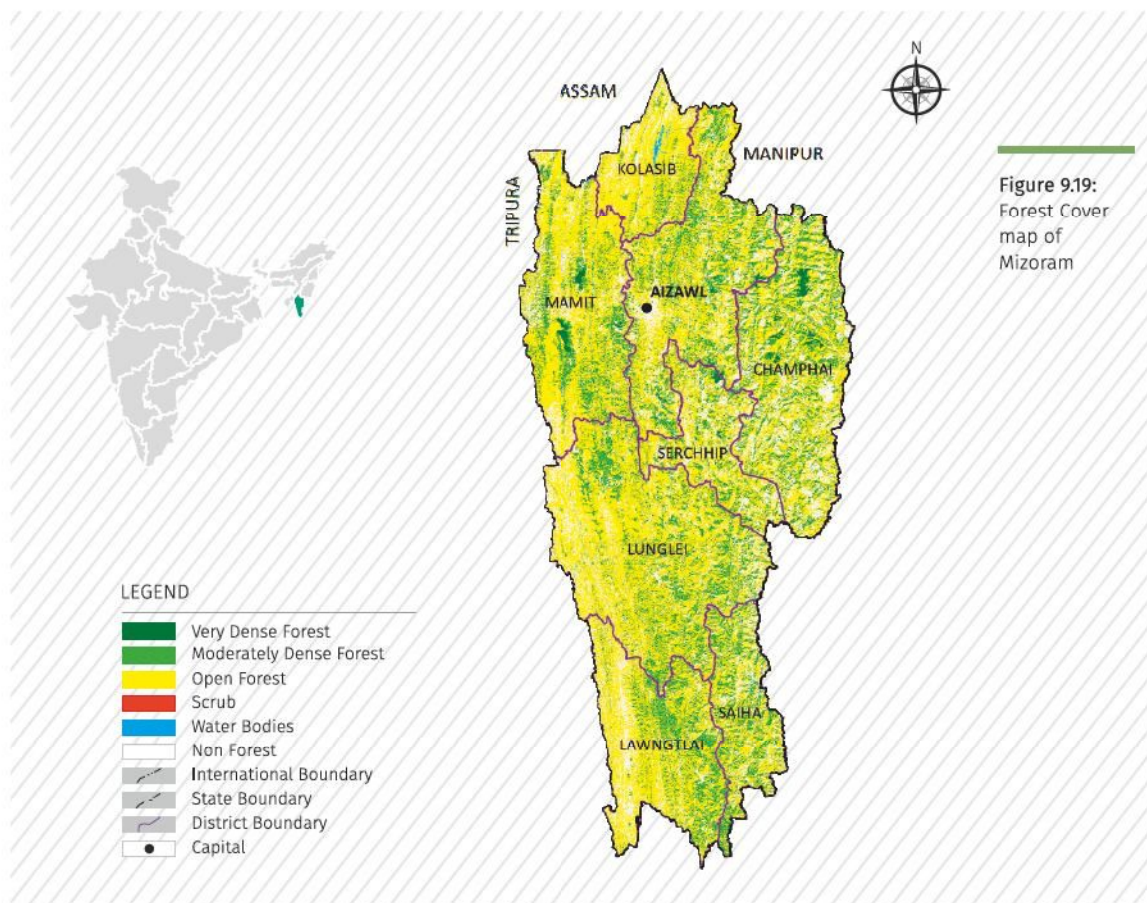


Figure 9.19:
Forest Cover
map of
Mizoram

| Table 9.19.7 District- wise Forest Cover | | | | | | | (area in sq km) | |
|--|-------------------|-------------------|-------------------|---------------|---------------|--------------|-----------------|----------|
| District | Geographical Area | 2017 Assessment | | | | % of GA | Change * | Scrub |
| | | Very Dense Forest | Mod. Dense Forest | Open Forest | Total | | | |
| Aizawl TH | 3,576 | 18 | 1,092 | 1,984 | 3,094 | 86.52 | -93 | 0 |
| Champhai TH | 3,185 | 56 | 1,012 | 1,535 | 2,603 | 81.73 | -78 | 0 |
| Kolasib TH | 1,382 | 0 | 172 | 1,010 | 1,182 | 85.53 | -13 | 0 |
| Lawngtlai TH | 2,557 | 0 | 704 | 1,518 | 2,222 | 86.90 | -112 | 0 |
| Lunglei TH | 4,536 | 1 | 1,195 | 2,826 | 4,022 | 88.67 | -118 | 0 |
| Mamit TH | 3,025 | 43 | 772 | 1,885 | 2,700 | 89.26 | -27 | 0 |
| Saiha TH | 1,399 | 0 | 548 | 657 | 1,205 | 86.13 | -41 | 0 |
| Serchhip TH | 1,421 | 13 | 366 | 779 | 1,158 | 81.49 | -49 | 0 |
| Total | 21,081 | 131 | 5,861 | 12,194 | 18,186 | 86.27 | -531 | 0 |

*Change compared to updated 2015 assessment.

| Table 9.19.8 Forest Cover Change Matrix | | | | | | (area in sq km) |
|---|-----------------|--------------|---------------|----------|--------------|-------------------------|
| Class | 2017 Assessment | | | | | Total ISFR 2015 updated |
| | VDF | MDF | OF | Scrub | NF | |
| Very Dense Forest | 131 | 4 | 0 | 0 | 0 | 135 |
| Moderately Dense Forest | 0 | 5,748 | 10 | 0 | 42 | 5,800 |
| Open Forest | 0 | 109 | 12,178 | 0 | 495 | 12,782 |
| Scrub | 0 | 0 | 0 | 0 | 0 | 0 |
| Non Forest | 0 | 0 | 6 | 0 | 2,358 | 2,364 |
| Total 2017 | 131 | 5,861 | 12,194 | 0 | 2,895 | 21,081 |
| Net Change | -4 | 61 | -588 | 0 | 531 | |

9.19.6

Reasons for change detected in 2017 assessment

The net decrease of 531 sq km in forest cover in Mizoram can be attributed to shifting cultivation and developmental activities. Increase in forest cover in certain pockets is due to regeneration of bamboo and other plantations.

