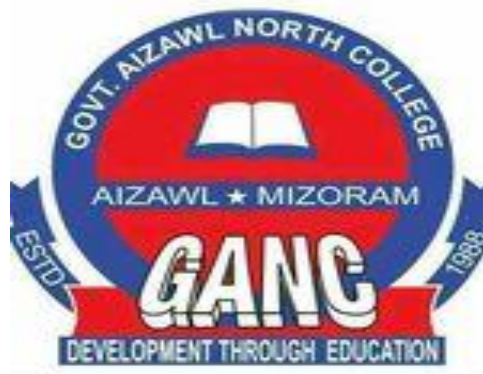


# **A BRIEF REPORT ON FOREST IN MIZORAM**

*PAPER COURSE NO : xi (Dessertation)*



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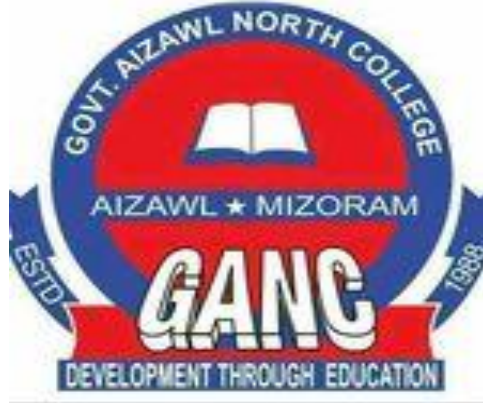
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## **CERTIFICATE**

MAY, 2021

I hereby certify that the minor research project entitled 'A Brief Report On Forest in Mizoram' is a record done by Laltlanchhuaha Roll number 1805BA086, vi - semester Department of Geography, Government Aizawl North College and it has not formed the basis for the award of any degree, associate-ship or other similar title and that the project represents an independent work on the part of the principal Investigator.

Place, Aizawl

(Dr. Lalrinmawia)

Dated Aizawl on 22<sup>th</sup> May 2021

Assistant Professor & Supervisor

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# CHAPTER – 1

## 1

## INTRODUCTION

Department of Geography, Aizawl North College a 2019 – 2021 bacth six semester zirlai ten kan zirlai peng pakhat zinga pawimawh tak Dessertation tihna paper 11 tih hlawhtlin nan leh zirlai ten mimal a hlawkna kan neih theihnan mahni theuha zir china neia, mahni a Dessertation zo tur a tih kan ni.

He kan Dessertation tih hlawhtlin nan a zirchian tur thupui Supervisor in a min pek chu ‘ *A Brief Report On Forest In Mizoram*’ tih thupui ani a, Mizoram chhunga ramngaw awmdan zir chianna leh thuk zawka Mizoram in ramngaw a neih dan te Mizoram chhunga district hrang hrang te ramngaw an neih dan te hriatchian alo nih theih na atana he thupui hi thlan ani.

Mizoram hi India ram North East a awm kan ni a, Mizoram state hian South West Monsoon, Bay of Bengal monsoon system a awm kan ni a, kum tin ruahtui May – September inkar ah hninghnar takin kan dawng thin a, heihian Mizoram a kan ramngaw hi a chawm tha hle a ramngaw in siam kawngah nasa takin a pui a, amaherawh chu, Southeast Asia a ram hrang hrang Tribal te chin dan tho in Lo nei thin kan ni a, he kan lo neih dan hi ‘Shifting Cultivation’ ‘Jhum Cultivation’ ti te a hriat lar ani a, he kan lo neih dan hian kan State ramngaw hi a ti chhia in rambua a siam tam hle ni a hriat ani a, Kum tin ramngaw thalai zau tak tak te vah chereu an ni a, ram chang tha te kan daidarh zo zel a eng tianga nasa in nge kan ramngaw neih hi kan khawih danglam a, Mizoram hian ramngaw hi engzah nge kan neih, kan ram hi ramngaw hian engzah nge ala khuh that, kan ramngaw neih te hi eng chi nge anih ( *Open Forest, Moderate Forest, Dense Forest*), khawilai ah nge ramngaw a that a, khawilaiah nge ramngaw thiahdarh nasat anih a, ramngaw humhalh na lai bik kan nei em, tih te hriat chian a kan ramngaw dinhmun zirchian hi thil pawimawh tak anih avangin he paper Course tih hlawhtlin nan hian a zirchianna neih tura he thupui hi thlan ani.

## 1.1

## METHODOLOGY

Ramngaw tih thumal in a sawi tumber chu Thing leh mau 'Plants' arual a hmun khata an din a hmunzau tak an awh a, lei (surface ground) tha taka an khuh a, heng thing leh mau tamtak ding te hi Ramngaw(Forest) ti a hriat ani.

He thupui zir chian tur ' A Brief Report On Forest In Mizoram' in a tumber chu Mizoram state chhunga Ramngaw din hmun zirchianna neih leh, District hrang hrang te ramngaw neihdan tarlan tumna ani nghal bawk ani.

He zirchianna neih na tur a tana information kan hmuhna hnar pawimawh tak chu 'Mizoram Forest Department' ' Forest And Tree Resources in UT and State Data' te an ni a, Forest Department in mumal taka Mizoram ramngaw te anlo chhinchhiahna data atanga zirchianan hi neih anih bak ah Geographical Information System (GIS) Remote sensing data awmsa te atanga lak ani bawk.

Heng data zirchian nan a hman te hi Forest cover zir Chiang tuten an zirchianna kum 2015 – 2020 inkar Quantitative data te hman ani a, The Indian Wildlife (Protection) Act, 1972 (Amendment 1993) Chapter IV, Section 18(1) – dan in Mizoram ah Wildlife Sanctuary Leh National park a asiam te, heng park te hi ramngaw siam nan an tangkai leh tangkai loh tarlan ani bawk.

Mizoram ah hian ramngaw in engzahnge a awh a, ram hmun hma hi chi engzah te nge kan neih tih te tarlan ani a, he zirchianna neih hi ti fiah a , hriatthiam awlsam zawk anih theih nan Quantitative data leh Qualitative Data behchhan a zir leh hman ani a, Bar Diagram, Pie Chart, Pie Diagram, Mizoram Map, Toposheet, Circular diagram te hmang a entirna pek anih bak ah tarlan an ni a, data te felfai tak leh a dik tak a chhuah theih nan siamrem in statistical data Quantitative data hman ani bawk.

## **CHAPTER – 2**

### **(PHYSICAL SETTING)**

#### **2.1 LOCATION**

Mizoram hi india hmar chhak tawp a awm ani a, North east State te zinga mi ni in, International border bul a awm ni in, Khawthlang lam ah Bangladesh leh Khawchhak leh chhim lam ah Myanmar nen ramri a nei bawk. State thenawm hmarlam ah Assam leh Manipur neiin, khawthlang lamah Tripura anei bawk.

India ram state a a te ber Pangana (5<sup>th</sup> position ) nihna a hauh bawk. A zau zawng hi 21,087 km<sup>2</sup> (8,142 sq mi) ni in Geographical co-ordination ah 21°56'N to 24°31'N, and 92°16'E to 93°26'E inrina laia awm ni in, Tropic of Cancer in Mizoram hi map lai tak chungzawn deuh ah a tan tlang bawk. Indian Standard Time zone a awm ni in Westbengal route time zone hman ani bawk. National highway 54 in Assam atangin a pawhlut a, Mizoram state hi a dung zawng in kilometer 285 ani a, avang zawngin kilometer 115 ani a, Mizoram hi tectonic plate inrina zone a awm ni in, Lirnging thlen duhna hmun a an then Seismic Zone 5 a an thenna huamchhung aha tel bawk.



## 2.2

## TOPOGRAPHY

Mizoram hi tlangram ani a, Himalayan range a awmni in Purvanchal range huamchhung a awm ani bawk, Tlang ram anih avang in Lui leh kawr ruam tam tak a awm a, Tlangsang zual 21 lai hmuh tur a awm a hmun zawl zau hmuhtur hmun 6 ah hmuhtur a awm bawk.

Mizoram tlang te hi khawthlang atanga khawchhak hawi zawnin a inkhawh chhuak a, Chhim leh hmar dung zul zuiin an in khawh bawk.

Khawthlang lam a tlang te hi a tlawngpuiin feet 3600 a hrut rual theih an ni a, khawchhak lam a tlang te hi feet 6600 a hrutruual theih an ni bawk. Mizoram a lui awmte hi chhimluang leh Hmar luanga then an ni a, Lui lian ber chu Chhimtuipui ni in Myanmar ram ah Tuifinriat a pawh a, A sei ber chu Tlawng ani a Brahmaputra lui a fin bawk bawk.

Mizoram leilung hi a nopang in Neogene sedimentary rocks hmun ani a, Leilung insiam te hi Surma Group leh Tipam Formation ah te hian sandstone, siltstone, mudstone, limestone te hmuh an ni a. Mizoram khawchhak lam ah Barail group soils formation hmuh ani bawk.

## 2.3

## CLIMATE

Mizoram sik leh sa hi a nuam tawk, kum tluana a vawh lam pangai tak, a lum lam pawh lum lutuk lo ani a, nipui March to May ah hian  $68^{\circ}\text{F}$  -  $84^{\circ}\text{F}$  inkar ani a, Thlasik lai November – February ah hian  $45^{\circ}\text{F}$  –  $72^{\circ}\text{F}$  inkar ani thung. May thla tawp a tanga October thla tir thleng hi Fur ( Monsoon season) ruah sur hun anibawk. Mizoram hi Bay of Bengal Monsoon system in a huam a Tropical zone a awm anih avangin boruak hi a hnawng in kum khat ah ruah 254 cm vel asur thin bawk. Lunglei District hi Ruah dawng tamber district ani a, kum khat ah 350 cm lai ruah tui hi a dang a, State capital aizawl erawh kum khat ah 250 cm vel a danwg thung. Kumtin Cylclone thli in a nuai a, Mizoram khawthlang lam hi a nuai nasatlai hmun ani bawk.

### 3.

## VEGETATION COVER

Mizoram State hi Flora leh Fauna lamah a hauhsa hle a, india ram pum ang pawha thil vang tak tak te hi Mizoram ah hian a awmnuual a, Mizoram hi india ram state leh Union Territory te zing ah State zau zawng atanga teh in Ramngaw tha nei zau ber ani a, Mizoram a ramngaw te hi a humhalhna dan kenkawh leh thu neihna lekkawh ah State, district councils leh village councils te a tul ang zeal hma la tu tur an ni bawh.

Mizoram hi Tropical zone a awm kan ni a, State Ramngaw a thing te hi Tropical ever green forest an tih, kum tluana hring, Hnah tlakawh ve lo an ni hlawm a, Chihrang hrang pawl ruk a then ni in as Dipterocarpus turbinatus, Artocarpus chaplasha, Terminalia myriocarpa, Amoora wallichii, Michelia champaca, Mesua ferrea, ah te then an ni a, Khawchhak lam ah chuan Pine (Far) hmun tam tak hmuh tur a awmbawh. Tropical ever green forest te hi thing ah chauh an tha loa Mau ( Bamboo ) te pawh that akin an to thei bawh a Mizoram ah hian Mau chi 27 lai hmuhchhuah ani tawh bawh,

Mizoram Chhimlam hi sub tropical area zone a awmni in Sub tropical Ramngaw a thing awm chi Pinus kesiya, Quercus spp, Castanopsis spp, Schima wallichii, Rhododendron arboreum, Rhus semialata etc te hmuh an ni bawh.

Ramngaw zirchiang tu ber chu Recorded Forest Areas (RFA) an ni a, an data atanga alan dan in Mizoram ramngaw hi 5641 sq kilometer a zau ramngaw awh chin an chhinchhiaha, heng ramngaw 4483 sq km hi Humhalh lai Reserved forest ani a. heng chhinchhiaha sa ah hian 1158 sq kilometer a zau huamchhung ami te hi thenhran loh an ni bawh. 1<sup>st</sup> January 2015 atanga 5<sup>th</sup> February 2019 in kar ah khan ramngaw tha lai hi 0.24 Hectares a zau hi Forest Conservation Act, 1980 (MoEF & CC, 2019) hmangin ramngaw nilo thil tangkai dang chin nan a hman tura dah ani a.

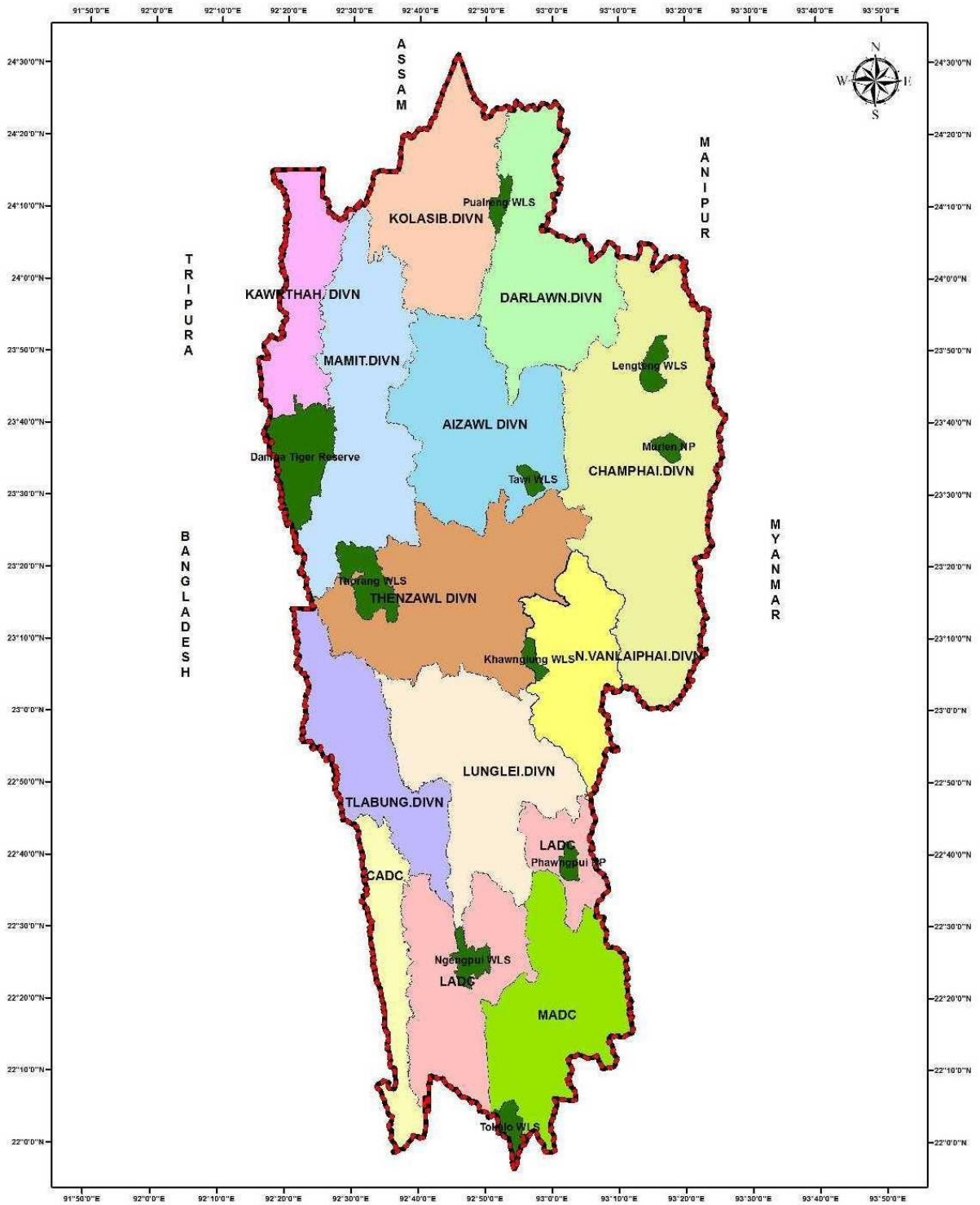
Tin, Mizoram ah hian National Park pahnih awmin Phawngpui National park leh Murlen National Park te an awma Murlen National Park hi 100 sq kilometers a zau ni in, Phawngpui National Park hi 50 sq kilometers azau ani bawh. Heng National park bak ah hian Sakei ( Tiger ) awmna atana ramngaw humhalh lai bik a awm bawh a, Dampa tige reserved a awm bawh. Heng bak ah hian ramngaw humhalhna Wildlife sanctuary 7 a awm bawh. Tin Wild life division hi hmun 4 ah then ani a, chung te chu, Aizawl Wildlife Division, Field Director Dampa Tiger Reserved, Chhimtuipui Wildlife division, Khawzawl Wildlife division, Madc forest department.

Heng Wildlife division huamchhung te hi humhalh an ni a, khauh taka ven an nih avang in a chhunga natural resource hi mihring ten hmang thei mahse Ram vah leh tih chereu

hi dan in aphal loa heng division te hi Mizoram Forest cover zauzawng siamna leh ramngaw tha neihna ah nasa takin kawngro an su ani.

S.No.	Name of Protected Area	Area in sq.km	District	Notification No. & date
<b>1</b>	Dampa Tiger Reserve	500 core 488 buffer	Mamit	No.B.11011/14/90-FST of 7.12.1994
<b>2</b>	Murlen National Park	100	Champhai	No.B.12012/5/99-FST of 24.01.2003
<b>3</b>	Phawngpui National Park	50	Lawngtlai	No.B.12011/5/91-FST of 22.07.1997
<b>4</b>	Ngengpui Wildlife Sanctuary	110	Lawngtlai	No.B.12012/4/91-FST of 22.07.1997
<b>5</b>	Khawnglung Wildlife Sanctuary	35.75	Lunglei	No.B.12012/10/96-FST of 12.10.2000
<b>6</b>	Lengteng Wildlife Sanctuary	60	Champhai	No.B.12012/15/94-FST of 31.05.2002
<b>7</b>	Tawi Wildlife Sanctuary	35	Aizawl	No.B.12012/1/91-FST of 16.11.2001
<b>8</b>	Thorangtlang Wildlife Sanctuary	50	Lunglei	No.B.12012/17/2001-FST of 23.04.2002
<b>9</b>	Pualreng Wildlife Sanctuary	50	Kolasib	No.B.12012/19/01-FST of 29.07.2004
<b>10</b>	Tokalo Wildlife Sanctuary	250	Saiha	No.MADC 68/E&F/2006-2007/63 of 01.10.2007
<b>Total-----</b>		<b>1728.75</b>		
--				

Table 1 Wildlife Division of mizoram



Prepared by :  
GIS Cell, EF&CC Dept. Mizoram

Map not to scale

**Legend**  
 State Boundary  
 Protected Areas

## 3.2

## FOREST TYPE & COVER AREA

December 2017 leh February 2018 inkar a IRS Resourcesat-2 LISS III satellite data in a chhinchhiah dan in, Mizoram hi ramngaw in 18,005.51 sq kilometer huamchhung hi ramngaw in thatakin ala khuh a, a zau zawng hi Mizoram state zauzawng atanga 85.41% a zau hi ramngaw hian ala awh ani.

Ramngaw te hi an chhah that leh that loh hi hmun bialkhat chhunga thing ding tam leh tam loh dan atangin an the a chu chu Forest Canopy tih ani.

Mizoram hi 157.05 Sq kilometer huamchhung hi ramngaw chhah tha tak ( Very Dense Forest) a chhiar theih in a awma,

5,800.75 sq kilometers huamchhung hi Ramngaw tha pangai tak Moderately Dense Forest (MDF) an tih zinga mi ani bawk.

12,047.71 sq kilometer huam chhung hi Ramngaw daidarh tan thing tlem tan na Open Forest zinga mi ani bawk.

Mizoram state chhunga ramngaw in a khuh chin hi 180.49 sq kilometers in 2016-2017 inkar ah khan a kiam a, a kum hmasa ai in ramngaw khuh hi a tlem zel ani.

Table 2 FOREST area

VERY DENSE	<ul style="list-style-type: none"><li>• <b>Very Dense Forest</b></li></ul> <ul style="list-style-type: none"><li>• 157.05(sq km) 0.74 (GA)</li></ul>
Moderate	<ul style="list-style-type: none"><li>• <b>Moderate Forest</b></li></ul> <ul style="list-style-type: none"><li>• 5,800.75(sq km) 27.52 (GA)</li></ul>
Open	<ul style="list-style-type: none"><li>• <b>Open Forest</b></li></ul> <ul style="list-style-type: none"><li>• 12,047.71( sq km) 57.15 (GA)</li></ul>

Table 3 Percentage of forest cover

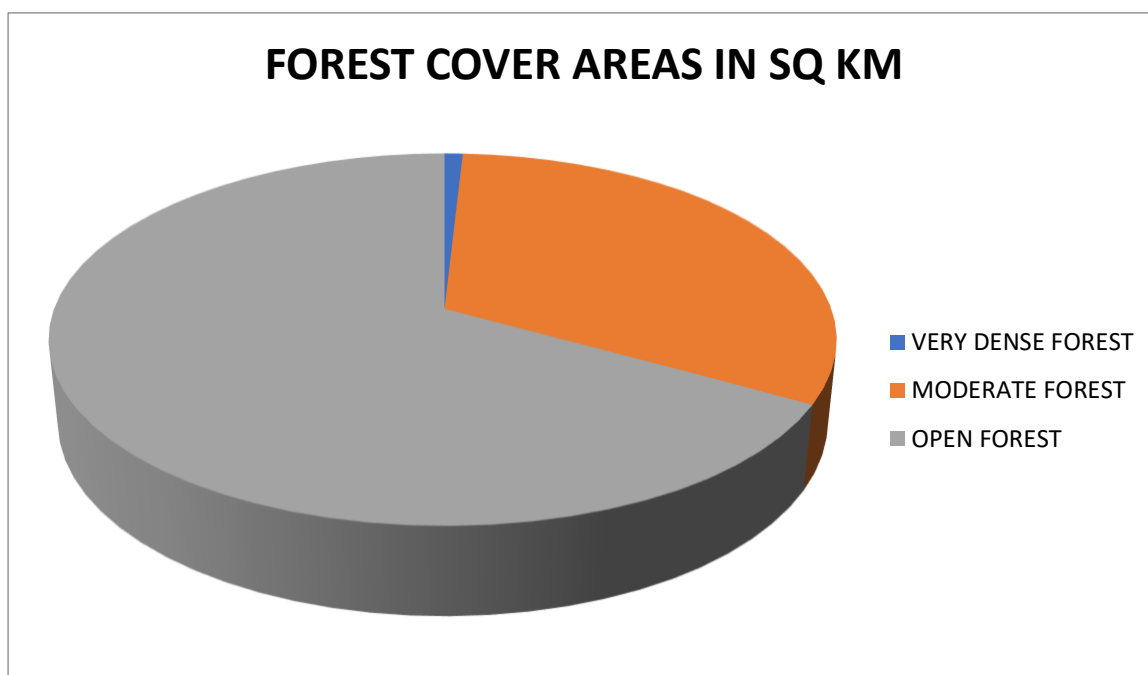
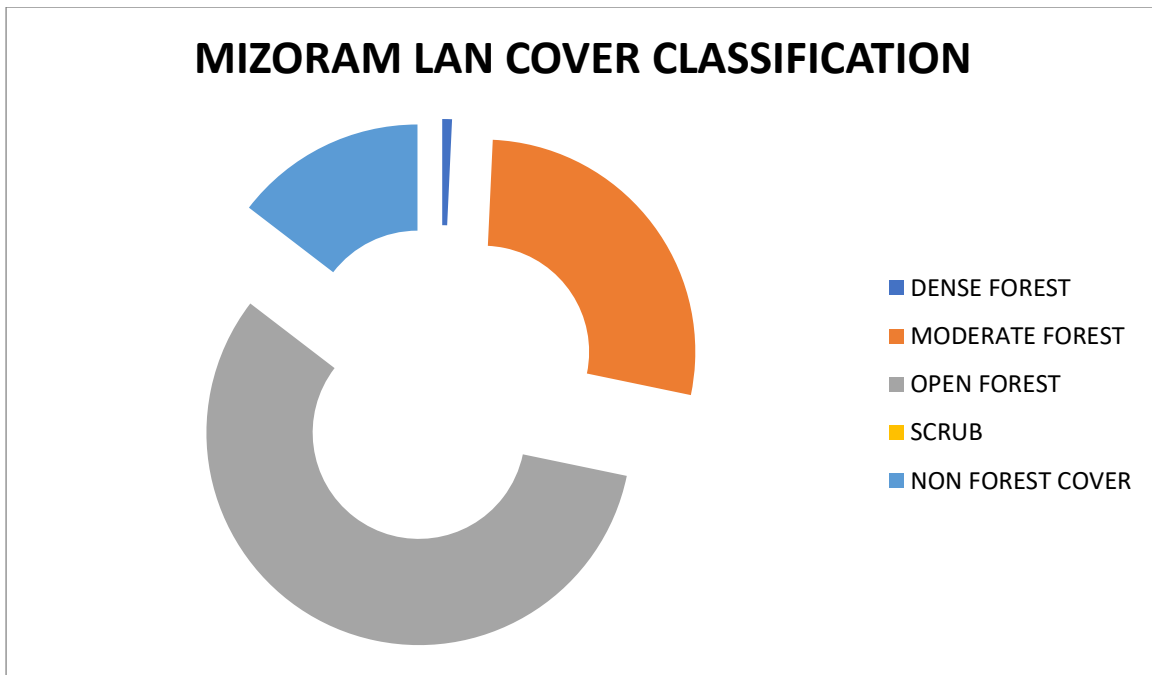


Table 4sHOWING LAND COVER

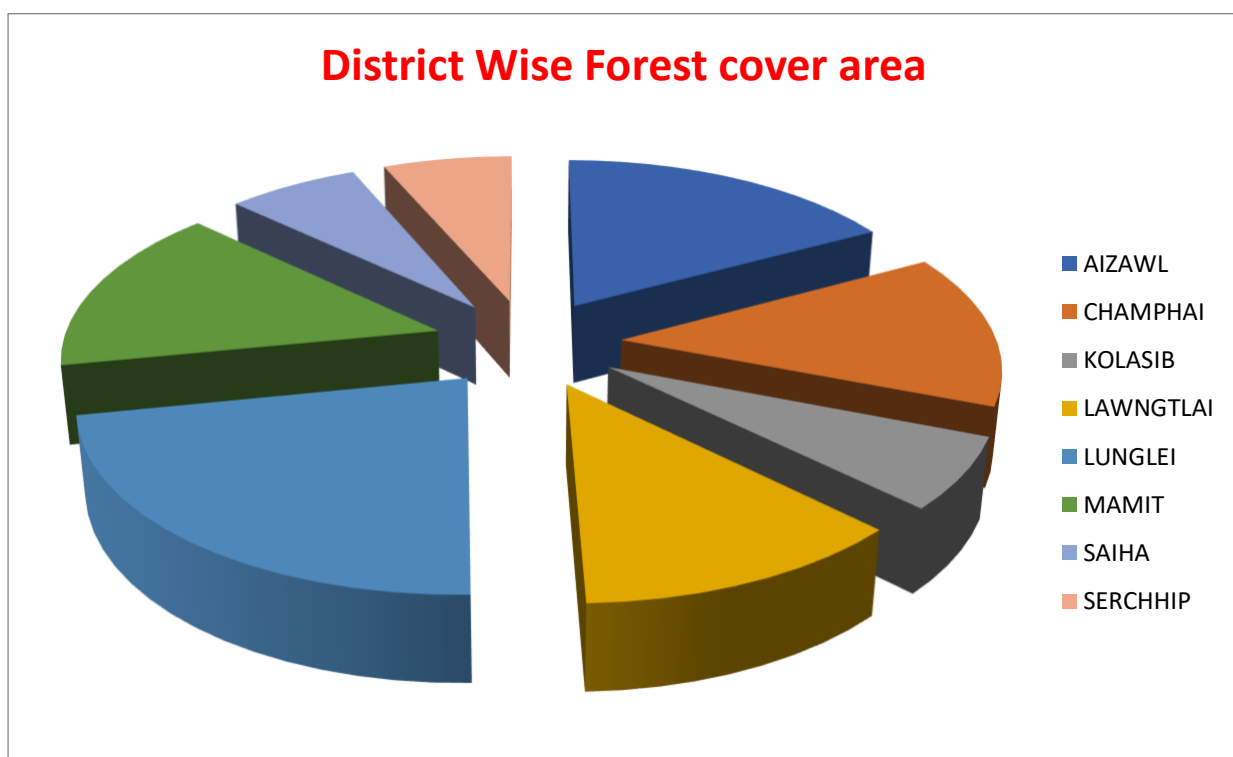




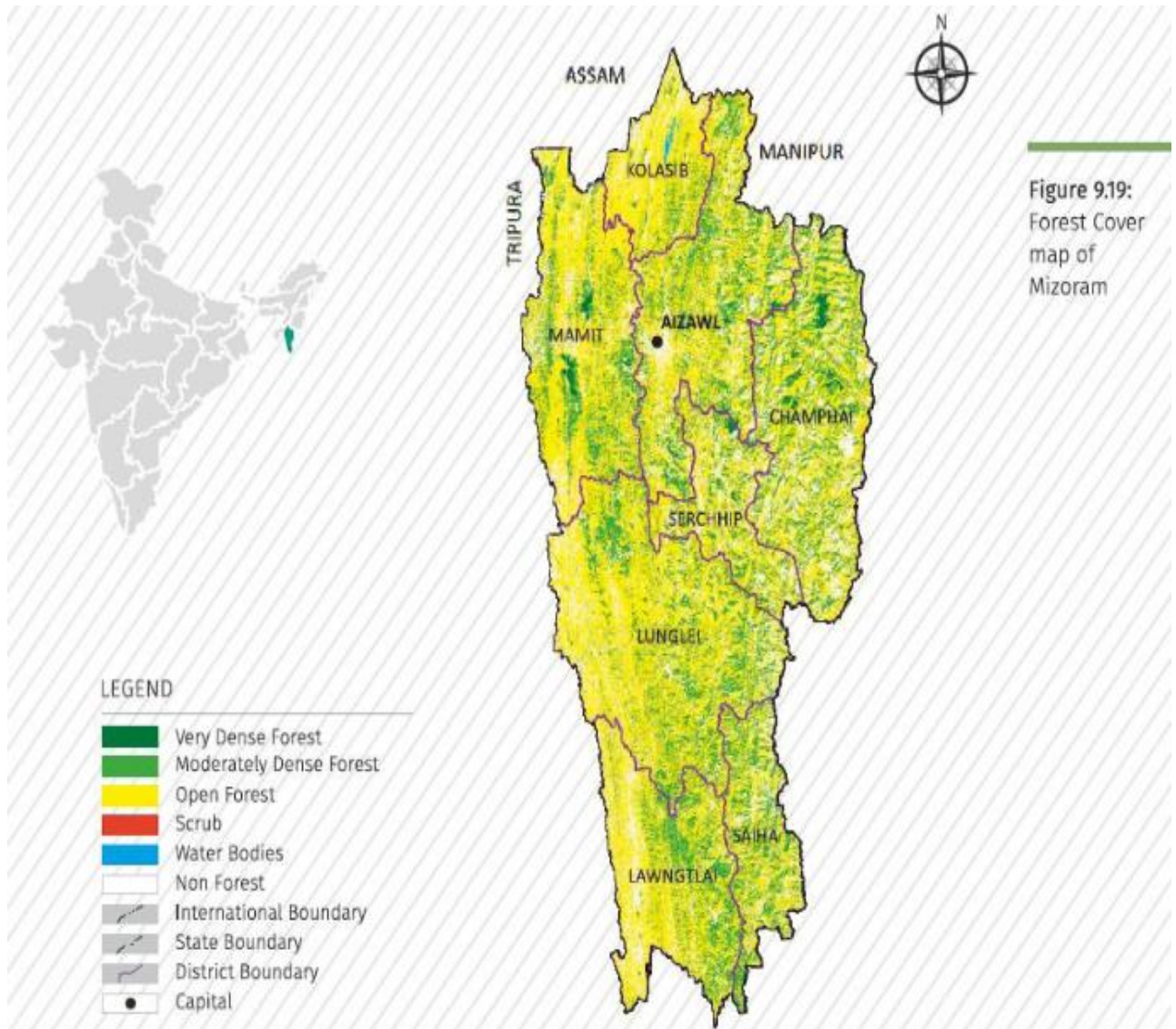
### 3.3 DISTRICT WISE FOREST COVER AREA

2019 data atanga alan dan in Mizoram ah Lunglei chu ramngaw tha nei zau ber an ni a, 4022 sq km lai ramngaw tha an la nei a, aizawl in rawn dawt in 3078.91 sq kilometres lai ramngaw an nei bawk. Lunglei district hi Mizoram a ruahtui dawng tam ber an ni a, Mizoram khawchhak lam tlang dung hi asan avangin thing to chi an dan deuh bak ah ramngaw hi a thawl zawk deuh bawk.

Champhai district hi ramngaw in a khuh tlemna ber hmun ani a, amaherawh chu Very dense forest class hi Champhai district ahhian a tam ber leh thung a, Mizoram dense forest awm zawng zawng atanga 55.62 lai hi champhai district a awm ani thung mamit in rawn dawt in 52.12 % lai mamit district ah hmuhtur a awm bawk . Lawngtlai district leh Siaha District te hian Very Dense Forest class hi an nei lo thung a, Moderate District hi Lunglei District in nei tam berin 1190.13 sq km lai an nei a Lunglei District vek hian Open Forest Class hi nei tam ber bawk in 2831.5 sq kilometres a zau nei in, Kolasib District hi Moderate forest class nei tlem ber ni in 168.37 sq kilometres a zau an nei thung. Siaha District hi Open Forest neitem ber district ni in 640.38 sq kilometres azau an nei ve bawk.



**Table 5 District wise forest cover**



### **3.4 FOREST COVER AT ELEVATION RATE**

Mizoram hi tlangram anih avangin heng kan ramngaw hmuh leh neih te hi an awmna san dan azirin then theih an ni a meters 2500 chin chunglam ah hian ramngaw chhah tha pangai hi hmuhtur a awm loa a tlangpuiin meter 1000 – 1500 inkar ah ramngaw tha ho hi hmuh an ni. Ramngaw thawl Open forest kan tih ho hi meters 500 emaw a aia hniam lamah hmuh tam ber an ni.

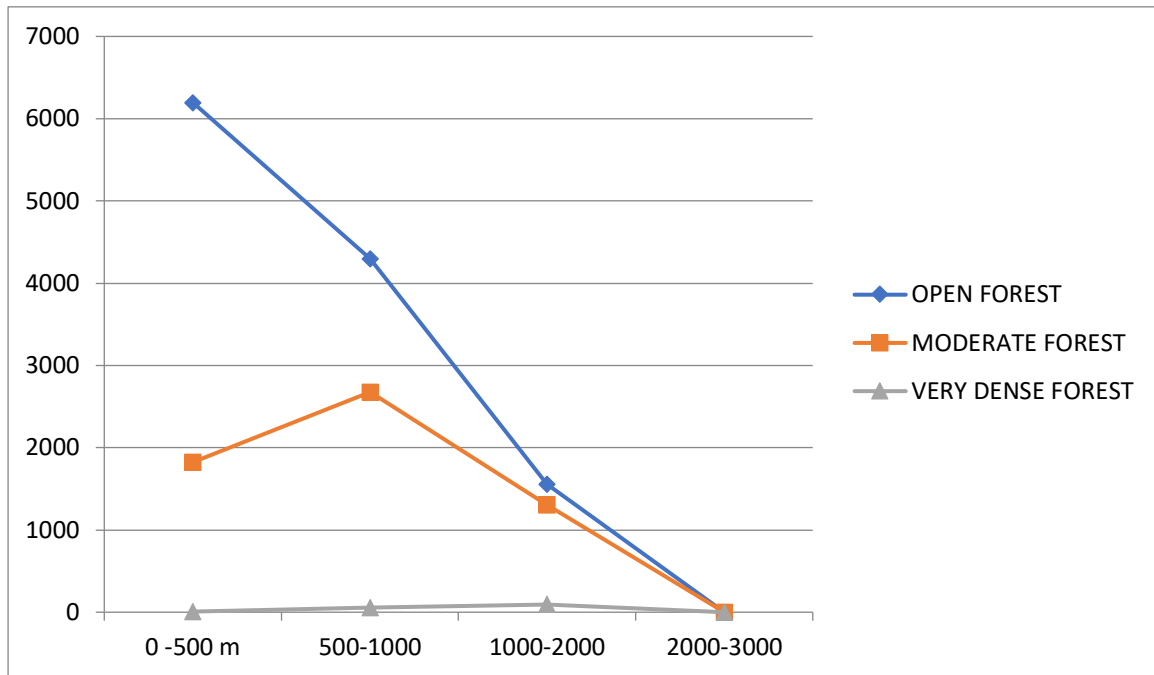
Mizoram state khawthlang lam hi a hniam a vangin leh ruahtui a hmuhtat bik avangin ramngaw then chi hrang hrang te hi hmuh tur an tam bik bawk.

Very dense forest class hi meters 2000-3000 inkar ah 1 sq km chauh hmuh tur a awm a elevation class adang ah pawh 1 sq km chauh hmuh ani a, Openforest erawh hmuh anilo, Dense forest class hi 1000-2000 meters in kar ah an tam bera 93 sq kilo meters a zau a awm thung.

Moderate forest hi elevation 500 – 1000 inkar ah hmuh tur a tam ber a 2000 meters chunglam ah erawh 1 sq km a zau chuah hmuh ani thung.

Open Forest class hi 0 -500 meters a sang ah a tam bera 6197 sq kilometres laia zau hmuh ani a, Open forest class hi elevation sang ang zel in hmuhtur a tlem telh telh ani.

**Table 6 FOREST CLASS DISTRIBUTION IN ELEVATION IN SQ KM**



### 3.5

## FOREST COVER AT SLOPE DEGREE

Mizoram a kan ramngaw hmuh te hi lei awih(slope) na hmun a zirin an bit dan hi then leh theih ani a  $15^{\circ} - 20^{\circ}$  slope inkar ah hiam ramngaw tha tam ber a,  $0 - 5^{\circ}$  slope hmun zawl zawk ah hian ramngaw hi a tlem zawk bawk ani.

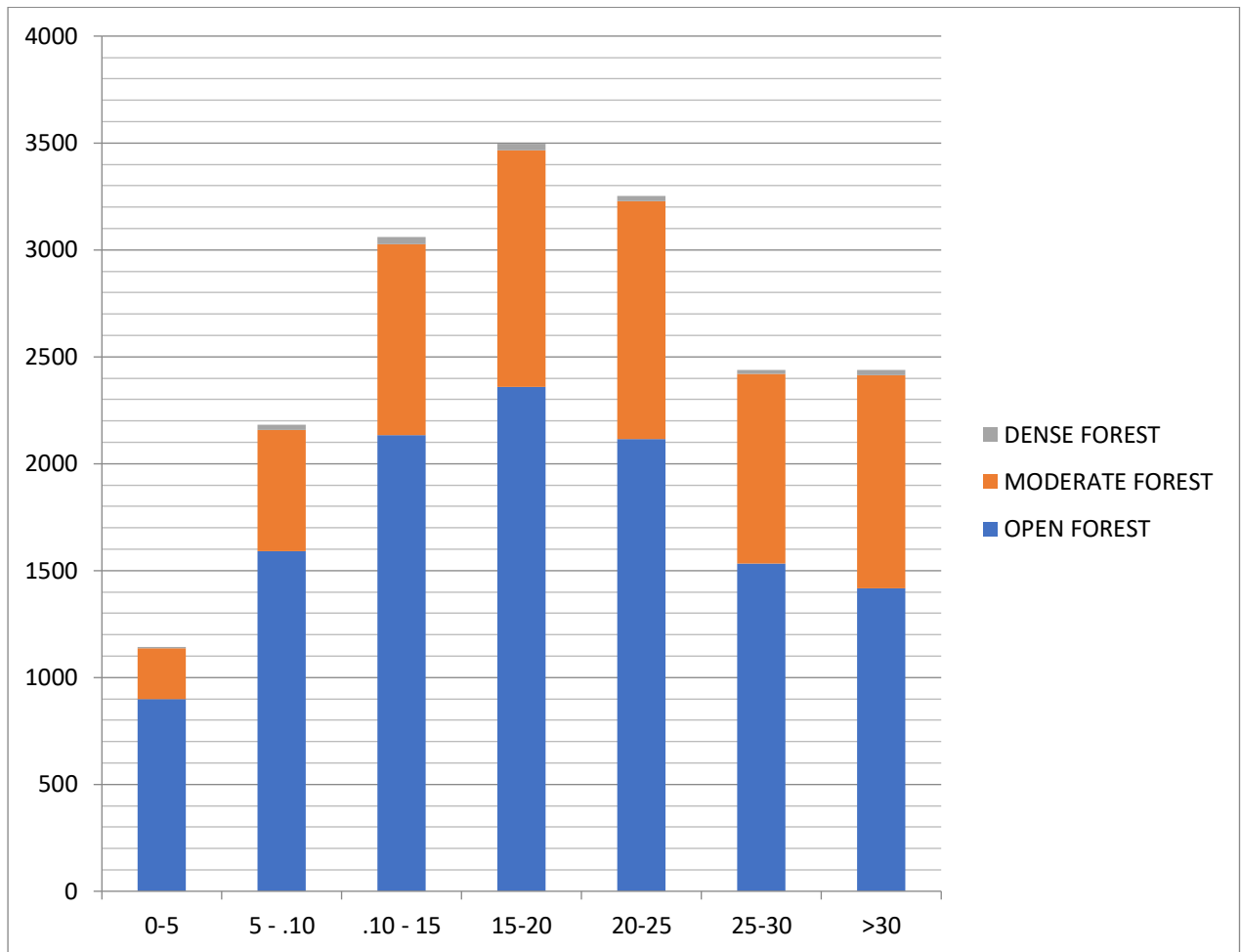
Very dense Forest class hi  $10^{\circ} - 15^{\circ}$  a awn ah te hmuh tam ber ani a 34 sq kilometres azau hmuh ani a,  $0 - 5^{\circ}$  slope ah hmuh tlem ber ni in 7 sq kilometres chauh hmuh ani.

Moderate forest te hi  $20^{\circ} - 25^{\circ}$  slope ah te hmuh tam ber an ni a, 1112 sq kilometres azau hmuh ni in,  $0 - 5^{\circ}$  slope ah hian hmuh tlem ber ni in 238 sq kilometres a zau ah an awm bawk.

Open Forest class te hi  $15^{\circ} - 20^{\circ}$  slope ah hmuh tam ber ni in 2358 sq kilometres an awh a,  $0 - 5^{\circ}$  slope ah hian hmuh tlem ber ni in 898 sq kilometres a zau hmun an awh bawk.

**Table 7**

**FOREST TOTAL COVER AREAS AT SLOPE DEGREE**



#### 4. Conclusion

Mizoram ramngaw chungchang data kan collect atanga kan hriat theih chu Mizoram ah chuan ramngaw kan la ngah em em a, India ram pumah pawh ramngaw humhalh tha pawl kan ni tih a lang chiang em em bawk ani. Mizoramah chuan ramngaw chi hran hran kan nei tih pawh a lang chiang hle a, a nawlpui chuan in ang viau mahse danglamna tamtak chhim leh hmar, chhak leh thlangah te a awm bawk ani.

Heihian kan dissertation chu kan lo duhtawk tawh mai ang a. Mizoram ramngaw te hi humhalh chhonzawm zel tlak ani tih kan tarlang duh

bawk ani.

## **5. Reference**

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