CHAPTER - 4
STUDY AREA

4.1 GEOGRAPHICAL LOCATION:

The study area falls under the major group Montane Sub-tropical Forest (Subramanian and Sasidharan, 1996) or Eastern Himalayan Montane Forests of Mizoram. The area covers about 24% of the total geographical area (i.e. 21,081 sq.km) of the state; it expanse in the eastern fringes of Mizoram bordering Myanmar (Burma) on the east and Manipur on the north. It lies between 21° 57' N to 24° 15' N latitude and 93° 11' E to 93° 29' E longitude. The altitude varies approximately from 750 m asl on the western side and 2158 m asl on the eastern side. The study area includes parts of Aizawl district, Champhai district, Serchhip district, Lunglei district, Lawngtlai district and Saiha district of Mizoram. It forms parts of the Topographical Maps No. 83 H/4, 83 H/8, 84 A/14, 84 A/15, 84 B/13, 84 B/14, 84 B/15, 84 E/1, 84 E/2, 84 E/3, 84 E/4, 84 E/5, 84 E/6, 84 E/7, 84 E/8, 84 F/1, 84 F/2, 84 F/3 of Forest Survey of India.

4.2 CLIMATE:

The area as a whole enjoys a pleasant and moderate climate. It is neither very cold nor very hot. It has a sub-temperate climate and the temperature varies from 9°C to 25°C (Lalramghinglova, 2003). The places at higher altitude experiences very cold winter with higher temperature ranges while places at lower altitude experiences lower temperature ranges.

The entire state of Mizoram is under the influence of monsoon. The study area also receives heavy rain during May to September like other areas of the state with the average of 2063.83 mm per annum. Within the study area, Saiha district which is
in the southern most part of the state receives heaviest rainfall with an average of 3244.90mm per annum (Anonymous, 2010). Normally July and August are the rainiest months whereas December and January are the driest months (Pachuau, 1994).

4.3 SOIL:


The soils of the study area also falls under the above three orders. They are generally young, immature and sandy. The surface soils are dark, highly leached and poor in bases, rich in iron and have low pH values ranging from 4.5-6.0 i.e. averagely acidic. They are well drained, rich in organic carbon, low in phosphate content and high in available potash. The surface soil textures are loam to clay loam with clay content increasing in depth. The pH and organic carbon content decreases with the increase in depth. They are capable of providing substantial oxygen supply for plant growth and have capability to retain moisture for sufficient supply of oxygen throughout the year. The percentages of clay, silt and sand within 50cms. of the surface is 15-30%, 35-45% and 25-45% respectively (Anonymous, 1999).

4.4 VEGETATION:

Out of the total geographical area (21, 081 sq.kms) of the state, 19,240 sq. kms. is covered by Forest which is about 91.27 % of the total area of the state (Anonymous, 2010). The vegetation of Mizoram can be simply divided into three
category: 1) Tropical Wet Evergreen Forest, 2) Tropical Semi Evergreen Forest and 3) Montane Sub-tropical Forest (Champion and Seth, 1964).

The study area also covers Montane Sub-tropical Forest and has abundant growth of vegetation. The common timber trees and some of the economically important plants species of the forest are as given below:

The forest are characterized by *Rhododendron arboreum* Sm.(Chhawkhlei); *Myrica esculenta* Buch. Ham. ex D. Don (Keifang); *Engelhardtia spicata* Leschn. ex Blume (Hnum); *Pinus kesiya* Royle ex Gordon. (Far); *Lithocarpus dealbata* (Miq.) Rehder. (Fah); *Quercus griffithii* Hk.f. & Th. ex DC (Sawthing); *Quercus serrata* Thumb. (Sehawrdum) etc.

*Arundinaria callosa* Munro (Phar); *Chimonobambusa khasiana* (Munra) Nakai (Lik); *Dendrocalamus sikkimensis* Gamble (Rawmi); and *D. giganteus* Munro (Rawpui) are the characteristic bamboo species. *Melocalamus compactiflorus* Benth. (Sairil) are also present, whereas distribution of *Melocanna baccifera* (Roxb.) Kurz is restricted to the forests. *Trachycarpus martiana* H. Wendl. (Siallute) and few cycads are also present (Lalramnghinglova, 2003).

The forest is also the natural abode of epiphytic orchids like *Renanthera inschootiana* Rolfe (Senhri); *Vanda coerulae* Griff ex Linda (Lawhleng); *Mantisia saltoria* and *M. wengerii* Fischer (Ruala, 1985; Singh et. al., 1990). Since most of the villagers are practicing Shifting Cultivation, it leads to the degradation of forest and disturbed plant succession.

### 4.5 PROTECTED AREAS:

The study area also includes 2 (two) National Parks (Murlen National Park and Phawngpui National Park) and 2(two) Wildlife Sanctuaries.
(Lengteng Wildlife Sanctuary and Tawi Wildlife Sanctuary). They are briefly described as below:

i) **Murlen National Park:** Situated in the eastern part of Mizoram (bordering Myanmar) it has an area of $150 \text{km}^2$ and the highest peak is 2175 m asl. Sub-tropical hill forests and tropical semi-evergreen forests prevail in the area. Pradhan (1995) has recorded 427 species of animals including 275 species of birds. The distance from Aizawl-via-Champhai is about 245 km.

ii) **Phawngpui National park:** It is located in the eastern part of Lai Autonomous District Council in Chhimtuipui District of South Mizoram. The area is 50 km$^2$ and the park includes the highest peak in Mizoram, *i.e.*, Phawngpui or Blue Mountain (2157 m asl). The existence of a Sub-tropical hill forests is characterized by the natural growth of *Rhododendron arboretum* Sm. and is endowed with rich growth of epiphytic orchids. Robertson (1996) has reported birds, *viz.*, *Falco peregrines, Garrulax virgustus, Ficidula superaciliaris*, etc. which were not seen anywhere in Mizoram.

iii) **Lengteng Wildlife Sanctuary:** Lengteng Wildlife Sanctuary is located in Champhai District of Mizoram. It lies at Lamzawl and is near to Murlen National Park. Some of the wild animals and birds found in this sanctuary are Tiger, Leopard, Sambar, Barking deer, Wild boar, Hoolock gibbon, Rhesus macaque, Ghoral, Serrow, Hume's Bartailed Pheasant, Kaleej Pheasant. Lengteng Wildlife Sanctuary is 250 km east of Aizawl. Lengteng wildlife sanctuary is very close to Indo-Myanmar and Indo-Bangladesh borders. It
covers about 110 sq. km of land and ranges in altitude from 400 m to about 2300 m asl. The second highest Peak in Mizoram can also be seen in this park.

iv) **Tawi Wildlife Sanctuary**: Tawi Wildlife Sanctuary in Aizawl District of Mizoram is one of the first sanctuaries in Mizoram. It is located in the central part of the state, about 115 km from the capital town of Aizawl. It covers an area of about 35.75 sq. km and ranges in altitude from 400m to 1300m from sea level. Notified in 1978, its vegetation includes tropical evergreen and semi evergreen forests, which are home to many species of flora like Canes and Bamboos, *Michelia champaca*, *Duabanga*, *Schima wallichi*, *Termunalia*, *Gmelina arborea*, etc. and fauna like Tiger, Leopard, Sambar, Barking deer, Jungle Cat, Serow, Hoolock gibbon, Rhesus macaque, Kallej pheasant, Jungle fowl, Common patridges, Hill myana, Dark rumped swift.

### 4.6 THE INHABITANTS:

In Mizoram, 16 Scheduled Castes, 14 Scheduled Tribes and 37 Sub-tribes have been recognized (Anonymous, 1991). Shakespeare (1912) divided the Lushai (Mizo) into a number of sub-tribes or clans and sub-clans. Dutta (1992) so far traced fifteen ethnic groups or population in Mizoram, such as *Lusei*, *Paihte*, *Hualngo*, *Tlau*, *Thado*, *Ralte*, *Hmar*, *Mara* (Lakher), *Pawi* (Lai), *Bawm*, *Pang*, *Chakma*, *Riang*, *Biate* and *Mog*.

Out of the above mentioned fifteen ethnic groups, 4 minority ethnic groups or communities form the “*inhabitants*” of the study area, such as (i) *Mizo* (Lusei) (ii) *Mara* (Lakher), (iii) *Lai* (Pawi), (iv) Paihte who are a very distinctive people rich in old-age traditions, cultures and customs, and continue to retain their respective
dialects and ethnic identity. (Lalramngtinglova, 2003). A brief account of the inhabitants of study area is presented below:

**MIZO (Lusei):** The Mizos are formerly known as *Lushais* and their language (i.e., *Lushai language or Duhlian*) has now became “*Mizo language*” (Phukan, 1992; Thanga, 1992). Their life and culture has been described under “*The People and Culture*” in Chapter 1. They are the dominant tribe in Aizawl, Champhai, Serchhip and Lunglei Districts of the study area.

**MARA:** The true name and the name by which they call themselves is ‘*Mara*’ but by the surrounding tribes they are known as “*Lakkers*” (Lorrain, 1921). They are known as ‘*Shamtu*’ in Myanmar, ‘*Shindu*’ in Arakan and ‘*Lakher*’ in Mizoram. They occupy the south-eastern corner of Mizoram. They came from Haka, the Chin Hills of Myanmar and they speak Mara language. They live in eastern hills and the valleys of *Kolodyne* river. The principal Lakher clans have been classified into royal, patrician and plebeian clans (Parry, 1932). They are extremely sensitive to their peculiar identity (Chatterjee, 1990). Agriculture is the main occupation. The rural people have acquired the knowledge of indigenous medicines form Mor or Rakhai. The Maras are expert cotton growers and women are good weavers.

**LAI:** Lai people are known as *Pawi* or *Chin*, because most of their settlements were in the Chin Hills of Burma (Singh, 1995). According to tradition, they came from Haka and Klangklang Sub-division of the Chin Hills of Myanmar (Anonymous, 1994). According to Hengmang (1992), Lai people came down from China in 200-100 B.C.
Lai People live around the Blue Mountain and in-between Kolodyne river and Chakma Autonomous District in Chhimtuipui District of South Mizoram. They speak their own language called, ‘Lai Hawlh’ (Language of Lai). Their dialect belongs to the Tibeto-Burman type of Central-Chin Group along with Lushei, Lakher and Zahau tribes (Grieson, 1908).

There are over 160 clans and sub-clans among the Pawi tribe. The principal clans are Hnialum, Chinzah, Hlawncheu, Hlawnchhing, Khenglawt and Fanai (Anonymous, 1994). Jhuming agriculture is their main occupation.

PAITE: The Paites are one of the constituting tribes of the ZOMI/ZOs who inhabit India, Burma and Bangladesh. The word paite means “a group of people marching " (pai-march ;te - "plural maker"). The Paites are a recognised scheduled tribe in Manipur as well as in Mizoram. The Paites are concentrated in Manipur, a northeastern state of India. They are dominant in Lamka Town of Churachandpur of Manipur state with a population of 60 thousands (as per the population consensus, 2001). Almost all ethnic Paites follows Christianity. There is also a large Paite population in the Indian State of Mizoram. They are well integrated in the Mizo group which consist of many very similar tribes. They live around Lengteng hills in the Northern part of Mizoram in Champhai district.
REFERENCES:


