

# **IDENTIFICATION AND MAPPING OF TOURIST SITES IN MANIPUR USING REMOTE SENSING AND GIS**

**THESIS SUBMITTED TO  
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IN PARTIAL FULFILMENT OF THE REQUIREMENTS  
FOR THE AWARD OF THE DEGREE  
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DOCTOR OF PHILOSOPHY  
IN  
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*By:*

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NAGALAND UNIVERSITY, LUMAMI-798627  
ZUNHEBOTO DISTRICT, NAGALAND  
2022**



## *Department of Geography*

### **School of science**

*(A central university established by an Act of Parliament No. 35 of 1989)*

Headquater: Lumami Dist; Zunheboto, (Nagaland), Pin Code 798667

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### **DECLARATION**

I, Ms. Takhellambam Prameshwori Devi, bearing registration No. **Ph.D/GEO/00080** dated **31/08/2017** hereby declare that the subject matter of the thesis entitled “**Identification and Mapping of Tourist sites in Manipur using Remote Sensing and GIS.**” is the record of work done by me, that the contents of this thesis did not form basis of the award of any previous degree to me or to the best of my knowledge to anybody else, and the thesis has not been submitted by me for any research degree in any other university/institute. This is being submitted to the Nagaland University for the degree of Doctor of Philosophy in Geography.

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Supervisor

*Dedicated to:*

*My Loving Mother Mrs. Takhellambam Pramodini Devi*

*&*

*My Loving Father Late Mr Takhellambam Prakash Singh*

*My only reason for who I am today*



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### **CERTIFICATE**

This is to certify that the thesis entitled **“Identification and Mapping of Tourist sites in Manipur using Remote Sensing and GIS.”** is a record of original research work carried out by Ms. Takhellambam Prameshwori Devi under my supervision. She is a registered research scholar, bearing the registration no. **Ph.D./GEO/00080** dated **31/08/2017** of the Department of Geography.

The candidate has fulfilled all the requirements of Ph.D. regulations of Nagaland University for the submission of thesis. The work is original and neither the thesis nor any part of it has been submitted elsewhere for the award of any degree or distinctions. The thesis, therefore, forwarded for adjudication and consideration for the award of degree of Doctorate of Philosophy in Geography under Nagaland University.

**(Prof. Wanghimenla Jamir)**

Supervisor



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## **CHAPTER I**

### **INTRODUCTION**

#### **1.1 INTRODUCTION**

Tourism is one of the world's largest and fastest-growing industries. A tourist is a person who undertakes the journey for pleasure, recreation or culture, may enter a country or visit a place for a temporary period of not less than 24 hours and spends the money he brought in, without seeking or taking up work or employment in the country or place of his visit. According to United Nations World Tourism Organisation (UNWTO), "tourism comprises the activities of persons travelling to and staying in places outside their usual environment for not more than one consecutive year for leisure, business and other purposes not related to the exercise of an activity remunerated from within the place visited". UNWTO's contribution of tourism to economic activities worldwide is estimated at 5%. In global trade Tourism is the major force which plays a vital role in the socio-cultural and economic development of most nations, and has the potential to preserve heritage values constitute the basic background elements for the evolution, growth of tourism, and loss of tourism value of the destination.

India's performance in international and domestic tourism in terms of Tourist traffic and tourism receipts, India is a tourist paradise and has all unique features of modernity and traditional hospitality. The average Indian is also an avid sightseer and can travel thousands of miles to different environments. Some impacts of new tourism development depend on many factors, including the existing cultural and economic distance between guests and residents, the ability of a destination to absorb visitors without unduly affecting local traditions, the place of development, and the types of activities undertaken by the visitors, Ranga (2003). Like other states of India, Manipur has also possibilities for growth in the Tourism sector with vast cultural and natural heritage with varied natural attractions.

#### **1.2 COMPONENTS OF TOURISM GEOGRAPHY**

According to Leiper (1990), a tourist attraction system is defined as an empirical connection of tourist, nucleus, and marker with tourists being travellers or visitors

seeking leisure-related experiences, which involve nuclear and marker elements. The following are the four components embedded in Leiper's model.

- I. The Human Component: The human component specified in the model is the tourists who undertake tourism to a destination of their interests. Tourists undertake different forms of tourism as per their needs like recreation, pleasure, business, education, health, pilgrimage, and culture and they are called recreational tourists, pleasure tourists, business tourists, education tourists, health tourists, pilgrimage tourists and cultural tourists in that order.
- II. The Geographical Component: The geographic component refers to the geographical area involved in the tourism process. Tourists depart from a geographical area – the place of origin, utilize a geographical route and reach a geographical area – the place of arrival or destination of visit.
- III. The Industrial Component: The industrial component involves the various business and organizations that provide services.
- IV. The Environment Component: The last component in Leiper's model of tourism system is the environmental component that surrounds the three geographical regions. Tourism is an open system and it interacts with the external environment. The environment is the surrounding circumstances that affect the tourism system and vice versa. These forces either induce positive or negative influences on the tourism system.

The environmental components that affect the tourism system are as follows:

1. Political Factors
2. Economic Factors
3. Social/Cultural Factors
4. Technological Factors
5. Environmental Factors
6. Legal Factors

### **1.3 HISTORICAL DEVELOPMENT OF TOURISM**

Tourism started as the largest global industry in the 20<sup>th</sup> century and even grew faster in the 21<sup>st</sup> century. In India, the tourism sector has immense possibilities for growth with vast culture and religious heritage, and varied natural attractions. After independence in India, tourism planning was started. The conscious and organized efforts to promote tourism in India were made in 1945 when a committee was set up by the government under the leadership of Sir John Sargent, the then Educational Adviser to the government of India. Thereafter systematic tourism development took place in India. (A.G. Krishna, 1995).

After the Second World War, tourism received a setback encouraging trend as a sensitive to world economic and political conditions. According to Khan (2005) tourism is the term today is of relatively modern origin and it is distinguishable by its mass character from the travel undertaken in the past as the period between the two world wars was also associated with the great movement of people for tourism as a result of the development of various modes of transport, especially the roadways and airways.

According to Authur phayre, the route by which Kshatriya princes arrived (in Burma) is indicated in the tradition as being through Manipur which lies with the basin of Irrawaddy. Among the coins collected in Manipur by W. Yumjao Singh, four pieces belong to the second century A.D. The discovery of these coins also indicates that there was a trade relation (Wangkhem Wilson, thesis). Thus, trade and commerce remained a strong force for many travellers to set out for a long journey. These great explorers can be credited with the distinction of being the pioneers who subsequently paved way for modern tourism.

### **1.4 THE CHARACTERISTICS OF TOURISM**

Tourism has also been recognized as several characteristics and their implications for management are identified as follows:

- I. Intangibility: Intangibility is the most unique characteristic of the service industry. Those things which can be touched and felt, are known as tangible



products like consumer goods and products which cannot be seen, tasted, or touched but can only be felt and experienced during consumption are called intangible products.

- II. Inseparability: Inseparability means, the product/service cannot be separated from the original service provider. Tourism service cannot be separated from its provider. The hotel guest cannot experience counter services if the receptionist is not available, nor can the receptionist render the service if there is no guest.
- III. Perishability: Tourism services cannot be stored like tangible products. Tourism is also perishable because every tourism product has some time limit to experience. A hotel room or aeroplane seat that is not sold on a particular night/day can never be sold. Unused capacity cannot be stored for future use.
- IV. Heterogeneity or Variability: Tourism product is heterogeneous as there are lots of human elements involved in the delivery of the tourism service and it cannot guarantee that each tourist's experience will be the same. The extensive involvement of people in the production of a tourism service introduces a degree of variability in the outcome.
- V. Seasonality of demand: Tourism is seasonal and one destination cannot be popular throughout the year. Most tourist destination areas are characterized by fluctuating periods of demand.
- VI. Interdependence of tourism production: Interdependence occurs because when a tourist visits a destination their experience is made up of several services, such as accommodation, transportation and attractions.
- VII. Lack of Ownership: Lack of ownership is a typical characteristic of tourism as well as the service industry.

### **1.5 TYPES OF TOURISM IN INDIA**

Tourism does not only mean travelling to a particular destination but also includes all activities undertaken during the stay. It includes day visits & excursions. The movement can be in the country or the tourists can also travel to foreign destinations for the tourism purpose. Every person in this world has his likes and dislikes.

Human thinking varies from person to person. Human thinking is diverse, and human wishes and desires vary. People in the world have reason to travel. Some travel for business purposes, some for medical purposes to get a good medical facility, some travel to visit a holy place while some travel to see the natural diversity.

The main purpose of travel determines the form of travel and tourism, so tourism could be classified as follows:

### **1.5.1 ECO TOURISM**

According to Cheia (2013), there are about 85 published definitions of eco-tourism, all of which referred to the concepts of 'conservation', 'sustainability', 'education', and 'local benefit'. In other words, eco-tourism is a type of tourism where tourists travel to the protected natural areas which are highly regulated to minimize the negative impacts and at the same time bring benefits to the local residents. In that process, both the tourists and the host are also educated about the importance of natural area conservation.

Ecotourism India has developed recently, for the concept itself is a relatively new one. Ecotourism entails travelling to places that are renowned for their natural beauty and social culture while making sure not to damage the ecological balance. Tourism in its purest sense is an industry committed to making a low impact on the natural environment and local culture while helping to generate income and employment for locals.

Ecotourism pertains to a conscious and responsible effort to preserve the diversity of a naturally endowed region and sustain its beauty and local culture. Indians have been known for ages to worship and conserve nature. So the growth of ecotourism in India is but natural. Also, the government of India has set up the Ministry of Tourism and Culture to promote ecotourism in India alongside other types of tourism.

### **1.5.2 CULTURAL TOURISM**

Cultural heritage tourism (or just heritage tourism) is a branch of tourism oriented towards the cultural heritage of the location where tourism is occurring. Culture has always been a major object of travel, as the development of the Grand Tour from the 16<sup>th</sup> century onwards attests. Global and local perspectives addresses in a comprehensive way some key challenges places face to paradigmatic shifts in cultural tourism (Richard, 2007). Cultural tourism in India is the predominant factor behind India's meteoric rise in the tourism segment in recent years because, from time immemorial, India has been considered the land of ancient history, heritage, and culture. The government of India has set up the Ministry of Tourism and Culture to boost cultural tourism in India. The ministry in recent years has launched Incredible India! Campaign and this has led to the growth of cultural tourism in India (Arunmozhi & Panneerselvam, 2013).

Culture is assumed as one of the primary beneficiaries and is regarded as a key asset in tourism development by promoting both tangible (i.e. cultural attractions, like museums and heritage centres, natural assets like the beach, sun and mountain) and intangible (i.e. promoting gastronomy cultural events and festivals and selling "atmosphere") elements. However, the diversity of known definitions and the complex relationship between culture and tourism underlines the problem of defining cultural tourism (Mousavi et al., 2016).

Cultural tourism in India has witnessed a lot of growth in recent years. For this growth to continue, the government of India needs to take further proactive steps and measures. Cultural tourism has a special place in India because of its past civilization as India has been considered the land of ancient history, heritage and culture. Historical and archaeological monuments continue to be the biggest draw in attracting international tourists. This fact has been confirmed by a survey undertaken by the pacific area travel association (PATA).

Cultural tourism deals with the commitment of a traveller to the culture of a nation or region, in particular the lifestyle and tradition and manner of life of the individuals in those geographical areas, the history of those people, their art, architecture, religion(s), and other elements that assisted remodelling their way of life. Cultural tourism is a financial enhancement instrument that achieves economic

development by attracting visitors from outside a host network who are totally or to some extent inspired by the historical, artistic, science or lifestyle offerings of a society, area, group or organization (S. Zagade, 2020).

### **1.5.3 PILGRIMAGE TOURISM**

The pilgrimage was the first tourism mobility to come into existence thousands of years ago (Kaelber, 2006). Although modern tourism is regarded as a relatively new phenomenon, its origins are rooted in the age-old practice of pilgrimage. Indeed, the development of tourism is difficult to understand without a thorough comprehension of the practice of pilgrimage in ancient times. This brief piece analyses the development of the pilgrimage phenomenon over the past few decades and concludes with the prediction that pilgrimage will re-emerge when the many similar segments – particularly, spiritual tourism, heritage tourism, religious tourism, dark tourism, and secular pilgrimage – are re-identified as a pilgrimage: mobility for the search for meaning that contains an element of transformation that is often deep and enduring (as they were viewed at the dawn of humanity and for thousands of years). Pilgrimage as a research concept, as distinct from a market segment, hardly existed before the 1990s. Its roots, however, reach back to concepts and theories – developed primarily by sociologists and anthropologists – that were analysed in the tourism literature of the 1970s and the 1980s and that focussed on the “visitor experience” and the psychosocial dynamics that drive different kinds of tourism, including pilgrimage (Cohen, 1979; 1992a, 1992b; 1998; Jackson and Hudman, 1995; MacCannell, 1973; Turner and Turner, 1969, 1978).

All pilgrims are engaged in a quest for a mystical or magical religious experience – a moment when they experience something out of the ordinary that marks a transition from the mundane secular world of their everyday existence to a special and sacred state. These experiences can be described as transformation, enlightenment and life-changing or consciousness-changing events, although words appear to be inadequate to truly describe such experiences, which often defy reason (Kim and Kim, 2018; Liutikas, 2015).

India is famous for its temples and that is the reason that among the different kinds of tourism in India, pilgrimage tourism is increasing most rapidly. The various places for tourists to visit in India for pilgrimage are Vaishno Devi, Golden temple, Char Dham, and Mathura Vrindavan. (Arunmozhi & Panneerselvam, 2013)

#### **1.5.4 WELLNESS TOURISM**

Wellness tourism is often conflated with medical tourism—not only by consumers but in destination marketing. This confusion is caused by an incomplete understanding of these markets and inconsistent usage of terminologies by destinations, government organizations and promotion agencies. Sometimes the term “health tourism” is also used as a catch-all to describe many types of medical and wellness services and activities—from open-heart surgery and dental care to destination spas and yoga retreats—causing further confusion. These two sectors operate largely in separate domains and meet different consumer needs.

A good way to understand the difference is to look at our health and wellbeing on a continuum:

- On the left are poor health, injury and illness. The medical paradigm treats these conditions. Medical tourism falls on this side—for example travelling to another place to receive surgery or dental treatment because it is more affordable, higher quality, or unavailable at home.
- On the right side of the continuum is wellness—these are the proactive things we do to maintain a healthy lifestyle, reduce stress, prevent disease, and enhance our wellbeing. This is what motivates wellness tourism.

The wellness tourism economy is much larger than a narrowly defined set of typical wellness businesses, such as spas, wellness retreats, thermal/mineral springs and boot camps. Wellness travellers (especially secondary wellness travellers) are looking to continue their wellness lifestyle during travel, and this lifestyle may encompass healthy eating, exercise/fitness routines, mind-body practices, nature experiences, connections with local people and culture, etc., thereby creating

opportunities for businesses such as yoga studios, gyms and fitness centres, healthy food stores/markets, events, arts and crafts, museums and many others.

The potential of wellness systems, developed through centuries of the wisdom of this ancient civilization would be fully tapped. This is being done by positioning India as a centre of Ayurveda, Yoga, Sidha, Naturopathy, etc. together with the spiritual philosophy that has been integral to the Indian way of life.

### **1.5.5 BUSINESS TOURISM**

Business tourism is the provision of facilities and services to the millions of delegates who annually attend meetings, congresses, exhibitions, business events, incentive travel and corporate hospitality. Business tourism is a broad concept that covers the activities and support services inherent to tourism, and the range of events or meetings held in the destination (Marques & Santos, 2017). Marais et al. (2017) further develop this definition by adding that this kind of tourism includes all trips related to the profession of the person who is travelling or that are related to their business interests. This could be the case for example for managers looking to expand their business in other countries. Haven-Tang et al. (2006) define business tourism as a “highly lucrative but competitive sector of the tourism industry which has led many destinations to implement strategies and invest in infrastructure and human resource developments”.

Business travel accounts for approximately 9% of all international travel. Business tourism is defined as leisure activities in conjunction with business travel. Business tourists are less cost-sensitive than leisure tourists, spending on average twice as much per day. Their purchase decisions are influenced primarily by their ability to use time efficiently within business travel schedules.

Business tourism or business travel is a more limited and focused subset of regular tourism. During business tourism (travelling), individuals are still working and being paid, but are doing so away from both their workplace and home. Some definitions of tourism exclude business travel. However, the World Tourism Organization

(UNWTO) defines tourists as people "travelling to and staying in places outside their usual environment for not more than one consecutive year for leisure, business and other purposes". Primary business tourism activities include meetings, and attending conferences and exhibitions. Despite the term business in business tourism, when individuals from government or non-profit organizations engage in similar activities, this is still categorized as business tourism (travel).

### **1.5.6 HERITAGE TOURISM**

Heritage tourism is travelling to understand the cultures and places of the past—including those of your ancestors. Heritage tourism means travelling with the primary purpose of exploring the history and heritage of a place. It may mean simple sightseeing of renowned historical architecture, visiting local museums that document the past through artefacts, art, and literary remains, or even something as quaint as sampling authentic historical recipes in their place of origin.

Places that offer a substantial amount of history invariably top the charts of the world's most visited countries. These places always have a story to tell – in addition to the amazing aesthetics they offer – and that's what attracts people. If the same is accompanied by mind-blowing hotels, resorts, public transport facilities, and delectable cuisine, tourism becomes an active contributor to their economies year after year.

Heritage tourism is not only a special case of a heritage industry but its numerical and economic importance has generated special management and scientific and political attention. Tourism treats much heritage as a zero-cost, freely accessible, flexible, and inexhaustible resource. The resource providers are likely to see it as costly, multiuse and in danger of damage or depletion. The ubiquity and flexibility of the heritage resource render it ideal for the creation of tourism products, many of which are linked specifically to places. The urban geography of heritage tourism is considered elsewhere, in the concept and management of the 'tourist-historic city'. These place products are consumed selectively, rapidly, and fashionably by tourists,

which necessitates a constant extension and differentiation of the product line. Successful heritage tourism places are in a process of continuous reinvention of their imagined pasts in response to their changing markets. The appreciation of the issue of tourism as support and justification for heritage or, conversely, as parasitical exploiter and potential despoiler of resources they have not created, do not manage and are not the sole or even most important user, depends largely on the viewpoint of the observer and its resolution depends mostly on the priorities set by governments and place managers (Ashworth, 2009).

Heritage tourism can be defined, broadly, as the harnessing of cultural, historical, and ethnic components of a society or place as resources to attract tourists (Chang 1999). In this sense, heritage tourism can refer to religious tourism, diaspora tourism, living culture, historic cities and built heritage, archaeological sites, and ancient monuments. As “heritage and tourism are collaborative industries, heritage locations into destinations” (Kirshenblatt-Gimblett 1998: 151). Global tourism to heritage sites is increasing around 10 per cent per year on average, with many (but certainly not all) properties doubling or tripling in visitation and revenues every ten years (UNWTO 2009, 2013). It is no exaggeration to say that, throughout the world, heritage and tourism have become inextricably linked and mutually dependent upon each other (Di Giovine 2008).

### **1.5.7 MEDICAL TOURISM**

Medical tourism can be defined as the process of travelling outside the country of residence to receive medical care. Growth in the popularity of medical tourism has captured the attention of policymakers, researchers and the media. Originally, the term referred to the travel of patients from less-developed countries to developed nations in pursuit of the treatments not available in their homeland.

Medical tourism is when a person travels to another country for medical care. Each year, millions of US residents participate in medical tourism. Medical tourists from



the United States commonly travel to Mexico and Canada, as well as countries in Central America, South America, and the Caribbean.

People may travel to another country to get health care for many reasons, including:

- **Cost:** To get treatment or a procedure that may be cheaper in another country.
- **Culture:** To receive care from a healthcare provider who shares the traveller's culture and language.
- **Unavailable or Unapproved procedure:** To get a procedure or therapy that is not available or approved in the United States.

The most common procedures that people undergo on medical tourism trips include dental care, surgery, cosmetic surgery, fertility treatments, organ and tissue transplantation, and cancer treatment.

### **1.5.8 ADVENTURE TOURISM**

Adventure tourism is defined as the movement of the people from one to another place outside their comfort zone for exploration or travel to remote areas, exotic and possibly hostile areas. Adventure tourism is a type of tourism in which tourists do some adventurous activities like skydiving, hill climbing, and scuba diving.

Adventure tourism is very popular among young age tourists. Adventure tourism gains much of its excitement by allowing the tourists to step outside their comfort zone. This may be from experiencing culture shock or through the performance of acts, which required some degree of risk (real or perceived) and physical danger.

The growth and development of the modern day adventure tourism industry can trace back to the mid-1800 in America. It was here that adventure lovers started to push the limits of sports like white water rafting and mountaineering with the first ascent of the Matterhorn in 1865 and descent of the Colorado River in 1869.

Shortly after these two events two of the great states were set up and later on proved to be of monumental importance for the Adventure lovers and the industry at large. The National Geographic Society formed in 1888 to “increase and diffuse geographic knowledge” and the Explorers Club formed in 1904 to “promote the scientific exploration of land, sea, air, and space”

Adventure tourism is one of the branches of tourism which is attracting a large number of tourists towards it. There are destinations identified which fulfil the demand of adventure tourists and also are popular for the leisure and/or relaxation of tourists. Adventure tourism can be considered a new form of eco, sport, or nature-based tourism. Though adventure tourism is not new as an explicit commercial activity it is a new beginning.

Adventure tourism is a travel experience that involves an outdoor pursuit that purposefully applies a challenge to the participants. This may often include the participants putting their skills, tenacity, stamina, and problem-solving abilities to counter some form of ‘risk’. Through adventure, we could learn many things e.g., teamwork, coordination, leadership, decision making and adjustment skills.

Adventure tourism has recently grown in India. This involves exploration of remote areas and exotic locales and engaging in various activities in India, tourist prefers to go trekking to places like Ladakh, Sikkim, and the Himalayas.

### **1.5.9 WILDLIFE TOURISM**

India has a rich forest cover which has some beautiful and exotic species of wildlife some of which are even endangered and very rare. This has boosted wildlife tourism in India. The places where foreign tourists can go for wildlife tourism in India such as the Sariska Wildlife Sanctuary, Keoladeo Ghana National Park, and Corbett National Park.

According to research by conservation India, Wildlife tourism is growing by 15 per cent annually in parks in which 70 per cent of the visitors are Indian. The research further states that many tourists (71 per cent) are willing to re-visit these parks but tourists to Ranthambore and Kanha say that tiger sightings are a must. Tourists have

a critical role to play in India as wildlife tourism continues to grow in leaps and bounds. Visitors' concern and interest in Indian wildlife and parks along with financial prowess can become a boon or death knell for conservation.

Wildlife tourism is a great way to be as close to nature as possible amid an amazing mix of flora and fauna. It is niche tourism whose popularity is immense. It is an eco-friendly venture having huge economic potential. The tourist is exposed to the animal world in the background of nature. He learns about the animal group's behaviour, their social structure, communication patterns, social code of discipline, and their mode of interaction and interpretation of the same. A keen observation of animals reacting in a specific way to a given environment draws loads of fun and thrill.

Wildlife tourism has a long history behind its evolution. It all started following the trail of the big game. Hunting wildlife was the chief motive driven by commercial schemes as well as making a specific settlement free from the attacks of wild lions and tigers and herds of rhinos and elephants who had become a potential menace to the cultivated crops.

## **1.6 GIS IN TOURISM**

A Geographical Information System (GIS) is used to record, store, edit, analyze and reproduce spatial or geographical data. A GIS system uses layered data where each layer represents one form of spatial data, such as a street layer, forest layer, vegetation layer and many more. All these layers are then combined into one to form an integrated layer with all the data. It performs as a tool to analyze spatial data and assists in building decision support systems for organizations. GIS has been slowly reshaping governance with its numerous applications, such as a Village Information System (VIS), Landslide hazard mitigation and Election mapping. Inevitably, GIS has made its way to the tourism industry as well.

In 1988, with the availability of data from the operational Indian Remote Sensing Satellites (IRS), the National Remote Sensing Agency (NRSA) started disseminating IRS satellite data to the user community. For evaluating the natural resources, the

IRS mission envisages the planning and implementation of a satellite-based remote sensing system. IRS mission has the main principle to use the satellite data in conjunction with supplementary/complementary information from other sources for survey and management of natural resources. The panchromatic camera provides data with a spatial resolution of 5.2-5.8m and a ground swath between 63 km-70 km and it operates in the 0.50 – 0.75 microns spectral band which will enable frequent revisits and are suitable for stereo viewing. The WIFS sensor collects into two spectral bands and has a ground swath between 728 km to 812 km with a spatial resolution of 169m to 188m enabling monitoring of vegetation dynamics.

A large chunk of all information regarding a country, state or city is already available on the internet which can easily be accessed by tourists. But there are still some limitations, as finding the most accurate information is still a herculean task. The vast amounts of information are not only confusing but consume a lot of time as well. To overcome these issues, GIS has been applied in the tourism industry. GIS not only provides information on tourist attractions, but it is a database of geographical conditions, transportation, accommodation, ethnic groups of the population and more. GIS produces thematic maps which can help tourists understand their destination in a better and more detailed manner.

GIS application in tourism opens up new avenues and enhances the tourist experience. Near accurate details of the area, the tourist wishes to visit can help them enhance their experience and helps them understand the culture and values of the people living in the area. GIS not only helps the tourists but can help the officials in educating the tourists as well, about certain places, based on the population, the ethnicity or environmental conditions. The development of tourism is inevitable, and GIS is helping tourism take giant strides towards efficient information management and exchange.

## **1.7 BACKGROUND OF THE STUDY AREA**

Tourism mapping is an important tool that helps tourists in identifying and finding the best tourist sites in the area. Finding the best route between two locations for sightseeing varied with optimum planning. It depends on the time and length impedance that helps the user to visit the tourist sites.

To understand any type of problem, it is necessary to explore geo-socio-economic based on the study area. The problem selected for the study is to identify the tourist sites and it also focuses on the time and length between two locations, different types of tourism and the development of tourism over some time. Thus the title of the study can be stated as, “Identification and mapping of tourist sites in Manipur using Remote Sensing and GIS”.

## **1.8 LIMITATIONS OF THE RESEARCH**

For each work, there are certain limitations. In the present research work following limitations were observed.

Not all tourism sites in the state are registered with the Department of tourism. Hence, the location details of only registered tourism sites for the year 2019-20 were selected for the analysis.

## **1.9 OBJECTIVES**

The main objectives of the study are as follows:-

1. To identify tourist sites in Manipur.
2. To survey the major tourist site of Manipur.
3. To create a map showing probable areas through Remote Sensing and GIS.
4. To promote and improve the standard of tourism development in Manipur.

## **1.10 METHODOLOGY**

The present research is based on the organized study of secondary and primary data. The secondary data is collected from various sources like official documents, available literature, topographic maps, newspaper, research report, journals and magazines. Primary data was collected through the survey of the different tourist sites of the districts. The questionnaire is prepared for personal interviews of the tourist during the research period at selected tourist sites of Manipur to fulfil the study objectives.

A random sample survey of tourists was conducted during the year 2019-20. The questionnaires were collected through the information related to geographical background, the age structure of tourists, religion, occupation, mode of travel, duration of stay etc. The behavioural attitude of tourists regarding the tourist sites in Manipur and the views and effects of tourists were calculated with the help of the SPSS factor analysis method.

Kernel density and network analysis were used in ArcGIS 10.3 to identify and mapping the potential tourist sites. Finally, based on the findings of the study, appropriate measures for the best route and service area to help the users to plan for tourism in the future for the state are suggested.

The methodology followed for the present research is depicted in fig.1.1 below:

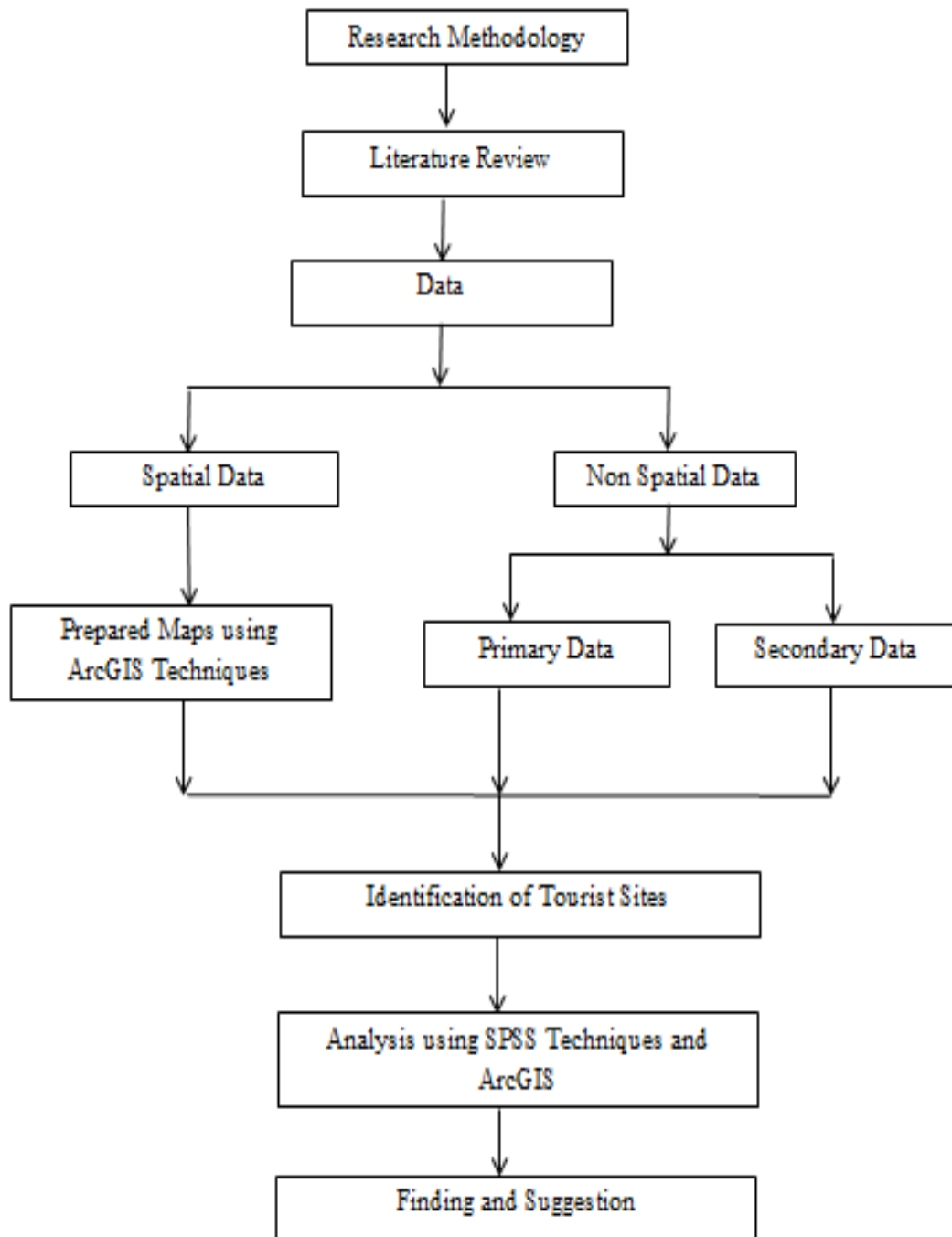


Fig 1.1: Flowchart of the Research Methodology

## 1.11 ORGANIZATION OF THE THESIS

The thesis is organized into six chapters:

**Chapter – 1: Introduction:** - This chapter includes an introduction to a topic, components of tourism, historical development, and the character of tourism, types of tourism in India, GIS in Tourism, background, limitations, Objectives, methodology, review of literature and organization of the thesis.

**Chapter – 2: Physical and Social character of the study area:** - This chapter presents the profile of the study area which includes location, physiography, climate, drainage, rainfall, geology, soil, transport, land use and land cover, administrative, demography, settlement and education.

**Chapter – 3: Recreational Landscape of the study area:** - This Chapter covers the landscape of the study area, amenities in different districts of Manipur, and road length to reach different tourist destinations.

**Chapter – 4: Trends of development and types of tourists in Manipur:** - This Chapter deals with the trends of development, the shortest path and best route, closest facilities, proposed service area and factor analysis that supports the development of potential tourists sites.

**Chapter – 5: Findings, Suggestions and conclusion:** - This chapter provides the findings of the study, suggestions and conclusion of the study.



## **1.12 REVIEW OF LITERATURE**

### **1.12.1 GROWTH OF TOURISM AND TOURISM DEVELOPMENT**

Today, tourism is becoming one of the most important major sources of income in the world. Many developed countries like the United States of America (USA), United Kingdom (UK), Germany, China, Japan, Hong Kong, etc. have commercial enterprises from tourism which currently the green pastures and have huge infrastructural development, and job creation, conservation of atmosphere etc. The character of the destination, including historical attractions, natural as well as man-made attractions and resorts, which have been traditionally dependent on tourism.

Tourism is one of the phenomena of the whole world. It is a growing and dynamic industry involving several components having inter-linkages. It is recognized by most the developing countries as an international business and some countries rely completely on the income generated by tourism. They perceive it as an economic generator. As tourism is one of the most significant activities undertaken by people of the international world, countries make use of their needs and provide opportunities for them to travel to distant places away from their place of residence. It provides a platform to relieve themselves from their routine, drab and monotonous life. This thesis focuses on finding the best route, closest facility, service area and the development of potential tourist sites as tourist destinations in Manipur.

When tourists wish to reach their favourite tourism destination from the tourist origin includes visiting time at each tourist destination. It determined the users to plan for tourism destinations to save time and satisfaction. There are some districts with a high potentiality for tourism which have attracted the attention of many scholars during the last two to three decades.

The level of development of potential tourist sites with factors like a basic requirement for tourist satisfaction, amenities for tourists and factors which support tourism development i.e. tourist information centres, tour guide and proper transport facilities.

Ranga (2003), encourages the growth of travel by motivating the potential tourist extrinsically, but the more powerful motivating factors are intrinsic, that is they arise out of a felt need or want on the part of the individual himself. It is a major force in global trade. It plays a vital role in the social-cultural and economic development of most nations and has the potential both to preserve the heritage and it is the source of income for hundreds of millions of individuals worldwide. According to Sharma (1996), tourism is one of the world's largest and fastest-growing industries, it brings socio-economic benefits to the community and the state in terms of employment opportunities, income generation, revenue generation for the states, foreign exchange earnings and, in general, causes human habitat improvement. The driving force behind the development and promotion of tourism is economic gain through the profitable satisfaction of tourists' needs (Badan & Bhatt, 2007). Sharma (1996) stated that the intention of announcing a national policy on the subject was stated to give a new sense of purpose and direction to its development and promotion and to add new ethos and value to tourism. According to Hussai (2015) opined that the development of the tourism industry in Manipur directly depends upon the formulation of a proper tourism development policy and people's cooperation and consciousness. Tourism potential of North-Eastern Region (NER), Government of India attaches great importance to NER because of its immense potential. The region is endowed with diverse tourist attractions and each state has its own distinct features (Rajmani & Prasain, 2014). Pradeep (2008) argued that tourism has long been an interest in the contribution to the balance of payments; this has been surpassed in the 1980s by a concern for its potential employment creation. An important relationship between development and tourism is that the former conditions the level of domestic demand. The National Tourism Policy enunciated by the Government of India has begun to show results in terms of infrastructure buildings and the development of the tourism industry in India as an active joint venture of the government and private sector (Singh, 1998). The concerns and emphases of spatial planning vary at different levels. At a national and regional level particular consideration will be given to the selection and distribution of areas to be developed (Malhotra, 2005).

Since its independence, India has placed greater emphasis on the development of tourism and travel-related activities. The Government of India itself and with the help of State Governments is developing this sector by allocating huge budgets and taking various campaign activities. Any initiative taken by the Government for Tourism by way of legislation or direct investment is envisaged within the framework of Tourism Policy (Ahamed, 2018). While talking about the Indian scenario, the hotel and tourism industries have been growing rapidly in recent years, bringing in huge revenues through overseas as well as domestic tourists in many parts of India. There was a key rush to inbound tourism in India in 2006 and a double-digit increase in the coming of overseas tourists to India in the same year (Sharma et al., 2012). The potential and performance of India's tourism industry need to gauge in terms of its socio-economic magnitudes. It also examines the impact of India's economic growth on tourism, Contributors to economic growth, the Role of the Tourism industry in India's GDP, and Foreign versus Domestic Tourists. Tourism is one of the fastest-growing service industries in the country with great potential for its further expansion and diversification (M. Venkatesh, 2016). Tourism has a strong linkage with the economic growth and development in India. Because of its maximum backward and forward linkages, tourism contributed more to income and employment generation in India. However, the development of the tourism sector in India also raises some issues related to the environment (Rizal & Asokan, 2014). In recent decades, improvements in the knowledge domain, advances in technology, reductions in communication barriers, progress in transportation, and the development of tourist-friendly facilities, have all contributed to the growing tourism industry. Thus, it has been well understood that tourism can play a critical role in achieving inclusive and sustainable growth and development (Deshpande, 2021). Tourism, economic growth and financial development are cointegrated. It is shown that inbound tourism spurs economic growth in India both in the long-run and short-run. In addition, the analysis indicates the presence of a long-run one-way Granger causation running from tourism to economic growth (Ohlan, 2017). Tourism is one of the most important sectors in the world economy. It is now considered an efficient tool for promoting the economic growth of the host country. In the last few decades, the tourism industry in India has been growing at a

rapid pace and it has vast potential for generating employment and earning a large amount of foreign exchange besides giving a fillip to the country's overall economic and socio-cultural development. It is thus imperative to examine the dynamics of the relationship between tourism sector expansion and economic growth in India (Mishra et al., 2011). Tourism plays a vital role in the growth of an economy. It contributes to increasing foreign exchange earnings, providing employment opportunities, a fair return on investment, conservation of forests etc.(A. Victoria Chanu, 2017). Tourism to a great extent depends on the range and type of hotels available at the destination. Hotels are a core area of tourism playing a distinctive role in the development of this ever-expanding industry. In a state like Manipur where the potential for industrialization could not be exploited and realised till date, tourism has become a favoured means of mitigating the socio-economic problems. Concerned efforts have been taken up in the recent past to promote tourism (Thomas, 2017). Tourism is also developed given the supposed significant multiplier effect. Manipur is promoted as the gateway to Southeast Asia, the preferred destination for Adventure and sports tourism, Ecotourism, War tourism and Medical tourism. Manipur is experiencing 'hasty' development in the field of tourism for over a decade (Shimray et al., 2017). In Manipur it is only of recent that tourism has been recognized as a potential growth driver. The region's picturesque location, rich cultural heritage as well as inexpensive manpower availability make it suitable for development as a suitable tourist hub. In the present reconnaissance of the rural tourism scenario, the local rural members make a community and are participating directly or indirectly in tourism development in their areas (Ursa, 2021). According to Asha Thokchom ( 2014), stated as in the Northeast Region (NE R) of India in general and Manipur in particular the concept of community participation in tourism development is not widely prevalent and is in infancy stage. In this back drop the paper adopt a hypothesis that Community based tourism is a factor for maximizing the socio-economic benefit of the community and growth of tourism industry in the state. The locals are thus alienated from the development and benefits of tourism. There are well-documented evidences of local people having only a little or no say in the development of tourism in their locality.

### **1.12.2 IDENTIFICATION OF TOURISM SITES USING GIS TECHNIQUES**

In the last two decades, space technology has come up with remote sensing from satellite platforms. This has become a potential and powerful tool to observe and study any area on Earth (Narayan, 2001). Kumar & Tripathi (2011), stated that Landsat satellite images of TM and ETM+ sensors have been processed in remote sensing software ERDAS Imagine version 9.1 to map and analyze the dominant changes that occurred in land use/land cover feature (especially in the built-up area). According to the application of SPOT data for regional growth analysis and local planning and GIS is recognized widely and accepted as a valuable tool for analysing, managing, and displaying large volumes of diverse data pertinent to many local and regional planning activities (Ethlers et.al, 1990). The benefit of using GIS in tourism and leisure research is that GIS can manipulate both data, spatial and attributes. Moreover, it has provided necessary value-added information (Bahaire and White, 1999). Fung & Wong (2007), a symbiotic and complex relationship between the environment and tourist activities are possible when this philosophy can be translated into appropriate policy, careful planning and tactful practicum. GIS can help to transfer recommendations for ecotourism development into an effective planning action for future sustainable development. Chen (2007), GIS can be used to demonstrate tourism impacts on various industrial sectors in a time-series and spatial format. Tyagi (2014) developed a web-based customized tourism data system (TIS) for eastern U.P., designed on a GIS platform. the application offers an interactive dynamic mapping by showing the location of tourist destinations moreover as the location of restaurants, travel firms, hospitals, security, passport office etc. Hussain (2006) developed an interactive internet primarily based GIS application prototype for Hyderabad city to push the town's traveller activities and provide the users with an innovative idea to access the spatial contents of the city. Kansky (1963), Network Analysis is closely related to spatial interaction modelling. A set of geographic locations interconnected in a system by several routes. Poslad et al. (2001), An inquiry into previous papers devoted to subjects in the same field shows that a lot of tourism-tailored GIS applications have been developed to analyse regional specific information. GIS technology offers great opportunities for the development of modern tourism applications using maps. Tourists who want to visit a sightseeing

destination need to have information and visual representation about those places with the help of a GIS tool (Gill & Bharath, 2003). Tao Peng and Xiaowen Wang (2012), work on a project where they used the mobile-based navigation web application system. The authors work on hindering factors like hospitals, schools, residential areas, traffic lights and the user-controlled factor of traffic and driving speeds for proving route plan, which finds the shortest path and shows the result as an online map via web GIS application. The main aim of the project was to use the web GIS and GNSS technology with open-source data and tools, to combine web GIS and mobile phones with GPS modules for designing and developing a web-based application which provides an intelligent vehicle navigation system. The authors used Dijkstra's algorithm to find the shortest path. The shortest path problem is the problem of finding the shortest path or route from a starting point to a final destination. We use graphs to represent the shortest path problems. It is a mathematical abstract object. It contains sets of vertices and edges (Dabhade et al., 2015). The uses of Geographical Information System (GIS) technology in tourism management using Ile-Ife as a pilot study. A major strength of this paper is the use of GIS techniques to create awareness of the existence of the tourist attraction centres the prospective visitors (Fadahunsi, 2011). A geographic Information System (GIS) is a database and mapping computer technology that is used to store and analyze geographical data. Geographical data include information about the location, characteristics, and relationships among places distributed over the earth's surface. A GIS is an information system which can handle spatially distributed data, relate them to other numerical or descriptive data, and present the data visually on a map (Jenkins, 2004). People's strategies and choices to utilize tourism information have shifted dramatically over the years following ubiquitous access to the Internet. Even though many tourism information searches on the Internet involve geospatial information through WebGIS, little is known about tourists' behavioural patterns with this media (Chang & Caneday, 2011).

### **1.12.3 TOURISM DEVELOPMENT AND TOURIST SATISFACTION USING SPSS FACTOR ANALYSIS**

Using SPSS, Under Factor Analysis, the Principal Component Analysis method was implemented for the Dimension Reduction and Identification of the Significant Factors for Tourists' Satisfaction (Danish Md. et al. 2019). Satisfaction is a very important tool for evaluating the tourists' behaviour (Reisinger & Turner, 2003). Satisfaction and loyalty also determine the success of tourism (Yoon & Uysal, 2005 ). Oliver (1980), Tourism Satisfaction is also defined as the gap between prior expectation and perceived performance after consumption. Dissatisfaction occurs, due to deviation between performance and expectation. Liao Zhixue et al. (2015), During a Survey Analysis on Tourist Satisfaction in Jiuzhai Valley, China, Factor Analysis reveals the high importance of Scenic Spot's Environment, Infrastructure, Management and Service with that of Tourist Scale, Accommodation and Catering.

The quantitative data is then analyzed using factor analysis and multiple regression analysis to identify significant factors. The result indicates that the most significant factor affecting the overall satisfaction is the cost of staying, and other significant factors are hospitality, attractions and accessibility, and infrastructure (Suanmali, 2014). The factors influencing tipping practice in Kuala Lumpur 5-star hotels. Experienced customers of five star rated hotels were targeted in this investigation by focusing on two sub-dimensions of service components which are personal and professional dimensions. Service charges and good and service tax has been added to most premises bills raising a question about why people tip. This study reports upon a study of 400 hotel customers. Using survey data, results indicated that the professional aspect play the important role in tipping practice (Zain et al., 2017).

The factors affecting domestic tourists' satisfaction with the quality of ecotourism services (GIAO et al., 2021). It enables us to determine that the investment and innovation factor is a basic component of tourism development in the regions with a high level of tourism infrastructure effectiveness. The efficiency of the transport network, innovative activity, the level of investment attractiveness and provision of the fixed assets reproduction conditions the intensity of tourism development in the

regions with an average level of tourism infrastructure effectiveness. The expansion of transport infrastructure, strengthening of public financing and capital asset renewal are the primary factors for ensuring the tourism market development in the regions with a low efficient tourism industry (Lubov et al., 2016). The uniqueness of an area is often considered a major asset in tourism development and promotion. While unique natural environments, human history, and culture often contribute to the success of a tourist-re-creation region, they could be overpowering to the point of distorting the image and hindering successful development (Hunt, 1975). Tourist satisfaction has become an increasingly important topic for destination management organizations because it serves as a reliable yardstick to assess overall performance. A good understanding of tourist satisfaction levels, as well as the dynamic changes in these levels, benefits not only the service industries that focus on inbound tourism but also the government regulators and private investors that have a vested interest in the development of high-quality tourism infrastructure (Song et al., 2011).

Factor analysis is particularly suitable to extract a few factors from a large number of related variables to a more manageable number, before using them in other analysis such as multiple regression or multivariate analysis of variance. It can be beneficial in developing a questionnaire. Sometimes adding more statements to the questionnaire fail to give a clear understanding of the variables (Shrestha, 2021).

#### **1.12.4 VARIOUS POLICIES**

The importance of tourism for the economy. Due to extreme resource utilisation by mass tourism developments, insufficient planning and limited coordination and collaboration between the bodies involved in tourism activities, tourism can have a negative impact and conflicts may escalate. These conflicts are mainly related to the concentration of tourist arrivals in time and space, inappropriate use of resources, and limited incorporation of the community in the development and planning process. To offer solutions, various policies and strategies have been proposed/adopted at the regional level (Andriotis, 2010).

Tourism policy development is an increasingly complex process, with longer time scales and a wider scope than in the past. Developing the necessary tourism and



related infrastructure to meet expected future demand requires an integrated long-term approach across departments and levels of government, with input and support from industry. Such an approach seeks to secure the longevity of tourism as an economic and social force by focusing on environmental sustainability, establishing industry diversity and securing innovation and strategic improvements to productivity (Haxton, 2015).

In tourism politics and public policy. It begins by defining “politics” and “public policy,” moves on to examine studies of tourism policy, and then discusses ways forward. The massive growth of tourism, the involvement of governments, and the perceived negative impacts of tourism in developing countries helped bring about an increase of activity in tourism policy analysis especially in the late 1980s and early 1990s, with the work of Matthews (1975, 1976, 1977, 1978; Matthews and Richter 1991) and Richter (1980, 1983, 1984, 1989; Richter and Waugh 1986) providing a seminal contribution to scholarship. It is only since the 1970s that tourism public policy has become a high priority of governments in developed and less developed countries (Jenkins, 2004).

Tourism policy in China has evolved from being based on the administrative allocation of resources to a market-based allocation of resources constrained by administrative powers. The targets for tourism policy have always been developed with the strategic objectives of national economic and social development in mind. These can be divided into four stages: servicing foreign affairs, developing the business economy, providing a new growth point in the economy, and becoming a national strategic pillar industry. Tourism policy is mainly used for micro-supervision. Tourism policy formulation cannot macro-control the factors of production such as capital, land, technology and talent (Tang, 2016).

The number of tourists to Bhutan has been controlled not by an annual visa quota, but by a daily minimum tariff, a required guided tour, certain spatial restrictions, and the general perception of inconvenience associated with the process of getting a visa. The controlled tourism policy, however, is limited only to western tourists, who represent only a quarter of arrivals. Although Bhutan has been able to minimize the

environmental and cultural impacts of western tourists through its low-volume, high-yield tourism policy, this is more related to power and regional politics than simply a quest for sustainable tourism (Nyaupane & Timothy, 2010).

Religious tourism activity takes place outside the state's framework of policies and institutions. The contemporary religious tourism industry has largely evolved from the tradition of pilgrimages and continues to thrive on the economy of religious devotion. Religious actors drive this industry by providing religious services, accommodation and transport options in pilgrimage sites yielding an explicit 'religious' and 'informal' orientation (Shinde, 2015).

Policy-makers should be informed that through public interventions, tourism can advance development by the design and implementation of integrated policies in developing economies. In addition, policy consistency and coherence are essential for competitiveness, sustainability, and maximizing benefits from tourism (Khan et al., 2020).

The mission of this Policy is not to remedy a panacea but to create a direction that will drive the tourism industry in Manipur and to let the dynamics of the industry take over thereafter. The Policy seeks to harness the tourism potential of Manipur and to present to the world as a "Tourism Hotspot" for attracting tourists and investments with the development of hotels & restaurants, resorts, transport & communication, heritage sites and handloom and handicrafts. This will ultimately help in creating jobs and revenue, and in contributing to the economy, and development of backward areas, thereby reducing poverty (Manipur Tourism Policy, 2011).

Manipur and its tourism policy become all the more important given India's Look East Policy, the Trans-Asian Highways and the Railways. The Government is keen to take advantage of these developments and therefore, seeks to create a unique brand to market Manipur Tourism as the 'Gateway to South-East Asia' in conformity with its modern outlook, relevance, competitiveness, and strategic location and commercial aspects. It is felt that once the appropriate infrastructure and services are suitably placed, Manipur is destined to become a popular tourist

hotspot in South-East Asia akin to its South-East Asian neighbours (“Manipur Tourism Policy,” 2014).

In the policy for tourism development, a major role is to be played by the hoteliers, tour operators, travel agencies and others who provide services in the Tourism Sector. The role of the State in providing infrastructure and coordinating development efforts will be performed through a small and compact administrative set-up as already incorporated. The State Government is hopeful that the tourism industry, investors, tourists and the general public will respond wholeheartedly to the approach and policy of tourism development in the State and help in bringing about integrated and healthy tourism development (20 Years Perspective Plan Manipur, 2018).

## **CHAPTER II**

### **PHYSICAL AND SOCIAL CHARACTER OF THE STUDY AREA**

#### **2.1 INTRODUCTION**

Manipur lies in the extreme northeastern part of the country having an international boundary with Myanmar in the south-east, Nagaland in the north, Assam in the west and Mizoram in the south. It consists of 90 per cent of land is hilly and the rest is the valley area. Manipur has a rich culture in every aspect such as martial arts, dance, theatre and sculpture and is also suggested as the land of jewels. The greenery with the moderate climate make the place charming and beautiful which attracts tourists heaven as the beautiful and seasonal shirui and Dzuko lily, Sangai (Brow antlered deer) and the floating islands at Loktak lake and Manipur polo which is also known as a royal game are originated from Manipur. Manipur dance forms are also parts of the Indian classical dance. Manipur has long connected with the Indian sub-continent to Southeast Asian Countries.

#### **2.2 HISTORY OF MANIPUR**

Manipur existed as an independent kingdom inhabited by different cognate groups /clans from the ancient period. Some of these clans amongst themselves congregated into one group collectively termed Meitei. The Meitei emerged as the initiator of the composite state of Manipur in the early pre-colonial period and reflected the political development of the citizens as an advanced community with indigenous religion, script and governance of high order. However, with the passage of time and the fast pace of migration and settlement from different directions the valley population became multi-cultural, multi-ethnic and multi-religion. Thus, the state of Manipur became the home to various ethnic groups and denominations with different cultural, social and racial backgrounds Thus, Manipur continued to be an independent princely state as long as 1891 (Devi, 2021).

The earliest recorded history of the Manipur dates to about 900 A.D. Manipur was existed as a princely state and involved in several disputes with its neighbour. According to Pemberton's report, it had never been static but rather fluctuated at various times of different kings. King Pamheiba generally known by his other name Garibaniwaj, was one of the great conquerors of Manipur. During his reign, the Manipuris had acquired very considerable power. In the years 1725, 1735, 1738 and 1749, King Garibaniwaj repeatedly invaded Burma (now Myanmar), defeated Burmese Armies and devastated many parts of Burma. Manipur also faced Burmese invasion in her later period say in the year 1890 which led to the so-called seven years of devastation in her history.

During this period the then king Gambhir Singh of Manipur took shelter in the Cachhar district of Assam. There he re-organised the army with the assistance of the British and ousted the Burmese from Manipur. Slowly, the British started interfering in the administration of Manipur. This ultimately led to a full-fledged war with the British in 1891. The Manipuri heroes faced the well-armed (with guns) and massive British forces with swords and spears. The last phase of this battle was fought at Khongjom and ended on 23rd April 1891. The Manipuri forces at Khongjom, led by Major Paona were defeated eventually by the British forces.

According to a merger agreement signed on 21st September 1949 between Maharaja Budhachandra, the then king of Manipur and the government of India, the state was merged into India as a part of "C" State on the 15th October 1949 and administered by the President of India through a Chief Commissioner. Manipur ceased to be a part of "C" State on the 1st November 1956 and became a Union Territory under the Union Territorial Council Act, 1956. The Territorial Council consisting of 30 elected members and 2 (two) nominated members was constituted on 16-8-1957. However, the Territorial Council was replaced by a Territorial Legislative Assembly of 30 members and 2 (two) nominated members on 23rd July 1963. Manipur became a full-fledged state within the Indian Union with a Governor as the Head of the state on the 21st of January, 1972 and the members of the Legislative Assembly were

increased to 60. The first popular Ministry, after attaining statehood, was installed on March 20, 1972 (Economic Survey Manipur, 2021-21).

### **2.3 LOCATION OF THE STUDY AREA**

Manipur, a small hilly state situated in the eastern Himalayan region in the subtropical belt, lies between 23°50'6.379"N and 25°41'53.604"N latitude and between 92°57'57.959"E and 94°44'49.655"E longitude, with an area of 22,327 sq. km and has an altitude ranging from 30 to 2,994 mean sea level. Manipur and its tourism policy become more important because of India's Act East Policy, the Trans-Asian Highways and the railways. The joint effort of the state and the centre to develop tourism in Manipur has succeeded with the recent attention that the tourism sector has received. The state has taken up several tourism projects to attract more tourists. The Manipur Tourism Department is taking major initiatives to develop Manipur, a prime tourist destination in northeast India. In Manipur, there are unlimited potential sites for the development of tourism. Tourism is still in the developing stage in Manipur. The national policy put forward by the Government of India has been the development of Tourism in the exotic states like Manipur as the key to all economic development in the area. The location map of the study area is shown in figure 2.1.

### **2.4 PHYSIOGRAPHY**

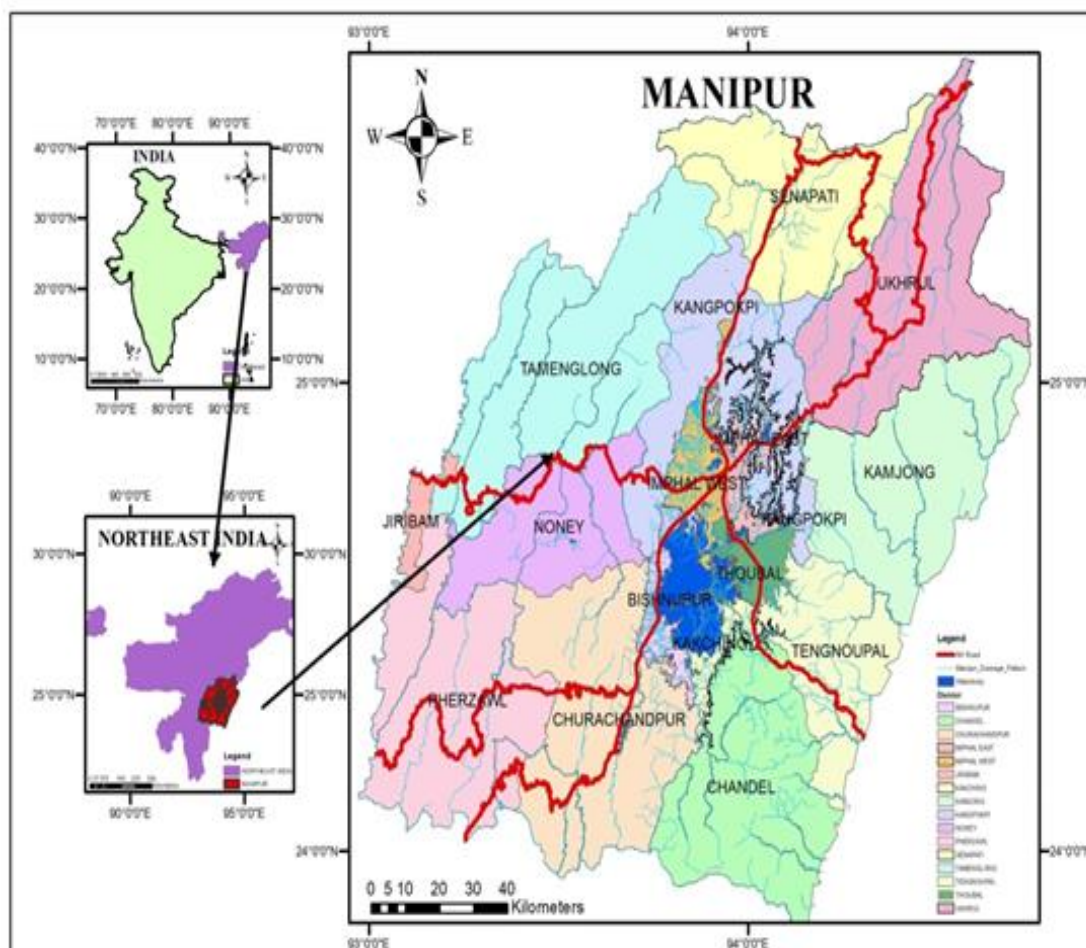
Manipur land is divisible into two physiographic regions i.e., a central valley and the surrounding mountains. The central valley is also known as Imphal valley. It extended about 60 km in the north-south and about 30km in the east-west. In this region, most of the landforms are isolated hills and ridges. This valley is formed by ancient lakes. The surrounding hills are divided into two groups:

a) Eastern Hills: This hill run along with the border of Myanmar. It extends with an average height of 1,500 m above sea level. The important ranges of eastern hills are

Mapithel, Chingai, Mulain etc. Among these ranges, Kayangbung (2,833m), Shirui (2,568m) and Kachaobung (2,498m) are the most popular peaks of this hill range.

b) Western Hills: This hill range mainly consists of parallel ridges with a total length of about 180 km. The prime ranges in the Western Hills are the Yangpujilong, the Daimikhong, the Koubu, and the Kalanaga. Among these ranges, Mount Iso (2,994m) is considered the highest peak in Manipur and Dzukou Valley lies at the foothills. Some of the peaks in the Western Hills include Leikot (2,831m), Tampaba (2,564m), and Koubu (2,562m).

The altitude ranges from 30 to 2,994 MSL. The highest elevation location is located on the western hills i.e Mount Iso (2,994m). Figure 2.2 shows the physiography of Manipur.





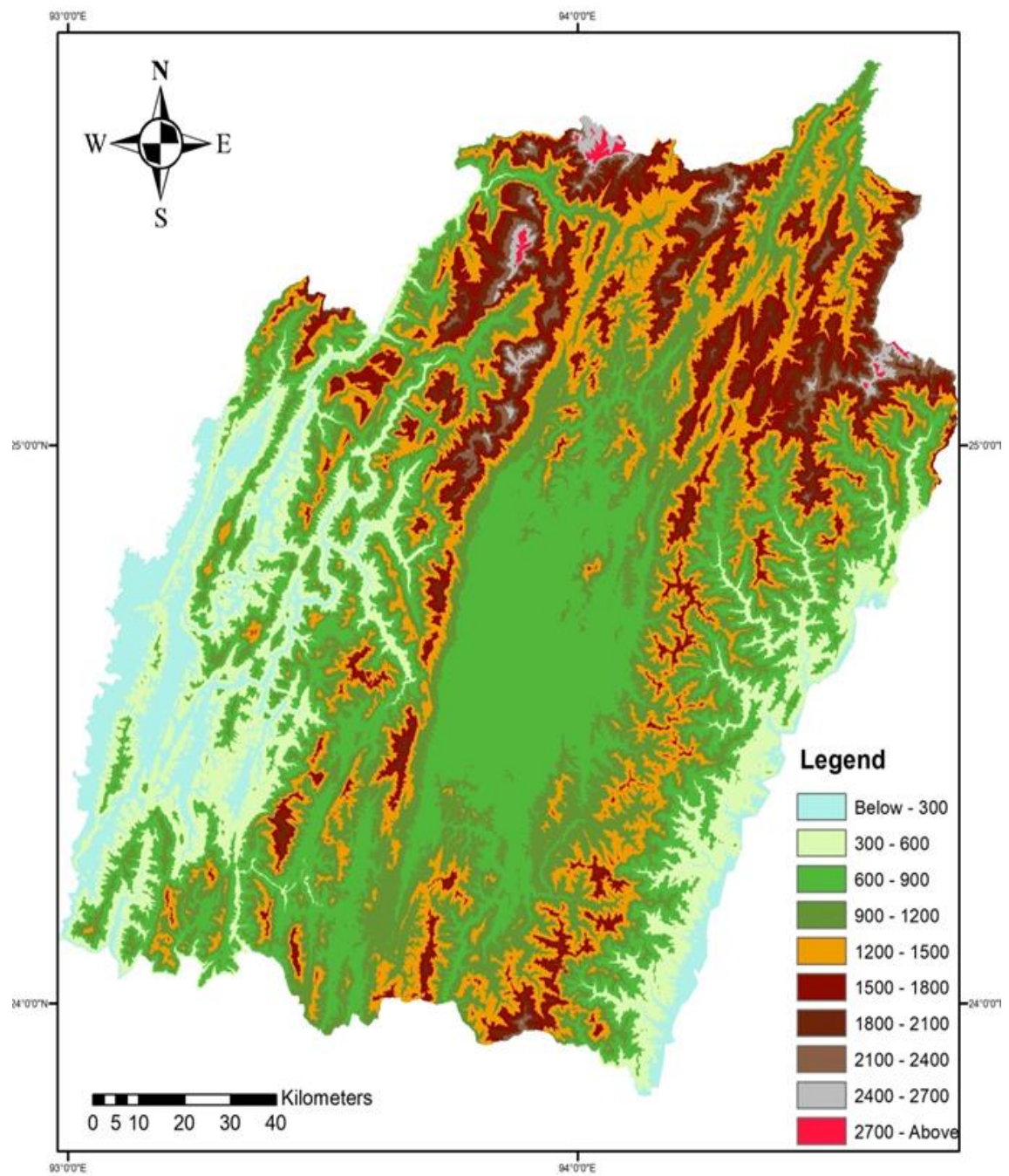


Figure 2.2: Physiography of Manipur

## 2.5 CLIMATE

Manipur enjoys a sub-tropical monsoon type climate. Depending upon the different types of topography, the climate changes within short distances. The state is marked by different types of climates between hills and valleys. The climate of Manipur describes essentially a monsoon type of climate. The maximum temperature in summer is around 32°C and in winter, the minimum temperature is around less than 5°C.

In Manipur, the winter season is started from December to February. In March and April pre-monsoon season started and monsoon season is beginning from May to September and the post-monsoon season started in October and November. Figure 2.4 shows the climate map of Manipur and the yearly climate of the study area for the year 2018 are depicted in Figure. 2.3.

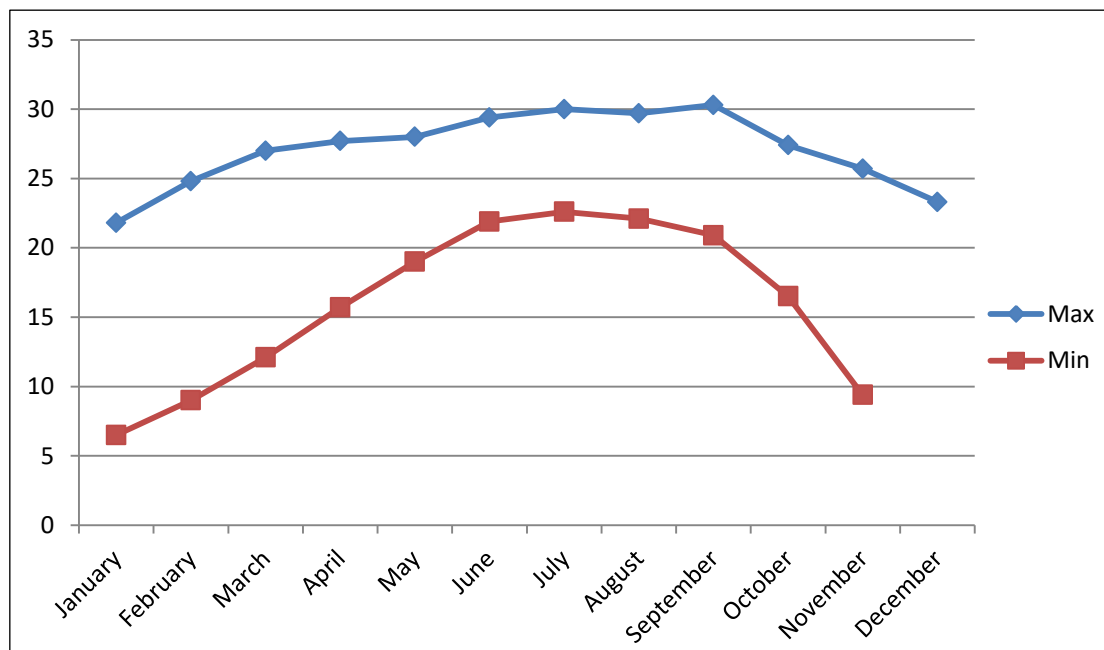


Fig. 2.3: Climate data for the year 2018 (Source: ICAR Lamphelpat)

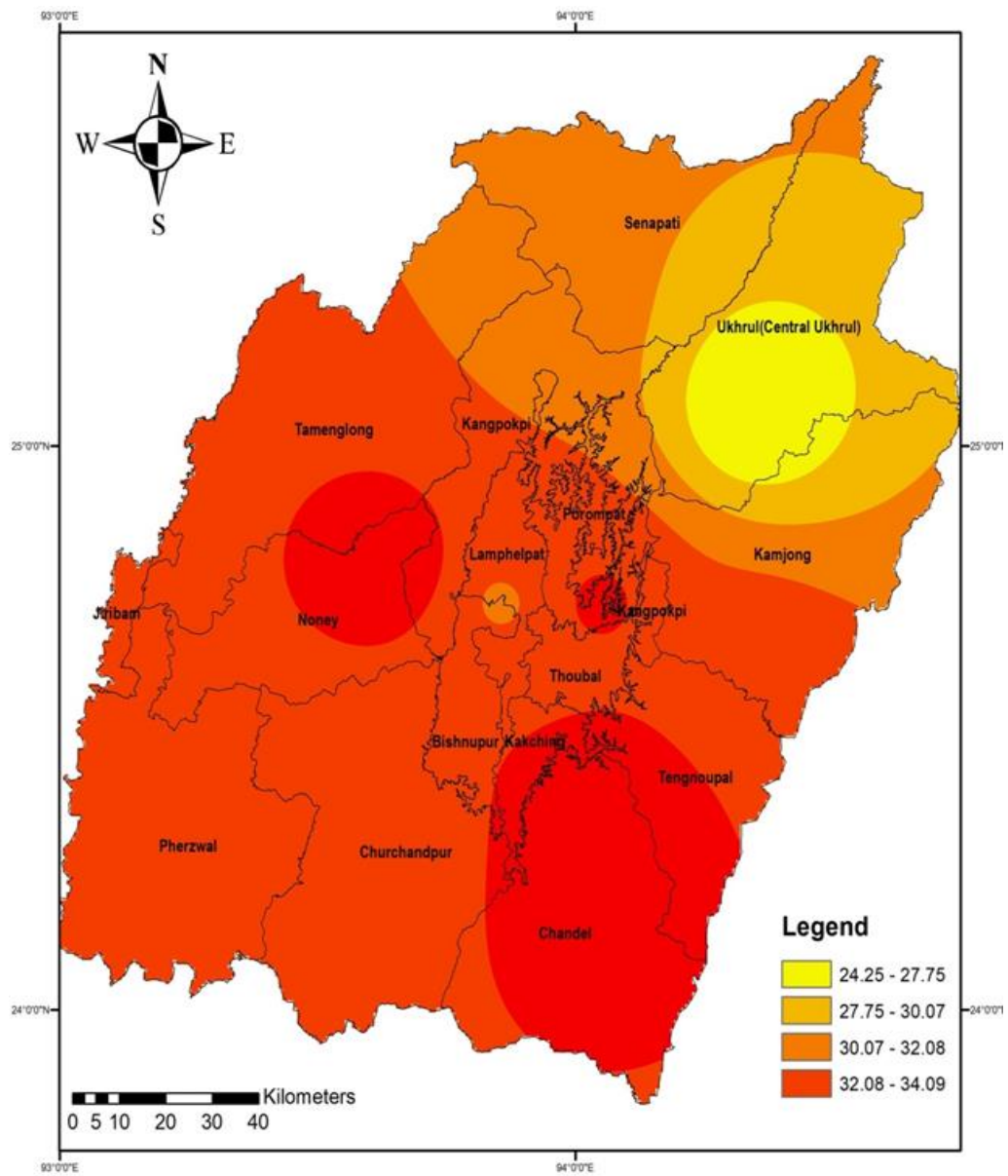


Figure 2.4: Climate of Manipur

## 2.6 RAINFALL

The southwest monsoon formally arrives in June and it continues with heavy rain showers up to September. From the southwest monsoon, the state receives a major portion of its rainfall. The annual average rainfall ranges between 895mm to 2135mm in the valley and up to 3148 mm in the hilly region. The rainy season is quite long sometimes starting from the early month of May and continuing up to the middle of October. Figure 2.5 and Monthly rainfall within the study area for the year 2020 are depicted in Figure 2.6.

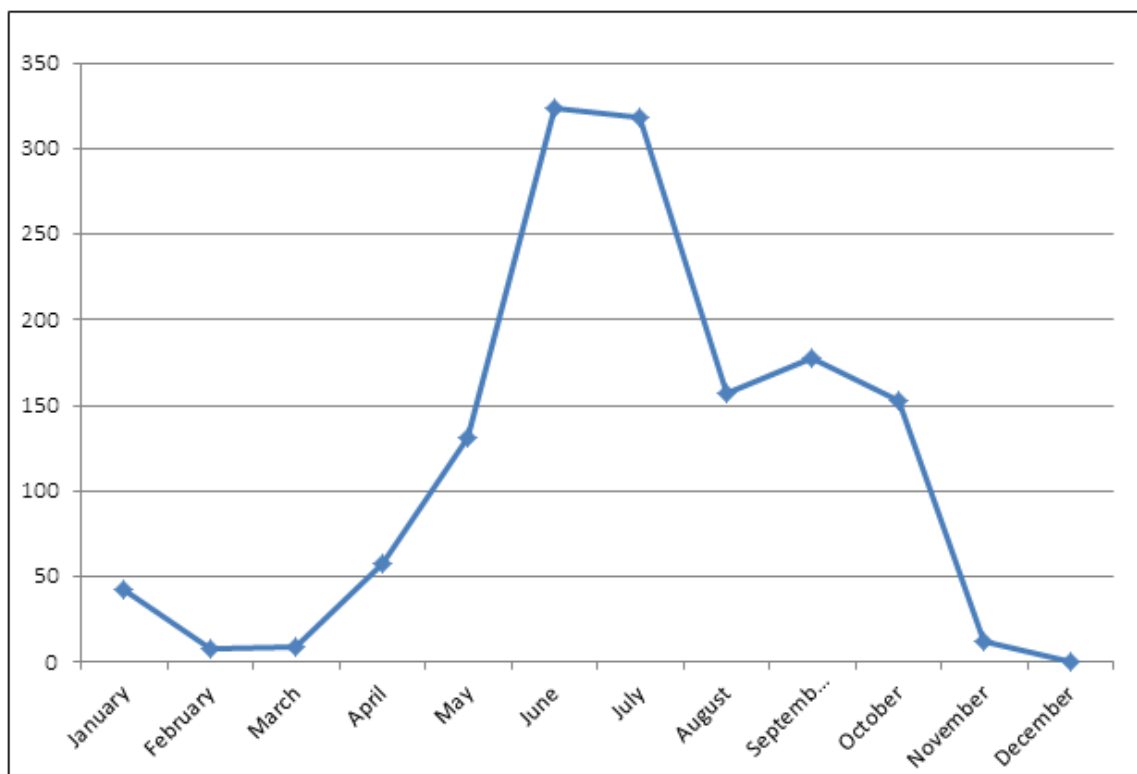


Figure 2.5: Rainfall of Manipur for the year 2020 (Directorate of Environment, Government of Manipur)

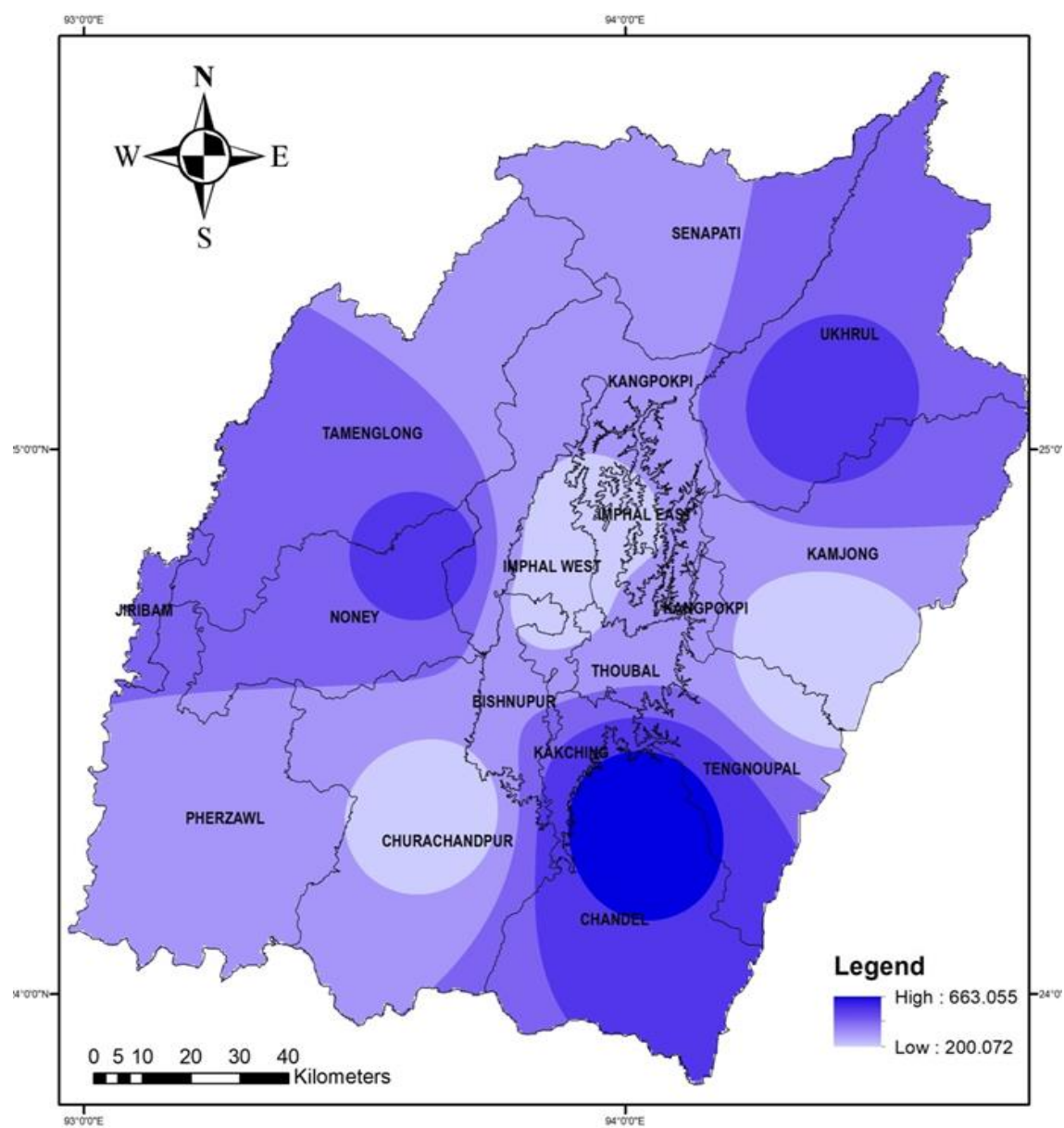


Figure 2.6: Rainfall of Manipur

## 2.7 DRAINAGE

Almost all the rivers of Manipur are flowing from north to south. There are two main river basins of Manipur i) The Barak river basin and ii) The Manipur river basin.

The Barak River originates from the hills of the northern hills of Manipur in the Senapati district and it flows through the southwestern hill ranges. Jiri, Maku, Irang rivers etc. are the main tributaries of the Barak River.

The Manipur or Imphal River originates north of Karong, Senapati district. The Manipur or Imphal meanders through the Manipur valley in a NorthWest-SouthEast direction. The Kong, the Iris, the Thoubal, the Heirok Sekmai, the Khuga and the Chakpi River are the important tributaries of the Imphal or Manipur River. It meanders through the Imphal valley and flows to the south towards Myanmar and falls into the Chindwin River.

Two barrages for irrigation and hydropower have been regulated by the Manipur River. The first barrage is the Imphal barrage: downstream of Lilong regulates the flow of irrigation purposes and the second barrage: is situated at the Ithai which diverts into the loktak lake for lifting irrigation and hydropower project.

The major streams and lakes within the study area are shown in fig. 2.7 below. The state of Manipur has enjoyed sub-tropical monsoon type climates having a wide variation in water level during pre-monsoons and post-monsoons showing distinctive hydro features except for Loktak Lake in which water level is kept continuing to run the existing hydro-electric project (K. J. Singh, 2018).

Manipur has several shallow lakes or marshes in the interfluvial areas of these river systems viz Lamphel pat (lake) between rivers Nambul and Imphal, Waithou pat (Lake) between the rivers Iris and Thoubal, Ikop pat, Kharung Pat and Lousi Pat between Thoubal and Sekmai river. Between the river Manipur and Khuga lies the Loktak Lake, on the west. The eastern half of the state including Imphal Valley drained the total water discharge from the Manipur River Basin (Kumar, 1991).



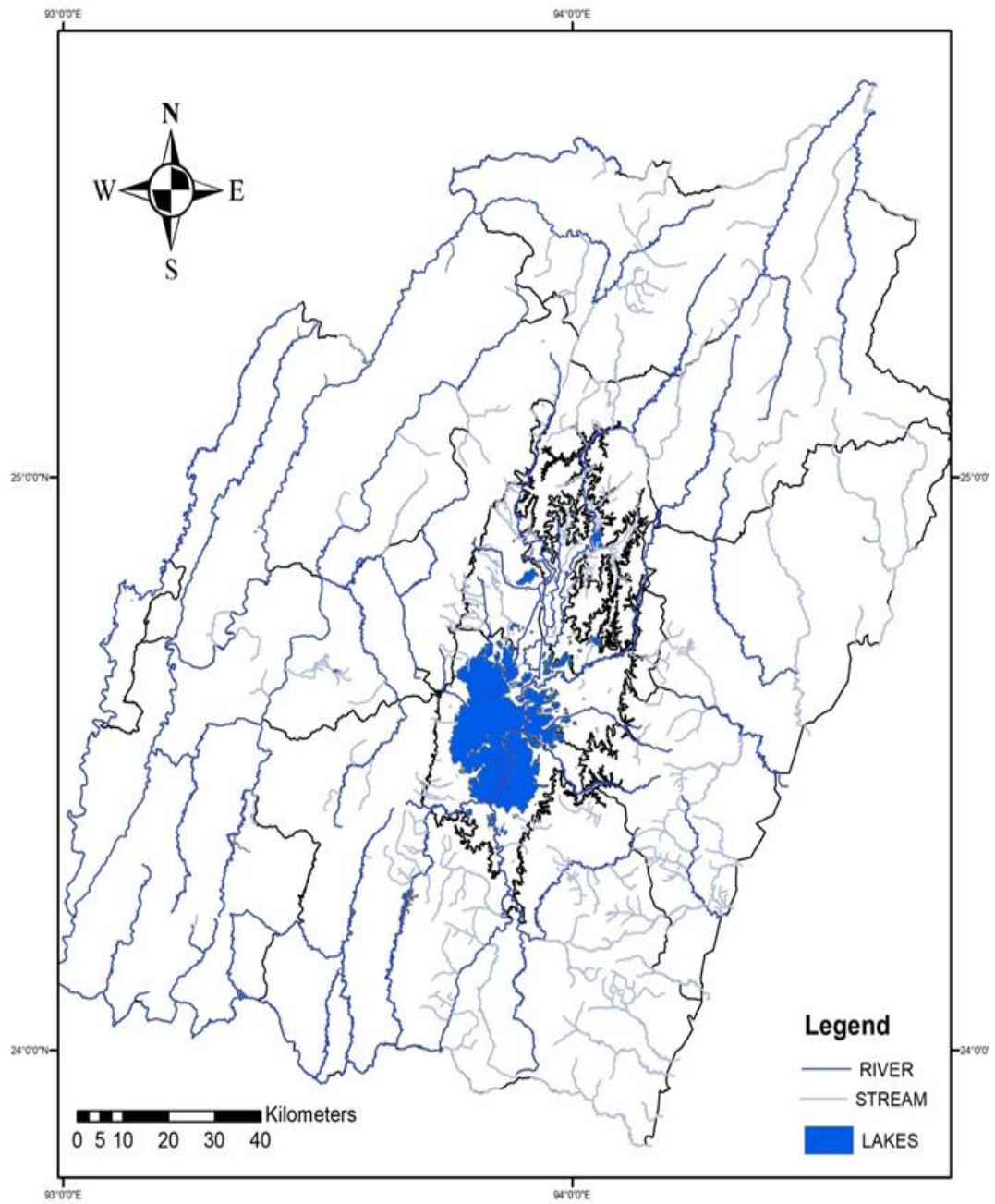


Figure 2.7: Drainage system of the study area

## 2.8 GEOLOGY

According to Geological Survey India (2011), Manipur belonging to the Indo-Burman range along its eastern frontier has to be analysed keeping in view the evolutionary history of the Neogene Surma basin, inner Palaeogene Belt of Manipur-Nagaland and the Ophiolite Suture Zone. The geological history of Manipur is a summation of the tectonic-sedimentological events which were operating in these domains during the Late Mesozoic and Tertiary eras. The geological history of Manipur is a summation of the tectonic-sedimentological events which were operating in these domains during the Late Mesozoic and Tertiary eras.

Dayal (1968) stated that in the early Pleistocene age during the Cenozoic era, some 55 million years ago, the whole region was uplifted from Tethys sea to its present position. Manipur is part of the Assam-Burma geological Unit. It is the eastern part of the Himalayan orogenic formation. The detailed information about its tectonic and geological history is inadequate. The state is the outline classification of rocks which was made by the most reliable geological history. The patterns of major rocks distribution from north-south are shown in fig. 2.8. The oldest Axial rock type is found in a small narrow belt in the north-eastern part i.e., in the Ukhrul district where limestone occurs as lenses in a sequence of gritty sandstone and buff to grey coloured shale. The term axial was described for the rocks which are older than Disang by the geologist of the Burma Oil Company. It was probably formed during the cretaceous period (about 80 to 90 million years).

Ukhrul district belongs to the upper cretaceous period as in the district found limestone deposited. The eastern half of Manipur belongs to the Eocene period where the sandstone and shale of the Disang group are found. The western blanks of Manipur belong to the Miocene period as it covers by the shales and sandstone of the Tipam and the Surma groups.

In the valley of Manipur, alluvial rocks are deposited and they can be grouped as older and young alluvium and tertiary rocks are mainly composed in the state. Igneous rocks which contain quartz, sandstone, limestone, etc. are mainly confined in the Ukhrul areas.



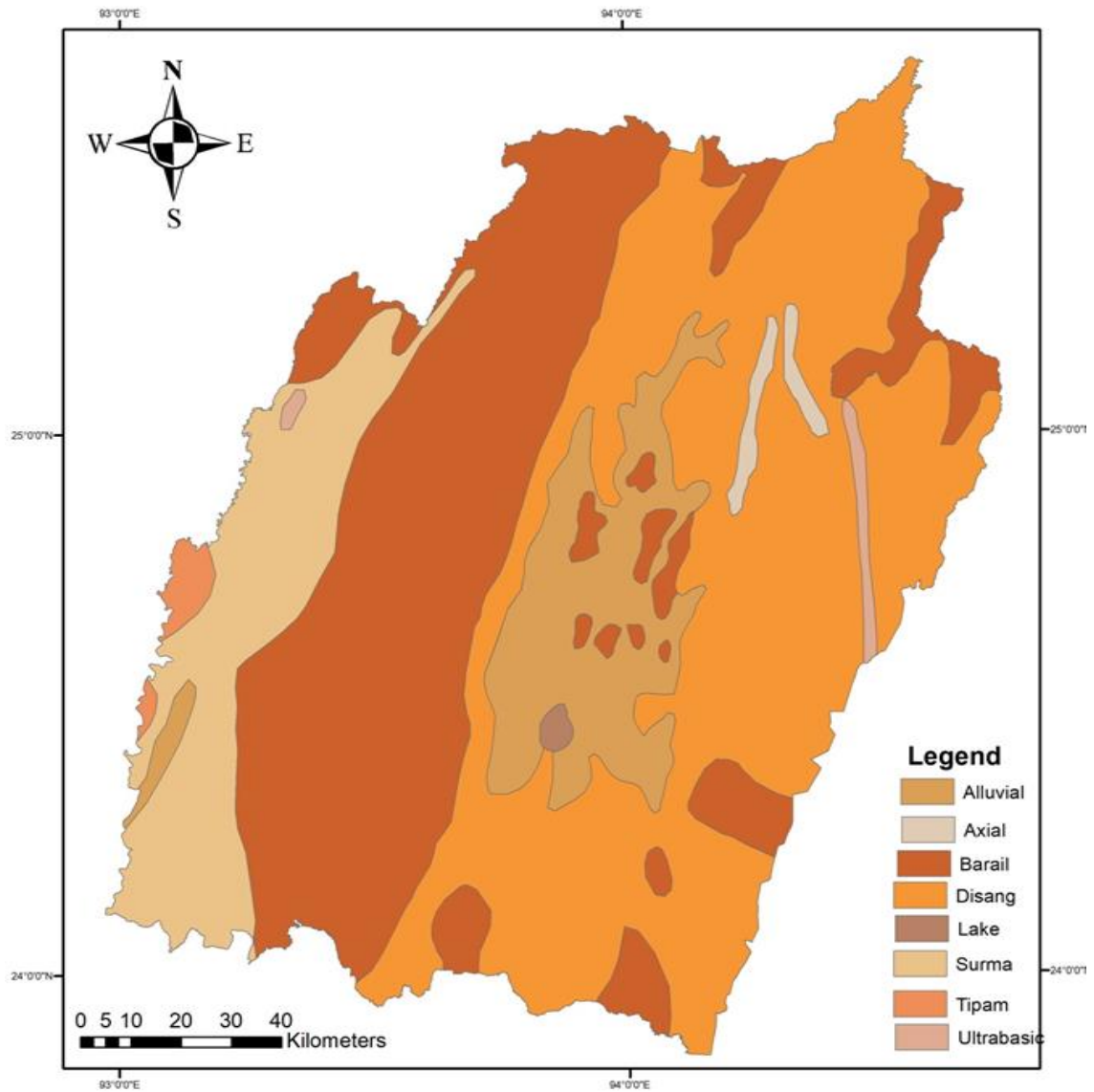


Figure 2.8: Geological Map of the study area

## **2.9 SOIL**

Soil is a limited natural resource and the loose surface material that covers most land helps for the growth of natural vegetation, agriculture, horticulture etc. The soils of the state can broadly be classified into two major types – the red ferruginous soil and the alluvium found in the hill and valley area. In the plain areas, especially flood plain areas of soil are a considerable thickness of soil.

In the valley, the alluvial soils cover 1600 sq. km. This soil has a general clayey warm texture and grey to pale brown colour which contains a good proportion of potash and phosphate, a fair quantity of nitrogen and organic matter and is less acidic whereas the organic soils cover the low lying areas of the valley with dark grey colour and clayed loam texture and abundance of organic matter have a good amount of nitrogen and phosphorus but are poor in potash and peaty soils have high acidity. Soils in the hill are more or less rich in organic carbon (1 to 3%) in the top soil, but poor in available phosphorus and potash. They are acidic (N. M. Singh, 2015).

Figure 2.9 illustrates that Clayey (15.70%), Loamy (15.70%), Clayey Loamy (36.84%), Loamy Clayey (18.04%) and Marshy land (09.62%).

## **2.10 TRANSPORT**

Manipur is located in the north-eastern state of India and is well connected by mainly airways and roadways to other parts of the country. The nearest railway station to Imphal is the Dimapur railway station. Apart from this, another additional railhead is in the Jiribam district of Manipur and the government is planning to reach railway line to all parts of Manipur as part of a trial run for the first passenger train engine arrived on 14<sup>th</sup> March 2022 at the newly constructed Khongshang railways in Noney district of Manipur.

In Manipur, road transport is well connected by national highways to the rest of the states of the country. Imphal is connected to Guwahati, Dimapur and Kohima by the

National Highway No.2. This National Highway runs through Mao in the extreme north of Manipur to the International border town of Moreh in the south-east. With the proposal highway between Moreh to Mae Sot (Thailand) via Myanmar is coming up and Manipur will become India's Gateway to south-east Asian countries.

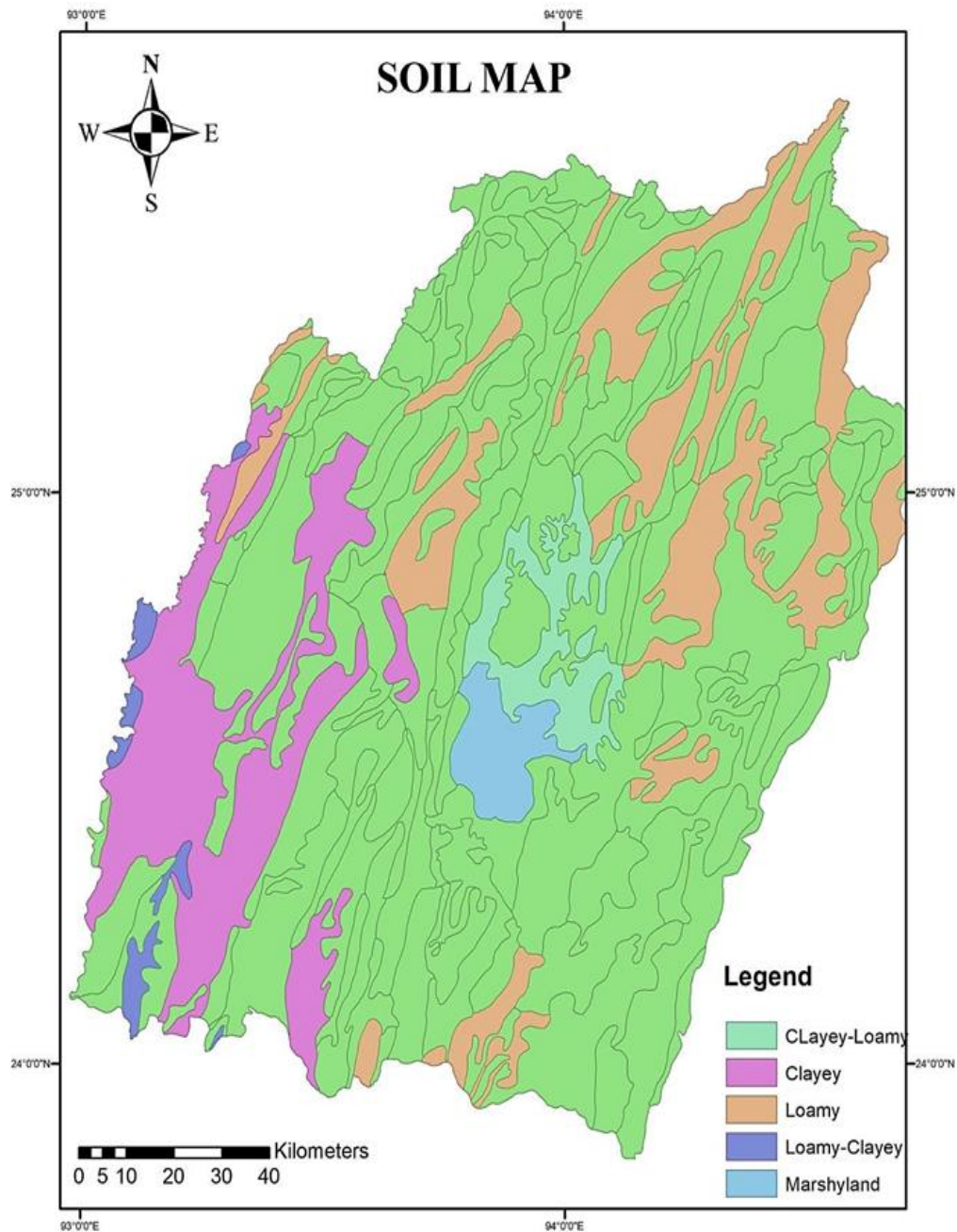


Figure 2.9: Soil Map of the study area

Another National Highway No. 37 connects Imphal via Jiribam connects Imphal to Silchar in Assam and National Highway No. 150 connects Imphal with Aizawl via Churachandpur.

**Table No. 2.1: Length of Road in Manipur**

Classification of Road	2014		2015	
	Total	Surfaced	Total	Surfaced
National Highways	1452	1452	1746	1746
State Highways	715	620	715	715
PWD Roads	9404	3707	9507	4884
Rural Road	8949	4133	11121	4906
Urban Road	165	110	182	127
Project Road	976	972	976	972

Source: Transport Research Wing, Ministry of Road and Highways

The state highways and major district roads from the secondary road system take care of collection and distributary functions. The length of the National Highway was 1746 km in 2015 as 1452 km in 2014. The length of the road is shown in Table No. 2.1.

In the state of Manipur, road transport is the main dominant mode of transport. Figure 2.10 shows the distribution of the road networks in Manipur. The Manipur

State Road Transport Corporation (MSRTC) played an important role in operating all over the state and on 25<sup>th</sup> June 2017, the Manipur State Transport (MST) was re-established with a mixed fleet of 10 SLF buses (JNNURM) and 6 Marcopolo Buses. During 2018-2019, 9 new buses have been added and 15 buses are providing passenger services for the routes from Imphal to Kakching, Yairipok, Moreh, Noney, Chandel, Moirang, Pherzawl, Jessami, Kamjong, Tamei, Tamenglong, Nungba, Khoupum.

In 2013, the Tulihal airport has been declared an International Airport, later known as Bir Tikendrajit International Airport. Even though Golden Myanmar Airlines' maiden chartered Flights landed but no regular International Flight service is not yet introduced (Economics Survey Manipur, 2021).

## **2.11 LAND USE AND LAND COVER**

Figure 2.11 shows the distribution and different land use patterns in 2017 and 2021 in Manipur. Forests occupied about 49.25% of the state, 2.44% settlement, 6.65% agriculture, about 38.72% land with or without scrub, 1.65% covered with a surface water body and 1.9% engaged with other categories.

The growing demands of industry and growing population pressure have degraded secondary forests and degraded village forests. There has been a marked shift in policy toward conservation with the enactment of the Forest Conservation Act-1980 and the new National Forest Policy of 1988. The state has adversely affected traditional and historical management systems has been controlled commonly (Devi, et al., 2011).

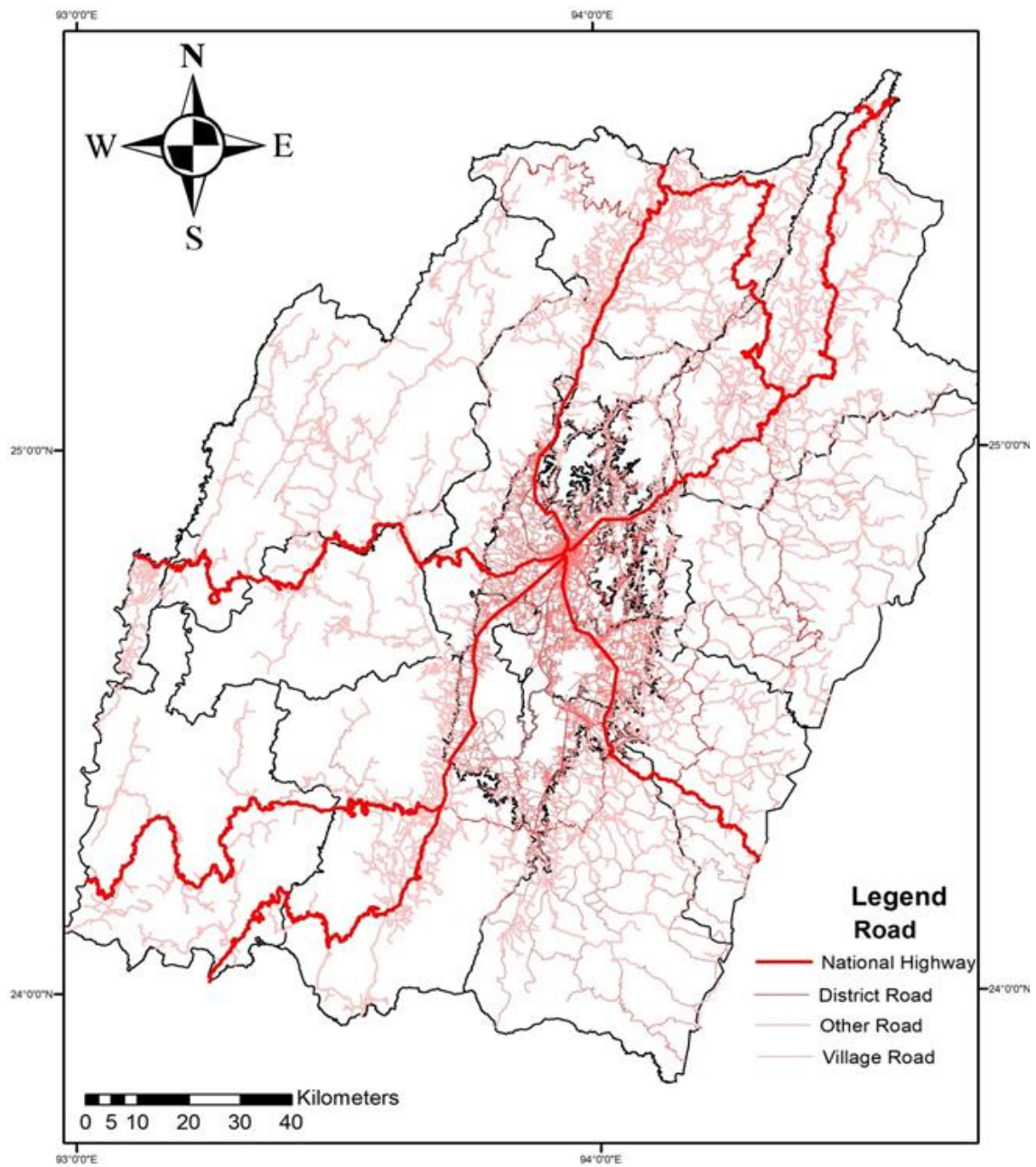


Figure 2.10: Road network of Manipur



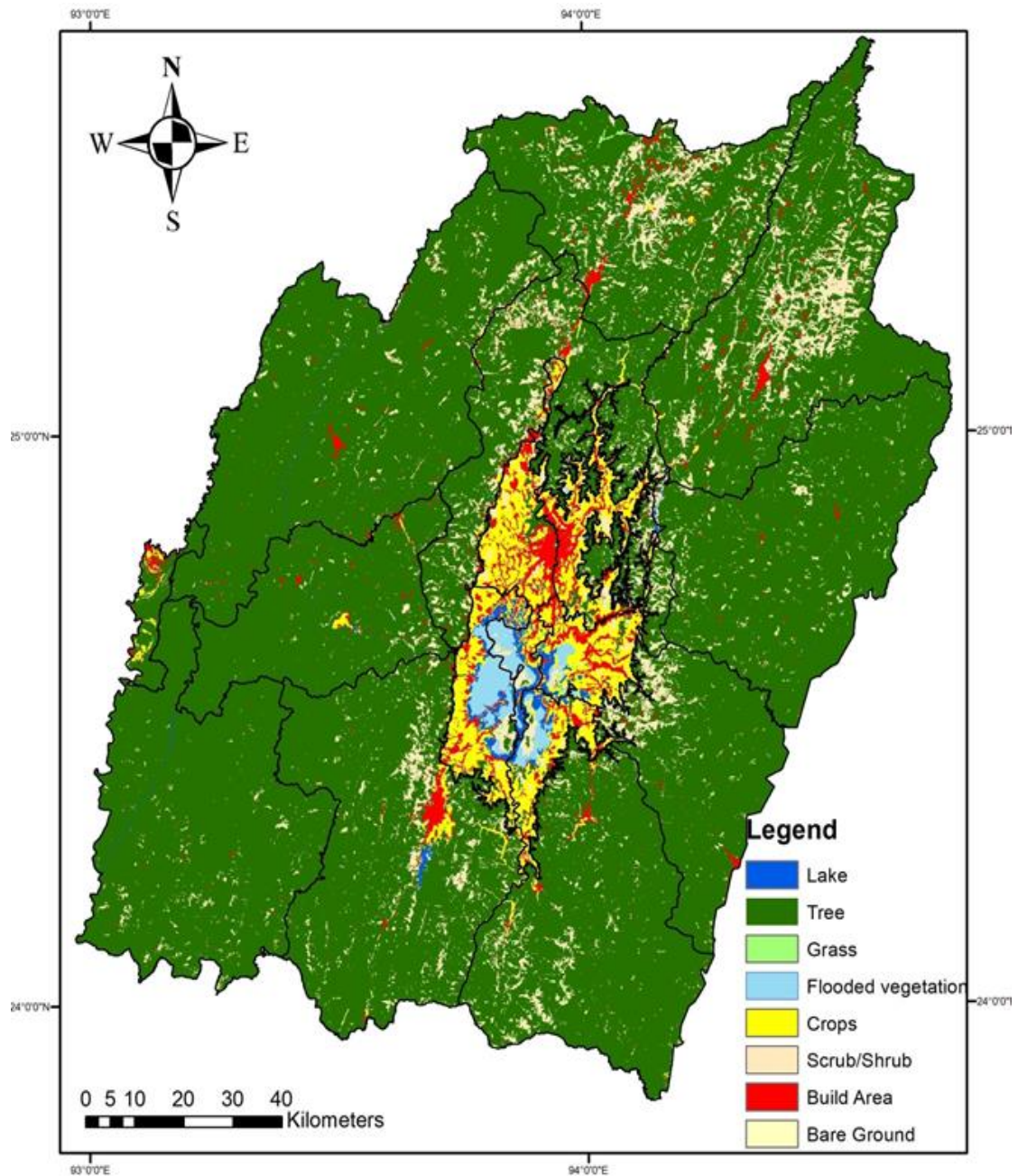


Figure 2.11: Land use and Land cover of the study area

## 2.12 ADMINISTRATIVE DIVISIONS

On 15<sup>th</sup> August 1947 Manipur become a sovereign independent kingdom and established a democratic form of government with the Maharaja as the Executive

Head and an elected legislative assembly. A merger agreement between the government of India and the king of Manipur sign an agreement to become a part of the Indian union and in the year 1949 on 15<sup>th</sup> October, Manipur was merged into India and achieved its statehood in the year 1972. In 2011 there were 9 districts in the state of Manipur where 5 districts are located in the hill areas and 4 districts in the valley areas.

Currently, Manipur has 16 districts, 66 sub-divisions, 69 blocks and 52 towns. Imphal is the capital of Manipur and Manipur state covers an area of 22,327 sq. km. Churachandpur is the largest district with 4574 sq. km and Jiribam smallest district with 232 sq. km among all the districts of Manipur. Table 2.2 and Figure 2.13 show the administrative division in Manipur.

## **2.13 THE PEOPLE**

Manipur is inhabited by three main ethnic groups namely Meiteis which occupy the valley region of Manipur. According to the 2011 census, the Nagas and the Kukis-Chin occupy the surrounding hills with 33 recognised tribes in the hills and Meiteis that also included Bamon (Meiteis Brahman), Meitei Pangans (Meiteis Muslims). The tribes of Manipur have their distinctive dialects, costumes, cultures and traditions. The staple food for all ethnic groups of Manipur is rice. In addition to Meiteis, the valley is also inhabited by other communities from the other states of India. G.A. Grierson (1904) stated the theory, that the Tibeto-Burman and other Mongolian ethnic groups inhabited the upper courses of the Yangtze and Hwang-Ho rivers in China in pre-historic times. Their kinsmen migrated southwards and settled in the Hukwang valley, the present land of the Kachins in upper Burma before they moved further down to the Manipur valley. Recent archaeological findings at Tharon cave and Napachik etc. highlighted the existence of a Mon-Khmer speaking Australoid-Mongoloid people in Manipur before the arrival of the Tibeto-Burman speakers.



The descriptions of some of the tribes in Manipur are as below:

- Anal - The Anals are one of the oldest tribes and they settled in the Southern hills of the Tengenoupal district. They are recognised as a tribe in the year 1951.
- Aimol - They are listed under the Kuki tribes and they speak Aimol language. They are primarily Christians and are found in parts of Chandel District, Senapati District and around Loktak Lake in Bishnupur District.
- Chiru - The Chirus are one of the earliest tribes of Manipur and are found in four districts - Tamenglong, Kangpokpi, Churachandpur and Thoubal district. They speak Chiru dialect which is one of the Kuki - Chin - Naga languages.
- Chothe - They settled in the Purum region of Chandel and in Bishnupur district. They speak a Kuki - Chin dialect and are divided into seven clans.
- Gangte - The Gangtes are one of the major Kuki - Chin tribes dwelling in Churachandpur, Tamenglong and Senapati districts. They are also one of the educated and developed groups and Christianity is their religion.
- Hmar - They belong to Kuki - Chin - Mizo group populated mainly in Churachandpur. They speak Hmar language. Their main occupations are agriculture and weaving and they are also one of the highly educated communities along with the Gangtes.
- Khoibu - They are one of the Naga tribes of Manipur. They speak Khoibu dialect and are recognised as a tribe in 194. Khoibu Khullen in Chandel is the oldest and the first settlement village of the Khoibu tribe.
- Kom - They settled in Churachandpur, Tengenoupal and Senapati districts. They speak language similar to that of Koirang, Aimol and Chiru. They are highly literate and also have close relationship with the Hmar.
- Liangmai - The Liangmais settled in Tamenglong, Kangpokpi and Senapati districts. They speak the Liangmai language, a Tibeto - Burman language. Chaga - Ngee which is celebrated in the month of October is their biggest festival.
- Paite - The Paites settled mostly in Churachandpur district. They speak the Paite language and follow Christianity. Jhum cultivation is the main occupation of the people in the villages.

## 2.14 DEMOGRAPHY

According to the 2011 census of India, Manipur's population is 28, 55,795 consisting of 14, 38,586 males and 14, 17,208 females. The population density is 128 persons per sq. km as of 2011 whereas 103 persons per sq. km in the 2001 census. In 2001, 974 females per 1000 males improved to 985 females per 1000 males in 2011. The growth rate of the population of Manipur is 24.50% in 2011. The hill district of the state accounts for 41.20% while 58.90% for valley areas of the total population. District wise population is provided in table 2.3 and Figure 2.14 shows the demographic map of the study area.

As per 2011 census, the literacy rate of Manipur is in 5<sup>th</sup> rank among the North Eastern States of India. In 2001, the literacy rate was 70.50% and increase to 76.94% in 2011. The literacy rate among the male has increased from 80.30% in 2001 to 83.58% in 2011 while 60.50% among the females has increased in 2001 to 70.26% in 2011. Fig. 2.12 shows the literacy rate of Manipur from 1991 to 2011

**Table No. 2.2: Administrative divisions in Manipur**

<b>Sl. No.</b>	<b>Name of District</b>	<b>Area in Sq.km</b>	<b>No. of Sub-division</b>	<b>No. of Blocks</b>	<b>No. of Towns</b>	<b>No. of Villages</b>
1	Bishnupur	496	3	3	7	49
2	Chandel	2,100	3	4	-	98
3	Churachandpur	4,750	13	13	3	321
4	Imphal-East	497	3	4	13	39
5	Imphal-West	519	4	10	13	178
6	Jiribam	232	2	2	1	58
7	Kakching	192	2	4	2	46
8	Kangpokpi	1,698	9	9	1	534
9	Noney	1,217	4	4	-	73
10	Pherzwal	2,285	4	4	-	200
11	Senapati	3,271	7	6	-	622
12	Tamenglong	4,395	5	4	-	215
13	Thoubal	514	3	2	9	82
14	Tengnoupal	1,142	3	3	1	95
15	Kamjong	2,000	4	4	-	45
16	Ukhrul	4,547	4	4	-	96

Source: Directorate of Economics & Statistics, Manipur

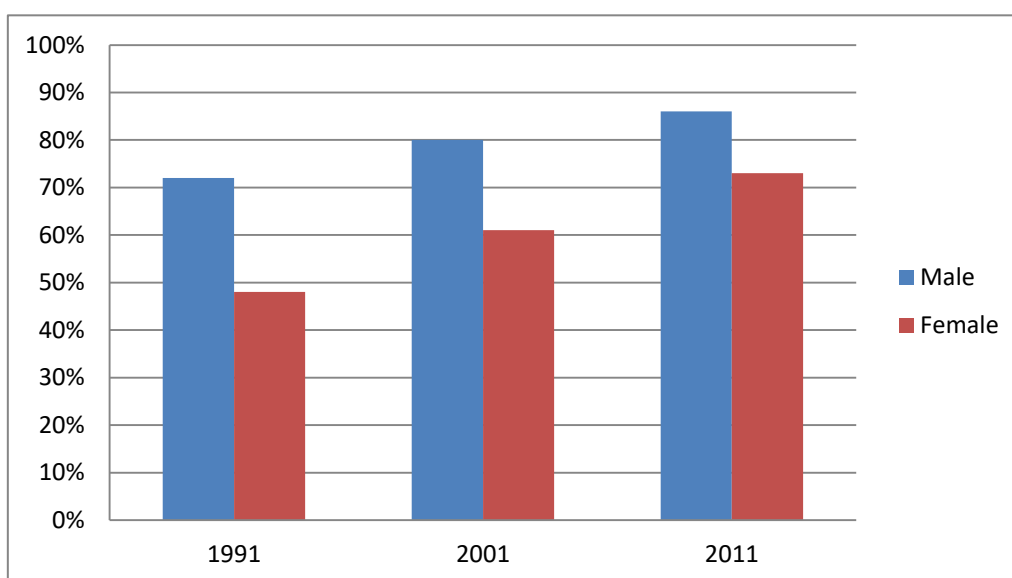


Figure 2.12: Literacy rate in Manipur 1991 to 2011

**Table No. 2.3: District-wise population of Manipur, 2011**

Sl. No.	District	Total Population		
		Total	Male	Female
1	Senapati	479148	247323	231825
2	Tamenglong	140651	72371	68280
3	Churachandpur	274143	138820	135323
4	Chandel	144182	74579	69603
5	Ukhrul	183998	94718	89280
6	Imphal-East	456113	226094	230019
7	Imphal-West	517992	255054	262938
8	Bishnupur	237399	118782	118617
9	Thoubal	422168	210845	211323

Source: Office of the Registrar General of India



Figure 2.13: Administrative division of the study area

## **2.14 EDUCATION**

In Manipur, there was no primary school until 1872. In the year 1885, Sir James Johnstone established an English School with the purpose of Maharaj Chandra Kriti and later on the school was known as Johnstone Middle English School. Four Lower Primary Schools were opened during the year 1893-95, three in Imphal and one in the hill area (at Mao). At Imphal, a separate Girl's Primary School was established in 1899.

In 1910, the Department of Education was established. Johnstone Middle English School was upgraded to the high school level and was affiliated with Calcutta University in 1921. Many high schools came up during 1931-1941, with the increasing demand for Schools. In the name of Maharani Dhanamanjuri, a college was established in the year 1946.

There has been a rapid growth in the number of educational institutions at the college level. In the year 2020-21, there are more than 86 colleges and 9 universities that offer UG and PG degree programs in Arts, Science and commerce streams and there are more than 450 schools both private and government. Under Manipur University, 86 colleges are affiliated, 5 colleges are affiliated under Dhanamajuri University and there are 1 constituent college i.e. Manipur Institute of Technology along and 2 medical colleges.

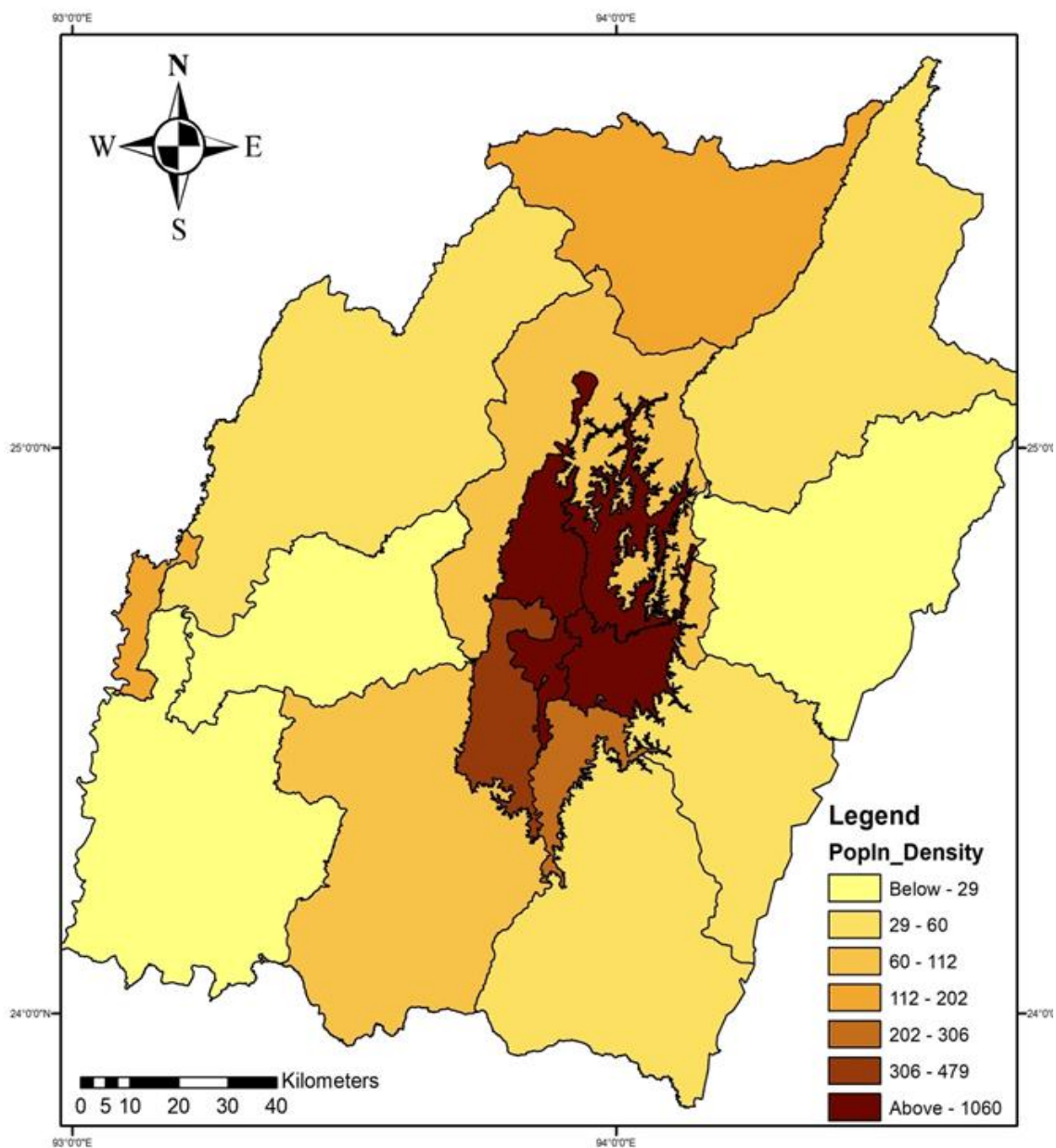


Figure 2.14: Demographic Map of Manipur

## 2.15 ECONOMY

According to the census 2011, the main activity for the workers whose participation in any economically productive activities is 45.68% of the population. The workers are broadly classified into two categories namely:

a) Main Workers: These workers are those who worked 183 days or more days for a major period of the year.

b) Marginal Workers: These workers are those who worked less than 183 days in a year. As per the 2011 census, 12% of the total population was marginal workers.

Table No. 2.4 shows the GSDP of Manipur at Market Prices from 2011-12 to 2019-20 and constant (2011-12=100) prices (Economics & Manipur, 2020).

**Table No. 2.4: Gross State Domestic Product of Manipur at Market Prices, 2011-12 to 2019-20**

Year	At current prices		At constant (2011-12=100) prices	
	GSDP (Rs. In lakhs)	Annual Growth Rate (%)	GSDP (Rs. In lakhs)	Annual Growth Rate (%)
2011-12	12,91,460	-	12,91,460	-
2012-13	13,74,324	6.42	12,99,281	0.61
2013-14	16,18,204	17.75	14,11,509	8.64
2014-15	18,12,905	12.03	15,24,490	8.00
2015-16	19,53,067	7.73	16,42,368	7.73
2016-17	21,29,389	9.03	17,08,192	4.01
2017-18	25,78,923	21.11	18,75,074	9.77
2018-19	27,86,871	8.06	19,30,041	2.93
2019-20	31,98,949	14.79	20,74,284	7.47

Source: Directorate of Economics & Statistics, Manipur

The above table shows the continuously increasing the GSDP of Manipur State at Market Prices over years. In the year between 2011-12 to 2019-20 increasing the growth rates is working out to be 11.34% and 5.9% for current and constant (2011-12) prices respectively.



## **2.16 INDUSTRIES**

Manipur government Industrial Policy of 1982 was the first policy to attempt the industrial growth conducted through specific instruction/ order/ guidelines. Later on, the Industrial Policy of 1990 mainly focuses on small-scale sector development and also focuses on the large and medium industries. The state government gave priority to industrial investment such as agro-based industries, industries based on locally available raw materials, including minerals and waste, products with local/regional demand, Indo-Myanmar Border Trade, handloom and handicraft sector etc. and to provide the status of industry to Tourism and all admissible incentives/support accordingly (INDUSTRIAL POLICY OF MANIPUR, 1996).

On 17<sup>th</sup> November 2017, the industrial and Investment Policy was notified. Provides funds for maintenance despite providing a package of incentives and concessions as laid out in its industrial policies and programmes for all the public sectors facing financial problems and insufficient funds. The Government has decided to close down five companies' viz. Manipur Cycles Corporation Ltd. (MCCL), Manipur Cement Ltd. (MCL), Manipur Spinning Mills Corporation Ltd. (MSMCL), Manipur Drugs and Pharmaceutical Ltd. (MDPL) (Joint Sector) and Manipur Pulp & Allied Products Ltd. (MPAPL) as they fail to run the industries.

## **CHAPTER III**

### **RECREATIONAL LANDSCAPE OF THE STUDY AREA**

#### **3.1 INTRODUCTION**

A landscape of tourism is included the whole context and infrastructure of tourism development of the total physical as well as visual environment utilized, for better policies and decisions on land development by all tourism activities (Gunn, 1979b) and the greatest interest in landscape planning and tourism management should be given to better landscape structure (Gkoltsiou & Terkenli, 2012). Tourism development needs computerized techniques which help to make a generalized landscape assessment of a region provided by government developers, and landscape planners (Gunn, 1979a).

##### **3.1.1 FORMATION OF RECREATIONAL TOURIST LANDSCAPE**

The tourist landscape incorporates the following tourist landscape elements and their interrelationships:

- I. Tourist attractions and activities (Inskeep, 1991; Moscardo & Pearce, 1999) include all-natural and human-made features of the destination (Jafari, 1982).
- II. Infrastructures specifically developed for tourism (accommodations, food establishments, etc.).
- III. Environmental elements of the tourist destination (air, water, soil).
- IV. Basic infrastructures of the tourist place, such as transportation networks, water supply, sewage, solid waste disposal systems etc.
- V. The landscape as a whole is dominant and marked in heterogeneous tourism areas (Briassoulis, 2002).

### 3.2 Tourist Landscape of different districts of Manipur

Manipur is a small hilly state situated in the eastern Himalayan region in the subtropical belt. Manipur is situated in the north-eastern part of the country having an international boundary of about 352 km long stretch of land. In Manipur, there is unlimited potential for the development of tourism sites. It has numerous natural and cultural heritage sites and has unlimited potential for the development of tourism. Different types of birds, animals and orchids form only a small part of the rich natural heritage of Manipur. Sites like wildlife sanctuaries and floating national parks in the state can attract tourists all over the world. Keibul lamjao is a part of a wide valley with several hillocks surrounded by the largest freshwater lake in India i.e. Loktak lake. It is the unique habitat place for “Sangai” the most endangered deer in the world. Since 2006, the Manipur Tourism festival is celebrated annually by the Department of Tourism, Government of Manipur. Some other festivals that are also developed recently to promote tourism and their respective areas are the Shirui Lily Festival, Pineapple festival, Loktak festival and Orange festival. The researcher has identified 160 tourist sites in Manipur which is shown in Table No. 3.1 and fig. 3.1.

**Table No. 3.1: Tourist Sites of Manipur**

SL. No.	Name of tourist Site	Districts	Latitude	Longitude
1	Kalimai Mandir	Imphal -West	24°47'48.917"N	93°56'23.978"E
2	Isckon Temple	Imphal -West	24°46'48.499"N	93°54'38.383"E
3	Hiyangthang Lairembi	Imphal -West	24°43'33.788"N	93°54'10.261"E
4	Mosques At Babupara	Imphal -West	24°47'54.842"N	93°56'30.724"E
5	Rkcs Art Gallery	Imphal -West	24°47'44.12"N	93°56'9.51"E
6	GS Rose Garden At Yurembam	Imphal -West	24°47'17.504"N	93°51'52.759"E
7	Imphal View Point Tourist Complex At Cheiraoching	Imphal -West	24°49'56.332"N	93°56'15.597"E
8	Chorus Repertory Theater	Imphal -West	24°48'38.606"N	93°54'20.679"E
9	Makoi Park -Patsoi	Imphal -West	24°48'21.746"N	93°53'15.534"E
10	Millennium Garden	Imphal -West	24°49'6.004"N	93°51'25.9"E
11	2 <sup>nd</sup> World War Museum At Tera Amudon	Imphal -West	24°48'12.556"N	93°55'2.956"E

<b>SL. No.</b>	<b>Name of tourist Site</b>	<b>Districts</b>	<b>Latitude</b>	<b>Longitude</b>
12	Manipur Science Centre	Imphal -West	24°48'6.922"N	93°54'25.074"E
13	Kanglatombi War Memorial	Imphal -West	24°59'7.075"N	93°53'34.202"E
14	Kouburu Leikha Temple	Imphal -West	25°3'16.32"N	93°55'41.942"E
15	Battle of Motbung	Imphal -West	24°59'54.33"N	93°54'16.721"E
16	Sangaithel Park	Imphal -West	24°48'43.835"N	93°47'16.59"E
17	Phayeng Chakpa Picnic Spot	Imphal -West	24°50'39.899"N	93°48'50.874"E
18	Khurkhul Picnic Spot	Imphal -West	24°55'6.453"N	93°49'57.024"E
19	Awunching Park	Imphal -West	24°54'6.106"N	93°53'19.712"E
20	Heaven Garden	Imphal -West	24°48'20.055"N	93°51'40.396"E
21	Masajid Road	Imphal -West	24°48'22.075"N	93°56'0.311"E
22	Kangla Palace	Imphal -West	24°48'27.158"N	93°56'41.623"E
23	Bijoygovinda Temple	Imphal -West	24°48'15.38"N	93°55'18.64"E
24	Zoological Garden	Imphal -West	24°49'1.369"N	93°53'27.191"E
25	Khongampat	Imphal -West	24°52'44.943"N	93°54'35.291"E
26	Ima Market	Imphal -West	24°48'30.402"N	93°56'7.12"E
27	Langthabal	Imphal -West	24°44'54.221"N	93°55'37.096"E
28	Saheed Minar	Imphal -West	24°48'24.946"N	93°56'11.788"E
29	Manipur State Museum	Imphal -West	24°48'18.093"N	93°56'14.358"E
30	Andro Monument	Imphal -West	24°44'33.876"N	94°2'28.213"E
31	Shree Shree Govindajee Temple	Imphal -West	24°47'51.56"N	93°56'55.871"E
32	Santhei Ecopark Andro	Imphal -West	24°45'12.059"N	94°2'5.234"E
33	Sekta Living Muesum	Imphal -West	24°53'43.882"N	94°2'20.225"E
34	Manipur Adventure And Allied Sports Institute	Imphal -West	24°45'7.776"N	93°59'18.196"E
35	Hapta Mela Ground	Imphal-East	24°47'58.388"N	93°56'50.099"E
36	Mutua Museum Andro	Imphal-East	24°44'41.25"N	94°2'27.291"E
37	Shilheipung Eco-Park (Leimakhong Mapan)	Imphal-East	24°53'3.138"N	94°5'4.023"E
38	Manipur Adventure And Allied Sports Institute	Imphal-East	24°45'12.54"N	93°59'19.946"E

<b>SL. No.</b>	<b>Name of tourist Site</b>	<b>Districts</b>	<b>Latitude</b>	<b>Longitude</b>
39	Hanumanjee Temple	Imphal-East	24°47'44.946"N	93°56'36.922"E
40	Ramji Prabhu Temple	Imphal-East	24°47'58.444"N	93°57'12.273"E
41	Common Wealth War Cemetery	Imphal-East	24°49'21.251"N	93°56'45.317"E
42	Khuman Lampak Sports Complex	Imphal-East	24°49'7.241"N	93°57'12.385"E
43	Marjing Polo Complex	Imphal-East	24°52'22.522"N	93°57'0.472"E
44	Ningthem Pukhri	Imphal-East	24°52'22.522"N	93°57'0.472"E
45	Puruk Shoubi	Imphal-East	24°45'24.503"N	93°57'55.368"E
46	Bhagyachandra Open Air Theatre	Imphal-East	24°47'57.786"N	93°56'44.892"E
47	Chingakham Mandop (Japanese Bombing Site)	Imphal-East	24°49'1.71"N	93°57'39.132"E
48	Kombirei Garden	Imphal-East	24°49'23.314"N	93°59'38.528"E
49	Hapta Mela Ground	Imphal-East	24°47'58.581"N	93°56'50.117"E
50	Koirengei Old Airfield	Imphal-East	24°52'27.032"N	93°55'30.365"E
51	Cathedral Catholic Church	Imphal-East	24°51'5.484"N	93°55'52.902"E
52	Wonderland Adventure Park And Camping	Imphal-East	24°56'16.741"N	94°1'8.148"E
53	Xingu Park And Resort	Imphal-East	24°54'27.151"N	94°0'38.443"E
54	Pinewood Garden	Imphal-East	24°41'56.356"N	94°1'5.351"E
55	Nongmaiching	Imphal-East	24°46'48.714"N	94°1'22.934"E
56	Seloi Longmai Eco Park	Imphal-East	24°47'54.141"N	94°0'43.508"E
57	Thangapat (Moat)	Imphal-East	24°47'35.952"N	93°56'52.656"E
58	Nongmaiching	Imphal-East	24°46'48.714"N	94°1'22.934"E
59	Gwarok Mahadeva Yairipok	Thoubal	24°39'54.453"N	94°4'2.666"E
60	Mmrc & Unity Park	Thoubal	24°37'5.369"N	94°1'1.127"E
61	Khongjom War Memorial Complex	Thoubal	24°34'3.938"N	94°2'24.102"E
62	Waithou Lake	Thoubal	24°40'49.56"N	93°58'58.79"E
63	Shree Bungshibudon Temple	Thoubal	24°37'16.144"N	94°0'52.807"E
64	Waithou Tourist Spot (anchoring )	Thoubal	24°40'31.34"N	93°58'33.34"E
65	Thongjao Pottery	Kakching	24°25'46.855"N	93°55'53.344"E
66	Angan Ching Eco-Park	Kakching	24°29'37.032"N	93°57'39.785"E

<b>SL. No.</b>	<b>Name of tourist Site</b>	<b>Districts</b>	<b>Latitude</b>	<b>Longitude</b>
67	Kakching Uyokching Garden	Kakching	24°29'5.965"N	93°58'53.037"E
68	Bishnupur HQ	Bishnupur	24°37'37.595"N	93°45'54.041"E
69	Moirang	Bishnupur	24°29'49.946"N	93°46'58.435"E
70	Bishnu Temple	Bishnupur	24°37'27.905"N	93°45'34.633"E
71	Thangjing Temple	Bishnupur	24°29'51.224"N	93°46'43.304"E
72	Ithai Barrage	Bishnupur	24°25'25.915"N	93°50'17.881"E
73	Karang Island	Bishnupur	24°32'51.407"N	93°50'1.268"E
74	Sendra Tourist Complex	Bishnupur	24°30'54.505"N	93°47'45.829"E
75	Loktak Lake	Bishnupur	24°32'53.23"N	93°48'8.205"E
76	Loktak Project	Bishnupur	24°34'51.013"N	93°44'19.063"E
77	Loukoipat	Bishnupur	24°38'5.891"N	93°45'40.441"E
78	Takmu Watersports Complex	Bishnupur	24°30'28.891"N	93°47'25.375"E
79	Karang Island	Bishnupur	24°32'50.745"N	93°49'59.221"E
80	Ithai Barrage	Bishnupur	24°25'21.941"N	93°50'27.661"E
81	Imphal Peace Museum	Bishnupur	24°42'17.356"N	93°49'3.456"E
82	India Peace Memorial	Bishnupur	24°42'17.356"N	93°48'57.289"E
83	INA Memorial	Bishnupur	24°30'8.904"N	93°46'34.45"E
84	Keibul Lamjao National Park	Bishnupur	24°28'44.314"N	93°48'29.021"E
85	Ukhrul Hq	Ukhrul	25°6'9.311"N	94°21'49.343"E
86	Battle Of Shangshak	Ukhrul	25°0'38.973"N	94°20'11.912"E
87	Phangrei / Sei	Ukhrul	25°9'4.478"N	94°27'33.522"E
88	Kachai /Somtal	Ukhrul	25°9'4.478"N	94°27'33.522"E
89	Wuyawon Lily	Ukhrul	25°0'8.026"N	94°27'7.784"E
90	Hundung	Ukhrul	25°3'56.717"N	94°20'43.861"E
91	Nungbi Pottery	Ukhrul	25°12'37.687"N	94°27'42.319"E
92	Khangkhui Cave	Ukhrul	25°3'30.545"N	94°24'54.227"E
93	Mova Cave	Ukhrul	25°2'4.884"N	94°20'2.981"E
94	Khayang Waterfall	Kamjong	25°3'42.679"N	94°44'18.013"E
95	Kamjong Chassad	Kamjong	24°51'3.935"N	94°30'33.824"E

<b>SL. No.</b>	<b>Name of tourist Site</b>	<b>Districts</b>	<b>Latitude</b>	<b>Longitude</b>
96	Roni Village	Kamjong	25°3'8.567"N	94°34'5.971"E
97	Chadong Adventure Watersports	Kamjong	24°50'1.495"N	94°8'19.939"E
98	Kachouphung	Kamjong	25°4'18.74"N	94°43'35.074"E
99	Zeilad Lake	Tamenglong	24°54'13.752"N	93°22'36.241"E
100	Tamenglong Hq	Tamenglong	24°59'17.475"N	93°30'31.345"E
101	Tharon Cave	Tamenglong	25°3'32.358"N	93°32'7.669"E
102	Bunning Meadow	Tamenglong	25°8'21.462"N	93°35'46.103"E
103	Barak Waterfall	Tamenglong	24°52'43.479"N	93°23'8.007"E
104	Kisha Range	Tamenglong	25°14'13.314"N	93°31'41.647"E
105	Jiri-Makru Wildlife Sanctuary	Tamenglong	24°49'3.383"N	93°14'45.225"E
106	Khoupum Waterfall	Noney	24°39'24.815"N	93°29'38.389"E
107	Khoupum Valley	Noney	24°40'29.67"N	93°30'46.923"E
108	Khoupum Dam	Noney	24°39'33.891"N	93°32'11.105"E
109	Nungleiband	Noney	24°39'14.889"N	93°37'16.978"E
110	Kambiron (Birth Place Of Haipou Jadonag)	Noney	24°43'33.507"N	93°22'15.14"E
111	Churachandpur Hq	Churachandpur	24°20'38.262"N	93°42'14.805"E
112	Adventure Tourism Complex Of MMI	Churachandpur	24°35'55.416"N	93°42'17.715"E
113	Thangjing Peak	Churachandpur	24°28'6.651"N	93°39'47.536"E
114	Mautam Village	Churachandpur	24°16'48.972"N	93°40'14.27"E
115	Japan Bridge	Churachandpur	24°34'35.435"N	93°40'0.561"E
116	Leimatak Power House	Churachandpur	24°35'25.318"N	93°40'6.171"E
117	Santing Waterfall	Churachandpur	24°22'21.53"N	93°25'25.936"E
118	Laimaton Peak	Churachandpur	24°38'4.468"N	93°42'5.562"E
119	Ngaloi Waterfall	Churachandpur	24°33'46.464"N	93°41'46.854"E
120	Bunglon For Pine Apple	Churachandpur	24°29'54.288"N	93°43'11.543"E
121	Gelijang Resort	Churachandpur	24°15'29.907"N	93°40'13.506"E
122	Mautam Village	Churachandpur	24°16'44.701"N	93°40'19.196"E
123	Khuga Dam Site	Churachandpur	24°16'53.267"N	93°40'53.46"E

<b>SL. No.</b>	<b>Name of tourist Site</b>	<b>Districts</b>	<b>Latitude</b>	<b>Longitude</b>
124	Tuibuong tribal museum	Churachandpur	24°20'30.23"N	93°41'41.28"E
125	Joutung Waterfall	Pherzwal	24°12'58.515"N	93°16'27.737"E
126	Tipaimuk	Pherzwal	24°13'58.505"N	93°1'27.373"E
127	Dzuko Valley	Senapati	25°33'3.566"N	94°4'3.632"E
128	Senapati Hq	Senapati	25°16'25.727"N	94°1'49.531"E
129	Willong Megalith	Senapati	25°28'17.567"N	93°58'31.655"E
130	Yangkhulen Wonder	Senapati	25°31'8.032"N	93°57'52.252"E
131	Purul	Senapati	25°22'27.215"N	94°13'44.797"E
132	Liyai	Senapati	25°29'4.68"N	94°17'34.368"E
133	New Maram	Senapati	25°22'16.936"N	94°5'3.981"E
134	Maram Khulen	Senapati	25°25'32.242"N	94°5'3.981"E
135	Potato Farm	Senapati	25°30'24.859"N	94°7'59.425"E
136	Mt. Isii (2995m)	Senapati	25°31'51.897"N	94°5'18.262"E
137	Senapati Hq	Senapati	25°16'32.27"N	94°1'49.22"E
138	Koide	Senapati	25°23'4.879"N	94°11'26.969"E
139	Sirong Lamkhai	Senapati	25°22'10.468"N	94°16'25.795"E
140	Phaibung	Senapati	25°18'55.029"N	94°2'18.194"E
141	Koubru Peak	Kangpokpi	25°3'42.316"N	93°52'26.345"E
142	Singda Tourist Home	Kangpokpi	24°53'4.32"N	93°48'17.469"E
143	Sadu Chiru Waterfall	Kangpokpi	24°44'21.052"N	93°45'13.192"E
144	Koubru Leikha, Siva Temple	Kangpokpi	25°3'20.141"N	93°55'45.151"E
145	Thangal Ecopark	Kangpokpi	25°12'1.558"N	93°59'49.907"E
146	Haipi	Kangpokpi	25°9'20.063"N	93°57'34.778"E
147	Thangalphai, Sailkul	Kangpokpi	25°2'40.486"N	94°1'40.001"E
148	Battle Of Nungshigum	Kangpokpi	24°54'35.127"N	94°1'17.208"E
149	Battle Of Kameng	Kangpokpi	24°51'25.773"N	94°3'58.787"E
150	Kanglatombi War Memorial	Kangpokpi	24°59'14.17"N	93°53'33.958"E
151	Waphong Village	Kangpokpi	24°53'37.567"N	93°42'34.103"E



<b>SL. No.</b>	<b>Name of tourist Site</b>	<b>Districts</b>	<b>Latitude</b>	<b>Longitude</b>
152	Machii Village	Tengnoupal	<b>24°29'52.423"N</b>	<b>94°8'38.836"E</b>
153	Langol Peak	Tengnoupal	<b>24°30'16.153"N</b>	<b>94°4'1.467"E</b>
154	Ising Thingbi	Tengnoupal	<b>24°33'36.408"N</b>	<b>94°7'44.023"E</b>
155	Yaingangpokpi Lokchao Wildlife Sanctuary	Tengnoupal	<b>24°19'19.135"N</b>	<b>94°13'53.241"E</b>
156	Kwatha Meetei	Tengnoupal	<b>24°20'5.392"N</b>	<b>94°16'35.997"E</b>
157	Moreh	Tengnoupal	<b>24°14'53.587"N</b>	<b>94°18'17.076"E</b>
158	Battle Of Tengnoupal	Chandel	<b>24°25'2.668"N</b>	<b>94°3'27.701"E</b>
159	Yangkhelching,Chakpi River	Chandel	<b>24°12'19.769"N</b>	<b>93°54'55.738"E</b>
160	Ningshingkhul	Jiribam	<b>24°46'25.841"N</b>	<b>93°8'58.989"E</b>

Source: Compiled by the author based on Department of Tourism, Government of Manipur



### **3.2.1 IMPHAL-WEST**

Imphal-West is in the category of the Manipur valley region. Imphal-west district is located between 24°10'91"N latitude and 93°47'6"E longitude with an area of 558sq.km. At present, Imphal-West has around 34 tourist spots which are identified with various historical, cultural, archaeological sites and gifts of nature. GIS and Remote Sensing provides a gross understanding of tourism. The varied and colourful tribal folk dances are an expression of nature, creation, and aestheticism of the tribal way of life. The colourful costumes, dance movements, and the unique rituals in the tribal festivals like the Lui-Ngai-Ni are simply majestic and charming. Some of the important tourist places of Imphal west district are Kangla Fort, the seat of Manipur's power till 1891, the historical embodiment of Manipuri Rulers and the people of Manipur; Kangla has a special place in the hearts and minds of the people of Manipur. Shaheed Minar, the indomitable spirit of the patriotic Meitei and tribal martyrs, who sacrificed their lives while fighting against the British in 1891, is commemorated by this tall Minar at Bir Tikendrajit Park in the heart of Imphal city. Ima Market, is a unique all women's market, with more than 3000 "Imas" (mothers) who run the stalls. It is split into two sections on either side of a road. Vegetables, fruits, fish and household groceries are sold in one section and exquisite handlooms and household tools in the other. Nupi Lal Memorial Complex, the complex is a tribute to the courageous Manipuri women, who sacrificed their lives fighting for justice against the British on 12th December 1939. Manipur State Museum, the interesting Museum near the Polo Ground has a fairly good collection and display of Manipur's tribal heritage and a collection of portraits of Manipur's former rulers. Particularly interesting are the costumes, arms & ammunition, relics and historical documents on display. Manipur Zoological Garden is at the foot of the pine growing hillocks at Iroisemba on the Imphal-Kanchup Road. Not to be missed is an opportunity to see the graceful brow-antlered deer (Sangai) one of the rarest species in the world, in sylvan surround

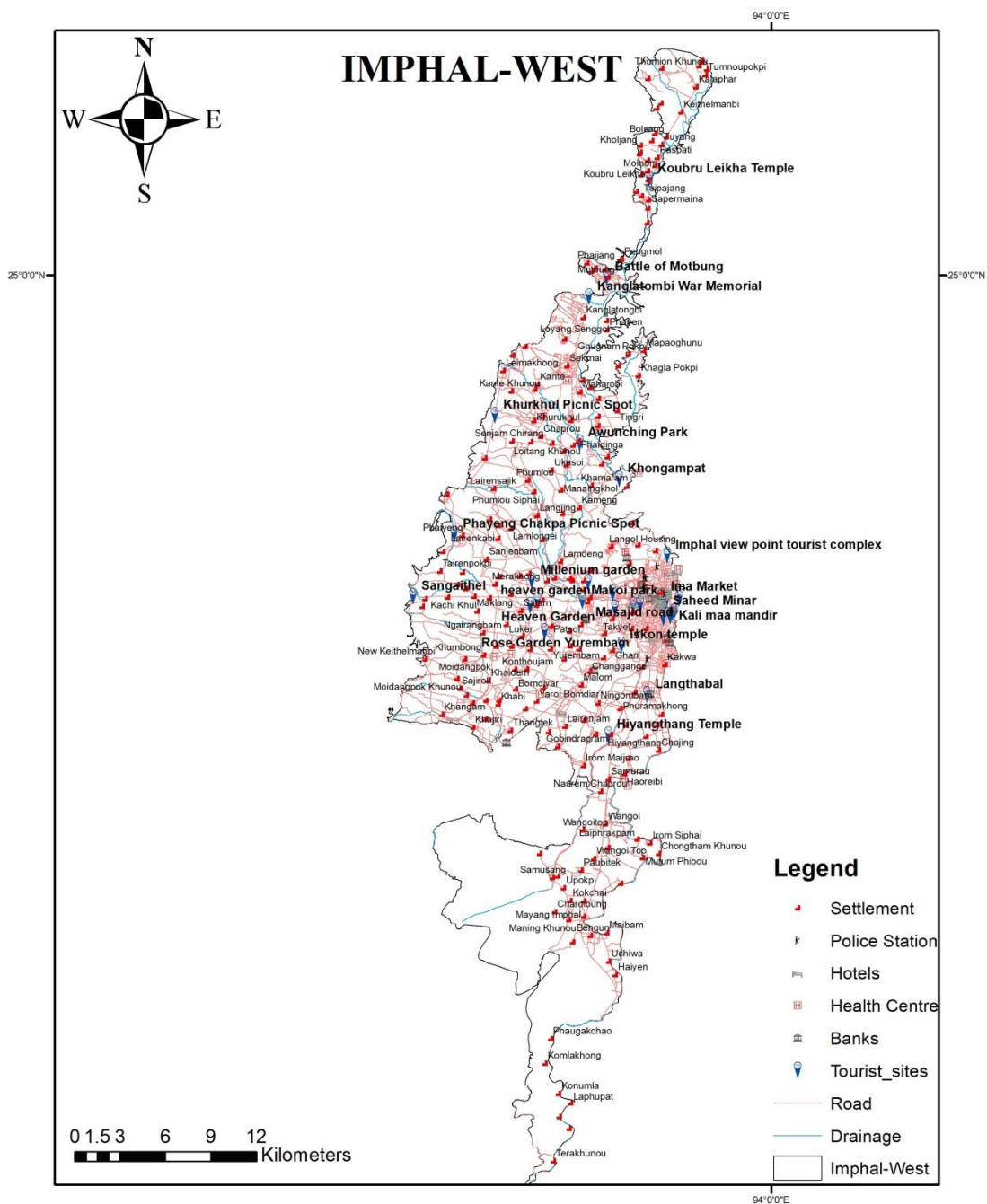


Figure 3.2: Imphal-West Tourist Landscape

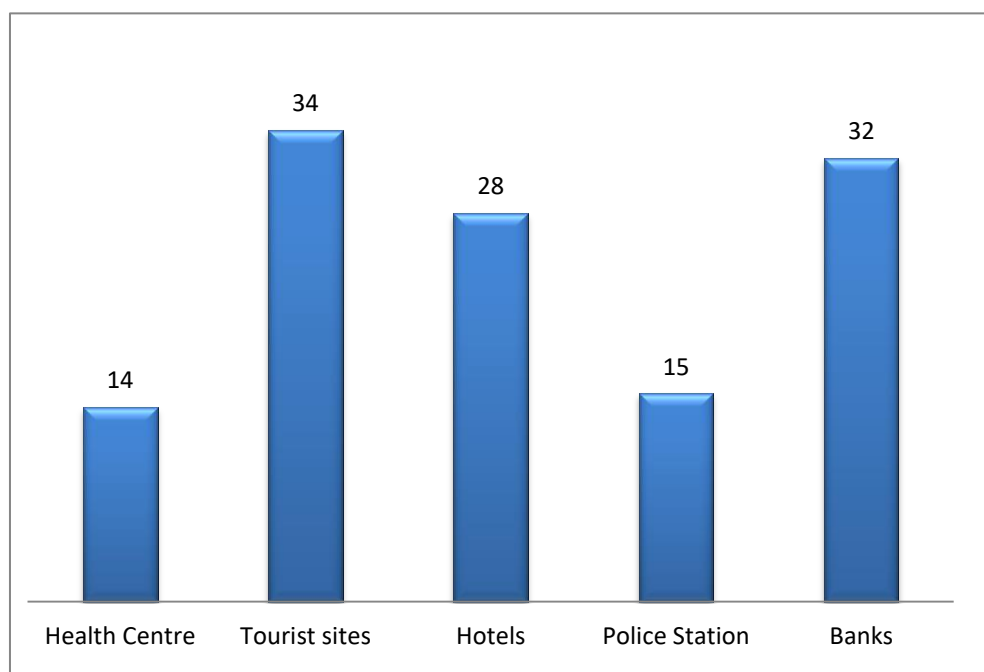


Figure 3.3: No. of amenities and no. of tourist sites in Imphal-West

Fig. 3.2 and 3.3 show different services in the Imphal-West district such as hospitals, hotels, tourist sites, police stations etc. 28 hotels are available at the heart of the Imphal city. As is preferred by tourists, the state is trying to promote homestays and in Imphal-West being preferred by tourists, the state is trying to promote homestays and in Imphal-West. There are several homestays also set up. Almost all the hotels in Manipur are available in the Imphal-West district. There are several natural as well as cultural tourist sites in Imphal-West shown in plate 3.1.

### 3.2.2 IMPHAL-EAST

Imphal-East is a small district of Manipur which is situated in the sub-tropical belt, lies between 24°39'49.09" N latitude and 93°55'30" E longitude with an area of 497 sq. km and has an altitude of 790 MSL. Imphal-East is bounded by Senapati district on the north and east, Thoubal district on the south and Imphal-west on the west. Imphal-East district is a land of scenic beauty, landscape, pleasant climate and rich culture where tourists will find various interesting sights and exploration here. The Sanamahi kiyong temple is the abode of Iainingthou Sanamahi an ancient deity of the Meitei community in Nongmaiching hills which attracts religious tourists from

other meiteis residing in other states of north-eastern India and surrounding countries like Myanmar and Bangladesh. Shree Govindajee temple is a historic vaishnavite centre adjoining the royal palace of Manipur Maharajas. The temple has an elegant domed structure along with the hall for prayers and congregations and the domes are plated with gold. The Ramji Prabhu is also one of the old temples of Manipur which existed during the times of Garib Niwaj (1709-1789). It is said that the idols of Ram, Sita, Lakshman, Bharat, Shatraghan were installed. Mutua Museum is a cultural complex at Andro village in Imphal-East district which is about 26 Km away from the capital. Here, it houses artefacts of the state and from all over the northeast, such as pottery, rare coins, rare manuscripts of the state, etc. which will be more interesting for tourists. There are two war cemeteries managed by the commonwealth war grave commission. In addition to this, there are some temples namely Kaina and Mahabali holy places of Manipuri Hindus which is a pre-historical places in the state.

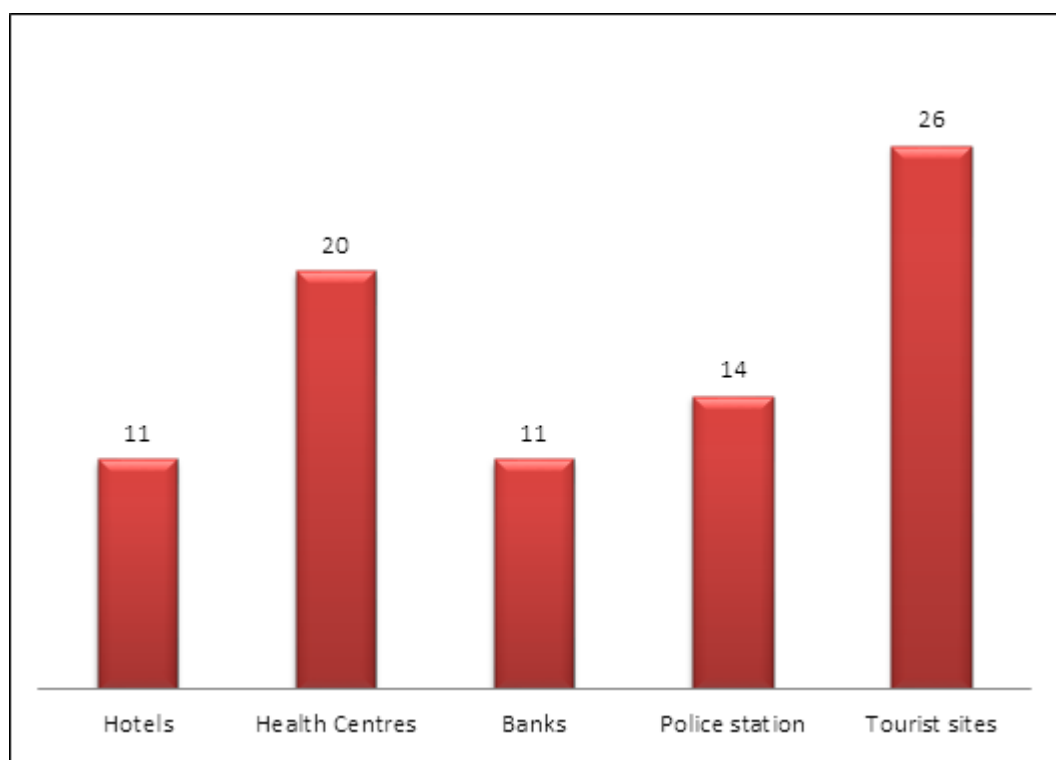


Figure 3.4: No. of amenities and no. of tourist sites in Imphal-East



### TOURIST SITES IN IMPHAL-WEST



a) Shree Bijoygovinda Temple



b) Ibuthou Pakhangba Temple, Kangla Palace



c) Sahid Minar (BT Park)



d) Ema Keithel (Mother's Market)



e) Nupilal Complex



f) Imphal view point

PLATE NO. 3.1

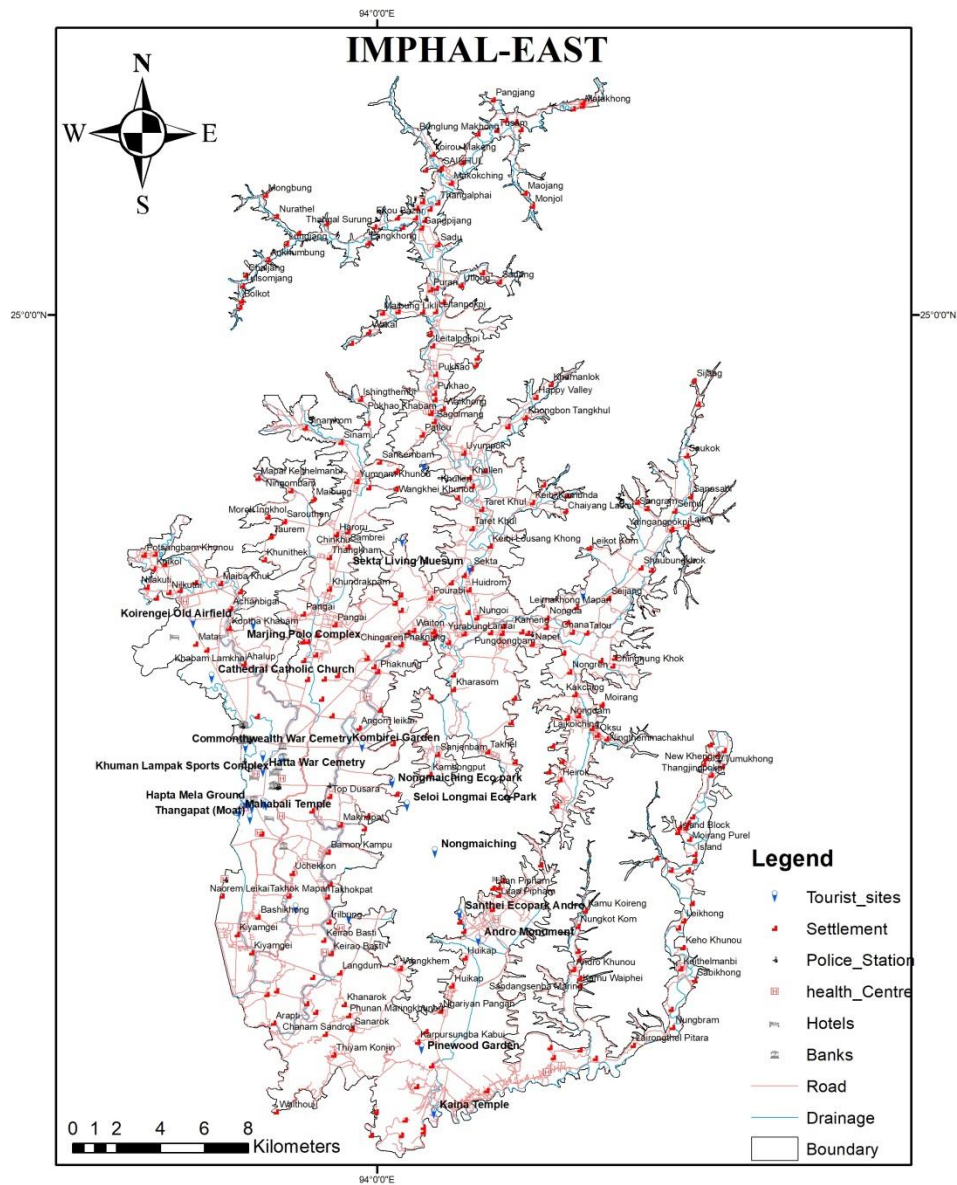


Figure 3.5: Imphal-East Tourist Landscape

26 tourist sites have been identified with both cultural and natural tourist sites and 11 hotels are available and as well as different services are also available such as health centre, banks, police station etc. in Imphal-East district. Fig. 3.4 and Fig. 3.5 show the landscape and the total number of different amenities available in the Imphal-East district. Some of the Tourist sites in the Imphal-East district are shown in Plate No. 3.2.



**TOURIST SITES IN IMPHAL-EAST**



a) Shree Govindajee Temple



b) Common Wealth Cemetery



c) Selloi Langmai Ecological park



d) Kaina Temple



e) Ningthem Pukhri (Holy water of Meitei)



f) Mutua Museum

**PLATE NO. 3.2**

### 3.2.3 BISHNUPUR

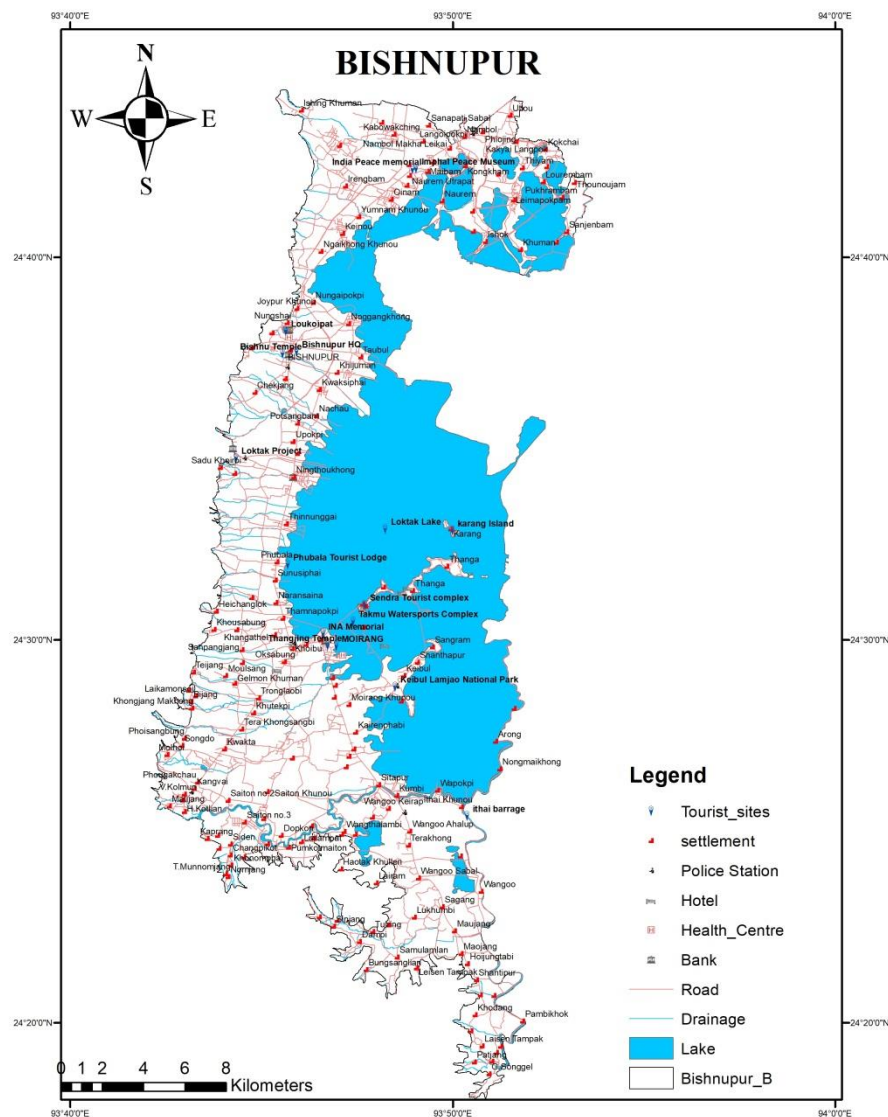


Figure 3.6: Bishnupur Tourist Landscape

The geographical area of Bishnupur lies between 24°18' N-24°42' N latitude and 93°47' E-93°53' E longitude with an area of 496 sq. km in the south-western corner of the Manipur Valley (also known as Imphal Valley). In Bishnupur, there is unlimited potential for the development of tourist sites. It has numerous natural and cultural heritage sites for the development of tourism. Sites like floating national parks in the state can attract tourists all over the world. Keibul lamjao is a part of a wide valley with several hillocks surrounded by the largest freshwater lake in India

i.e. Loktak Lake. From Sendra visitors can catch up a bird's eye view of Loktak Lake, keibul lamjao is the only floating national park in the world on Loktak Lake, within the park, there are watchtowers and two rest houses for the visitors which are maintained by the forest department of Manipur. Red hill is also known as India Peace Memorial where the British and the Japanese fought an extreme battle during World War II it becomes a place of pilgrimage for Japanese tourists and recently Imphal Peace Museum was inaugurated here tourists can able to see the exhibition which divided into during war, post-war and lifestyle and culture of Manipur. Lakoipat is a tiny lake located near Bishnupur bazaar, here visitors will get the facilities of boating and will attract the scenic beauty of the place. INA war museum, which is dedicated to the Second World War and focuses on the role and activities of Netaji Subhash Chandra Bose in particular, including arms and ammunition, bayonets, helmets and bottles, among others are displayed. Ibudhou thangjing is a temple located in Moirang, bishnupur district, one of the most important traditional deities of the Manipuris which made this district abounds in pilgrimage centre. Culture & Traditions, Manipur is a mosaic of traditions and cultural patterns. Bishnupur district is bounded in heritage resources and besides other cultural and traditional expressions that ingenious themselves in performing different arts, dance, fairs, festivals, etc. A small district like bishnupur district of Manipur is vibrant with colours and boasts of a rich culture. Many tourists around the globe will likely attract their history and customs. Hence, a small place like this should be explored and admired. Several communities are living in Bishnupur, such as Meitie, Meitei Pangals (the Manipuri Muslims), Rongmei, Chothe, Gangte, Kom, etc. among these communities they have different types of festivals like Lai-Haraoba, the festival is celebrated in the name of the deity called Umang Lai which takes place in May. Kut festival is celebrated by the Kuki-Chin-Mizo groups. It takes place on 1st November in honour of an abundant harvest, Gaan-Ngai is the greatest festival of the Rongmei people, Innampeï Lin festival is celebrated by the Chothe people. Visitors may enjoy being a part of the different Manipur festivals and loves the cultural diversity of the region.

Fig. 3.6 and Fig. 3.7 show the number of amenities available in Bishnupur District for tourist satisfaction to visit at this place and 17 tourist sites has been identified in this district. Some of the tourist sites which have been identified are shown in Plate No.3.3.

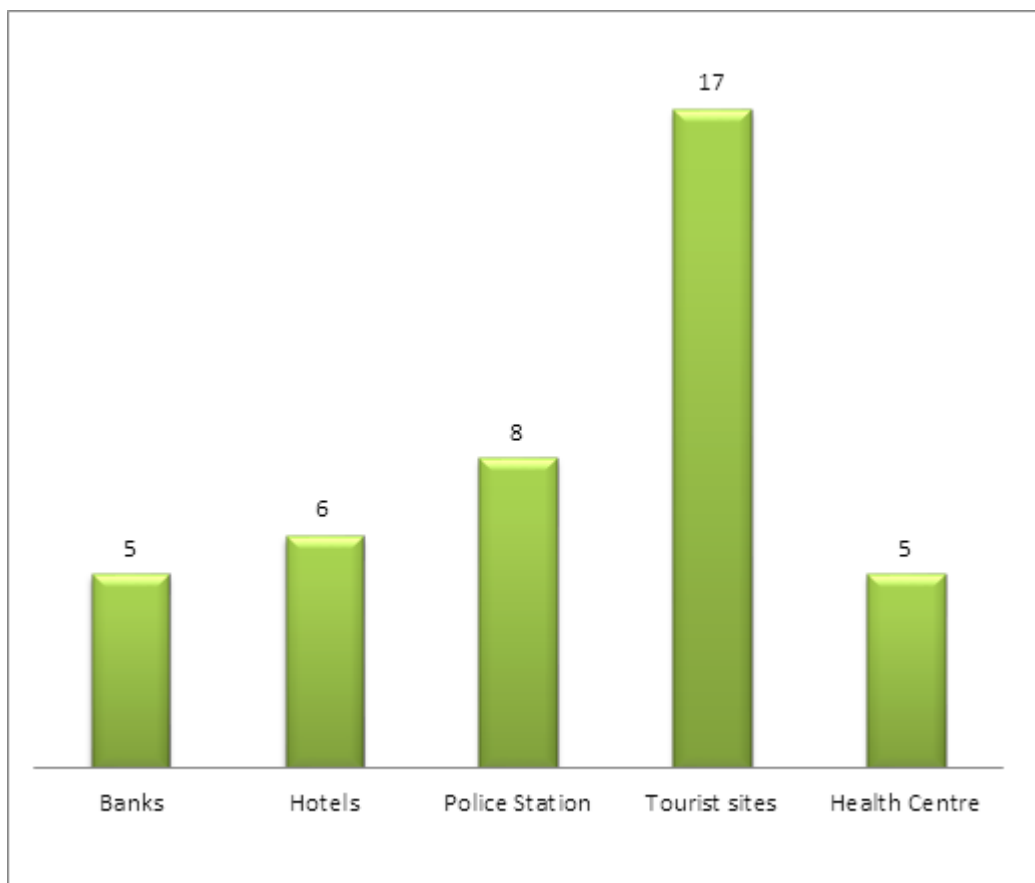


Figure 3.7: No. of Amenities and No. of Tourist sites in Bishnupur



### TOURIST SITES IN BISHNUPUR DISTRICT



a) Loktak Lake



b) Old Bishnu Temple



c) Watch Tower at Keibul Lamjao National Park



d) Thangjing Temple



e) Imphal Peace Museum



f) Loukoi Pat

**PLATE NO. 3.3**

### 3.2.4 THOUBAL

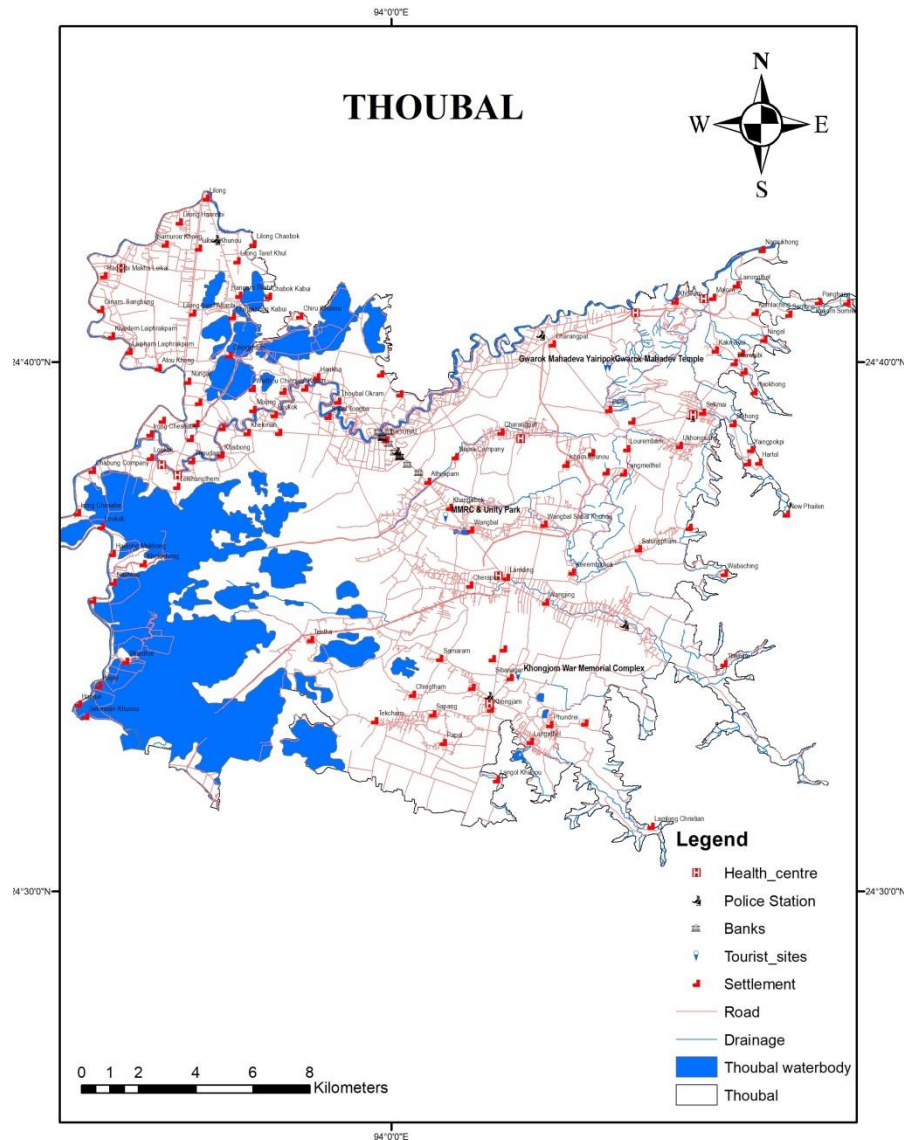


Figure 3.8: Thoubal District Landscape

Thoubal district lies between 24°14'29.45"N latitude and 94°9'18"E longitude with an area of 514sqkm. In Thoubal district, the Khongjom war memorial is an important historical significance, located 36 km from Imphal on the Indo-Myanmar road. It is the place where the last war of Manipur's independence was between the Manipuris and the British soldiers. This district is an ideal place for picnics and trekking with an abundance of green landscapes and various lakes as well as various facilities also available here as shown in fig. 3.8 and Fig. 3.9. and Plate No. 3.4 shows some of the tourist sites in Thoubal district. Among all the lakes

Waithou Lake makes the district more attractive to the tourist and it lies in the northern part of the district. This lake was famous for local fish i.e “Ngaton” but after the construction of the Cheksabi barrage, Ngaton vanished completely from the lake in the year the 1970s.

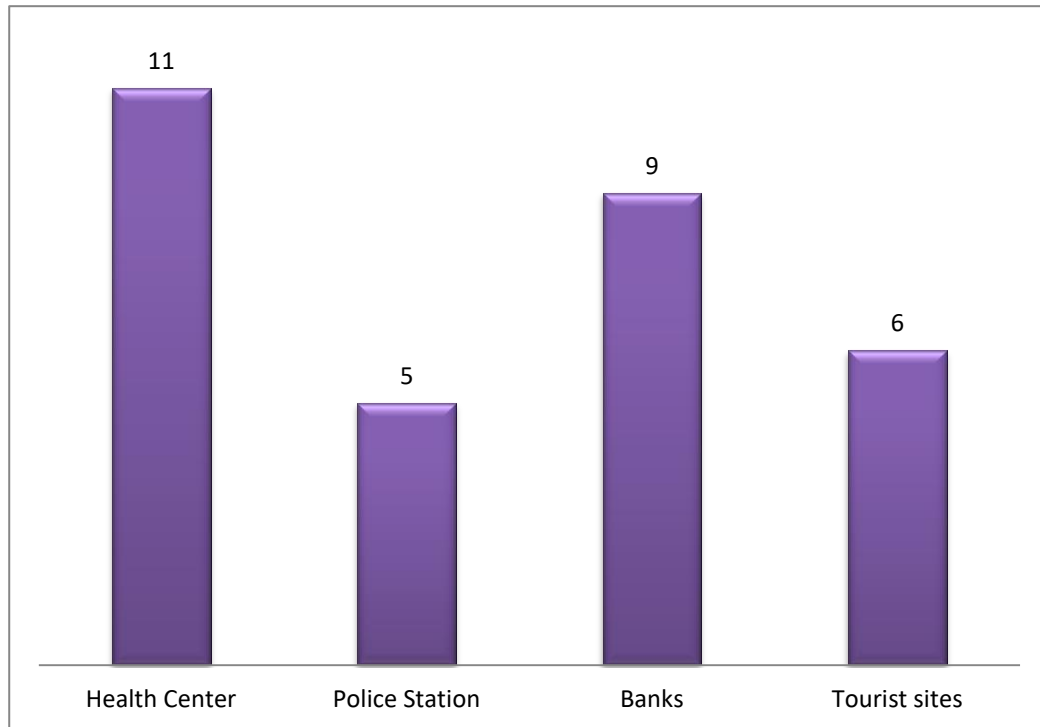


Figure 3.9: No. of Amenities and No. of Tourist sites in Thoubal District

Now, this lake is ideal for natural beauty including pineapple gardens which are quite famous and make all entire tourists surely give some quality time. Thoubal district is famous for various temples and the town has also had a big market area where tourists can go shopping for local handicrafts and handloom products which make tourists a quiet pleasure.



## TOURIST SITES IN THOUBAL DISTRICT



**a) Khongjom War Memorial**



**b) Gwarok Mahadeva Temple**

**PLATE NO. 3.4**



### 3.2.5 KAKCHING

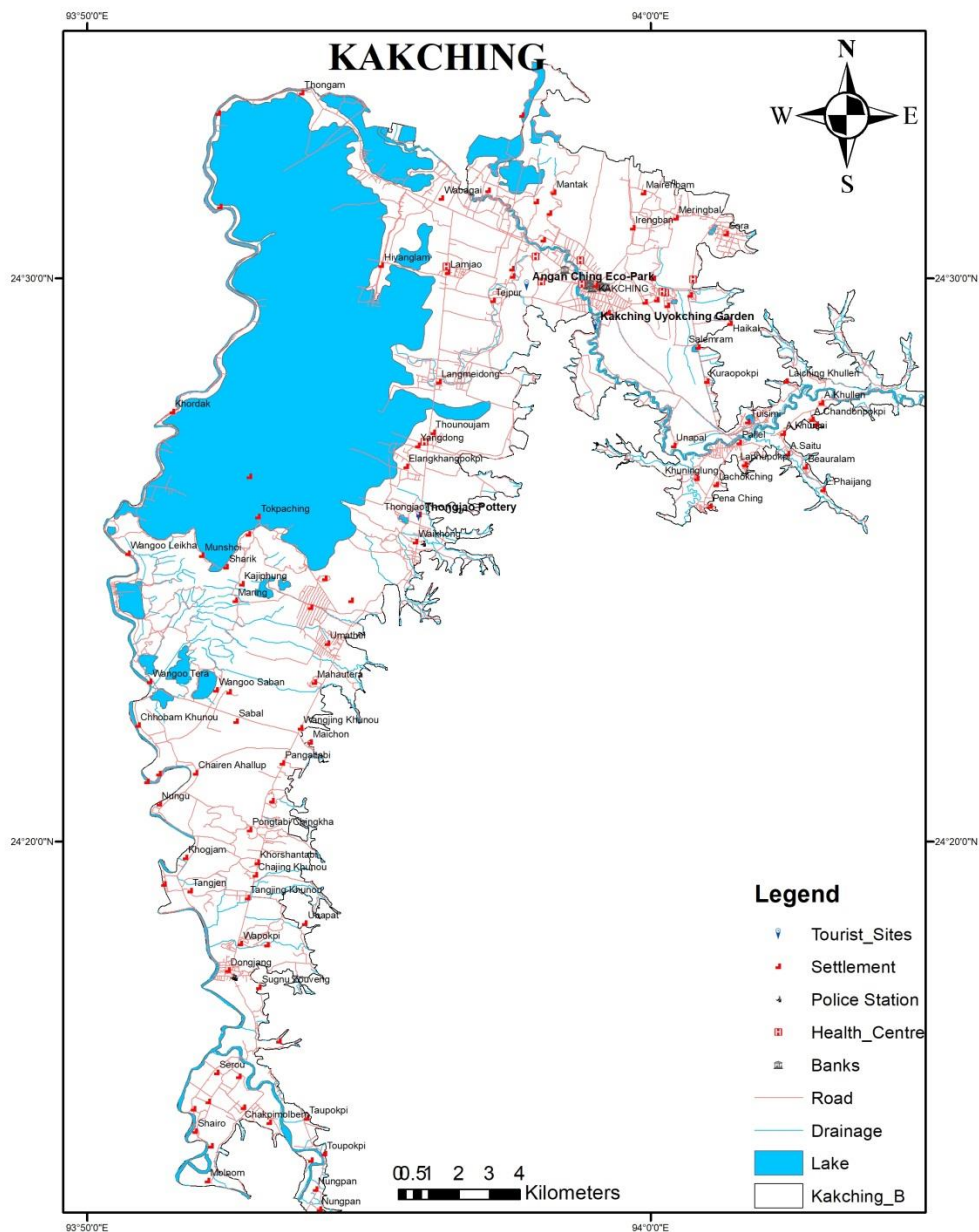


Figure 3.10: Kakching District Landscape

Kakching district lies in the south-eastern part of Manipur between 24°29'42.818"N and 93°56'11.295"E with an area of 192 sq. km. On May 18<sup>th</sup> 2018, Kakching district was declared the cleanest town in North-East India. 3 tourist sites have been identified and numbers of amenities are available in this district. Kakching district is socially wealthy in numerous fields like Nat Sangkritan, Meitei Pung Cholom,

Martial Arts, Thang-Ta, Mukna and kangjei and there are numerous gardens has been set up for recreation for tourist and varieties of indigenous vegetables, fish and local snacks are also available in the market to make tourist for better satisfaction. Fig. 3.10 and fig. 3.11 refers to the number of tourist sites in Kakching district and one of the tourist sites in Plate No. 3.5.

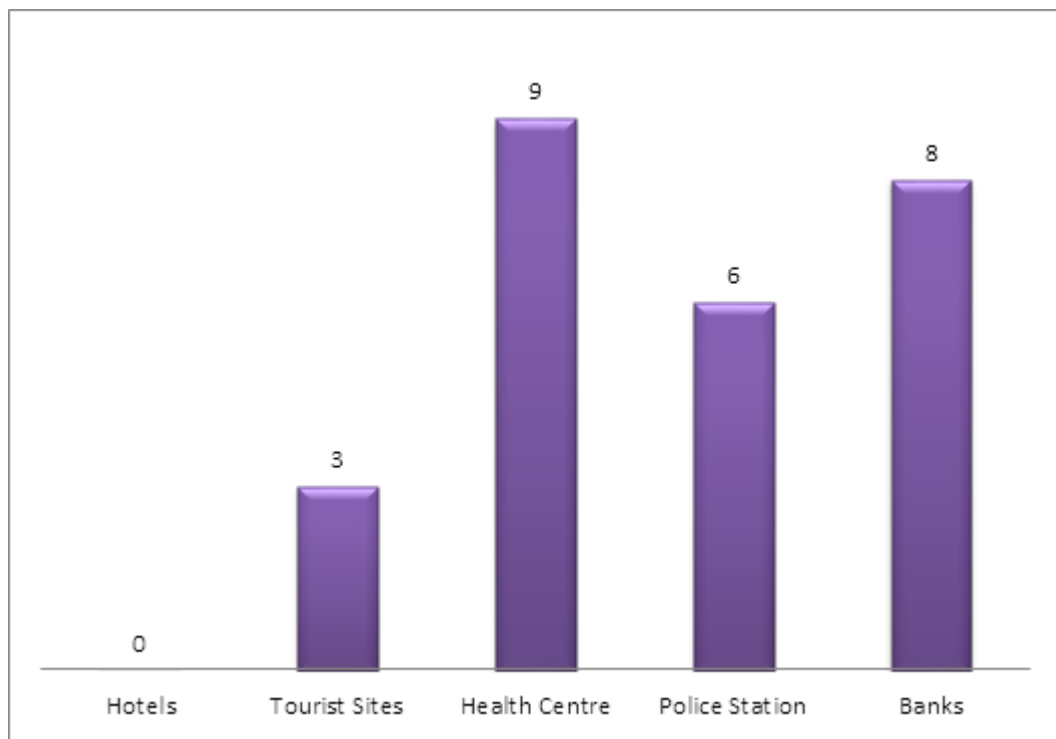


Figure 3.11: No. of Amenities and No. of Tourist sites in Kakching district

**TOURIST SITES IN KAKCHING DISTRICT**



**a) Kakching Garden**

**PLATE NO. 3.5**

### 3.2.6 KAMJONG

Geographically Kamjong district lies between 24°52'13.686"N and 94°20'48.512"E with an area of 2000 sq. km. The Tangkhul Naga tribe mostly occupied the kamjong district of Manipur. Tangkhul tribes are highly cultured people. They celebrate different types of festivals as part of their culture. The traditional clothes and wears for both men and women are unique as well as very attractive for tourists who visited this place. 4 tourist spots are identified where tourists can go trekking and hiking and enjoy the greenery landscape for this district shown in fig. 3.12 and fig. 3.13.

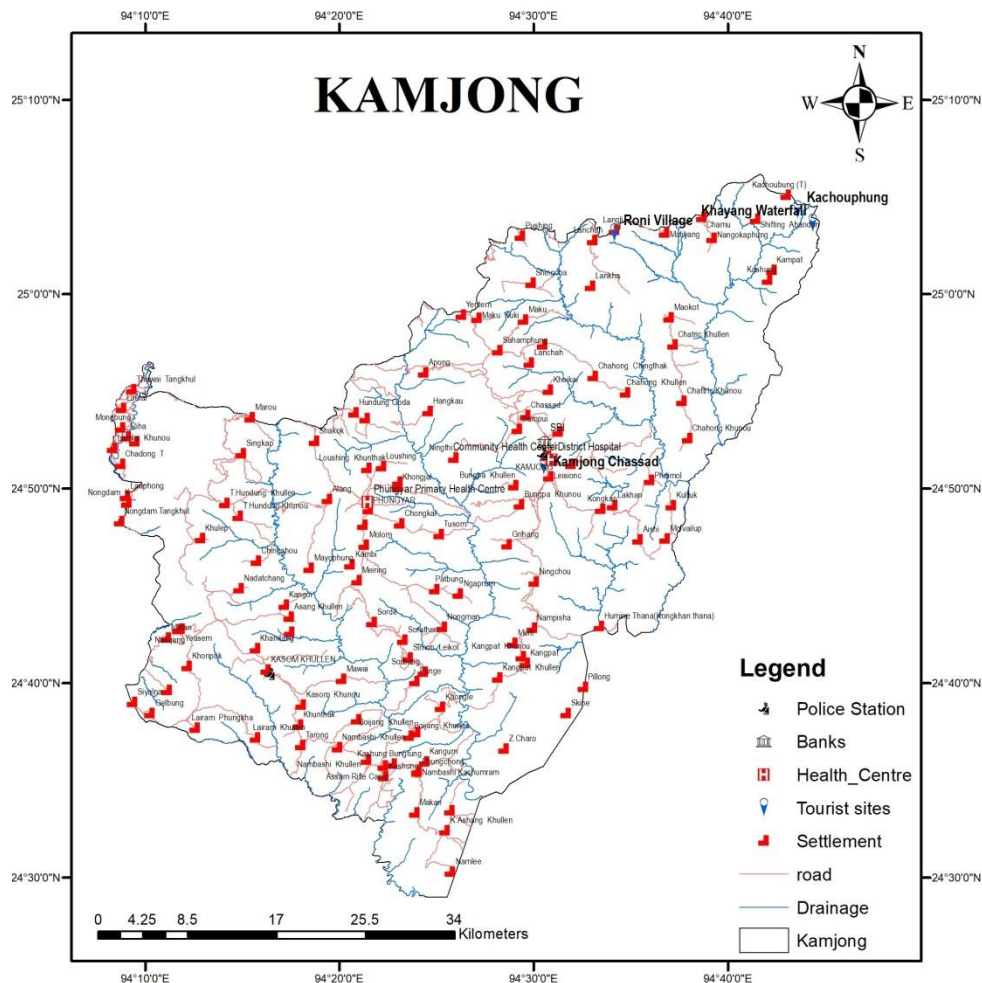


Figure 3.12: Kamjong district Landscape



**TOURIST SITES IN KAMJONG DISTRICT**



**Khayang Waterfall**

**PLATE NO. 3.6**

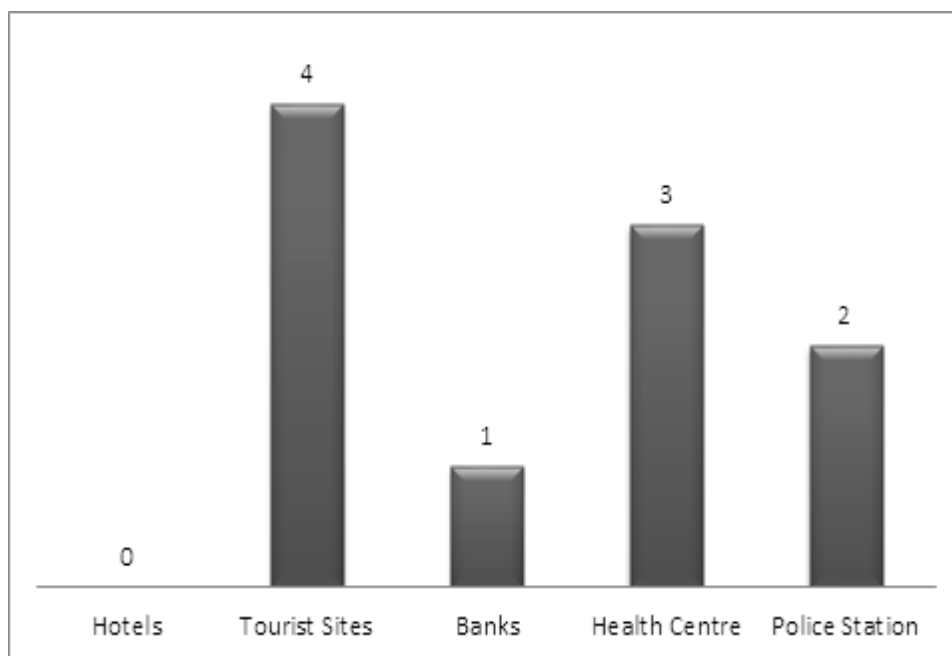


Figure 3.13: No. of Amenities and No. of Tourist sites In Kamjong District

### 3.2.7 UKHRUL

Ukhrul district lies at the eastern corner of the state of Manipur and it extends between 25°8'43.066"N and 94°18'59.295"E with an area of 2,206 sq. km. Like Kamjong district Ukhrul district is also mainly occupied by the Tangkhul tribe with pleasant climatic conditions ranging from 3°C to 33°C and various festivals with traditional dance and songs which has attracted tourists over the year.

In the Ukhrul district, 12 tourist sites have been identified with natural as well as cultural tourist sites with different types of amenities which are shown in Fig. 3.14 and Fig. 3.15. Among the natural tourist sites, Shirui Lily famous tourist site which is found on the peak of Shirui kashong there are famous caves namely khangkuei cave and Mova Cave and as cultural tourist sites, the battle of Shangshak war memorial is also found in the district. Tangkhul cuisines and traditional dances and songs attract tourists over the year.

Recently, the Manipur Tourism department has organized the shirui Lily festival in October 2019 to save endangered species and promote other tourist sites in the district as tourist destinations through this festival.

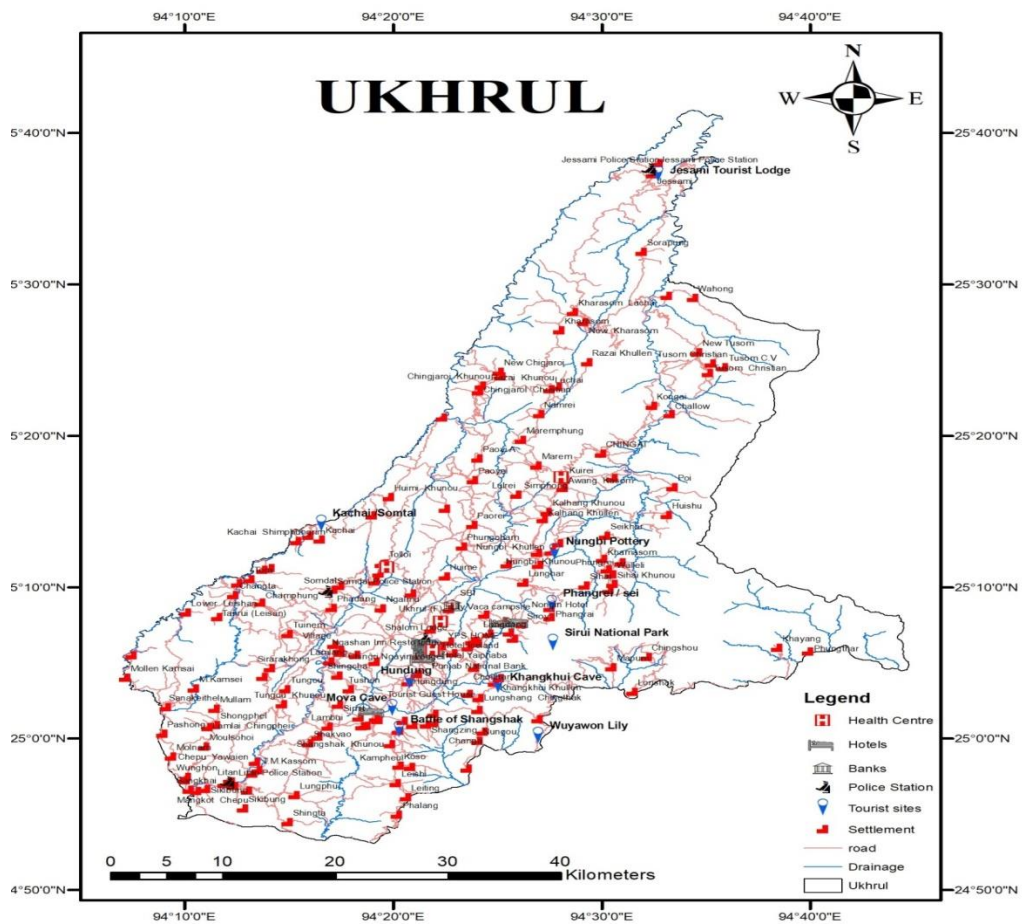


Figure 3.14: Ukhrul district Landscape

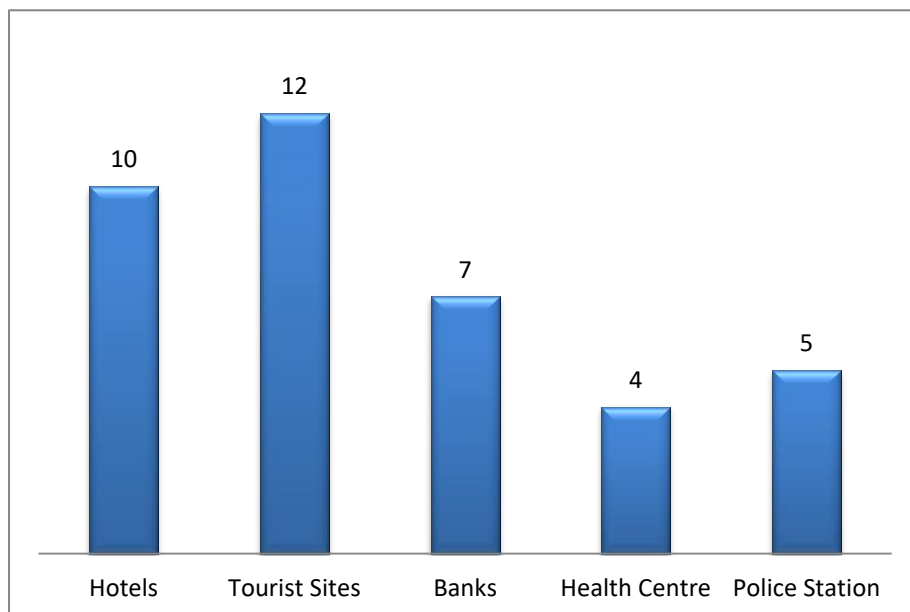


Figure 3.15: No. of Amenities and No. of Tourist sites in Ukhrul District

**TOURIST SITES OF UKHRUL DISTRICT**



**a) Shirui Peak**



**b) Mova Cave**

**PLATE NO. 3.7**



### 3.2.8 CHURACHANDPUR

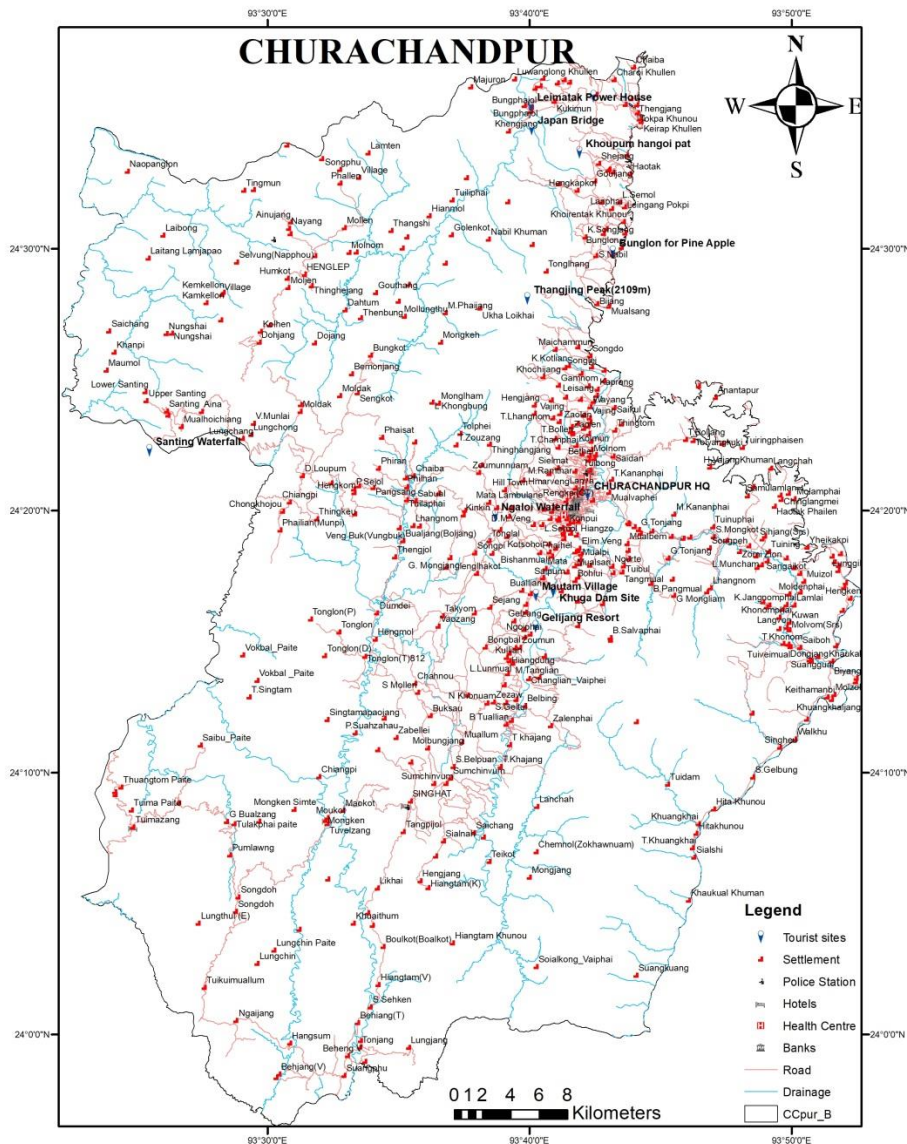


Figure 3.16: Churachandpur district Landscape

Churachandpur district lies in the south-western and it extended between  $24^{\circ}13'15.152''\text{N}$  and  $93^{\circ}41'30.704''\text{E}$  with an area of 4750 sq. km. Churachandpur district with more than thirty ethnic groups with varying geo-cultural environments. Churachandpur is also known as the second largest town after Imphal and becoming a tourist attraction region with 13 tourist sites has been identified as natural and cultural tourism. The khuga dam is the perfect place to visit with friends and family for a picnic spot.

**TOURIST SITES IN CHURACHANDPUR**



**a) Japan Bridge (Ngaloi Waterfall)**



**b) Gelijang Resort**



**c) Khuga Dam Site**

**PLATE NO. 3.8**

Tuibuong tribal Museum is the museum where tourists can help to learn the history and get details about the lifestyle and antique collections belonging to them and the Ngaloï fall is also one the most emerging tourist attraction sites with abundant greenery and effusive water.

The beautiful tourist site of the region and tourists can also buy handicrafts and indigenous arts as mementoes can make tourists satisfaction. Churachandpur has become a tourist attraction region with a rich culture to the historical sites, shopping and sightseeing. Fig. 3.16 and fig. 3.17 show the availability of service in the Churachandpur district and plate no. 3.8 shows some of the tourist sites.

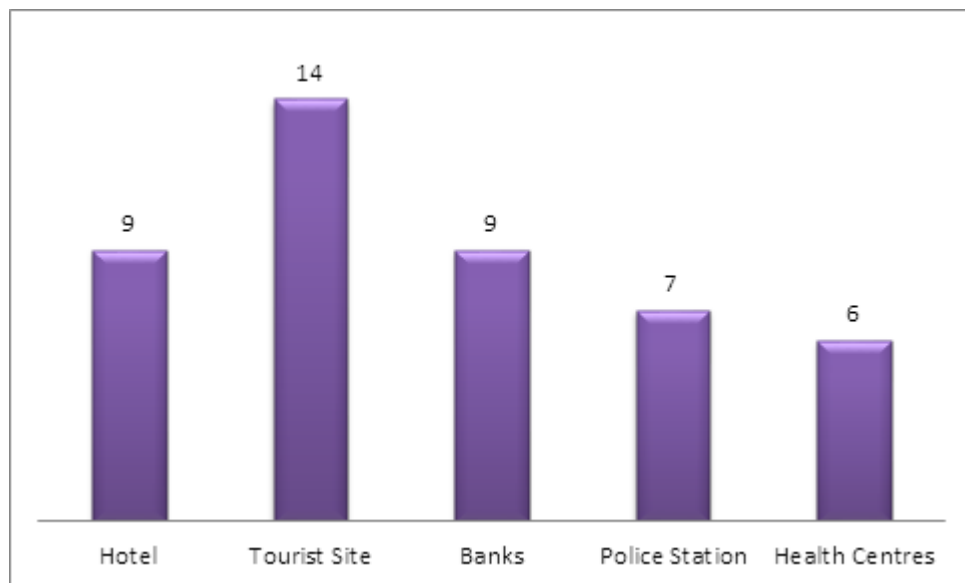


Figure 3.17: No. of Amenities and No. of Tourist sites in Churachandpur District

### 3.2.9 PHERZWAL

Pherzwal district is located in the southern part of the state of Manipur and it extended between 24°20'12.747"N and 93°13'8.2"E. Pherzwal district enjoys a temperature ranging from 3.4°C up to 34.1°C which made the tourist with pleasant climate and greenery landscape with the hilly region so the tourist can go for trekking and hitch-hiking.

Fig. 3.18 and Fig. 3.19 indicate the different types of tourist services and in the Pherzwal district there are numerous tourist homestays also set up which can make all the visitors satisfied. This district is connected with the state capital with bus services.

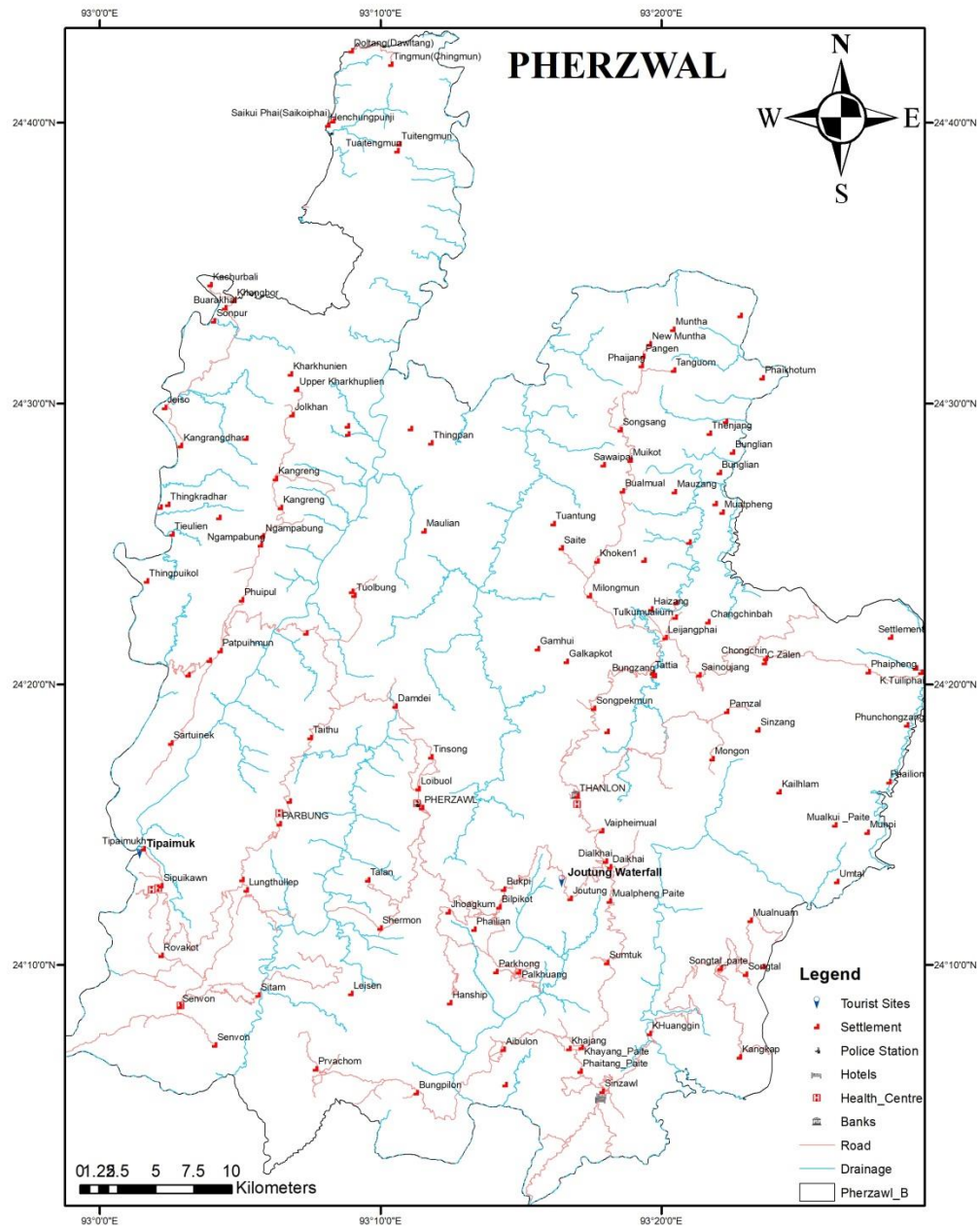
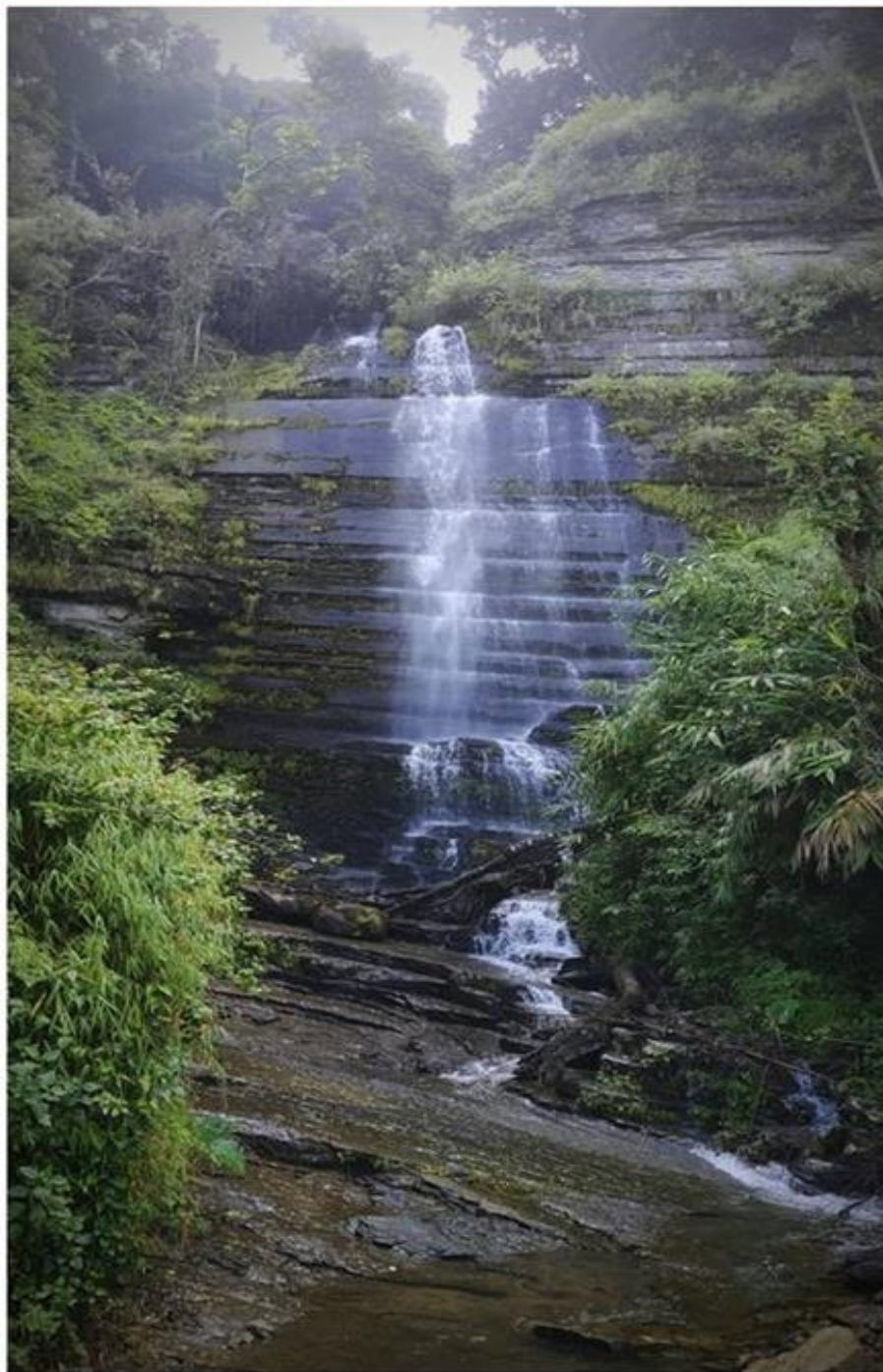


Figure 3.18: Pherzwal district Lndascape



**TOURIST SITES IN PHERZWAL DISTRICT**



**Joutung Waterfall**

**PLATE NO. 3.9**

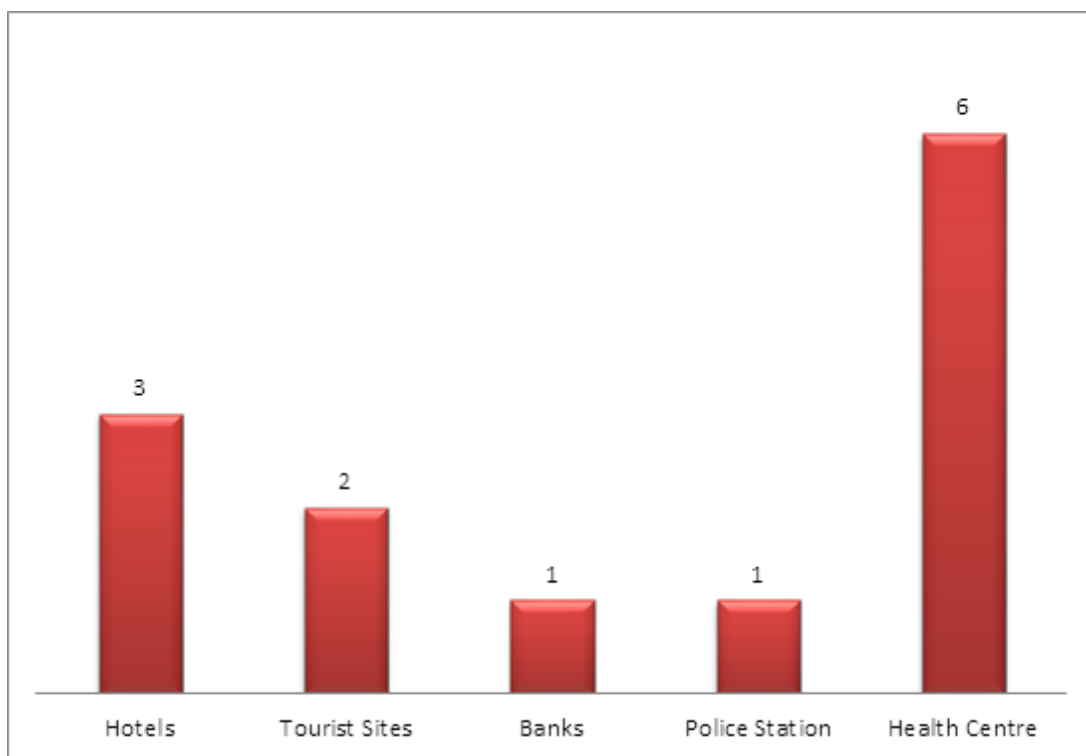


Figure 3.19: No. of Amenities and No. of Tourist sites in Pherzwal District

### 3.2.10 TENGNOUPAL

Tengnoupal district is located between 24°27'44.342"N and 94°8'29.842"E with an area of 1,142 sq. Km. 6 tourists have been identified with several amenities also available in this district. Fig. 3.20 and Fig. 3.21 show the number of amenities available in the district. The region is surrounded by beautiful landscapes and hillocks and there is also one border town known as Moreh which plays an important role as a huge commercial hub with a rapidly developing trade point between Myanmar and India and makes a good relationship between these two countries. Here, visitors can get opportunities for shopping for both Indian and Myanmar products. Langol Peak Garden is also one of the most famous tourist spots with its magnificent terrain, hillocks and fresh scenic beauty that attract tourists to the Tengnoupal district. The Yangoupopi-Lokchao Wildlife Sanctuary is one of the most important Sanctuaries among all the wildlife Sanctuaries in Manipur. The region is rich with a variety of mammals and natural habitats where visitors can explore a wide variety of species.





**TOURIST SITES IN TENGNOUPAL DISTRICT**



**a) Langol Peak**



**b) Kwatha village**



**c) Ising Thingbi**

**PLATE NO. 3.10**



### 3.2.11 CHANDEL

Chandel district is one of the districts of Manipur which lies on the Indo-Myanmar border and extended between 24°7'33.076"N and 93°57'52.903"E with an area of 2,100 sq. Km. The district is bounded by natural habitats with different species of flora and fauna. There are numerous unique orchids and ornamental plants where tourists can get chances to explore the natural beauty of the region. There are numerous amenities are available for tourist satisfaction are shown in Fig. 3.22 and Fig. 3.23.

Battle of tengnoupal is also one of the important regions where fierce fighting happened during World War II between the Japanese and allied troops and the region saw see-saw battles fought among the peaks.

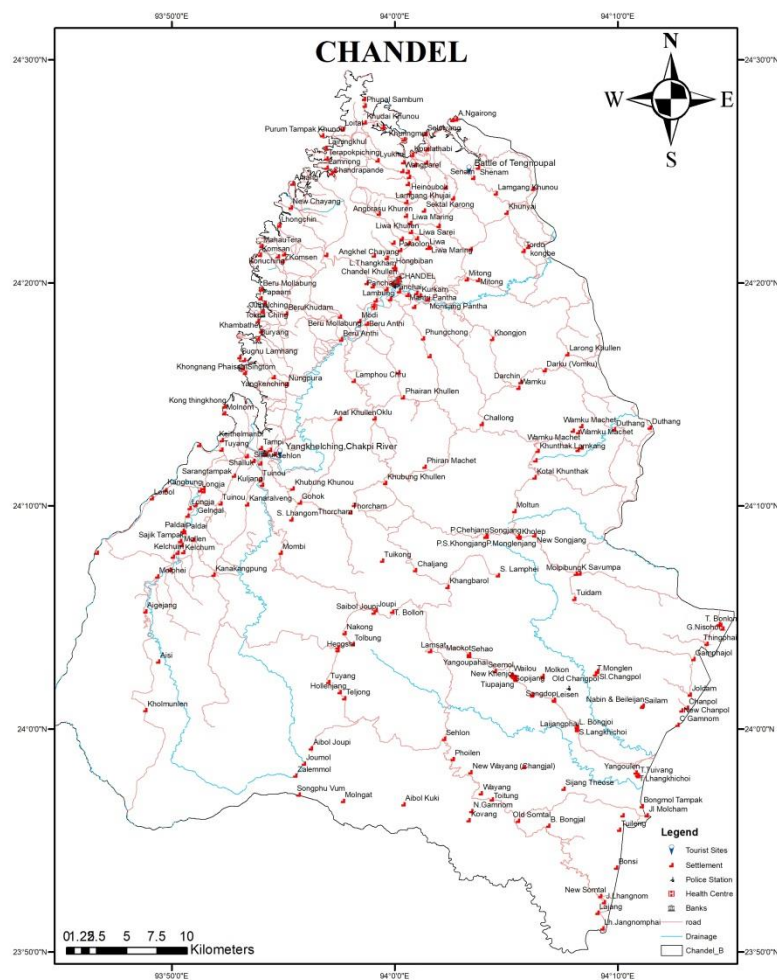


Figure 3.23: Chandel district Landscape

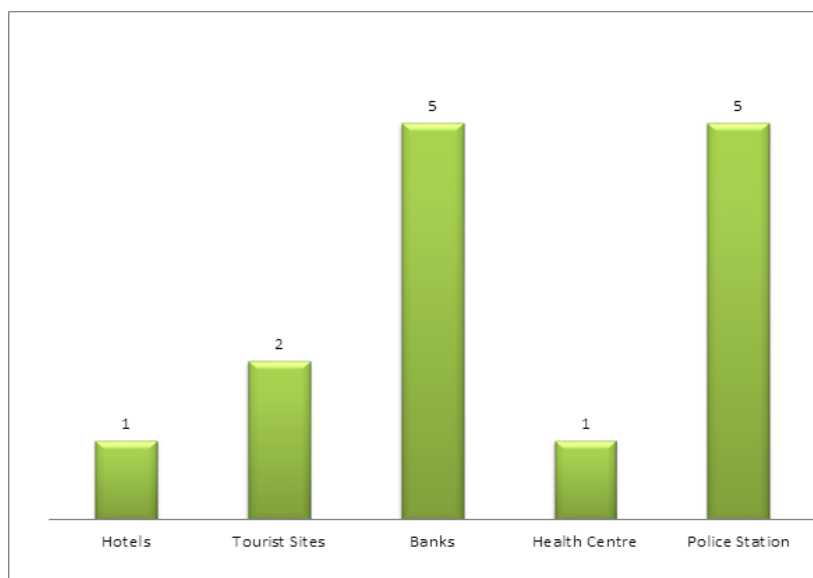


Figure 3.22: No. of Amenities and No. of Tourist sites in Chandel District

### 3.2.12 KANGPOKPI

Kangpokpi district is located between 25°9'0.765"N and 93°53'10.224"E with an area of 1698 sq. km. 15 tourist sites have been identified with both natural and cultural tourism sites shown in fig. 3.24 and fig. 3.25. The region constitutes with natural habitat with trekking and hitch-hiking facilities for the tourist.

Mt. Koubru has been a peaceful pilgrimage place for the valley inhabitants as well as those of the hills of Manipur. Annually the people from both the valley and hilly offering prayers and performing rites even before the advent of Christianity (Haokip, 2021) and tourists also can get the opportunity to enjoy the greenery landscape and peaceful scenic beauty of the region.

Battle of Nungshibum is one of the historical Landmarks of the Second World War between British and Japanese troops the British troops used tanks for the first time in this hilly terrain and later it has been named as “Battle of Nungshibum” and it is also well known among all the historians of various countries.

In kangpokpi district, Sadu chiru waterfall is one of the perfect places for tourist attractions for the entire nature lover seeking to spend quality time with family and friends. The region is not far from Imphal city, it is about only 25km away from the city.

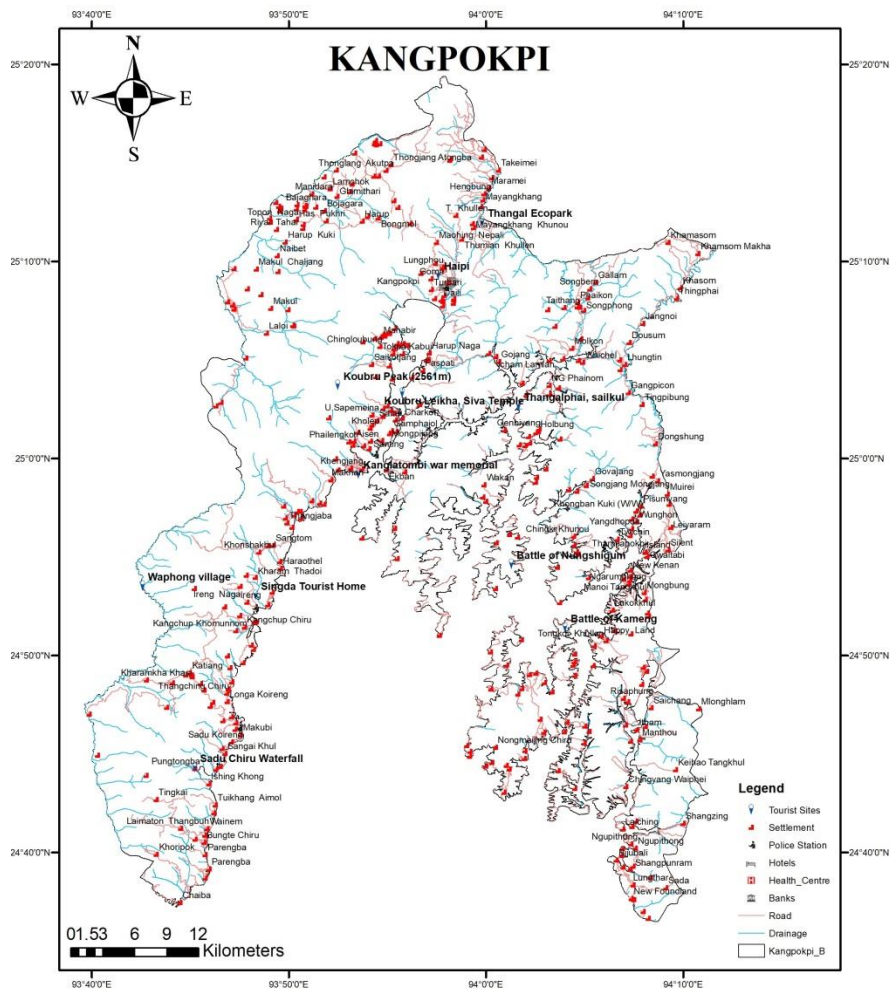


Figure 3.24: Kangpokpi district Landscape

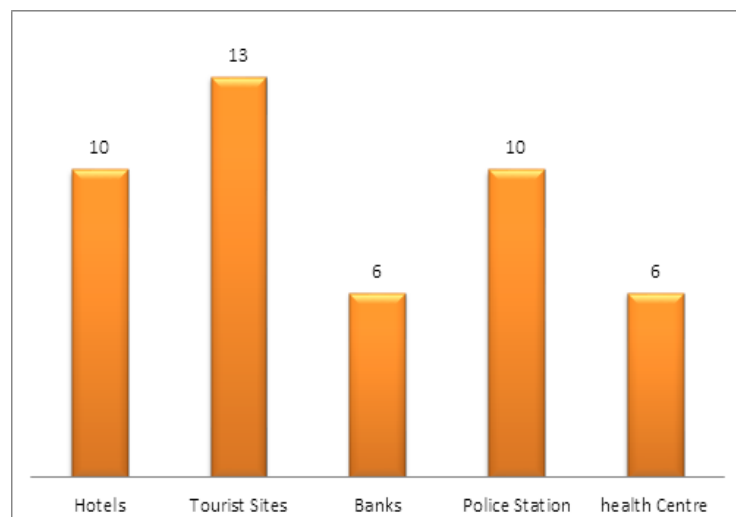


Figure 3.25: No. of Amenities and No. of Tourist sites in Kangpokpi District

## **TOURIST SITES IN KANGPOKPI DISTRICT**



**a) Sadu Chiru Waterfall**



**b) Waphong Village**

**PLATE NO. 3.11**



### 3.2.13 SENAPATI

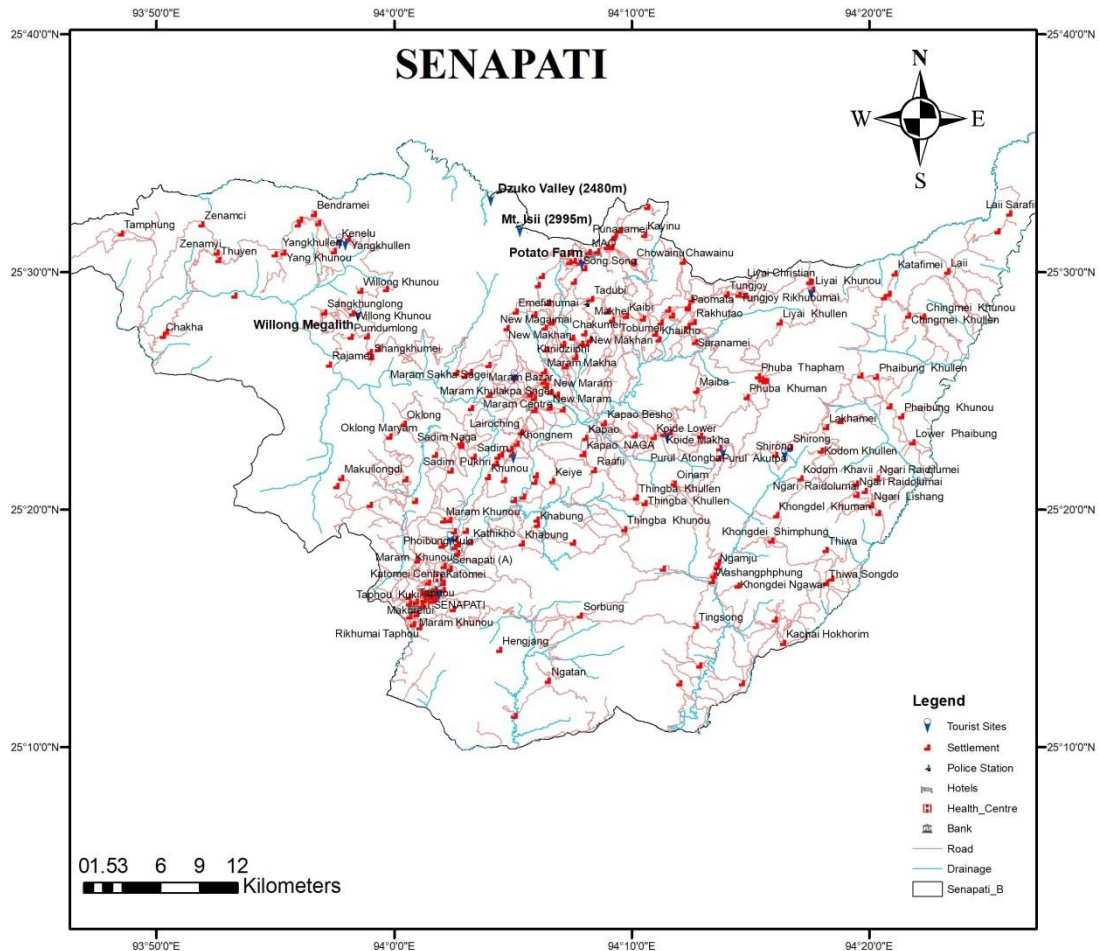


Figure 3.26: Senapati District Landscape

Senapati district is located between 25°23'21.654"N and 94°5'3.348"E with an area of 3271 sq. Km. Senapati district is blessed with natural beauty and greenery landscape which made visitors explore different tourist sites in Senapati district. Here, in this district, 14 tourist sites have been identified with various amenities which will be satisfactory for the tourist.

Dzukou Valley is one of the most tourist attracted areas and is famous for Dzukou Lily. The region is situated between the border of Nagaland and Manipur and the region is the perfect place for those tourists who love to break a sweat through hiking and trekking.

Yangkhullen village is a small village regarded as a historic place. Tourists can see the traditional social and economic life of people. The village attracts the tourist with their traditional and customs way of life, which built their houses on rocky slopes.

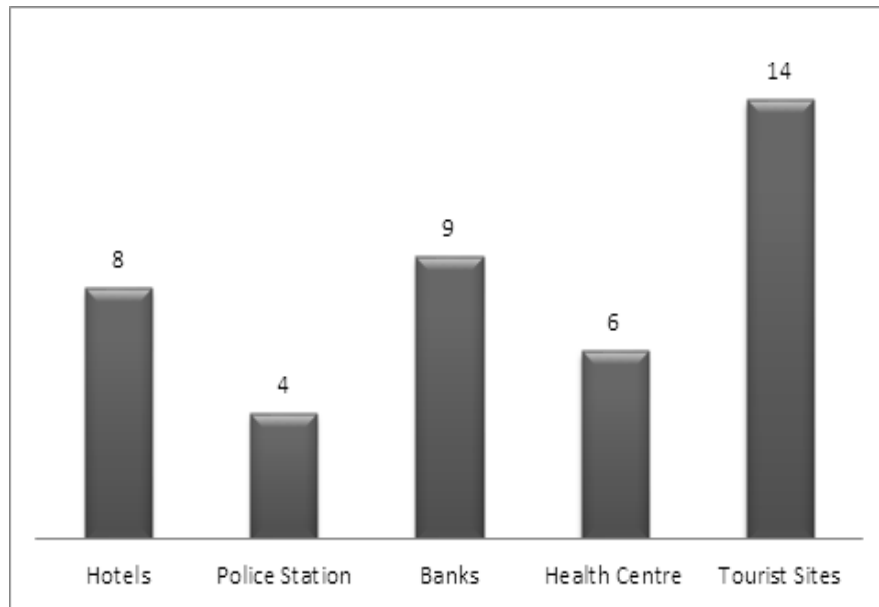


Figure 3.27: No. of Amenities and No. of Tourist sites in Senapati District

### 3.2.14 TAMENGLONG

Geographically, the Tamenglong district lies between 25°0'52.5"N and 93°31'0.343"E with an area of 4395 sq. km. Tamenglong district has been identified with 14 tourist sites with a balance of natural and cultural diversity.

Tamenglong district comprises different types of tourist attractions sites namely Barak Waterfall is a beautiful place that takes tourists to a series of waterfalls, Zeilad Lake is one of the most famous lakes in Tamenglong district. This lake is situated high hill area which made abundant scope for adventure tourism and consisted of a flora and fauna making it more attractive for tourists to visit this place. Recently, Zeilad Lake has been declared a wildlife sanctuary and not only this sanctuary, but there are also two more sanctuaries namely Bunning and Jiri-Makru wildlife sanctuaries which attract tourists and have opportunities to explore the region.

## **TOURIST SITES IN SENAPATI DISTRICT**



**a) Dzuko Valley**



**b) Yangkhulen Village**

**PLATE NO. 3.12**

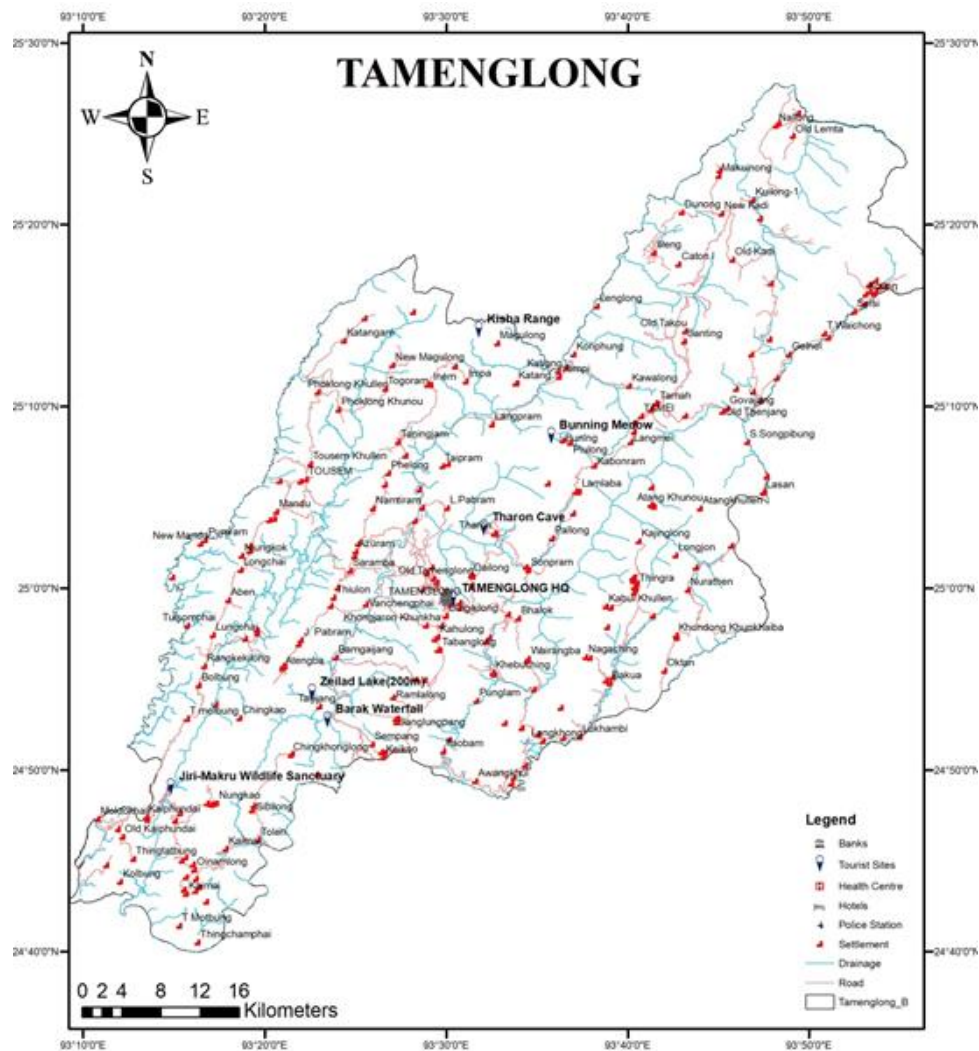


Figure 3.28: Tamenglong district Landscape

Tengnoupal district comprises not only natural diversity but also comprises of cultural diversity. Tourist gets the chance to enjoy celebrating various festivals including famous festival like the orange festival and tarang, Rih-Ngai etc. The most pleasant season for visiting this place is in the month between October and March.



**TOURIST SITES IN TAMENGLONG DISTRICT**



**a) Barak Waterfall**



**b) Zeilad Lake**

**PLATE NO. 3.13**

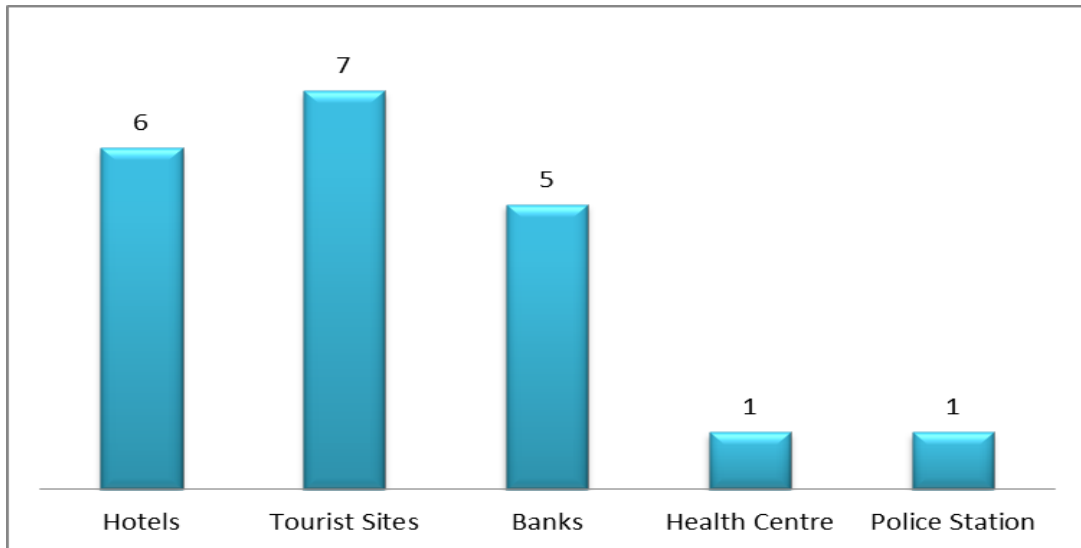


Figure 3.29: No. of Amenities and No. of Tourist sites Tamenglong district

### 3.2.15 NONEY

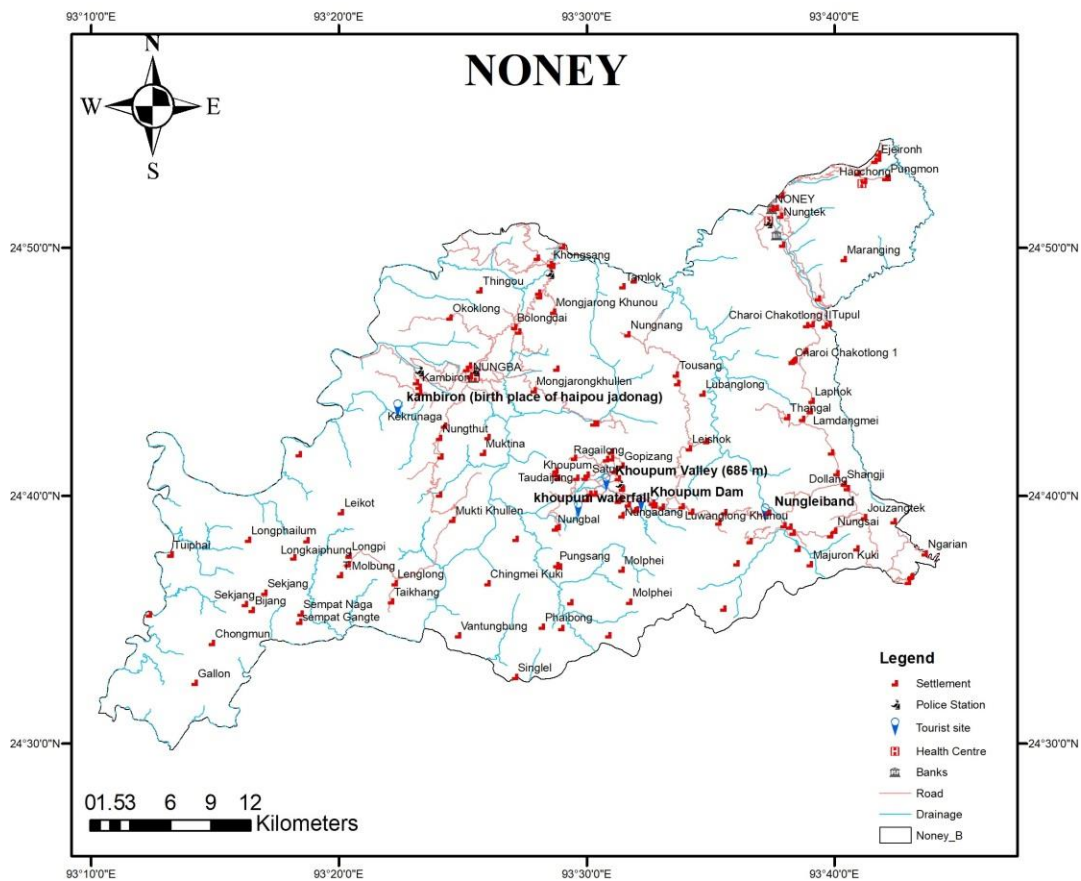


Figure 3.30: Noney district Landscape

Noney district lies between 24°43'12.45"N and 93°28'51.852"E with an area of 952 sq. km. Noney district is a newly formed district which is separated from Tamenglong district. The district is comprised of four subdivisions. Noney district is also known as Longmai

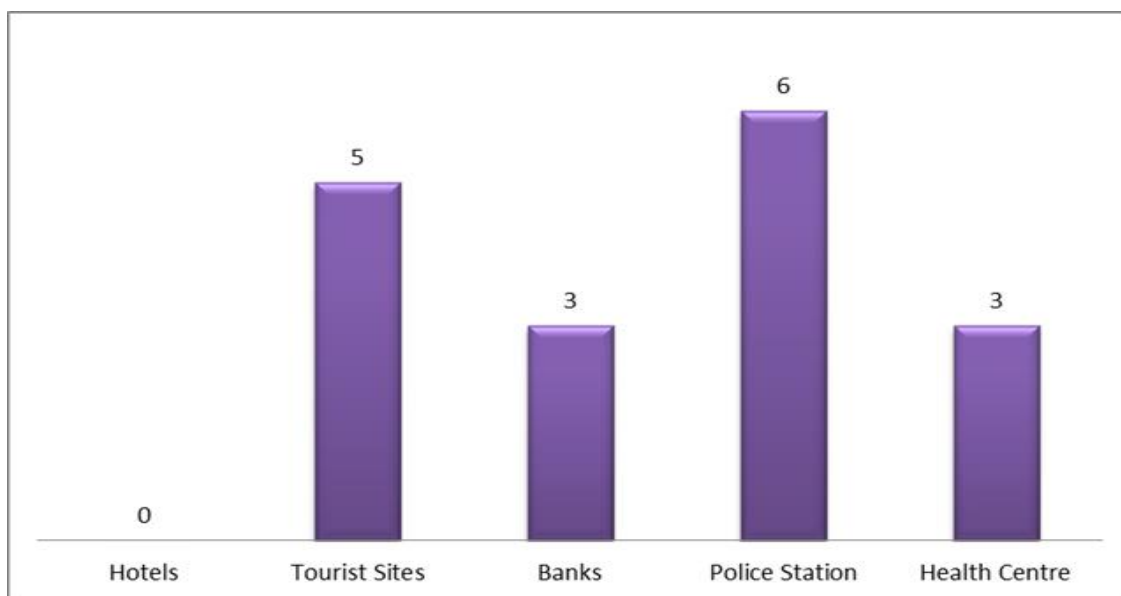


Figure 3.31: No. of Amenities and No. of Tourist sites in Noney District

5 tourist sites have been identified in Noney district. Khoupum valley is the second-largest valley in the state and a beautiful natural waterfall that will attract tourists who can spend their time with friends and family.

### 3.2.16 JIRIBAM

Jiribam district is located at the western corner of Manipur and lies between 24°44'58.455"N and 93°6'24.839"E with an area of 232 sq. Km. Jiribam district consists rich in flora and fauna.

Jiribam district is occupied by various communities. The region is enjoying with subtropical humid climate and this district is the one district being started the railways Imphal-Jiribam railway lines where tourists can easily come by railway.

## **TOURIST SITES IN NONEY DISTRICT**



**Khoupum Waterfall**

**PLATE NO. 3.14**



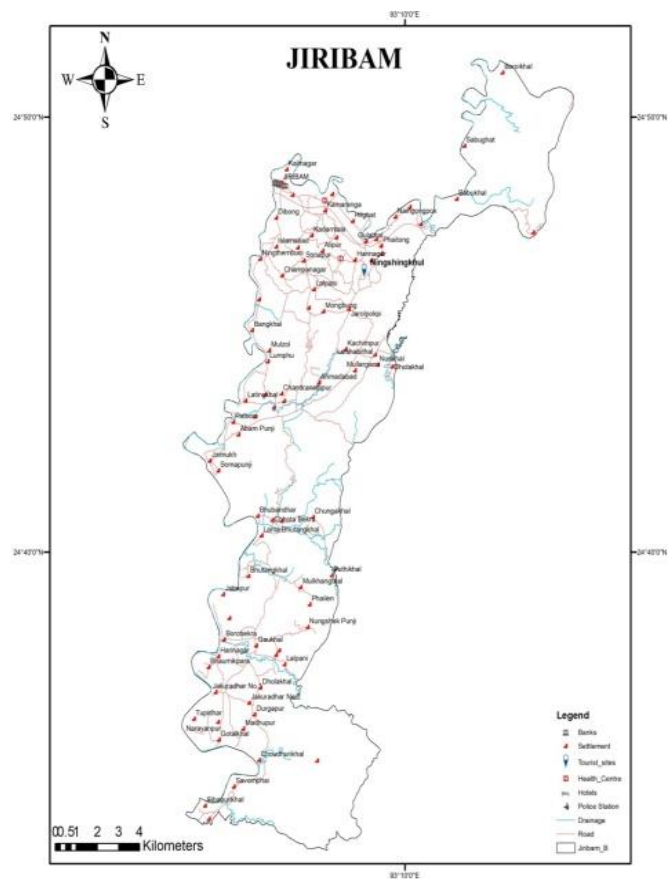


Figure 3.32: Jiribam district Landscape

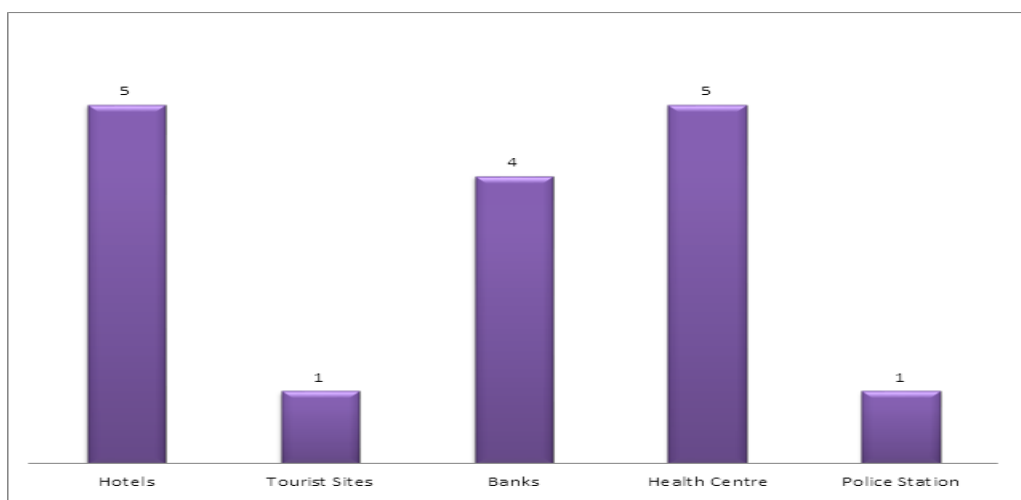


Figure 3.33: No. of Amenities and No. of Tourist sites in Jiribam

In the Jiribam district, there is one and only Biodiversity Park consisting of terrestrial plants and animals known as Ningsing Khun where statues are also placed with ancestral heroes namely Paona Brajabashi, Tikendrajit and Thangal General.

## **TOURIST SITES IN JIRIBAM DISTRICT**



**Ningshing Khun**

**PLATE NO. 3. 15**

### **3.3 TRANSPORT INFRASTRUCTURE IN DIFFERENT DISTRICTS OF MANIPUR**

Transports play an important role in the development of socio-economic activity and tourism. When there are good means of transportation, people will reach their desired places. So, the development of tourism is interrelated with transportation (Dinu, 2018). Mass tourism development is interrelated with the development of transport infrastructure and helps tourists to choose a destination for a tourist trip (Milošević, 2016). Therefore, the development of tourism inflow may depend on the construction of roads or upgrades (Wieckowski et al., 2014).

Transport is an important element of the wider tourism system and it helps the entire tourist's movement between their place of origin and their destination and allows tourists to wider tourist sites and exposure tourist flows for a region (Page, SJ. 2009). Hence, the transport system is an important fundamental element that can help visitors to travel to their favourite tourist destination (Antolini, F. 2022).

To determine the successful tourism development as transport system plays a vital role and possibility of existing service of tourism as well as the transport network and flows helps tourism can explore more successfully (Duval, 2007).

In the function of tourism, transport systems play an equal role in different modes of transport like personal and public transport, transport of goods, the infrastructure of transport etc. Transport service provides a special form as part of a tourist destination (Hrvatske & Hrvatske, 2010).

### **3.4 ROAD LENGTH TO REACH DIFFERENT TOURIST DESTINATIONS**

Tourism infrastructure needs travel and rests i.e. road, boarding and lodging facilities etc. and road destination is based on the flow of traffic. Manipur as being a hillock region which required good road network connectivity for the tourism development of the state.

Road connectivity is an important aspect to promote the tourism industry in Manipur as tourists can reach one tourist site from another through various transportation modes.

### 3.4.1 ROAD LENGTH IN IMPHAL-WEST

Table No. 3.2. Length of different tourist sites in Imphal-West

Sl. No.	TOURIST SITES	ROAD LENGTH FROM 0 KM
1	Shahid Minar	0.23
2	Ema Keithel	0.78
3	Bijoygovinda	2.44
4	Manipur Science Centre	4.55
5	Sangaithel	18.07
6	Imphal View Point	3.78
7	Khonghampat Orchid	11.72
8	Zoological garden	6.07



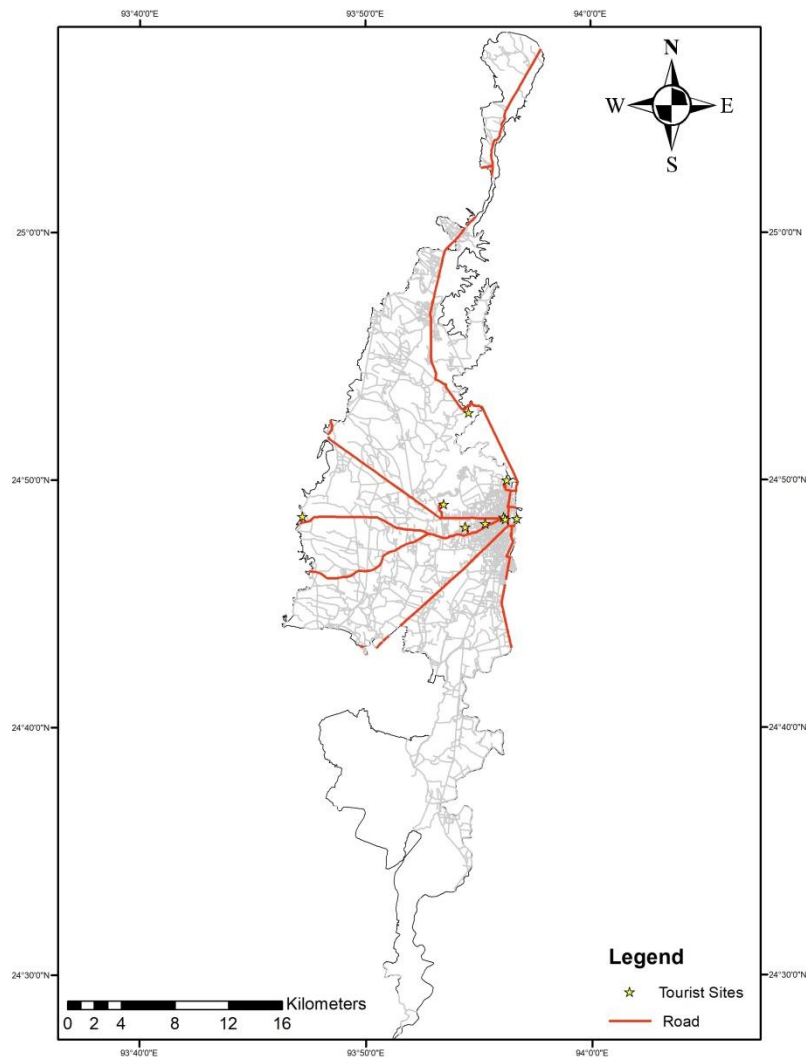


Figure 3.34: Popular Tourist sites in Imphal-West

In the Imphal-West district, 8 popular tourist sites have been identified with culture, nature, man-made as well as religious sites are shown in fig. 3.34 and Table No. 3.2 shows the length of the road to reach popular tourist sites of the Imphal-West district.

### 3.4.2 ROAD LENGTH IN IMPHAL-EAST

In the Imphal-East district, 11 popular tourist sites have been identified with culture, nature, man-made as well as religious sites are shown in fig. 3.35 and Table No. 3.3 shows the length of the road to reach popular tourist sites of the Imphal-East district.

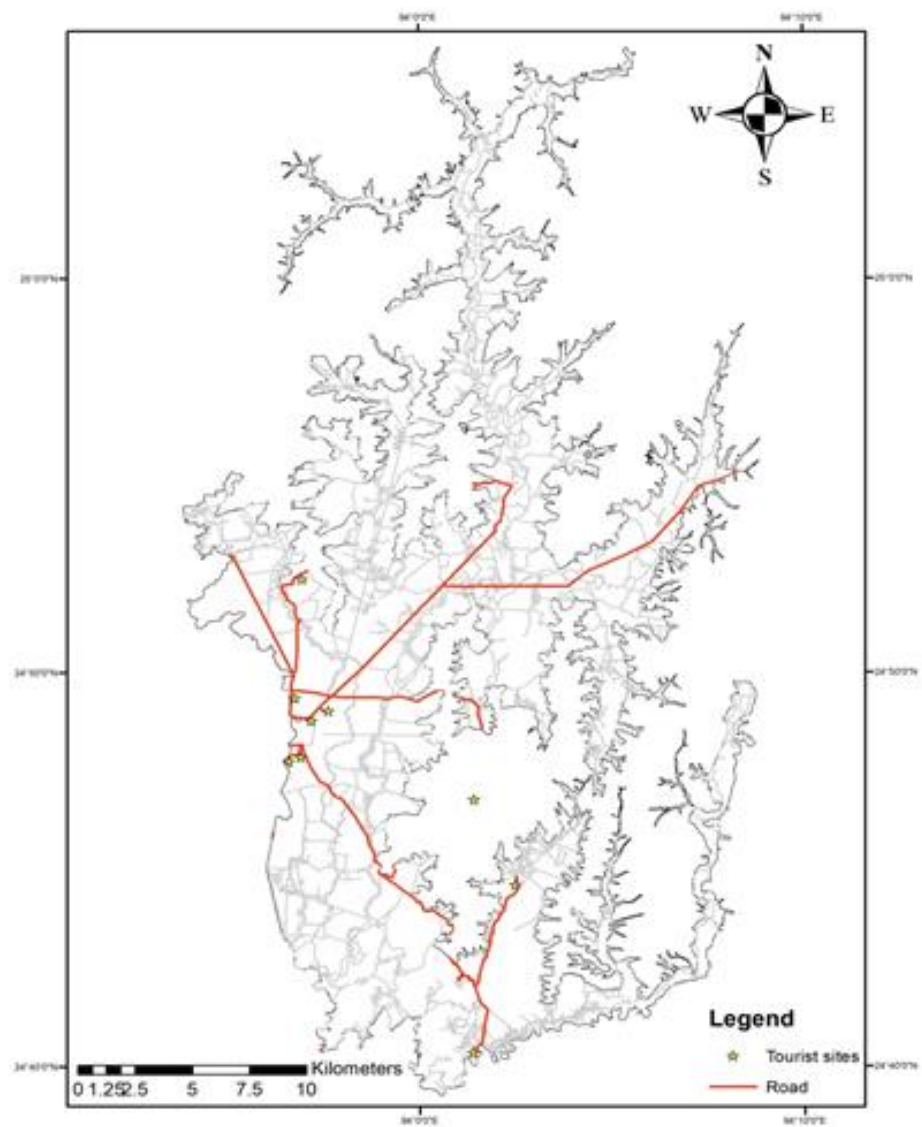


Figure 3.35: Popular Tourist sites in Imphal-East

Table No. 3.3. Length of different tourist sites in Imphal-East

Sl. No.	TOURIST SITES	ROAD LENGTH FROM 0 KM
1	Govindaji	2.06
2	Mahabali	2.74
3	Hatta war cemetery	2.33
4	Chingakham mandop	3.41
5	Manipur Adventure & allied sports institute complex	10.29
6	Common wealth cemetery	2.45
7	Marjing Polo complex	9.93
8	Andro Monument	16.24
9	Mutua Museum	24.56
10	Kaina Temple	21.95
11	Nongmaiching Pilgrimage	24.67

### 3.4.3 ROAD LENGTH IN BISHNUPUR

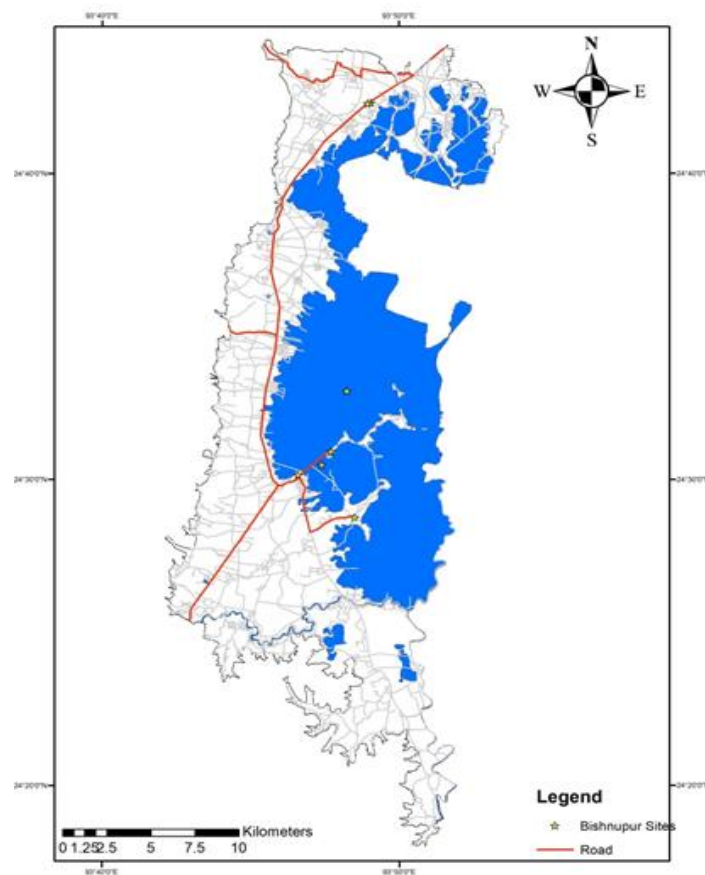


Figure 3.36: Popular Tourist sites in Bishnupur

In the Bishnupur district, 11 popular tourist sites have been identified with culture, nature, man-made as well as religious sites are shown in fig. 3.36 and Table No. 3.4 shows the length of the road to reach popular tourist sites in the Bishnupur district.

Table No. 3.4. Length of different tourist sites in Bishnupur

Sl. No.	TOURIST SITES	ROAD LENGTH FROM 0 KM
1	Peace Memorial	16.69
2	Imphal Peace Museum	16.85
3	INA Memorial	43.81
4	Keibul Lamjao	49.92
5	Takmu Watersports complex	45.23
6	Sendra Tourist Complex	46.16

#### 3.4.4 ROAD LENGTH IN THOUBAL

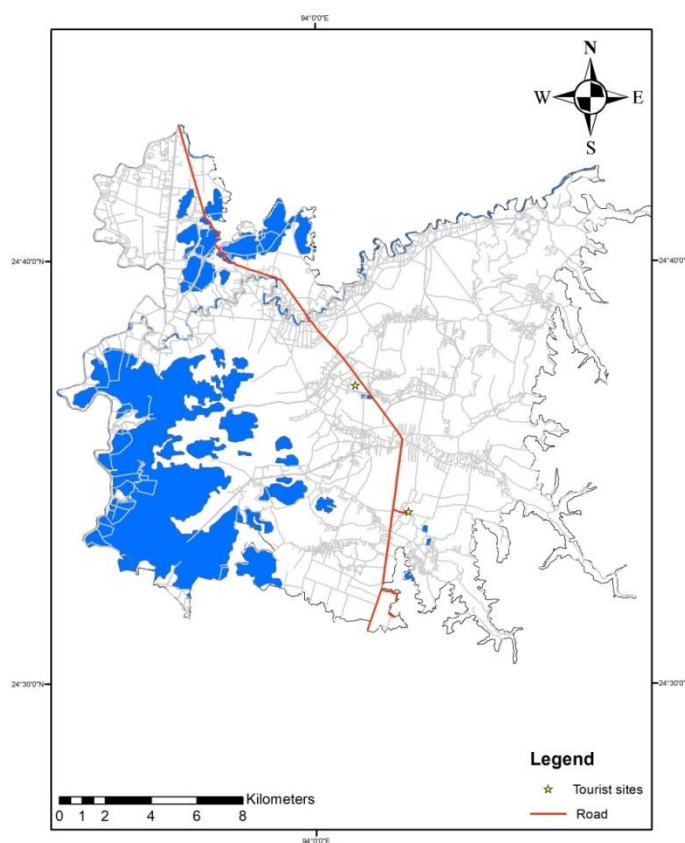


Figure 3.37: Popular Tourist sites in Thoubal

Table No. 3.5. Length of a tourist site in Thoubal

Sl. No.	TOURIST SITES	ROAD LENGTH FROM 0 KM
1	Khongjom War Memorial	32.3

In Thoubal district only 1 popular tourist site has been identified which is related to cultural tourism and also an important historical site of Manipur shown in fig. 3.37 and Table No. 3.5 shows the length of the road to reach popular tourist sites in the Thoubal district.

### 3.4.5 ROAD LENGTH IN KAKCHING

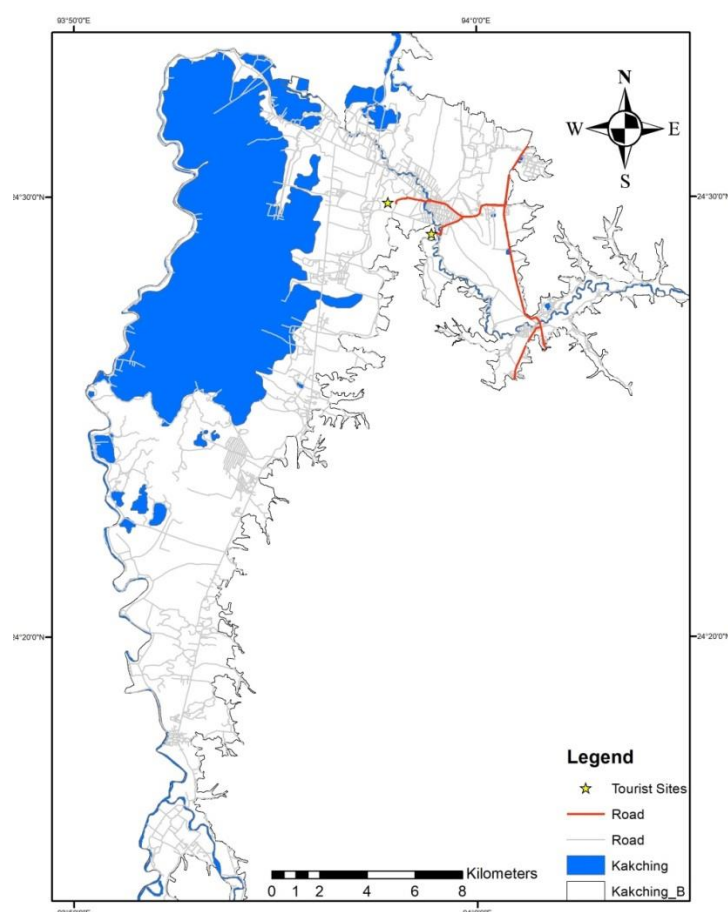


Figure 3.38: Popular Tourist sites in Kakching

In the Kakching district, 2 popular tourist sites have been identified which are related to man-made tourism shown in fig. 3.38 and Table No. 3.6 shows the length of the road to reach popular tourist sites in the Kakching district.

Table No. 3.6. Length of different tourist sites in Kakching.

Sl. No.	TOURIST SITES	ROAD LENGTH FROM 0 KM
1	Kakching uyokhing	44.02
2	Anganching Eco-Park	45.62

### 3.4.6 ROAD LENGTH IN KAMJONG

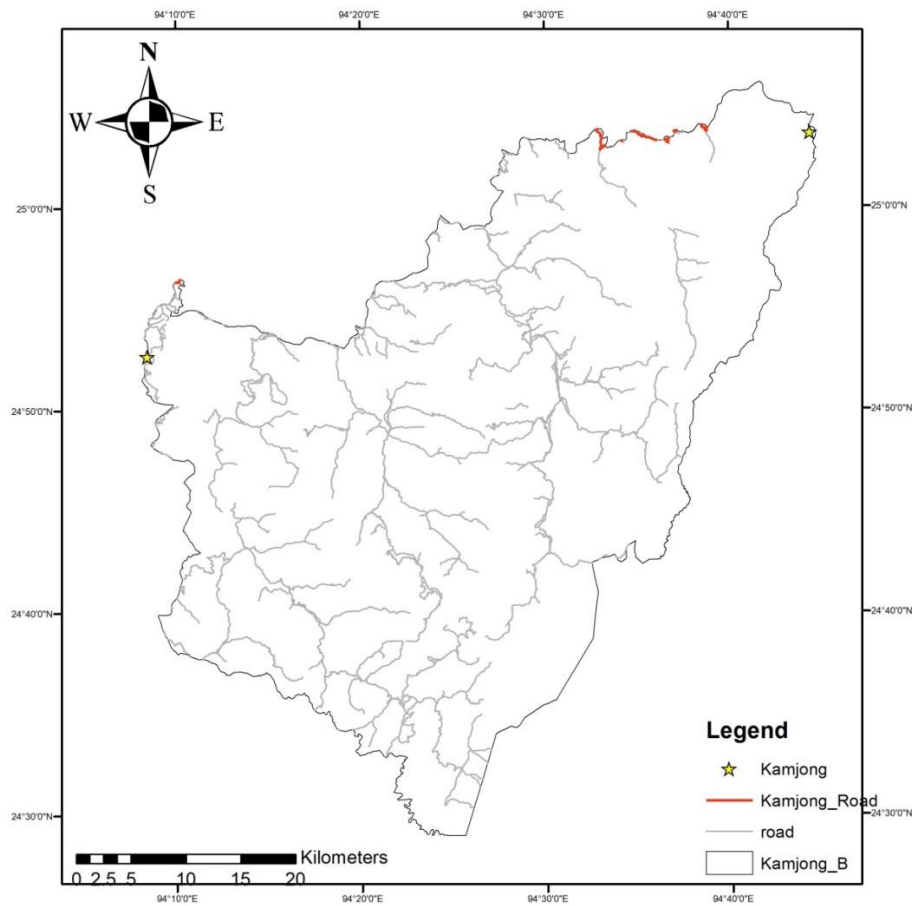


Figure 3.39: Popular Tourist sites in Kamjong

In Kamjong district 2 popular tourist sites have been identified which are based on Natural tourism sites shown in fig. 3.39 and Table No. 3.7 shows the length of the road to reach popular tourist sites in Kamjong district.

Table No. 3.7. Length of different tourist sites in Kamjong

Sl. No.	TOURIST SITES	ROAD LENGTH FROM 0 KM
1	Chadong adventure watersports	29.17
2	Khayang Waterfall	171.5

### 3.4.7 ROAD LENGTH IN UKHRUL

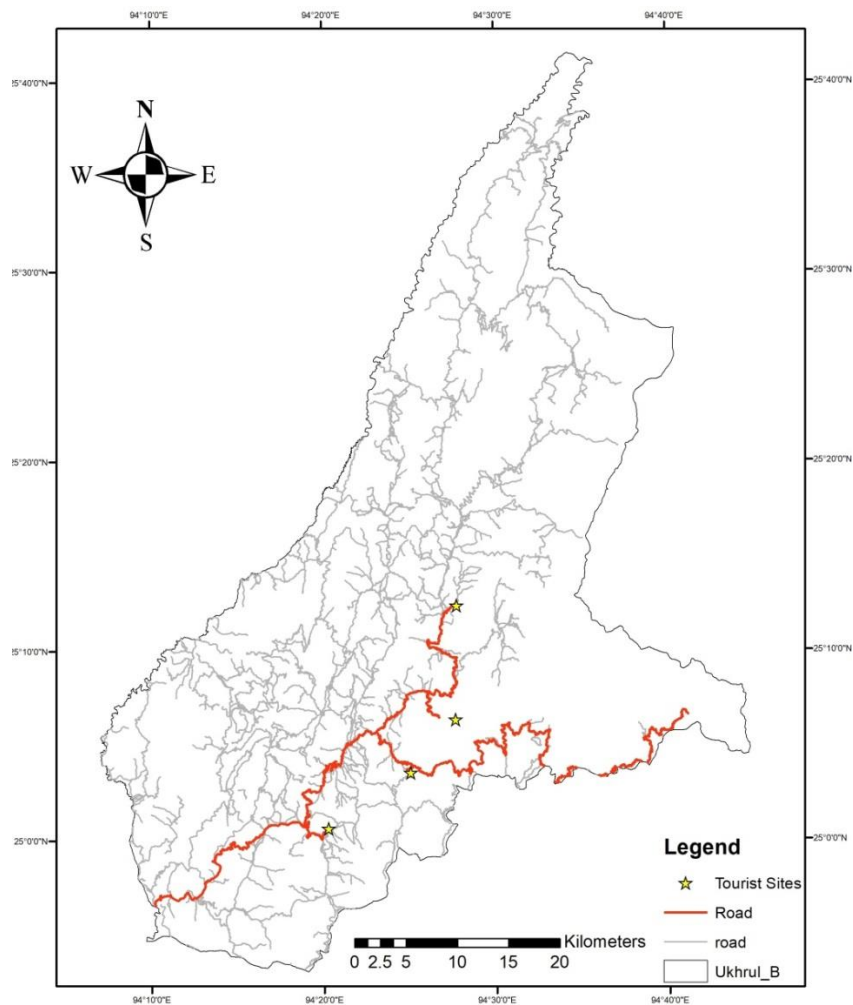


Figure 3.40: Popular Tourist sites in Ukhrul

In Ukhrul district 4 popular tourist sites have been identified which are based on both Natural and cultural tourism sites shown in fig. 3.40 and Table No. 3.8 shows the length of the road to reach popular tourist sites in the Ukhrul district.

Table No. 3.8 Length of different tourist sites in Ukhrul

Sl. No.	TOURIST SITES	ROAD LENGTH FROM 0 KM
1	Battle of Sangshak	142.28
2	Shirui National Park	99.84
3	Khangkhuei cave	94.88
4	Nungbi Pottery	116.77

### 3.4.8 ROAD LENGTH IN CHURACHANDPUR

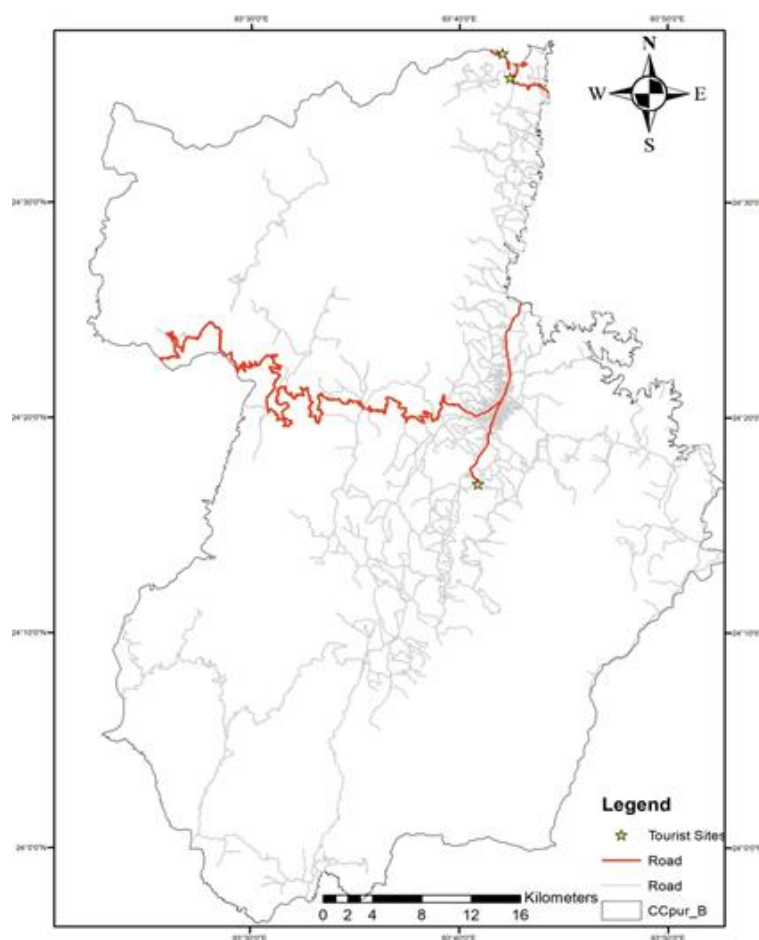


Figure 3.41: Popular Tourist sites in Churachandpur



In the Churachandpur district 4 popular tourist sites have been identified which are based on both Natural and cultural tourism sites shown in fig. 3.41 and Table No. 3.9 shows the length of the road to reach popular tourist sites in the Churachandpur district.

Table No. 3.9 Length of different tourist sites in Churachandpur

Sl. No.	TOURIST SITES	ROAD LENGTH FROM 0 KM
1	Adventure tourism	40.72
2	Laimaton Peak	50.74
3	Khuga Dam	69.31
4	Kailam Peak	178.89

### 3.4.9 ROAD LENGTH IN PHERZWAL

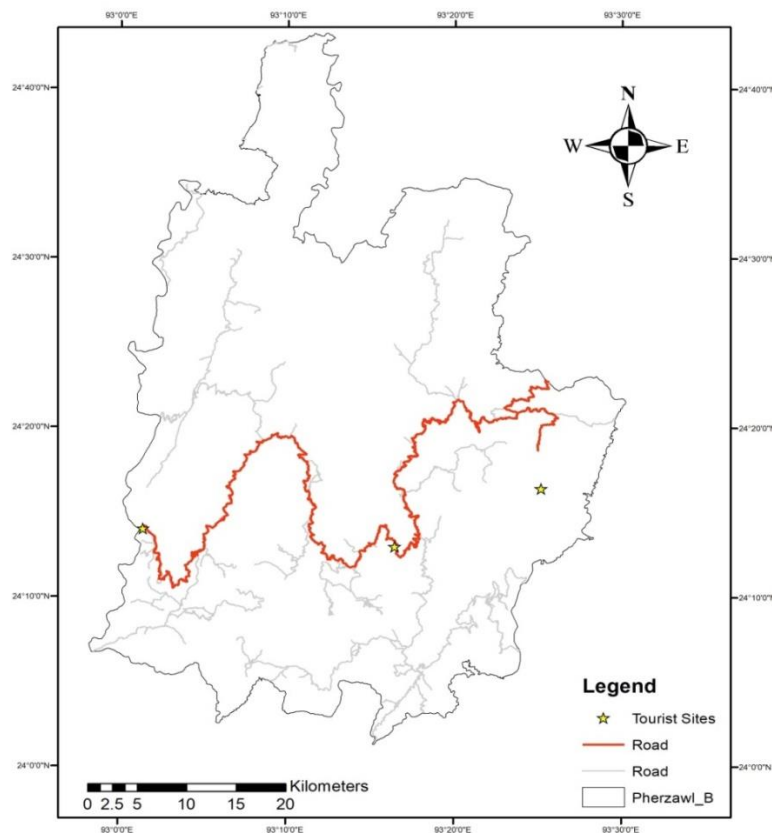


Figure 3.42: Popular Tourist sites in Pherzawl

In the Pherzwal district, 2 popular tourist sites have been identified which are based on Natural tourism sites shown in fig. 3.42 and Table No. 3.10 shows the length of the road to reach popular tourist sites in the Pherzwal district.

Table No. 3.10 Length of different tourist sites in Pherzwal

Sl. No.	TOURIST SITES	ROAD LENGTH FROM 0 KM
1	Joutung Waterfall	223.9
2	Tipaimuk	312.12

### 3.4.10 ROAD LENGTH IN TENGNOUPAL

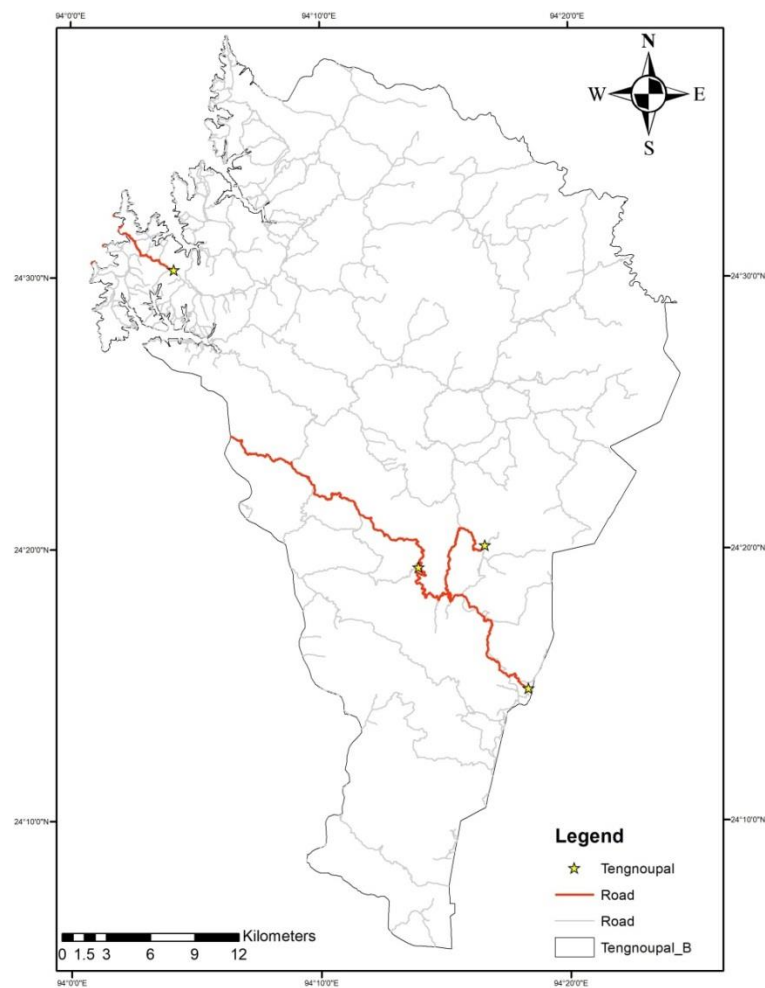


Figure 3.43: Popular Tourist sites in Tengnoupal

In Tengenoupal district have been identified 3 popular tourist sites are based on Natural tourism sites shown in fig. 3.43 and Table No. 3.11 shows the length of the road to reach popular tourist sites in the Tengenoupal district.

Table No. 3.11 Length of different tourist sites in Tengenoupal

Sl. No.	TOURIST SITES	ROAD LENGTH FROM 0 KM
1	Yaingangpokpi wildlife sanctuary	85.5
2	Moreh	105.62
3	Kwatha Meetei	102.88

### 3.4.11 ROAD LENGTH IN CHANDEL

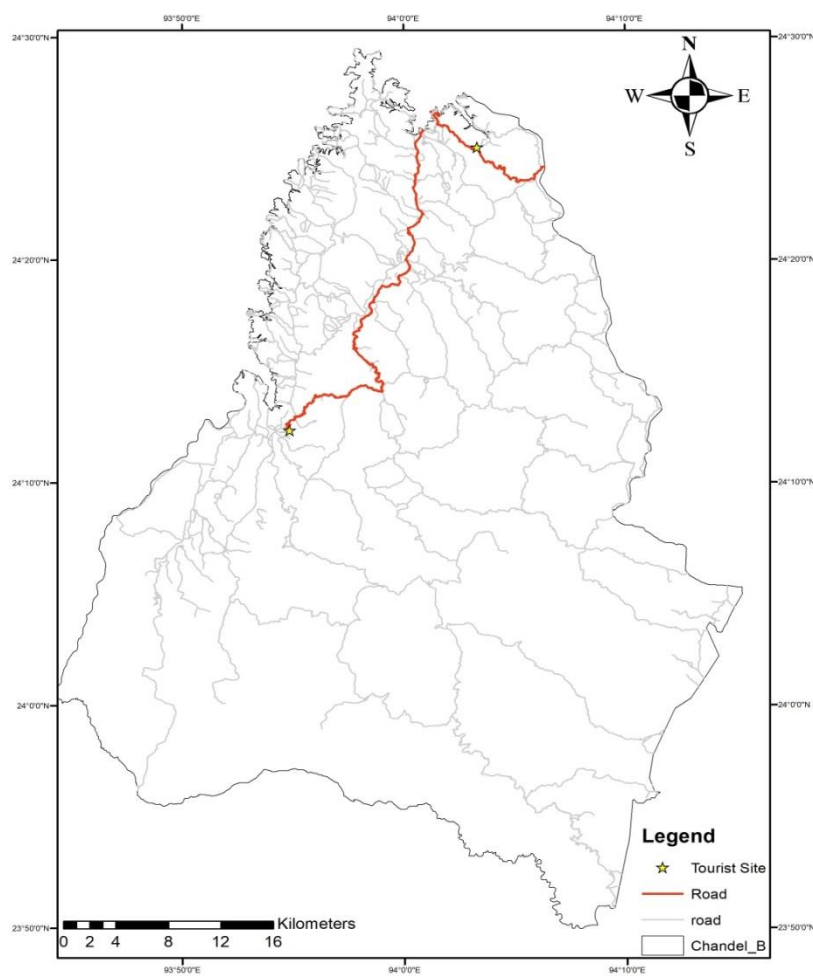


Figure 3.44: Popular Tourist sites in Chandel

In Chandel district have been identified 2 popular tourist sites which are based on Natural as well as Cultural tourism sites shown in fig. 3.44 and Table No. 3.12 shows the length of the road to reach popular tourist sites in the Chandel district.

Table No. 3.12 Length of different tourist sites in Chandel

Sl. No.	TOURIST SITES	ROAD LENGTH FROM 0 KM
1	Battel of Tengenoupal	53.01
2	Yangkhelching Chakpi River	91.6

### 3.4.12 ROAD LENGTH IN KANGPOKPI

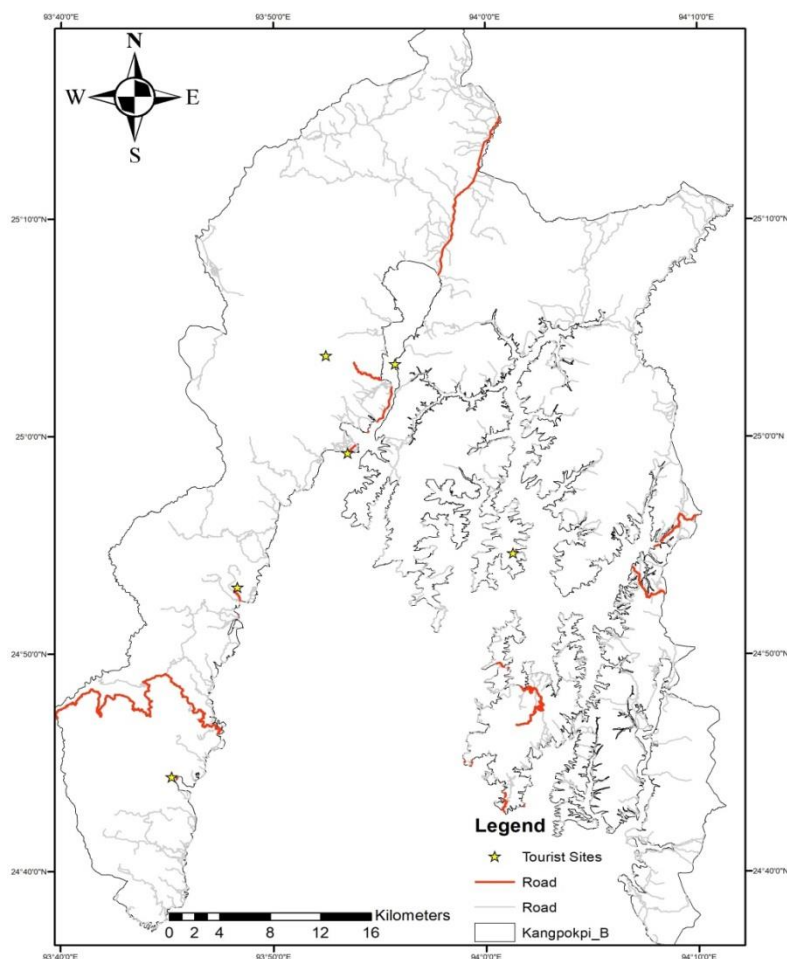


Figure 3.45: Popular Tourist sites in Kangpokpi

In Kangpokpi district have been identified 6 popular tourist sites which are based on Natural as well as Cultural tourism sites shown in fig. 3.45 and Table No. 3.13 shows the length of the road to reach popular tourist sites in the Kangpokpi district.

Table No. 3.13 Length of different tourist sites in Kangpokpi

Sl. No.	TOURIST SITES	ROAD LENGTH FROM 0 KM
1	Singda Tourist Home	18.34
2	Kanglatongbi war Memorial	24.3
3	Koubru Pilgrimage	36.56
4	Koubru leikha	33.41
5	Battle of Nungsibum	142.3
6	Sadu chiru waterfall	31.22

### 3.4.13 ROAD LENGTH IN SENAPATI

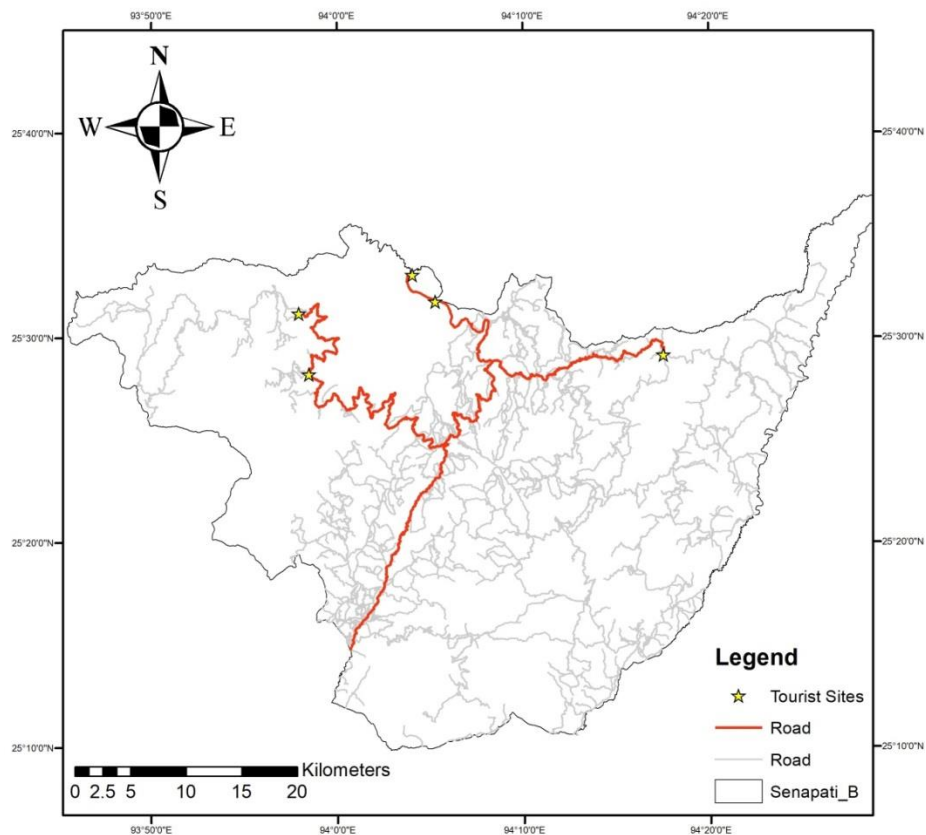


Figure 3.46: Popular Tourist sites in Senapati

In the Senapati district have been identified 6 popular tourist sites are based on Natural, as well as Cultural tourism sites shown in fig. 3.46 and Table No. 3.14, show the length of the road to reach popular tourist sites in the Senapati district.

Table No. 3.14 Length of different tourist sites in Senapati

Sl. No.	TOURIST SITES	ROAD LENGTH FROM 0 KM
1	Winglong Monolith	119.13
2	Yangkhulen Wonder	137.21
3	Liyai	124.66
4	Mt.Iso	133.96
5	Dzuko Valley	117.99

### 3.4.14 ROAD LENGTH IN TAMENGLONG

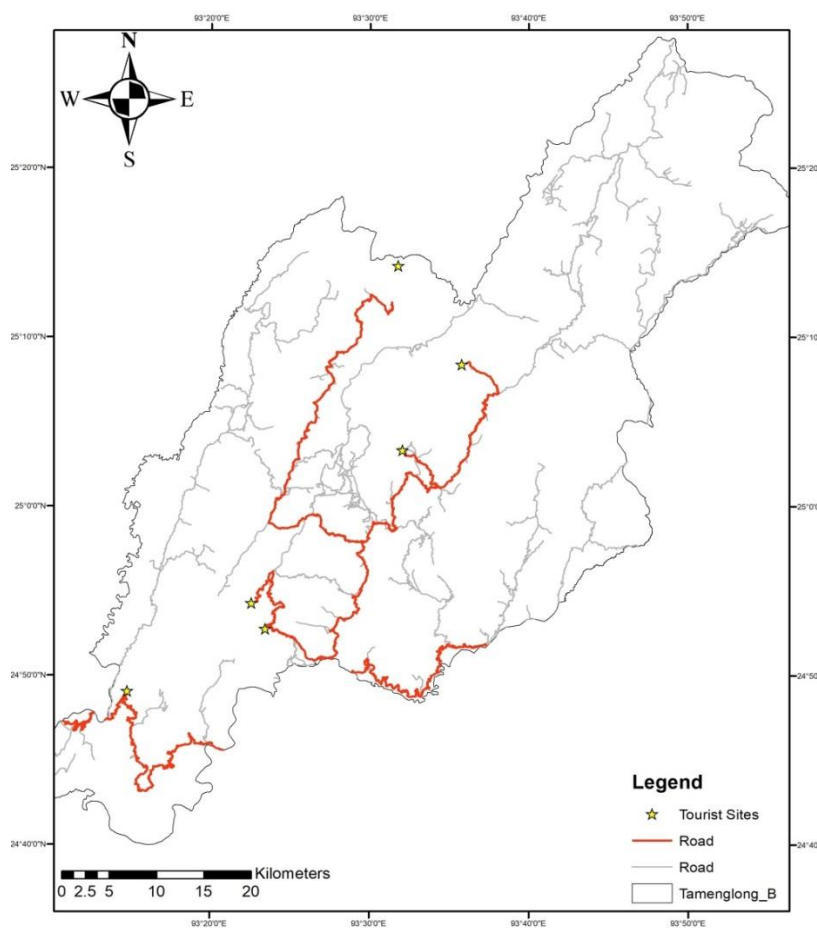


Figure 3.47: Popular Tourist sites in Tamenglong

In the Tamenglong district have been identified 5 popular tourist sites are based on Natural as well as Cultural tourism sites shown in fig. 3.47 and Table No. 3.15 shows the length of the road to reach popular tourist sites in the Tamenglong district.

Table No. 3.15 Length of different tourist sites in Tamenglong

Sl. No.	TOURIST SITES	ROAD LENGTH FROM 0 KM
1	Tharon Cave	171.59
2	Bunning Meadow	187.1
3	Kisha Range	200.18
4	Zeilad Lake	144.16
5	Barak Waterfall	125.89

### 3.4.15 ROAD LENGTH IN NONEY

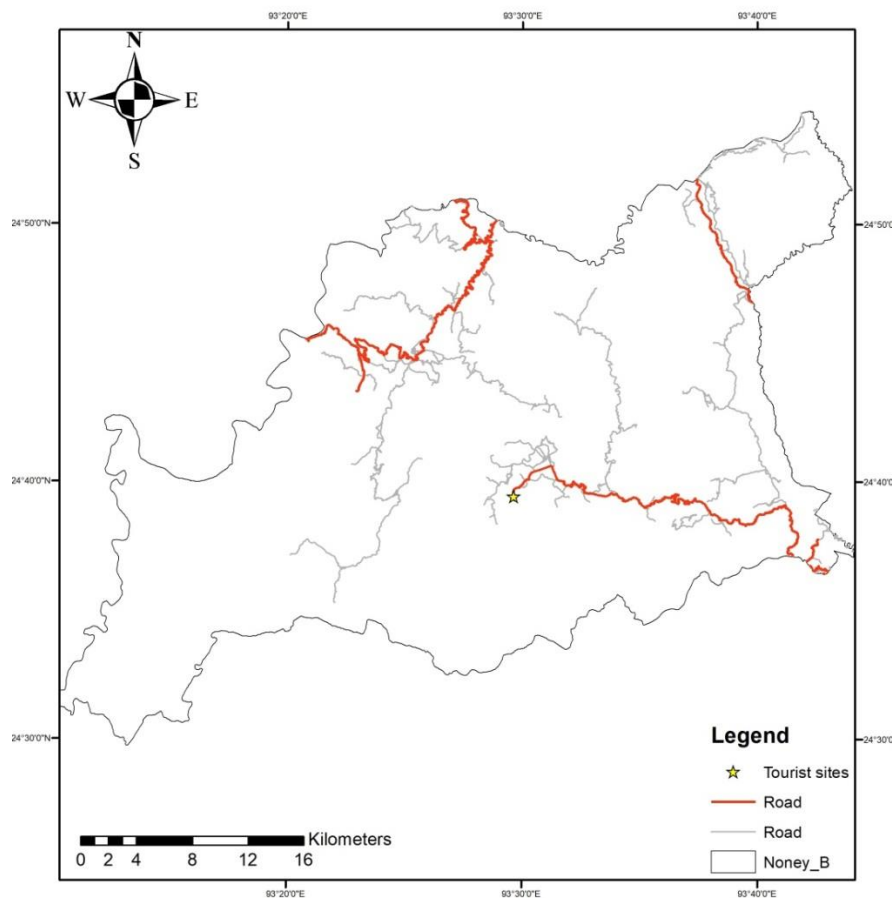


Figure 3.48: Popular Tourist sites in Noney

In Noney district have been identified only 1 popular tourist site on Natural tourism sites shown in fig. 3.48 and Table No. 3.16 shows the length of the road to reach popular tourist sites in Noney district.

Table No. 3.16 Length of different tourist sites in Noney

Sl. No	TOURIST SITES	ROAD LENGTH FROM 0 KM
1	Khoupam	87.23

### 3.4.16 ROAD LENGTH IN JIRIBAM

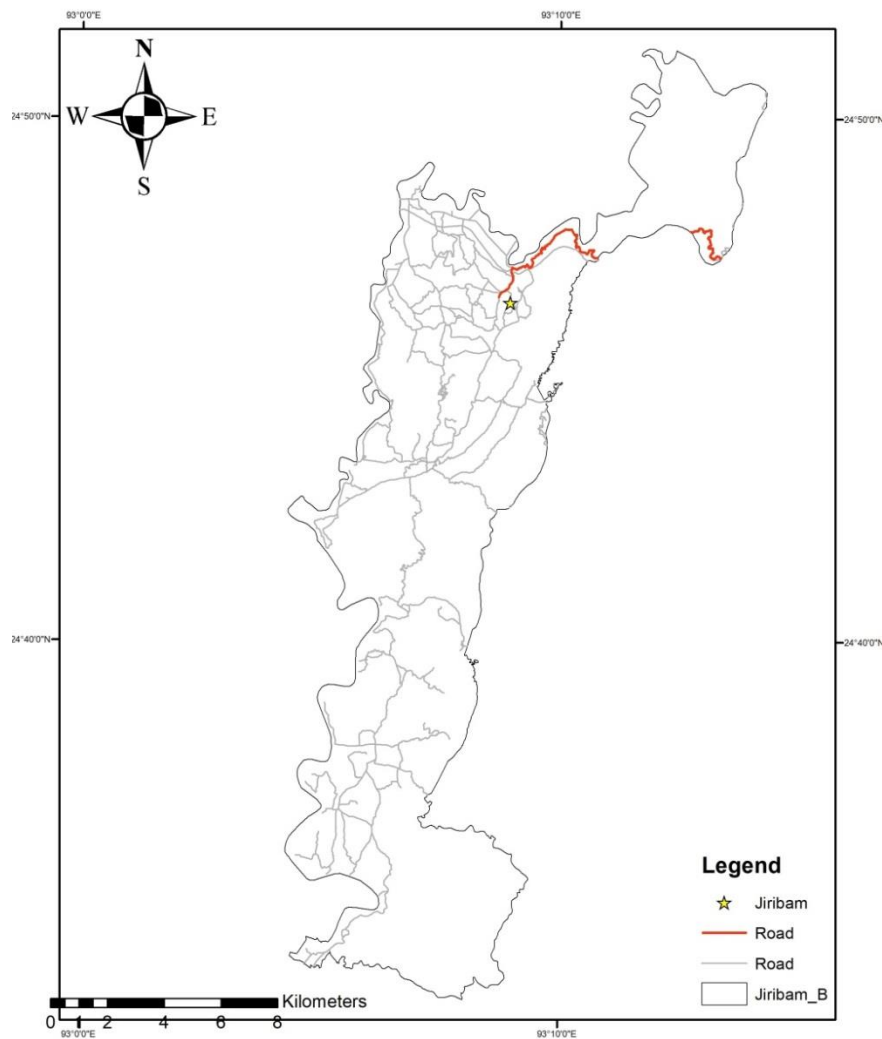


Figure 3.49: Popular Tourist sites in Jiribam



In Jiribam district have been identified only 1 popular tourist site based on Cultural tourism sites shown in fig. 3.49 and Table No. 3.17 shows the length of the road to reach popular tourist sites in Jiribam district.

Table No. 3.17 Length of different tourist sites in Jiribam

<b>Sl. No.</b>	<b>TOURIST SITES</b>	<b>ROAD LENGTH FROM 0 KM</b>
1	Ningshingkhul	208.51

## **CHAPTER IV**

### **TRENDS OF DEVELOPMENT AND TYPES OF TOURISTS IN MANIPUR**

#### **4.1 INTRODUCTION**

In India, tourism is becoming an important industry for the economic growth of the country. India has become a major global tourist destination with tremendous potential tourist destinations. For India, tourism has become the second-highest earner of foreign exchange.

The Manipur Tourism Policy 2014 attempts to develop and promote sustainable tourism for economic growth, and social integration and to increase tourist attractive places. Manipur Tourism Policy has become more important in India's Look East Policy and Trans-Asian Highways and the Railways attempts to become a hotspot area in South-East Asian Countries ("Manipur Tourism Policy," 2014).

Manipur Tourism Department has taken up major initiatives as a prime tourist destination in northeast, India. In Manipur, there are unlimited potential sites for the development of tourism. Tourism is still in the developing stage in Manipur. The national policy put forward by the Government of India has been the development of Tourism in the exotic states like Manipur as the key to all economic development in the area. The joint effort of the state and the centre to develop tourism in Manipur has succeeded with the recent attention that the tourism sector has received. The state has taken up several tourism projects to attract more tourists.

The Manipur government has taken up tourism development projects in some districts of Manipur. Some of the tourist sites are:

- a) Based on Natural Tourism: Loktak, Takmu, Karang, Sendra in Bishnupur district, Sadu-Chiru / Leimaram waterfall in Kangpokpi district, Shirui hills and Kangkhui caves in Ukhrul district and Mao as hill stations, in Tamenglong districts like Zeilad Lake and Barak waterfall and Tharon caves.

- b) Based on Adventure Tourism: Nongmaiching foothills in Imphal-East district, Khuga dam in Churachandpur and the Adventure Tourism Complex of MMI, Lamdan in Churachandpur district.
- c) Based on Cultural and Heritage: Ima-Keithel, Kangla fort, Nupilal memorial complex, Saheed minar, in Imphal-West district, Common Wealth war cemetery, Mutua museum, Kaina in Imphal-East district, INA memorial, Red Hill in Bishnupur district. (Shimray et. al, 2017).

The present chapter focuses to signify the role of the Geographical Information System (GIS) and factor analysis methods using SPSS for the development of the tourism sector in Manipur and identifying the potential tourist site in Manipur. Tourism policy and trend in the development in Manipur and the flow pattern of tourists in the state for both domestic tourism and emerging tourist potential centres of Manipur. The roads and places of a tourist destination were used to prepare from Indian Remote Sensing satellite (IRS) LISS-IV (5.6m) satellite data, Spatial data processing and Geo-referencing of the base map of the study area and the network topology and the network dataset were built.

## **4.2 TOURISM DEVELOPMENT IN MANIPUR**

Manipur has unlimited potential for tourism which could attract tourists and possibility develop Manipur. Development tourism is affected by the growth of transportation, social, economic, cultural and geographical factors.

In the year 1972, Tourism was established and upgraded in 1973 and the year 1987. A tourist home was constructed at Sendra in 1976 and 6000 tourists including foreigners were recorded this year and 108 foreigners alone visited in 1978. In the year 1987, tourism as an industry was started by the government of Manipur. Manipur is in the developing stage. In 2020-21, Under the Ministry of Tourism, Government of India, Department of Tourism, Manipur is trying to promote and develop a tourist circuit for Tamenglong-Noney-Tengnoupal and the pilgrimage circuit was completed under Swadesh Darshan Scheme, the Ministry of Tourism, Government of India. Table No. 4.1 indicate the number of revenue generated from Tourism.

Imphal to Mandalay Bus Service was scheduled to be started in April 2020. However, it was delayed due to the ongoing Covid-19 pandemic. The bus services may start operating once the tourism businesses resume in Manipur as well as Myanmar.

Table No. 4.1: Revenue generated from Tourism

YEAR	RUPEES IN LAKH
2018-19	55.8
2019-20	58.6

Source: State Finances: A Study of Budgets of 2019-20 by RBI

### 4.3 TOURIST DESTINATION OF MANIPUR

Manipur is named “A Jeweled Land” and “Gateway to South-East Asia” which can attract tourists and promote natural beauty and cultural tourism in Manipur. Manipur is bounded by numerous natural as well as cultural tourist sites namely Loktak Lake is the only freshwater lake in North-East India and the only floating National park in the world i.e. Keibul-Lamjao National Park which is known for “Sangai” (*Rucervus eldii eldii*), the famous rare and beauty seasonal two flowers namely Dzukou Lily and Shirui Lily respectively, numerous limestone caves which are naturally formed, greenery hills and valleys, exotic fauna and flora with rich culture and folklore, unique indigenous games and artistic handloom and handicrafts. With all these, Manipur is becoming a little paradise and an attractive tourist destination. Due to its ‘unrealised potential as an eco-tourism product’, the Asian Development Bank has identified the region as ‘a key Area’. Manipur is becoming a tourist destination with the planned and professional harnessing of tourism potential which would help in increasing both domestic tourist arrivals as well as socio-economic benefits to the state.

#### 4.3.1 POPULAR TOURIST DESTINATION

153 popular tourist sites have been identified in Manipur and all the tourist sites are connected. Fig. 4.1 represents the popular tourist sites with their road connectivity

and the entire road connectivity through all the tourist sites is measured from 0 km from the centre of the Imphal City.

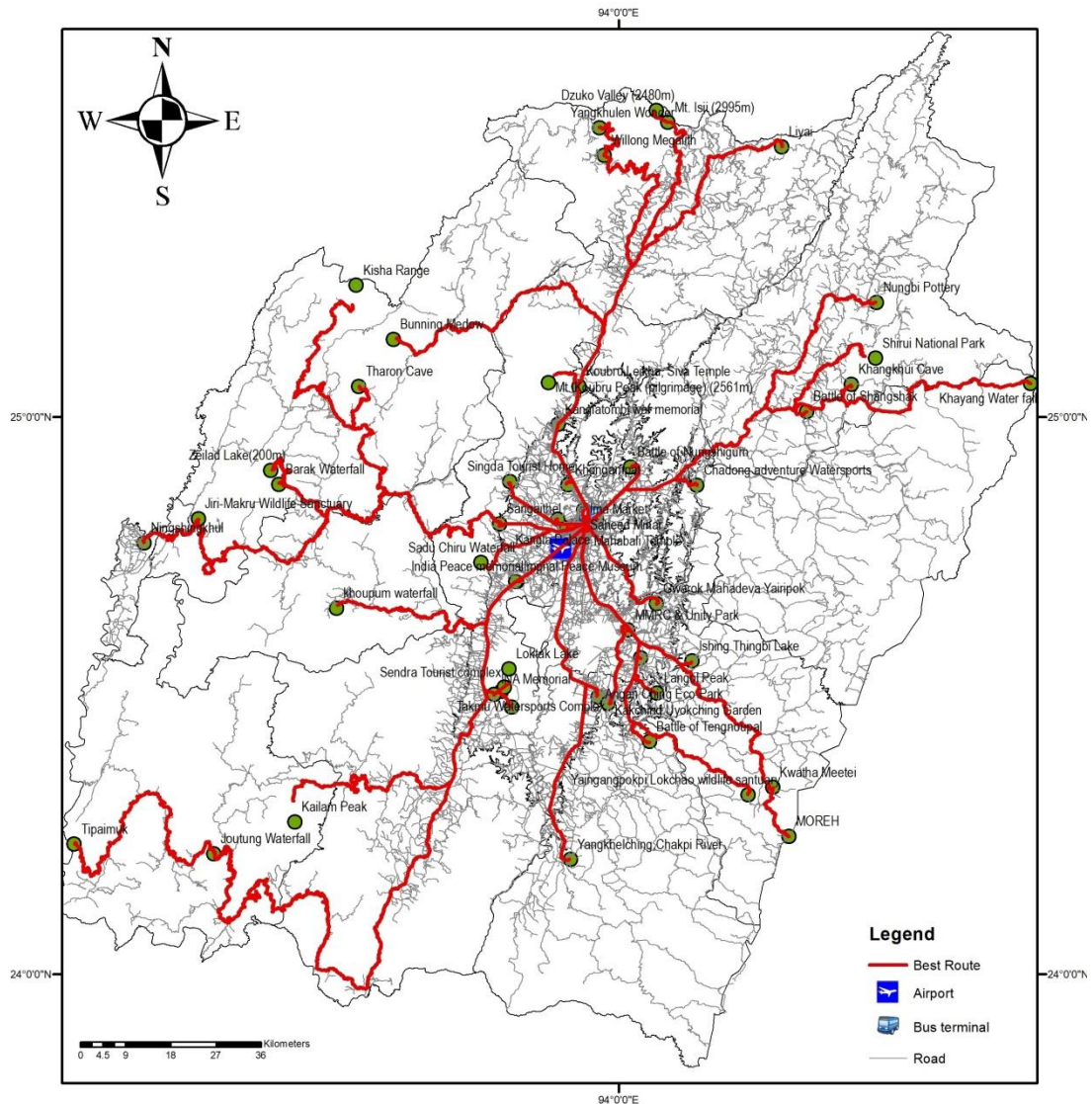


Figure 4.1: Popular tourist sites of Manipur

Table 4.1 shows the popular tourist sites with different types of tourism i.e. Natural, Cultural and man-made and locations in different districts of Manipur. Fig. 4.2 shows the number of different types of tourism sites i.e. Nature, Culture, Religious and Man-made sites which are identified in different districts of Manipur.

Table 4.2: Popular Tourist Sites in Manipur

SL. No.	Name of tourist Site	Districts	Category	Latitude	Longitude
1	Sirui National Park	Ukhrul	Nature	25° 6'23.09"N	94°27'24.97"E
2	Nungbi Pottery	Ukhrul	Culture	25°12'37.687"N	94°27'42.319"E
3	Khangkhui Cave	Ukhrul	Nature	25° 3'10.63"N	94°24'25.91"E
4	Ukhrul Hq	Ukhrul	Culture	25°6'9.311"N	94°21'49.343"E
5	Battle Of Shangshak	Ukhrul	Culture	25°0'38.973"N	94°20'11.912"E
6	Phangrei / Sei	Ukhrul	Nature	25°9'4.478"N	94°27'33.522"E
7	Kachai /Somtal	Ukhrul	Nature	25°9'4.478"N	94°27'33.522"E
8	Hundung	Ukhrul	Nature	25° 2'2.50"N	94°19'59.67"E
9	Mova Cave	Ukhrul	Nature	25°2'4.884"N	94°20'2.981"E
10	Wuyawon Lily	Ukhrul	Nature	25°0'13.24"N	94°26'56.95"E
11	Khongjom War Memorial Complex	Thoubal	Culture	24°34'4.36"N	94° 2'23.72"E
12	Gwarok Mahadeva Yairipok	Thoubal	Religious	24°39'54.453"N	94°4'2.666"E
13	Mmrc & Unity Park	Thoubal	Man-Made	24°37'5.369"N	94°1'1.127"E
14	Moreh	Tengnoupal	Nature	24°14'52.21"N	94°18'13.50"E
15	Machii Village	Tengnoupal	Nature	24°29'52.423"N	94°8'38.836"E
16	Langol Peak	Tengnoupal	Man-Made	24°30'16.153"N	94°4'1.467"E
17	Ising Thingbi	Tengnoupal	Nature	24°33'36.408"N	94°7'44.023"E
18	Yaingangpokpi Lokchao Wildlife Sanctuary	Tengnoupal	Nature	24°19'19.135"N	94°13'53.241"E
19	Kwatha Meetei	Tengnoupal	Nature	24°20'5.392"N	94°16'35.997"E
20	Zeilad Lake	Tamenglong	Nature	24°54'13.752"N	93°22'36.241"E
21	Tamenglong Hq	Tamenglong	Culture	24°59'17.475"N	93°30'31.345"E
22	Tharon Cave	Tamenglong	Nature	25°3'32.358"N	93°32'7.669"E
23	Bunning Meadow	Tamenglong	Nature	25°8'21.462"N	93°35'46.103"E
24	Barak Waterfall	Tamenglong	Nature	24°52'43.479"N	93°23'8.007"E
25	Jiri-Makru Wildlife Sanctuary	Tamenglong	Nature	24°49'3.383"N	93°14'45.225"E

<b>SL. No.</b>	<b>Name of tourist Site</b>	<b>Districts</b>	<b>Category</b>	<b>Latitude</b>	<b>Longitude</b>
26	Kisha Range	Tamenglong	Nature	25°14'10.328"N	93°31'46.754"E
27	Potato Farm	Senapati	Nature	25°30'24.859"N	94°7'59.425"E
28	Dzuko Valley	Senapati	Nature	25°33'3.566"N	94°4'3.632"E
29	Mt. Isii	Senapati	Nature	25°31'51.897"N	94°5'18.262"E
30	Senapati Hq	Senapati	Culture	25°16'25.727"N	94°1'49.531"E
31	Willong Megalith	Senapati	Nature	25°28'17.567"N	93°58'31.655"E
32	Yangkhulen Wonder	Senapati	Nature	25°31'8.032"N	93°57'52.252"E
33	Koide	Senapati	Nature	25°23'4.879"N	94°11'26.969"E
34	Purul	Senapati	Nature	25°22'27.215"N	94°13'44.797"E
35	Sirong Lamkhai	Senapati	Nature	25°22'10.468"N	94°16'25.795"E
36	Phaibung	Senapati	Nature	25°18'55.029"N	94°2'18.194"E
37	Liyai	Senapati	Nature	25°29'4.68"N	94°17'34.368"E
38	New Maram	Senapati	Culture	25°22'16.936"N	94°5'3.981"E
39	Maram Khulen	Senapati	Culture	25°25'32.242"N	94°5'3.981"E
40	Yangkhullen Village	Senapati	Nature	25°31'8.032"N	93°57'52.252"E
41	Joutung Waterfall	Pherzwal	Nature	24°12'58.515"N	93°16'27.737"E
42	Tipaimuk	Pherzwal	Nature	24°13'58.505"N	93°1'27.373"E
43	Khoupum Valley	Pherzwal	Nature	24°40'33.021"N	93°30'46.792"E
44	Nungleiband	Noney	Nature	24°39'16.584"N	93°37'11.841"E
45	Khoupum Waterfall	Noney	Nature	24°39'27.141"N	93°29'37.768"E
46	Kambiron (Birth Place Of Haipou Jadonag)	Noney	Nature	24°43'29.775"N	93°22'22.398"E
47	Singda Tourist Home	Kangpokpi	Nature	24°53'4.32"N	93°48'17.469"E
48	Koubru Peak	Kangpokpi	Nature	25°3'42.316"N	93°52'26.345"E
49	Sadu Chiru Waterfall	Kangpokpi	Nature	24°44'21.052"N	93°45'13.192"E
50	Thangal Ecopark	Kangpokpi	Culture	25°11'56.681"N	93°59'48.839"E
51	Haipi	Kangpokpi	Nature	25°11'56.681"N	93°59'48.839"E
52	Thangalphai, Sailkul	Kangpokpi	Nature	25°11'56.681"N	93°59'48.839"E
53	Battle Of Nungshigum	Kangpokpi	Culture	24°54'35.127"N	94°1'17.208"E
54	Battle Of Kameng	Kangpokpi	Culture	24°51'25.773"N	94°3'58.787"E
55	Koubru Leikha, Siva Temple	Kangpokpi	Religious	25°3'20.141"N	93°55'45.151"E

<b>SL. No.</b>	<b>Name of tourist Site</b>	<b>Districts</b>	<b>Category</b>	<b>Latitude</b>	<b>Longitude</b>
56	Kanglatombi War Memorial	Kangpokpi	Culture	24°59'14.17"N	93°53'33.958"E
57	Waphong Village	Kangpokpi	Nature	24°53'37.567"N	93°42'34.103"E
58	Khayang Waterfall	Kamjong	Nature	25°3'42.679"N	94°44'18.013"E
59	Kachouphung	Kamjong	Nature	25°4'18.74"N	94°43'35.074"E
60	Kamjong Chassad	Kamjong	Nature	24°51'3.935"N	94°30'33.824"E
61	Roni Village	Kamjong	Nature	25°3'8.567"N	94°34'5.971"E
62	Chadong Adventure Watersports	Kamjong	Nature	24°50'1.495"N	94°8'19.939"E
63	Thongjao Pottery	Kakching	Culture	24°25'46.855"N	93°55'53.344"E
64	Angan Ching Eco-Park	Kakching	Man-Made	24°29'37.032"N	93°57'39.785"E
65	Kakching Uyokching Garden	Kakching	Man-Made	24°29'5.965"N	93°58'53.037"E
66	Ningshingkhul	Jiribam	Culture	24°46'25.841"N	93°8'58.989"E
67	Kangla Palace	Imphal -West	Nature	24°48'27.158"N	93°56'41.623"E
68	Bijoygovinda Temple	Imphal -West	Culture	24°48'15.38"N	93°55'18.64"E
69	Zoological Garden	Imphal -West	Nature	24°49'1.369"N	93°53'27.191"E
70	Rose Garden Yurembam	Imphal -West	Man-Made	24°47'17.504"N	93°51'52.759"E
71	Kanglatombi War Memorial	Imphal -West	Nature	24°59'7.075"N	93°53'34.202"E
72	Khongampat	Imphal -West	Nature	24°52'44.943"N	93°54'35.291"E
73	Ima Market	Imphal -West	Culture	24°48'30.402"N	93°56'7.12"E
74	Koubu Leikha Temple	Imphal -West	Religious	25°3'16.32"N	93°55'41.942"E
75	Battle Of Motbung	Imphal -West	Culture	24°59'54.33"N	93°54'16.721"E
76	Heaven Garden	Imphal -West	Man-Made	24°48'20.055"N	93°51'40.396"E
77	Manipur Science Centre	Imphal -West	Culture	24°48'6.922"N	93°54'25.074"E
78	Manipur State Museum	Imphal -West	Culture	24°48'18.093"N	93°56'14.358"E
79	Kali Maa Mandir	Imphal -West	Religious	24°47'48.917"N	93°56'23.978"E
80	Iskon Temple	Imphal -West	Religious	24°46'48.499"N	93°54'38.383"E
81	Masajid Road	Imphal -West	Culture	24°48'22.075"N	93°56'0.311"E



<b>SL. No.</b>	<b>Name of tourist Site</b>	<b>Districts</b>	<b>Category</b>	<b>Latitude</b>	<b>Longitude</b>
82	Mosque At Babupara	Imphal -West	Culture	24°47'54.842"N	93°56'30.724"E
83	RKCS Art Gallery	Imphal -West	Culture	24°47'44.12"N	93°56'9.51"E
84	Imphal View Point Tourist Complex	Imphal -West	Culture	24°49'56.332"N	93°56'15.597"E
85	Langthabal	Imphal -West	Religious	24°44'54.221"N	93°55'37.096"E
86	Saheed Minar	Imphal -West	Culture	24°48'24.946"N	93°56'11.788"E
87	Heaven Garden	Imphal -West	Man-Made	24°48'20.055"N	93°51'40.396"E
88	Makoi Park	Imphal -West	Man-Made	24°48'21.746"N	93°53'15.534"E
89	Millenium Garden	Imphal -West	Man-Made	24°49'6.004"N	93°51'25.9"E
90	Sangaithel	Imphal -West	Man-Made	24°48'43.835"N	93°47'16.59"E
91	Hiyangthang Temple	Imphal -West	Religious	24°43'33.788"N	93°54'10.261"E
92	Phayeng Chakpa Picnic Spot	Imphal -West	Man-Made	24°50'39.899"N	93°48'50.874"E
93	Khurkhul Picnic Spot	Imphal -West	Man-Made	24°55'6.453"N	93°49'57.024"E
94	Awunching Park	Imphal -West	Man-Made	24°54'6.106"N	93°53'19.712"E
95	Chorus Repertory Theater	Imphal -West	Culture	24°48'38.606"N	93°54'20.679"E
96	2nd World War Museum Tera	Imphal -West	Culture	24°48'12.556"N	93°55'2.956"E
97	Andro Monument	Imphal-East	Religious	24°44'39.322"N	94°2'24.146"E
98	Shree Shree Govindajee Temple	Imphal-East	Religious	24°47'50.666"N	93°56'56.066"E
99	Kaina Temple	Imphal-East	Religious	24°40'20.434"N	94°1'22.535"E
100	Marjing Polo Complex	Imphal-East	Culture	24°52'21.364"N	93°56'56.884"E
101	Shilheipung Ecopark	Imphal-East	Man-Made	24°53'6.079"N	94°5'4.379"E
102	Koirengei Old Airfield	Imphal-East	Culture	24°52'27.532"N	93°55'22.315"E
103	Hatta War Cemetry	Imphal-East	Culture	24°48'47.812"N	93°57'10.247"E
104	Commonthwealth War Cemetry	Imphal-East	Culture	24°49'18.65"N	93°56'44.549"E
105	Khuman Lampak Sports Complex	Imphal-East	Culture	24°49'8.371"N	93°57'11.532"E
106	Santhei Ecopark Andro	Imphal-East	Culture	24°45'15.361"N	94°2'1.726"E
107	Ningthem Pukhri	Imphal-East	Culture	24°47'55.598"N	93°57'15.744"E

<b>SL. No.</b>	<b>Name of tourist Site</b>	<b>Districts</b>	<b>Category</b>	<b>Latitude</b>	<b>Longitude</b>
108	Hapta Mela Ground	Imphal-East	Culture	24°47'58.487"N	93°56'48.778"E
109	Chingakham Mandop (Japanese Bombing Site)	Imphal-East	Culture	24°49'2.05"N	93°57'39.82"E
110	Mahabali Temple	Imphal-East	Religious	24°47'44.041"N	93°56'36.74"E
111	Ramji Prabhu Temple	Imphal-East	Religious	24°47'58.487"N	93°57'11.891"E
112	Sekta Living Muesum	Imphal-East	Culture	24°53'43.821"N	94°2'19.218"E
113	Puruk Shoubi	Imphal-East	Religious	24°45'15.282"N	93°57'56.811"E
114	Thangapat (Moat)	Imphal-East	Culture	24°47'34.052"N	93°56'53.422"E
115	Nongmaiching Eco Park	Imphal-East	Man-Made	24°48'30.588"N	94°0'22.434"E
116	Seloi Longmai Eco Park	Imphal-East	Man-Made	24°47'56.324"N	94°0'46.419"E
117	Nongmaiching	Imphal-East	Religious	24°46'44.369"N	94°1'26.679"E
118	Pinewood Garden	Imphal-East	Man-Made	24°42'0.547"N	94°1'3.265"E
119	Xingu Park And Resort	Imphal-East	Man-Made	24°54'24.638"N	94°0'38.359"E
120	Wonderland Adventure Park And Camping	Imphal-East	Man-Made	24°56'15.835"N	94°1'8.594"E
121	Manipur Adventure And Allied Sports Institute	Imphal-East	Man-Made	24°56'15.835"N	94°1'8.594"E
122	Kombirei Garden	Imphal-East	Man-Made	24°49'21.868"N	93°59'37.712"E
123	Cathedral Catholic Church	Imphal-East	Man-Made	24°51'4.164"N	93°55'57.157"E
124	Adventure Tourism Complex Of MMI	Imphal-East	Culture	24°35'47.488"N	93°42'25.289"E
125	Thangjing Peak	Churachandpur	Nature	24°28'4.3"N	93°39'55.404"E
126	Churachandpur Hq	Churachandpur	Culture	24°20'36.131"N	93°42'13.184"E
127	Khuga Dam Site	Churachandpur	Culture	24°16'54.187"N	93°40'53.789"E
128	Mautam Village	Churachandpur	Nature	24°16'45.845"N	93°40'13.266"E
129	Japan Bridge	Churachandpur	Culture	24°34'34.16"N	93°40'3.834"E
130	Leimatak Power House	Churachandpur	Culture	24°35'27.329"N	93°40'2.072"E

<b>SL. No.</b>	<b>Name of tourist Site</b>	<b>Districts</b>	<b>Category</b>	<b>Latitude</b>	<b>Longitude</b>
131	Santing Waterfall	Churachandpur	Culture	24°22'16.936"N	93°25'29.08"E
132	Laimaton Peak (1782)	Churachandpur	Culture	24°37'57.192"N	93°42'4.711"E
133	Ngaloi Waterfall	Churachandpur	Nature	24°19'47.429"N	93°38'42.203"E
134	Khoupum Hangoi Pat	Churachandpur	Nature	24°33'41.102"N	93°41'53.956"E
135	Bunglon For Pine Apple	Churachandpur	Nature	24°29'52.769"N	93°43'10.603"E
136	Gelijang Resort	Churachandpur	Man-Made	24°15'34.648"N	93°40'14.448"E
137	Yangkhelching,Chakpi River	Chandel	Nature	24°12'20.629"N	93°54'51.686"E
138	Battle Of Tengnoupal	Chandel	Culture	24°25'2.256"N	94°3'20.609"E
139	Loktak Lake	Bishnupur	Nature	24°32'54.183"N	93°48'14.272"E
140	Loktak Project	Bishnupur	Culture	24°34'43.984"N	93°44'20.054"E
141	Loukoipat	Bishnupur	Culture	24°38'3.803"N	93°45'38.501"E
142	Bishnupur HQ	Bishnupur	Culture	24°37'31.91"N	93°45'55.681"E
143	Moirang	Bishnupur	Culture	24°29'51.354"N	93°46'58.262"E
144	Takmu Watersports Complex	Bishnupur	Culture	24°30'28.532"N	93°47'22.87"E
145	Bishnu Temple	Bishnupur	Religious	24°37'29.718"N	93°45'33.266"E
146	Karang Island	Bishnupur	Nature	24°32'49.692"N	93°49'58.606"E
147	Thangjing Temple	Bishnupur	Religious	24°29'51.685"N	93°46'43.264"E
148	Ithai Barrage	Bishnupur	Culture	24°25'23.079"N	93°50'21.82"E
149	Imphal Peace Museum	Bishnupur	Culture	24°42'17.797"N	93°49'2.116"E
150	India Peace Memorial	Bishnupur	Culture	24°42'17.797"N	93°48'57.782"E
151	Sendra Tourist Complex	Bishnupur	Culture	24°30'53.855"N	93°47'42.965"E
152	Ina Memorial	Bishnupur	Culture	24°30'8.573"N	93°46'36.573"E
153	Keibul Lamjao National Park	Bishnupur	Nature	24°28'45.268"N	93°48'31.178"E

Source: Compiled by the author based on Department of Tourism, Government of Manipur

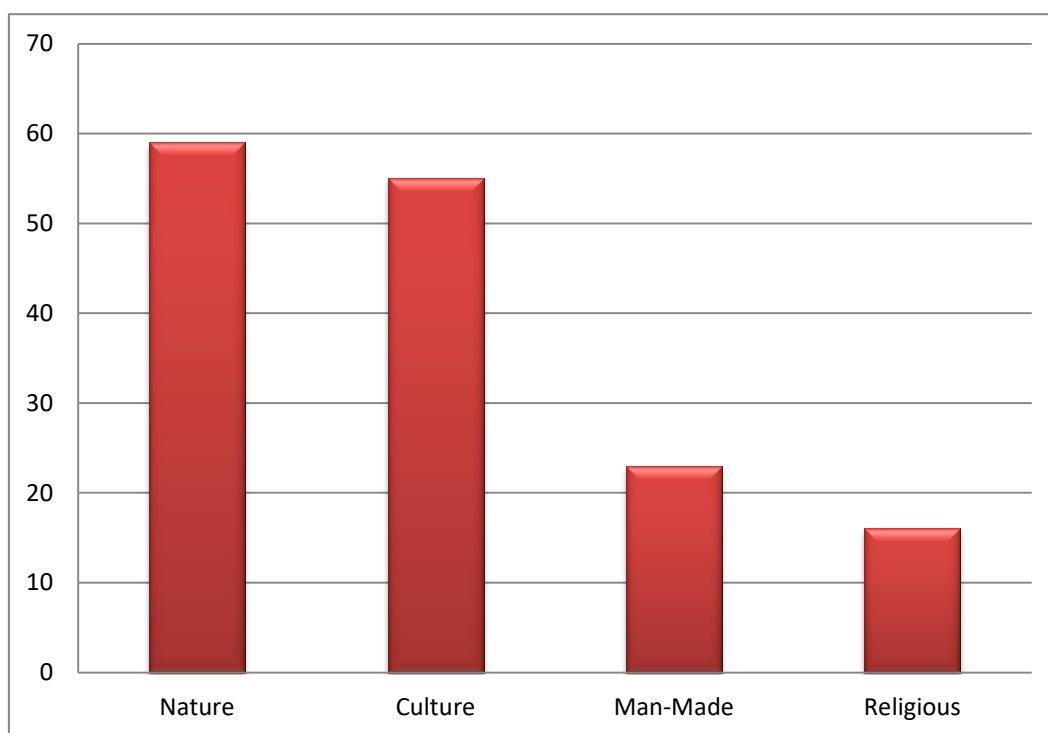


Figure 4.2: Number of different tourism sites in Manipur

#### 4.3.2 DENSITY OF TOURIST SITES

Fig. 4.3 represents the kernel density of the total tourist sites occupied per square kilometre in Manipur in the year 2021. The density of the tourist sites per square kilometre has been classified into four classes that are 0-3 Low, 4-6 Moderate, 7-9 High, and 10-11 Very High. All the popular tourist sites in Manipur are mostly confined to valley districts like Imphal-West, Imphal-East and Bishnupur districts and the hill districts like Ukhrul, Tamenglong and Senapati districts of Manipur are endowed with the natural and scenic beauty of hill and mountain ranges has the highest density of tourist sites. The density of the tourist sites can be found high in the central part of the Imphal city as all the tourist sites like Natural, Cultural, Man-Made and Religious Tourism sites are highly available.

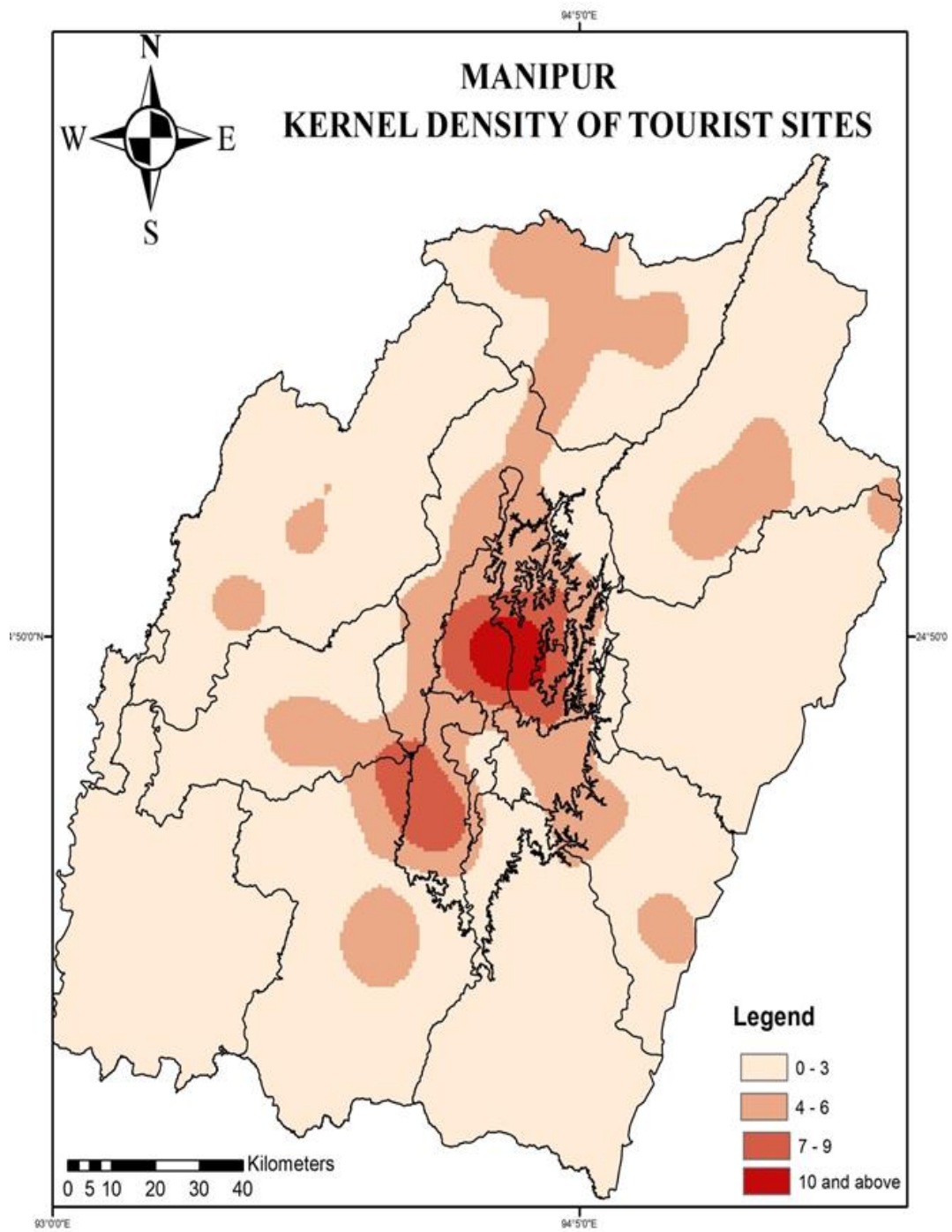


Figure 4.3: Kernel density of tourist sites in Manipur



Figure 4.4: District-Wise Tourist Sites in Manipur

### 4.3.3 SACRED GROVES AS POTENTIAL TOURIST DESTINATION

Sacred groves are known as sacred forests which are protected communally and influenced by religious beliefs as respect for nature. Sacred groves have also the potential for indigenous flora and fauna as preservation of biological diversity is clearly of much potential economic significance (Gadgil, M. and Vartak, 1976). Therefore, multi-species forestry consists of groves and clumps of trees belonging to one species or even a single old tree depending on the history of the vegetation and local culture (Pal, 2011).

In the northeastern state of India, Manipur has also known for ecologically distinctive and rich biodiversity with endemic flora and fauna and rich cultural diversity. Hence, a wide ecosystem and help in the conservation of rare and indigenous species were distributed by Sacred groves (Khumbongmayum et al., 2005, 2004). Around 322 sacred groves have been collected and fig. 4.5 indicates that 22 sacred groves have been identified for the possibility to develop and promote eco-tourism.

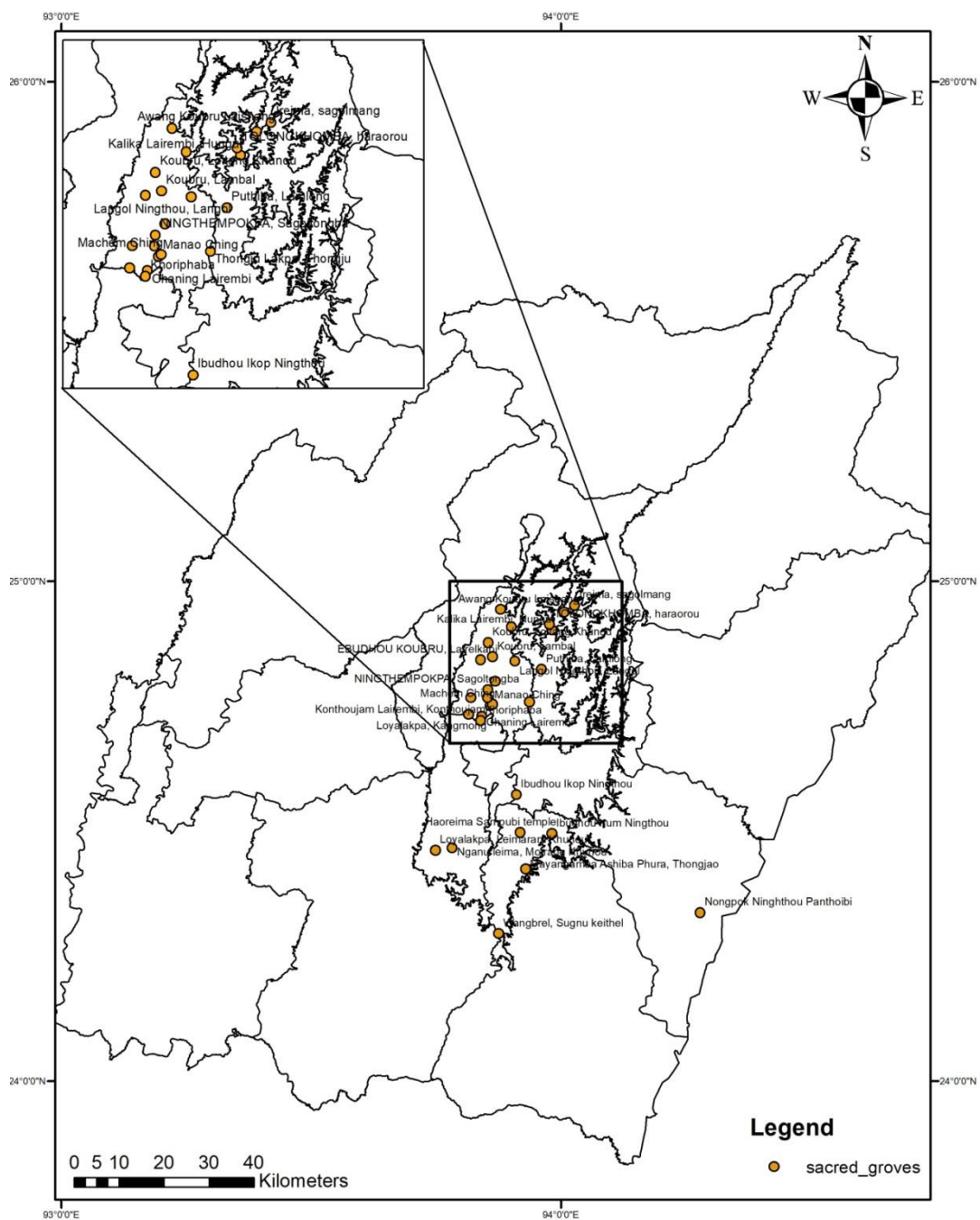


Figure 4.5: Sacred Groves in Manipur

#### **4.4 TYPES OF TOURISTS IN DIFFERENT TOURIST DESTINATIONS OF MANIPUR**

Manipur Tourism has been growing up fast over the years with massive natural, geographic and cultural diversity attracts for all types of tourists and visiting the state for various kinds of purposes. The purpose of travel is divided into nine categories as Pleasure, Conference, Pilgrimage, Visiting Relatives/ Friends, Health, Business trip, Sports, Merry Making. For domestic tourists, merrymaking and pilgrimage are the most important travel purpose for visit whereas, for foreign tourists, historical and cultural purposes are the most important purposes of tourism-based tourist sites viz National Parks and Wildlife Sanctuaries are another significant reason for travel for foreign tourists. Business based tourist activities are the cause for both domestic tourists and foreign tourists.

Table 4.4 represents about 20.4 per cent and 16.4 per cent of the sample respondents have visited due to Pilgrimage and Educational Trip purposes for educational tour to provide an opportunity for the students of learning about travels, especially to the places they visited. Students can learn more information about the environment on educational trips and students are getting an opportunity for better exposure to new places and get better knowledge from the trip and all the educational tour are interstate tours only. And pilgrimage purposes tourists come from neighbouring states mostly from Assam and Tripura for attending religious meetings and events. About 15.4 per cent of tourists visited for conference from different states of India and 8.9 per cent of them due to purposes for pleasure. About 8.5 per cent of tourists are enjoying travelling with their relatives and friends for attending weddings, funerals or other family events. 10.4 per cent of them are due to their merrymaking purpose and about 5.5 per cent of tourists are visiting for health purposes from neighbouring states and neighbouring countries like Myanmar. Here, the tourist visited to receive medical treatment from the hospitals, clinics and other specialized institutes for treatment. The rest 8.5 per cent of the respondents visited from different parts of the state of India for sporting purposes such as teaching courses, interstate football, hockey, cricket tournaments, etc. and also for International Polo (Sagol Kangjei in local language) Matches organized by Manipur Polo Association.



TABLE No. 4.4: SHOWING TYPES OF TOURIST IN MANIPUR

Sl. No.	Purpose of Travel	Indian Tourist		Foreign Tourist		Frequency	Category %		Total Category %	Cumulative%		Total Cumulative %
		Male	Female	Male	Female		Male	Female		Male	Female	
1	Pleasure	9	9	-	-	18	8.6	9.4	8.9	8.6	9.4	8.9
2	Conference	16	15	-	-	31	15.2	15.6	15.4	23.8	25.0	24.3
3	Pilgrimage	21	20	-	-	41	20.0	20.8	20.4	43.8	45.8	44.7
4	Visiting Relatives/ Friends	7	5	2	3	17	8.6	8.3	8.5	52.4	54.2	53.2
5	Educational Trip	15	18	-	-	33	14.3	18.8	16.4	66.7	72.9	69.6
6	Health	6	5	-	-	11	5.7	5.2	5.5	72.4	78.1	75.1
7	Business trip	6	6	-	-	12	5.7	6.3	6	78.1	84.4	81.1
8	Merry Making	14	7	-	-	21	13.3	7.3	10.4	91.4	91.7	91.5
9	Sports	9	8	-	-	17	8.6	8.3	8.5	100.0	100.0	100

Source: Questionnaires based analysis in SPSS 20

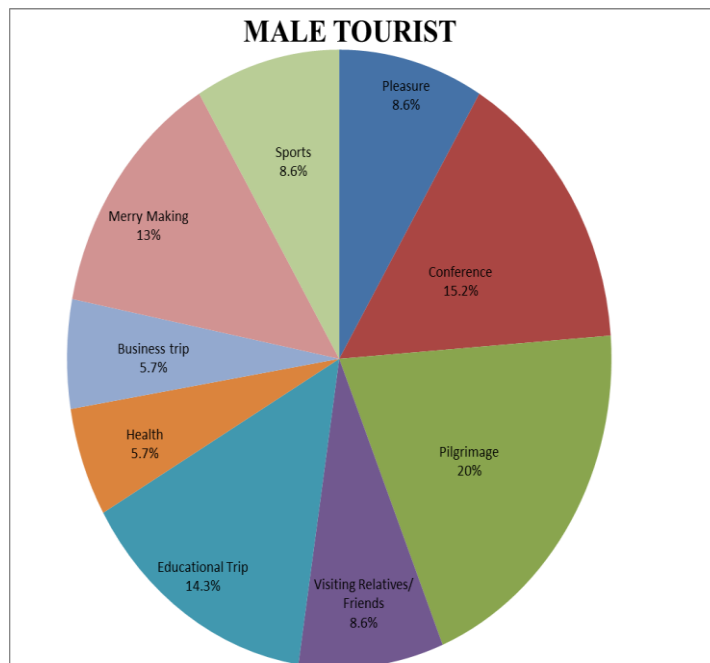


Figure 4.6: Category % of Male Tourist

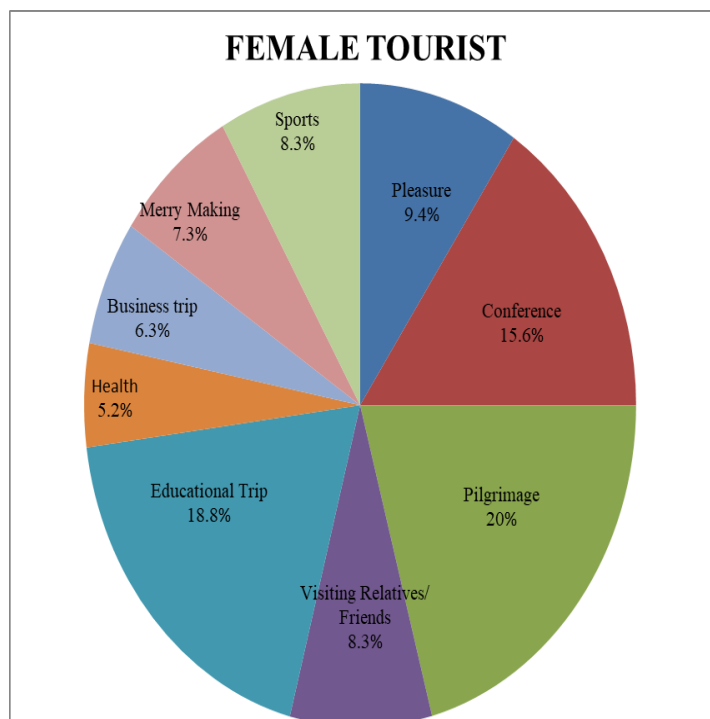


Figure 4.7. : Category % of Female Tourist

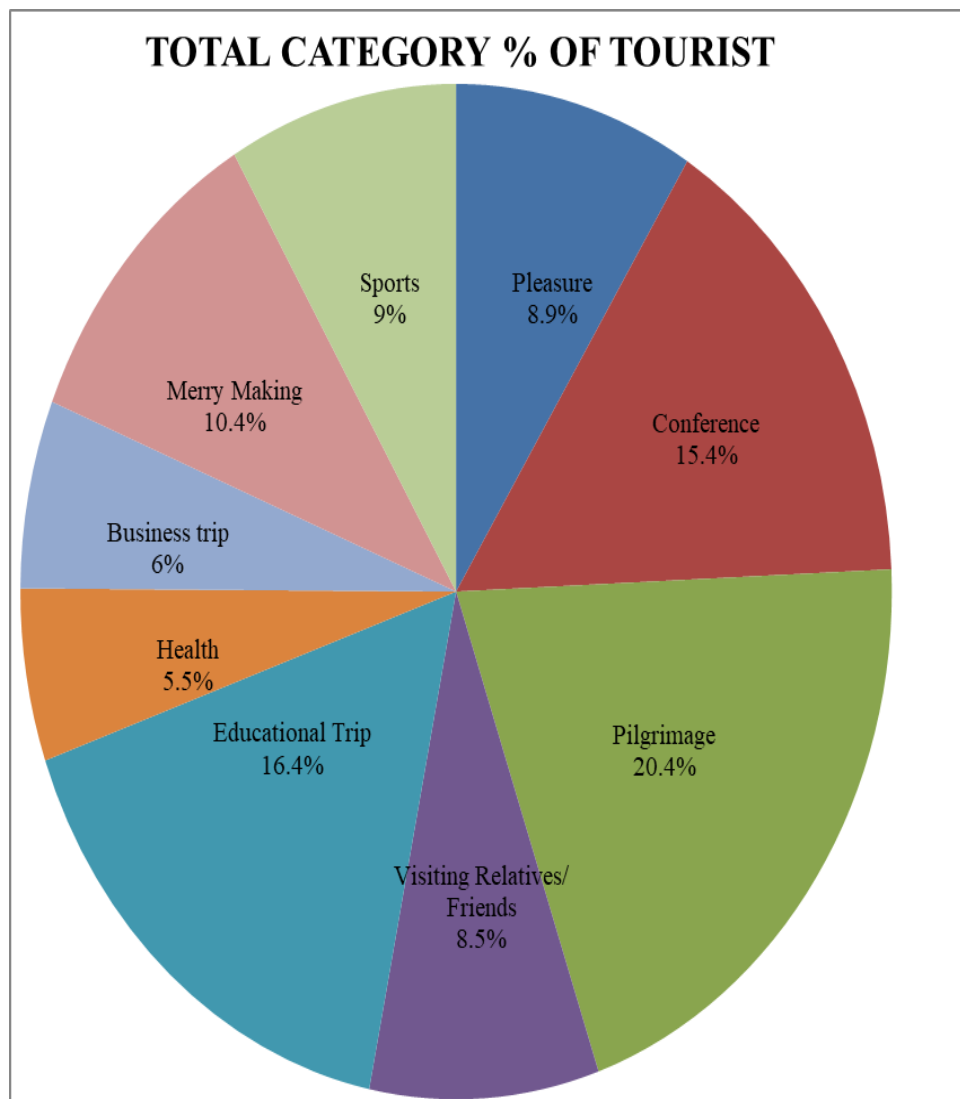


Figure 4.8: Total Category % of Tourist

#### **4.5 ARRIVAL OF TOURISTS IN DIFFERENT DISTRICTS OF MANIPUR**

Manipur government was realising the importance of Tourism in the State, which has full of untapped potential in the form of scenic beauties and a mosaic of cultures. The tourism department was established in 1972 to earn foreign exchange. Since the establishment of the department, discovery work for attractive tourist sites had been going on. The construction of tourist amenities at the tourist sites had been continuously going on at Ukhrul, Churachandpur, Moreh, Kangpokpi, Mao, etc. Only 11 tourist sites have been identified from 1969-to 1975. Fig. 4.6 shows the number of tourist sites from 1969- 1975.

The total number of tourists who visited Manipur is very low in the early years. In 1976-77, there were only 6,000 tourists who visited Manipur and 108 foreign tourists were increased in 1978-79 (Annual Administrative Reports, 1980).

In 2000-01 around 29 tourist sites have been identified and an increasing number of tourists have recorded at 1,04,263 and 1,48,721 tourists including foreign tourists have also been increasing in 2016-17. From 2000-2018, 81 tourist sites have been identified and so far, 160 tourist sites have been identified in 2020 as shown in Figures 4.10 and 4.11. The number of tourists has been increasing due to the increased number of amenities at the sites. Hence, construction work also accelerated. Table No. 4.2 shows the number of monthly wise tourist arrivals in Manipur from 2015-2018 and Table No. 4.3 shows the number of tourist arrivals in Manipur for both Domestic and Foreign from 2000 to 2020.

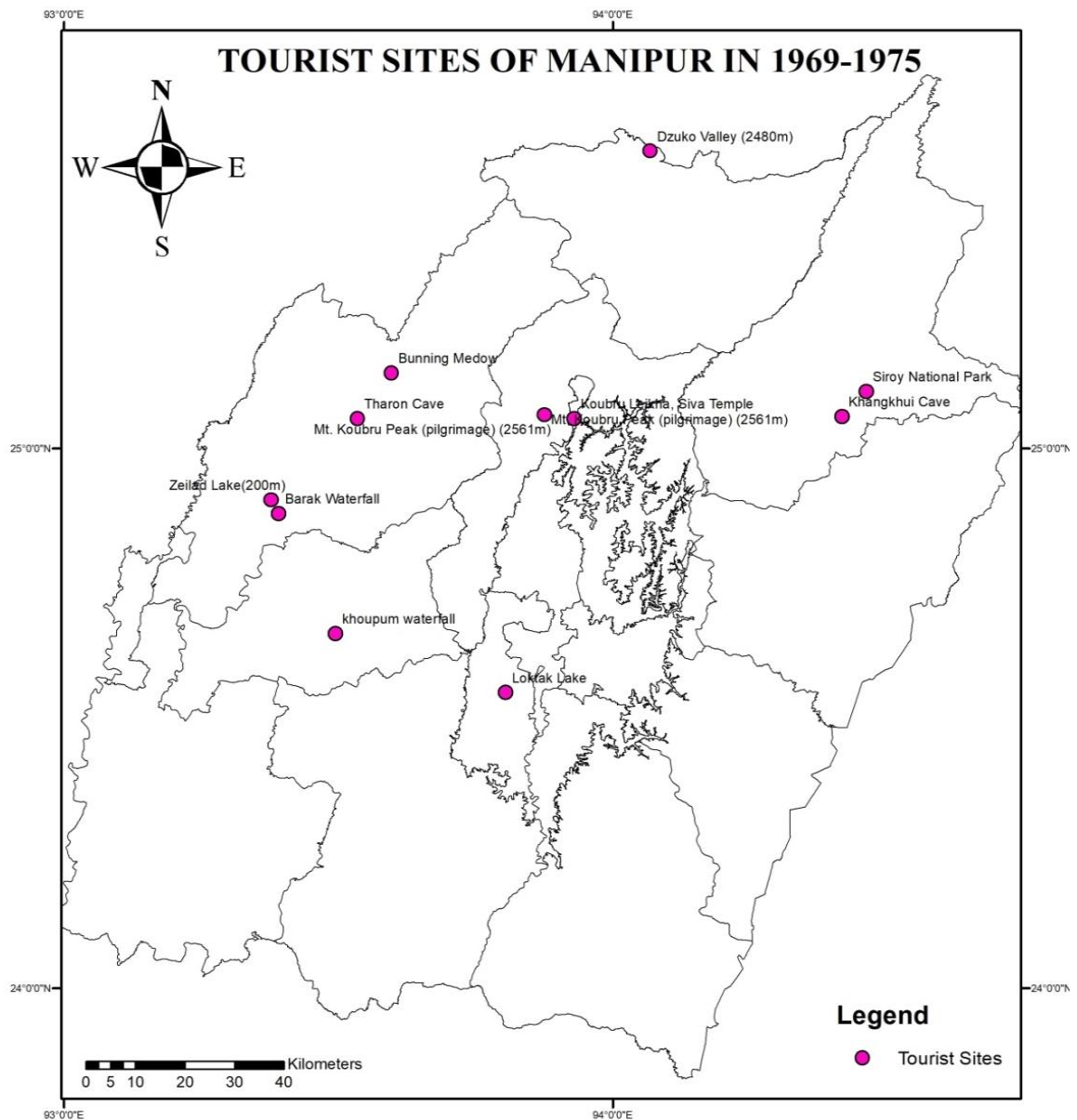


Figure 4.9: Tourist sites in Manipur in 1969-75

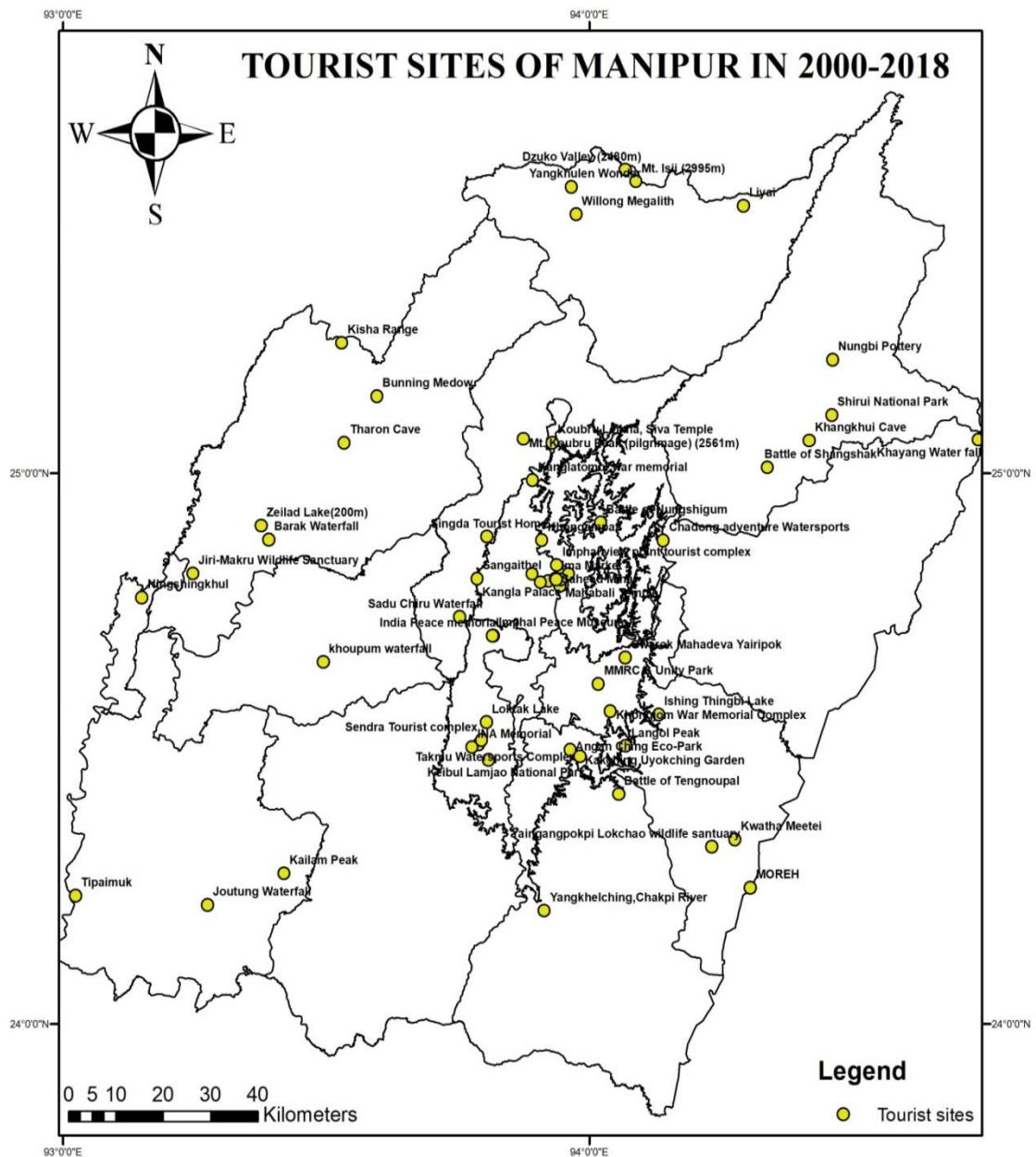


Figure 4.10: Tourist sites in Manipur in 2000-2018

Table 4.5: Monthly wise tourist arrivals in Manipur (Domestic and Foreign) from 2015-2018

Months	2015		2016		2017		2018	
	Domestic	Foreign	Domestic	Foreign	Domestic	Foreign	Domestic	Foreign
January	N.A	N.A	3575	15	3041	211	4259	409
February	N.A	N.A	4428	252	4040	357	4084	476
March	N.A	N.A	4447	213	3966	276	3847	383
April	3216	148	4322	148	4274	244	3586	235
May	3507	06	4648	171	5572	93	4123	222
June	2496	25	4454	86	5639	58	4076	193
July	2148	46	3419	163	3210	33	3454	80
August	1441	99	3259	48	3514	144	N.A	N.A
September	2554	56	3414	47	3290	144	3968	388
October	2907	297	3806	208	3486	127	N.A	N.A
November	3415	51	3886	709	3950	701	4173	913
December	3398	192	3227	234	3995	497	N.A	N.A
Total	51084		49179		50862		38869	

Source: Department of Tourism, Government of Manipur

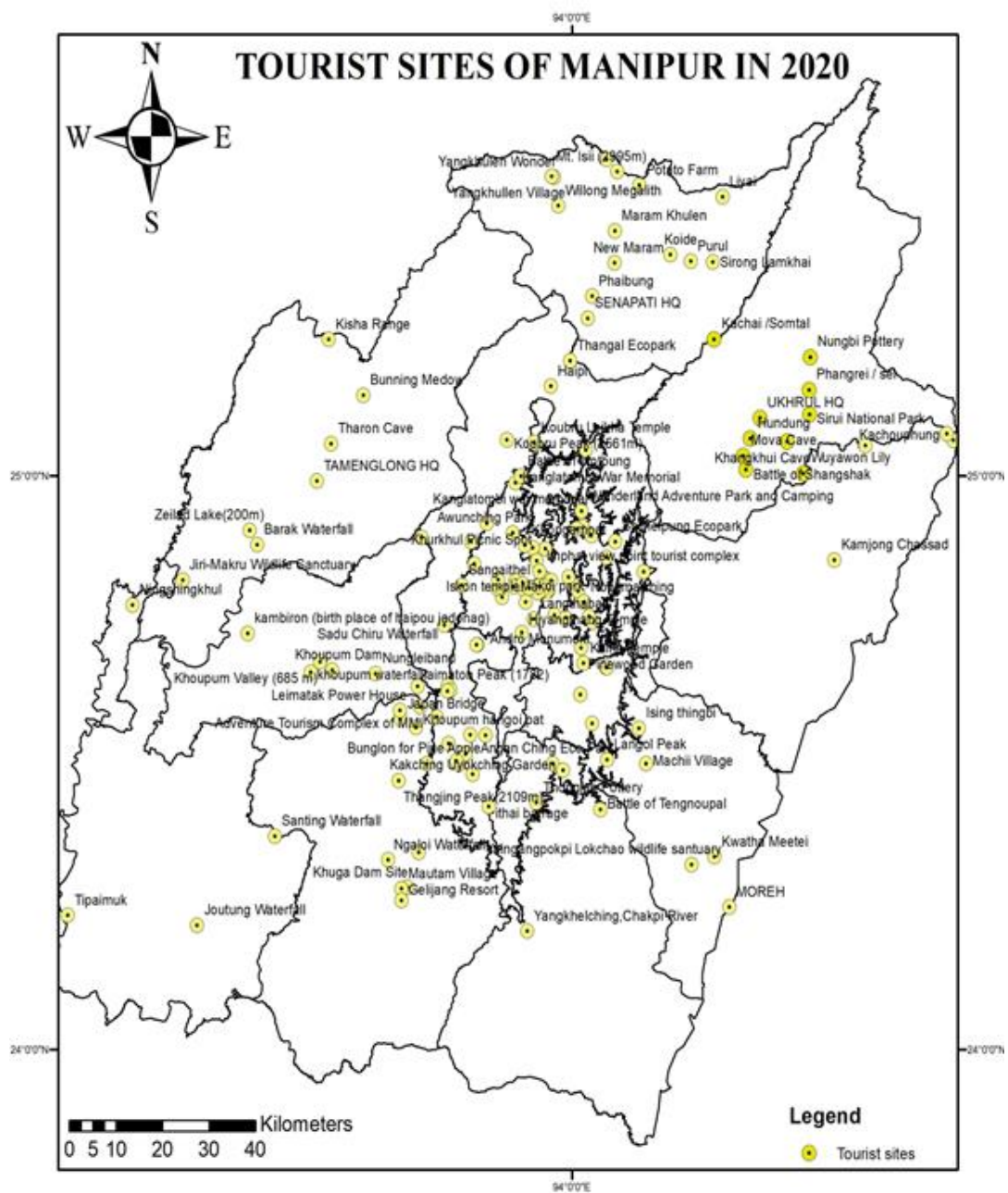


Figure 4.11: Tourist Sites in Manipur in 2020



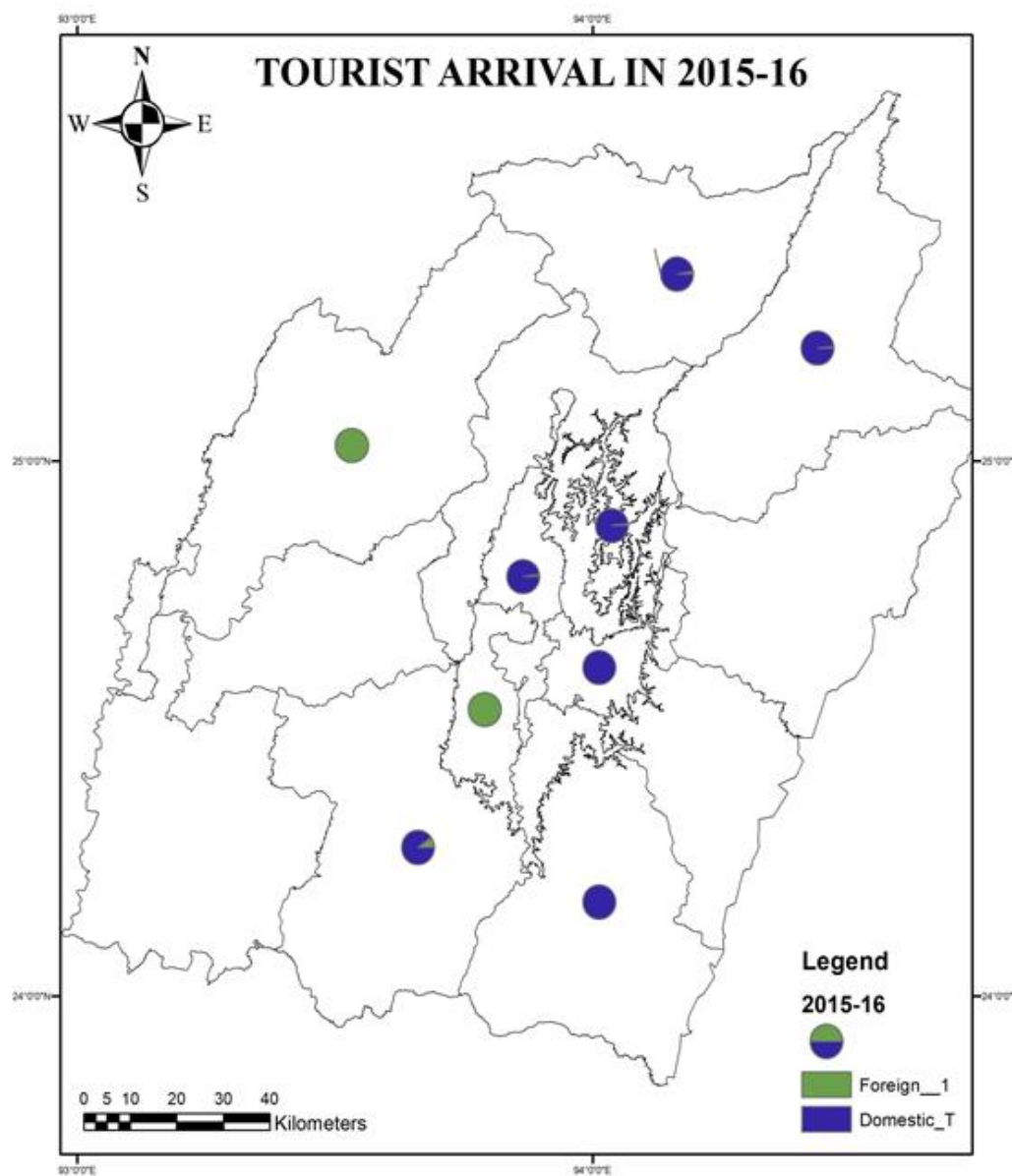


Fig 4.12: Tourist arrival in 2015-2016

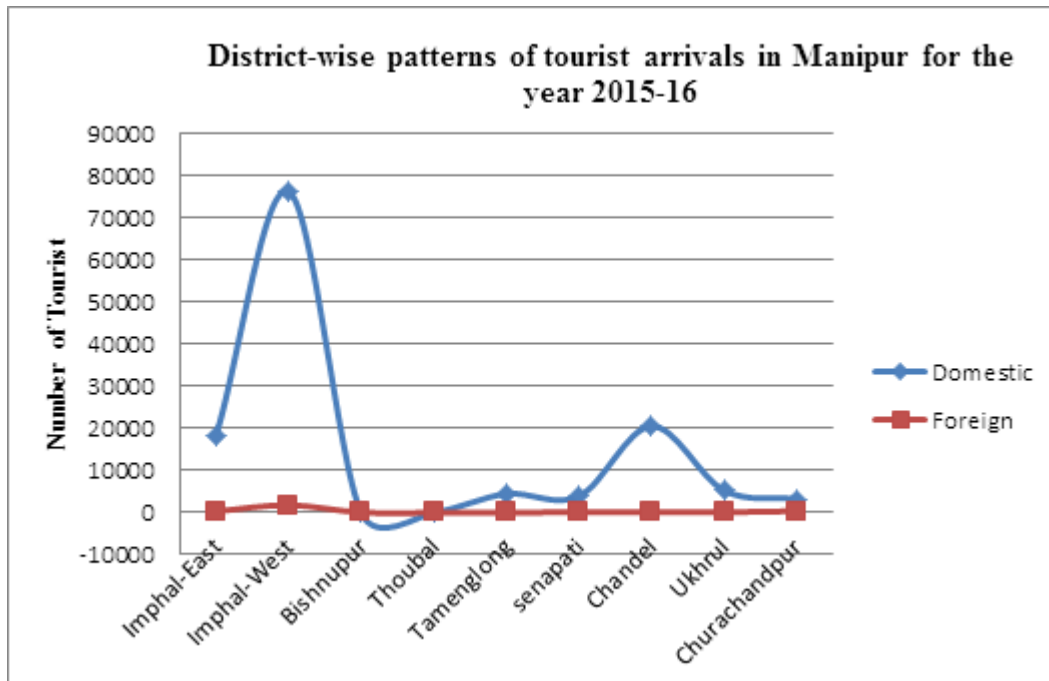


Fig 4.13: District wise pattern of total number of Tourists visits in Manipur

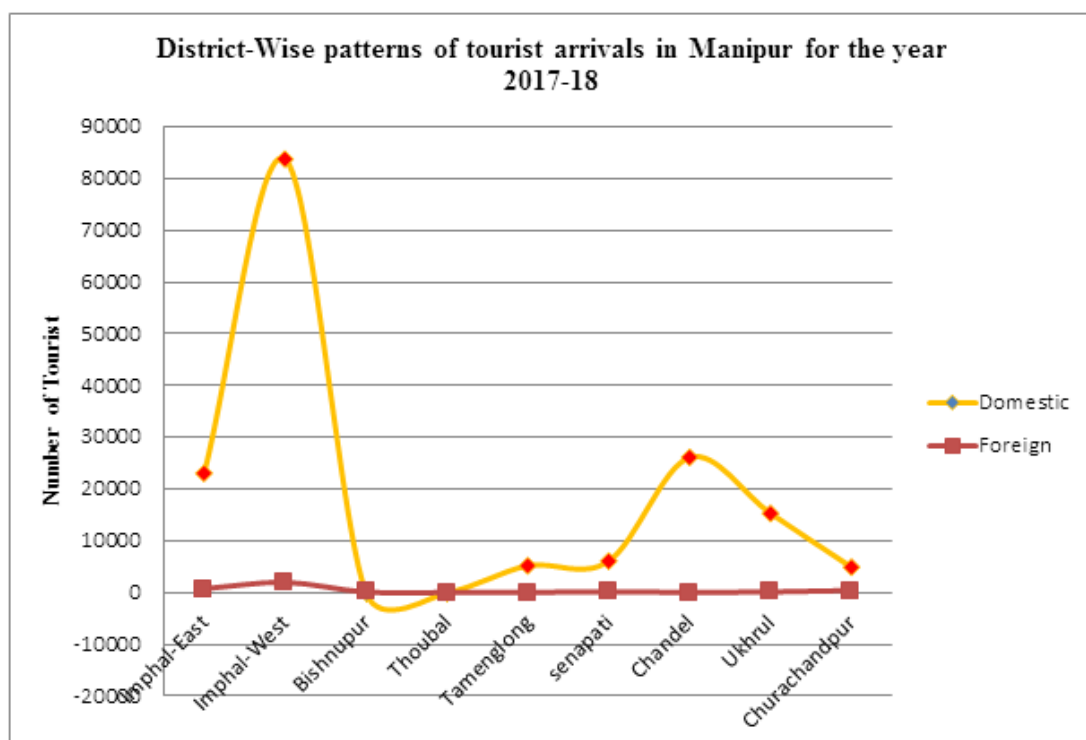


Fig 4.14: District wise pattern of total number of Tourists visits in Manipur

Fig 4.12 and Fig 4.13 shows the number of district wise tourist arrival in Manipur during the year 2015-2016. Fig. 4.14 and fig. 4.15 indicates the number of district wise tourist arrival in Manipur during the year 2017-2018 has increased over time. The number of foreign tourists arriving in the last 4 years increasing.

During the year 2015-16, the number of domestic arrival in Manipur was found higher in the Imphal-West district among the rest of the district. But in the year 2017-18, four districts i.e. Imphal-East, Tamenglong, Chandel and Ukhrul are found to have increased domestic tourists as compared with the year 2015-16. This is due to the development of infrastructure and an increasing number of homestays in the hilly districts.

In Bishnupur and Thoubal districts have a high potential for the development of tourism but there were fewer records of foreign tourists visiting because of the lack of accommodation facilities and tourism amenities.

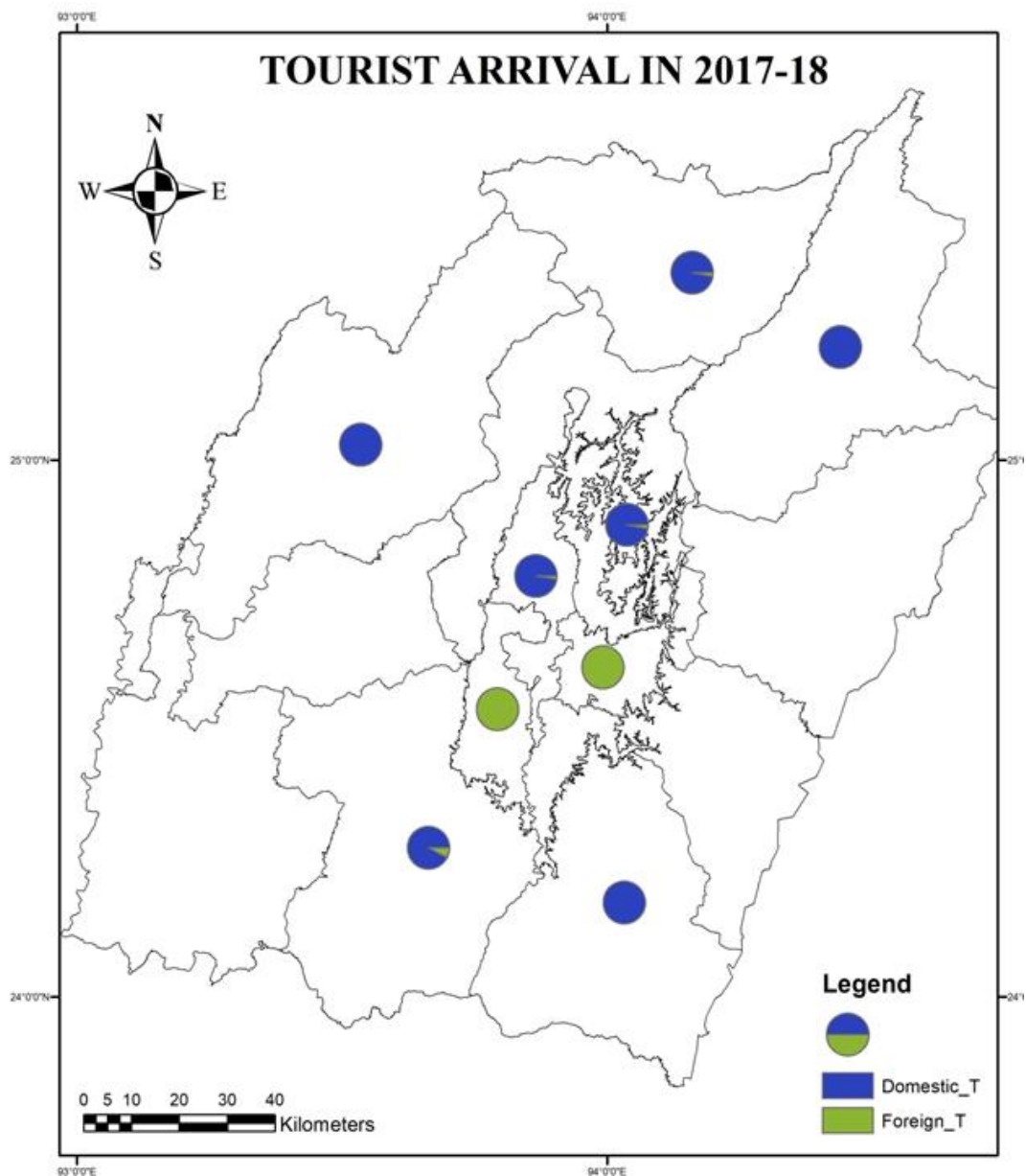


Figure 4.15: Tourist arrival in 2017-18

Table No. 4.6: Tourist arrivals in Manipur (Domestic and Foreign) from 2000-2020

Sl.No.	Years	No. of Tourists		Total
		Domestic	Foreign	
1	2000-2001	1,03,854	409	1,04,263
2	2001-2002	73,842	131	73,973
3	2002-2003	89,829	227	90,056
4	2003-2004	93,430	296	93,726
5	2004-2005	97,054	248	97,302
6	2005-2006	93,333	348	93,681
7	2006-2007	1,20,472	263	1,20,735
8	2007-2008	1,01,000	460	1,01,460
9	2008-2009	1,15,300	271	1,15,571
10	2009-2010	1,27,524	405	1,27,929
11	2010-2011	1,16,652	431	1,17,083
12	2011-2012	1,33,224	602	1,33,826
13	2012-2013	1,31,803	768	1,32,571
14	2013-2014	1,43,059	2588	1,45,647
15	2014-2015	1,34,584	2900	1,37,484
16	2015-2016	1,32,013	3102	1,35,115
17	2016-2017	1,45,685	3036	1,48,721
18	2017-2018	1,64,483	3787	1,68,270
19	2018-2019	19,4000	4500	1,98,500
20	2019-2020	167334	12102	1,79,436

Sources: Department of Tourism, Government of Manipur

From the above statistical data, the number of tourists visiting Manipur is very sluggish. There were 1,37,484 tourists including foreigners in 2014-2015. In 2016-2017, the number of foreign tourists increased by 1,48,721. This increase is due to amenities at the sites. Hence, construction work also accelerated. Then, there have been fluctuations in the trend of tourist arrivals in the year 2001-2011 and year

2002-2003 was considered to be the worst year for the foreign tourist and even for the domestic tourist. This is due to political instability like strikes and blockades of highways which made disturb the travellers. So, the trend of the tourist inflow this year has shown very low.

#### **4.6 ANALYSIS OF TOURIST PLACES IN MANIPUR**

Tourism is becoming one of the most important major sources of income in the world. Many developed countries like the United States of America (USA), United Kingdom (UK), Germany, China, Japan, Hong-Kong, etc. have commercial enterprises from tourism which currently the green pastures and has huge infrastructural development, job creation, conservation of atmosphere etc. The character of the destination, including historical attractions, natural as well as man-made attractions and resorts, which have been traditionally dependent on tourism. Using Global Positioning System (GPS), Geographic Information System (GIS) and Remote Sensing are tools which can be gathered, processed, organized and store information about tourist attraction sites and require the availability of certain parameters e.g. accessible road networks, standard accommodation facilities, attractions etc.

According to Gunn and Larsen (1988), the application of GIS in tourism research has been minimal through GIS technology has been discussed in the tourism literature for decades. “Both GIS and tourism share a common characteristic, that is, both cross the boundaries of disciplines and application areas. GIS has been applied in many fields including geography, forestry, urban planning, and environmental planners, anthropologist, and archaeologists” (Avdimiotis and Christou, 2002). To achieve sustainable tourism development, GIS can be regarded as providing a toolbox of techniques and technology.

Using GIS technology provides fast data access and multidimensional analysis and graphical representation capabilities that can result in more effective resource management decisions. In the form of graphs or maps, GIS technology is used for collecting spatial information, storage, and analysis which will help the user more effective to be understood.

#### **4.6.1 NATIONAL PARK AND WILDLIFE SANCTUARY IN MANIPUR**

National Park means an area where human activities such as development, hunting, grazing, and poaching are not permitted and are strictly reserved for wildlife and biodiversity whereas Wildlife Sanctuary is an area where adequate ecological, fauna, flora, geomorphological, natural or zoological significance and could be permitted for the people living inside the Sanctuary.

Eco-Tourism has the concept of the conservation of flora and fauna has the important for the promotion of sustainable tourism which can attract the tourists from various disciplines (Park, 2010). Therefore, sustainable tourism development helps economic development as conservation of the environment (Gogoi & Bora, 2016).

Manipur has enriched with unique floras and faunas with extensive forest areas. The state has 2 National Parks, 7 Wildlife Sanctuaries and 12 Community Reserves and forest areas that are covered by 8.42% reserved forest area and 23.95% protected forest areas. Table no. 5.4 represents the protected area of Manipur.

Keibul Lamjao National Park is the only floating National Park in the world covering an area of 40 sq. km located at the southern part of the Loktak Lake which is a habitat of the brow-antlered deer popularly known as the Sangai as well as other wildlife can also be seen such as Hog Deer, Otter, a host of waterfowls and during November to March, Migratory birds usually sighted.

Shirui hill which is the place of Shirui Lily (State flower) is located in Shirui village with an altitude of 2570 m in Ukhrul district. To maintain and protect the rare flower and other flora and fauna including Nongin (state bird), Hornbills, Pangloin, Flying squirrel, and Slow Loris, the commissioner of Forest proposed National park was issued on November 25, 1982. The Shirui National Park is covered by an area of 100 sq. km. (Sangai Express, 2001). In the year 2018, Shirui Lily Festival was held successfully and around 10,000 Shirui Lily saplings were planted to increase awareness about the plant. (E-Pao, 2018).

Bunning Wildlife Sanctuary is part of the Barail Range located in the Tamei subdivision in the Tamenglong district. The sanctuary is covered with an area of 115 sq. km. with rich flora and fauna viz feline's family like Tiger, Clouded leopard, Jungle cat and Golden cat.

Table no. 4.7: Protected area of Manipur

<b>TYPE OF PROTECTED AREA</b>	<b>NAME OF PROTECTED AREA</b>	<b>AREA (sq.km)</b>
<b>National Park</b>	Keibul Lamjao National Park	40
	Shirui National Park	100
<b>Wildlife sanctuaries</b>	Bunning Wildlife Sanctuary	115.80
	Kailam Wildlife Sanctuary	187.50
	Zeilad Wildlife Sanctuary	21
	Ziri Makru Wildlife Sanctuary	198
	Yangoupokpi Wildlife Sanctuary	184.80
	Khongjaingamba Ching Wildlife Sanctuary	0.412
<b>Community Reserves</b>	Thinungei Bird Sanctuary	1.031
	Pfunemai Community Reserve	2.10
	Azuram Community Reserve	5.85
	Chiibvii and Veimairii Community Reserve	3.39
	Sofii Kharo Community Reserve	2.04
	Baneevehdea Community Reserve	2.10
	Houphai Community Reserve	3.23
	Chipeivao Community Reserve	5.85
	Mekrimai Ru Kakramai Bu Community Reserve	72.456
	Shangnememe Community Reserve	3.0
	Lungpghu Community Reserve	3.7
	M. Tanglian Community Reserve	1.02
	Lailong S. Community Reserve	17

Source: Department of Forest, Manipur



Kailam Wildlife Sanctuary is located within the Kailam-Tipaimukh Hill Range in Churachandpur with an altitude ranging from 518m – 2014m above MSL and occupied a 187.50 sq.km. The sanctuary is important of five varieties of hornbills such as the Great Indian hornbill, Rufous-necked hornbill, wreathed hornbill, Indian Pied and lesser pied hornbill, and brown-backed hornbill. And there are also numerous unique flora and fauna found in this sanctuary.

Zeilad Wildlife Sanctuary is located in the district of Tamenglong district along with a group of seven lakes namely Zeilad, Guiphuapzai, Narouzai, Tuangpuizai, Goulungzai, Napsaimzai and one unnamed lake with an area of 21 sq. km. This sanctuary is a habitat with some important floras like *Michelia Champaca*, *Toona Ciliatia*, *Wallichii*, *Gmelina Arborea*, *Bombax ceiba* etc. and some of the important faunas are Hoolock gibbon, Great Indian Hornbill, barking deer, Slow loris, Leopard, Serow, Sambar etc.

Yangoupokpi Wildlife Sanctuary is situated in the Chandel District near the Indo-Myanmar border with an area of 184.80 sq. km. This Sanctuary has been classified into five zones with a wide variety of species namely Yangoupokpi, Khudengthabi, Leibi, Laiching, Kwatha and Khudengthabi. Currently, 6 amphibian species, 29 species of reptiles, 74 species of avifauna, 42 mammalian species and 86 species have been documented.

Ziri Makru Wildlife Sanctuary is situated between the river Jiri and Makru which are both the tributaries of the Barak River near the Assam-Manipur border with an area of 198 sq km. This sanctuary lies between Jiribam district and Tamenglong district and forest birds are an important place in these sanctuaries.

Thinungei Bird Sanctuary has located in the Bishnupur district of Manipur adjoining Loktak Lake with an area of 1.031 sq. km. During the winter season, a large number of migratory waterfowls have visited Loktal Lake.

#### 4.5.2: SPECIFIC GIS QUERY AND OVERLAY AND BUFFERING

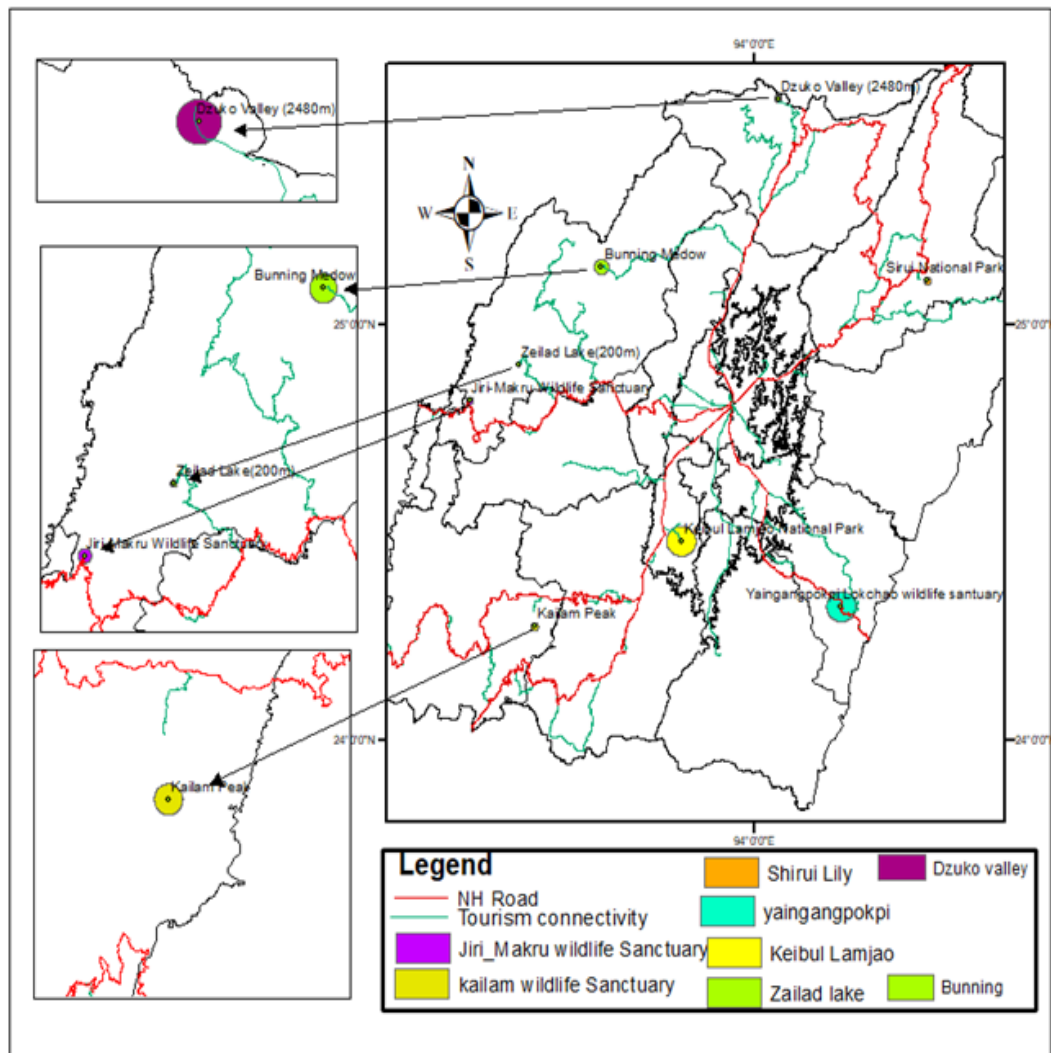


Figure 4.16: Use of buffer tool for the conservation of national Park and wildlife sanctuary

Buffer analysis is usually combined to define a suitable area. Buffering is an important and often used spatial analysis tool, but many others can be used in a GIS and explored by the user. The buffer zone, which is always vector polygons and the size of a buffer zone, is defined by a buffer distance. Here, a buffer of 500 m, 1000 m, 2000m, and 4000m respectively has been created with the help of a Buffer tool in the Proximity tool and the area represents has to be left open for conservation of National Park and Sanctuaries and no construction activity can take place in the buffer zone so that the natural beauty is maintained.

## **4.7 THE SHORTEST PATH AND BEST ROUTE ANALYSIS**

The shortest path problem is the problem of finding the shortest path or route from a starting point to a final destination. We use graphs to represent the shortest path problems. It is a mathematical abstract object. It contains sets of vertices and edges (Dabhade, A. et al, 2015).

The shortest path can find a path with minimum travel cost from the origin to the final destination with help of a network which connected (Lim & Kim, 2005). Hence, emergency vehicle routing was also used from the dynamic shortest path system and made a solution for emergency routing that reduces the travelling time (Panahi & Delavar, 2008).

The shortest path can find the start time and travel to the least time and path of the journeys and find the best route in static road networks for vehicle routing (Alazab et al., 2011).

GIS enables network analysis to determine the shortest and best route which helps the tourist to plan and various tourist places from their accommodation will benefit tourist time and economy. Using GIS in routing helps a powerful ability for network analysis, and management of shortest and closest facility analysis which benefits users to provide optimum planning for tourism.

### **4.7.1 NETWORK DATASET BUILDING**

Figure 4.17 show a different type of road speed and Table No. 4.8 indicates the Width and Speed of the Road. A cost attribute of a road network based on the impedance helps the user to choose the time and length to reach their destinations. Travel time estimation and distance were carried out as an analysis basis based on impedance (time and length). To calculate the shortest and best route between amenities and tourist sites and the differences between tourist sites. Therefore, tourist sites can choose the route which may be fastest and quickest depending on the impedance. The network data were built and corrected the road network errors for used network analysis.

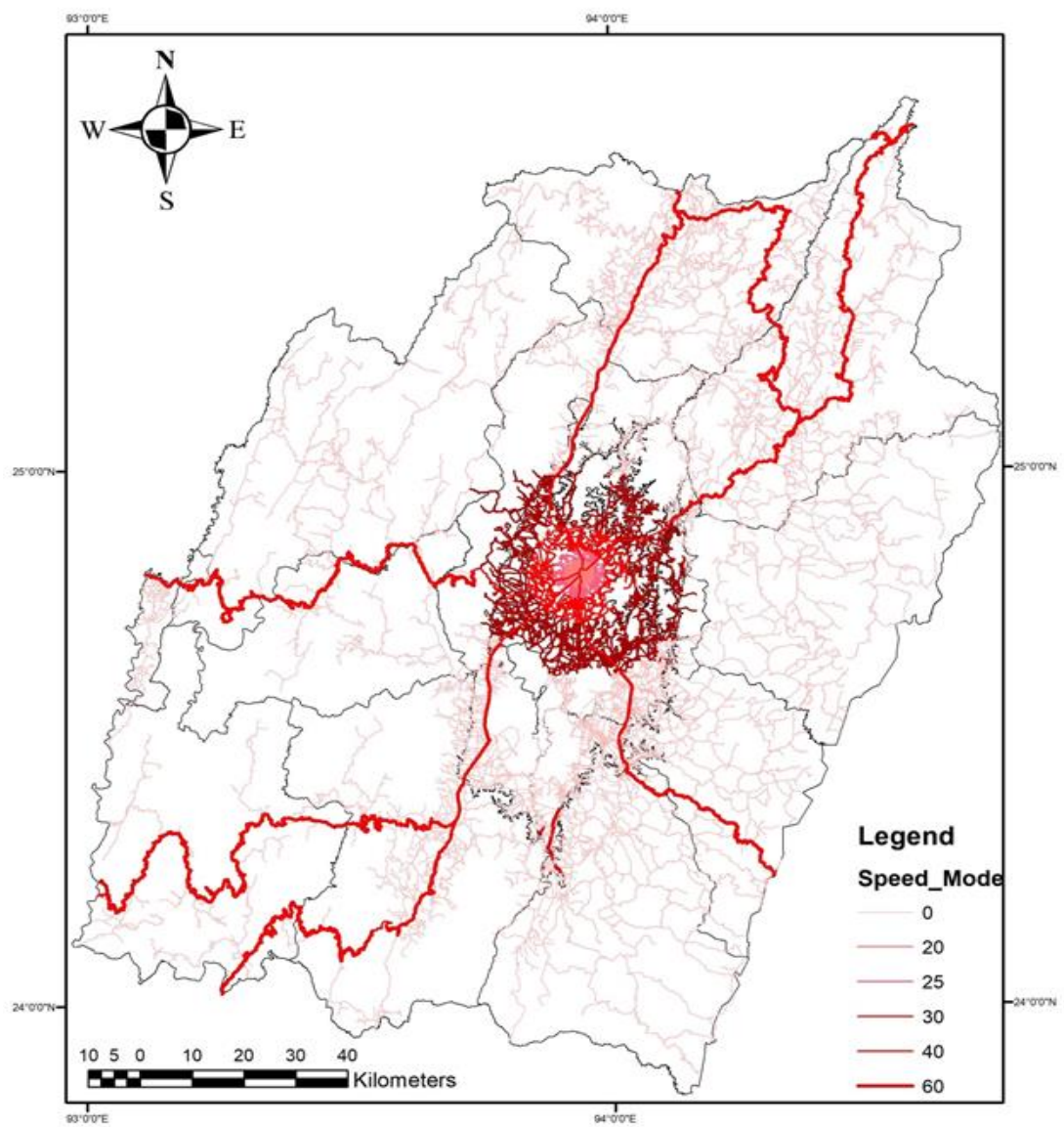


Figure 4.17: Different Types of road Speed

Table No. 4.8: Width and Speed of the Road

ROAD CLASSIFICATION	WIDTH (MT.)	SPEED (KMH)
AH	50	60
STATE ROAD	35	40
DISTRICT ROAD	30	30
MAJOR ROAD	25	25
MINOR ROAD	10	20

The above table shows different road speeds km per hr. based on the different types of roads, due to the high traffic congestion in the central part of the Manipur and different roads speed are clearly shown in figure 4.17.

#### 4.7.2 IDENTIFYING THE SHORTEST ROUTE BETWEEN TWO LOCATION

The shortest route was created between two locations by using network analysis tools helps to find out less time and cost consumed in travelling. Fig no. 4.15 shows the cumulative impedance between nodes to find the route with the help of the shortest route analysis. Just two nodes may connect to form the route i.e origin and a destination or have a specific stop between these two nodes.

The best route is between different tourist sites from one point to another with the minimum distances. The best route between two locations which based on less time and cost consuming in travelling. The best route analysis finds the route to the start location and the end location. Figs 4.18 represent the junctions and edges that were connected topologically to run the analysis over the digitized road network a network geo dataset was created. Fig. 4.20 shows the best route between the start location (location 1) and end location (location 2) which will determine the order of location specified by the user. It is the best route to get from one location to different

tourist sites or the best way to visit several locations and the direction window for the best route analysis is shown in fig 4.19.

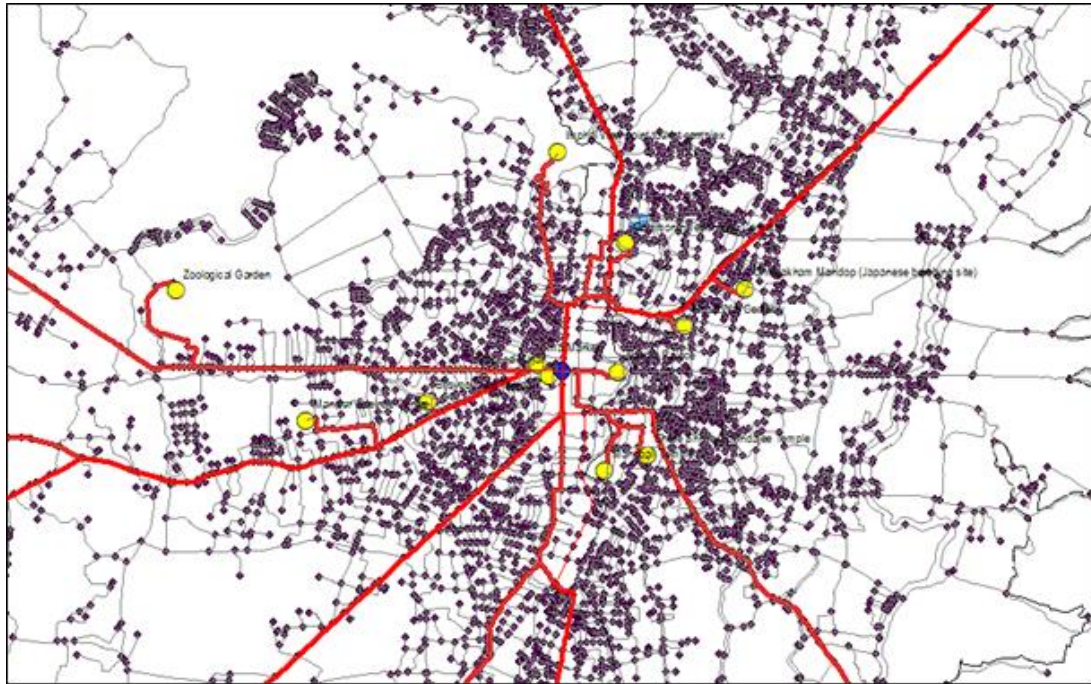


Figure 4.18: Junctions and nodes of the digitized road networks

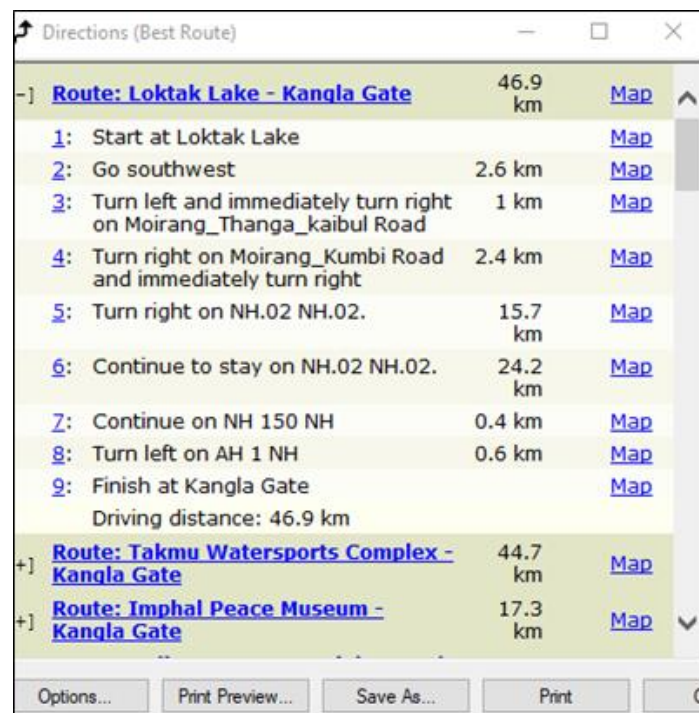


Figure 4.19: The Best Route direction window



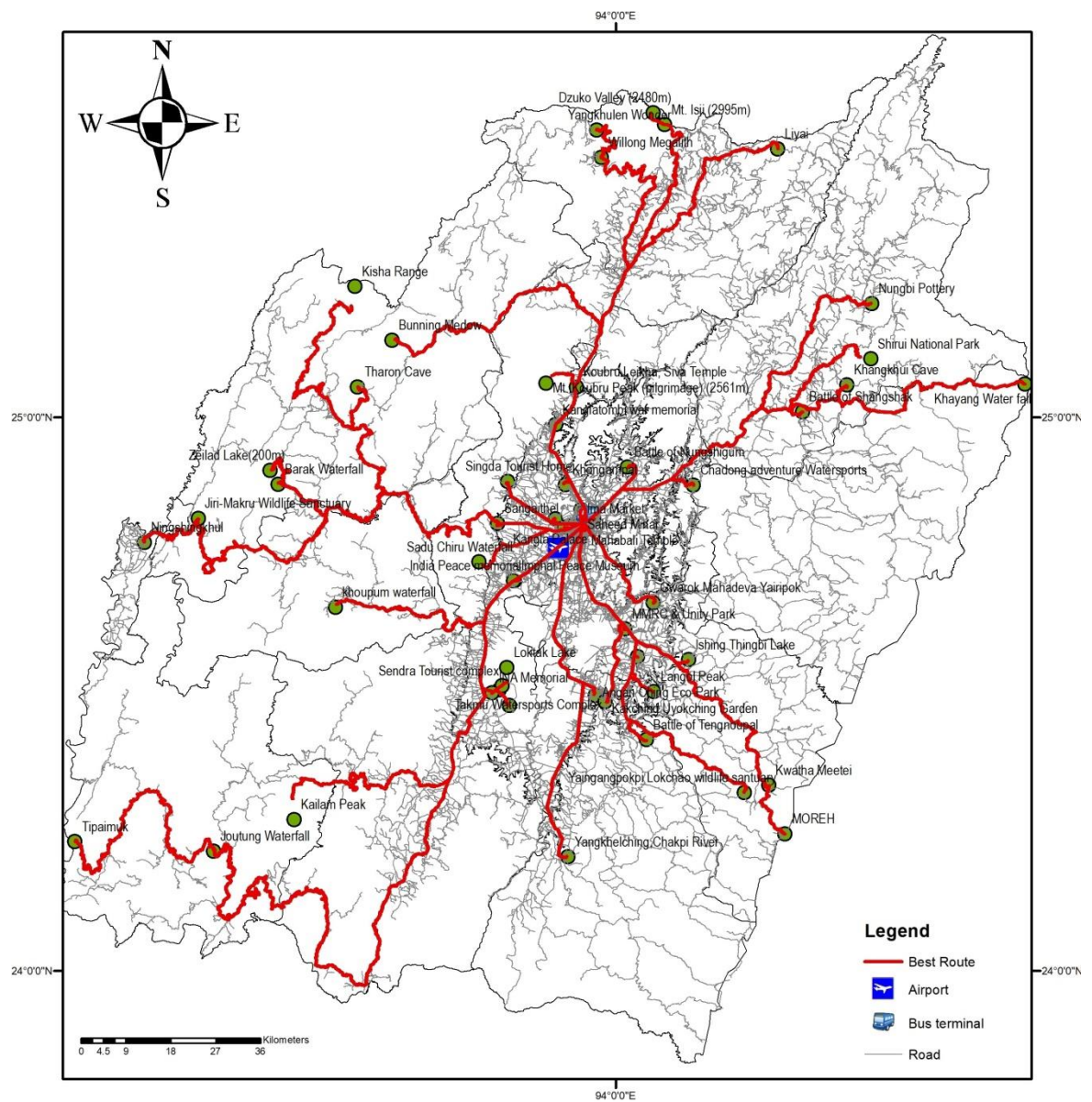


Figure 4.20: Best Route Result

#### 4.8 CLOSEST FACILITY ANALYSIS

The closest facilities analysis finds the closest facilities that can be reached in a specific period from tourist sites based on travel time and traffic information available which determine the user to locate the specified location. The map represented the seven closest tourist places from the heart of the city as shown in figure 4.21 and direction windows are shown in fig. 4.22.

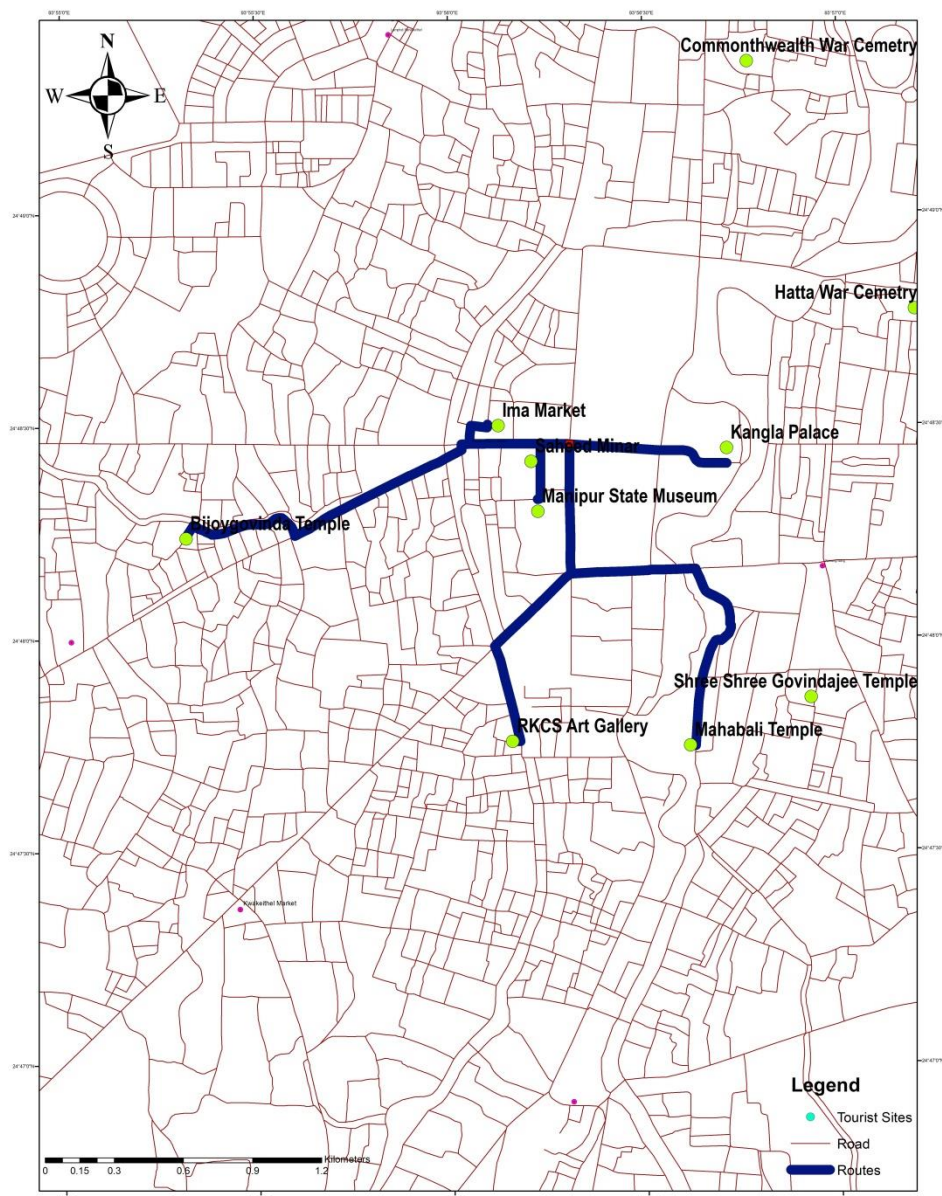


Figure 4.21: Closest Tourist sites from the Heart of the City



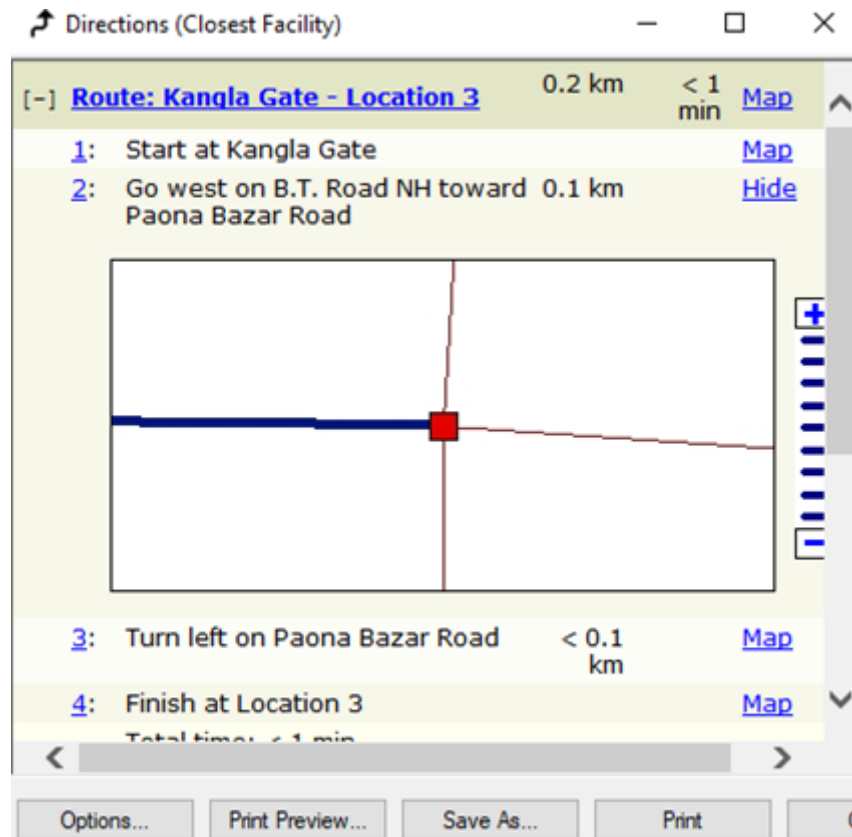


Fig 4.22: Closest Facility direction window

Closest facilities analysis helps to find the number of facilities like hotels, banks, Police Stations, Hospitals etc and direction of travel i.e from present location and nearby facilities or the nearby facility and present location.

Figure 4.23 shows the closest facilities from Airport are identified based on the shortest distance which shows minimum cumulative impedance between present locations and nearby facilities and fig 4.24 indicates the closest facility direction window from Airport to the nearby facilities.

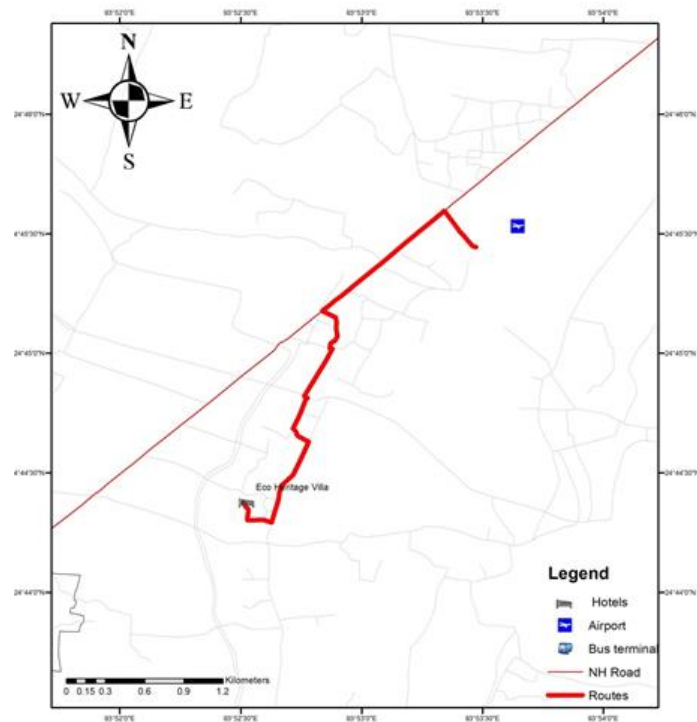


Figure 4.23: Closest facilities from Airport

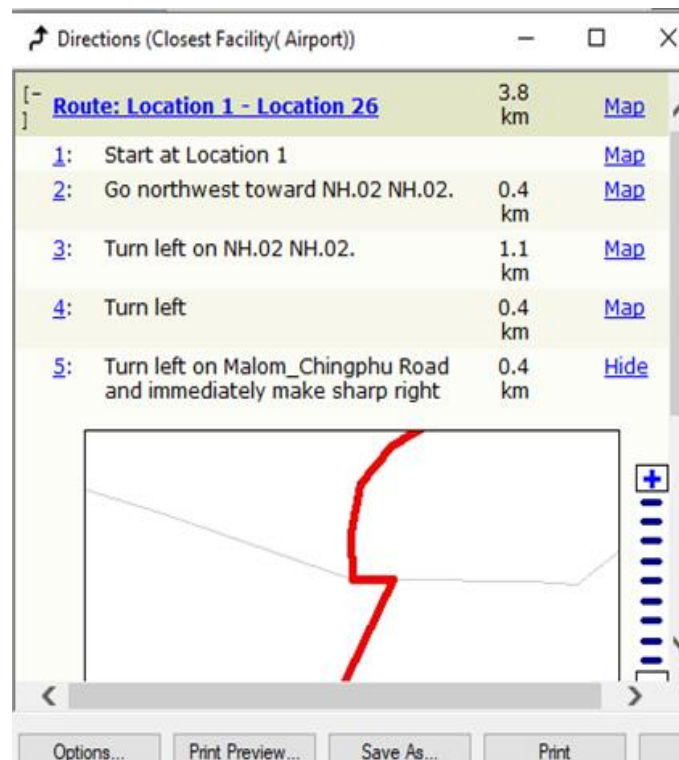


Figure 4.24: Closest facilities windows from Airport

#### **4.9 PROPOSED SERVICE AREA ANALYSIS**

The spatial distribution of different services such as hospitals, universities, hotels, and tourist places, airports, bus terminals, and police stations through a route network which is also known as service allocation analysis. With the help of this analysis, the efficiency of these services in terms of time and distance may be analysed in the actual service area of different facilities or whether these facilities are enough for that area, if not then how much is required as shown in figure 4.23.

The service area based on the buffer with an estimated travelling distance of 1 and 1.5 km covers each market centre which shows the availability of shopping malls, restaurants and other amenities for tourist's people are available. Seven service area polygons which calculated for each facility in a service area for amenities based on travel distance, with a buffer of 3, 5, 10, 20, 50, 150, 250 km. The dark colour means a sufficient amount of amenities are available in this area. The area has less availability of amenities for tourism and new amenities are required as shown in Map 4.26.

#### **4.10 DEVELOPMENT OF TOURIST CIRCUIT IN MANIPUR**

Manipur is consisting of unique culture, ancient traditions and natural attraction sites for tourism. Manipur is a state with a diversity of rich cultural heritage, art and architecture, historical and religious which attract tourists from all over the world.

As Manipur is a hillock region and confined with greenery natural surrounding and has all the qualities to attract tourists and high potentiality of tourist sites and has the opportunities to develop tourist circuits as Manipur has enough opportunities for trekking, rock climbing, bird watching, photography, adventure sports and many other nature-based recreational activities to fulfil the desires of tourist. Over the past years, tourism-related activities have grown up rapidly in the state of Manipur and have the potential to develop a tourist circuit and become the tourist hub of the region.

The Indian government has introduced a religion based tourist circuit and can redesign and spiritual tourism or multi-faith image has been presented. Under the

12<sup>th</sup> five years plan (2013-17), the ministry of Tourism India has developed a spiritual tourism circuit not only for sustainable development and growth of tourism and also to promote India as a spiritual tourist destination (Arshida, 2012).

Manipur has also developed a spiritual circuit under Swadesh Darshan Scheme, Ministry of Tourism and was inaugurated on December 21, 2020. The spiritual circuit consists of five components viz. Shree Bijoygovindajee temple – Shree Govindajee Temple – Kaina Temple – Shree Bangshibodon Temple – Shree Gopinath Temple.

#### **4.10.1 POTENTIAL TOURIST CIRCUIT IN MANIPUR**

The present study found that due to different road speeds travelled, if the length is taken as impedance it covers 108.7 km distance but if the time is taken as impedance it covers 109 km distance. The only 1-minute difference in time speed between both impedance routes was only higher-order taken into consideration for the study. Along with the best route ArcGIS network analysis provides a turn by a turn route map and six tourist sites have been created are shown below as well as shown in Plate 4.1 and a visual representation of the tourist circuits in figure 4.27.

1. Imphal-West – (Imphal Viewpoint tourist complex-Kangla-Ima Keithel-Saheed Minar)- Bishnupur – ( Maibam Lokpa Ching – Moirang – INA Complex – Loktak Lake – Keibul Lamjao National Park – Churachandpur – (Adventure Tourism Complex of MMI - Khuga Dam Site - Gelijang Resort).
2. Imphal-East – Imphal war cemetery – Imphal-West – Khonghampat-Kangpokpi – (Kanglatombi war memorial – Mt. Kouburu Peak – Senapati – (Dzuko Valley – Willong Megalith – YangKhullen Wonder).
3. Imphal -West – (State Museum – Nupilal Complex – Thoubal – Khongjom – Tengnoupal – (Langol peak – Moreh)
4. Imphal-West – Manipur Science Centre – Kangpokpi – Singda Tourist Home – Tamenglong – (Zeilad Lake - Barak Waterfall) – Jiribam – Ningshingkul.

5. Imphal-East – Hatta War Cemetery – Kangpokpi – Sekta Living Museum – Kamjong – Chadong adventure watersports – Ukhrul – (Battle of Shangshak – Kangkhuei Cave – Shirui National Park – Nungbi Pottery).
6. Imphal-East – Hapta Mela Ground – Manipur Adventure & Allied Sports Institute Complex Keirao – Mutua Museum Andro – Santhei Eco-Park Andro.
7. Imphal-West – Shree Bijoygovindajee temple – Imphal-East – (Shree Govindajee Temple – Kaina Temple) – Thoubal – Shree Bangshibodon Temple – Bishnupur – Shree Gopinath Temple.( spiritual circuit under Swadesh Darshan Scheme)

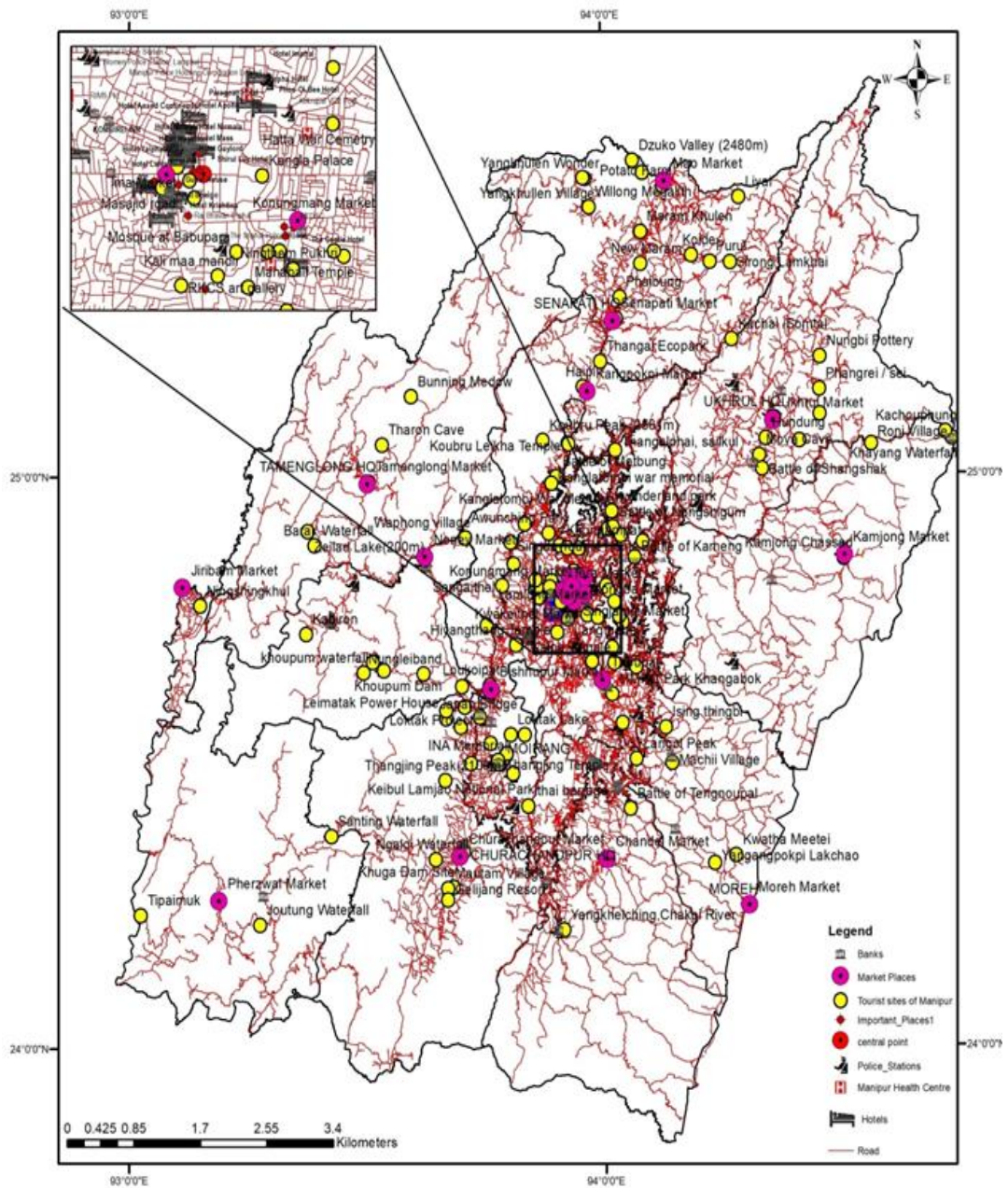


Figure 4.25: Service Available in Manipur

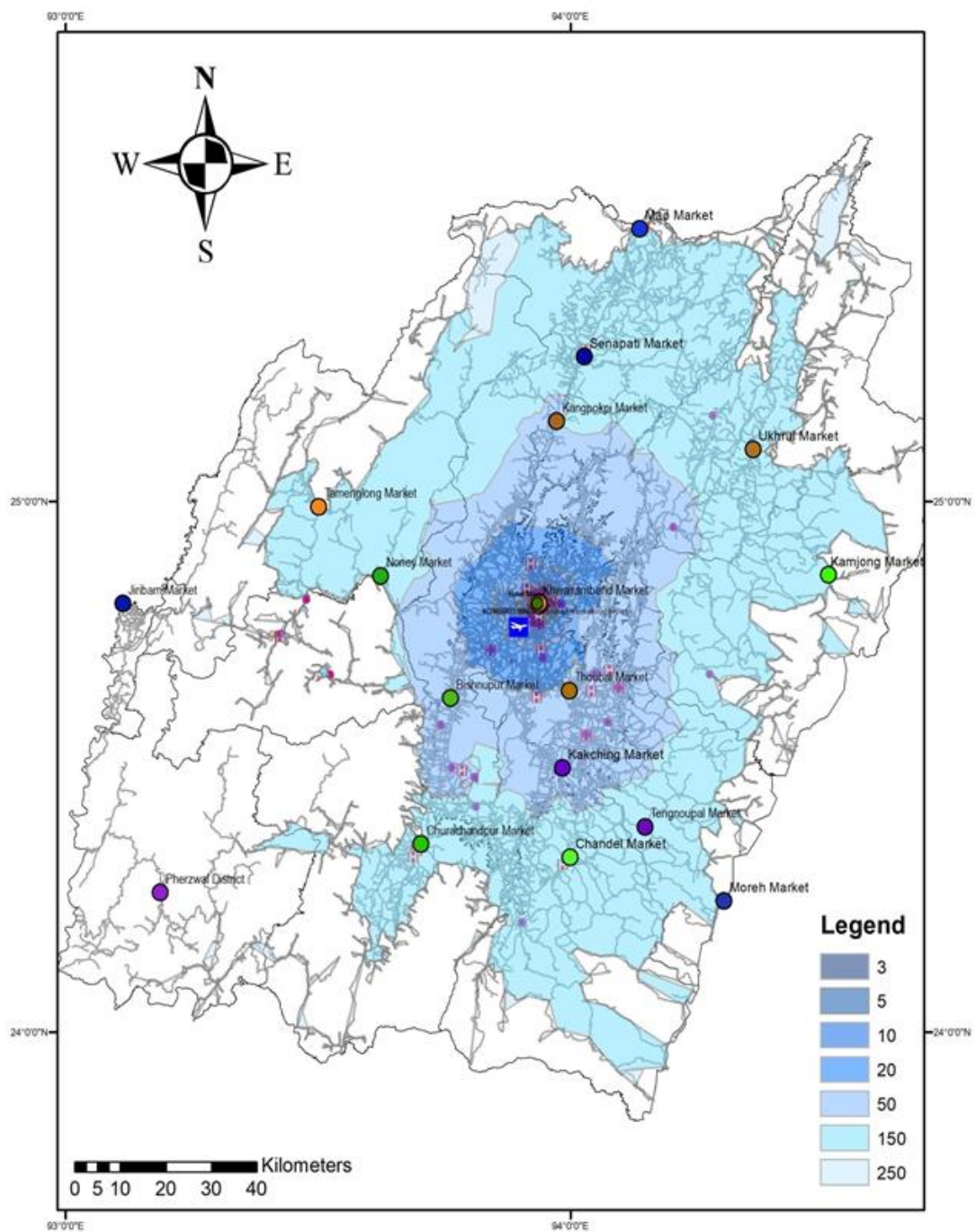


Figure 4.26: Service Area for different amenities available for tourists in Manipur



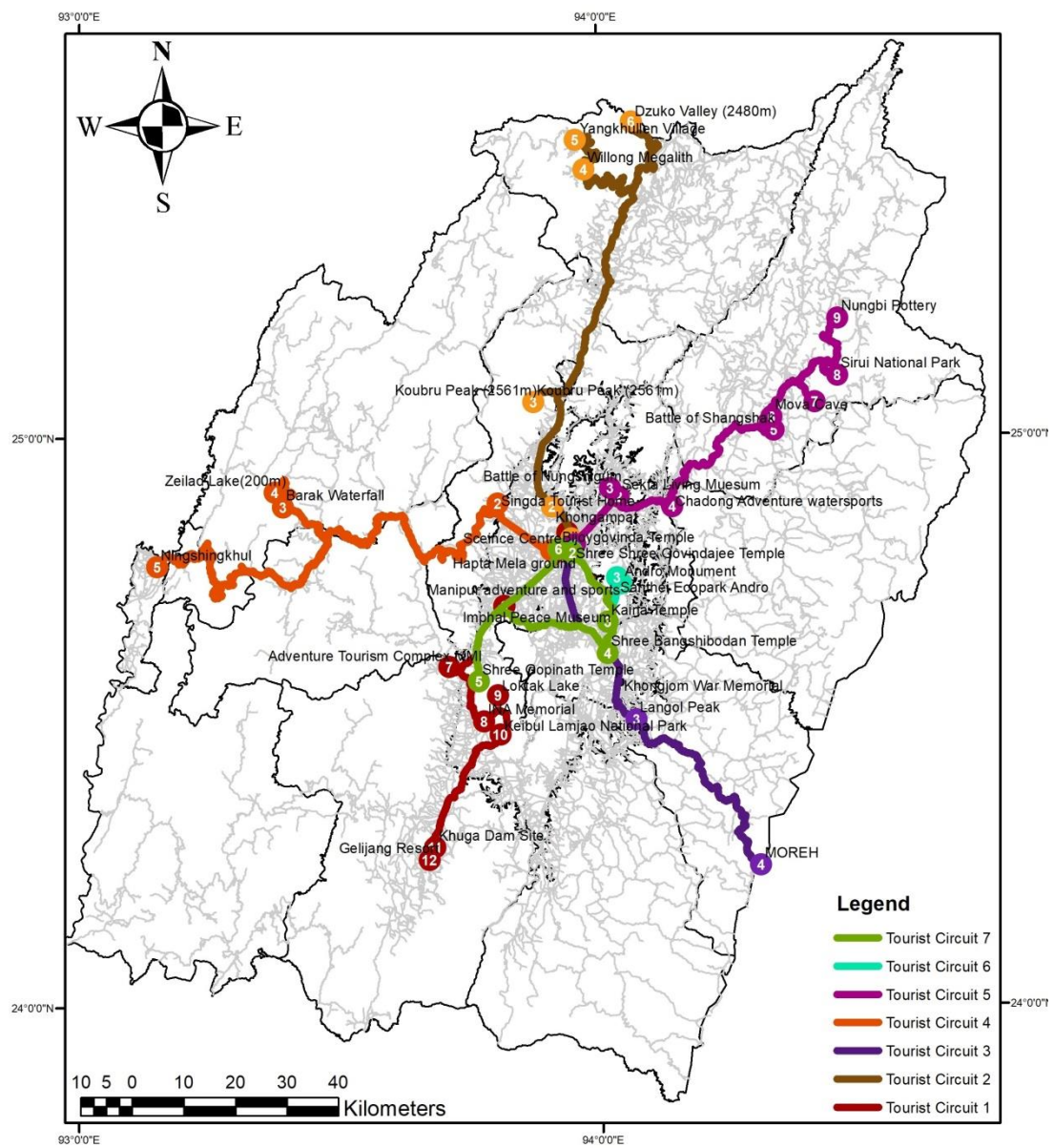
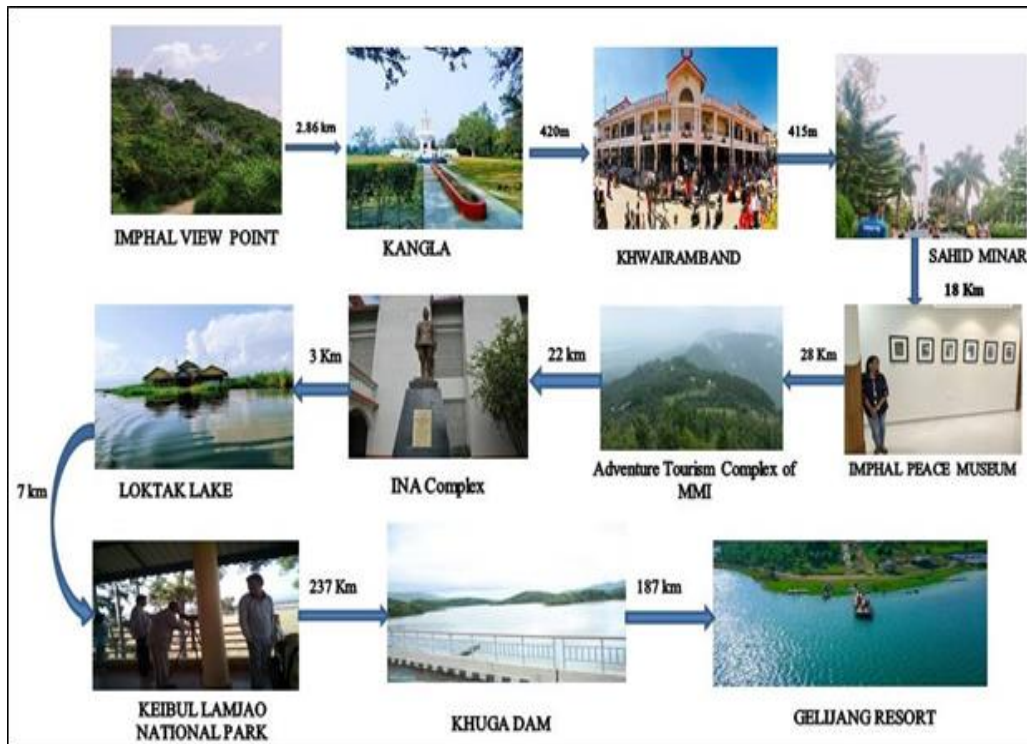
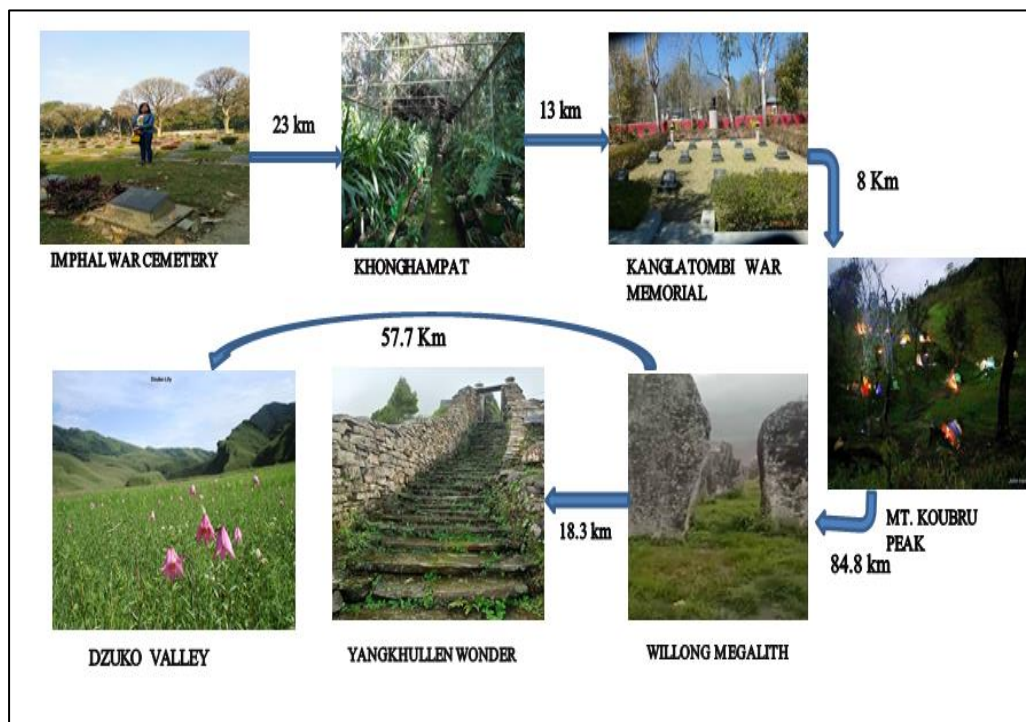


Figure 4.27: Tourist Circuits in Manipur



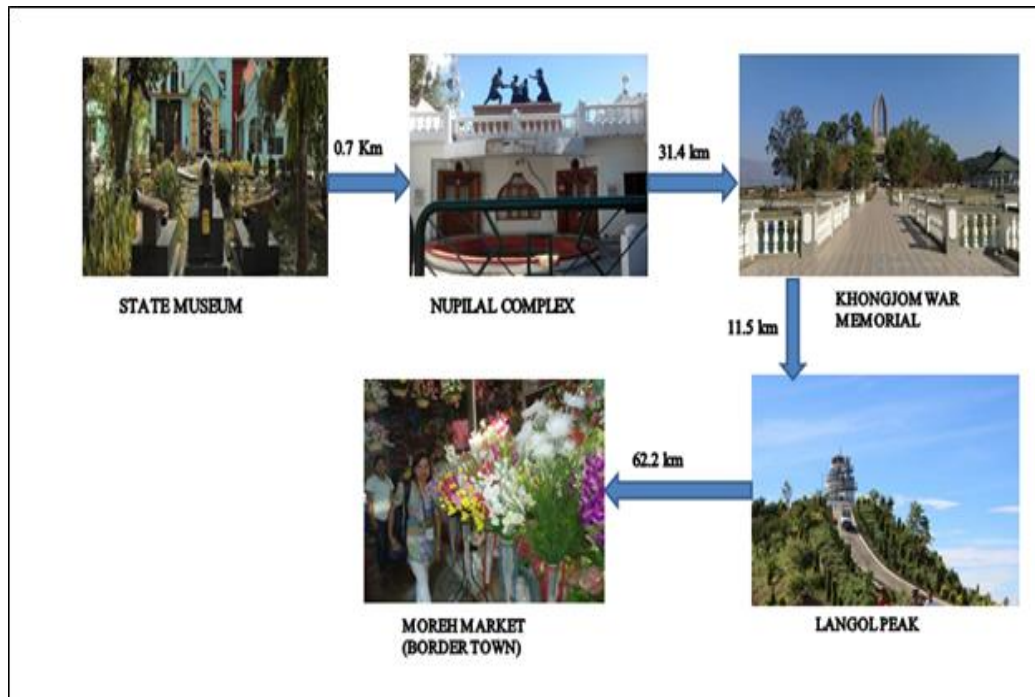


### TOURIST CIRCUIT 1

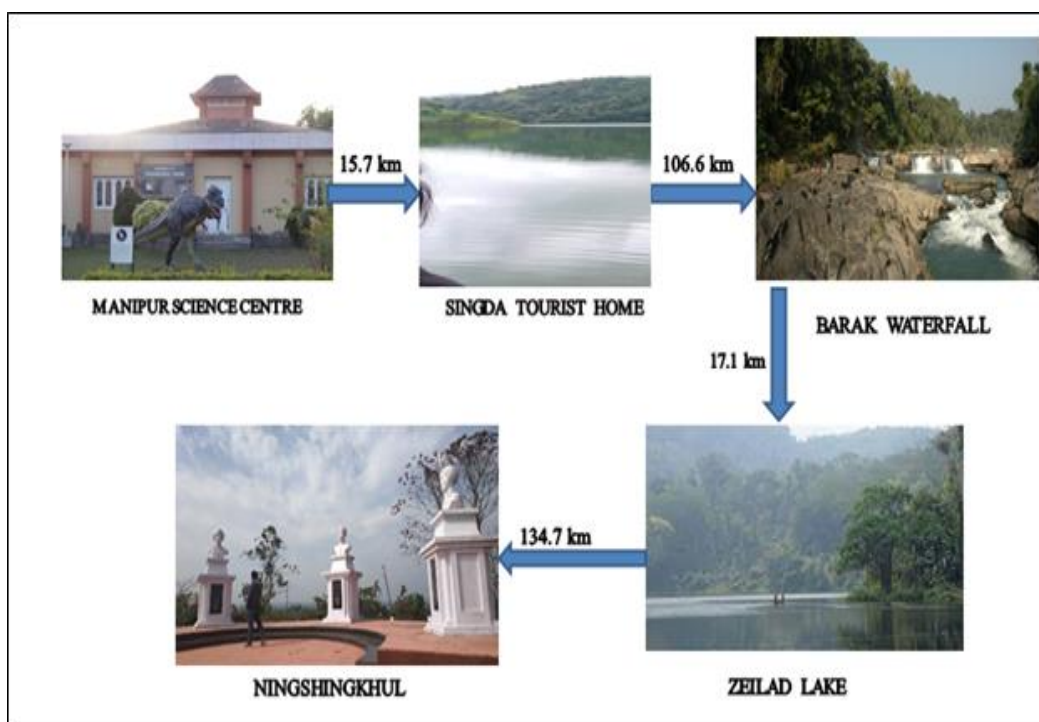


### TOURIST CIRCUIT 2

PLATE NO. 4.1



### TOURIST CIRCUIT 3



### TOURIST CIRCUIT 4

PLATE NO. 4.2



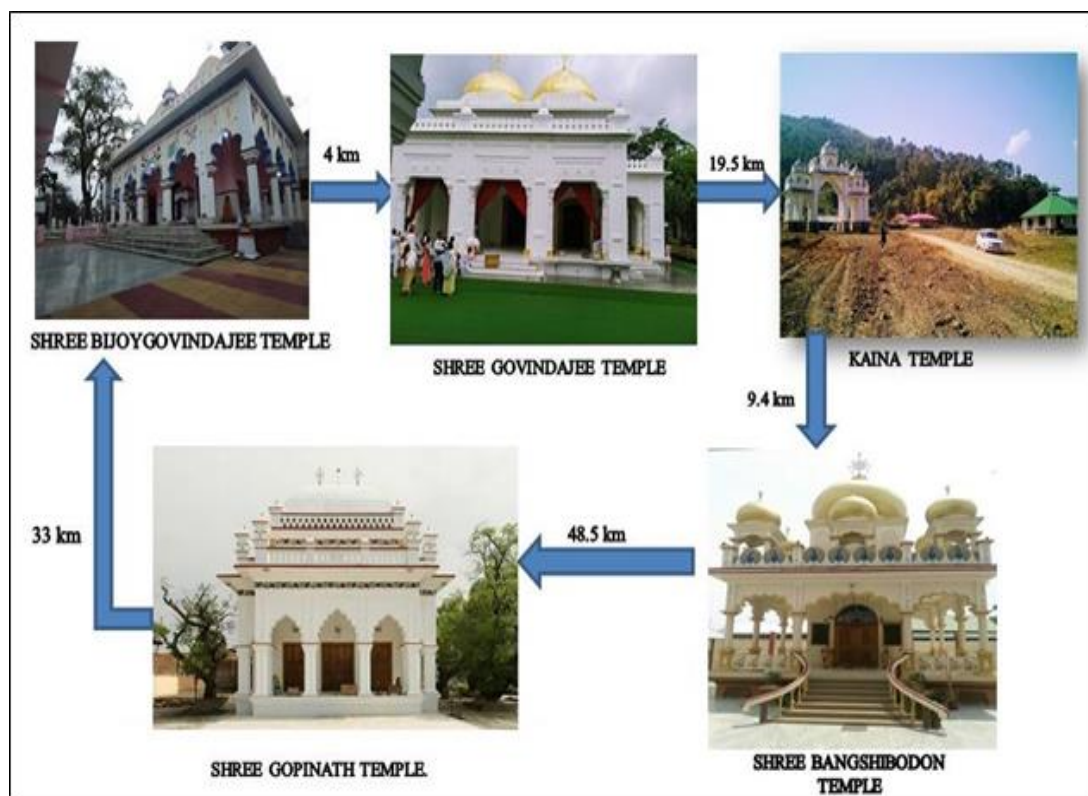
### **TOURIST CIRCUIT 5**

**PLATE NO. 4.3**





### TOURIST CIRCUIT 6



### TOURIST CIRCUIT 7

PLATE NO. 4.4

#### **4.10 FACTOR ANALYSIS THAT SUPPORTS THE DEVELOPMENT OF POTENTIAL TOURIST SITES**

The development of Tourism destinations for travellers has been influenced by many factors with an exclusive focus on tourist satisfaction and remarkable services. Manipur has taken up tourism, a vital role in the state economy towards new initiatives making changes by developing remote areas, women and other disadvantaged groups and regenerating the environment (Manipur Tourism Policy, 2014). Principal Component Analysis is used to pinpoint the variables associated with GIS modelling and helps to map the identification of the hotspot of the underdeveloped region (Petrişor et al., 2012). At the regional level tourism industry development destination manifested all interconnections and interdependencies of a given system with the particular environment (Stankova & Vasenska, 2019). GIS helps to identify the undeveloped potential area (Mohd et al., 2020) and using SPSS factor analysis also helps to identify the significant factors for tourist satisfaction and is useful to plan for better tourist sites for future development and can explore the potential tourist sites (Danish & Chakraborty, 2019).

This study focus to determine the development of the tourism sector in Manipur and identifying the potential tourist site in Manipur using two methods, factor analysis methods and another is a geographical information system (GIS). The first method's results determine the most influencing variables and factors (eigenvalues above 1). Based on these results, the most influencing variables and factors are mapped through the Geographic Information System model. According to Petrişor et al.(2012), using PCA in conjunction with GIS modelling to assess the development within the territorial subunits of a given region and this method also shows the potential as a decision-support tool, by pinpointing underdeveloped areas that require special attention.

##### **4.11.1 CHARACTERISTICS OF THE DEVELOPMENT OF TOURISM SITES IN MANIPUR**

To reach international standards, Manipur Government has taken up the efforts to set up tourism facilities by developing infrastructure and providing special

incentives to the private sectors and other concerned departments (20 Years Perspective Plan Manipur, 2018).

Table 4.9. Socio-demographic characteristics of tourists

VARIABLES	FREQUENCIES	CATEGORY %	CUMULATIVE%
Gender			
male	105	52.2	52.2
Female	96	47.8	100.0
Age			
Under-18	10	5.0	5.0
19-29	28	13.9	18.9
30-39	61	30.3	49.3
40-49	55	27.4	76.6
50-59	34	16.9	93.5
60-69	13	6.5	100.0
Educational Qualification			
High School	16	8.0	8.0
Under Graduate	54	26.9	34.8
Graduate	85	42.3	77.1
Master's Degree	42	20.9	98.0
Ph.D Degree	4	2.0	100.0
Settlement			
Urbanite	103	51.2	51.2
Ruralite	98	48.8	100.0

Religion			
Hindu	86	42.8	42.8
Muslim	14	7.0	49.8
Christian	41	20.4	70.1
Other	60	29.9	100.0
Marital Status			
Married	97	48.3	48.3
Unmarried	94	46.8	95.0
Widow	10	5.0	100.0
Occupation			
Service	51	25.4	25.4
Business	32	15.9	41.3
Unemployed	24	11.9	53.2
Farmer	20	10.0	63.2
Student	18	9.0	72.1
Retired	16	8.0	80.1
Other	40	19.9	100.0

Source: Questionnaires based analysis in SPSS 20

#### **4.11.2 CHARACTERISTICS OF THE RESPONDENTS**

52.2% of respondents are male and 47.8% are females, based on table 4.6. Most of the respondents are between 30-39 years old and comprise 30.3% and 42.3% of the respondents are graduates forming the largest percentage. The majority of respondents were locals and visitors from neighbouring states. The respondents also comprise foreigners but they are of relatively lesser percentage.

#### **4.11.3 FACTOR ANALYSIS THAT SUPPORTS THE DEVELOPMENT OF POTENTIAL TOURIST SITES WITH THE HELP OF TOURIST OPINION AS A TOURISM DESTINATION IN MANIPUR**

To assess the level of development of potential tourist sites in Manipur, 7 variables are being used. The principal components with specific variables which indicate the associations are presented in table 4.10. The results of the PCA found that out of seven variables only three variables (Transport facility, Sanitation Facility, Preservation of historical Monument) were used to evaluate the level of potential tourist sites in Manipur. Through GIS modelling, the map was obtained using their weights in fig. 4.28. These three variables describe the development of potential tourist sites with the help of tourist opinion.

Table 4.10: Results of Principal Component Analysis for development of potential tourist sites

Component	Initial Eigen Value	% variability explained	Corresponding variables
1	7.026	63.874	Transport Facility
2	1.339	12.172	Sanitation Facility
3	1.108	10.071	Preservation of historical Monuments

Using the factor analysis method, the factors affecting the tourist satisfaction level in Manipur have been identified. 15 sub-attributes were used to analyze the varimax rotation matrix of factor analysis.

Based on the factor analysis results KMO MSA sampling adequacy is 0.801. Here, the sample adequacy variable can be analyzed because the value of KMO MSA is more than 0.7. Here, the Chi-Square value is 2775.399 with 55 degrees and the variables are deserved to enter the subsequent analysis because the value of Barlett's Test of Sphericity shows the number 0.000.



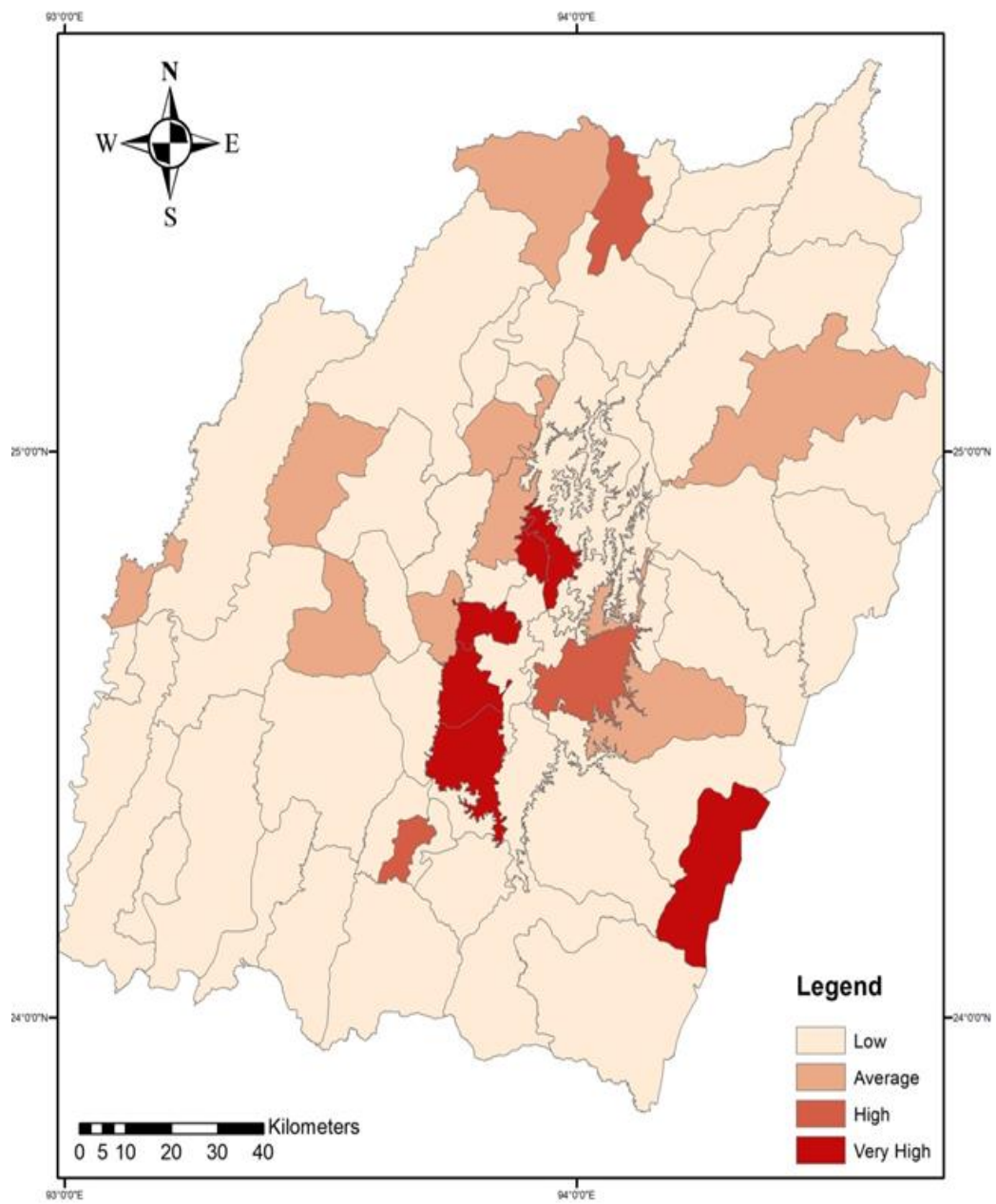


Figure 4.28: Spatial distribution of development of tourist sites

Table 4.11: KMO and Bartlett's Test		
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.801
Bartlett's Test of Sphericity	Approx. Chi-Square	2775.399
	df	55
	Sig.	.000

In this study using the Varimax rotation method, the number of Variables which has a high loading on a factor is minimized. Table 4.12 shows the correlation variables between three components that form factors.

Table 4.12: Rotated components Matrix

	Component		
	1	2	3
X1	.921	.152	-.035
X2	.762	.187	.401
X3	.742	.440	.292
X4	.720	.363	.398
X5	.207	.927	.244
X6	.164	.888	.341
X7	.510	.730	.308
X8	.607	.707	.082
X9	.050	.187	.917
X10	.251	.327	.820
X11	.526	.258	.672
Extraction Method: Principal Component Analysis. Rotation Method: Varimax with Kaiser Normalization.			

The above table shows the outcomes of the rotation variable. Three factors are formed in which each number is a factor: (1) Factor 1: X1, X2, X3, X4; (2) Factor 2: X5, X6, X7, X8; (3) Factor 3: X9, X10, X11. Groups of variables are given based on the results and form into three factors as follows:

1. Factor 1: X1(Tourism Safety), X2(Disposal of Waste Material), X3 (Sanitation facility), X4 (Preservation of historical monuments). In factor 1 some variables are included that support the basic requirement for tourism sites for tourist satisfaction.

2. Factor 2: X5 (Food Quality), X6 (Behavior of the Local People), X7 (Transport Facility), X8 (Accommodation Facility). This factor included those variables which show the road condition and transport systems, as well as amenities facilities, are very much important for the tourist satisfaction. Food and beverage shopping & entertainment services, Security and safety, and Transportation have positive associations with domestic traveller's satisfaction (GIAO et al., 2021).

3. Factor 3: X9 (Tourism Information), X10 (Tour Guide), X11 (Parking). This factor includes the variables which support the development of tourist sites. Tour guide performance on tourist shopping behaviour by examining the mediating effects of credibility trust and tourist satisfaction has the strongest effect (Chang, 2012).

## **CHAPTER V**

### **CONCLUSION, FINDINGS AND SUGGESTIONS**

#### **5.1 CONCLUSION**

Tourism started as the largest global industry in the 20<sup>th</sup> century and even grew faster in the 21<sup>st</sup> century. In India, the tourism sector has immense possibilities for growth with vast culture and religious heritage, and varied natural attractions.

The movement can be in the country or the tourists can also travel to foreign destinations for the tourism purpose. Every person in this world has his likes and dislikes. Human thinking varies from person to person. Human thinking is diverse, and human wishes and desires vary. People in the world have reason to travel. Some travel for business purposes, some for medical purposes to get a good medical facility, some travel to visit a holy place while some travel to see the natural diversity.

Tourism is a fast-growing industry for promoting peace and providing jobs, generating income, diversifying the economy, protecting the environment and promoting different tourist sites in developing countries.

Manipur has 16 districts, 66 sub-divisions, 69 blocks and 52 towns. During the year 2015-16, the number of domestic tourist arrival in Manipur was found higher in the Imphal-West district among the rest of the district. Manipur is very sluggish. From 2016-to 2017, the number of foreign tourists increased for both foreign tourists and domestic tourists. The highest growth rate for both foreign tourists and domestic tourists was recorded in the years 2006-17 (29%), 2008-09 (14%), 2017-18 (13%), and 2019-20 (18%). During the year 2015-16, the number of domestic arrival in Manipur was found higher in the Imphal-West district among the rest of the district. But in the year 2018-19, four districts i.e. Imphal-East, Tamenglong, Chandel and Ukhrul were found to have increase in domestic tourists as compared to the year 2015-16. This is due to the development of infrastructure and organizing the Sangai festival as well as Shirui lily festival.

The present research focuses on the opportunities for the development of the tourism industry in the state and the possibilities of taking up profitable enterprises in

tourism-related activities. In the year 2020-21, the number of foreign and domestic tourist arrivals is relatively increased. To the fulfillment of tourists' demands, the government should take more initiatives to increase the number of hotels, restaurants; cafeterias etc. and try to supply proper, good electricity, drinking water and sanitation.

In Manipur, Tourism has been growing up fast over the years with massive natural, geographic and cultural diversity attracts for all types of tourists and visiting the state for various kinds of purposes. The purpose of travel is divided into nine categories as Pleasure, Conference, Pilgrimage, Visiting Relatives/ Friends, Health, Business trip, Sports, Merry Making. For domestic tourists, merrymaking and pilgrimage are the most important travel purpose for visit whereas, for foreign tourists, historical and cultural purposes are the most important purposes. Eco tourism-based tourist sites viz National Parks and Wildlife Sanctuaries are another significant reason for travel for foreign tourists. Business based tourist activities are the cause for both domestic tourists and foreign tourists. Such activities as handloom and handicraft activities which identify the ethnic identity of the state are displayed. And numerous man-made parks have been developed for the growth of the economy. Manipur has enriched with unique floras and faunas with extensive forest areas. The state has 2 National Parks, 7 Wildlife Sanctuaries and 12 Community Reserves and forest areas that are classified as 8.42% reserved forest area and 23.95% protected forest areas.

The principal components with specific variables indicating the three variables viz transport facility, sanitation facility, preservation of historical monuments were evaluated the level for the development of potential tourist sites with the help of tourist opinion. Transportation plays a great role in promoting tourism/tourism sector. Without transportation, tourists will not be able to reach the sites or places they wish to visit. When a good transportation facility is available, there will be growth and development in the tourism sector as the lack of transport accessibility obstructs tourism. Sanitation is quite necessary for promoting tourism because when the standard quality is not maintained at tourist places; there will be a blowback both to the tourists and the locals. Supply of good drinking water, proper management of

wastewater, safe disposal of waste matter for pollution control and medical care are needed much for tourism to flourish. Historical monuments reflect the culture, tradition and religious beliefs of the past. Preserving these monuments can attract tourists as they can know a lot about our culture and identity and about our glorious past.

The research survey shows that about 20.4% and 16.4% of the sample respondents have visited on account of Pilgrimage and Educational Trip purposes for educational tour to provide an opportunity for the students of learning about travelling, about the culture, tradition and religion of the places they visited. Students can get more information about the environment, practical knowledge about the people and places as well as they get an opportunity for better exposure to new places and get better knowledge from the trip and all the educational tour are interstate only. For pilgrimage purposes tourists come from neighbouring states mostly from Assam and Tripura for attending religious functions, meetings and events. About 15.4% of tourists visited the states for conference and official works from different states of India and 8.9% of them for the purposes of pleasure and recreation. About 8.5% of tourists are enjoying travelling with their relatives and friends for attending occasions like weddings, funerals and other family events. 10.4% of them are due to their merrymaking purposes as well as to explore and enjoy the scenic beauty of the state and about 5.5% of tourists are visiting for medical and health purposes from neighbouring states and neighbouring countries like Myanmar. Here, the tourist visited to receive medical facilities from the hospitals, clinics and other specialized institutes for treatment. The rest 8.5% of the respondents visited from different parts of the state of India for sporting purposes such as teaching courses, interstate football, hockey, cricket tournaments, etc.

Hence, we observed that most of the tourists have visited the state on account of pilgrimage and educational purposes. This is because the state government has taken up special steps for the development and reconstruction of pilgrimage sites such as Shree Bijoygovindajee temple, Shree Govindajee Temple, Kaina Temple, Shree Bangshibodon Temple and Shree Gopinath Temple under Swadesh Darshan Scheme, Ministry of Tourism. Not only this, the state government has also special

plans to protect the endangered species like the Sangai, which is found only on the floating island of Loktak lake i.e. Keibul Lamjao in Bishnupur district, the preservation of the unique flower Shirui lily, which grows only at the shirui hills in Ukhrul district and the improvement and management of Loktak lake, which is the largest fresh water lake in North-East India.

Besides these, it is also observed that the tourist percentage for the purpose of merrymaking has also increased as the state has lots of places endowed with scenic beauty. They have visited to explore and enjoy the natural beauty of the state such as the lushy hills, stunning waterfalls, calm lakes, historical forts etc. and also the newly set up man-made parks and gardens by private entrepreneurs.

In addition to these, sports tourism has also increased a lot since the state has improved sports complex, grounds and fields such as Khuman Lampak sports complex, Mapal Kangjeibung etc. for different events of sports. For example – the Polo Tournament which is held every year at Mapal Kangjeibung with Polo players from different countries and interstate tournaments of different events where players from other states take their participation.

The socio demographic characteristic of tourist shows that about 52.2% and 47.8% of the sample respondents are male and female respectively. The age structure of the tourist is also an important factor. The majority of the respondents were in the age group of 30-39 i.e. 30.3% and 40-49 i.e. 27.4% respectively. These age groups were engaged in government as well as private sector visited the tourist's sites during the holidays or at the weekends. In the age group of 50-59 i.e. 16.9% and 60-69 i.e. 6.5% of the respondent were pensioners, farmers etc. visited the tourist sites for recreation and relaxation.

The tourist's marital status is also an important factor with 48.3% are married, 46.8% unmarried and 5.0% widow which influence accommodation, food and other facilities. Both domestic and foreign tourists have visited with their family members especially in the parks and resorts such as Loktak Sendra Resort, Gelijang Resort and many more.

As per research survey, all the tourist were mostly literate as about 2.0% of the sample respondents are Ph.D. qualified who visited for personal purpose like participation in conference, seminars and interaction programmes, 8% are matriculates enjoying happy hours with friends, 20.9% are master's graduates having leisure hours with colleagues, 26.9% are under graduates who visited for outing and 42.3% are graduates having quality time with friends and relatives.

Transport system and accommodation facilities also play a vital role in the development of tourism. A study from the GIS service area analysis based on the buffer with an estimated travelling distance of 1 and 1.5 km covers each market centre which shows the availabilities of shopping malls, restaurants and other amenities for tourist's people. This provides the tourist the idea about the mode of transport, road condition etc. Manipur is connected with different cities in India. The state is connected by air transport, road transport as well as rail transport network. First passenger train engine also introduced as part of trial from Khongshang railways in Noney district of Manipur.

Accommodation also plays an important role for the development of tourism activities. Almost all the hotels, lodges, guest houses and dharmashalas are concentrated in Imphal and in hilly areas of Manipur besides hotels; home stays are introduced for the tourist providing good hospitality.

The GIS network analysis application help to find the best route between two locations on the road network and is helpful for optimum planning for sightseeing with time and length impedance. The study enhanced GIS-based network analysis focuses on finding the best route, closest facility analysis, and service area determined analysis to help the users to plan for tourism. Therefore, in the future GIS-based network analysis which helps the user to save time and satisfaction and SPSS analysis helps to determine the level of development of potential tourist sites with factors like basic requirements for tourist satisfaction, amenities for tourists and factors which support tourism development i.e. tourist information centres, tour guide and proper transport facilities. There is an unlimited potential tourist



destination that needs proper concern from the state government as well as from the central government.

## **5.2 FINDINGS**

The main aim of the present research was to identify and map tourist sites and to understand the developments in tourist destinations. The study which enhanced GIS-based network analysis focus on finding the best route, closest facility analysis, and service area determined analysis to help the users to plan for tourism in Manipur. SPSS factor analysis method helps to identify influencing factors of the tourist decision and GIS modelling helps in mapping the development of potential tourist sites of Manipur. The results show that visitors are satisfied with the amenities provided in tourist sites of Manipur. However, there has been lack of facilities for transport and tourism information. Therefore, some factors such as accommodation, sanitation, transport and travelling, and tourist information centres become the most important aspects to attract sites and GIS helps in recognizing those potential tourist sites. The major findings of the study are as follows:

- Manipur was earning Rs. 55.8 Lakhs in the year 2018-19 from tourism and increase up to Rs. 58.6 Lakhs in the year 2019-20, which recorded the highest amount during the study period.
- In the year 1972, Tourism was established and upgraded in 1973 and in 1987. A tourist home was constructed at Sendra in 1976 and 6000 tourists including foreigners were recorded that year and 108 foreigners too visited in 1978.
- In 2000-01 around 29 tourist sites have been identified and with an increasing number of tourists recorded as 1,04,263 and 1,48,721 tourists including foreign tourists have also been increasing in 2016-17 with 81 tourist sites that have been identified. So far, 157 tourist sites have been identified in 2020-21 and 153 popular tourist sites have been identified.
- During the year 2015-16, the number of domestic arrival in Manipur was found higher in the Imphal-West district compared to the rest of the district. Due to the development of infrastructure and with an increasing number of homestays in the hilly districts in the year 2018-19, four districts i.e. Imphal-East, Tamenglong,

Chandel and Ukhrul recorded increase in domestic tourists as compared with the year 2015-16.

- From the kernel density analysis, all the popular tourist sites in Manipur are mostly confined to valley districts like Imphal-West, Imphal-East and Bishnupur district and the hill districts like Ukhrul, Tamenglong and Senapati district of Manipur that endowed with the natural and scenic beauty of hills and mountain ranges has the highest density of tourist sites. The density of the tourist sites can be found higher in the central part of the Imphal city as all the tourist sites like Natural, Cultural, Man-Made and Religious Tourism sites are highly available in these part.
- There are 59 Natural, 55 Cultural, 23 Man-Made and 16 Religious sites among the popular tourist sites both from the hill and valley areas of Manipur.
- Twenty-two sacred groves have been identified with the possibilities to develop and promote eco-tourism. The state has 2 National Parks, 7 Wildlife Sanctuaries and 12 Community Reserves and forest areas are classified as 8.42% reserved forest area and 23.95% protected forest areas.
- Majority of the sample respondents are visited for the purposes of pilgrimage. About 20.6% tourists have preferred the pilgrimage centres.
- About 16.4% of the sample respondents have visited due Educational Trip purposes for educational tour to provide an opportunity for the students of learning about travels, especially to the places they visited.
- About 15.4 % of tourists visited for conference from different states of India.
- About 8.9% of them due to purposes for pleasure and about 10.4 per cent of them are due to their merrymaking purpose.
- About 8.5% of tourists are enjoying travelling with their relatives and friends for attending weddings, funerals or other family events.
- About 5.5% of tourists are visiting for medical and health purposes from neighbouring states and neighbouring countries like Myanmar.
- About 8.5% of the respondents visited from different parts of the state of India for sporting purposes such as teaching courses, interstate football, hockey, cricket tournaments, etc. and also for International Polo (Sagol Kangjei in local language) Matches organized by Manipur Polo Association.

- The closest facilities analysis finds the closest service centre that can be reached in a specific period from tourist sites based on travel time and traffic information available which determine the user to locate the specified location. Seven closest tourist places from the heart of the city have been identified.
- Closest facilities analysis helps to find the number of facilities like hotels, banks, Police Stations, Hospitals etc. and direction of travel i.e. from present location and nearby facilities or the nearby facility and present location.
- The closest facilities help to identify based on the shortest distance which shows minimum cumulative impedance between present locations and nearby facilities and indicates the closest facility direction window from present locations to the nearby facilities.
- The service area analysis based on the buffer with an estimated travelling distance of 1 and 1.5 km covers each market centre which shows the availabilities of shopping malls, restaurants and other amenities for tourist's people are available. Seven service area polygons are calculated for each facility in a service area for amenities based on travel distance, with a buffer of 3, 5, 10, 20, 50, 150, and 250 km which has been identified.
- Manipur has also developed a spiritual circuit under Swadesh Darshan Scheme, Ministry of Tourism and was inaugurated on December 21, 2020. The spiritual circuit consists of five components viz. Shree Bijoygovindajee temple – Shree Govindajee Temple – Kaina Temple – Shree Bangshibodon Temple – Shree Gopinath Temple.
- According to field survey, 52.2% of respondents are male and 47.8% are females. Most of the respondents are between 30-39 years old and 30.3% and 42.3% of the respondents are graduates forming the largest percentage. The majority of respondents were locals and visitors from neighbouring states. The respondents also comprised of foreigners but they are relatively lesser in percentage.
- About 2.0% of the sample respondents are Ph.D. qualified, 8% are high school, 20.9% are master's graduates, 26.9% are under graduates, 42.3% are graduates. This information indicates that people who visited Manipur were all literate.

- About 51.2% of tourists are urbanite and 48.8% ruralite and about 48.3% are married, 46.8% are unmarried and 5% are widow.
- About 42.8% of tourists are Hindus, 20.4% tourists Christians, 7.0% tourists Muslims and 29.9% from other religions.
- About 25.4% of the respondents are government employment, about 15.9% tourist's businessmen, who came from Imphal, Guwahati, Kolkata, Delhi etc. About 11.9% of respondents are from unemployed. About 10% are engaged in agricultural activities. About 8% tourists are government retired. Only 9% of the respondents are students.
- To assess the level of development of potential tourist sites in Manipur, 7 variables are being used in PCA analysis. The results of the PCA found that out of seven variables only three variables (Transport facility, Sanitation Facility, Preservation of historical Monument) were used to evaluate the level of potential tourist sites in Manipur.
- Three variables (Transport facility, Sanitation Facility, Preservation of historical Monument) describe the development of potential tourist sites with the help of tourist opinion using PCA factor analysis.
- Using the factor analysis method, the factors affecting the tourist satisfaction level in Manipur have been identified. 15 sub-attributes were used to analyze the varimax rotation matrix of factor analysis.
- Around 20 potential tourist destinations have been identified in the state. Fig. 5.1 shows the suggested locations for the potential tourist destinations depending on the tourist opinions and all these may be developed with the improvement of road connectivity to other places and other amenities for tourism infrastructure.
- According to the geographical location of tourist places, 6 tourist circuits can be developed. Among these 6 tourist circuits, 1 circuit will be completed in one day, 2 of the circuits may take to cover three to four days and the remaining circuits may take only two days.

## 5.2 SUGGESTION

From the above findings, it is observed that Manipur has vast scope for potential tourism development due to hilly and valley rich natural resources for tourism

development. The state is expecting an increasing tourist of both domestic and foreign tourists due to the prospects of an increasing number of amenities and a favourable climate. The present study has made the following suggestion for the development of tourism in Manipur.

- The geographical environment also provides a great opportunity for tourism development such as lakes, waterfalls, greenery mountains, wildlife sanctuaries, national parks etc. which attracts the tourist. Not only this, based on the cultural tourism different types of tourist sites provided a great opportunity for tourism development such as forts, monuments, festivals etc.
- Manipur has unlimited potential for the development of tourism in Manipur. It is properly concerned and enacted by the participation of the local people state government and the central government.
- Transport and accommodation infrastructure should be developed on a priority basis and the quality of transportation facilities should be increased and all the roads should be connected as well as metalled and wider to promote tourism in the state. To develop tourism in the state, there should be a long term plan and policies.
- Manipur needs to update the tourist with all the information regarding the tourist places and tourism amenities like hotels, restaurants and guest houses as well as homestays should be constructed at all such potential tourist places.
- In the present study, a few tourist places have been identified as potential tourist sites where related biodiversity and cultural diversity are identified such as Yangkhullen Village, Willong Megalith, Machii Village, Battle of Tengnoupal, etc.
- The state has the potential to develop adventure tourism and various adventurous activities like rock climbing; trekking, ballooning etc. should be developed. Nongmaiching foothills in Imphal-East district, Khuga dam in Churachandpur and the Adventure Tourism Complex of MMI, Lamdan in Churachandpur district are the ideal location for such development.
- Manipur has a diversity of rich cultural heritage which indicate in the form of traditional dance, folk dances, ritual functions, martial arts, handicrafts and handlooms etc.

- In major areas of the study region, the government should develop a tourist information centre. The road maps of the tourist places showing the important features of the state viz forts, caves, waterfall etc. should be displayed at certain locations on AH, National Highways, State Highways, District Highways, bus stand and airport will help tourist reach tourist destination and attract more tourists to Manipur.
- To attract more tourists to the study area the government should start festivals similar to Sangai Festival, and Shirui Festival.
- The various tourist facilities should be up to date with a good and clear guide map and information extensively provided at airports, bus terminals, hotels and various interesting places.
- The application of GIS in the tourism industry of Manipur Districts at large needs to critically look into the potentiality of its uses. This technology would help the development of the tourism industry which promises to provide significant direct and indirect employment.
- From research analysis, certain potential tourist sites can develop in different districts of Manipur as shown in figure 5.1 but still lacking in tourism infrastructure.
- Tourism is an overwhelming industry of private sector/service providers and hence their critical role shall be duly acknowledged. The policy seeks to sensitize all stakeholders on the shared vision which is very essential for highly efficient, responsive and sustainable tourism including private sector driven and community welfare-oriented.
- It is highly recommended that the application of GIS in tourism in Manipur as a result of the easiness and fastness of characteristic tourist sites and can have a comprehensive map of what they have in every location.

## POTENTIAL TOURIST DESTINATIONS

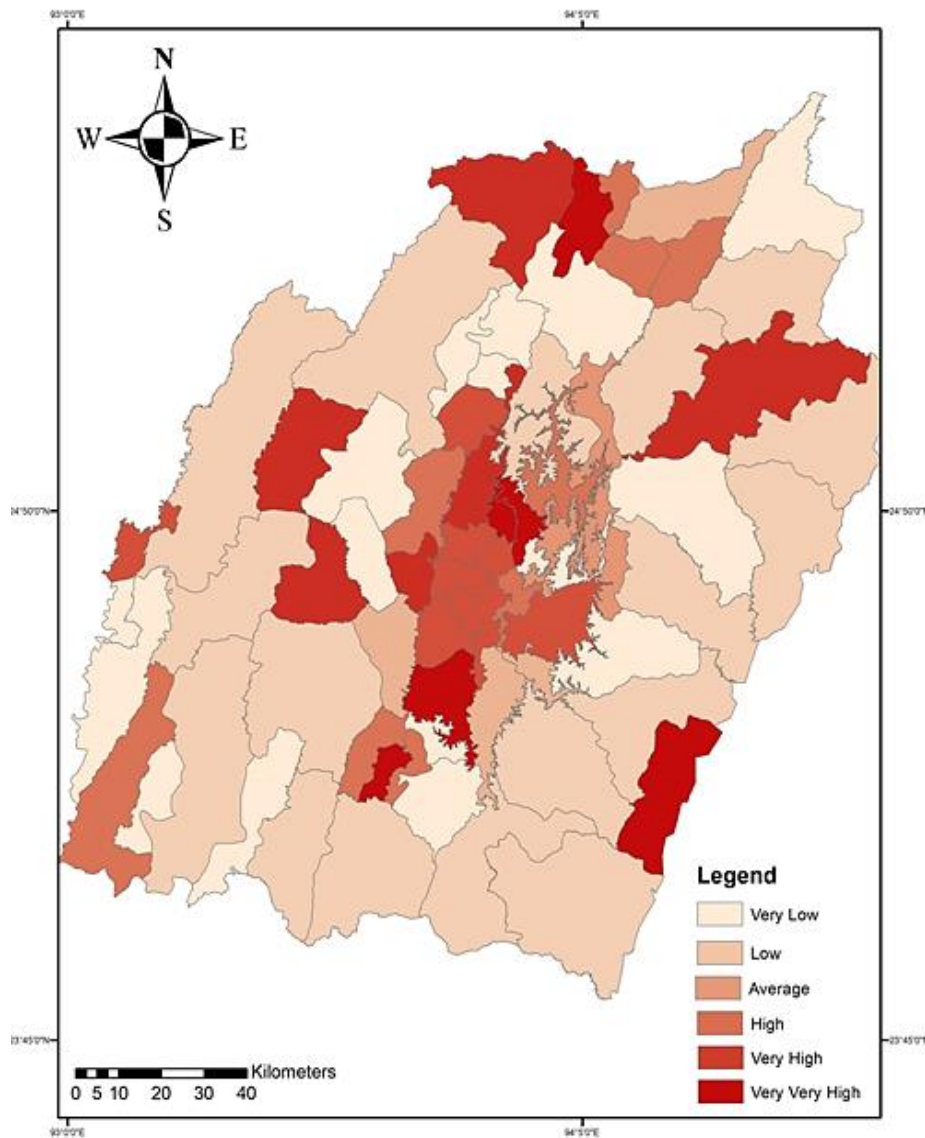


Figure 5.1: Suggested potential tourist destinations

The above figure indicates the suggested potential tourist sites which can be developed depending on the different variables. Potential tourist sites can develop with factors like basic requirements for tourist satisfaction, amenities for tourists and factors which support tourism development i.e. tourist information centres, tour guide and proper transport facilities.

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