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A Review on the Scopes of Ecotourism in Manipur: An Approach for Environmental Conservation

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ABSTRACT

The concept of ecotourism is gaining popularity among the professionals working in the field of environmental and conservation science, natural resource management and social science for achieving the goals of Ecologically Sustainable Development (ESD). Ecotourism is considered as nature based tourism which advocates for environmental conservation, protection and practical interpretation of natural environment which is socio-economically acceptable and ecologically sustainable. Manipur is an ecologically rich zone due to its distinctive Biogeographically realm,richnatural resources and climatic conditions. Ecologically, the state is an integral parts of Indo-Burma biodiversity hotspots and is known for its rich repository of various endemic flora and fauna species, enchanting landscape and scenic beauty. The state is conglomeration of diverse and dynamic socio-cultural and ethnic groups with rich tradition. These diverse ethnic groups have their distinct cultural identity, languages, rituals and practices. Moreover, handloom, handicraft, fine arts, traditional practices and indigenous traditional knowledge (ITK) of each ethnic group contributes diverse dimensions to the culture of the state. But due to socioeconomic disparity and geopolitical unrest in the region,the fragility of its sensitive ecology and richness of environment is under the threat.In order to apprehend the present trend of nature and natural resources depletion in the state, an ecologically sensitive strategy is the need of the hour that can help in achieving goals of Ecologically Sustainable Development in the state. So, ecotourism can be an effective auxiliary and useful tool for achieving sustainable development goal, if properly planned and executed through a participatory approach.

KEYWORDS: Ecological, Ecotourism, Sustainable Development, Endemic

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INTRODUCTION

'Ecotourism' is an environmentally responsible travel to a relatively ecologically sensitive and undisturbed area in order to enjoy, appreciate nature and accompanying cultural features that promotes conservation through an active involvement of local populations for socio-economic benefit[1]. Basic objective of ecotourism is to develop and manage sustainable tourism operations in natural area in order to maintain the ecological, environmental, socio-economical integrity and well-being in perpetuity[2,3]. In general, the consensus on ecotourism was developed with an objective to contribute towards conservation of ecology, biodiversity, sustaining well-being of ethnic people, promoting interpretation and learning experiences of nature through responsible and participatory tourism actions[4,5]. Accordingly, it further facilitates ownership of the ethnic and endogenous people so as to achieve lowest possible consumption of non-local resources[6]. Thus, if ecotourism is properly planned, managed and executed through a participatory approach it can serve as an viable effective tool for both government and local communities for conservation ofnatural and cultural resources of a region[7,8]. So, ecotourism equally focuses on environment, social, cultural and economical sustainability criteria in all subsequent operations to popularize, encourage andprovide sustainable livelihood option to the people residing in the periphery of protected areas and ecologically sensitive zones through a participatory process for achieving symbiotic benefits[9,10].

1. BIOGEOGEOGRAPHIC IMPORTANCE

Manipur is biogeographically and ecologically rich zone because of its unique geographical location, landscape and climate.The state is located in Indo-Myanmar arc system between latitudes 23.80^0N to 25.68^0N and longitude 93.3^0 E to 94.78^0 E sharing national border with Assam, Mizoram, Nagaland and International border with Myanmar. The state experiences contrasting spatial and temporal meteorological condition with sub-humid and sub-tropical to temperateclimate. The state receivesaverageannual rainfall of 1436 mm and around 59% of total rainfallis contributed by SW and NE monsoonsduringJune-September[11]. The minimum and maximum annual average temperature of state ranges between 1^0C to 36^0C respectively with coldest temperature reaching up to -3^0C during December and Januray. Physiographically, Manipur valleycoversonly10% of total geographical area of the state with intermontane geomorphologysurrounded by rugged-hillsextendingfrom NNE to SSW direction. Nearly about 2.85 % of total geographical area (63,616 ha) are covered by 708 number of wetland (locallyknown as "pats"), of which 167 wetlands are of an area greaterthan 2.25 ha and 541 are of smallerthan 2.25 ha. Presently, Directorates of Environment, Govt. of Manipur has identified and recognized 19 major wetlands for conservation.The state comprises of three major river basins *viz.* the Barak River basin (covering

9042 sq. km.) draining the western part of the state, Manipur River basin (covering 6332 sq. km) and the Chindwin River basin (covering 6953 sq. km)draining the eastern half of the state. The major river system and its tributaires includes River Thoubal, Imphal, Nambul, Makru, Leimatak, Irang, Iril that flow through the Manipurvalley[12].

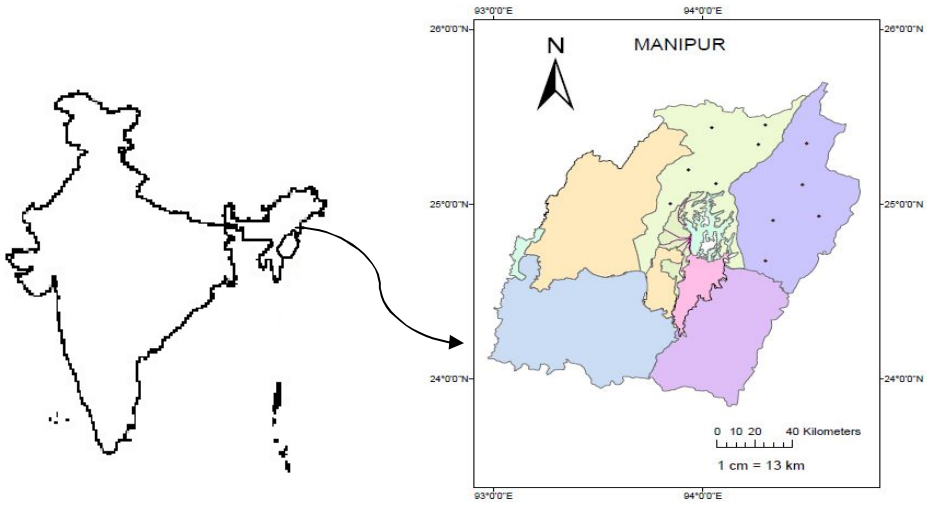

Figure1.The Figure Represents the Location of Manipur

2. PROSPECTS OF ECOTOURISM IN MANIPUR

Government of India is keen to develop Manipur as 'Gateway to South-East Asia' due to unique strategic geographical location and considering prospects for tourism and commercial activities with neighbouring countries[13]. The state is already in priority list of "Look East and Act East Policies" and many important national and international projects such as 'Trans-Asian Highways' and 'the Railways'are underway. The national highways in Manipur which connect Imphal to other NE states through NH-53 (Imphal to Silchar), NH-150 (Imphal to Dimapur) and NH-39 (Imphal to Tumu in Myanmar) which further connect to Asian Highway 1 (AH-1)[13]. The international air services to neighbouring countries have already started and development of such initiatives, appropriate infrastructure and services will develop Manipur as popular tourist hotspot and destination for all forms of tourism in SE Asian countries[14].The prospect of ecotourism depends on coherence of socio-cultural, economical and ecological linkage and participation of communities in the fields of biodiversity conservation. The state is having a veryhighpotential for developingitinto a hub of ecotourism in the country due to various unique features and ecosystem services. Some important and major factors are elaboratedhere:

2.1.Ecological Uniqueness and Biodiversity

Ecologically Manipur belongs to Indo-Burma biodiversity hotspots regions of the world which is junction of Himalayan, Trans-Himalayan and Indo-Malayan biodiversity region and is known for conglomeration of various endemic floral and faunal species, enchanting landscape and picturesque beauty. The unique 'bowl-shaped' valley is surrounded by rugged hills and mountains systems that support wide range of micro-climatic zones, ecological zones and isolated ecosystems. The forest of Manipur is found in the North-South-Burmese-Java Arcs formed by parallel folded mountain ranges that extends up to South Manipur and Chin Hills[15]. These zones comes under one of the four tropical/subtropical conifer forest *eco-region* in the Indo-pacific region that are biologically distinctive and known forsupporting some of the world's greatest variety of endemic, endangered floral and faunal species[15]. Some of the biologically rich micro-climatic and microhabitat eco-zones includes Mizoram-Manipur Kakchin Rain Forest, Indo-Myanmar Pine Forest, hills of Koubru, Esso, Khongho, Godai, Sirui, Chingpi in Churachandpur, Dzuku, Maram in Senapati, Tegnopaul and northern inaccessible hill area of Tamenglong district[16,17]. These regions are hub of rarest and endemic species with its captivating natural beauty. The state comprises of Tropical Semi Evergreen, Dry Temperate, Sub-Tropical Pine (Sub-Alpine) and Tropical Moist Deciduous forest that signify unique association of *Pinus* with the *Dipterocarp*s[19,20]. The state is also a hub of more than 55 species of Bamboo, 500 species of orchids, 430 species of medicinal plants, 34 edible fungi, 40 endemic rice variety, 160 fish species, 21 species of migratory aquatic birds within its geographical boundaries. Due to confluence of two tectonic plates (Burmese and Indian), the region is centre of variety of angiospermic plants (more than 2500 species) which has characteristics of Southeast Asian and Indian Sub-continents[21,22].

2.2.Environmental Protection Initiatives

The present state of forest cover of the state is around 76.54% (against 77.12 % record of 2003). The majorityforestcover is unclassifiedforest with only 8.4% classified as protectedforest area[16,17]. The Forest Department, Government of Manipur have recommended conservation of the following area under forest at the Barak river basin covering Senapati, Tamenglong and Churachandpur district, Siroi hills in Ukhrul district, Khong-Tenepu, Dzoku valley in Senapati district, Kailam Range in Churachandpur district, Yangoupokpi Lochao Sanctuary and Dipterocarpus forest of Chandel district, Zeilad Lake in Tamenglong[20]. Loktak lake in Bishnupur district (a Ramsar site) known for its naturally occurring '*phumdis*' (mass of floating vegetation) and southern part is *Keibul Lamjao* National Park with unique floating wild life reserve for endangered species of brown antlered deer (Sangai)[18,19]. Already 19 mammals species are enlisted in Scheduled-I, II, III, IV; 23 reptilesenlisted in Scheduled-I, II, 158 migratory avifaunal species in

Scheduled-I, II and 40species oforchids in IUCN list for conservation and also Protected Area Network programme through both in-situ and ex-situ conservation initiatives (Table 1) have been undertaken by StateForest Department, Govt. of Manipur[21,22]. The present geographical area coverage under protectedarea is very low (total 3.79% against national average of 4.88%, where 0.63% and 1.23% area areunder NP and WLS against national average of 3.17% and 3.58%, respectively[21,22].

Table 1.Protected Area Network of Manipur

Sl No	Protected Area (conservation)	District	Area (Sq. Km)	Important Faunal Species	Important Floral Species
1	Keibul Lamjao NP (*In-situ*)	Bishnupur	40.00	Sangai, Hogdeer, Wild boar, Common otter, Indian civet cat, Turtles, Viper, Krait, Cobra, Python, Rudy shelduck; Coot, Shoveller, Gadwall; Wigeon; Pintailduck; Pochard; LesserWhistlingteal; Cormorants	Zizanialatifolia; Saccharummunja; Eiranthusprocerus; Dioschoria bulbifera; Cynodon dactylon; Alpiniagalanga; Hedychiumcoronarium; Phragmiteskarka
2	Yangoupokpi Lokchao WLS (*In-situ*)	Chandel	184.80	42 species of mammals, 74 species of aves, 29 species of reptiles, 6 species of amphibia, 86 species of fishes. Green Peafowl-Pavomuticus, *Sphenocichla*	Dipterocarpus turbinatus; D. tuberculatus; Tectona grandis; Melanorrhoeausitata; Terminaliachebula; Emblica officinalis; Cedrellatoona; Cedrellaserrata; Quercus spp.; Bauhineaspp.; Dilleniaspp.; varieties of bamboos.
3	Bunning WLS (*In-situ*)	Tamenglong	115.80	Barkingdeer; Sambar; Leopard; Jackal; Pangolin; Wild boar; Tiger; Jungle cat; Martens; Cloudedleopard; Golden cat; Slow Loris	Micheliachampaca; Toonaciliata; Schimawallichii; Gmelinaarborea; Messuaferrea; Artocarpus hirsuta; Castanopsishystrix; Bombax ceiba; Cinnamomumzeylanicum; Emblica officinalis; Duabangaspp.; Melia azedirach; Bauhinia variegata; Phoebe hainesiana; Eugenia praecox; Quercus spp; Albiziaprocera; Alnusnepalensis; Juglansregia; Terminaliamyriocarpa; Canes and bamboo (Melocannabambusoides)
4	Zeilad WLS (*In-situ*)	Tamenglong	21.00	Tiger, Leopard, Leopard cat, smallIndian civet, Common Langur, Hoolock gibbon, Great IndianHornbill, barkingdeer, flyingsquirrel, Slow Loris, Golden cat, yellowthroatedmarten, large Indian civet cat, Hogbadger, Bear, Serow, Sambar etc., varieties of migratorybirdsincludingfalcon, snakes, Turtles	Micheliachampaca; Toonaciliata; Schimawallichii; Gmelinaarborea; Messuaferrea; Artocarpus hirsute; Mangiferaindica; Castanopsishystrix; Bombax ceiba; Cinnamomumzeylanicum; Emblica officinalis; Duabangaspp.; Melia azedirach; Bauhinia variegata; Phoebe hainesiana; Eugenia praecox; Quercus spp.; Albiziaprocera; Alnusnepalensis; Juglansregia; Terminaliamyriocarpa; Canes and bamboo (Melocannabambusoides)
5	Kailam WLS (*In-situ*)	Churachandpur	187.50	Clouded Leopard and Serow	extensive bamboospecies, Melocannabaccifera, a monopodialbamboo
6	Jiri-Makru WLS (In-situ)	Tamenglong	198.00	Hoolock gibbon; Caped Langur Stump Tailed Macaque; Barking deer; Sambar; Leopard; Jackal; Jungle cat; Clouded leopard; Golden cat; Serow; Pig tailed monkey; marble cat, Great Indian hornbill, Rufous necked hornbill, wreathed hornbill, Indian and lesser pied and brown backed hornbill.	Melocannabaccifera, a monopodialbamboo, Phoebe hainesiana; Micheliachampaca; Dilleniapentagyna, Duabangaonneroetoides; Terminalia myriocarpa; Gmelina arborea; Bauhinia purpurea; Artocarpus hirsute etc.

7	Shiroi NP(*In-situ*)	Ukhrul	797	Hoolock gibbon; Himalayan Black bear; Barking deer; Sambar; Leopard; Jackal; Indian elephant; Pangolin; Wild boar; Jungle cat; Flying squirrel, Martens; Clouded leopard; Golden cat; Slow Loris; Hog badger; Serow; Stump tailed macaque; Bison; Otter; Jungle fowl; Parakeet; Mrs. Humes barred backed pheasant; Blyth's tragopan; Horn bills, Tortoise; Viper; Krait; Cobra; Python; Land monitor lizard, Green snake; Rat snake; Varanus; Buff striped keelback, Salamander.	Liliummackliniae(ShiroiLily),Liliumchitrangadae; groundlily, 5 (five) Quercus sp. and 7 (seven) Rhododendron sp.,Micheliamanipurensis; Magnolia cambellii; Pinuskesiya; Castanopsissp.; Phoebe hainesiana etc.
8	Manipur Zoological Garden (*Ex-situ*)	Imphal West (Iroishemba)	0.08	N/A	N/A
9	Second Home of Sangai (*Ex-situ*)	Imphal West (Iroishemba)	0.06	N/A	N/A
10	Orchid Preservation Centre (*Ex-situ*)	Imphal East (Khonghampat)	0.50	N/A	N/A

(*Source:* ENVIS, 2016)

2.3. Population and Cultural Diversity

The state is an amalgamation of multiple cultural groups, ethnic tribes confined to specific locations of the state. The hillyregion is spreading over 80% of total geographical area contributing around 40% of the state population. Around 60% of population confined of valley districts mainly comprises of Meiteis and Pangal Meiteis (Muslim-Meiteis) along with considerable numbers Schedule tribes and non-Manipuri population. The Meiteis are divided into seven clans (*salai*s) i.e. *Manganz, Luwang, Khuman, Angom, Moirang, Chenglai (Sarang-Leishangthem)* and *Khaba-Nganba*. The hills of the state have almost 29 sub-tribes mainly belonging to the Tibeto-Mongolooid group. The north, west and eastern hills mainly covering Senapati and Ukhrul districts of the state is dominated by Nagas include the Kabui, *Kacha, Tangkhul, Mao, Maram, Maring*and*Torao*tribes. The Southern hills of the state mainly occupied by the Kuki-Chin-Mizowho came during the pre-colonial period includes the *Gangte, Hmar, Paite, Thadou, Vaiphei, Zou, Anmol, Chiru, Koireng, Kom, Aual, Chote, Lamgang, Koirao, Thangal, Moyon*and*Mousang*tribes[14].This conglomeration of diverse and dynamic ethnic groups with their distinct socio-cultural identity, languages, dialects, rituals, traditional and cultural practices manifest promotion of ecotourism. There are twenty four (24) languages spoken in Manipur, which have evolved from Tibeto-Burman sub-family or Tibeto-Chinese family of languages, of which Manipuri is a considered as an official language of the state[23]. The state is home to various ethnic groups with varied IndigenousTraditional Knowledge (ITK) that are harmonized by a high degree of environmental diversity[14]. Spatial variability of environment and diverse socio-cultural practices are visible in the form of various art and culture, food culture and agricultural practices have increased the scope of cultural, food and ecological tourism in the state[18,19]. Some isolated and inaccessible locations within the state have helped in protecting and preserving both social-cultural diversity and endemism in the state, may prove to be of high ecotourism scope if properly planned with regulated tourist activities.

2.4. Handicraft Handloom and Indigenous Fine arts

The vibrant culture and diverse ethnic groups of Manipur also manifest rich culture of handicrafts, handloom products and fine arts. The state handloom and handicrafts products includes products made of bamboo, cane, pottery and weaving products, crafts, implements etc. that are admired and is very common practices in rural Manipur[14]. The products made of bamboo are most commonly used for agricultural implements, household furniture, fishing and fish preservation implements, constructional materials for house etc. The state is also rich in wooden handicraft products made of rare and exotic timber varieties. The other handloom and handicraft product such

as lifan, aquatic weed mat (Phak) and Phiruk which are very common in the rural Manipur. Mostly, people wear hand-weaved traditional dresses which are quite colourful, attractive and exquisite in designs peculiar to each communities. Pottery products from Andro, Thongjao and Nungbi include variety of earthen products[23].

2.5.Indigenous Dance, Sports and Music

The state represents a vibrant centre of culture which manifests various cultural practices in the form of exotic dance forms, indigenous music, indigenous sports and martial arts, performing arts, literature etc. that are admired worldwide due to its uniqueness and high cultural value. The majority of population of the state belongs the Vaishnavite Hindu believes with neo-Christian of tribal heritage that are rich in artistic expression. The state is famous for its dances and performing arts, native martial arts which are influenced by Mongoloid style. The various exotic dance forms includes *RasLeela, Khamba-Thoibi, Dance, PungCholom, Maibi Dance, Nupi Pala, Lai Haraoba Dance* and various tribal dances like the *Kabui Dances, KukiThadou Dance forms, Bamboo Dance, and various Naga Dances,* and *various adapted dances*[23].The Indigenous Music of the state includes *KhullongEshei, Pena Eshei, KhubakEshei, Nat, etc*. Some of the indigenous forms of martial arts and sports are: *Chongba, Taa Khousarol* (Spear dance), *Thanghairol* (Art of sword fight), *Mukna*(wrestling–Manipuri style), *Thanghairol* (Art of sword fight), *SagolKangjei* (Polo), *Thang-Ta, SaritSarak, YubiLakpi, HiyangTanaba, Mukna, Kang Sanaba, Arambai* etc.[14,23]

2.6.Indigenous Festivals, Celebrations and Cuisine

There are number of festivals are celebrated in Manipur. Almost all months of the year is marked by some major festival connected to socio-cultural or religious aspiration of diverse ethnic groups of people. The various cultural and religious festivals and celebrations include *Gang-Ngai, Lui-Ngai-Ni, Yaoshang (Doljatra), Lai-Haraoba, Cheiraoba, Ratha Jatra, Heikru Hitongba, Kut Festival, Rasa Lila, Ningol Chakhouba, Chumpha* etc.[14]Variety of ethnic groups manifests diversity of food culture that has great potential for attraction of people all over the country and world for food tourism[22]. Most of the Manipuri cuisines are simple, healthy and of high nutritional value that includes typical boiled, smoked, spicy cuisines that uses lots medicinal plants and vegetables. Uses hot king chilli (Umorok) along with dry and fermented fish and bamboo shoots are very common. The peculiarity of preparation dishes or food is the uses of lots of ingredients with medicinal and nutritional values, use of fresh and fermented bamboo shoots, banana flowers and stems are also very popular among the people of Manipur and in its neighbouring states. The conventional Manipuri dishes includes rice, leafy vegetables, various fish items, salads made of green and leafy vegetables, medicinal plants, dry fish (*Iromba*), sweets made of black rice.[21,23]

3. MAJOR CHALLENGES OF ECOTOURISM IN MANIPUR

3.1. Degradation of Forest cover and Wildlife

State Forest cover area has shrunken from 79.11 % to 76.54% during 1987 to 2015which is going to be a major threat to state future water, ecological and environmentalsecurityposing an greatthreat to state socio-economicstatus[16]. The practices of traditional*jhumming* and shifting agricultural in the hill districts and in hilly slopes causing a major threat to ecological diversity of the state duet to forest degradation, reducing carrying capacity of water bodies, streams, channels and wetlands due to siltation and sedimentation[18]. This is causing a threat to socio-economic and agricultural sector influencing conservation of biodiversity and other natural resources of the region. The Forest Department, Government of Manipur, have started community based initiatives including protected Area Network[22]in order to protect and conserve the wildlife and other floral species of the state where 19 mammals species enlisted in Scheduled-I, II, III, IV; 23 reptiles enlisted in Scheduled-I, II and 158 migratory avifaunal species in Scheduled-I, II and 40 species of orchids in IUCN list[18,22].

3.2. Degradation Water Resources

Wetland in Manipur plays a very crucial role in socio-economic and cultural aspects of the population of the state[15]. But due to various natural and anthropogenicactivitieshave threatened the sustainable management of thesewetlands. The siltation has reduced the carrying capacity of water bodies due to soil erosion, sedimentation, landslides of fragile landscape[18]. The surface water bodies contributes major source of water for household water supply, agriculture and hydroelectric power generation are now under vulnerable situations due to both quantitative and quantitative aspects. Presently, the Government of Manipur is planning nearly 20 mega dams under Manipur Hydroelectric Power Policy (2012)[23]. It is projected that due to construction dam of Tipaimukh hydroelectric power projectwillresult in submergence of 27,000 hectares of forest land includingfelling of more thaneight (08) million tresscausing a severeimbalance in ecohydrologicalregime of the region[23,24]. All these factors accompanied by phenomenonsclimate change willmostly affects the biodiversity of the region and can pose a challenge for various socio-economicsecurity and livelihood of people.

3.3. Changing Climatic Dynamics

Climate change is an alarmingthreat to the alteration of ecological balance and biodiversity of the region. It poses direct impacts on the temporal and spatial distribution and depletion water

resources, naturalresources, agriculture pattern, causing a socio-economicdisparitybetween communities and theirsustainable livelihood[24,25]. In addition, the variability of climatic factors can cause otherecological and environmental hazardssuch as drought, flood, extremeweatherevents, cropfailures, pestattacks, increase in vector borne diseases and theirsusceptibility[26]. Subsequently, more impacts willbe visible in climate-sensitive sectorslikeecology, biodiversity, agriculture, forestry, horticulture, animal husbandry, pisciculture and all forms of tourismsector. Health and sanitation of the state is not adequate and requires a serious attention as the region is an easyprey to water-borne diseases due to the humidsub-tropicalclimate and heavymonsoon rainfall[27]. The cases of water-borne and vector-borne diseases are verycommon in the state and reportedeveryyear[12]. Most visible impacts willbeobservedamongpoor and vulnerable groups residing in eco-sensitive or ecological zones.

3.4.Demographical Change and Urbanisation

Rapid urbanisation is observed in the region from last few decades as a result of migration of people from rural area to urban area of the state (Table 2)[11]. The major factors responsible for this type of migration is due to better employment oppurtunities, educationfacilities, healthcare etc.Apartfrom that due to changes in various other factors such as socio-economic condition, environmental hazards and disasters related hydrometeological factors, law and order and social securities etc.[29] All these factors have combine effects directly or indirectly for forced migration people fromrural to urban areas in search of living and basic needs[30]. This migration within and fromoutside the statemaycreate a serioussocio-economic and cultural security for the region. The trend (Table 2) shows a negative indication of rural socio-economic life and its pressure on natural and forestresources as well[31]. So, promotion of ecotourism and rural tourism can be an one of the alternative for sustainable development among rural communities and to meet the requirements for biodiversity conservation.

Table 2.Growth of DecadalUrban Population in Manipur

Year	Number of Urban area	Total Population			Population Percentage (%)	
		State	Urban	Rural	Urban	Rural
1961	1	7,80,037	67,717	7,12,320	8.68	91.32
1971	8	10,72,753	1,41,492	9,31,261	13.19	86.81
1981	32	14,20,953	3,75,460	10,45,493	26.42	73.58
1991	31	18,37,149	5,05,645	13,31,504	27.52	72.48
2001	33	23,88,634	5,70,410	18,18,224	23.88	76.12
2011	33	27,21,756	8,22,132	18,99,624	30.21	69.79

(*Source*: Census of India, 2011)

3.5.Challenges of Public Services and Communication Facilities

The state of Manipur have sufficient potential for developing as a hub of various forms of ecotourism destination in South East Asian countries due to its strategic location and accessibility. In order to execute this objective there is huge requirements for the development basic public services such as transport and communication, hospitality services, health services, information centre and other infrastructural facilities that act as a lifeline of any form of development[9]. These facilities can be upgraded through a private-public partnership investment and technological intervention. In order to popularize the objectives of ecotourism it requires participation and involvement of community based, voluntary and youth organisations. Connectivity and Communications is prior and immediate necessity for any development of the region including tourism sector[14]. The state is still waiting to be connected to the railways map of India, which itself will be a good potential for tourism. Though state is connected through air services to the other states but more air connectivity is required for both domestic and international visitors, which can be developed by upgrading the Imphal Airport to a full-fledged International Airport with sufficient flight services.

3.6. Vulnerability of Agriculture. Livelihood and Employment Sector

Manipur is basically is an agrariens society with around 70% of population involved in where two types of agricultural practices*i.e.* settled and organised agricultural practices in valley districts, foothills, terraceslopes and shiftingcultivation (*Jhum* or *slash and burn*) practices in hills and hillslopes[12]. The livelihood option for most of the population in Manipur living in rural area are agriculture, fishery and naturalresourcesincludingforestresources and wetlands, which is otherwiseconsidered to besecondarysector, contributesstate's major GDP (73.82%)[13]. Wetland and aquaculture are major source of livelihood in rural people and plays a very crucial role in the social, economical and cultural lifeof the people of Manipur. The state is major consumer of fish and has huge potential of pisciculture (35,000 MT of fish per year)which can boast up the rural livelihood, employment opportunities, rural and ecotourism sector[13]. As per present situation, lack of rural employment and livelihoodopportunities, huge influx of people are taking place to urban areas in search of jobs and alternative livelihoodwhich are triggeringotherhumansecurityand conflictsrelated issues[22,30].

3.7. Challenges from geopolitical issues and Law and order

Present geopolitical issues related to the state and national boundaries within and with Manipur influences all forms of development of the state leading to emerging problems of ethnic clashes, blockades of national highways, economics blockades, public agitation, insurgencies, protest and bandhs, insufficient supply and distribution of basic commodities and price hike etc.

These problems of the state are crippling whole economy and developmental sectors of the state[22]. These further impacts all forms of tourism(including endogenous or ecotourism) to a great extent. A congenial and secured environment will attract both national and international tourist/visitors to the state which can further generate more livelihood opportunities and rural employment in the state leading to bridging the socio-economic gap and disparity among the people of the region[20]. This can be achieved through a process of community participation for creating ambient environment for flourishing tourism sector. So, it requires proper government mechanism and planning to generate awareness about development of ecotourism for livelihood opportunities.

3.8.Synchronization of Government Institutes and Organisation

The role of government is very much crucial in development multi-sectoral tourism industry. The government can play important role to ensure linkages, coordination, management of line departments and local institutions through a community based participation process, innovative institutional research, strategic master plans, trainingand awareness generation[9]. The major responsibility of government will includes identifying ecotourism potentials, planning, zoning, creating infrastructural facilities, incentive facilities through micro financing, ownerships of programme/projects, providing social-cultural securities and highlighting environmental priorities in order to encourage people's participation[10]. In addition to these, there are many areas where government role is very crucial in the form of maintaining law and order, public security, security of national and government projects/institutions, providing basic public services such as water supply, health and sanitation, transport and communication, power supply, information centres etc. in order to promote and disseminate information about ecotourism[8].

FUTURE OF ECOTOURISM IN MANIPUR

Ecotourism has an emerging scope in Manipur and can serve as an efficient tool for conservation of ecological, environmental and cultural resources of the state if properly planned and executed through a participatoryapproach. It requires an holistic planning, comprehensive frameworkinitiatives to recognize the scope and potential of ecotourismwithin the state. A combined initiative and collaboration with the neighbouring states and countries can alsoboast up and popularizeecotourism sector in the region through participation of communities bothat micro and macro levels through CBOs, NGOs and various othergovernmentstakeholdersincludingdecision and policymakers. So, to make ecotourism a realization, both state and central government have to initiate an institutional interventions for technical innovations, investment, policy shift and encouraging participation of various stakeholders. The up-scaling of ecotourism or agroforestrybasedtourism for Manipur can belinked to entrepreneurshipbasedlivelihood for

management of NTFPs, medicinal and aromatic plants, wildlife conservation, natural resource management and promotion of IndigenousTraditionalKnowledge (ITK) in association with microfinance, skill development and humandevelopment. Creation of eco-village, eco-parks, eco-camps, biodiversityparks, parks for endogenousmedicinal plants, orchids, varieties of bamboo and banana species, *in-situ* and *ex-situ*wildlife parks for conservation of endemic species, researchcenters and institutes, eco-zones to facilitateecotourism with conservation objectives. In this regard, development of infrastructures and other facilities can prove to be an effective, long-term and sustainable tool for developing Manipur as ecotourism hub in the region and at the same time it can pomote conservation of biologicaldiversity, naturalresources, socio-economic and cultural integrity of the state.

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