

13.18

# MIZORAM



## Geographical Area

21,081 sq km

## Geographical Coordinates

Latitude- 21° 56' N to 24° 31' N

Longitude- 92° 16' E to 93° 26' E

## Population (as per Census 2011)

1.09 million

Urban 0.57 million (52.11 %)

Rural 0.52 million (47.89 %)

Tribal 1.03 million (94.43 %)

## Average Population Density

52 per sq km

## Livestock population

(as per 19<sup>th</sup> Live Stock Census)

0.31 million

## No. of Districts

8

## No. of Hill Districts

8

## No. of Tribal Districts

8

Table 13.18.1 Land Use Pattern

Land Use Types	Area (in '000 ha)	Percentage
Geographical Area	2,108	
Reporting area for land utilization	2,040	100.00
Forests	1,585	77.70
Not available for land cultivation	75	3.68
Permanent pastures and other grazing lands	11	0.54
Land under misc. tree crops and groves	41	2.01
Culturable wasteland	7	0.34
Fallow land other than current fallows	128	6.27
Current fallows	47	2.30
Net area sown	146	7.16

Source: Land Use Statistics, Ministry of Agriculture, GOI, (2017-18)

## 13.18.1 Forest Cover

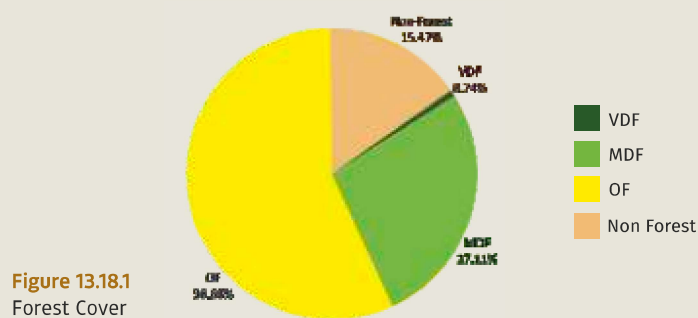


Table 13.18.2 Forest Cover of Mizoram (in sq km)

Class	Area	% of GA
VDF	156.79	0.74
MDF	5,715.24	27.11
OF	11,947.97	56.68
<b>Total</b>	<b>17,820.00</b>	<b>84.53</b>
Scrub	0.90	0.00

Table 13.18.3 District-wise Forest Cover in Mizoram

(in sq km)

District	Geo-graphical Area (GA)	2021 Assessment				%of GA	Change wrt 2019 assessment	Scrub
		Very Dense Forest	Mod. Dense Forest	Open Forest	Total			
Aizawl <sup>TH</sup>	3,576	30.30	1,062.67	1,971.90	3,064.87	85.71	-14.04	0.03
Champhai <sup>TH</sup>	3,185	55.36	942.90	1,375.63	2,373.89	74.53	-113.9	0.11
Kolasib <sup>TH</sup>	1,382	1.24	166.28	983.88	1,151.40	83.31	-1.15	0.00
Lawngtlai <sup>TH</sup>	2,557	0.00	700.93	1,479.99	2,180.92	85.29	-19.16	0.07
Lunglei <sup>TH</sup>	4,536	0.99	1,187.08	2,825.85	4,013.92	88.49	-8.25	0.69
Mamit <sup>TH</sup>	3,025	52.02	756.74	1,909.94	2,718.70	89.87	1.83	0.00
Saiha <sup>TH</sup>	1,399	0.00	543.88	628.98	1,172.86	83.84	-12.63	0.00
Serchhip <sup>TH</sup>	1,421	16.88	354.76	771.80	1,143.44	80.47	-18.21	0.00
<b>Grand Total</b>	<b>21,081</b>	<b>156.79</b>	<b>5,715.24</b>	<b>11,947.97</b>	<b>17,820.00</b>	<b>84.53</b>	<b>-185.51</b>	<b>0.90</b>

## 13.18.1.1 Forest Cover Inside and Outside Recorded Forest Area (or Green Wash)

The Forest Cover inside and outside Recorded Forest Area (RFA) has been analysed in different categories and presented in Table given below.

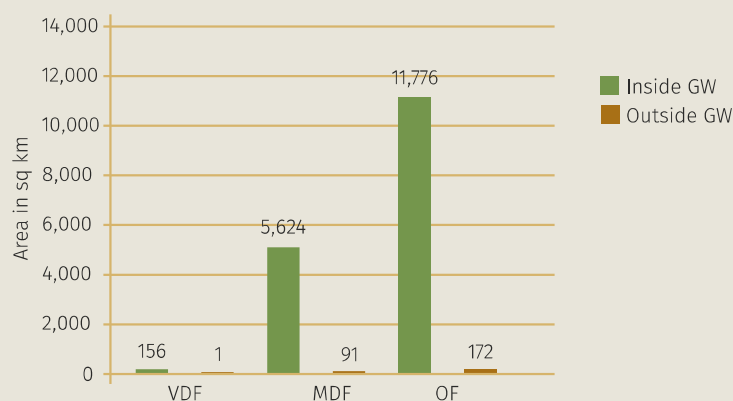
Table 13.18.4 Forest Cover Inside and Outside Recorded Forest Area (or Green Wash) in Mizoram

(in sq km)

Forest Cover Inside the Recorded Forest Area (or Green Wash)				Forest Cover Outside the Recorded Forest Area (or Green Wash)			
VDF	MDF	OF	Total	VDF	MDF	OF	Total
156	5,624	11,776	17,556	1	91	172	264
0.89%	32.03%	67.08%		0.38%	34.47%	65.15%	

\*in case of Mizoram, Green Wash boundaries have been used.

# MIZORAM



**Figure 13.18.2**  
Forest Cover Inside  
and Outside of  
Green Wash in  
Mizoram

**Table 13.18.5 Forest Cover Change Matrix for Mizoram**

(in sq km)

Class	2021 Assessment					Total ISFR 2019
	VDF	MDF	OF	Scrub	NF	
Very Dense Forest	157	0	0	0	0	157
Moderately Dense Forest	0	5,713	1	0	87	5,801
Open Forest	0	0	11,881	0	167	12,048
Scrub	0	0	0	1	0	1
Non Forest	0	2	66	0	3,006	3,074
<b>Total ISFR 2021</b>	<b>157</b>	<b>5,715</b>	<b>11,948</b>	<b>1</b>	<b>3,260</b>	<b>21,081</b>
Net Change	0	-86	-100	0	186	

**Table 13.18.6 Altitude-wise Forest Cover in Mizoram**

(in sq km)

Altitude Zone (m)	Geographical Area	VDF	MDF	OF	Total	Scrub
0-500	9,163	8	1,816	6,186	8,010	0
500-1000	8,205	55	2,641	4,246	6,942	1
1000-2000	3,710	93	1,257	1,516	2,866	0
2000-3000	3	1	1	0	2	0
<b>Total</b>	<b>21,081</b>	<b>157</b>	<b>5,715</b>	<b>11,948</b>	<b>17,820</b>	<b>1</b>

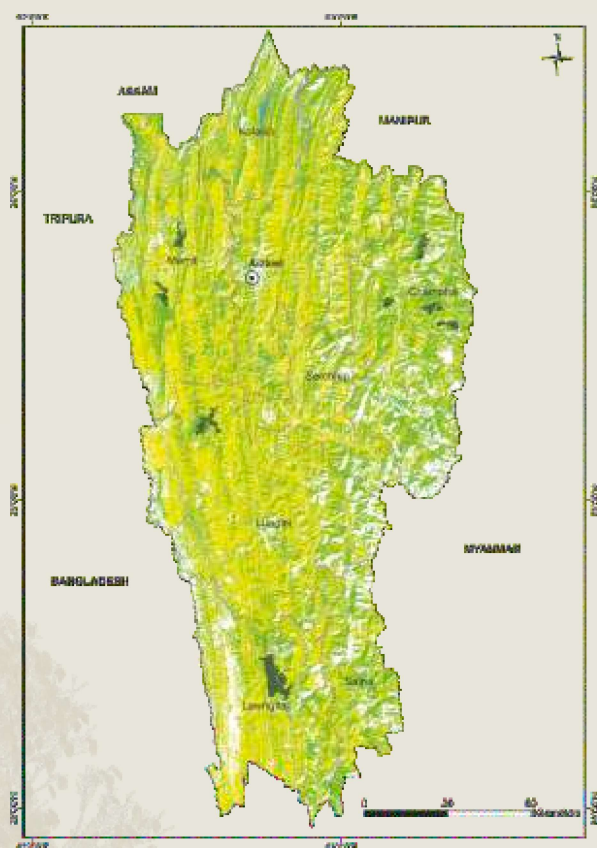
(based on SRTM, Digital Elevation Model, 30 m, 2016)

**Table 13.18.7 Forest Cover in different slope classes in Mizoram**

(in sq km)

Slope (in degrees)	Geographical Area	VDF	MDF	OF	Total	Scrub
0-5	1,565	7	234	894	1,135	0
5-10	2,668	22	558	1,582	2,162	0
10-15	3,625	34	875	2,119	3,028	0
15-20	4,058	31	1,089	2,339	3,459	1
20-25	3,713	23	1,095	2,096	3,214	0
25-30	2,745	16	876	1,517	2,409	0
>30	2,707	24	988	1,401	2,413	0
<b>Total</b>	<b>21,081</b>	<b>157</b>	<b>5,715</b>	<b>11,948</b>	<b>17,820</b>	<b>1</b>

(based on SRTM, Digital Elevation Model, 30 m, 2016)



**Figure 13.18.3**  
Forest Cover  
Map of Mizoram

**LEGEND**

<span style="display:inline-block; width:15px; height:15px; background-color:darkgreen; border:1px solid black;"></span>	Very Dense Forest
<span style="display:inline-block; width:15px; height:15px; background-color:mediumseagreen; border:1px solid black;"></span>	Moderately Dense Forest
<span style="display:inline-block; width:15px; height:15px; background-color:yellow; border:1px solid black;"></span>	Open Forest
<span style="display:inline-block; width:15px; height:15px; background-color:red; border:1px solid black;"></span>	Scrub
<span style="display:inline-block; width:15px; height:15px; background-color:white; border:1px solid black;"></span>	Non-Forest
<span style="display:inline-block; width:15px; height:15px; background: repeating-linear-gradient(45deg, transparent, transparent 2px, blue 2px, blue 4px); border:1px solid black;"></span>	Water-bodies
<span style="display:inline-block; width:15px; height:15px; border-top: 1px dashed blue; border-bottom: 1px dashed blue; border:1px solid black;"></span>	International Boundary
<span style="display:inline-block; width:15px; height:15px; border-top: 1px dashed orange; border-bottom: 1px dashed orange; border:1px solid black;"></span>	State Boundary
<span style="display:inline-block; width:15px; height:15px; border-top: 1px dashed purple; border-bottom: 1px dashed purple; border:1px solid black;"></span>	District Boundary
<span style="display:inline-block; width:15px; height:15px; border: 1px solid black; border-radius: 50%;"></span>	Capital

## 13.18.2 Forest Types

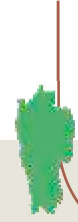
The area under different forest types of Mizoram as per the Champion & Seth classification (1968), according to the Atlas Forest Types of India 2020 are presented in the following Table.

**Table 13.18.8 Area statistics of the Forest Types found in Mizoram**

(in sq km)

Sl. No.	Forest Type	Area	% of the total mapped area*
1.	2B/C1/2S1 Pioneer Euphorbiaceous scrub	74.10	0.41
2.	2B/C2 Cachar semi-evergreen forest	5,580.26	30.99
3.	2/2S1 Secondary moist bamboo brakes	6,600.03	36.65
4.	3C/C3b East Himalayan moist mixed deciduous forest	5,648.50	31.37
5.	8B/C1 East Himalayan subtropical wet hill forest	7.94	0.04
6.	9/C2 Assam subtropical pine forest	92.75	0.52
	<b>Sub Total</b>	<b>18,003.58</b>	<b>99.98</b>
7.	TOF/Plantation	2.83	0.02
	<b>Total (Forest Cover &amp; Scrub)</b>	<b>18,006.41</b>	<b>100.00</b>

\*Forest Types have been assigned to the natural forest formations under forest cover and scrub categories shown in forest cover mapping (ISFR, 2019). The total mapped area, therefore, is sum of forest cover and scrub.



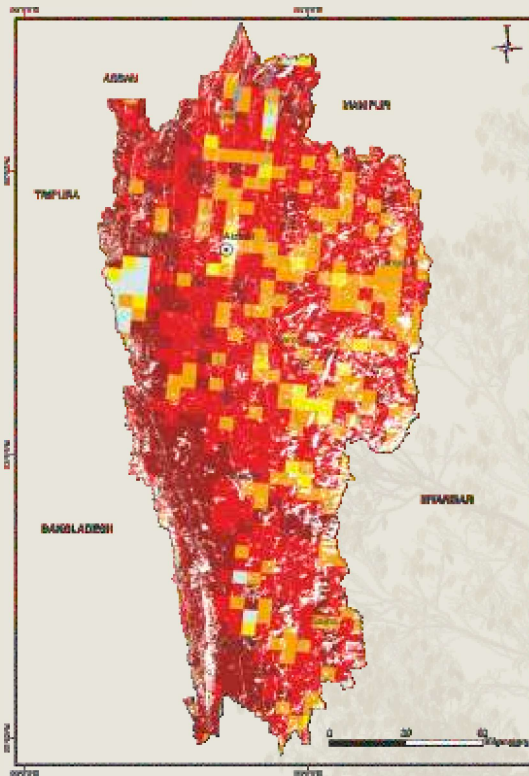
# MIZORAM

## 13.18.3 Fire Prone Forest Areas

Forest Cover under different classes of forest fire proneness is given in following table.

**Table 13.18.9 Forest Fire Prone Classes** (in sq km)

Sl. No.	Forest Fire Prone Classes	Forest Cover	% of Total Forest Cover
1.	Extremely fire prone	4,683.50	26.28
2.	Very highly fire prone	8,862.58	49.73
3.	Highly fire prone	3,369.82	18.92
4.	Moderately fire prone	543.28	3.05
5.	Less fire prone	360.82	2.02
	<b>Total</b>	<b>17,820.00</b>	<b>100.00</b>



**Figure 13.18.4** Fire prone forest areas under different fire prone classes

**LEGEND**

- Extremely Fire Prone
- Very Highly Fire Prone
- Highly Fire Prone
- Moderately Fire Prone
- Less Fire Prone
- Water-bodies
- International Boundary
- State Boundary
- District Boundary
- Capital

## 13.18.4 Tree Cover

Tree cover is defined as all tree patches of size less than 1 ha occurring outside the recorded forest area. Tree cover includes trees in all formations including scattered trees. Tree cover in Mizoram has been estimated as given in following table.

**Table 13.18.10 Tree Cover in Mizoram** (in sq km)

2019 Assessment	2021 Assessment	Change wrt 2019 Assessment
441	444	3

### 13.18.5 Extent of Trees Outside Forest (TOF)

Trees outside Forests (TOF) refer to tree resources found outside the forests as defined in the Government records. Forest Cover outside the recorded forest area is derived using boundaries of RFA or Green Wash. Extent of TOF therefore may be estimated as the sum of extent of forest cover outside the recorded forest areas (RFA) and tree cover as given in following table.

**Table 13.18.11 Extent of TOF in Mizoram** (in sq km)

Forest Cover outside the RFA/GW	Tree Cover	Extent of TOF
264	444	708

### 13.18.6 Growing Stock in Forest

Growing stock in the recorded forest areas (RFA) in Mizoram is given in the Table 13.18.12. Diameter class-wise distribution of top 5 species in numbers derived from the forest inventory data is presented in the table 13.18.13.

**Table 13.18.12 Growing Stock in Mizoram** (in m cum)

Sl. No.	Growing Stock (GS)	2019 Assessment	2021 Assessment	Change wrt 2019 Assessment	% of Country's GS
1.	Growing Stock in Recorded Forest Area	21.30	28.87	7.57	0.66
2.	Growing Stock in TOF	44.11	46.05	1.94	2.59

**Table 13.18.13 Diameter class distribution of top five species inside RFA in Mizoram** (in '000)

Sl. No.	Species	Dia class (cm)		
		10-30	30-60	>60
1.	<i>Macaranga</i> spp.	15,552	173	0
2.	<i>Schima wallichii</i>	11,628	1,281	46
3.	<i>Albizia</i> spp.	6,050	782	46
4.	<i>Tectona grandis</i>	5,687	792	0
5.	<i>Dysoxylum binectariferum</i>	573	34	92

# MIZORAM



## 13.18.7 Dominant tree species in Trees Outside Forests (TOF)

Top five species in numbers in Trees Outside Forests in Mizoram in Rural and Urban areas are given in the Table 13.18.14 and Table 13.18.15 respectively.

**Table 13.18.14 Top five tree species in TOF (Rural) Mizoram**

Sl. No.	Species	Relative Abundance (%)
1.	<i>Schima wallichii</i>	9.95
2.	<i>Castanopsis</i> spp.	9.57
3.	<i>Quercus</i> spp.	6.59
4.	<i>Macaranga</i> spp.	6.04
5.	<i>Tectona grandis</i>	4.48

**Table 13.18.15 Top five tree species in TOF (Urban) in Mizoram**

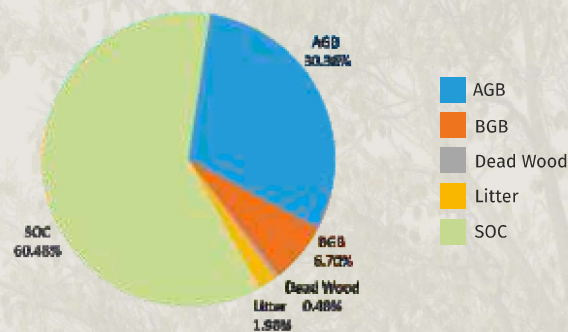
Sl. No.	Species	Relative Abundance (%)
1.	<i>Areca catechu</i>	14.72
2.	<i>Mangifera indica</i>	12.97
3.	<i>Schima wallichii</i>	6.30
4.	<i>Artocarpus heterophyllus</i>	5.74
5.	<i>Albizia</i> spp.	4.35

## 13.18.8 Carbon Stock in Forest

The total Carbon stock of forest in the State including the TOF patches which are more than 1ha in size is 158.64 million tonnes (581.68 million tonnes of CO<sub>2</sub> equivalent) which is 2.20% of total forest carbon of the country. Pool wise forest carbon in Mizoram is given in the following table.

**Table 13.18.16 Forest Carbon in Mizoram in different pools** (in '000 tonnes)

Sl. No.	Carbon Pools	Forest Carbon
1.	AGB	48,157
2.	BGB	10,622
3.	Dead wood	758
4.	Litter	3,140
5.	SOC	95,961
	<b>Total</b>	<b>1,58,638</b>



**Figure 13.18.5 Forest Carbon in Mizoram**

## 13.18.9 Growing Stock of Bamboo

Bamboo bearing area and growing stock inside the recorded forest area (RFA)/ Green Wash which include culms of 1 year age and above are given in the following table.

**Table 13.18.17 Growing Stock of Bamboo in Mizoram**

Growing Stock (GS)		% of Country's GS of Bamboo
Bamboo bearing area inside RFA/Green Wash (in sq km)	4,561	3.05
Total number of culms (in millions)	1,490	2.79
Total equivalent green weight (in '000 tonnes)	12,585	3.13

### 13.18.10 Major NTFP and Invasive Species

Major NTFP and invasive species as assessed from forest inventory data are presented in the Table 13.18.18 and Table 13.18.19 respectively.

**Table 13.18.18 Major NTFP species in Mizoram**

Sl. No.	Species	Plant Type	Relative Abundance (%)
1.	<i>Thysanolaena maxima</i>	Herbs	61.75
2.	<i>Imperata cylindrica</i>	Herbs	10.76
3.	<i>Hedyotes scandens</i>	Shrub	7.17
4.	<i>Parkia javancia/timoriana</i>	Tree	3.59
5.	<i>Embilica officinalis/Phyllanthus</i>	Tree	3.19

**Table 13.18.19 Major invasive species in the State inside the RFA/Green Wash in Mizoram** (in sq km)

Sl. No.	Species	Estimated Extent
1.	<i>Chromolaena odorata</i>	23
2.	<i>Mikania micrantha</i>	9
3.	<i>Imperata cylindrica</i>	4

Major NTFP species are given in terms of relative abundance whereas invasive species are given in terms of their estimated extent.

