

# **POTENTIAL AND PROSPECTIVE OF TOURISM IN ARUNACHAL PRADESH: A GEOGRAPHICAL ANALYSIS**

## **THESIS**

**Submitted in Partial Fulfillment of the Requirement for the  
Degree of Doctor of Philosophy in Geography**

*Submitted by*  
**Mr. PURA OMO**  
**RGU/RS-547/2014**

**Professor KIRAN KUMARI**  
**Supervisor**



**2020**

**DEPARTMENT OF GEOGRAPHY  
RAJIV GANDHI UNIVERSITY  
RONO HILLS, DOIMUKH  
ARUNACHAL PRADESH**



**राजीव गांधी विश्वविद्यालय**  
**RAJIV GANDHI UNIVERSITY**

भारत के संसद के अधिनियम द्वारा वर्ष 2007 में स्थापित किया गया  
(A CENTRAL UNIVERSITY ESTABLISHED IN 2007 BY AN ACT OF PARLIAMENT OF INDIA)

रोनो हिल्स, दोईमुख (ईटानगर)  
Rono Hills, Doimukh (Itanagar)  
पिन - ७९१११२,  
PIN - 791112,  
अरुणाचल प्रदेश  
Arunachal Pradesh  
Ph.: 0360-2277253, Fax: 0360-2277889  
E-mail: registrar@rgu.ac.in  
Website: rgu.ac.in

No. RGU/GEOG/HOD/2020/168

Dated: 28 July, 2020

**CERTIFICATE**

*Certified that the thesis titled, "Potential and Prospective of Tourism in Arunachal Pradesh: A Geographical Analysis" submitted by Mr. Pura Omo (Registration No. RGU/RS-547/2014) for the award of Ph.D. degree in the Department of Geography is a bonafide research work in accordance to the ordinance of Rajiv Gandhi University. To the best of my knowledge and belief, the work is original of his own and no other persons' work has been used without due acknowledgement in the main text of the thesis and has not been submitted for award of any degree in this or any other University/ Institute of higher learning. This thesis is forwarded for examination of the degree of Doctor of Philosophy in the Department of Geography, Rajiv Gandhi University.*

  
(Prof. Kiran Kumari)

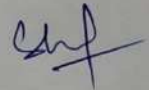
Head & Supervisor  
विभागाध्यक्ष, भूगोल विभाग  
राजीव गांधी विश्वविद्यालय, दोईमुख  
HOD, Geography  
Rajiv Gandhi University, Doimukh

### Declaration

I declare that the Thesis titled "Potential and Prospective of Tourism in Arunachal Pradesh: A Geographical Analysis" submitted by me for the award of Doctor of Philosophy in the Department of geography, Rajiv Gandhi University, Itanagar is an original work and it has not been submitted before in part or full to this or any University/ Institute of Higher Learning for any degree.

Rajiv Gandhi University

(Pura Omo)



Date: 28/07/2020

Reg. No. RGU/RS-547/2014

#### ACKNOWLEDGEMENTS

I take this opportunity to acknowledge the contribution and encouragement given by each and every individuals and institutions in completing this research work.

At the outset, I would like to express my deepest gratitude and my most sincere appreciation to my supervisor Prof. Kiran Kumari Department of Geography, Rajiv Gandhi University, Itanagar for her valuable academic assistance, support, suggestions and encouragement, so unstintingly provided, throughout this incredible journey. Without her patience guidance, persistent help, and constructive criticisms, this Thesis would not have been possible. I know that I have been blessed and extremely fortunate enough to have such a supervisor who cared so much about my work that she never let any of her commitments ever restrict her from giving me this best and who, by her perfection, motivated me to aspire to greater heights than I dreamt possible.

I would like to express my deep gratitude to Professor S.K. Patnaik for his professional expertise and relentless guidance during my M Phil Course which has immensely help me in entire Ph. D course. I acknowledge the valuable suggestions given by the Dean Prof. N.C. Singh, Department of Geography and Dean In-charge Prof. Tasi Kaye, Faculty of Environmental Science and Senior Professor Prof. Tomo Riba and Prof. N. Kar. I also like to thanks Professor, Dr. Gijji Ninasow, Dr. S. Saikia and Dr. Tage Rupa Sora for their valuable support and suggestion given for this work. I am deeply indebted to RGU Administration for providing scholarships and other academic and administrative support in completing my Ph D course.

I would also like to extend my thanks to Dr. Jai Kishun, Assistant Professor, Department of Biostatistics and Health Informatics, SGPGIMS, Lucknow for paying his valuable effort in completing this work. A special thanks goes to my fellow friend Mr. Jyoti Saikia for assisting me to bring this work more qualitative in nature. I extend my heartiest thanks to all my University friends who were always willing to help in every aspect and whose valuable support and encouragements during entire research period cannot be forgotten.

1

A huge thanks also goes to each individuals and institutions of Arunachal Pradesh State, government officials, experts, scholars, tour operators, hotel owners, tourist guides, local residents of various districts of the state and tourists who gave their valuable time in responding my interviewed during fieldwork. I acknowledge every official of the stakeholders who always show their willingness to provide relevant information and secondary data for my research work.

Finally, I take a privilege to extend my heartiest thanks to each and every one of my family members for their moral, emotional, intellectual and financial support in my entire academic journey. This thesis could not have been completed without my family support and encouragement. I wish to express my gratitude and appreciation to all the people who helped me with their capacities large and small in completing my entire Ph. D course.

I am truly blessed to have all of you in my life.

Thank you very much!

Rajiv Gandhi University

Date: 28/07/2020

547/2014

(Pura Omo)

Reg. No. RGU/RS-

2

<b>CONTENT</b>		<b>Page No</b>
<i>Certificate</i>		<i>i</i>
<i>Pre-Submission Certificate</i>		<i>ii</i>
<i>Plagiarism Certificate</i>		<i>iii</i>
<i>Declaration</i>		<i>iv</i>
<i>Acknowledgement</i>		<i>v</i>
<i>List of Maps</i>		<i>vi</i>
<i>List of Tables</i>		<i>vii</i>
<i>List of Figures</i>		<i>viii</i>
<i>List of Plates</i>		<i>ix</i>
<b>CHAPTER 1</b>	<b>CONCEPTUAL BACKGROUND</b>	<b>1</b>
	I.1. Introduction	1
	I.2. Statement of problem	6
	I.3. Literature review	7
	I.4. Study area	13
	I.5. Objectives	16
	I.6. Data source	17
	I.7. Methodology	18
	I.8. Research Question	20
	I.9. Design of the Research Work	20
	References	21
<b>CHAPTER 2</b>	<b>GEOGRAPHICAL BACKGROUND OF ARUNACHAL PRADESH</b>	<b>27</b>
	2.1: Location and Extent	27
	2.2: History of Arunachal Pradesh in the Indian Union	27
	2.2.1: Administrative Status of Union Territory and State	30
	2.3: Physiography	35
	2.3.1: Himalayan Range	37
	2.3.2: Trans-Himalayan Range	38
	2.3.3: Naga-Patkoi Range	39
	2.3.4: Brahmaputra Plain	39
	2.4: Drainage Pattern	39
	2.5: Climate	41
	2.6: Forest	42
	2.7: Biodiversity	43
	2.8: Agriculture	43
	2.9: Population Characteristics	44
	2.10: Distribution of Tribes	48
	2.11: Physical Infrastructures	51
	2.12: Economy of the State	55
	References	61

<b>CHAPTER 3</b>	<b>ATTRACTIONS AND TOURIST ARRIVALS IN ARUNACHAL PRADESH</b>	<b>64</b>
	3.1: The Concept and Definition of Tourist Attractions	64
	3.2: Spatial Distribution of Tourist Attractions in Arunachal Pradesh	67
	3.2.1: Tawang District	70
	3.2.2: Bomdila	75
	3.2.3: East Kameng	77
	3.2.4: Papum Pare	77
	3.2.5: Si-Yomi	80
	3.2.6: West Siang	80
	3.2.7: Upper Siang	81
	3.2.8: East Siang	81
	3.2.9: Lohit	81
	3.3: Major Festivals and Dances of Arunachal Pradesh	84
	3.4: Tourist Circuits in Arunachal Pradesh	85
	3.5.: Tourist Arrivals in North-East region in comparison to India	87
	3.6: Tourist Arrivals in Arunachal Pradesh	89
	3.7: Profile of Tourist Respondents	92
	3.8: Tourist Responses after Visiting Tourist Attractions in Arunachal Pradesh	93
	References	99
<b>CHAPTER 4</b>	<b>SOCIO-CULTURAL IMPACT OF TOURISM ON IN ARUNACHAL PRADESH</b>	<b>100</b>
	4.1: Social- Cultural Impact	100
	4.2: Society and Culture of Arunachal Pradesh	102
	4.2.1: Custom	102
	4.2.2: Donyi-Poloism	103
	4.2.3: Indigenous Faith and Beliefs	103
	4.2.4: Major Festivals	104
	4.2.5: A Paradise of Linguistic Diversity	105
	4.2.6: Indigenous Cuisine	106
	4.2.7: Folk Lore: Mines of Indigenous Wisdom	106
	4.2.8: Folk Songs: Replica of Cultural Heritage	106
	4.2.9: Indigenous Games: Bi-Product of Cultural Evolution	107
	4.2.10: Handicrafts: The Testimony of Rich Material Culture	107
	4.2.11: Ornaments: Unique Tradition and Culture	108
	4.2.12: Legacy of Incredible Culture	109
	4.2.13: New Challenges of Epidemic	109
	4.3: Socio-Cultural Impacts Indicators of Tourism in Arunachal Pradesh	110
	4.4: Profile of Host Respondents	110
	4.5: Hosts Responses on Socio-Cultural Impact of Tourism in Arunachal Pradesh	112

	4.6: Findings of Socio-Cultural Impact of tourism in Arunachal Pradesh	114
	References	122
<b>CHAPTER 5</b>	<b>SOCIO-ECONOMIC ENVIRONMENTAL IMPACT OF TOURISM IN THE STATE</b>	124
	5. 1: Socio-economic impact	124
	5. 2: Socio-Economic Impact Indicators of Tourism in Arunachal Pradesh	127
	5. 3: Host Respondents Response to Socio-Economic Impact	127
	5. 4: Analysis of Socoi-Economic Impact of Tourism with Demographic Factors	130
	5.5: Environmental Impact of Tourism	138
	5. 6: Environmental Impact Indicators of Tourism	140
	5.7: Hosts Response on Environmental Impact of Tourism	140
	5. 8: Analysis of Environmental Impact of Tourism with Demographic Factors	141
	References	151
<b>CHAPTER 6</b>	<b>POTENTIAL AND PROSPECT OF TOURISM</b>	153
	6.1: Indicators of potential of tourism in Arunachal Pradesh	153
	6.2: Host responses on potential of tourism in Arunachal Pradesh	154
	6.3: Analysis of Potential and Prospects of Tourism with Demographic Factors	157
	6.4: Identified Tourism Potential for Tourism Development in Arunachal Pradesh	161
	6.4.1: Cultural Heritage Tourism	162
	6.4.2: Adventure Tourism	164
	6.4.3: Community Based Tourism	165
	6.4.4: Festival Tourism	168
	6.4.5: Ethnic Ecotourism	168
	6.4.6: Nature – Based Eco Tourism	169
	6.4.7: Spiritual Tourism	170
	6.4.8: Niche Tourism	171
	6.4.9: Ayurveda Tourism	171
	6.5: Prospects for tourism development in Arunachal Pradesh	172
	6.6: Problems of Tourism	173
	6.7: Suggestion for Improvement	174
	References	175
<b>CHAPTER 7</b>	<b>CONCLUSION AND RECOMMENDATION</b>	177

## LIST OF MAPS

<b>Map</b>	<b>Title</b>	<b>Page No.</b>
Map 1	Study Area Map	15
Map 2	Administrative Division of NEFA	32
Map 3	Administrative Division Map of Arunachal Pradesh	34
Map 4	Altitudinal Map of Arunachal Pradesh	36
Map 5	Tourist Accommodation Map of Arunachal Pradesh	66
Map 6	Tourist Site map of Arunachal Pradesh	69

## LIST OF TABLES

Tables	Title	
Table 1.1:	Population, Literacy, Sex-ratio and Decadal growth, Arunachal Pradesh (Census, 2011)	16
Table 1.2:	Ratio of Tourist Sampling Size	19
Table 1.3:	Ratio of Host Sampling Size	19
Table 2.1:	Administrative District Headquarters (Census, 2011): Arunachal Pradesh	33
Table 2.2:	Annual rainfall in the district headquarters of Arunachal Pradesh	42
Table 2.3:	Distribution of Population, Sex Ratio, Growth, Literacy and Density by District (Census, 2011): Arunachal Pradesh	45
Table 2.4:	Growth of Literacy Rate from 1961 to 2011	47
Table 2.5:	Urban Population by Districts, 2011: Arunachal Pradesh	48
Table 2.6:	District Headquarters of the Main Tribes: Arunachal Pradesh	50
Table 2.7:	Length of National Highways as on 30.06.2017: Arunachal Pradesh	52
Table 2.8:	Number of Accommodation Units, Rooms, Beds and Employment: Arunachal Pradesh	54
Table 3.1:	District-wise Distribution of Tourist Attractions: Arunachal Pradesh	68
Table 3.2:	District-wise Distribution of Festivals and Dances: Arunachal Pradesh	85
Table: 3.3:	Tourist Arrivals in N-E Region of India (In Year 2017 & 2018)	87
Table: 3.4:	Shares of Tourist Arrivals in N-E Region of India (In Year 2017 & 2018)	89
Table: 3.5:	Tourist Arrivals in Arunachal Pradesh (2001-2002 to 2018-2019)	90
Table: 3.6:	Profile of Tourist Respondents	92
Table: 3.7:	Tourist Responses on Tourism in Arunachal Pradesh	94
Table 4.1:	Traditional Ornaments of Different Tribes of Arunachal Pradesh	108
Table: 4.2:	Profile of Tourist Respondents	111
Table: 4.3:	Hosts Response on Socio-cultural Impact of Tourism	113
Table 4.4:	Significant / P-Values / socio-cultural impacts of tourism on the respondents of Arunachal Pradesh according to demographic characteristics.	114
Table 4.5:	Mean Rank of Age Group with Socio-Cultural Impacts of Tourism.	115
Table 4.6:	Mean Rank of Education with Socio-Cultural Impacts of Tourism.	117

Table 4.7:	Mean Rank of religion with socio-cultural impacts of tourism.	118
Table 4.8:	Mean Rank of occupation with socio-cultural impacts of tourism.	119
Table 5.1:	Contribution of Tourism to GDP	126
Table 5.2:	Contribution of Tourism to Employment	126
Table 5.3:	Contribution of Tourism in the Economy of Arunachal Pradesh	128
Table: 5.4:	Hosts Response on Socio-Economic Impact of Tourism in Arunachal Pradesh	129
Table 5.5:	Significant / P-Values of Socio-Economic Impact of Tourism on the Demographic Factors of Respondents of Arunachal Pradesh.	131
Table 5.6:	Mean Rank of Age Group with Socio-Economic Impacts of Tourism.	132
Table 5.7:	Mean Rank of Education with Socio-Economic Impacts of Tourism.	134
Table 5.8:	Mean Rank of Religion with Socio-Economic Impacts of Tourism.	135
Table 5.9:	Mean Rank of Occupation with Socio-Economic Impacts of Tourism	136
Table:5.10:	Hosts Response on Environmental Impact of Tourism in Arunachal Pradesh	140
Table5 10:	Significant / P-Values of Potential and Prospect Impact of Tourism on the Demographic Factors of Respondents of Arunachal Pradesh.	142
Table5 11:	Mean Rank of Age Group with Environmental Impacts of Tourism.	143
Table 5.12:	Mean Rank of Education with Environmental Impacts of Tourism.	146
Table 5.13:	Mean Rank of Religion with Environmental Impacts of Tourism.	148
Table 5.14:	Mean Rank of occupation with environmental impacts of tourism.	149
Table: 6.1:	Hosts Response on Potential and Prospects of Tourism	156
Table 6.2:	Significant / P-Values of Potential and Prospect Impact of Tourism on the Demographic Factors of Respondents of Arunachal Pradesh.	158
Table 6.3:	Mean Rank of Age group with Potential and Prospect Impacts of Tourism.	158
Table 6.4:	Mean Rank of Education with Potential and Prospect Impacts of Tourism.	158
Table 6.5:	Mean Rank of Religion with Potential and Prospect Impacts of Tourism.	160
Table 6.6:	Mean Rank of Occupation with Potential and Prospect Impacts of Tourism.	161

## LIST OF FIGURES

<b>Figures</b>	<b>Title</b>	
Fig 3.1:	Tourists visited in Arunachal Pradesh	90
Fig 3.2:	Tourists Classified by State/Country of Origin	93
Fig 4.1:	Socio-Cultural Impact of Tourism with Gender	115
Fig.4.2:	Socio-Cultural Impact of Tourism with Age Group	116
Fig.4.3:	Socio-cultural Impact of Tourism with Marital Status.	117
Fig.4.4:	Socio-cultural Impact of Tourism with Education.	118
Fig.4.5:	Socio-cultural Impact of Tourism with Religion	119
Fig.4.6:	Socio-cultural Impact of Tourism with occupation	120
Fig.4.7:	Socio-cultural Impact of Tourism with occupation categories Pair wise	121
Fig.5.1:	Socio-Economic Impact of Tourism with Gender	132
Fig.5.2:	Socio-Economic Impact of Tourism with Age Group	132
Fig.5.3:	Socio-Economic Impact of Tourism with Marital Status	133
Fig.5.4:	Socio-Economic Impact of Tourism with Education	134
Fig.5.5:	Socio-Economic Impact of Tourism with Religion	135
Fig.5.6:	Socio-Economic Impact of Tourism with Occupation	137
Fig.5.7:	Pair wise Comparisons of Occupation with Socio-Economic Impacts of Tourism	137
Fig.5.8:	Environmental Impact of Tourism with Gender	143
Fig.5.9:	Environmental Impact of Tourism with Age Group	144
Fig.5.10:	Environmental Impact of Tourism with Marital Status	145
Fig.5.11:	Environmental Impact of Tourism with Education	146
Fig.5.12:	Pair wise comparisons of Education categories with Environmental Impact of Tourism	147
Fig.5.13:	Environmental Impact of Tourism with Religion	148
Fig.5.14:	Environmental Impact of Tourism with Occupation	149
Fig.5.15:	Pair wise comparisons of Occupation category with Environmental Impact of Tourism.	150
Fig.6.1:	Pair wise Comparisons of Various Religion with Potential and Prospect Impacts of Tourism.	160

## LIST OF PLATES

No.	Details	Page No
1	Adi Attire	188
2	Arrow Shooting Competition At Mega Solung Festival	188
3	Hanging Bridge Over Siang River	189
4	Pasighat view	189
5	Temporary Local Hut Stall At Mega Solung	190
6	Bomdila Monastery	190
7	Bumla Pass	191
8	Gorzam Zemithang	191
9	National Yak Breeding Farm, Dirang	192
10	PTSO Lake	192
11	Sela Pass	193
12	Sela Lake	193
13	Siir Resort	194
14	Siro Resort Inner Hall	194
15	Tarin Fish Farm	194
16	Ziro Palace Inn Tourist Resort	195
17	Researchers Interviewing with Receptionist, Ziro Palace Inn	195
18	Abasa Home Stay	195

## CHAPTER -1

### CONCEPTUAL BACKGROUND

---

#### 1.1 INTRODUCTION

From the very beginning of the history travelling has captivated man. The curiosity to know the unknown, discover new places and diverse environment are bases of this endeavor. Tourism, being a service-oriented industry is emerged to be a revolutionizing phenomenon especially in the second half of the last century, outpacing manufacturing industries as a catalyst of the development process at the national and at the global levels. Tourism is the single fourth largest and fastest growing industry (Davenport & Davenport<sup>1</sup> 2006; Hemmati& Koehler<sup>2</sup> 2000) of the world in terms of employment generation and contribution to national GDP (WTTC 2013). Tourism industry may become a tool for Third World countries to combat poverty by generating income and employment (Tooman<sup>3</sup>, 1997), as well diversifying the economy (Emaad<sup>4</sup>, 2007), given that the Third World countries often possess unparalleled natural beauty.

India is gradually emerging to be placed as one of the fastest growing “Tourist Destination” in the globe. The Planning Commission of India has declared tourism as the second largest sector in the country in providing employment opportunities for low-skilled and semi-skilled workers. Domestic tourism contributes about 75% of tourism economy. Thus in 12<sup>th</sup> Five Year Plan (2012-2017) tourism has been marked as a dawn of new era for social integration and economic development<sup>5</sup>. As per the 2017 report of World Travel & Tourism Council (WTTC), tourism have generated the revenues of Rs. 15.24 lakh crore (US\$230 billion) or 9.4% of the nation’s GDP. Tourism also supports 41.622 million jobs i.e., 8% of its total employment. During 2017, 10 million foreign tourists visited the country registering an annual growth of 15.6%. In the same year i.e., 2017, India was placed on 40<sup>th</sup> position among the 136 countries across the globe (*Travel and Tourism Competitiveness Report*, 2017).

The first major effort to promote the industry was launched with the announcement of 1991 as the ‘Visit India Year’. The next decade saw the restructuring of the schemes of Integrated Development of Tourist Circuits, and Products/Infrastructure Destination Development. Additional schemes/incentives were announced for service

providers. Upgrading of beaches, airports, tax incentives were also introduced. Besides creating an official website for the Tourism Ministry, now the calendar of events is planned. Even the new initiatives to encourage the NRI's and PIOs, through visit India programmes, *Pravasi Bhartiya Divas* Celebration, Dual Citizenship to certain categories of diasporas Indians have given much fillip to tourism in India. The Tourism Ministry has also played an important role in the development of the industry, initiating advertising campaigns such as the “*Incredible India*” campaign, which promoted India's culture and tourist attractions in a fresh and memorable way.

For tourism infrastructure creation in the country, Ministry of Tourism has two major schemes, launched during 2014-15, viz. Swadesh Darshan – Integrated Development of Theme-Based Tourist Circuits and PRASHAD- Pilgrimage Rejuvenation and Spiritual, Heritage Augmentation Drive for development of tourism infrastructure in the country including historical places and heritage cities. The “Incredible India 2.0” Campaign of the Ministry marks a shift from the generic promotions being undertaken across the world to market specific promotional plans and content creation. In order to recognize the efforts of State/UT Governments to maintain tourist places clean, awards titled “Swachhta Award” and “*Best Civic Management of a tourist destination in India Award*” has been instituted by the Ministry. Ministry is giving special emphasis on promotion and development of tourism in North East region and Jammu & Kashmir. *International Tourism Mart* is organised annually with an objective to showcase the untapped tourism potential of the North East region in the domestic and international markets and to increase tourism in the region. “*International Tourism Mart*” (ITM) in association with the North Eastern States was held in Imphal, Manipur from 23 November to 25 November, 2019 (Annual Report 2019-20, Ministry of Tourism, Govt. of India). The tourism industry has helped growth in other sectors as diverse as horticulture, handicrafts, agriculture, construction and even poultry. India's governmental bodies have also made a significant impact in tourism by requiring that each and every state of India have a corporation to administer support issues related to tourism<sup>6</sup> i.e., costly travel, poor organization and lack of supportive infrastructure, lapses in security and safety, uneven progress etc. Arunachal Pradesh is one of the most incredible tourist destination of North East India.

## 1.1 MEANING OF TOURISM

The word ‘tourism’ is derived from the ‘tour’ meaning a ‘Journey’ in which one returns to the starting point (Nandi & Chakraborty<sup>7</sup>, 1999). There is no single definition that gives clear meaning of tourism. According to Hunt and Layne (1991)<sup>8</sup>, inconsistencies in the meaning and interpretation of tourism have existed since the early 19<sup>th</sup> Century and there is little doubt that such inconsistencies will continue as long as new tourism concepts and theories continue to emerge.

According to Hunt and Layne (1991), more than 550 definitions of tourism have been proposed although all forms of tourism comprise three fundamental elements. These are people, place and time. People‘ represents the individual or groups who will choose to engage in tourism for particular purposes (Hunt and Layne<sup>8</sup>,1991); place‘ represents both the geographical setting of tourism and the residence of those engaging in tourism (i.e. where tourists go to –destination countries –and where they come from –generating countries); and, time represents duration of travel (Hunt and Layne,1991). As a consequence, most of not all definitions of tourism refer, with greater or lesser emphasis, to these factors (Choi & Sikaraya<sup>9</sup> 2005; Go & Jenkins<sup>10</sup> 1997). Having reviewed a substantial number of articles, reports and working papers, this study classified definitions of tourism into three groups, namely: conceptual, technical and holistic (Neto<sup>11</sup> 2003; Pearce et al.<sup>12</sup> 1996; Mowforth& Munt<sup>13</sup> 2003; Lipman & Kester<sup>14</sup> 2008). Conceptual definitions focus on the essential nature of tourism as a human / social activity (Gill & William<sup>15</sup> 1994; Jafari<sup>16</sup> 2001). Under the conceptual definitions, tourism is regarded as a composite phenomenon embracing the incidence of a mobile population of travellers who are strangers to the destinations they visit, and where they represent a distinct element from the residents and working population (Brown<sup>17</sup> 1998). Sharpley<sup>18</sup> (2009: 9) argues that tourism is one manifestation of mobility; the dramatic growth in the scope and scale of tourism reflects, or has contributed to, the increasing mobility of both people and the services (finance, information, communication and so on) that facilitate tourism‘.

Unlike conceptual definitions, technical definitions provide typologies of tourists and constituents of tourism activity. Ogilvie<sup>19</sup> (1933:5-6) defined tourists as all persons who travel away from home for any period of less than a year and ... while they are away

they spend money in the place they visit without earning it there'. The definition was refined in 1972 and, thus, a tourist was defined as a person staying in a locality situated outside his place of residence during minimum of 24 hours and a maximum of one year' (OECD 1974: 7 cited in Leiper<sup>20</sup> 1979). The most accepted technical definition of tourism is that derived by World Tourism Organisation (WTO, 1999). This definition is broad to extent that it includes the elements necessary to facilitate the collection of data and comparison between countries (Hunt & Layne, 1991). According to the WTO<sup>21</sup> (2001), 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, or other purposes. Tourism can also be defined by using system model (Gunn & Var<sup>22</sup> 2002; Gunn<sup>23</sup> 1994; Leiper<sup>24</sup> 1990). Thus, it is very important to understand tourism as a system (Leiper<sup>25</sup> 1995; Mill & Morrison<sup>26</sup> 2006).

According to Leiper<sup>25</sup> (1995), tourism is a systems framework which constitutes the tourists' generating region, the transit route region and the tourist destination region. Understanding the tourism system model is necessary as it helps to explore the multiplicity of forward and backward linkages into the destination community, especially in the context their participation.

Tourism as a system is integrated not only into the private sector as businesses but as a service industry linked into more sectors of the economy than virtually any other area of economic activity' (Sofield et al.<sup>27</sup> 2004: 8). Considering tourism as a system, composed of a large number of inter-related businesses and support services, reveals the ways in which tourism could provide opportunities for poor sections of destination communities (Gunn & Var<sup>28</sup> 2002; Solified & Bhandari<sup>29</sup> 1998). That is, recognizing tourism as a system provides the basis for a much deeper analysis of community involvement in tourism and host-guest relationships (Faulkner & Russell<sup>30</sup> 2003). Therefore, an holistic approach is considered the best way of defining tourism.

Tourism is considered as 'an activity essential to the life of nations because of its direct effects on the social, cultural, educational and economic sectors of national societies and on their international relations<sup>31</sup>. Tourism boosts up economic activities through its multiplier effects and exploits local cultural and natural specialties in a positive way<sup>32</sup>. Tourism comes in many shapes and forms such as social, cultural,

economic and environmental (Godfrey & Clarke<sup>33</sup>, 2000). It is a multi-sectoral and as a means of economic, social and cultural exchange and has many aspects and types (Mow forth & Munt<sup>34</sup>, 2003). Geographers study the spatial expression of tourism as a human activity, focusing on tourist generating and tourist receiving areas.

(Kaye and Pertin, 2014)<sup>64</sup> has illustrated various types of tourism activities or product in the state as given below:

1. Cultural Tourism: The state has rich cultural heritage and indigenous cultural diversity of different tribes. The culture and the tradition with their belief lure the greatest number of tourist. The different colours of various fair and festival also attracts the tourist to visit this place.
2. Natural/ Ecotourism: The state is endowed with rich biodiversity. Tourist can experience the nature's architect in abundance like the snow capped mountain, passes, gorges, waterfall, rivers, lakes, stream and vastly undulating forested terrain. All this gift of nature makes the state an ideal destination for the nature lovers and eco-tourist.
3. Adventure Tourism: With its rich basket of natural resources, the state is blessed with green forest and many major such as the mighty Siang, Subansiri, Kameng, Lohit and Tirap. It is surrounded by wide range of outdoor activities like, mountaineering, trekking (low, semi and high altitude), mountain biking, river rafting, angling, water sports (in lakes and rivers), aero sports like paragliding, hang gliding, hot air ballooning, etc. are the ingredients that can make the state an attractive destination for adventure sports both nationally and internationally.
4. Wildlife and Forest Tourism: With maximum area of it's under the forest cover, the state has 2 national parks and number of wildlife sanctuaries, biosphere reserve, tiger reserve, elephant reserve and many reserved forest. Which are home to some of the rare and endangered flora and fauna species and the wildlife and forest tourism in the state have high potential as a tourist destination.
5. Rural Tourism: Rural tourism in the state can be a stepping step toward or base for eco-tourism, heritage tourism or the recreation tourism. Where a visitor or

tourist can seek to enhance personal experiences through exchange of knowledge, interaction with different culture and environment.

6. Historical Tourism: Arunachal Pradesh is also an important for its historical and archaeological sites and monuments, like the Tawang Monastery, Bhismaknagar, Parshuram Kund and World-War-II cemetery are some of the historical tourism sites in the state.

Tourism Potential is a widely used and accepted term in tourism domain, however, it sometimes creates misunderstanding as potential expresses some territorial capabilities, which holds a little narrower domain. As prescribed by S. Formica<sup>35</sup> the term 'potential' may be replaced by 'Attractiveness' which clearly indicates the relation between demand and supply of tourism. Assessment of tourism potential is a necessity for Indian tourism. It is not just to find out any quantitative value, rather to assess the gap of the demand and to enhance the performance of tourism.

The state has considerable tourist potentials, which has not been fully tapped. The potential of tourism in Arunachal Pradesh has not been still explored and marketed; the present study is an attempt to explore the potential and prospects of tourism industry in Arunachal Pradesh.

## **1.2 STATEMENT OF THE PROBLEM**

The nature has endowed with a plenty of tourist interest natural beauty, varieties of flora and fauna as well as rich cultural legacy in the state which has to be harness for all-round socio-economic development of the people and for the state and nation as well. In spite of vast tourism potential, Arunachal Pradesh so long remained unexplored to the outside world due to general backwardness of the area in terms of inadequate road connectivity, railway links and airstrips, imposition of Restricted Area Permit (RAP)/Protected Area Permit (PAP) and Inner Line Permit (ILP) system, remoteness and inaccessibility of the area, lack of infrastructural development which holds the progress of tourism development in check in the state. Although there is a manifestation of progress in tourism activities in the study area but it lacks even minimum requirement of the infrastructural facilities. Apart from these the sustainable development in milieu of harnessing these resources is another challenging factor.

There is very little site specific information about sources of visitor's origin and destination, travel motivation, spatial patterns of recreation/tourism development. The proposed study is an attempt to throw light on the potential and prospects of tourism sector in the state so that the area became one of the tourist hotspot in the country and in the world.

### **1.3 LITERATURE REVIEW**

Review of literature helps in the easy assessment of the different aspects of the study. To have deep understanding of the potential and prospects of tourism in the state, the related available literature on the subject is being reviewed in an extensive manner.

Elwin, Verrier<sup>36</sup> (1960) contribution to earlier known as NEFA (North East Frontier Agency) envisaged to understand the Historical Development of tribal life and culture with respect and the spirit of affection and identification that eliminates any possibility of imposition. It envisaged to not ignore the past but would built upon it. The approach focused on bringing the best things of modern world to the tribes, but in such a way that they would not be destroying the traditional way of life, but would activate and develop all that is good in it.

Gupta, V. K.<sup>37</sup>(1987) has extensively discussed about the tourism in almost all states of India. He stated that tourism is an important factor for maintaining communal harmony and peace in the country. He opined tourism as medium for national integration. In his work he has also mentioned the distinct tourism potentialities in the country like that of historical monuments, hill ranges, pilgrimage places and various dance and festivals.

Shackley, M.<sup>38</sup> (1995) admitted that the remote North-East Indian province of Arunachal Pradesh was briefly opened to visitors from 1993-1995 as part of a general Indian Policy promoting wider access to frontier areas. He visited Arunachal Pradesh during 1994 to assess its fledgling tourism industry expressing great concern over potential socio-cultural impact. He expressed his feeling that tourism is now being actively discouraged and the industry seems likely to atrophy. This report charts the rise and fall of Arunachal Pradesh tourism destination.

Bosseli, A. M., et. al<sup>39</sup> (1997) has attempted to explain the challenges or the bottle neck that the Himalayan Kingdom Nepal is facing in promoting tourism without

compromising the natural, cultural and social environment of the country. It observed that the numbers of visitor are increasing year after year. He has laid stresses on flourishing tourism without hampering the natural environment in the study area.

Koley, R. N.<sup>40</sup> (1998) in his paper has describes the state as a land of tourist treasures in terms of exotic natural beauty, rich culture and heritage, and expressed tourism potential of the state as economic bonanza for Arunachal Pradesh.

Rai, C. H.<sup>41</sup> (1998) has made an attempt to highlight the tourism of the hilly region. He has considered Himalayas to be a tourism-resource-potential area. In his book he has also deal with the prospect of tourism in the Kumaon Himalaya and has also highlighted the problems and potentialities of tourism in hilly areas.

Wim, G. M., et. Al<sup>42</sup> (1999), has stated that tourism and tourism development create major changes in the environment. To determine their impact on environmental sustainability, it is necessary to understand tourist behavior: Time, space and context. It requires specific data about a visitor's time spent, locations visited, routes chosen, informationused, perception and motivation.

Sharma, K. K.<sup>43</sup> (2000) has highlighted the importance of hospitality in tourism. In his book he has taken a general look at the type and characteristic of food service, establishment like lodging facilities and identifies some of the basic different trait of its operation. He also has stated that tourism industries cannot be prosper without providing these basic need to the tourist.

Amanda, S.<sup>44</sup>(2001) has stated that tourism is relevant to many theoretical and real-world issues in anthropology. For host people, tourism is often the catalyst of significant economic and social change, the context for cross-cultural encounters, and the stage-like setting for displays and recreations of culture and tradition. For the tourists, tourism can be a ritual form of escape from the structure of everyday life, or it can represent a symbolic quest for the kinds of authentic experiences that elude modern society. For anthropologists, tourism can be a lens through which to explore issues of political economy, social change and development, natural resource management, and cultural identity and expression.

Mitra, A.<sup>45</sup> (2001) in his paper emphasized the state of Arunachal Pradesh as one of the richest bio-geographical province of the Himalayan zone. Besides these he

concluded that mountain ecosystems have provided an ideal condition for the promotion of nature-based tourism in the state.

Gurung, D.P. and Pant, R.M.<sup>46</sup> (2003) in their paper identified the key elements in culture of Arunachal Pradesh, that can play a vital role in promoting cultural tourism in Arunachal Pradesh. They have also assessed the socio-economic status of Arunachal Pradesh and suggested the importance.

Megu, K.<sup>47</sup> (2003) has focused on a variety of tourist attractions such as wild life, scenic beauty, pilgrimage centres, exotic traditional crafts and festivals, in the state that was not utilized to accelerate the pace of tourism potential in comparison to other states.

Potdar, M. B.<sup>48</sup> (2003) analyzed that a treasure of tourism, beaches, horticulture, scenic beauty, historical monuments, temples and churches, local folk arts, handicrafts, food and festivals, biotic life are the resources available for ideal tourism in South Konkan. Therefore there is tremendous scope for tourism development in South Konkan. She studied economic and socio-cultural impact on local people by considering case studies in study region.

David, C, et. al<sup>49</sup> (2004) in his paper he has argued for a marketing solution to be the core factor to boost the tourism industry in a particular area. He stated that marketing techniques have been proven to be successful in encouraging tourists to visit existing tourist sites and new tourist sites. The use of mass marketing activities including promotional literature, bill- boards, advertising campaigns is standard practice for tourist related national and global companies. However, tourism sites must have potential to generate revenue to 'stay in business.

Chawla, R.<sup>50</sup> (2004) has tried to explore the prospect of cultural tourism in the context of various historical, social, artistic and craft products. He also tried to understand the importance of festivals and other unique features that attracts the tourist to visit the areas. Altogether he has made an attempt to provide relevant idea and knowledge about the cultural tourism and its growth in his study.

Krishan, K. K.<sup>51</sup> (2004) has highlighted that tourism is a service-oriented industry, and has been emerged as a revolutionizing phenomenon, especially in the second half of the present century, overtaking manufacturing and extractive industries as a catalyst of the development process at the national and at the global levels.

Richard, B.<sup>52</sup> (2004) has stated that all subjects need to understand from where and when they came and leisure, recreation and tourism (LRT) are no exceptions. He has reviewed the past geographical literature in these areas from a personal perspective which covers involvement in the field over the past four decades. It is an era approach to identify themes and emphases in the published research and to relate current research thrusts to the past efforts. It highlights on the relative status of LRT studies in geography and of geographical research in the LRT fields, and concludes with valuable thoughts on likely future areas of research effort.

Sinha, P. C.<sup>53</sup> (2005) has focuses on various aspect of tourism development like social, economic, cultural, physical, anthro-political, environmental and overall recreational facilities. He has also made an attempt to provide detail possible means for sustainable development of tourism in his book. Issue identification and planning strategies in the sphere of travel and tourism has been highlighted in his book. He has also focus on the potentialities and problems involved in the development of tourism at global level.

Julia C. H., et. al<sup>54</sup> (2006) has explored in length how participatory approaches and GIS can be integrated into a framework – PAGIS. They tried to understand the different bodies of local knowledge towards tourism and how we can improve community participation and stakeholder interaction in the planning process. They found that PAGIS has the potential to play a role in enhancing the achievement of more sustainable forms of tourism planning and development. Moreover, the planning and management of sustainable tourism in needs more attention and appropriate policy mechanisms in which local authorities can work effectively together with the local community and the tourism industry.

Kushwaha, A., et. al<sup>55</sup> (2007) has stated that GIS is a strong and effective tool to guide in tourism planning and decision-making. It empower not only spatial relationships, but also beyond the space to a holistic view of the world with its many interconnected components and complex relationships. It can also examined the aptness of locations for proposed developments, identifying conflicting interests and modeling relationships. Moreover, GIS allows policy makers to easily understand the problems in

relation to natural environment and more effectively target resources. However, due to the lack of inconsistencies in tourism databases, its applications are limited.

Songshan, H, et. al<sup>56</sup> (2008) has discussed about the China's tourism playing an important role in the world tourism market, but a little is known internationally about tourism and hospitality research in China. The paper attempts to give overview of China's recent tourism and hospitality research and the content analysis results showed that tourism research themes in China is basically focused on tourism attraction/resources development and management, tourism planning, and tourism industry development issues.

Tamar, D. W.<sup>57</sup> (2008) has widely discussed about the carrying capacity, with reference to tourism, by defining it as "the maximum number of people who can use a tourist site without an unacceptable alteration in the physical environment and without an unacceptable decline in the quality of the experience gained by the visitors". It is essentially the point beyond which the addition of more people will lead to the degradation of the environment. The study also argued that the degradation can have physical (including ecological as well as built-environment), social psychological, and economic dimensions.

Alexandre, R, et. al<sup>58</sup> (2009) has discussed in their journals that many protected areas are facing challenges of increasing pressure from visitors and tourism development. There is thus an urgent need for conservation biologists to evaluate the full impact of human disturbance not only on individual responses, but also on the viability of protected populations, so that relevant management measures can be proposed. They emphasized on the need for more integrative approaches combining research at individual and population levels.

David, M.<sup>59</sup> (2010) in his paper "The Value and Scope of Geographical Information Systems in Tourism Management", argued that that GIS can bring significant additional value to decision making through data analysis, modelling and forecasting. He stated that GIS is well suited to the practice of tourism development planning specially in sensitive environmental and cultural context where the sustainability is of prime consideration. However the lack of awareness and people's presumption of high

procurement costs involvement of GIS Technological inputs constrained them from utilization of these technologies.

Fred, L. M.<sup>60</sup> (2010) studied that GIS tools can play a major role in market analysis for tourism-dependent retailers. This intense study focused on how a GIS application, Environmental Systems Research Institute's (ESRI) Arc GIS 9.2 system, can be used to help tourist-dependent retailers serve existing customers more effectively and to target prospective new customers more precisely.

Bhatia, A.K.<sup>61</sup> (2012) has highlighted about the present status of tourism been upgraded to that of a great economic, cultural and social force, from the social and cultural point of view; there is enough evidence to support the fact that tourism travel unquestionably produces an interaction between the cultural custom of the visitor and those of the host people.

Kumari, Kiran<sup>62</sup> (2012) in her paper attempted to study the potential of GIS applications in tourism planning by getting the tourism information. This study was basically to provide tourist more information about their travel destination through the interactive maps and tabular information attached to it using GIS technology.

Mitra, Amitava and Lama, Maila<sup>63</sup> (2013) in their chapter in a book dealt with the opportunities and challenges of developing tourism in this remote state.

Lama, Rinzing<sup>64</sup> (2014) tried to identify and map Community Based Tourism resources by using the tools of Community Based Tourism Matrix, SWOT analysis and Sikkim Benchmarked against key Performance indicator of Community Based Tourism. His work planned to understand the dynamics of Community Based Tourism.

Kaye, T. and Pertin, John<sup>65</sup> (2014) in their chapter in a book reviewed the scenario of tourism industry in the state by quantifying SWOT analysis of tourism potentialities and opportunities to foster the growth and development of the state in general and the tourism industry in particular.

Lama, Maila<sup>66</sup> (2013) in his book dealt with an in-depth understanding socio-economic characteristics of tourists of Arunachal Pradesh as well as the structure of tourists demand in North East Region.

Baruah, Samannoy and Homeswar, Goswami<sup>67</sup> (2017) paper highlights about the Tawang, the important tourist attraction and destination spots of Arunachal Pradesh that

receives maximum number of tourists of the state and suggested adequate measures need to be taken to bridge the expectation gaps.

Sharma, Hirendra Nath<sup>68</sup> (2018) book is the outcome of his research on ecology, biodiversity and its societal implications in Arunachal Pradesh under the “Center with Potential for Excellence in Biodiversity” of Rajiv Gandhi University. It focuses on the landscape, ecology, environmental condition, forest types and products, herbs, shrubs, trees, medicinal plants, natural resources, wildlife, agricultural practice and produce, people and their pattern of livelihood of West Kameng and Tawang district. This book will influence the tourist to visit Arunachal Pradesh.

Qayum, Abdul and Singh, R.K.<sup>69</sup> (2018) book is attempted to share the culture of the state with the visitors through the Forest Rest Houses (FRHs). This book with a large number of photographs of FRHs reaches to an audience, who may want to explore the rich natural and cultural heritage. It leads the visitors to the heritage buildings deep inside the forests, which have unique architectural elements and several stories associated with them.

#### **1.4 STUDY AREA**

The study area Arunachal Pradesh is the 28<sup>th</sup> State of India located in the extreme North-East corner of India lying between the latitude 26°28' N to 29°30' N and Longitude 91°30' E to 97°30' E is bounded in the North by China, to the North-East and East by Myanmar, to the West by Bhutan and to the South by vast plains of the Brahmaputra Valley of the Assam State. It has a geographical area of 83,743 sq. km. The state has a total population of 13,82,611 persons with a population density of 17 persons per sq. km according to 2011 census. These populations are sparsely distributed over an area in uneven manner. The higher reaches are even more sparsely scattered of settlement in the state. The state is a home of some endangered plants and animal species besides rich cultural heritage of 26 major tribes and numerous sub-tribes.

Arunachal Pradesh is not a linguistic state, it is an ethnic state inhabited by colorful tribal people of diverse culture and lifestyle. Each of them has their own unique culture and traditions. They also have customary laws and a time tested dispute resolution mechanism. The disputes in tribal societies are resolved by a system of administration of justice founded on customs and customary laws of each tribe by the Village Council. But

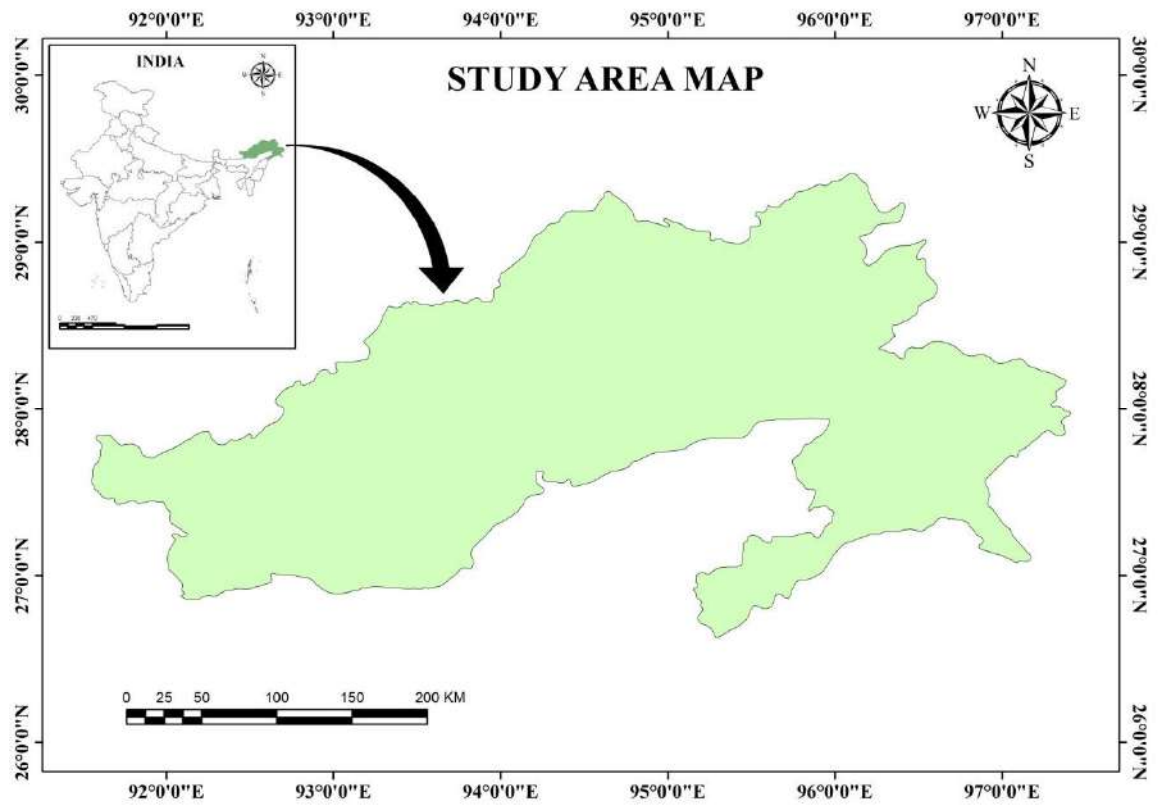
now a day's people preferably go for Indian judicial system for resolution of their disputes. Arunachal being a unique geographical zone is naturally blessed with diverse topography with changing altitudes. The altitude dependent climatic conditions have created a wildlife population that is diverse as well as precious. The rare and endangered species of wildlife thrive in the seven wildlife sanctuaries and two national parks within the state.

The state Arunachal Pradesh expose in its full splendor is a treasure house of nature tucked in the northeastern tip of the union of India. Snow clad mountain, snowy mist, famous monasteries, unexplored natural passes, insight mountains and hills and serene lakes come together to form some of the most glorious mountain spots in the state. For the tourists, the options are wide-ranging, each more alluring than the other. The colorful festivals of different tribes reflect the ancient faith of several tribes who have been harmoniously living in the cradle of nature since time immemorial. The 400 years old Buddhist Monastery and Sango Lake at Tawang, Mouling National Park at Jenging, Upper Siang District, Namdapa National Park at Tezu, Lohit District, Mehao wild life Sanctuary at Roing, Parasuram Kund at Lohit District, Archaeological excavation like Malinithan, Itafort and Bhismanagar are some of the major sites to visit and learned about the chronicles of the State Arunachal Pradesh.

The state offers wonderful panoramic views of Himalaya's landscapes and snow clad mountain with luxuriant forest. The land of enchanting beauty with its lush green valleys, hills and innumerable turbulent rivers and streams drained by rivers like Kameng, Subansiri, Siang, Lohit and Tirap and rich cultural, historical and archaeological sites has considerable tourist potential, which has not been still fully tapped.

Department of Tourism, Govt. of Arunachal Pradesh has made a humble beginning to create tourism infrastructure at different locations. It may be noted that Arunachal Pradesh has tremendous scope for development of various types of tourism activities, such as Rural tourism, Cultural tourism, Adventure tourism, Historical tourism, Wildlife tourism, Nature based tourism, pilgrimage tourism and Eco-tourism. There is an evident that the potential of tourism in Arunachal Pradesh has not been fully explored and marketed yet. This study is being carried out to investigate the potential and prospect of

**Map 1: Study Area Map Arunachal Pradesh**



tourism by undertaking the tourist responses on tourist attraction sites and host responses on socio-cultural-economic and environmental impact of tourism to promote tourism industry in Arunachal Pradesh.

The state is inhabited by 26 major tribes and numerous sub-tribes with a total population of 13,83,727 persons with a density of 17 persons per sq. km according to 2011 census.

<b>Table 1.1: Population, Literacy, Sex-ratio and Decadal growth, Arunachal Pradesh (Census, 2011)</b>						
<b>Sl. No.</b>	<b>District</b>	<b>Population</b>	<b>Urban Population</b>	<b>Literacy Rate</b>	<b>Sex ratio</b>	<b>Percentage of decadal growth rate 2001-2011</b>
1	Tawang	49977	11202	59.00	714	28.40
2	West Kameng	83947	15932	67.00	836	12.53
3	East Kameng	78690	18350	60.02	1029	37.62
4	Papum Pare	176573	96963	79.95	980	44.73
5	Lower Subansiri	83030	12806	74.35	984	49.00
6	KurungKumey	92720	2345	48.75	1031	116.56
7	Upper Subansiri	83448	13405	63.80	998	50.78
8	West Siang	112274	24968	66.46	930	8.04
9	East Siang	99214	27635	72.54	979	13.52
10	Upper Siang	35320	6540	59.99	889	5.87
11	Dibang Valley	8004	2384	64.10	813	10.07
12	Lower Dibang Valley	54080	11389	69.13	928	7.11
13	Lohit	145726	32430	68.18	912	16.50
14	Anjaw	21167	982	56.46	839	14.78
15	Changlang	148226	19228	59.80	926	18.18
16	Tirap	111975	20810	52.19	944	11.61
<b>Arunachal Pradesh</b>		<b>1383727</b>	<b>317369</b>	<b>65.38</b>	<b>938</b>	<b>26.00</b>

Sources: Statistical abstract of Arunachal Pradesh, 2017.

## **1.5 OBJECTIVES**

The major objectives of the study is to make geographical investigations of Tourism in Arunachal Pradesh. Following are the specific objectives of the study–

1. To examine the geographical background conscientious for the development of tourism in the study area.

2. To assess the existing transportation, communication and accommodation facilities in the study area.
3. To identify new locations having tourism potential and to suggest a strategy for the development of such tourist places.
4. To explore the major problems of tourist places in the study area.
5. To suggest an idea for the sustainable development of Tourism in the study area.

## **1.6 DATA SOURCE**

### **A. Primary Data**

The researcher used cross-sectional approach for collecting data. To generate primary data, questionnaires was prepared for tourist and stakeholders/ host community separately. The questionnaires were distributed for asking 400 tourists; classified into 2 samples for international tourist and 398 samples for domestic tourists. The other 90 samples questionnaires were distributed for asking the stakeholders'/host communities perception on tourism. Primary data were collected through questionnaires and they were compiled and tabulated using various quantitative methods.

However some of the selected tourist site is surveyed and its legitimacy and importance as tourist site are being supplemented with photographs and authenticate by narration of dwellers and visitors coming for the purposes.

### **B. Secondary Data**

Secondary data collected from Department of Metrology, Itanagar; Statistical Abstract of Arunachal Pradesh published by Department of Economics and Statistics, Itanagar and Statistical Hand Book of some districts of Arunachal Pradesh is used to derive population and economic parameter of the study area. The researcher intensively studied the physical development of tourist destination and facilities of all the districts from different sources i.e., India Tourism Statistics; Annual Report published by Ministry of Tourism, Government of India for different years; Project Preparation of 20 years Perspective Plan for the State of Arunachal Pradesh by Department of Tourism, Govt. of Arunachal Pradesh; Tourism Development Plan of Arunachal Pradesh February 2010, prepared by Heritage Tourism Division, New Delhi; Tourism Survey for State of Arunachal Pradesh etc. Besides these, Published and unpublished research, textbooks,

journals, articles, local newspaper, Internet and other related records is thoroughly referred to validate the factual data or information.

## **1.7 METHODOLOGY**

This research is aimed at studying the potential and prospect of the tourism in Arunachal Pradesh. The research methodology is as following:

### **1.7.1 Sample Selection**

#### **1.7.1.1 Population**

The population was divided into two groups of respondents. The first group is potential respondents who are tourist that visited different tourist destination in the district of Arunachal Pradesh. The group of tourists is divided into 2 groups: (1) group of domestic tourists and (2) group of international tourists. The second group is the stakeholders/ host/community those who are engaged in tourist services.

The researcher determined sample size from total tourist arrivals at Arunachal Pradesh using secondary statistical records collected from Directorate of Tourism, Government of Arunachal Pradesh.

#### **1.7.1.2 Sampling Method**

The researcher has used multi-stage sampling to calculate a sample size of target group from the total number of tourists who visited particular tourist destination in the particular district of Arunachal Pradesh. After that, the researcher used the Yamane's Formulae (1973) to identify appropriate total tourists in each district. This formula is reliable to 95% and less than 5% deviation factor.

$$n = N/[1 + Ne^2]$$

e= Deviation of Sampling

N= Size of Population

n= Size of Sampling

Formulation

$$n = 520089/[1+520089 (0.05)^2]$$
$$n = 520089/520090 (0.0025)$$
$$n = 399.99$$
$$n = 400$$

Therefore, the Sampling size is 400 samples.

From 400, the researcher computes by the ratio of host/ local community as given in the following table:

<b>Table 1.3: Ratio of HostSampling Size</b>		
<b>District</b>	<b>Total Households</b>	<b>Sampling Size</b>
Tawang	10062	42
East Kameng	14508	60
Papum Pare	35730	149
Upper Subansiri	15869	66
Lower Subansiri	15249	63
Dibang Valley	1952	8
Longding	2924	12
Total	96294	400
<i>Source: Census of India</i>		

#### **1.7.1.3: Data Analysis**

The researcher used SPSS 26.0 (Statistical Package for Social Sciences) and 4 point Likert Scale for analysing the data. Four point Likert scale is basically a forced Likert scale. The reason it is named as such because the user is forced to form an opinion. There is no safe 'neutral' option. Ideally it is good scale for market research , they make use of the 4-point scale to get specific responses. The manual tabulation analysis was used for variable of open-ended questions, for instances; suggestion and recommendations to obtain essential information.

Descriptive analysis methods like frequencies, percentage, mean and mean ranking etc. were used. The tourists' and stakeholders'/host/ communities' questionnaires were subjected to frequency and cross tabulation analysis. Descriptive statistical measures limit generalization to the nature of particular group (and that group only) and it gives precious information about that group. Mean is a single value that represents the entire data. Tourists' and (b) stakeholders'/ host/ communities opinions were calculated on the basis of responses on a Likert scale. A score was created in percentage by combining all questions related to Socio-cultural-economic and environmental impact. A response was assigned minimum 1

and maximum 4 numbers. Significant difference was assessed among the categories of each demographic factors using Independent-Samples Mann-Whitney U

Test and Independent-Sample Kruskal-Wallis Test. The outcomes of the analysis were presented by using tabular and graphical methods like tables, bar diagrams, box & whisker diagrams etc

## **1.8 RESEARCH QUESTIONS**

1. Are physical setting and infrastructural facilities playing vital role in the development of tourism?
2. Existing infrastructure for the development of tourism is inadequate in the study area?
3. Are there any unexplored tourist sites in the study area?
4. Is there any environmental impact pose by tourism in the study area?
5. Can tourism play any role for sustainable development of the study area?

## **1.9 DESIGN OF THE RESEARCH WORK**

The proposed research work is presented into following seven chapters covering various aspects of the study.

**Chapter One** entitled ‘Introduction’ deals with the concept of Tourism, conceptual background of GIS, the status of tourism in India, it also contain objectives, data base and methodology, literature review and design of research work.

**Chapter Two** is concerned with geographical background of the study area and elaborated about the physiographic characteristics, drainage pattern, vegetation, climate, population characteristics, socio-economic characteristics, infrastructural facilities such as transport and communication, accommodation and other facilities.

**Chapter Three** deals with distribution of tourist attraction sites and tourist arrivals in Arunachal Pradesh in detail.

**Chapter Four** is focusing on socio-cultural impact of tourism in the state.

**Chapter Five** is focusing on socio-economic and environmental impact of tourism in the state.

**Chapter Six** examined the potential of tourism and which provides future prospect of tourism in the state.

**Chapter seven** presents the summary, conclusion and recommendation of the proposed research work.

## REFERENCES

1. Davenport, J., & Davenport, J. L. (2006). The Impact of Tourism and Personal Leisure Transport on Coastal Environments: a review: *Estuary. Coast, Shelf Sci.* 67 280 e292. *Destination, Journal of Travel Research* 38, 260-269 (2000)
2. Hemmati, M., & Koehler, N. (2000). Financial Leakages in Tourism. *Sustainable Travel and Tourism*, 25-29.
3. Tooman, A. L. (1997). Tourism and Development, *Journal of Travel Research*, 35, 33-40.
4. Emaad, M. (2007). Tourism Development Strategies and Poverty Elimination, *Problem and Perspectives in Management*, 5, (1)
5. Report in the Working Group of Tourism; 12<sup>th</sup> Five Year Plan (2012-2017), Ministry of Tourism, Government of India.
6. Thyagu Raju N. (2016). Prospects and Emerging Challenges of Tourism Industry in India, *International Journal of Multidisciplinary Research and Development*, Vol-3; Issue 4; p.173.
7. Nandi, P. and Chakraborty, P. (1991). Tourism and Environment Degradation, Facts and Remedies, *Geographical Review of India*, Vol. 61, March, pp.22-29.
8. Hunt, J., and Layne, D. (1991). Evolution of Travel and Tourism Terminology and Definitions, *Journal of Travel Research*, 30, pp. 7-11.
9. Choi, H. and Sirakaya, E. (2005). Measuring Residents' Attitude Toward Sustainable Tourism: Development of Sustainable Tourism Attitude Scale, *Journal of Travel Research*, 43 (4), pp. 380-394.
10. Go, F. and Jenkins, C. (1997). *Tourism and Economic Development in Asia and Australia*. London: Cassell.
11. Neto, F. (2003). A new approach to Sustainable Tourism Development: Moving Beyond Environment Protection. *Natural Resources*, 27, pp. 212-222
12. Pearce, P. Moscardo, G, and Ross G. (1996). *Tourism Community Relationships*, Oxford: Pergamon.
13. Mowforth, M. and Munt, I. (2003). *Tourism and Sustainability: Development and New Tourism in the Third World*, London, UK: Routledge Publishing.

14. Lipman, G. and Kester, J. (2008). The Travel and Tourism Competitiveness Index: Leveling the Playing Field. *The Travel and Tourism Competitiveness Report*, World Economic Forum.
15. Gill, A. and Williams, P. (1994). Managing Growth in Mountain Tourism Communities, *Tourism Management*, 15 (3), pp.212-220.
16. Jafari, J. (2001). The Scientification of Tourism. In Smith, V. and Brent, M. (eds.) *Hosts and Guests Revisited: Tourism Issues of the 21<sup>st</sup> Century*, New York. Cognizant Communication Corporation.
17. Brown, D. (1998). Evaluating Institutional Sustainability in Development Programmes: Beyond Dollars and Cents, *Journal of International Development*, 10 (1), pp. 55-69
18. Sharpley, R. (2009). Tourism and Development Challenges in the Zambia, Current Issues in Tourism, 12 (4), pp. 337-358
19. Ogilvie., F. (1993) *The Tourist Movement: An Economic Study*, London: P S King and Sons.
20. Leiper, N. (1979). The Framework of Tourism, *Annals of Tourism Research*, 16 (4), pp. 390-407.
21. WTO (2001). The concept of Sustainable Tourism. At <http://www.worldforum.org/sustainable/concepts.html>
22. Gunn, C. and Var, T. (2002). *Tourism Planning*, 4<sup>th</sup> Edition, New York: Routledge.
23. Gunn, C. (1994). *Tourism Planning: Basics, Concepts, Cases*, 3<sup>rd</sup> Edition, Washington D.C.: Taylor and Francis.
24. Leiper, N. (1990). *Tourism Systems*, Palmerston North: Development of Management Systems, Massey University.
25. Leiper, N. (1995). *Tourism Management*, Melbourne: RMIT Press.
26. Mill, R. and Morrison, A. (2006). *The Tourism System*, 5<sup>th</sup> Edition, Kendall Hunt Publishing Company
27. Sofield, T. Bauer, J., De Lacey, T., Lipman, G. and Daugherly, S. (2004). *Sustainable Tourism-Eliminating Poverty (ST-EP)*. Cooperative Research Centre for Sustainable Tourism, University of Tasmania, Launceston.
28. Gunn, C. and Var, T. (2002). *Tourism Planning*, 4<sup>th</sup> Edition, New York, Routledge.

29. Solified, T. and Bhandari, H. (1998). *The Tourism System*. Perth: Seminar Address, Murdoch University.
30. Faulkner, B. and Russell, R. (2003). Chaos and Complexity of Tourism: In Search of a New Perspective. In Fredline, Lo, Leo J., and Chris C. (eds.). *Progressing Tourism Research- Bill Faulkner*, Clevedon: Channel View Publication.
31. Technical Manual (1995). Collection of Tourism Expenditure Statistics, World Tourism Organization (Web: [Wikipedia.org/wiki/tourism](http://Wikipedia.org/wiki/tourism))
32. Zimmerman, P. and Grassmann, S. (1996). Evaluating A Territories Touristic Potential, LEADER Seminar in Sierra De Gata.  
(web: <http://ec.europa.eu/agriculture/rur/leader2/rural.en/biblio/tourist/method.pdf>)
33. Godfrey, K. and Clarke, J. (2000). *The Tourism Development Handbook: A Practical Approach to Planning and Marketing*. London: Continuum.
34. Mowforth, M. and Munt, I. (2003). *Tourism and Sustainability: Development and New Tourism in the Third World*, London, U.K.: Routledge Publishing
35. Formica, S. (2000). 'Destination and Attractiveness as a Function of Supply and Demand Interaction', a PhD. Dissertation submitted to the Faculty of the Virginia Polytechnic Institute.
36. Verrier, Elwin (1960). *A Philosophy for NEFA*, p.54.
37. Gupta, V.K. (1987). *Tourism in India*. Gian Publishing House, Delhi.
38. Shackley, Myra (1995). Just Started and Now Finished: Tourism Development in Arunachal Pradesh, *Tourism Management*, Vol.16, Issue, 8, December, pp. 623-625.
39. Bosseli, A.M., Caravello, G.U., Scipioni, A. & Baroni, A. (1997). "Sustainable Tourism Development in Nepal: Evaluation and Perspective". *Journal of human Ecology, International, Inter disciplinary journal of man environment relationship*, 8 (1), January.
40. Koley, R.N. (1998). Prospects of Tourism and Mineral Resources in Arunachal Pradesh. *Arunachal Review*, vol. IV (24), 9-11.
41. Rai, H.C. (1998). *Hill Tourism planning and Development*. Kanishka Publisher and Distributors, New Delhi.

42. Wim, G.M., Van Der, K. (1999). "Research Report: GIS oriented analysis of tourist time-patterns to support sustainable tourism development", *An International Journal of Tourism Space, Place and Environment*, 1(1), 56-69.
43. Sharma, K.K. (2000). *Tourism and Hospitality*. Sarup and Sons 4790/23, Ansari road. Daryaganj, New Delhi.
44. Amanda S. (2001). "Anthropology of Tourism: Forging New Ground for Ecotourism and Other Alternatives", *Annual Review of Anthropology*, Vol. 30, pp. 261-283.
45. Mitra, A. (2001). Nature based Tourism in Arunachal Pradesh- A Study Focused on Socio Economic Characteristics of Surveyed Tourists. *Resarun*, 27, 8-16.
46. Gurung, D. P. and Pant, R. M. (2003). Cultural Tourism in Arunachal Pradesh, published in *A Journal of Business Studies*, Vol. VII, Kangleipak Review.
47. Megu, K. (2003). Significance of Highway Service facilities for Development of Tourism Industry in North East Region with Special Reference to Bhalukpung-Bomdila-Dirang-Tawang Tourist Circuit of Arunachal Pradesh. *Resarun*, 29, 14-20.
48. Potdar, M.A. (2003). Tourism Development in South Konkan. Unpublished Doctoral Thesis, Submitted to Shivaji University, Kolhapur.
49. David, C, Audrey, G, Mário, P, Ascensão, Lyn F. (2004). "Holistic Tourist Industry Marketing: Significant Deficiencies in Relation to Natural Tourist Sites", *Journal of Marketing Theory and Practice*, Vol. 12, No. 4, pp. 49-59.
50. Chawla, R. (2004). *Cultural Tourism in India*. Sonali Publications, New Delhi.
51. Krishnan, K. K. (2004). *Economics of Tourism*. Kanishka Publishers and Distributors, New Delhi.
52. Richard, B. (2004). "Geographical Research on Tourism, Recreation and Leisure: Origins, Eras and Direction", *Tourism geographies: An International Journal of Tourism space, Place and Environment*, Vol. 6, Issue 2, pages 143-162.
53. Sinha, P.C. (2005). *Ecotourism and Mass Tourism*. Anmol Publication Pvt. Ltd. 4374/4B, Ansari Road, Daryaganj, New Delhi.
54. Julia C. H, Simon M. (August, 2006). "Participatory Approaches and Geographical Information Systems (PAGIS) in Tourism Planning", *Tourism Geographies: An*

- International Journal of Tourism Space, Place and Environment*, Vol. 7, No. 3, pp. 272–28.
55. Kushwaha, A., Chatterjee, D., Mandal, P. (2007). Potentials of GIS in Heritage & Tourism, Geospatial World Forum, Hyderabad, India, Paper Reference No.PN-71.
  56. Songshan H, Cathy H. C. H. (October, 2008). “Recent Tourism and Hospitality Research in China”, *International Journal of Hospitality & Tourism Administration*, Vol. 9, No. 3, pp. 267-287.
  57. Tamar, D. W. (May, 2008). “The Impact of Tourism in Latin America”, Published by: Sage Publications, Inc., *Latin American Perspectives*, Vol. 35, No. 3, pp. 3-20.
  58. Alexandre, R, Emmanuelle, P, Françoise, G, and Romain, J. (Jun., 2009). “Tourism in Protected Areas Can Threaten Wild Populations: From Individual Response to Population Viability of the Chough *Pyrrhocorax*”, Published by: British Ecological Society, *Journals of Applied Ecology*, Vol. 46, No. 3 pp. 657-665.
  59. David, M. (March, 2010). “The Value and Scope of Geographical Information Systems in Tourism Management”, *Journal of Sustainable Tourism*, Vol. 7, Issue 1, pp. 77-92.
  60. Fred, L.M. (Nov, 2010). “Geography and Tourism Marketing Using a GIS in Market Analysis for a Tourism-Dependent Retailer in the Pocono Mountains”, *Special Issue: Geography and Tourism Marketing. Journal of Travel & Tourism Marketing*, Vol. 25, No. 3-4, pp. 325-340.
  61. Bhatia, A.K. (2012). *International Tourism Management*. Sterling Publishers Pvt. Ltd., New Delhi-110020, p-444.
  62. Kumari, Kiran (2012). “A Study on Uttaranchal Tourism by Using GIS”, *Journal of Research in Trans-Disciplinary Sciences*, Vol.-1, No.1, July December, pp. 10-24
  63. Mitra, A. and Lama, Maila (2013). “*Tourism Development in Remote State: A Case Study of Arunachal Pradesh*”, India, Chapter in Handbook of Tourism Economics Analysis New Applications and Case Studies by Clement A. Tisdell dealt with the Opportunities and Challenges of Developing Tourism in this Remote State of India, pp.705-723.

64. Lama Rinzing (2014). “Community Based Tourism Development” (A Case Study of Sikkim), Unpublished thesis, Tourism & Hotel Management, Kurukshetra University, Kurukshetra, Haryana.
65. Kaye, Tasi and Pertin John (2014). “*Tourism: An Emerging Industry in Arunachal Pradesh*” In *Tourism Industry in North East India: Challenges and Opportunities*, Akansha Publishing House ,pp. 311-343.
66. Lama, Maila (2014),*Ecotourism in North East India- with Reference to Arunachal Pradesh*,AkanshaPublishing House, pp.58-75.
67. Baruah, Samannoy and Homeswar, Goswami (2017). “ Tourist Expectation Gap –A Study on the Tourist Spot Tawang in Arunachal Pradesh, India”, *International Journal of Innovative Research in Science, Engineering and Technology*, Vol. 6, Issue 9, September, pp. 17894-17899
68. Sharma, Hirendra Nath (2018). “*Discovering Eastern Himalaya The Arunachal Pradesh West Kameng&Tawang*”, South Eastern Book Agencies, Guwahati.
69. Qayum, Abdul and Singh, R. K. (2018). *Ecotourism Potential and Forest Rest Houses of Arunachal Pradesh*. Department of Environment and Forests, Government of Arunachal Pradesh In association with Satyam Grafix.

## **CHAPTER -2**

### **GEOGRAPHICAL BACKGROUND OF ARUNACHAL PRADESH**

---

#### **2.0 INTRODUCTION**

The physical, social, economic and cultural features of an area is a conditioning factor affecting the nature of tourism and distribution of tourist sites. The aim of this chapter is to sketch the salient geographical features in order to able to appreciate the relationship between the geographical environmental characteristics and tourist arrivals in various attraction sites resulting in the growth of tourism in Arunachal Pradesh.

#### **2.1 LOCATION AND EXTENT**

Arunachal Pradesh, lexically means “land of down lit mountains” is referred to as prabhu mountains in the literature of the Kalika Purana and Mahabharata. The entire political land of the State Arunachal Pradesh located between 26° 39' 59.67" N to 29° 22' 44.83"N latitude and 91° 34' 22.76" E to 97° 27' 21.94" E longitude. There are 10 major river basins in Arunachal Pradesh consisting of 46 major and medium rivers. These are Tawang, Kameng, Dikrong, Subansiri, Siang, Sisiri, Lohit, Tirap-Dehing and Tissa river basins.<sup>1</sup> Most of the districts in the state are named after the rivers that flow through the area such as East and West Kameng, Papum Pare, Lower and Upper Subansiri, East, West and Lower Siang, Lohit, Tirap, Tissa, Si-Yomi and Kamle district as well.

Arunachal Pradesh, earlier known as the North East Frontier Agency [NEFA] is a wild and mountainous region situated along the north-eastern frontier of India. The whole state is covered with the eastern Himalayas and is bounded by Bhutan to the West, Tibet to the north and north-east, Myanmar [Burma] to the south east<sup>2</sup> and Assam in the south. Arunachal Pradesh state shares its borders with Bhutan in the west, the Tibet Autonomous Region and China to the north, Nagaland and Myanmar to the east and Assam in the south covers an area of 83,743 km<sup>2</sup>.

#### **2.2 HISTORY OF ARUNACHAL PRADESH IN THE INDIAN UNION**

The North-East Frontier Agency (NEFA) of 1954, yielded to Arunachal Pradesh in 1972 when it was renamed by its own people.<sup>3</sup> It became a Union Territory in 1972<sup>4</sup>

and in 1987 it gained the status of full-fledged State of the Union of the Indian States.<sup>5</sup> Indian Constitution had defined the territories of Arunachal in Part B of the Sixth Schedule as: (1) North-East Frontier Tract, Tirap Frontier Tract, Abor Hills District and Mishmi Hills District; and (2) Naga Tribe Area. These were brought under an Administrative Agency called NEFA in 1954.<sup>6</sup>

The promulgation of the North East Frontier (Administration) Regulation, 1954, inaugurated a full-scale and integrated administrative structures for the entire area under the name of North East Frontier Agency (NEFA) for the first time. In the same year, the erstwhile Frontier Tracts were re-designated as Frontier Divisions, and a realignment of the administrative topography also took place with the division of Balipara frontier Tract into two separate divisions viz.- the Kameng Frontier Division and the Subansiri Frontier Division. As a result of the reorganisation the whole administrative area was divided into six frontier divisions as follows :-

1. The Kameng Frontier Division with headquarters at Bomdi-La
2. The Subansiri Frontier Division with headquarters at Ziro.
3. The Siang Frontier Division with headquarters at Along.
4. The Lohit Frontier Division with headquarters at Tezu.
5. The Tirap Frontier Division with headquarters at Khela.
6. The Tuensang Frontier Division with headquarters at Tuensang.

Each division was placed under a Political Officer. Thus, there were six Political Officers for the Six Frontier Divisions. In addition to that, eight Assistant Political Officers were appointed under respective Political Officers both at headquarters and In-charge of important Administrative Centres. Apart from this, a number of Base Superintendents were also put in charge of various administrative circles spread over the divisions. The technical departments such as education, public health, engineering, forest, agriculture, community development, cottage industries etc., headed by offices at the divisional headquarters with smaller units at the administrative centres either on a permanent basis or deputed touring officers to initiate and supervise development programme in the far flung areas. Thus, the question of integration of the Frontier areas with Assam was always under dispute between the Central Government and the public opinion in Assam, but NEFA continued to be centrally administered. Thereafter,

however, the Naga movement for a separate Naga state brought about a minor change and the Tuensang Frontier Division was separated out from NEFA in the year 1957.<sup>7</sup>

When every effort was being made by the Government to consolidate the gains of administration and enhance the quality of life of the tribal people of the region, China mounted a massive attack across India's Northern border on 20<sup>th</sup> October, 1962 and overran the Kameng Frontier Division and also occupied some areas of three other Northern Frontier Divisions of NEFA. However, later on, China withdrew her troops beyond the frontiers.<sup>8</sup> Due to this aggression; the efforts to streamline administration and to bring about changes in the set-up received fresh impetus. The size of the cadre, both in the political and technical wings of the administration was expanded and new administrative units were carved out of the existing divisions and placed under the charge of Additional Political Officers who were given enormous powers. These new limits were in fact subdivisions under the respective Frontier Divisions. These were as following:<sup>9</sup>

**1. Kameng Frontier Division :**

- (a) Bomdila under Political Officer.
- (b) Tawang under Additional Political Officer.
- (c) Seppa under Additional Political Officer.

**2. Subansiri Frontier Division :**

- (a) Ziro under Political Officer
- (b) Daporijo under Additional Political Officer.

**3. Siang Frontier Division**

- (a) Along under Political Officer
- (b) Pasighat under Additional Political Officer

**4. Lohit Frontier Division**

- (a) Tezu under Political Officer
- (b) Anini under Additional Political Officer

**5. Tirap Frontier Division**

- (a) Khonsa under Political Officer.

In the year 1965, further developments in the administrative evolution of NEFA took place. As a result of the recommendations of the Daying Commission, appointed by the Government of India, the North East Frontier Agency was transferred from the charge of the External Affairs Ministry to that of the Home Ministry on 1<sup>st</sup> August, 1965. Further on 1<sup>st</sup> December of the same year, the nomenclatures of the administrative divisions were also changed. The Kameng Frontier Division renamed as Kameng District, the Subansiri Frontier Division became the Subansiri District, the Siang Frontier Division became the Siang District, the Lohit Frontier Division became the Lohit District and the Tirap Frontier Division was called the Tirap District. Correspondingly, the Political Officers, the Additional Political Officers and the Assistant Political Officers were redesignated as Deputy Commissioners, Additional Deputy Commissioners and the Assistant Commissioners respectively.

In the meantime, the process of streamlining the administrative machinery was initiated in order to bring it closer to the all-India pattern. Splitting of districts into subdivisions and establishment of more administrative circles under Circle Officers proceeded simultaneously. Additional Deputy Commissioners, Assistant Commissioners and Extra Assistant Commissioners took charge of the sub-divisions and important administrative centers. These administrative as well as territorial change were necessitated due to political and strategic reason.<sup>10</sup> And ultimately proved important steps in the evolution of a full-fledged state within India.

### **2.2.1 Administrative Status of Union Territory and State**

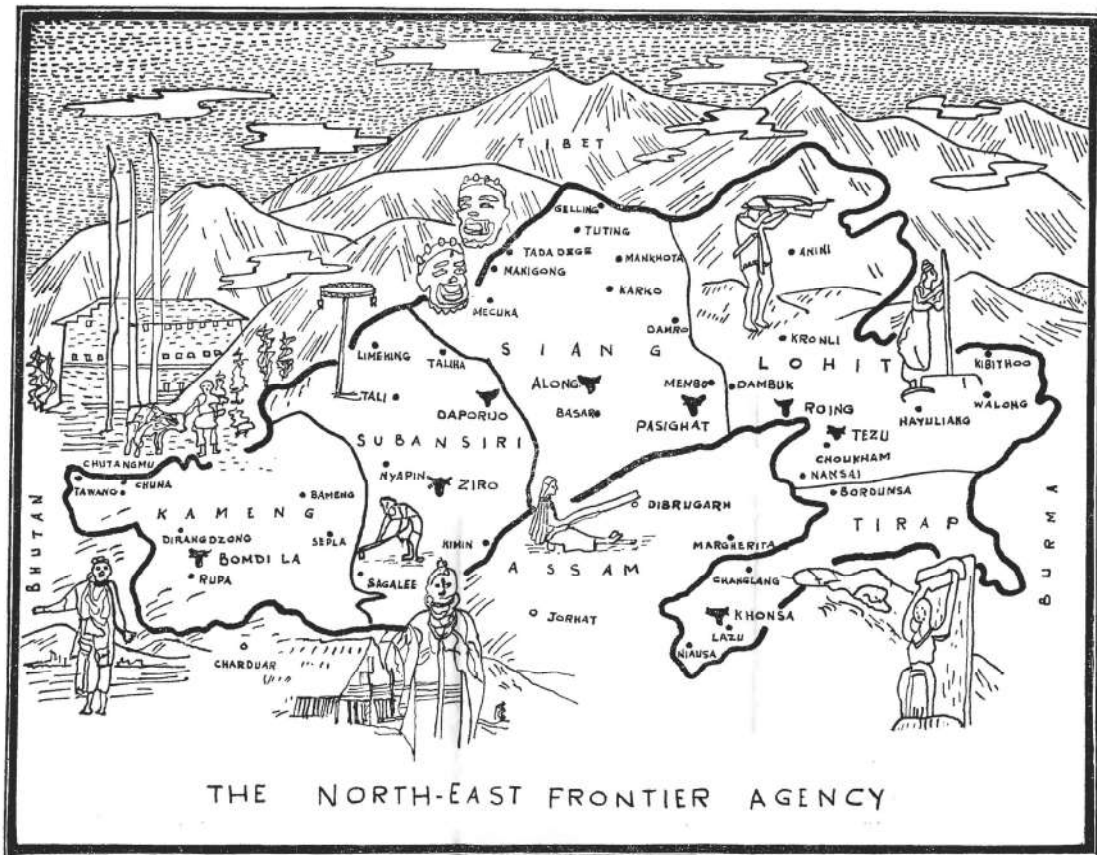
The political and constitutional developments that have been taking place during later sixties, lead NEFA towards a separate status. On 21<sup>st</sup> January, 1972 NEFA attained the status of Union Territory under the provisions of the North Eastern Areas (Regulation Act 1971(8) of 1971) with a new name of Arunachal Pradesh. Thereafter, it was placed under the charge of a Chief Commissioner with his headquarters at Shillong. The headquarters of the Union Territory was later on shifted from Shillong to the newly built capital complex at Itanagar in the year 1974. On 15<sup>th</sup> of August, 1975 the Union Territory of Arunachal Pradesh was endowed with a Legislative Assembly with a Chief Minister and a cabinet of four Ministers. Initially these were created and to assist the Lt. Governor appointed on the same day as the Administrative head of the Union Territory. The first

General Election to the 30 members Arunachal Pradesh Assembly was held in 1978. Finally, on 20<sup>th</sup> February, 1987 the Union Territory of Arunachal Pradesh attained the status of a full-fledged state and at present it has 60 members Legislative Assembly along with the Governor of the state to run the administrative and political matter of the State.

The entire area of Arunachal Pradesh was treated as rural upto 1961 census. In 1971 census, only four district and sub-divisional headquarters i.e. Bomdila, Along, Tezu and Pasighat were treated as towns. In 1981 Census, two more places viz., Itanagar and Naharlagun were declared as towns. It was mentioned that till May, 1980, Arunachal Pradesh consisted of five districts as represented in the Fig 2.1. But under the Arunachal Pradesh Reorganisation of District Act, 1950, four more districts were formed by dividing the areas of Kameng, Subansiri, Siang and Lohit districts. On 1st day of October, 1984, two more districts were created by carving out West Kameng and Tirap Districts.<sup>11</sup> Finally one more district with the name of Papum-pare was formed on September 1992. It included the areas of Itanagar and Naharlagun with its headquarters at Doimukh. In 1991 Census, the total number of towns went upto 10 (ten) with the new addition of Ziro, Roing, Namsai and Khonsa in the list of urban areas of the state of Arunachal Pradesh. In November 1994 yet another district named upper Siang was created with its headquarter at Ying Kiong. In 2001 census there were thirteen districts i.e., (1) Tawang (2) West Kameng (3) East Kameng (4) Lower Subansiri (5) Upper Subansiri (6) West Siang (7) East Siang (8) Diang Valley, (9) Lohit (10) Tirap (11) Changlang (12) Papum-Para and (13) Upper Siang.

On 1<sup>st</sup> April 2001, KurungKumey district was carved out from the erstwhile Lower Subansiri district.<sup>12</sup> On 16<sup>th</sup> December 2001, Dibang Valley district was bifurcated into Dibang Valley district and Lower Dibang Valley district.<sup>13</sup> On 16<sup>th</sup> February 2004, Anjaw district was carved out from the erstwhile Lohit district.<sup>14</sup> On 19<sup>th</sup> March 2012, Longding district was carved out from the erstwhile Tirap district.<sup>15</sup> On 25<sup>th</sup> November 2014, Namsai district was carved out from the erstwhile Lohit district.<sup>16</sup> On 7<sup>th</sup> February 2015, KraDaadi district was carved out from the erstwhile KurungKumey district.<sup>17</sup> On 27<sup>th</sup> November 2015, a new Siang district was carved out from parts of East Siang and West Siang districts.<sup>18</sup> On 22<sup>nd</sup> September 2017, Lower Siang district, was carved out of West Siang and East Siang districts.<sup>19, 20, 21</sup> On 4<sup>th</sup> December 2017, a new district called

**Map 2: Administrative Division of NEFA**



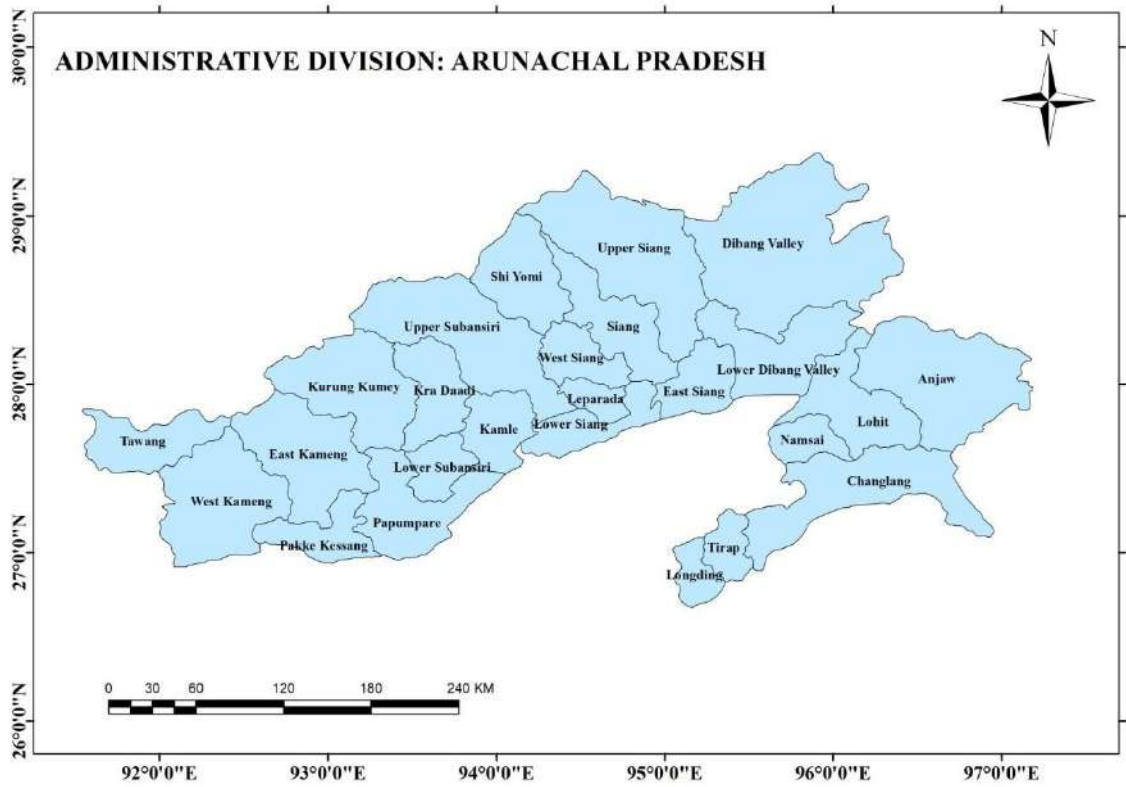
Source: NEFA-an Introduction, R. N. Haldipur, p.8

Kamle district was created from Lower Subansiri District and Upper Subansiri District, with its headquarters located in Raga.<sup>22</sup> It comprises the administrative circles of Raga, Kumporijo and Dollungmukh circles from Lower Subansiri District.<sup>23</sup> and Gepen Circle, Puchigeiko Circle from Upper Subansiri District.

Table 2.1: Administrative District Headquarters (Census, 2011): Arunachal Pradesh				
Sl. No.	District	Headquarter	Year of Opening Administrative Centres	Administrative Status
1	Tawang	Tawang	1953	Divisional HQ of Kameng Frontier Division
2	West Kameng	Bomdila		
3	Shi Yomi			
4	East Kameng	Seppa		
5	PakkeKessang			
6	Papum Pare	Yupia Itanagar	1974	Old Capital Complex
7	Capital Complex		1978	New Capital Complex
8	Lower Subansiri	Ziro	1952	Divisional HQ of Subansiri Frontier Division
9	KurungKumey	Koloriang		
10	KraDadi			
11	Upper Subansiri	Daporijo		
12	Kamle			
13	West Siang	Along	1948	Divisional HQ of Siang Frontier Division
14	Leparada			
15	Lower Siang			
16	East Siang	Pasighat	1911	Divisional HQ of Pasighat Sub Division in Siang Frontier Division
17	Upper Siang	Yingkiong		
18	Siang			
19	Dibang Valley	Anini		Divisional HQ of Anini Sub Division in Lohit Frontier Division
20	Lower Dibang Valley	Roing	1951	
21	Lohit	Tezu	1952	Divisional HQ of Lohit Frontier Division
22	Namsai	Namsai	1953	Divisional HQ of Lohit Frontier Division
23	Anjaw	Hawai		Divisional HQ of Tirap Frontier Division
24	Changlang	Changlang		
25	Tirap	Khonsa	1954	
26	Longding			

Compiled by Author as per District Gazetteers, Govt. of Arunachal Pradesh

**Map. 3: Administrative Division Map of Arunachal Pradesh**



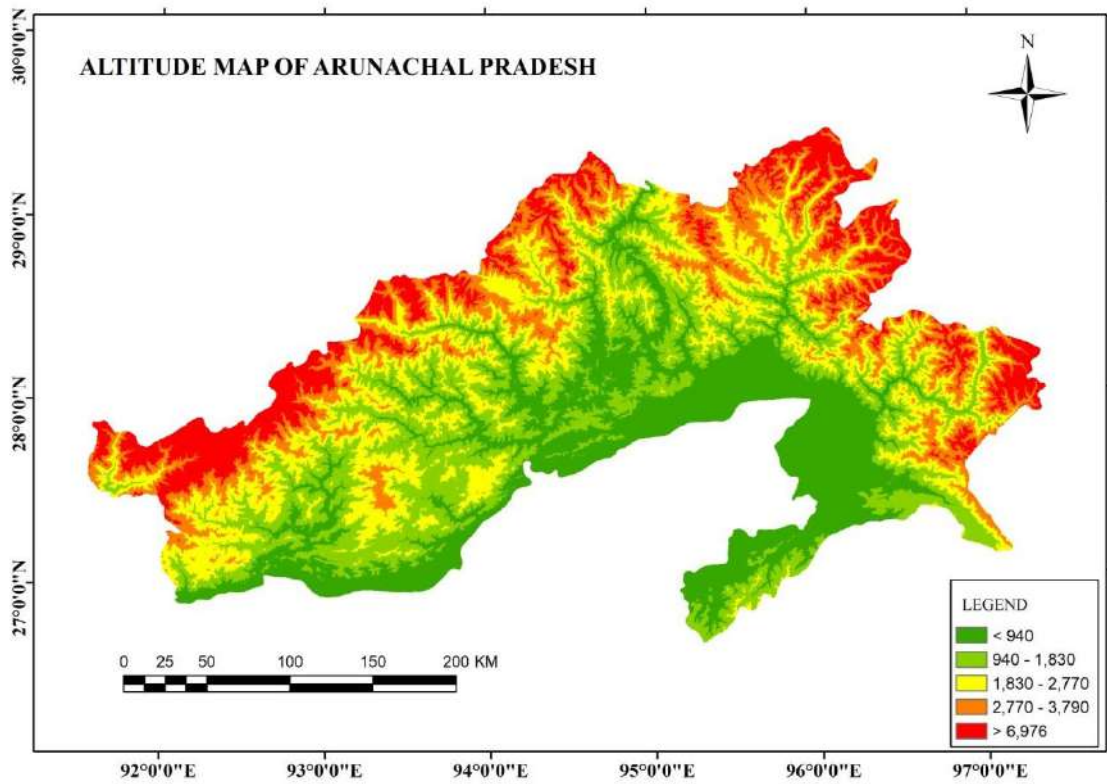
On 30<sup>th</sup> August 2018, 3 new districts, Pakke-Kesang, Lepa-Rada and Shi-Yomi formed. The Pakke-Kessang district will be carved out of East Kameng district with five administrative units namely Pakke-Kessang, Seijosa, Pijiriang, Passa Valley and DissingnPasso with district headquarters at Lemmi. The Lepa Rada district would be created by bifurcating the Lower Siang district with headquarters at Basar. The district would have four administrative units Tirbin, Basar, Daring and Sago. The Shi-Yomi district would be created by bifurcating the West Siang district with its headquarters at Tato. The district would have four administrative units namely Mechuka, Tato, Pidi and Manigong.<sup>24</sup>

As of August 2018, Arunachal Pradesh comprises 25 districts. Although Itanagar capital complex (as represented in Table 2.1) does not have district status it is counted by some as one (making the district count 26 now).<sup>25</sup>

## **2.3 PHYSIOGRAPHY**

Arunachal Pradesh easternmost segment of the Himalaya is located east of Bhutan, where Gansser<sup>26</sup> and Indian Geological Survey<sup>27</sup> have done extensive mapping. Geologic research in the Arunachal Himalaya can be traced back to 19<sup>th</sup> century during which several reconnaissance investigations were conducted along its foothills.<sup>28-31</sup> The early research laid a foundation for a proliferation of geologic activities<sup>31-35</sup> in the early 1970s and subsequent regional syntheses by Thakur<sup>36</sup>, Singh and Chowdhary<sup>37</sup>, Acharyya<sup>38-40</sup>, and Kumar<sup>41</sup> among others.

**Map 4: Altitudenal Map of Arunachal Pradesh**



Arunachal Pradesh comprises of distinctive geological and tectonic history of following physiographic divisions and sub divisions viz. 1.) Himalayan range- a. Tibetan Himalaya, b. Higher Himalaya, c. Lesser Himalaya and d. Sub Himalaya; 2.) Trans-Himalayan range; 3.) Naga-Patkoi range and 4.) Brahmaputra plain.

### **2.3.1 HIMALAYAN RANGE**

The Himalayan range from the Brahmaputra plain covers about 350 km length of the easternmost part of the Himalaya extending from the border of Bhutan to the Dibang and Lohit valleys and terminating against the Tidding-Tuting suture. Its elevation is 100 m in the south to above 1000 m. in the north above the MSL (Mean Sea Level) with few peaks attaining heights more than 7000 m. On the basis of geographic characters and type and density of vegetation, the Himalayan range of Arunachal Pradesh is again subdivided into four divisions as given below:

#### **2.3.1.a. Tibetan Himalaya**

Tibetan Himalaya covers the north-western part of Arunachal Pradesh bordering Bhutan and Tibet and is represented by a NE-SW trending 30-40 km wide zone of high altitude, low relief, gentle slopes and sparse alpine type vegetation. This zone has physical relief feature ranging between 3000 m and 6000 m above MSL (shown in Fig. 2.2) that consists of a part of the high grade schists rock types and gneisses of the Sela Group, Proterozoic meta sediments of Lumla formation and a part of Tethyan sequence.

#### **2.3.1.b. Higher Himalaya**

Higher Himalayas are bounded by the Tibetan Himalaya in the north and the Lesser Himalaya in the south and the southern limit is generally defined by the Main Central Thrust as in adjacent Bhutan and Western Himalayas. It has an ENE-WSW trend adjacent to Bhutan that changes gradually to NE-SW eastward. This zone has a high relief features ranging approx. 6000 m (shown in Fig. 2.2) height with rugged topography consisting of high ridges, precipitous slopes and narrow deep gorges. High ridges mostly remain snow clad; the precipitous slopes are occupied mainly by grasses and the valley and gorges by alpine vegetation types. This zone consists of Palaeoproterozoic high grade gneisses and schists rock types of the Se La Group and Tertiary intrusive granites rock types.

#### **2.3.1.c. Lesser Himalaya**

The Lesser Himalayan zone is bounded by the Higher Himalaya in the north and the Sub-Himalaya in the south is comparatively of lower elevation ranging between 2500 m and 4000 m (shown in Fig. 2.2). This zone is E-W trending in the western part and gradually swings to NNE-SSW till the syntaxial bend after which it swings to NW-SE and abuts against the Tidding-Tutting suture in the Dibang valley and Lohit districts. The southern boundary of this zone is defined by the Main Boundary Fault which terminates against the Roing Fault. A major part of this zone is made up of the Palaeo-proterozoic meta sediments of the Bomdila Group, Ziro Gneisses and narrow discontinuous outcrops of Upper Palaeozoic sediments. However, in the eastern part Upper Cretaceous to Lower Eocene sediments and Abor volcanic are also exposed.

#### **2.3.1.d. Sub-Himalaya**

The Sub-Himalaya or the foothill foredeep is represented by the Siwalik hill range varying in width from 10 to 20 km. The sedimentary in Siwalik range is followed to the south by the thick alluvial cover of the mighty Brahmaputra and Digaru, altitude ranging from 1700 m to 2000 m (shown in Fig 2.2). This zone trends E-W near Bhutan border, gradually swings to ENE-WSW towards east where it gradually turns and terminates against the Roing Fault at Dibang valley. This belt is characterised by longitudinal ridges and well defined “Dun” type valleys and supports luxuriant vegetation. The Himalayan landform, in general, represents a mega folded, faulted and thrust terrain. Due to presence of tectonic lineament and heterogeneity in lithology with approaching immaturity of dissection, this landform has attained a high degree of relief. Simultaneous rejuvenation, along with operating erosional cycle, has rendered rivers of aggrading nature mainly. In this process, a macro relief of parallel ridges and valleys has been imprinted over the whole region.

### **2.3.2 TRANS-HIMALAYAN RANGE**

Trans Himalayan range also known as the Mishmi hills, is the northernmost zone covering 30-40 km wide with an elevation ranging between 3000m – 6000m and all important Passes are located in this zone. The NW-SE trending mountain range appears to be equivalent of the Ladakh range lying to the north of the Indus-Tsangpo suture with

a syntaxial bend near Tutting. The Trans-Himalayan range can be subdivided into two parallel belts – (a) one bounded by the Tidding suture to the west and the Lohit Thrust to the east and (b) the other to the east of the Lohit Thrust. The former comprising meta sedimentaries and ultra mafics, abuts against the Naga-Patkoi Range along the Mishmi Thrust and the latter, comprising the Lohit Granitoid Complex, continues to the SE as the northern Myanmar Range.

### **2.3.3 Naga-Patkoi Range**

The Naga-Patkoi range attains an altitude up to 2780 m and defines the southern limit of the Upper Brahmaputra plain. These form a part of the ENE-WSW trending Arakan-Youma Mountain chain that assumes an arcuate pattern in the vicinity of the Mishmi Thrust. The Naga-Patkoi range consists of Tertiary sequences of Assam and south-eastern Arunachal Pradesh.

### **2.3.4 Brahmaputra Plain**

Part of the eastern extremity of the vast Brahmaputra plain falls in Arunachal Pradesh where it is bounded to the north and east by the Himalayan range and to the south by the Naga-Patkoi range at an average elevation of 100 m. The terrain is underlain by post-Siwalik Quaternary sediments.

## **2.4 DRAINAGE PATTERN**

Rivers constitute an important part of the topography of the state. The entire territory of Arunachal Pradesh forms a complex hill system with varying elevation, travelled throughout by a number of rivers and rivulets (Das and Kar, 2011).<sup>42</sup>

Arunachal Pradesh is divided into five major river valleys namely (1)The Siang Valley (2)The Kameng Valley (3) The Subansiri Valley (4)The Lohit Valley and (5) The Tirap Valley. All these river valleys have immense hydropower potential, currently estimated at 60,000 MW, or approximately 22 per cent of India's current power generating capacity.

These valleys are named after the important rivers of the state. The major rivers and their tributaries traversing the state are Siang, Kameng, Subansiri, Subansiri, Lohit, Tirap etc. All these and other countless rivers and rivulets are fed by snow from the Himalayas. Therefore, mostly these small rivulets are perennial in nature. The rivers draining Arunachal Pradesh form part of the mighty river Brahmaputra which originates on the

northern slopes of the Himalaya in Tibet. Almost all the major river system flows in the North-South direction and ultimately drains into the Brahmaputra. The River Kameng and the River Subansiri are its principal north bank tributaries draining the Himalayan ranges while the Dibang (Sikang) and the Lohit drain Mishmi hills. The Disang, Nao Dihing and BurhiDihing rivers are the main drainage channels in the Naga-Patkoi ranges of Arunachal Pradesh and meet the Brahmaputra from the south (Kumar 1997).<sup>43</sup>

Main rivers flowing in this state are as follow:

**The River Siang:** The River Siang, is largest river of Brahmaputra river system, originates from ChemaYungdung Glacier near Kubi at 5150 m in Tibet. In Tibet it is popularly known as Tsang-Po, flows in West–East direction. After traversing a distance of about 1625 km river in Tibet and then it takes a turn in south direction, enters the territory of India near Tuting in the Upper Siang district of Arunachal Pradesh and flows through North–South direction in East Siang district towards Assam and finally it merges with Lohit and Dibang in Assam and it becomes the mighty River Brahmaputra (Das et. al. 2014).<sup>44</sup>

**The River Subansiri:** River Subansiri is the largest tributary of the Brahmaputra river. It originates in Tibet, and enters India through Arunachal Pradesh merges with Brahmaputra in Assam. It is a 442 kilometer long river, with a drainage basin area, 32640 km<sup>2</sup>. The Subansiri originates in the Himalayas in China. It flows east and southeast into India, then south to the Assam Valley where it joins the Brahmaputra River in Lakhimpur district.

**The River Kameng:** The Kameng river (also known as Bhareli in Arunachal Pradesh and Jia Bhareli in Assam). It originates in Tawang district from the glacial lake below snow-capped ‘Gori Chen’ mountain on the India-Tibet border in South Tibet and flows through Bhalukpong circle of West Kameng District, Arunachal Pradesh and Sonitpur District of Assam, India. It joins Brahmaputra River and Tezpur, east of the ‘KoliaBhomoraSetu Bridge’. The length of Kameng River is about 264 km. and its drainage basin is about 11,843 km<sup>2</sup>. The eastern half of ‘Eaglenest-Sessa Wildlife Sanctuaries’ is drained by the Tippi River which joins Kameng River at the village of Tippi, situated on the Bhalukpong- Bomdila Highway. Tenga, Bichom and Dirangare also tributaries of the Kameng River.

**The River Lohit:** The Lohit River rises in eastern Tibet in the 'Zayal Chu' range and flows in Arunachal Pradesh for two hundred kilometres and then it enters in the plains of Assam. It is known as the 'river of blood' because of contribution of laterite soil from Mishmi Hills. It meets the Siang at the head of Brahmaputra Valley.<sup>45</sup>

**The River Tawang:** The Tawang river system covers most part of the Greater Himalayan Peaks of about 7000 m high. The Tawang is a sub basic mean river system, which flows from Tibet (China) to Bhutan through the westernmost part of Arunachal Pradesh. There are two main catchments of the sub-system, which form a complete physiographic unit lower area. They are Nyamjong the catchment of about 581 Sq. Km and the Tawang Chu Valley of about 1536 Sq Km area.

The Ranga-Dikrong flow in the foothill zone of this area and finally meets the mighty Brahmaputra to forms separate geo-ecological unit of an aerial size of 1516 Sq. Km. They developed a trellis pattern in their micro relief features.

**The River Dibang:** Dibang River system is developed in the transitional belt of the Greater Himalayan Ranges and the frontal ranges of the Mishmi Hills with the result of folding and faulting. It is approximately 11576 Sq. Km in its area extending longitudinally. It has seven sub-basins of diverse geo-ecological characteristics. However the Dibang river syustem is independent and well developed. The Matun, the Elan, the Dri, the Tagon and the Emra are main rivers forming 'Tree-Pattern' in the upper part of the valley. The Ahi and the Ithi are the main Tributaries of the foothill zones which develop the interfluves area of the lower parts of the Dibang river system.

**The River Tirap:** The Tirap river system is a part of the BurhiDihing River, which falls in the Brahmaputra river between Sibsagar and Dibrugarh near Majuli Island at the elevation of only 93 m in the Upper Assam valley. The Tributaries of the Tissa River drain the Khonsa area of the outer lounge of Arunachal Pradesh which is the upper part of the Dibang River Valley. In the Khonsa area, the Tissa river sub-system display tree like pattern, this forms the specific dissected relief features of the Patkai-Hills.

## **2.5 CLIMATE**

Climate of the state is influenced greatly by the Himalayan Mountains and large variations in altitude across the state. Areas that are at a very high elevation in upper

Himalayas close to the Tibetan border experience alpine and tundra climates. In the middle Himalayas temperate climate is experienced. Areas at the sub Himalayan generally experience humid sub-tropical climate with hot summers and mild winters. The rainfall of Arunachal Pradesh is amongst the heaviest in the country receiving more than 3500 mm in a year. The state receives rainfall over a period of 8 to 9 months excepting in winter, however, most of rainfall is between May and September. Higher regions experience snow fall during winter. The average annual rainfall is 1000 mm in the higher elevations and 5750 mm in the foot hill areas (as shown in Table 2.2). Winter months have average temperatures in the range 15° C to 21° C, and the monsoon month temperatures are in the range of 22° C – 33° C, and the summer months temperatures sometimes are higher well over 37°C. The foot hills experience maximum temperatures around 40°C during summer.<sup>46</sup>

<b>Table 2.2: Annual rainfall in the district headquarters of Arunachal Pradesh</b>		
<b>Rain gauge Station</b>	<b>During the year (in millimeters)</b>	
	<b>2015</b>	<b>2016</b>
Tawang	1681.90	1711.52
Bomdila	538.10	1152.00
Seppa	NA	NA
Itanagar	2721.82	2999.52
Ziro	650.80	1043.92
Koloriang	3084.10	NA
Daporijo	1300.90	NA
Aalo	NA	NA
Pasighat	NA	2686.00
Yinkiong	2348.50	NA
Anini	NA	NA
Roing	NA	4742.80
Tezu	1679.50	NA
Hayuliang	NA	NA
Changlang	2636.30	NA
Khonsa	642.69	NA

Sources: Statistical abstract of Arunachal Pradesh, Itanagar.

## **2.6. FOREST**

Forest is the most important resource in Arunachal Pradesh with the predominantly large tribal population living in close association with forests and highly dependent on it. Traditional shifting (jhum) cultivation is practiced by the people which

impacts upon forest conservation. The total forest and tree cover of the state is 6.79 mha, which is 81.14% of the total geographical area. The Protected Areas (PA) constitutes 11.82% of the geographical area of the state. Forests in the state can be categorized as tropical, sub-tropical, pine, temperate and alpine with bamboos and grasses common in the degraded forests. Carbon sequestration of forests of Arunachal Pradesh is very significant in India. Moderate dense forests account for about 37.68% of the forest area followed by very dense forests accounting for about 24.91%. Forests are classified as Reserved Forests (20.46%), Protected Forests (18.49%) and Unclassed Forests (61.05%). In Arunachal Pradesh, indigenous community institutions play an important role in forest protection, management and administration with much of the forests listed as “unclassified”. Apart from projected vulnerability due to climate change, the forests in Arunachal Pradesh also face several threats and biotic pressures in the form of shifting cultivation, grazing, forest fires, encroachment, commercial plantations, human-wildlife conflicts and illegal extraction of forest products along interstate borders with Assam and Nagaland.<sup>47</sup>

## **2.7 BIODIVERSITY**

Arunachal Pradesh possesses India’s second highest level of genetic resources. Although occupying only 2.5% of India’s geographical area, the state occupies a significant place in terms of floral and faunal biodiversity, being considered one of the world’s 18 biodiversity hotspots and home to 85 species of terrestrial mammals, 760 species of birds, 4,500 species of angiosperms and 550 species of orchids. It has been recognized by International World Conservation Union in 1995 as one of the major centers of plant diversity.<sup>48</sup>

## **2.8 AGRICULTURE**

Agriculture is the main occupation for about 35 percent of the population of Arunachal Pradesh. Jhum cultivation (Shifting Cultivation) and Terrace farming (Wetland Rice Cultivation (WRC)) are the two major patterns that farmers employ. Jhum is a way of life in the high altitude areas. Jhum area productivity is very low (0.7 to 0.8 tonnes/ha of organic rice against average of 3 tonnes/ha). Jhum/shifting cultivation accounts for 0.11 million hectares and permanent cultivation is about 0.09 million

hectares. 17% of total cultivated area is under irrigation. Jhum cultivation contributes only about 14% as compared to Terrace farming contribution of 86% of total grain production in the state. Topography and climate of Arunachal Pradesh is conducive for cultivation of rice, millets, wheat, maize, pulses, sugarcane and potatoes. Areas of agricultural importance in Arunachal Pradesh include: Off-Season Potato and Vegetables in Tawang, West Kameng, Lower Subansiri and Mechuka sub-division of West Siang, Commercial Tomato growing in Rupa subdivision of West Kameng district, Terraced Rice Cultivation in Shimong (Yingkiong), Pangin, Boleng, Basar, Upper Subansiri, Wet Rice Cultivation in Papumpare, East Siang, Lower Dibang Valley, Lohit and Changlang, Famous Paddy cum Fish culture in Apatani plateau, Command area Commercial Crop growing in Jampani area of East Siang, Mustard cultivation in East Siang, Lower Dibang Valley, Lohit and Changlang, Ginger cultivation in Lower Dibang Valley, Lower Subansiri, East Siang, Cold Storage under construction in East Siang and Lohit, Wholesale Regulated Market at Pasighat, Miao, Tezu, Potential Agro-Eco tourism destinations viz. Tawang, Bomdila, Ziro, Basar, Mechuka, Boleng, Pangin, Mebo, Jampani, Pasighat, Yingkiong, Roing, Namsai, Wakro, Miao, Borumsa, Kanubari.<sup>49</sup>

## **2.9 POPULATION CHARACTERISTICS**

### **2.9.1 Population Growth**

The State of Arunachal Pradesh is the home for 0.11 %. Arunachal Pradesh's demographic history reveals that, from a population of 3,36,558 persons in 1961, the state's population rose to 10,97,968 in 2001, more than thrice the 1961 within 40 years. According to 2011 Population Census, Arunachal Pradesh has a total population of 13,83,727 persons (Male: 7,13,912 and Female: 6,69,815) which is approximately 0.11% population of the country as shown in Table 2.3. The growth of population in an area reflects the history of the people's responses to the environmental possibilities within the area. Population growth refers to the numerical change in the size of a region's population between two periods. The rate of growth is usually expressed in percentage. The decadal growth rate of the state is 27 % (against 21.54% for the country) and the population of the state continues to grow at a much faster rate than the national rate. In the present decade, Arunachal Pradesh has enrolled a growth of 25.92% in terms of total population. The most noteworthy decade growth in terms of population has been

recorded in KurungKumey locale. Arunachal Pradesh has seen a massive change in terms of numbers as compared to 30-40 years back and it has come a long way with the increasing number of inhabitants in Arunachal Pradesh.

<b>Table 2.3: Distribution of Population, Sex Ratio, Growth, Literacy and Density by District (Census, 2011): Arunachal Pradesh</b>							
Sl. No.	District				Sex Ratio	Decadal Growth (in %)	Density Person/ km <sup>2</sup>
		Total	Male	Female			
1	Tawang	49977	29151	20826	714	28.40	23
2	West Kameng	83947	45155	37792	836	12.53	11
3	Shi Yomi						
4	East Kameng	78690	38775	39915	1029	37.62	19
5	PakkeKessang						
6	Papum Pare	176573	89182	87391	980	44.73	51
7	Capital Complex						
8	Lower Subansiri	83030	41843	41187	984	49.00	24
9	KurungKumey	92076	45318	46758	1031	116.56	15
10	KraDadi						
11	Upper Subansiri	83448	41758	41690	998	50.78	12
12	Kamle						
13	West Siang	112274	58168	54106	930	8.04	13
14	Leparada						
15	Lower Siang						
16	East Siang	99214	50116	49098	979	13.82	28
17	Upper Siang	35320	18699	16621	889	5.87	5
18	Siang						
19	Dibang Valley	8004	4414	3590	813	10.07	1
20	Lower Dibang Valley	54080	28053	26027	928	7.11	14
21	Lohit	145726	76221	69505	912	16.50	28
22	Namsai						
23	Anjaw	21167	11507	9660	839	14.78	3
24	Changlang	148226	76948	71278	926	18.18	32
25	Tirap	111975	57604	54371	944	11.61	47
26	Longding						
<b>Arunachal Pradesh</b>		<b>1383727</b>	<b>713912</b>	<b>669815</b>	<b>938</b>	<b>26.00</b>	<b>17</b>
Source: Compiled and calculated by the author, Census 2011, RGI							

The rapid population growth in Arunachal Pradesh results due to declining death and low infant mortality rate. The outcome of this combination is the large natural increase in the population. Some of the reasons to explain the low mortality rate are improved agriculture and enhanced food security, better nutrition, improvement in

general sanitation among the people and better medical care and the scientific breakthrough in techniques for controlling infectious diseases. Of particular importance are the place of vaccination, immunization and the use of insecticides to subdue mosquitoes and other insect vectors. The disastrous effect of wars, famines and other natural disasters have greatly been curtailed due to international co-operation and improved transportation and information technology, coupled with the impact of industrialization that has added to the range of consumable and capital goods available for use.<sup>50</sup>

Arunachal has the lowest population density in the country. The density of population of the State is 17 persons per km<sup>2</sup> as against the national average of 382 persons per km<sup>2</sup>. As per 2001 census, its population density was 13 per km<sup>2</sup> (as against the national average of 312) with total population of about 1.1 million.

As per Census 2011 sex ratio of Arunachal Pradesh is biased against women i.e., 938 females to 1000 males. It is difficult to explain, as the cultures do not practice gender preference or female infanticide, and may simply reflect counting errors in this remote and sparsely populated state.

### **2.9.2 Literacy Rate**

At the time of Independence (15th August 1947) the literacy rate of this region was almost zero. In the census 1961, a meagre literacy rate of 7.23% against the national average of 28.30%. But, over a period of seventy years of independence, a remarkable literacy rate of 66.95% (Census-2011) has been achieved as against the national average of 74.04% (Census-2011) despite tough terrain and severe financial constraints. The following Table No. 2.4 shows the decadal growth of literacy rate of Arunachal Pradesh. In spite of the substantial progress that Arunachal Pradesh has made in literacy, adult illiteracy in the State is still high. More than half of the adults in Arunachal are illiterate. Given the fact that most languages in the region do not have a script of their own, it is not surprising that the literacy levels in the State were extremely low. Along with formal education, the literacy rate in Arunachal has also increased considerably.

Majority of the population living in the state are Animist, followed by Christians, Buddhist and Hindu. Theravada Buddhism is followed by people living close to the Burmese border. About 30% of the populace are Christian.

<b>Table 2.4: Growth of Literacy Rate from 1961 to 2011</b>						
Year	Literacy Rate of Arunachal Pradesh			Literacy Rate of India		
	Male	Female	Total	Male	Female	Total
1951	-	-	-	27.16	8.86	18.33
1961	-	-	7.23	40.14	15.35	28.30
1971	20.63	4.43	11.29	45.96	21.97	34.45
1981	33.35	13.39	24.54	56.38	29.76	43.53
1991	51.54	29.69	41.59	64.13	39.29	52.23
2001	63.83	43.53	54.74	75.85	54.16	65.38
2011	73.69	59.95	66.95	82.14	65.46	74.04
Source: Compiled and calculated by the author, Census 2011, RGI						

### 2.9.3 Urban Growth

Arunachal Pradesh, like any other non-industrial region of India, establishment of an administrative headquarters became the basis of urban evolution. Absence of any economic pull factor in the form of employment opportunities and the prevalence of the “Inner-Line Permit”, prevented free influx of migrants- a proved process responsible for “exploding” Third World cities.<sup>50</sup> Lowest concentration of the urban population was in Lower Subansiri (0.12), Changlang (0.57), KurungKumey&KraDaddi (0.61). Location Quotient higher than 1 means urban population there is better than the state average. Papum Pare District and Capital Complex, Itanagar has the highest concentration of urban population. Rural-Urban composition of population is 77 per cent and 23 per cent of total population of the State along with area composition in the ratio of 99 per cent resides in rural area and 1 per cent population resides in Urban area in the State as represented in Table 2.5.

<b>Table 2.5: Urban Population by Districts, 2011: Arunachal Pradesh</b>					
<b>Sl. No.</b>	<b>District</b>	<b>Total Population</b>	<b>Urban Population</b>	<b>Urban %</b>	<b>Location Quotient</b>
1	Tawang	49977	11202	22.41	0.98
2	West Kameng	83947	15932	18.98	0.83
3	Shi Yomi				
4	East Kameng	78690	18350	23.32	1.02
5	PakkeKessang				
6	Papum Pare	176573	96963	54.91	2.39
7	Capital Complex				
8	Lower Subansiri	83030	2345	2.82	0.12
9	KurungKumey	92076	12806	13.91	0.61
10	KraDadi				
11	Upper Subansiri	83448	13405	16.06	0.70
12	Kamle				
13	West Siang	112274	24968	22.24	0.97
14	Leparada				
15	Lower Siang				
16	East Siang	99214	27635	27.85	1.21
17	Upper Siang	35320	6540	18.52	0.81
18	Siang				
19	Dibang Valley	62084	13773	22.18	0.97
20	Lower Dibang Valley				
21	Lohit	166893	33412	20.02	0.87
22	Namsai				
23	Anjaw				
24	Changlang	148226	19228	12.97	0.57
25	Tirap	111975	20810	18.58	0.81
26	Longding				
	<b>Arunachal Pradesh</b>	<b>1383727</b>	<b>317369</b>	<b>22.94</b>	<b>1.00</b>

Source: Compiled and calculated by the author, Census 2011, RGI

## 2.10 DISTRIBUTION OF TRIBES

Arunachal Pradesh is the abode of 26 major tribes and more than 110 Sub-Tribes with diverse tribal cultures, dialects, social customs, and agriculture practices, Tibetan Monpas in the west to the Burmese-influenced Nagas in the east. The tribes constitute about 70 percent of the population and a steady influx of outsiders, many from Assam and Bangladesh, make up the remaining approximately 30 percent.

The tribal population of the State is 9,51,821 persons (Male - 468390 and Female-483431), thus, tribal population constitutes 69 % of the total population of the State and remaining 31% is constituted by migrant population from the rest of country for

economic pursuits. The major tribal communities are Monpas, Mijis, Akas, Khowas, Sherdukepens, Bangnis, Apatanis, Nyishis, Tagins, Hills Miris, Adis, Galos, Membas, Khambas, IduMishmis, Digaru bMishmis, MijuMishmis, Khamptis, Singhphos, Noctes, Wanchos, Tangsas etc. The prominent tribal communities as per the size of their population in the west are the Sulung, the Sherdukpen, the Aka, the Monpa, the Miji, the Apatani and the Hills Miri. The largest tribal group is that of the Adi, who occupy the central part of the Arunachal Pradesh, while the Mishmi, the Khampti dominates the north-eastern part and the Wangcho, the Nocte and the Tangsa are cantered in the south-east of the state, around the district of Tirap and Changlang (which neighbours the Nagaland). Most of the larger tribes are the conglomerates of many groups, the Adis, for example, are made up of the Galo, Adi, the Padam, the Minyong and other groups. The Mishmi comprises of the Idu, Digaru and MijuMishmies. Between them the tribal people speak over 50 distinct languages and dialects (mostly of Tibeto-Burmese branch of the Sino-Tibetan language family), making English (the official language of the state), Hindi, Bengali and Assamese the main means of inter communication. Although influenced by Buddhism, most of the tribal peoples are animists, venerating natural and elemental deities or spirits and often practicing ritual and animal sacrifices (notably of the Mithun, a semi-domesticated gaur).

The Table 2.6 represents the district wise distribution of population composition in the study area according to the census 2001. Newly created KurungKumey district has recorded the highest concentration of ST population (97.89%) followed by Upper Subansiri (89.53%), East Kameng (86.72%). The Lohit District has registered the lowest size of tribal Population i.e. 32.42 per cent followed by Changlang 36.16 per cent. It is apparent from the distributional patterns of the non-APST population that they are concentrated in lower plain areas of the state where they are engaged themselves as an agricultural labourer and in small business activities.

<b>Table 2.6: District Headquarters of the Main Tribes: Arunachal Pradesh</b>		
<b>Districts</b>	<b>Headquarters</b>	<b>Tribes inhabiting the Districts</b>
Tawang	Tawang	Monpa
West Kameng	Bomdila	Monpa, Sherdukpen, Lishpa, Chuggapa, Aka (Huroso), Miji, Bugun (Khawn)
East Kameng	Seppa	Nyishi, Bangni, Sulung (Puroik)
Papum Pare	Yupia	Nyishi
Lower Subansiri	Ziro	Apatani, Nyishi
Upper Subansiri	Dapoijo	Adi, Tagin
West Siang	Along	Adi, Memba
East Siang	Pasighat	Adi, Mishmi/Mishing
Upper Siang	Yingkiong	Adi
Dibang Valley (New)	Anini	Idu Mishmi, Adi (Padam)
Lohit	Tezu	Meyor, Mishmi, Tai-Khampti, Singpho
Changlang	Changlang	TangsaSingpho
Tirap	Khonsa	Nocte, Wancho
KurungKumey	Koloriang	Nyishi, Sulung Tagin
Lower Dibang Valley	Roing	Mishmi, Adi (Padam_
Anjaw	Hawai	Mishmi

Source: Arunachal Pradesh Human Development Report, Government of Arunachal Pradesh, Itanagar, 2005, p. 5

Each tribe is divided into clans or lineages which are really kinship-based social units. Clans or lineages are exogamous. Clan members are like close relatives and they act as one social unit. By and large, society is patrilineal across all the major tribes and sub tribes of whole state of Arunachal Pradesh. i.e. there is a close emphasis on male line of decent, inheritance, authority and succession to office. The 26 major tribes and 110 sub tribes inhabiting the area with unique cultural heritage of their own ancestors. Most of these communities are ethnically similar, having derived from an original common stock. Because of geographical isolation from each other it has brought among them distinctive characteristics in language, dress and costumes. Broadly, the people may be divided into three cultural groups on the basis of their socio-religious affinities. The

Monpas and Sherdukpens of Tawang and West Kameng Districts follow the Lamaistic (monastic) tradition of Mahayana Buddhism, noted for their religious fervour, the villages of these communities are found to be decorated with Buddhist temples locally called 'Gompas'. Though largely agriculturist, they practice terrace cultivation, most of these peoples are also pastoral and breed herds of Yak (the high altitude bovine species) and mountain sheep. Culturally similar to them are Membas of Upper and West Siang belt that live in the high altitude areas along the northern borders. Khamptis and Singphos inhabiting the eastern part of the state are also Buddhist of Hinayana sect. They are said to have migrated from Thailand and Myanmar and arrived India around 1833 and the Khamptis still use ancient script derived from their original homeland.

The second groups of people include- Mijis, Akas, Nishis, Tagins, Apatanis, Adis, Galos, Miahmis who worship Donyi-Polo the sun and moon god. They worship their god in Neyder-Namlo, Meder-Namlo, MederNello and Dere, the places of worship for these communities. Although there is no any written record but they believe themselves as descendent of common ancestor Abo-Tani. Their religious rituals largely coincide with the phases of agricultural cycles where they invoke nature deities and make animal sacrifices to appease them. The third group comprises Noctes, Wanchos, Tangsas, Tutsa of Changlang and Tirap Districts. Noctes and Wanchos strictly follow their structured village system in which the hereditary system of village chief still plays a vital role. The Noctes also practice elementary form of Vaisnavism and Tangsas worship their god in Rangfrah mandir. Some people follow the Christianity and Hinduism in recent times.

## **2.11 PHYSICAL INFRASTRUCTURES**

### **2.11.1 Roadways**

According to May 2018 report published by India Brand Equity Foundation, Arunachal Pradesh has about 12,169 km of major district roads. As of February 2018, the state had 2,537 km of national highways. During 2017-18, work on 1,132.018 km road length was completed and 20 habitations were connected under PMGSY. In March 2017, the state completed construction of a new bridge on the Dhola-Sadiyaghat, which will streamline the traffic scenario, while connecting the states of Arunachal Pradesh & Assam. It will also become a point of convenience for various districts located on higher altitudes.

<b>Table 2.7: Length of National Highways as on 30.06.2017: Arunachal Pradesh</b>			
<b>Sl. No.</b>	<b>NH No.</b>	<b>Route</b>	<b>Length (Km)</b>
1	13	Tawang-Bomdila, Nechipu, Seppa, Sagalie, Ziro, Daporijo, Along, Pasighat, Tezu-junction with NH-15 near Wakro	1,293.00
2	15	Mahadevpur/ Dirak (Assam Border) to junction with NH-13 near Wakro	79
3	115	Shantipur (Assam Border) to Meka junction with NH-13	19.5
4	215	Junction with NH-15 near Mahadevpur- Bordumsa, Namchik, Lalpul, Manmao, Changlang,	266.6
5	315	Assam border- Jairampur- Nampong-Myanmar border (Stilwell road)	32.5
6	415	Holongi (Assam Border)- Itanagar- Banderdewa (Assam Border)	50.8
7	515	Jonai (Assam Border)- junction with NH-13 near Pasighat	28
8	315A	Khonsa on NH-215- Hukanjuri- Assam Border	35
9	113	NH-13 near Hawacamp- Hayuliang- Hawaii	165
10	313	NH-13 near Meka- Anini	235
11	513	NH-13 near Pasighat- Mariyang- Yingkiong	140
12	713	NH-13 near Joram- Palin- Sangram- Koloriang	158
13	713A	Junction with NH-13 Hoj- Yupia- NH-415 at Pappu (near Naharlagun)	35
<b>Sub Total</b>			<b>2,537.40</b>

Source: North East India- Data Bank 2017

In May 2017, the government inaugurated the country's longest 9.15 kms bridge over the Brahmaputra tributary, Lohit, which links Dholain Assam & Sadiyain Arunachal Pradesh. A number of major feeder roads connect various corners of the state with NH-52, which are under active supervision of BRTF. The road transportation network of the state is built up to all district headquarter of the state with visible inter linked village road. However, the present condition of the road network is in pathetic especially during monsoon season. The Trans Arunachal Highway network road is in progress to inter connect the entire district within the state. The overall length of the National Highway in the state is represented in Table 2.7.

### **2.11.2 Railways**

According to May 2018 report published by India Brand Equity Foundation, The state's capital, Itanagar, was put on the country's railway map in April 2014. The state

government plans to extend the existing railway connectivity & connect the Upper Assam areas with Arunachal Pradesh. In March 2018, the new Arunachal Express train connecting Naharlagun and New Delhi was launched by Indian Railways. Railway projects worth Rs 90,000crore (US\$13.97billion) are going on in the north eastern region of the country. Surveys of seven new broad gauge railway lines were started in May 2017. The Ministry of Railways is readying to build huge railway infrastructure in the state, beginning with surveying of 3 railway tracks linking Tawang. The projects are estimated to require investment of around US\$7.43billion to US\$10.41billion.

The state is facilitated by a single metre-gauge railway station namely, Naharlagun and Gumto, which is connected with Guwahati in Assam. However, there are proposals to extend the length of the railway track to connect rest of the feasible areas of the state. Arunachal Pradesh Chief Minister Pema Khandu today welcomed the sanctioning of eight new railway lines connecting several locations in the foothills of the strategically-located mountainous State by the Centre, including the three proposed railway lines extending to Tawang, Aalo and the one connecting Pasighat-Roing-Tezu.

On insistence from the Chief Minister, the eight new railway lines – Itakhola to Seijosa (18 km), Doomdooma-Namsai-Wakro (96 km), Dangri-Roing (60 km) Naharkatia-Deomali (20 km), Lekhapani-Nampong-New Khamlang-Deben (75 km) and Tinsukia to Pasighat via Kanubari (300 km) were sanctioned by the Ministry of Railways, informed a press release issued by the CMO here. Preliminary survey for the three railway lines – Bhalukpong-Tenga-Tawang (378 km), North Lakhimpur-Bame-Aalo-Silapathar (247.85 km) and Pasighat-Roing-Tezu-ParsuramKund-Rupai (227 km) – has already completed and detailed location survey will commence soon, informed the visiting Railway officials. It was also informed that the survey for the eight railway lines has been sanctioned.

### **2.11.3 Airways**

According to May 2018 report published by India Brand Equity Foundation, The air service in the state is in process to operate newly built Advance Landing Ground for commercial flight to ease the hurdle for passengers. Regular helicopter service is however available between the state capital and Guwahati and Jorhat. Further, there are

helicopter services from Itanagar to Tawang, Bomdila, Seppa, Ziro, Along, Yinkiong, Passighat, Anini, Tezu, Khonsa and Changlang. Commercial flights in the state were started in the state in May 2018 from Pasighat airport. Tezu airport is also expected to become operational soon.

#### **2.11.4 Mobile Network**

Today, the thrust on communication and digitalization is reaching the in every nook and remote corners of the Arunachal Pradesh. Life in the remote rural areas is getting affected and changed for the better because of improved communication infrastructure. Mobile network operators like BSNL, Vodaphone, Airtel, Jio 4G are venturing into far-flung areas where even roads have not reached. They are literally taking the world to these places.

#### **2.11.5 Accommodation Units**

As per the Tourism Survey for State of Arunachal Pradesh (2017), the number of accommodation units in the districts of Arunachal Pradesh was 95 as shown in Table 2.8. These accommodation units fall under the non-star category that is non- star Hotel types. Among these units there are 89 non-classified and 6 classified accommodation units. According to Arunachal Pradesh Tourism there are list of 56 number of Homestay in Arunachal Pradesh. The maximum number of occupancy rate was in October and minimum was in month of August.

<b>Table 2.8: Number of Accommodation Units, Rooms, Beds and Employment: Arunachal Pradesh</b>	
No. of Accommodation Units	95
No. of Rooms	1130
No. of Beds	2178
Number of Temporary Employees	886
Number of Permanent Employees	57

Source: Tourism Survey for State of Arunachal Pradesh (2017)

As per the Annual Report of Ministry of Tourism 2018, the total number of approved accommodation units in the districts of Arunachal Pradesh is 1242 was 12.07 per cent increase over year 2017. These accommodation units fall under the non-star

category that is non- star Hotel types. Among these units there are 92 classified accommodation units of both 3 Star and 2 Star and about 943 unclassified non star/ Guest Houses as an accommodation units. According to this report there are list 207 accommodation units comprising of BB/Homestay/ Resort/ Timeshare/ Dharmashala/ Gurudwara/ Youth Hostel (Est) number of Homestay in Arunachal Pradesh. The maximum number of occupancy rate was in October and minimum was in month of August.

## **2.12 ECONOMY OF THE STATE**

The topographical situation of Arunachal Pradesh has had direct influence on the economy of the state. Historically, from the economic point of view the state had been divided into three lateral belts each having a distinct pattern of economic development. The upper belt bordering the international frontiers had economic ties with the people across the border. The middle belt acted as a bridge between the upper and the lower belts. The lower belt consisting mainly of the foot hills had intimate economic ties with the adjoining plains of Assam. The people inhabiting the three belts were hence at different stages of economic developments with sets of factors acting as catapult and hindrance in deciding the pattern of livelihood and thus economic integration.

### **2.12.1 AGRICULTURE**

Agriculture primarily drives the economy. About 54.6% of the population is engaged in agriculture and allied activities and 80% of the population living in the rural area is dependent on agriculture and about 62 % of total working populations are engaged in agriculture. Jhum/shifting cultivation and terrace farming/wetland rice cultivation are the two major patterns that farmers employ. About 53% of the total cultivated area is under Jhum and the rest under permanent cultivation. Jhum, the local term used for shifting cultivation is being widely practiced among all the tribal groups.

Almost, all the cultivators cultivate at least one plot of land under jhum each year. They produce all the crops they want from jhum field includes; rice, maize, millet, wheat, pulses, sugarcane, ginger and oilseeds etc., it is the way of their life. The tribes who practice only settled cultivation are the Apatanis and the Khamtis. The Nishis, Noctes, and their sub-tribes are exclusive jhumias. The Adis, Mishmis and the Hill Miri and their

sub-tribes practice both jhum and settled agriculture. Besides the traditional economic pursuits, the peoples are also engaged in many a salaried job or vocation, business and contract to improve their economic life.

### **2.12.2 HORTICULTURE**

Horticulture is the backbone of the rural economy in Arunachal Pradesh. It has a vast potential, owing to its varied agro-climatic conditions and topography, for the cultivation of various tropical, sub-tropical and temperate fruits like apples, oranges and pineapples, vegetables, spices, mushrooms, aromatic and medicinal plants. Apple, mandarin, pineapple, ginger, large cardamom, besides off-season vegetables have a big opportunity in the domestic markets. Kiwi, though grown in a small area, has good potential to scale it up to the commercial level. Most of the land of the state is covered with dense and rich forest. Various steps were taken to diversify the agriculture economy by encouraging the cultivation of cash crops like potatoes, and horticulture crops like apple, oranges, guavas, and pineapples etc.

### **2.12.3: FOREST PRODUCTS**

Forest products were also among the most significant sectors of the state's economy. This is logical since Arunachal Pradesh has close to about 61,000 square kilometers of forests, so logging and forestry contribute much to the gross state product. However, this has declined starting in the 1970s, when environmental legislation were implemented. Since the turn of the 21<sup>st</sup> century, forest-related activities have been confined to just a few local industries, which are mostly small or medium sized. Most of these industries are rice mills, handloom crafts and fruit preservation units. There are also sawmills and plywood mills although these are stated as illegal by the state government.

### **2.12.4 MINERAL RESOURCES**

The state also has various resources at its disposal although these have been largely unutilized until recently. The mineral resources found in Arunachal Pradesh include marble, clay, graphite and pyrite. Dolomite, limestone and quartzite can be mined there as well. In 1991, the Arunachal Pradesh Mineral Development and Trading Corporation Limited was set up; the Namchik-Namphuk coal fields are under the corporation's control.

### **2.12.5 HYDROELECTRICITY**

Hydroelectricity is another natural resource that the state government is using to its full capacity. Arunachal Pradesh accounts for a significant portion of India's untapped hydroelectric power production potential. This led to the state government to sign deals with various Indian companies in 2008 for 42 hydroelectric schemes which, upon completion, will produce more than 27,000 megawatts of electricity. The construction of the Upper Siang Hydroelectric Project started in April 2009. It is estimated that this will generate between 10,000 to 12,000 megawatts of power.

### **2.12.6 ARTS AND CRAFTS INDUSTRY**

Arunachal Pradesh is a land of beautiful handicrafts comprising wide range in variety. All the people have a tradition of artistic craftsmanship. A wide variety of crafts such as weaving painting, pottery, smithy work, basketry, woodcarving etc. are found among the people of Arunachal Pradesh. On the basis of the art and cultural pattern, the indigenous inhabitants of the state may be divided into three distinct groups, (i) the group comprising Bodic tribe like Monpa, Sherdukpen, Memba, Khamba, Khamti and Singpho, (ii) group including the Aka, Miri, Miji, Sulung, Nishing, Adi, Apatani, Hill Miri, Tagin, Mishmi, Tangsa, Nah, (iii) and the Nocte and the Wancho. All of these groups have some speciality in their art items. The members of first group are good in art of woodcarving and painting works. The second group is widely known for their weaving and cane and bamboo works. The third group viz. Nocte and Wancho are also good wood carvers but their style and motifs are quite different from the other groups. They also specialize in beads works. Apart from these, carpet making, sketch painting, tattooing, pottery, smithy and ivory works are also practiced by some of the tribesmen, which assume significance of their respective society.

### **2.12.7 WEAVING INDUSTRY**

Weaving is the occupation of the womenfolk throughout the territory. They are very particular about colours and have a beautiful sense of colour combination. The favourite colours are black, yellow dark blue, green, scarlet and madder. Originally they used natural dye but now a day they switch over to synthetic dyes available in the market. The designs are basically geometrical type varying from a formal arrangement of lines

and bands to elaborate patterns of diamonds and lozenges. These designs are enhanced by internal repetition and other decorations. A few of the woven products that deserves mention are Sherdukpen shawls, Apatani jackets and scarves, Adi skirts, jackets and bags, Mishmi shawls, blouses and jackets and Wancho bags Although fly shuttles are now being introduced particularly in the government run weaving centers, the traditional looms are still in use and the genuine textiles are products of these looms.

#### **2.12.8 CANE AND BAMBOO INDUSTRY**

Cane and bamboo industry of Arunachal Pradesh is of very high standard. Most of the domestic requirements are made of cane and bamboo. Hats of different sizes and shapes, various kinds of baskets, cane vessels, a wide variety of cane belts, woven and plains, elaborately woven brassier of cane and fiber, bamboo mugs with carvings, a variety of ornaments and neckless are some of the products that deserve special mention. The technique of basketry is also worth mentioning. The two basic techniques are twill and hexagon both open and closed. Arunachal basketry is beautiful not only because of the fine texture but also because of the unusual shapes. Many a baskets have pleasing forms. There is definite correlation between the shape and the topography and climatic condition of the region. The angular and curvature nature of some of the baskets has definite functional value.

#### **2.12.9 CARPET INDUSTRY**

Carpet Making is one of the most important and special occupation of this state. The carpets of Arunachal Pradesh have been acclaimed to be of national and international repute on the basis of the quality of carpet weaved in the state. Carpets are woven in varied colors, designs and shapes. Carpet making is the specialty of the Monpas. They weave lovely colourful carpets with dragon, geometric and floral designs. The choice of color and the color combination is unique. With the increase in demand, carpets have become a major item of trade as well as a major occupation for the women population of the state. The other main products of the industry are wall hangings, cushion pads, telephone pads and floor coverings.

### **2.12.10 WOOD CARVING INDUSTRY**

Woodcarving is a tradition with some of the tribes of Arunachal Pradesh. The Monpas, Khamtis, and Wanchos occupy significant place in this art. The Monpa wood carvers make beautiful cups, dishes, fruit bowls and carve magnificent masks for ceremonial dances and pantomimes. Wooden masks are also carved by the Khambas and Membas of West Siang. The Khamptis make beautiful religious images figures of dancers, toys and other objects. Very beautiful woodcarvings are made by the Wanchos of Tirap. In fact the Wancho area is the chief center of woodcarving. Wancho woodcarving was earlier associated mainly with head hunting and human head dominated everything that they made. But now-a -day's variety of subjects is included. They are invariably free standing. Minute observation on the details will reveal that the Wancho wood carver has deep sense of proportion, in spite of the fact that they give much attention to the head. Of late departure from the traditional fixed form is noticed in many carved figures. Asymmetrical ones replace symmetrical postures; relief works are experimented in various themes. There is no doubt that change has penetrated deep into the Wancho woodcarving.

### **2.12.11 ORNAMENTS INDUSTRY**

Ornament making is another craft widely practiced in Arunachal Pradesh. Besides beads of various colors and sizes blue-feathered wings of birds and green wings of beetles are also used in decoration. The Akas make bamboo bangles and ear ornaments, decorated with handwork designs. Most of the ornaments are made of beads, as the tribes are very fond of it. While some people just hang strings of beads round their neck, others such as the Noctes and Wanchos weave them into very attractive patterns. The Wancho girls particularly are very expert in beadwork. The designs and colour combination are superb. Besides beadwork, the Wanchos make ear ornaments from glass beads, wild seeds, cane, bamboo and reed. Various ornaments of coloured glass beads hold a special fascination for the people of Arunachal Pradesh. Silver ornaments are a specialty of the Mishmis. The Idu Mishmi women wear silver fillet necklaces with locket and beautiful earring. The Sherdukpens and the Khamtis at one time were also renowned for silver work.

### **2.12.12 TOURISM**

Arunachal Pradesh is emerging as a major tourist destination in the North-Eastern region. It has tremendous scope for development of various types of tourism activities, such as cultural tourism, adventure tourism, historical tourism, wildlife tourism, nature based tourism and eco-tourism. The Department of Tourism, during last couple of years has taken up various developmental programmes to boost up tourism activities in the state. Some of the achievement in infrastructural sector are: – Construction of tourist lodges at Dirang, Darak, Zemithang and Ziro, construction of cafeteria at Itanagar and Dirang, construction of coffee house -cum-guest House at Mayudia, construction of HawaGarh at Itanagar and Yazali, construction of viewpoint at Namdang and Darkang, electrification at Ganga lake has been completed, development around Malinithan was completed. The Department of Tourism is responsible for planning and formulating overall policy, implementation of different schemes and execution of projects for sustainable tourism development at various levels. They are also undertaking developmental schemes and exploring more of places of tourist interests in the form of providing infrastructural facilities such as construction of tourist lodges tourist, huts, hawagarhs, wayside amenities, development of lakes, of all types of adventure sports etc. at various places of tourist interests in near future.

## REFERENCES

1. Rawat, J.S. (2010). "Rivers in Arunachal Pradesh- The Eastern Himalaya", *Sci. & Cult.* 76 (11-12) 534-536.
2. Verrier Elwin (1993). *Myths of North East Frontier of India*, Second Reprint, Directorate of Research, Government of Arunachal Pradesh, Itanagar, p. xiii
3. Shanker, N. (1988). "A Profile of Arunachal Pradesh", *Resarum*, Vol.XIV, Nos.1& 2.
4. *Ibid.*
5. *Ibid.*
6. Bose, M. L. Historical and Constitutional Documents.
7. Chowdhury, J.N. (1982).
8. *Ibid* pp. 263
9. *Ibid* pp. 265, 266
10. *Ibid.* pp. 271, 272
11. *District Census Handbook, West Kameng and Tirap District, Government of India.* 16 June 2014. p. 8.
12. *District Census Handbook, Lower Diban Valley, Govt. of India.* 16 June 2014. p. 8.
13. *District Census Handbook, KurungKumey, Govt. of India.* 16 June 2014. p. 8.
14. *District Census Handbook, Anjaw, Govet. of India.* 16 June 2014. p. 8.
15. Gwillim, Law (2016). "India Districts". [www.statoids.com](http://www.statoids.com).
16. "Namsai became the 18th district of Arunachal Pradesh in November 2014". *India Today*. 18 December 2014. Retrieved 26 October 2015.
17. "Arunachal Pradesh carves out new district". *The Times of India*. 9 Feb. 2015.
18. "Siang becomes 21st district of Arunachal". *The Arunachal Times*. 28 Nov. 2015.
19. "Arunachal to get four new districts". *timesofindia*. 16 January 2013. Retrieved 16 January 2013.
20. Lepcha, Damien (23 September 2017). "Lower Siang starts functioning". *The Telegraph India*.
21. "Khandu Cabinet approves Operation of Lower Siang District with HQ Likabali". *Arunachal24.in*. 22 September 2017.
22. "Protect Tribals if Chakma & Hajong are considered for citizenship, says legislative assembly". *arunachaltimes.in*. 19 October 2017.

23. "Arunachal Assembly approves Kamle as 23rd district of state". *Arunachal24.in*. 18 October 2017.
24. "Arunachal Assembly Passes Bill For Creation Of 3 New Districts". *NDTV.com*. Retrieved 30 August 2018.
25. "Arunachal Assembly approves Kamle as 23rd district of state". *Arunachal24.in*. 18 October 2017.
26. Gansser, A. (1983). *Geology of the Bhutan Himalaya*, Birhauser Verlag, Boston, 190
27. Bhargava, G. N. (1995). "The Bhutan Himalaya: A Geological Account", Geological Survey of India, Special Publication, Vol. 39.
28. Godwin- Austin, H. H. (1875). Notes on the geology of the Dafla Hills, Assam, lately visited by the force under Brigadier-General Stafford, *C. S. J. Asiat. Soc. Bengal*, 44, 34-41.
29. La Toucher, T. D. (1885). Notes on the geology of the Aka Hills, Assam Hills, Assam, *Rec. Geol. Surv. India*, 18, 121-124.
30. McClaren, J. M. (1904). Geology of Upper Assam, *Rec. Geol. Surv. India*, 31, 179-204.
31. Brown, C. J. (1912). "A Geologic Reconnaissance through the Dibang Valley", being the geological result of the Abhor Expedition, 1911-12, *Rec. Geol. Surv. India*, 42, 231-264.
32. Jain, A. K.; Thakur, V. C. and Tandon, S. K. (1976). "Stratigraphy and structure of the Siang District, Arunachal (NEFA) Himalaya", *Himalayan Geol.*, 6, 259- 286.
33. Verma, P. K. and Tandon, S. K. (1978). Geological Observations in Parts of Kameng District, Arunachal Pradesh (NEFA), *Himalayan Geol.*, 6, 259-286.
34. Acharya, S. K.; Ghosh, S. C.; Ghosh, R. N. and Shah, S.C. (1975). "The Gondawana Group and associated marine sequences of Arunachal Pradesh (NEFA)", *Eastern Himalayan Geol.*, 5, 60-80.
35. Jangpani, B. S. (1974). "Stratigraphy and Tectonics of Parts of Eastern Bhutan", *Himalayan Geol.*, 4, 117-136.
36. Thakur, V. C. (1986). "Tectonic Zonation and Regional Framework of Eastern Himalaya", *Sci. Tette. Memi.*, 47, 347-360.

37. Singh, S. and Chowdhary, P. K. (1990). "An Outline of the Geological Framework of the Arunachal Himalaya", *J. Himalayan Geol.*, 1, 189-197.
38. Acharya, S. K. (1994). The Cenozoic Foreland Basin and Tectonics of the Eastern Sub- Himalaya: Problems and Prospect's, *Himalayan Geol.*, 15, 3-21.
39. Acharya, S. K. (1980). "Structural Framework and Tectonic Evolution of the Eastern Himalaya", *Himalayan Geol.*, 10, 412-439.
40. Acharya, S. K. (1998). "Thrust Tectonics and Evolution of Domes and the Syntaxis in Eastern Himalaya", *India, J. Nepal Geol. Soc.*, 18, 1-17.
41. Kumar, G. (1997). "Geology of Arunachal Pradesh", *Geological Society of India*. Bangalore.
42. Das, B. K. and D. Kar (2011). "Habitat Mapping, Spatial Analysis of Fish Diversity of River Subansiri during winter season in Assam and Arunachal Pradesh (India)" *Environment and Ecology*. 29 (4A): 1948-1951.
43. Kumar, G. (1997). "Geology of Arunachal Pradesh", *Geological Society of India*. Bangalore.
44. Das, B. K., P. Boruah and D. Kar (2014). "Potential Application of Geographic Information System (GIS) and Remote Sensing (RS) in River Analysis". *International Journal of Recent Scientific Research*. 5 (4): 828-830.
45. Verma, Rahul (2015). "*The Overview of the Major Drainage Systems in the North-East Region, India*", Published in The Indian Rivers - An Introduction for Science and Society.
46. Arunachal Pradesh State Action Plan on Climate Change (2011). July, Government of Arunachal Pradesh, p.3
47. *Ibid.* p.4
48. *Ibid.* p. 5
49. *Ibid.* p. 6
50. Singh, S. Ravi (2008). "Urbanization in Arunachal Pradesh: Trend and Geographical Patterns), *Annals of the National Association of Geographers*, Volume XXVIII, No. June, pp. 83-95.

## CHAPTER -3

### TOURISTS ATTRACTIONS AND TOURIST ARRIVALS IN ARUNACHAL PRADESH

---

#### 3.0 INTRODUCTION

The attractions of tourist destinations are principal components which have the greatest impact and largely determine tourists' choice and influence their motivations. Without attractions there is no need for other tourism services, thus without any attractions tourism does not exist. The present chapter focusses on the tourist attractions and tourist arrivals in Arunachal Pradesh.

#### 3.1 THE CONCEPT AND DEFINITION OF TOURIST ATTRACTIONS

Sites are specific places or destinations that are considered significant. In other words, the terms “attraction’ and “site’ can be used interchangeably both constitute a place that attracts tourist visitation. According to MacCannell a sight is a site that can be visited and attracts tourists such as a “*mountain range or moon rocks.*” (MacCannell, 1976)<sup>1</sup>.

Alan Lew states, “tourist attractions consist of all those elements of a ‘non-home’ place that draw discretionary travelers away from their homes” (Lew, 1987). Tourist attractions usually offer activities and opportunities for participation, landscapes to observe, and experiences to remember (Lew, 1987)<sup>2</sup>.

The simplest definition of an attraction for visitors, however, was formulated by the psychologist P. Pearce (1991, p. 46)<sup>3</sup>, who described it as “a named site with a specific human or natural feature which is the focus of visitor and management attention”. Middleton (1996, p. 261)<sup>4</sup> proposed precise definition, “A designated permanent resource which is controlled and managed for the enjoyment, amusement, entertainment and education of the visiting public”.

Benckendroff, defines “*A tourist attraction is a permanent resource which derives all or part of its income from visitors and which is managed for the primary purpose of leisure and visitor enjoyment.*”

This definition expressly excludes temporary attractions such as events and festivals. It further excludes attractions such as national parks and churches which are

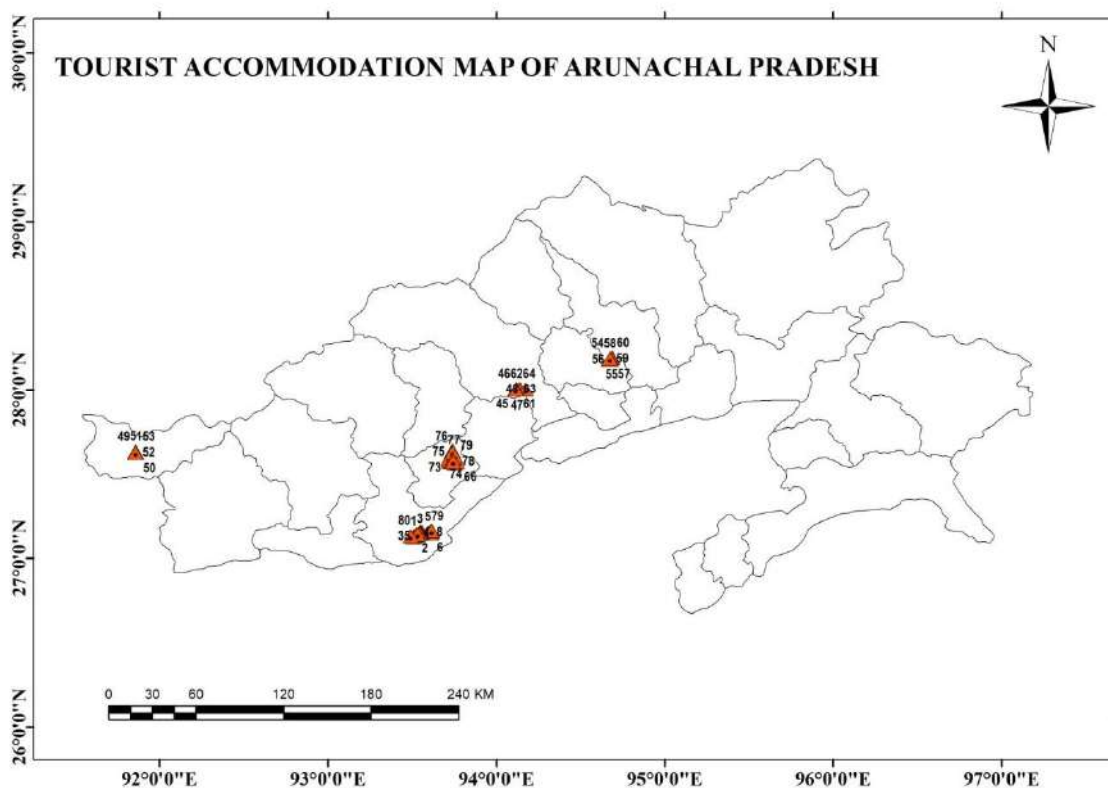
primarily managed for preservation or religious purposes. The definition recognises that attractions can derive income from visitors through admission charges and/or other activities such as donations or the sale of related products (Benckendorff, 2001)<sup>5</sup>.

Lubbe (2003) defines a tourist attraction as an attraction that can provide overnight accommodation. Those without overnight accommodation are called day visitors' attraction. In the context of this research this concept refers to any place that has been identified with the potential to attract the desires, interests and needs of the people that are prepared to pay for a visit<sup>6</sup>.

The attractions of tourist destinations are principal components which have the greatest impact and largely determine tourists' choice and influence their buying motivations. They include natural resources, human-made attractions, and hospitality (Gartner<sup>7</sup>, 1996; Gunn<sup>8</sup>, 1994; Inskeep<sup>9</sup>, 1991; Middleton<sup>10</sup>, 2001; Ritchie et al.<sup>11</sup> 2001). The elements of natural resources incorporate land, landscape, flora and fauna, climate, water, and other geographical features of the destination and its natural resources. For many locations, land and landscape such as mountains, ski hills, wildlife species and water features (lakes or waterfalls) are the most important destination attributes. They are extremely valuable tourism assets since they are central to a destination's appeal and they are the foundation from which other resources are created and developed (Godfrey & Clarke<sup>12</sup>, 2000; Gunn<sup>8</sup>, 1994; Inskeep<sup>9</sup>, 1991; Middleton<sup>10</sup>, 2001; Ritchie et al.<sup>11</sup> 2001).

Human-made attractions also occur at the tourist destinations. They embrace 'both past and present lifestyles, attitudes, and social settings' (Godfrey & Clarke<sup>12</sup>, 2000, p. 67). These are not only elements reflecting historical features, such as old and ancient buildings and ruins, architectural and artistic buildings and monuments, historical and heritage sites, but also the current culture reflecting how people from that area and ethnic origin live, work and play (Godfrey & Clarke<sup>12</sup>, 2000). Parks and gardens, convention centers, marinas, industrial archaeology, golf courses, specialty shops, theme parks, theme retail areas, and special hallmark events are also humanmade assets (Middleton<sup>10</sup>, 2001). Indeed, both natural and human-made resources function as 'the true travel product' and 'the reward from travel' which provide tourists with satisfaction (Gunn<sup>8</sup>, 1994, p. 58). People and aspects of their ways of life and customs, languages, and activities provide opportunities for social encounters such as festive and religious events,

**Map 4: Tourist Accommodation Map of Arunachal Pradesh**



dances, music, food, and other entertainment. They have also become a powerful 'pull' factor to motivate tourists' choice (Middleton<sup>10</sup>, 2001).

Tourist attractions, both man-made and natural, are the core components of a region's tourism product. Without attractions there is no need for other tourism services. It would be fair to say that without attractions, tourism as we know it would not exist (Benckendroff, 2001)<sup>5</sup>. Without tourist attractions there would be no tourism and vice versa.

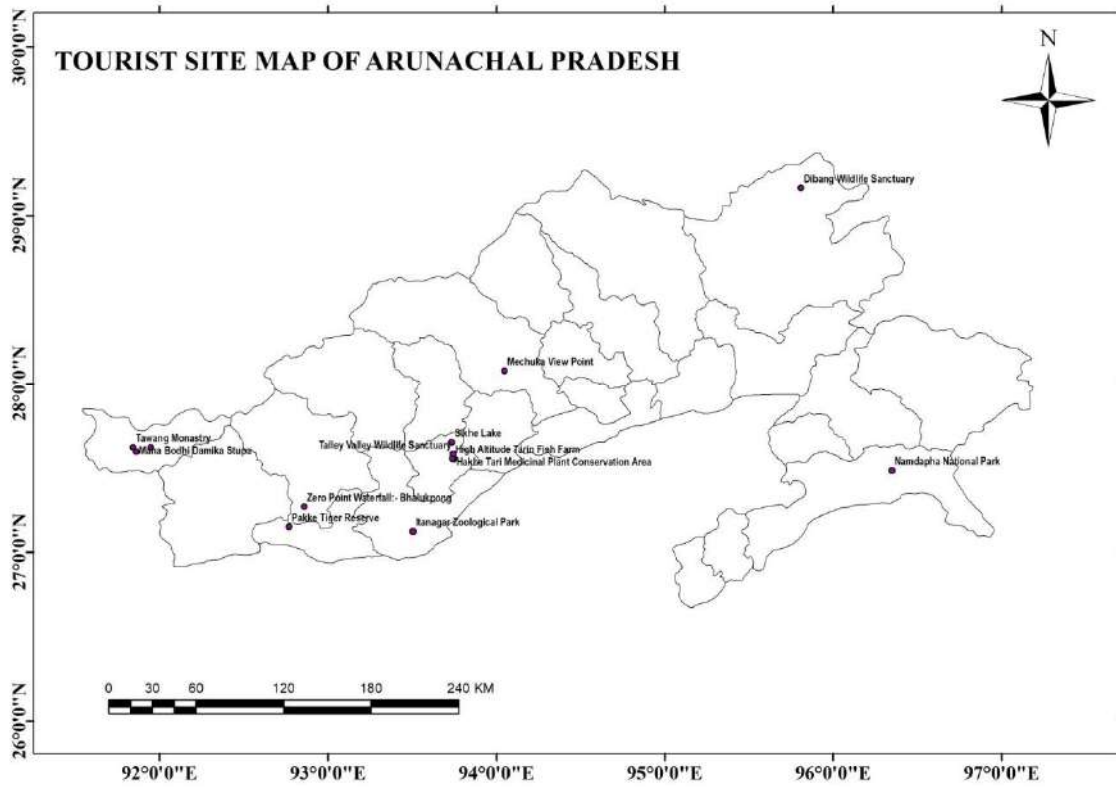
### **3.2. SPATIAL DISTRIBUTION OF TOURIST ATTRACTIONS IN ARUNACHAL PRADESH**

The place of tourist attraction destinations/sites in the state are unevenly distributed amongst all districts of the state. Much flourishing and surfacing tourist sites are located in the westernmost part of the state in Tawang and West Kameng District. Lohit District and Lower Subansiri District of the central parts of the state comes next to the former two districts in a row. The other moderately flourished tourist sites are unevenly scattered in various parts of the state. These tourist sites are flourishing as a pilgrimage sites, religious sites, cultural sites, natural sites, adventurous sports sites and rural tourism sites. Arunachal Pradesh is an 'orchid Paradise' accounting for 601 species of orchids, or 52 percent of the species known in India. Various orchid centres are situated in Itanagar, Tipi, Sessa, Dirang, Jengging, Roing, which have a good germ-plasm collection of nearly 400 species of orchids as well as hybrids. Places of tourist attractions in the state is represented in Table 3.1.

<b>Table 3.1: District-wise Distribution of Tourist Attractions: Arunachal Pradesh</b>		
<b>District</b>	<b>District HQ`</b>	<b>Tourist Attractions</b>
Tawang	Tawang	SelaPass,Nuranang, Jaswant Garh, War Memorial, TawangMonastery, Ugyelling, PTso Lake, Sangetsar/Madhuri Lake
West Kameng	Bomdila	Bhalukpong Archaeological site, Eaglenest Bird Sanctuary, Sessa Orchid Sanctuary, BomdilaMonastery, Dirang,,
Shi Yomi	Mechukha	Mechukha Lake, Mechukha Oldest Buddhist Monastery
East Kameng	Seppa	Pakhui Tiger Reserve
Papum Pare	Itanagar	Itafort, GyekarSinyik (Ganga Lake), Jawaharlal Nehru Museum, Craft Centre & Emporium, Zoological Park
Lower Subansiri	Ziro	Talley Wildlife Sanctuary, Talley Valley, Ziro, Shivalinga at Kardo Hills
KurungKumey	Koloriang	Palin and Nyapin, Sangram Hill Station
KraDadi		
Upper Subansiri	Daporijo	Daporijo, Menga Cave
West Siang	Along (Aalo)	Malinithan
East Siang	Pasighat	Dr. DayingEring Memorial Wildlife Sanctuary
Upper Siang	Yingkiong	Tuting, Moulung National Wildlife Sanctuary, Dehang-Dibang Biosphere Reserve
Siang		
Dibang Valley	Anini	Mayudia, Hunli Valley
Lower Dibang Valley	Roing	Bhismaknagar Archaeological site, Salley Lake, Mehao Wildlife Sanctuary
Lohit	Tezu	Parashuram Kund, Kamlang Elephant Reserve Forest, Kamlang Wildlife Sanctuary, Hayuliang, Walong, Dong Valley
Namsai	Namsai	Golden Peace Pagoda
Anjaw	Hawai	
Changlang	Changlang	Miao, Namdapha National Park
Tirap	Khonsa	

Compiled by Author

**Map 5: Tourist Site map of Arnachal Pradesh**



### **3.2.1 TAWANG DISTRICT**

Tawang is a pristine location nestled amidst the picturesque mountains that provides a peaceful site for nature lovers and trekkers to soak in the jaw-dropping beauty of nature. An enticing hill resorts of the state at an altitude above 10,000 ft having a numerous worth visiting sites is just the place for a dream holiday destination. Enchanting snowcapped mountains feeding the horizon, long revitalizing walks and appealing mysticism has a unique historic perspective mixed with natural beauty and solitude of Gudpi and Chong-Chungmi ranges and Tawang Chu River Valley added more flavor for the visitors. The place is an important site of Mahayana Buddhism renowned for Tawang Monastery of Gelukpa founded by Mera Lama Lodre Gyatso during the 17<sup>th</sup> century a contemporary of 5<sup>th</sup> Dalai Lama.

### **3.2.1.1 Tawang Monastery**

It was established by Mera Lama Lodre Gyatso during 17<sup>th</sup> century. It is located at 27° 35' 12"N – 94° 51' 26"E at an altitude of 2965 meter above mean sea level and situated amidst picturesque landscape all-around. It is the second largest Monastery in Asia and largest in India that control the religious affairs of 17 Gompas of the region. The most impressive part of the Monastery is the three storied assembly hall which houses the temple and the 28 feet high Golden Statue of Lord Buddha. The monastery has a big library having an impressing collection of ancient books and manuscripts where the famous Buddhist scriptures Kangyur and Tangyur inscribed in gold are preserved. The follower of Buddhism has inseparable attachment with this Monastery, as it is a centre of learning where young Buddhist Monks learn about the essence of Buddhist culture. The amazing collection of manuscripts, books and other artifacts in the monastery increase its multifold value.

### **3.2.1.2 Taksang Gompa**

Taksang Gompa is believed to have been honored by Guru Padmasambhava's visit during 18<sup>th</sup> century which is located at the ridge of a hill. Your eyes cannot feed enough on the spectacular views from here. The thick coniferous forest and lofty mountains that surrounds the monastery seems enchanting scenery that add never ending flavor to the monastic site and render magic to the air. You are sure to be overwhelmed by the serene atmosphere that makes you feel rejuvenate yourself with nature.

### **3.2.1.3 Gorichen Peak**

The Gorichen Peak is known as Sa-Nga Phu by local Monpa tribe, which literally means the Kingdom of Deity and is considered to be one of the sacred peaks protecting them from all the evils according to the local belief. This is the highest peak in Arunachal Pradesh situated at the height of 22500 feet above mean sea level and is roughly 164 kilometer away from Tawang. This peak offers a challenging trekking routes and mountaineering spot. The place not only makes you feel with nature but also stimulates the challenger in you. It is the right place for the adventure lovers which possess a high challenge to trekkers. The gorgeous Gorichen Peak offers magnificent views around the peak.

#### **3.2.1.4 UrgyellingGompa**

Urgyelling is the birth place of Tsangyang Gyatso, the sixth Dalai Lama. Bramadung Chung, Sengsarbu Ani Gompa, Gyanggong Ani Gompa are nunneries among the oldest sacred place in the country. It is a perfect destination for a great time with your near and dear ones. Enjoy the attractions of this popular and worth visiting tourist spot. It provides plenty of attractions to lure your senses and offer you best recreation to get drenched in the spirit of adventure that you get to explore at Urgelling Gompa. Enjoy together all the points of popular interests and bring back several memorable moments in your cameras and memories. The spot is not just the place for sightseeing, but it also enables you to steal a self-indulgent moment for yourself as well. So, check out the Urgyelling Gompa tourist spot for all the attractions that is an offer to rejuvenate your time on weekends. World standards, extraordinary architecture, innovative layouts, and well-thought execution make these place a highly coveted point of tourist interest.

#### **3.2.1.5 Jaswant Garh**

Many natural wonder places were so far has become tourist destinations areas, as their compelling beauty is irresistible. The memory of ‘wonder man’ has to visited, as his valor is compelling. The ‘wonder man’ Jaswant Singh Rawat of the Indian army fought a lone battle against the invading Chinese troop during Indo-China war in 1962. He stood his position for 3 days at an altitude of 10000 ft without giving up until his last breath. This war memorial is located 21 km away from Sela Pass towards Tawang. The post held by him to fight Chinese army is named as Jaswant Garh in honour of his memory. It is the war memorial for 1962 martyr of Indian defense force who has sacrifices their supreme life to defend the nation from external aggression. Every passerby defense forces through the road visit the memorial and honor his supreme sacrifice. Though he is not alive but his name and soul is being honored and his rank is promoted from time to time. There is a bedroom in the Garh which is being maintained its cleanliness by changing bed sheet and pillow cover every day.

#### **3.2.1.6 Sangetsar Lake (Madhuri Lake)**

The Lake is believed to be an outcome of a major earthquake in 1950. Historically there was a grazing ground at this place before the earthquake has occurred. The

surroundings are inundated with natural beauty with gentle breeze which forms ripples in the lake. The lake is an absolute delight for the photographers. The tourists frequently visit the place mostly in groups.

#### **3.2.1.7 Nuranang Waterfall**

Tawang has offered every form of nature beauty at its best to your eyes. Nuranang Waterfalls is one such wonderful attraction that Tawang offers. This spectacular 100 meter-high waterfall lies at 27° 35' 22"N – 91° 58' 44"E at the height of 2052 meter above mean sea level and is 40 kms away from Tawang. It is also known by Bong Bong Falls or Jang Water Fall since it is close to Jang, a town between Tawang and Bomdila. Originating from northern slopes of the famous Sela Pass, Nuranang River forms the waterfall and then plunges into Tawang River. These waterfalls are one of the most stunning waterfalls in Arunachal Pradesh state. The Hydel power station nearby is open for visit now a days.

#### **3.2.1.8 Bap Teng Kang Waterfalls**

Bap Teng Kang Waterfalls is located at the outskirts of Tawang town near a village called Baap Teng Kang and is 82 km away from the main town of Tawang district. This 100 feet high waterfall is one of the most visited tourist spot in Tawang. Set amidst lush greenery, the waterfall offers spectacular sight to nature lovers attracting countless tourists every year. The crystal clear water encourages you to indulge in swimming to have experience and comfort of this rare and closed proximity to nature. It is situated on the way to Zeminthang from Tawang. The waterfall is well-known for relaxing place among residents.

It is a beautiful destination to be explored by tourists and travelers. People like to visit this place for the eye catching beauty of its surroundings. The nature around the Bap Teng Kang Waterfalls is so green and captivating and the surroundings are so refreshing. It is an ideal picnic spot for the tourists and many adventure tourists and is comparatively safer place for a family outing. There are public transport services as well as tourist taxis available to reach this region.

### **3.2.1.9 Pangkang Tseng Tso Lake**

Pangkang Tseng Tso Lake, also called as P T Tso Lake is situated 17 km away from Tawang. The lake remains frozen throughout the winter and the area around the lake supports skiing on the surface. To enjoy the calm weather where you would not want to miss even the smallest whispers of nature, you need to visit this place in summer. In addition to that, radiant rhododendron flowers along the way and birds in different hues could not be done justice even by the best of photographers. This Lake is another attraction to visit in Arunachal Pradesh which is surrounded by a vivid backdrop of the snow-clad mountains and hills and is experience with gushing cool weather around lake with brilliance and beauty of Mother Nature. In fact, the entire Tawang is a major tourist destination and it hosts a perfect blend of adventure tourism. When you visit Pankang Teng Tso Lake you will be surrounded by calm water, quite meandering clouds, wet snow-covered forests and sweet chirping of birds.

Pankang Tseng Tso Lake, a popular tourist attraction is indeed, is a breathtaking site especially for its tranquil setting and interesting places around. The place is famous for two distinct ambiances, while it remains cool, quiet and everything white with fluffy snow covered surrounding during winter, it is quite pleasant with blue lapis flowers in summer season. Certainly, the place is the best destinations to visit to find mesmerizing attractions for instance.

### **3.2.1.10. Bumla Pass**

It is situated 37 kms away from the main town of Tawang district. It lies at the Indo-China border at an altitude of 16000 ft above mean sea level and is the right place for you to examine your fitness level if you love adventure. As you reached this higher altitude, you will find short of oxygen and your vehicle may not be your best companion to take you beyond a certain elevation point. You might have come and prepared for an adventurous trekking but your body have to support you to go up to this high altitude areas where the presence of oxygen is less in compare with the low lying areas. The spine chilling snow covered atmosphere that penetrates deep inside your body may pose another challenging task for your body. Since the road to Bumla Pass may not be in the best of conditions throughout the year, the ideal time to visit the place to enjoy its

limitless beauty would be from May to October. This natural pass was the passage used by Dalai Lama to escape from Tibet to enter India.

#### **3.2.1.11. Sela Pass**

It is the world's second highest motor able pass at an altitude of 14000 ft with a serene crystal clear blue water natural lake lying along the way from Bomdila to Tawang. The natural beauty of the surrounding landscape is like a dream come true feelings. It holds the credit of being the one of the high altitude motor able mountain pass in the world. It is one amongst the most frequently visiting tourist destination in the whole of Arunachal Pradesh State. If you venture to this place in winter, you will find a stunning view of snow clad mountain and hills. The site views from Sela Pass are spectacular; you will find paradise Lakes on your way to Sela Pass. These lakes, for the most parts of the winter remain frozen. The sunrays kissing the mountain top give you a different version of the mountain. This natural mountain pass is rightly called the 'Heaven on earth'.

#### **3.2.2 BOMDILA**

Bomdila is the headquarter of west Kameng District and home of Aka (Huroso), Miji (Sajolang), Monpa, Sherdukpen and Bogun (Khawas) tribes. Craft Center, Monastries, Ethenographic Museum, Emporium, etc. are worth visiting in this place. One may view an assortment of snow clad mountain peaks from bird's eye view of Kangto and Gorichen peaks in the state.

##### **3.2.2.1 Bhalukpong:**

Bhalukpong is one of the entry points to Arunachal Pradesh state and is located at 27° 01' 20"N – 92° 64' 29"E at an altitude of 145 meter above mean sea level. It is famous for archaeological ruins of king Bhaluka, an ancient ruler of the region. The stone remains of the historical fort of 10<sup>th</sup>-12<sup>th</sup> Century A.D. is situated in this region which speaks about the capital of king Bhaluka and his grandson Bana of Mahabharata fame. The river Kameng after completing all turbulent courses becomes serene flow in this area which provides a rare opportunity for adventurous river rafting and serves as a beautiful picnic spot as well.

#### **3.2.2.2 Dirang**

It is a place of hot water spring where people can take bath. It is believed that the hot water spring cures skin ailments. Apple and Kiwi Orchards, National Yak Research and Breeding Centre at Nigmadung, Sheep Breeding Farm and Sangti Valley where Siberian black necked storks visit during winter are the places of tourist interest.

#### **3.2.2.3 National Research Centre on Yak**

This research Centre is located in the West Kameng District, Dirang of Arunachal Pradesh. This must visit tourist attraction at Dirang has a collection of more than 150 yaks of different varieties. This National Research Centre is solely dedicated for overall improvement of Yak husbandry and upliftment of dwindling yak population in the region. It is located at walking distance from Dirang and one can reach this place from other major destinations of Arunachal Pradesh via roadways. While visiting this place one can also visit other tourist attractions sites like Dirang Dzong, Hot Water Spring, Sangti Valley and Kalachakra Gumpa in Dirang. Best Time to Visit this small hill station is in between the month of April to October.

#### **3.2.2.4 Eagle Nest Bird Sanctuary**

For an environmentalist, Arunachal Pradesh needs no introduction because its rich flora and fauna is well known throughout the world. In fact the state has paved its place at the top in the global biodiversity map of the world. The Eagle Nest Bird Sanctuary situated in the Dafla hills of west Kameng district of Arunachal is an important bird watching area. Similarly, the Sessa orchid sanctuary is also considered as an avian treasure trove. Both these sanctuaries with rich biodiversity wealth cover an area of 317 sq. km.

Since 2003, regular bird tours are being organized here under the Eaglenest Biodiversity Project. Local welfare societies provide all the necessary logistical support to these tours. The revenue collected from these bird tours are pumped back to these societies. The main objective of these eco-tours is to provide employment to local people so that they don't resort to sale of precious forest products. These well-organized trips have been very successful because of local participation. These bird tours not only formulate participant awareness about the avian life that exists in this astounding area but also draw naturalists to venture into bio-diversity studies. This sanctuary is well-endowed

with avifauna. In fact, 425 species were spotted in this small area that includes several endemic species as well as vulnerable and near threatened species. Several range extensions have been reported in recent times during the course of bird tours. One such famous reporting was the sighting of a spectacular bird called the new *Liocichla* which has many similarities with the Emei Shan *Liocichla* (Chinese taxon). Efforts are on to gather more details about this surprise discovery which is a new avian species.

### **3.2.3 EAST KAMENG**

#### **3.2.3.1 Seppa**

Seppa formerly known as Sapla is the headquarters of the East Kameng district in the state is inhabited by Nishi, Sullung and Aka Tribes. Literally, Sapla means ‘marshy’ land in local dialect. It lies on the bank of Kameng River and there is a helipad lies along the river bank. Seppa has been a focal point for the state government in terms of developing tourism and more importantly the economy of the place.

Away from commercial activities, one can venture into adventure sports such as Trekking, Hiking, Fishing, River Rafting, paragliding and Camping. Tourists can enjoy fishing in the Kameng River and get the fresh fish cooked by locals. However sports equipment is not easily available here and hence it is advised to carry your own equipment. Mountaineering is another amusing sport in the area as the place is abundantly filled with big and small mountains. Visitors can take tips from the local experts in climbing mountains. Camping in tents is absolutely wonderful in the cold dark night with the bon fire burning the ambiance seems like a dream come true.

The Arunachal Tourism department is significantly encouraging tourism in Seppa. One of the examples is introducing River rafting training programs in the Kameng River.

### **3.2.4 PAPUM PARE**

#### **3.2.4.1 Itanagar**

It is the capital of Arunachal Pradesh state which is dotted with archeological sites of great historical value. The city is named after the irregular shaped Itafort, the port of bricks which is the centre of attraction for visitors is located within the heart of twin capital Itanagar and Naharlagun. There are also institutions of great socio-cultural significance in the area. The twin city is recently been selected among 100 smart city plan

proposed by the government of India. It has numerous other attractive places of social, cultural and religious importance in the area.

#### **3.2.4.2: Ganga Lake (GyakarSinyi)**

The natural lake located within the Itanagar is somewhat 7 km away from Ganga market which is the main town of Itanagar. It is believed that numerous Mithuns (Bros Frontalis) were drowned in this lake. There is a swimming pool built adjacent to the lake for visitors. This lake is under the care taker of private organization on lease from the department of tourism.

#### **3.2.4.3: Gumpa Mandir**

Gumpa Mandir is located within the hearth of Itanagar. The place is known for important religious site of Buddhist Community which stands as one of the peaceful sites for a tourists as well as local residents with family and friends to spend a leisure times.

#### **3.2.4.4: Itafort**

Itaport is the ruin port of bricks which is the centre of attraction for visitors, located within the heart of twin capital Itanagar and Naharlagun. The port has northern, southern and western gate with an irregular shape of bricks which has missing links at many places. The approximate length of the port is around 16,200 cubic meters dates back to 14<sup>th</sup>-15<sup>th</sup> Century. According to some scholars, these bricks are similar with those of the reign of Ramachandra of Mayapur, king of the Jitari Dynasty.

#### **3.2.4.5: Jawaharlal Nehru State Museum**

Jawaharlal Nehru State Museum is the lone museum in twin capital Itanagar and Naharlagun. The museum displayed the diversity of the ethnic community inhabiting within the state. It shows the rich culture, heritage and historical monuments, artifacts, handicrafts and handlooms of the state.

#### **3.2.4.6: Indira Gandhi Park, Itanagar**

Indira Gandhi Park, Itanagar is the lone recreational Centre in Itanagar for a public to spend a leisure time with family and friends. It is named after the then Prime Minister of India Smt. Indira Gandhi. The Science Center within this park is additional

attraction for children and students to know the scientific temperament and technological knowhow.

#### **3.2.4.7 PoomaMithun Breeding Farm**

This is the lone Mithun breeding center in the state. The scientific name of the state animal Mithun is *Bos frontalis*. Although this animal is reared almost in all districts of the state, the breeding center is only established in the capital till date. There is much needed of this breeding center in various parts of the state to maintain the dwindling Mithun populations in the state.

#### **3.2.4.8: Pooma Bamboo Farming Centre**

This bamboo farming center is established in 2011 by considering state potential on bamboo production. Varieties of bamboo are found abundantly in the state which has to be brought into the economic realm of the state for overall development of the state.

### **3.2.4 LOWER SUBANSIRI**

#### **3.2.4.1: Ziro Valley**

Ziro town, the Headquarter of Lower Subansiri District of Arunachal Pradesh falls under the heart of Ziro valley popularly known as Apatani Valley. It lies at an altitude of 1572 meters above mean sea level. The area lies between 27° 30' 25"N- 27° 38' 5"N and 94° 46' 2"E - 94° 55' 27"E and encompasses an area of about 120 sq. km with a total population of about 24703 persons according to 2001 census. The town is inhabited by Apatani tribes with little numbers of other tribes. The town is located 164 km away from state capital. The majority of the people of the town are engaged in other than primary activities. The whole Tani groups, the descendant of fore father Abo Tani believe in worshipping Donyi-Polo but now a day's some peoples are changing thir religion from worshipping Donyi-Polo to Christianity. Their major festivals are Dree, Myoko and Murung which is celebrated for bumper crops, well-being and prosperity of individual as well as for clan members.

The Apatani or more accurately Tanii which corresponds to the autonym, are an ethnic community of approximately 30,000 people living in the Arunachal Pradesh State. The majority of them inhabit a small valley surrounded by mountains in the Lower Subansiri District, which is popularly known as the Ziro Valley or rice bowl of Ziro.

Tending groves of bamboos, pine or fruit trees in the vicinity of villages is another important element of the agricultural production system. Through sustainable use of natural resources the Apatanis have been able to sustain their basic needs for construction and fuel over years without major damage to their immediate environment. The beauty of man-made landscapes of the valley and the specific farming and conservation techniques of the Apatanis have lead UNESCO to nominate Ziro Valley for World Heritage Site in 2006.

### **3.2.5. SI-YOMI**

#### **3.2.5.1 Mechuka**

It is the northernmost part in the eastern India. The area lies in the northernmost tips of Arunachal Pradesh State bordering Tibet Autonomous Council. It constitutes the northernmost part of newly created Si-Yomi District. The place is considered as one of the distinct site in terms of natural scenic beauty in the state. Every year the state tourism department organized Mechuka festival to attract the tourist and to promote tourism in the state as whole and area in particular.

### **3.2.6. WEST SIANG**

#### **3.2.6.1. Aalo:**

#### **3.2.6.2. Malinithan:**

A place of relics on stone ruins of temples and valuable sculptures is associated with the mythological legend of Lord Krishna. The site has temple ruin dating back to 10<sup>th</sup> and 14<sup>th</sup> Century AD of rich sculptural value. Beautifully designed and decorated basement of temple, divine images, icon, and deities, animal motifs and floral designs, carved columns and panel, have been unearthed. It is believed that on the way to Dwarka from Bhismaknagar, Lord Krishna and Rukmini rested here and Goddess Parvati in the form of Malini offered them the choicest of flowers.

#### **3.2.6.3 Sangam Confluence:**

It is the place where Yomgo river and Sangam river join together to form mighty Siang river. It is famous for organizing an event tourism.

### **3.2.7: UPPER SIANG**

#### **3.2.7.1: Yinkiong:**

Yinkiong is the headquarter of Upper Siang District and has international border with China. This region is known for its diverse and colourful ethnicity where people live with love and celebrate festivals with zeal. It is inhabited mainly by four tribes, Adi, Khamba, Mishmis and Memba. Adventure lovers come here to indulge in hiking, trekking, mountaineering, angling, fishing, rafting, camping and everything else that enlivens their soul. Besides this culture, and a lively atmosphere attracts the visitors.

### **3.2.8: EAST SIANG**

#### **3.2.8.1: Pasighat:**

Pasighat is the headquarter of East Siang District and is one of the oldest town in the state Arunachal Pradesh. Recently the town has been included amongst hundred smart city proposal of the country. The first educational institute of the state was established way back in 1954 in this town.

#### **3.2.8.2 Advanced Landing Ground, Pasighat**

It is one among seven ALG constructed in the state. ALG will enhance air support capability for the army, paramilitary forces and the civil administration and will also facilitate the connectivity by air for the people of Arunachal Pradesh with the rest of the country. To bolster up the operational capability in the eastern part of Arunachal Pradesh, IAF took over the ALG in February 2010 and started the aviation infrastructure development. At present, the development work is coming to an end and a new airfield is ready for operational use.

### **3.2.9: LOHIT**

#### **3.2.9.1: Tezu**

Tezu is a census town and one of the oldest town is the Fifth largest town in Arunachal Pradesh and one of its most developed and important headquarters of Lohit district. It has earned its own record for prevalence of harmony and peace.

### **3.2.9.1: ParasuramKund**

ParasuramKund is a place of great sanctity attracting large numbers of pilgrims from all over India for a dip in the kund during Makar-Sankranti Mela every year. According to the legend recorded in the kalika purana, Parasuram washed away his sins of killing his mother, in the water of Brahma Kund. It is situated within the Kumlang Reserve Forest area. This place on the Lohit River carries a strong mythological link with the legend of Parasuram, a hindu sage. According to the legend, sage Parasuram washed away his sin of matricide in the water of Lohit River, Brahmakund. Each year thousands of pilgrims from all over the country come together on Makar Sankranti day, to wash away their sin where a fair (Mela) is held during this period.

### **3.2.10: LOWER DIBANG VALLEY**

#### **3.2.10.1: Roing**

Roing, the District Hq of Lower Dibang Valley is the central point to all the tourist spots in the district. It is the last major township at the north-eastern frontier of India. Most of the places are very near to the town or within the township. The snow peaked mountains, deep gorges, turbulent rivers cascading down the hills, numerous waterfalls, placid lakes, archaeological sites, peace and fun loving hospitable people and above all the heavenly climate make Roing one of the most attractive destinations for tourists.

#### **3.2.10.2: Bhismaknagar Archaeological site**

Bhismaknagar is one of the popular archaeological and heritage sites of Arunachal Pradesh. The place gains its popularity due to the Bhismaknagar Fort which is around 30 km from Roing and is situated in the Lower Dibang Valley District of Arunachal Pradesh. This hill fort was built out of fabricated burnt bricks during the 8th century is related to Mahabharata period where its king Bhismak had a very beautiful daughter name Rukmini, who later become wife of Lord Krishnan is one of the oldest and sacred archaeological sites in the state. It is believed that this place was under the clench of the Chutiyas from 12<sup>th</sup> to 16th centuries BC. The prior shreds of this place throws nimble on the quarries of this town. This town voices for the Catholic spirit of ancient Indians and the bestowal by the Idus who made to the synthetic fabric of Indian culture. The

manner in which Bhismaknagar has blossom its race to revitalize the customary ethos along with the espousal of its reformism has made this place a center of resurgence.

The place is also a holy heritage site for the IduMishmis who belong to the tribal communities in Arunachal Pradesh. Excavations at the site have found a number of artifacts from the fort like terracotta plaques, terracotta figurines, decorative tiles and potteries. An emblem of historical affluence indicates the extraordinary and classical civilization of Bhismaknagar in Arunachal Pradesh. Extended over an area of 1860 square meters this fort displays three halls, six ingresses and two extension rooms. The architecture of the fort displays the primeval culture. The fort was first quarried from the year 1969 to 1973 and then again in 1997 which brought the significant relics into limelight. The Archeological Survey of India has very well retained and preserved the monument and it has been affirmed as a secured monument. This fort can still be signified as an astonishing work of art.

### **3.2.10: CHANGLANG**

#### **3.2.10.1: Golden Pagoda**

It is located at Tengapani (also known as Chongkham) in the Namsai District of Arunachal Pradesh in North East India. It is also known as 'Khongmu-kham' in local Tai-Khamti tribal people of the area. The Golden Pagoda is a temple complex is about 20 hectares of land and the temple is built in a Burmese architectural design. The Pagoda, with four entrances was consecrated in February 2010 and has a large meditating Buddha statue inside it. This Buddha statue was donated by Ven Prakhupabhavana the chief monk of the Wat Aranjikavas of Thailand. Each of the four entrances of the shrine is guarded by a pair of mythical lions. The four corner of the outer base of the main shrine has a bell called Vasundhara, the goddess of wealth, a monk and four deities. A pond to the left of the entrance gate and a Ashoka pillar on the eastern side of the main shrine are some of the main features of the Golden Pagoda complex.

The Golden Pagoda complex facilitates meditation hall, multipurpose hall, guest houses for travelers and devotees, library, monastery to accommodate around 100 Bhikkhus and living quarters for the monks. It located on National Highway 52, at

Tengapani that is on the way to Parashuram Kund and only 110 kms away from the Nearest airport Dibrugarh in Assam,

### **3.3: MAJOR FESTIVALS AND DANCES OF ARUNACHAL PRADESH**

The culture of this State, its people, its festivals, its dances its architecture, its music, its food, its present as well as its past - these are the truly unique features of Arunachal Pradesh which the tourist does not find elsewhere. It is similarities with their own culture which enable the tourist to feel a comfortable empathy with Arunachalees; it is the differences from their own cultures which confront and excite tourists, contributing novelty and meaning to their visit. It is the combination of these which give the tourist a lasting impression of our state and which challenge the notion of Arunachal Pradesh only as a destination of outstanding natural resources.

At present, our State is experiencing an increase in tourist arrivals with many positive impacts, such as generating income for the locals which in turn has enabled to improve the quality of the festivals. Showcasing of rich cultural heritage in festivals and dances attracts tourist to visit this destination, as represented in Table 3.2.

<b>Table 3.2: District-wise Distribution of Festivals and Dances: Arunachal Pradesh</b>			
<b>District</b>	<b>Festivals</b>	<b>Month</b>	<b>Dances</b>
Tawang	Losar (Monpas&Shedukpens)	February	AjiLhanu Dance
West Kameng	Losar (Monpas&Shedukpens)	February	Yak Dance Lion-Peacock Dance
	Khan (Mijis)	Feb./March	
East Kameng	Nyokum (Nyishings)	February	Rekham Pada
PakkeKessang	ShapawngYawngManau Poi (Singpho)	February	
	Gomkum gomp (Solungs)	April	
Papum Pare	Nyokum (Nyishings)	February	Rekham Pada
	Gomkum gomp (Solungs)	April	
Lower Subansiri	Dree (Apatani)	July	HiiriKhaning Dance Daminda&Pakhu-Ittu
	Gomkum gomp (Solungs)	April	
	Nyokum (Nyishings)	February	Rekham Pada
KurungKumey KraDadi	Nyokum (Nyishings)	February	Rekham Pada
	Gomkum gomp (Solungs)	April	
Upper Subansiri	Si-Donyi (Tagins)	January	
West Siang Leparada Lower Siang	Mopin (Galos)	April	Popir Dance Ponu Dance
East Siang	Aran (Adis)	March	Dii:shang Dance
	SolungAdis)	September	Ponung Dance
Dibang Valley			Igu Dance
Lower Dibang Valley	Reh (IduMishmis)	February	
Lohit&Anjaw	Tamladu (Taroon&KammanMishmis)	February	Buiya&Naiya Dance Ta-Tangging, Tamae &Kambing Dance
	Sangken (Khampti)		
Changlang	Moh-Moh (Tangsa)	April	
Tirap	Oriah (Wanchos)	February	
	Cholo-Lokku (Noctes)	November	Chalo Dance

Compiled by the Author

### 3.4 TOURIST CIRCUITS IN ARUNACHAL PRADESH

A 'tourist circuit' is a route with at least three major tourist attractions such that their locations are not in the same town/village/city. Instead, they are located close to each

other and entry and exit of such route are well defined in such a way that tourists are encouraged to visit all of them if one of them is visited (MOT: 2012a).<sup>13</sup> Circuit tourism needs careful planning in smallest detail. It will also require development of proper support system at various locations along the circuit route; and provides an opportunity to involve local people in the tourism development process (DoT, 2003).<sup>14</sup>

Department of Tourism, Government of Arunachal Pradesh till date has identified 12 tourist circuits which are distinctive in character with different ethnic culture, topography and vegetation as per above mentioned tourist attractions in the Arunachal Pradesh.

The tourist circuits are as follows:

1. Tezpur – Bhalukpong – Bomdila – Tawang
2. Itanagar – Ziro – Daporijo – Aalo – Pasighat
3. Pasighat – Jengging – Yingkiong – Tuting
4. Tinsukia – Tezu – Hayuliang
5. Margherita – Miao – Namdhapha – Vijoynagar
6. Roing – Mayudia – Anini
7. Tezpur – Seijosa – Bhalukpong
8. Ziro – Palin – Nyapin – Sangram – Koloriang
9. Doimukh – Sagalee – Pake Kessang – Seppa
10. Aalo – Mechuka
11. Daporijo – Taliha – Siyum – Nacho
12. Jairampur - Manmao - Nampong – Pangsau Pass

#### **3.4.1. Two North East Circuits under Swadesh Darshan Scheme**

Two important projects under Swadesh Darshan Scheme of Ministry of Tourism, Government of India were inaugurated on 15 November, 2018 at PTSO Lake in Tawang, Arunachal Pradesh.

These projects are “Development of North East Circuits:

1. Bhalukpong- Bomdila - Tawang Project, and
2. Nafra- Seppa- Pappu, Pasa, Pakke Valleys- Sangdupota- New Sagalee- Ziro- Yomcha Project”.

The project Development of Bhalukpong- Bomdila - Tawang was sanctioned by the Ministry of Tourism in March 2015 for Rs. 49.77 Crores. Under this project the Ministry has developed facilities like Accommodation, Cafeteria, wayside Amenities, last Mile Connectivity, Pathways, Toilets, Multipurpose Hall at Jang, Sorang Monastery, Lumpo, Zemithang, Bumla Pass, Gritsang TSO lake, PTSO Lake, Thingbu and Grenkha Hot Spring, Lumla, Sela Lake.

The project Development of Nafra- Seppa- Pappu, Pasa, Pakke Valleys- Sangdupota- New Sagalee- Ziro- Yomcha was sanctioned by the Ministry of Tourism in December 2015 for Rs. 97.14 Crores. The facilities developed under this project includes Helipad, Wayside amenities, trekking trails, Rafting Centre, Log Huts, craft bazaar, Eco Park, Tourist facilitation centres, parking, multipurpose Hall, festival ground etc.

### **3.5. TOURIST ARRIVALS IN NORTH-EAST REGION IN COMPARISON TO INDIA**

North East Region of India comprises eight States namely Arunachal Pradesh, Assam, Manipur, Meghalaya, Mizoram, Nagaland, Tripura and Sikkim. The location of the region is strategically important as it has international borders with Bangladesh, Bhutan, China and Myanmar. The North Eastern Region is endowed with diverse tourist attractions and each State has its own distinct features. The Ministry of Tourism provides special emphasis on the development and promotion of tourism for North Eastern States.

Table 3.3 gives the number of domestic and foreign tourist visits to different States of North East Region and in India, during the year 2017 and 2018. Number of domestic tourist visits in India during 2018 was 1854 million as compared to 1657 million in 2017, with a growth rate of 11.9 per cent whereas the visits by foreign tourists registered a growth of 7.4% over 2017. It may be seen from this table that most of the States of North East Region have generally shown increase in the number of domestic tourist visits during 2018. Assam recorded decline in domestic tourist visits and Mizoram recorded decline in foreign tourist in 2018 over 2017.

<b>Table: 3.3: Tourist Arrivals in N-E Region of India (In Year 2017 &amp; 2018)</b>						
<b>State</b>	<b>2017</b>		<b>2018</b>		<b>Growth Rate (in %)</b>	
	<b>Domestic</b>	<b>Foreign</b>	<b>Domestic</b>	<b>Foreign</b>	<b>Domestic</b>	<b>Foreign</b>
Arunachal Pradesh	444005	7147	512436	7653	15.41	7.08
Assam	6052667	21760	5856282	36846	-3.24	69.33
Manipur	153454	3497	176109	6391	14.76	82.76
Meghalaya	990856	12051	1198340	18114	20.94	50.31
Mizoram	67772	1155	76551	967	12.95	-16.28
Nagaland	63362	4166	101588	5010	60.33	20.26
Sikkim	1375854	49111	1426127	71172	3.65	44.92
Tripura	398669	69899	414388	102861	3.94	47.16
North-East Region	9546639	168786	9761821	249014	2.25	47.53
India	16575461 52	26886684	1854933384	28872384	11.91	7.39

Source: India Tourism Statistics (2019); Compiled by the author

From the Table 3.4 it is evident that the State's share in total tourist arrivals in the region has been improved from 4.65 per cent in 2017 to 5.25 per cent in 2018. Currently, the state is ranked 4<sup>th</sup> among the eight state of the region in terms of its share in tourist arrivals in the North East region, it indicates that Arunachal Pradesh is emerging one of the most attractive tourist destinations.

<b>Table: 3.4: Shares of Tourist Arrivals in N-E Region of India (In Year 2017 &amp; 2018)</b>						
<b>State</b>	<b>2017</b>		<b>2018</b>		<b>Rank 2018</b>	
	<b>Domestic</b>	<b>Foreign</b>	<b>Domestic</b>	<b>Foreign</b>	<b>Domestic</b>	<b>Foreign</b>
<b>Arunachal Pradesh</b>	<b>4.65</b> (0.03)	<b>4.23</b> (0.03)	<b>5.25</b> (0.03)	<b>3.07</b> (0.03)	<b>4</b> (30)	<b>5</b> (30)
<b>Assam</b>	<b>63.40</b> (0.37)	<b>12.89</b> (0.08)	<b>59.99</b> (0.32)	<b>14.80</b> (0.13)	<b>1</b> (22)	<b>3</b> (26)
<b>Manipur</b>	<b>1.61</b> (0.01)	<b>2.07</b> (0.01)	<b>1.80</b> (0.01)	<b>2.57</b> (0.02)	<b>6</b> (33)	<b>6</b> (31)
<b>Meghalaya</b>	<b>10.38</b> (0.06)	<b>7.14</b> (0.04)	<b>12.28</b> (0.06)	<b>7.27</b> (0.06)	<b>3</b> (27)	<b>4</b> (27)
<b>Mizoram</b>	<b>0.71</b> (0.00)	<b>0.68</b> (0.00)	<b>0.78</b> (0.00)	<b>0.39</b> (0.00)	<b>8</b> (35)	<b>8</b> (36)
<b>Nagaland</b>	<b>0.66</b> (0.00)	<b>2.47</b> (0.02)	<b>1.04</b> (0.01)	<b>2.01</b> (0.02)	<b>7</b> (34)	<b>7</b> (33)
<b>Sikkim</b>	<b>14.41</b> (0.08)	<b>29.10</b> (0.18)	<b>14.61</b> (0.08)	<b>28.58</b> (0.25)	<b>2</b> (26)	<b>2</b> (24)
<b>Tripura</b>	<b>4.18</b> (0.02)	<b>41.41</b> (0.26)	<b>4.24</b> (0.02)	<b>41.31</b> (0.36)	<b>5</b> (32)	<b>1</b> (22)
<b>North-East Region</b>	100.00 (0.58)	100.00 (0.63)	100.00 (0.53)	100.00 (0.86)		
<b>India</b>	(100)	(100)	(100)	(100)		

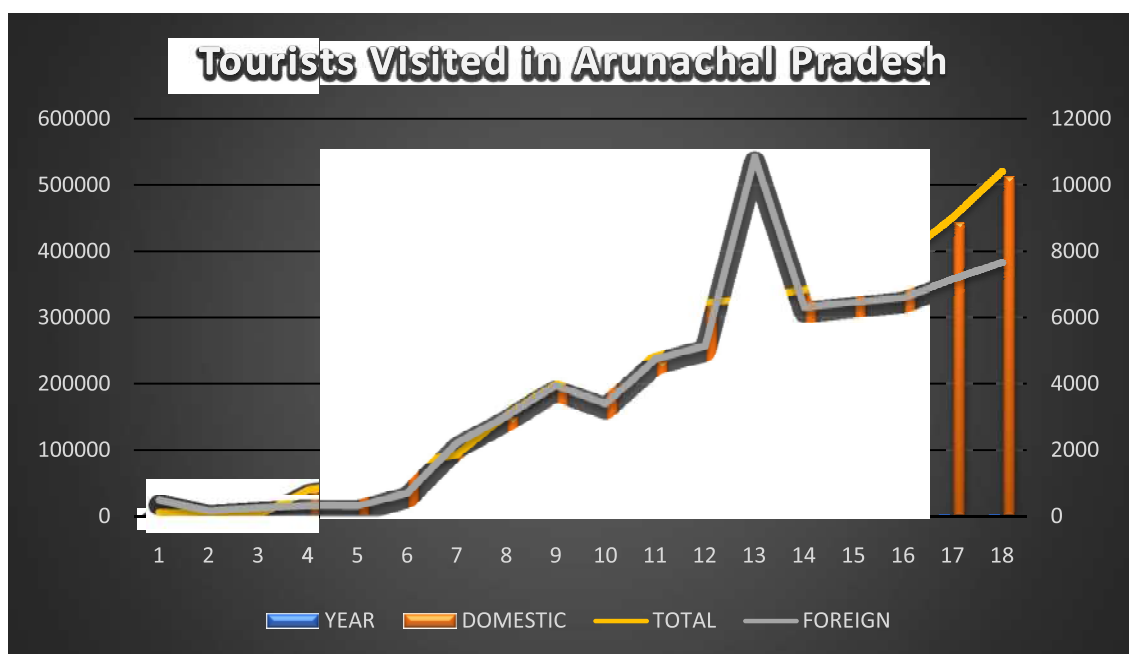
Source: India Tourism Statistics (2018); Compiled by the author

### 3.6. TOURIST ARRIVALS IN ARUNACHAL PRADESH

The State has no doubt an enormous potential to attract from various parts of the country as well as from the different countries. In the recent years it has been observed that the total tourists arrivals both domestic and foreign tourists in the State has been increasing at a faster rate. Table 3.5 represents the tourist arrivals in the state in the years from 2001-2002 to 2018-2019.

<b>Table: 3.5: Tourist Arrivals in Arunachal Pradesh (2001-2002 to 2018-2019)</b>			
<b>Year</b>	<b>Domestic</b>	<b>Foreign</b>	<b>Total</b>
2001-2002	4644 (98.35)	78 (1.65)	4722
2002-2003	6878 (98.05)	137 (1.95)	7015
2003-2004	3632 (89.24)	438 (10.76)	4070
2004-2005	39767 (99.20)	321 (0.80)	40088
2005-2006	50560 (99.38)	313 (0.62)	50873
2006-2007	80137 (99.13)	706 (0.87)	80843
2007-2008	91100 (97.63)	2212 (2.37)	93312
2008-2009	149292 (98.02)	3020 (1.98)	152312
2009-2010	195147 (98.02)	3945 (1.98)	199092
2010-2011	227857 (98.53)	3395 (1.47)	231252
2011-2012	233227 (98.04)	4753 (1.96)	242733
2012-2013	317243 (98.41)	5135 (1.59)	322378
2013-2014	318461(96.71)	10846 (3.29)	329307
2014-2015	336028 (98.16)	6307(1.84)	342335
2015-2016	352176 (98.41)	6453 (1.59)	358629
2016-2017	385875 (98.32)	6598 (1.68)	392473
2017-2018	443211 (98.41)	7147 (1.59)	450358
2018-2019	512436 (98.53)	7653 (1.47)	520089

*Source: Directorate of Tourism, Government of Arunachal Pradesh*



**Fig. 3.1**

As the table 3.5 and fig. 3.1 represents that Arunachal Pradesh is witnessing a rapidly increase in number of tourist arrivals in recent years. The total tourist arrival was only 4722 i.e. very less in the year 2001 then it increased to 7015 in year 2002 and again rises to 4070 in the year 2003. The total tourist arrivals has increased from 40088 in 2004 to approximately 5times in year 2010 i.e. 231252 and again marked an increase of more than 10 times in 2017 about 450358 and in year 2018 it is about 520089 i.e. 13 times in comparison to the year 2004. In 2004 foreign tourist constituted only about 0.80 per cent of the total tourists visiting the State. However, the share of foreign tourists increased to 2.37 percent in 2007. In the year 2009 number of tourist arrivals in the State was 1,99,092 and foreign tourist constituted 1.98 per cent of the total tourists visiting the State. In 2010 number of total visitors rose significantly to 231,252 but foreign tourist decreased -13.94 percent over 2009. During 2010-11 there was a slight decrease of both domestic and foreign tourists in the state. The reason for decrease of tourist inflow was the socio-political disturbances and repeated strike/band call by different political and other Non-Governmental organizations in the state. In 2012 total tourist arrivals in the State was 322,378 which was 35.46 per cent increase over 2011. In the year total tourist arrivals was 329,307 but arrival of the foreign tourist beat all the records of about 3.29 per cent of the total tourists in the year 2013. In the year 2014 total tourist arrivals was 342335 i.e. it rose to 3.96 per cent over 2013 but there was a decrease of -41.85 per cent tourist arrivals over 2013. In the year 2015 total tourist arrival significantly rose to 4.76 per cent over 2014 i.e. about 358,629 and this year also witnessed 2.32 per cent increase in foreign tourist arrivals. Both domestic and foreign tourist inflow is steadily rising in the state since 2004. In the year 2016 number of tourist arrivals in the State was 392,473 which rose to 450,358 in 2017. In 2018 total tourist arrival in the State was 5,200,869 which is 10.55 per cent increase over 2017. The growth of tourist arrivals in the State is because of the determined effort made by the Government of Arunachal Pradesh to encourage the tourists' attractions to selected tourist destinations of the State by organizing a number of events related to fair and festivals. Tourist arrivals both domestic and International is now increasing in the state but still the visitors from outside is very low in comparison to other state of the country. Though, the share of foreign tourists is increasing, the domestic tourists constitute the major proportion of total tourists visiting the State.

### 3.7 PROFILE OF TOURIST RESPONDENTS

In this study there are six independent variables, gender, age-group, marital status, education level and income level as represented in table 3.6

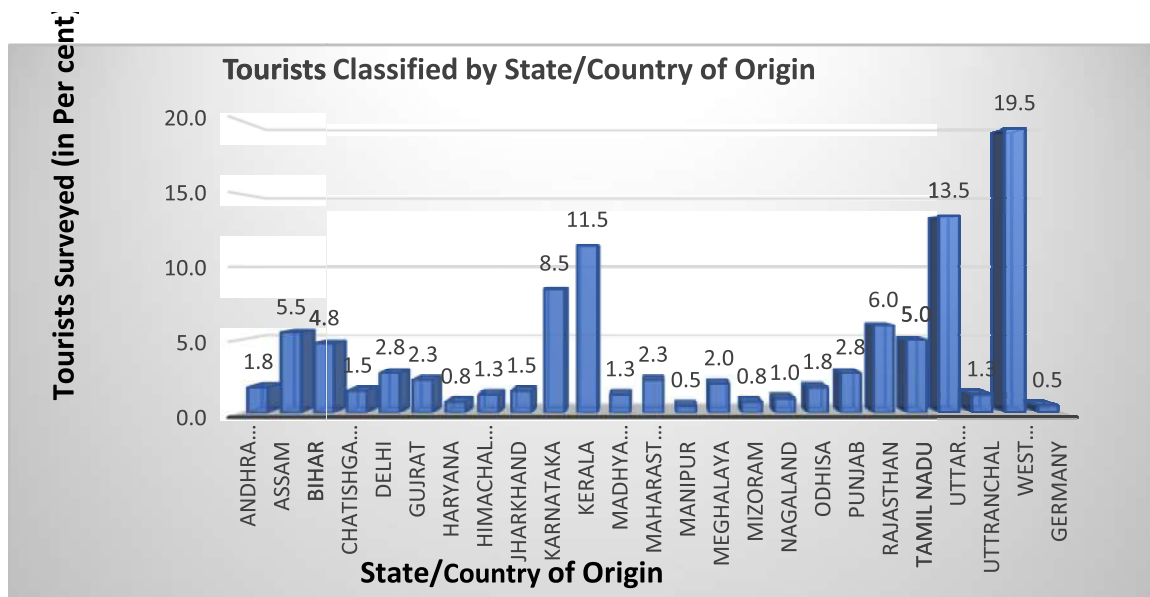
<b>Table: 3.6: Profile of Tourist Respondents</b>			
		<b>Frequency (N=400)</b>	<b>Percent</b>
<b>Gender</b>	Female	130	32.5
	Male	270	67.5
<b>Age-Group</b>	<=20 years	15	3.8
	21-40 years	172	43.0
	41-60 years	195	48.8
	>60 years	18	4.5
<b>Marital Status</b>	Divorcee	3	0.8
	Married	300	75.0
	Unmarried	96	24.0
	Widow	1	0.3
<b>Country Origin</b>	Domestic	398	99.5
	Foreign	2	0.5
<b>Education Level</b>	PG and Above	116	29.0
	Graduate	202	50.5
	Intermediate	35	8.8
	High School	35	8.8
	Middle School	7	1.8
	Primary	5	1.1
<b>Income Level</b>	Rs. 1000000 & Above	120	30.0
	Rs. 500000-1000000	24	6.0
	Rs. 100000-500000	85	21.3
	Rs. 50000 to 100000	167	41.8
	Below Rs.50000	4	1.0
<b>Source: Survey Data, 2017-2019</b>			

The study made an attempt to understand the gender category of tourists in the study area. It was found that majority of the surveyed tourists were of age in between 41 to 60 years comprising of 48.8 per cent followed by 43 per cent age -group in between 21 to 40 years.

The study made an attempt to understand the age of the tourists in the study area. For this purpose they were grouped under four different categories. It was found that majority of the surveyed tourists i.e., 67.5 per cent where male and 32.5 percent were female.

The study made an attempt to understand the marital status of surveyed tourists in the study area. It was found that most of the surveyed tourists were married (75 per cent) followed by unmarried (24 per cent) tourists.

Out of total 400 surveyed tourists only 0.5% belong to foreign country and 99.5 % respondents belongs to different States of India highest tourist arrivals from Uttar Pradesh with 19.5 percent, there may be many factors responsible for this reasons. A proper strategy and policies should be recommended for this.



**Fig. 3.2**

The study made an attempt to understand the educational background of surveyed tourists in the study area. It was found that 50.5 per cent were graduate followed by 29 per cent tourist having Post Graduate and above qualification.

The study made an attempt to understand the surveyed tourists under different income categories in the study area. It was found that 41.8 per cent tourist income was between Rs. 50 thousand to 1 lakh followed by 30 per cent surveyed tourists with an income of above Rs.10 lakh annually.

### **3.8. TOURIST RESPONSES AFTER VISITING TOURIST ATTRACTIONS IN ARUNACHAL PRADESH**

The study made an attempt to understand the most encouraging factors that motivated to surveyed tourists to visit in this study area. It was found that 48 per cent of

the surveyed tourists were attracted towards the natural sites and beauty of the state followed by 33 percent having interested because of its culture and 17.3 percent were motivated by its adventure factors as represented in table 3.7.

<b>Table: 3.7: Tourist Responses on Tourism in Arunachal Pradesh</b>			
		<b>Frequency (N=400)</b>	<b>Percent</b>
<b>The most supporting factors encouraging you to visit the state Arunachal Pradesh</b>	Adventure	69	17.3
	Culture	132	33.0
	Hospitality	7	1.8
	Natural Sites	192	48.0
<b>As a traveller are you satisfied with the existing transport facilities of the states?</b>	Yes	313	78.3
	No	87	21.8
<b>As a traveller are you satisfied with the existing accommodation facilities of the states?</b>	Yes	313	78.3
	No	87	21.8
<b>As a traveller are you satisfied with communication facilities provided by various service agents in the state?</b>	Yes	397	99.3
	No	3	0.8
<b>Satisfaction with the Hospitality Services</b>	Yes	394	98.5
	No	6	1.5
<b>Additional Tourist Sites for tourism Development</b>	Yes	100.0	100.0
	No	0	0
<b>Natural environment is degraded with the development of tourism industry</b>	Yes	399	99.8
	No	1	0.3
<b>Sustainable approach for Tourism Development</b>	Yes	397	99.3
	No	3	0.8
<b>Non-Governmental Organization and individual stakeholders should be encouraged to boost the tourism industry in the area</b>	Yes	100	100.0
	No	0	0.0
<b>The most encouraging tourism to be developed in the area</b>	Adventure Tourism	78	19.5
	Cultural Tourism	93	23.3
	Natural Tourism	71	17.8
	Pilgrimage Tourism	4	1.0
	Rural Tourism	154	38.5

<b>Whether it is expensive in the area?</b>	Yes	100	100.0
	No	0	0.0
<b>Have you find any difficulty in obtaining ILP/PAP/RAP?</b>	Yes	203	50.8
	No	197	49.4
<b>Purpose of visit</b>	Conference	45	11.3
	Pilgrimage	90	22.5
	Pleasure	216	54.0
	Relatives	9	2.3
	Sports	40	10.0
<b>Mode of travel</b>	Bus	29	7.3
	Hired Taxi	217	54.3
	Shared Taxi	154	38.5
<b>With whom would you like to prefer to travel</b>	Alone	77	19.3
	With Family	124	31.0
	With Friends	166	41.5
	With organized groups	32	8.0
	Other	1	0.3
<b>Type of accommodation you preferred</b>	Hotel	144	36.0
	Government	134	33.5
	Home Stay	121	30.3
	Other	1	0.3
<b>Where do you like to stay in the study area?</b>	Friends Home	16	4.0
	Government GH	135	33.8
	Hotel	198	49.5
	Relatives Home	51	12.8
<b>How much expenditure would you like to spend for accommodation per night?</b>	1500 & Below	188	48.0
	1501-3000	104	26.75
	3001-4500	66	16.5
	4501-6000	32	8.0
	Above 6000	10	2.5
<b>Do you want to take the help of guide to visit the tourist spots?</b>	Yes	181	45.3
	No	219	54.8
<b>Who influence you to visit the area?</b>	Friend	184	46.0
	Relatives	108	27.0
	Social Media	108	27.0
<b>How many times you have visited this place?</b>	Four Times	2	0.5
	Three Times	223	55.8
	Two Times	29	7.3
	One Times	146	36.5
<b>Do you find language difficulties in communicating with the local resident?</b>	Yes	369	92.3
	No	31	7.8
<b>Source: Survey Data, 2017-2019</b>			

The study made an attempt to understand whether surveyed tourists were satisfied with the existing transport facilities in the study area. It was found that 78.3 per cent of the surveyed tourists were satisfied followed by only 21.8 unsatisfied tourist.

The study made an attempt to understand whether surveyed tourists were satisfied with the existing accommodation facilities in the study area. It was found that 78.3 per cent of the surveyed tourists were satisfied followed by only 21.8 unsatisfied tourist.

The study made an attempt to understand whether surveyed tourists were satisfied with the existing communication facilities in the study area. It was found that 99.3 per cent of the surveyed tourists were satisfied followed by only 0.8 per cent unsatisfied tourist.

The study made an attempt to understand whether surveyed tourists were satisfied with the hospitality services of the host people in the study area. It was found that 98.5 per cent of the surveyed tourists were satisfied followed by only 1.5 per cent unsatisfied tourist.

The study also made an attempt to know from the surveyed tourist their view to adding more tourist sites can develop tourism in the study area. It was found that 100 per cent tourist were of view that to develop tourism there is an ardent need of increasing more tourist sites in Arunachal Pradesh.

The study also made an attempt to know the opinion of the surveyed tourist whether development of Tourism is responsible for degrading the natural environment. It was found that 99.8 per cent of the surveyed tourists were of the favor that yes, tourism is degrading the natural environment.

The study also made an attempt to know the opinion of the surveyed tourist whether Tourism Industry can be developed in sustainable ways in the study area. It was found that 99.3 per cent of the surveyed tourists opined that tourism industry can only be developed by following sustainable approach.

The study also made an attempt to know the opinion of the surveyed tourist whether NGOs and individual stakeholders should be encouraged to boost the Tourism Industry in the study area. It was found that 100 per cent of the surveyed tourists opined that tourism industry can only be developed by encouraging and involvement of different NGOs and individual stakeholders in this industry.

The study also made an attempt to know the opinion of the surveyed tourist that what type of tourism can be encouraged and developed in this study area. It was found that 38.5 per cent of the surveyed tourists opined that rural tourism should be encouraged and developed followed by 23.5 per cent, 19.5 per cent 17.8 per cent and 1.0 percent for cultural tourism, adventure tourism, natural tourism and pilgrimage tourism respectively. The study made an attempt to understand how expensive is for surveyed tourists in the study area. It was found that 100 per cent of the surveyed tourists opined that this area is quite expensive for visitors.

The study made an attempt to understand the difficulties in obtaining ILP/PAP/RAP from the surveyed tourists in the study area. It was found that half of the surveyed tourist i.e., 50.8 per cent obtained ILP/AP/RAP easily while 49.4 per cent respondents faced the difficulties for obtaining it.

The study also made an attempt to understand the purpose of surveyed tourists in the study area. It was found that majority of the surveyed tourists i.e., 54 per cent visit this area for pleasure followed by 54 per cent, 22.5 per cent, 11.3 per cent, 10 per cent and 2.3 per cent for pilgrimage, conference, sports and to meet their relatives respectively.

The study also made an attempt to know the mode of travel availed by the surveyed tourists in the study area. It was found that majority of the surveyed tourists i.e., 54.3 per cent travelled by hired taxi followed by 38.5 per cent tourist travelled by shared taxi and only 7.3 per cent tourist availed bus for travelling in the study area.

The study also made an attempt to know the opinion of the surveyed tourists for their preference for travelling in the study area. It was found that 41.5 per cent of the surveyed tourists were of interested to travel with their friends followed by 31 per cent, 19.3 per cent, 8 per cent and 0.3 percent with family, alone, with organized groups and other respectively.

The study also made an attempt to know the opinion of the surveyed tourists for their preference for type of accommodation. It was found that 36 per cent of the surveyed tourists preferred hotel followed by 33.5 per cent, 30.3 per cent and 0.3 per cent for Government accommodation, homestay and other preferences respectively.

The study also made an attempt to understand the staying preferences of the surveyed tourists in the study area. It was found that 49.5 per cent of the surveyed tourists preferred to stay in the hotel followed by 33.8 per cent, 12.8 per cent and 4 per cent in Government Guest house, relatives home and friends home respectively.

The study also made an attempt to understand the level of the expenditure on accommodation per night halt charges by the surveyed tourists giving them open choice based options for the study area. Many different opinions based on their choice they were interested for spending more and more for their need of comfortability. The majority of respondents viewed of spending below 1500 with 47 per cent followed by 1501- 3000 (26.75 per cent), 3001-4500 (16.5 per cent), 4501-6000 (8 per cent) and above 6000 (2.5 per cent) of the sample.

The study also made an attempt to understand the need of guide for visiting in the study area by surveyed tourists. It was found that 45.3 per cent tourist showed their willingness to take the help of Guide for visiting the tourist spots and 54.8 per cent of the surveyed tourists refused to take the help of guide.

The study also made an attempt to understand the influential factor that worked for visiting the study area by the surveyed tourists in. It was found that 46.6 per cent of the surveyed tourists were influenced by the friends in circle followed by 27 per cent each through relatives and social media.

The study also made an attempt to understand the frequency of the trips performed by the surveyed tourists in the study area. It was found that 55.8 per cent of the surveyed tourists visited this place thrice times followed by 36.5 per cent, 7.3 per cent and 0.5 per cent at one, two and four times respectively.

The study also made an attempt to understand the language difficulties found in the surveyed tourists in the study area. It was found that majority of the surveyed tourists i.e., 92.3 per cent easily communicated with the local people while only 7.8 per cent respondents faced the language difficulty while communicating with local residents.

## REFERENCES

1. MacCannell, Dean (1976). "*The Tourist: A New Theory of the Leisure Class*", New York; Schocken Book, p. 41.
2. Lew, Alan, A. (1987). "A Framework of Tourist Attraction Research", *Annals of Tourism Research*, Vol. 14, Issue 4, 1987, pp. 553-575.
3. Pearce, P. L. (1991). "Analyzing tourist attractions". In *Journal of Tourism Studies*, vol. 2, 1991, no. 1. ISSN 1035-4662, pp. 46–55.
4. Middleton, V. T. C. (1994). "*Marketing in travel and tourism*. Oxford: Butterworth-Heinemann. 487 p. ISBN 0750644710.
5. Benckendroff, Pierre, J. (2001). "*Planning for the Future: A Study of Australian Tourist Attractions*", Sum. Report for Aust. Tourist Attractions", James Cook University.
6. Lubbe, B. (2003). "*Tourism Management in Southern Africa*". Cape Town: Maskew Miller Longman (Pvt.) Ltd
7. Gartner, W. (1996). "*Tourism Development Principles, Processes, and Policies*. Canada: John Wiley & Sons.
8. Gunn, C. A. (1994). "*Tourism Planning*" (3 ed.). Washington: Taylor & Francis.
9. Inskip, E. (1991). "*Tourism Planning: An Integrated and Sustainable Development Approach*". New York: Van Nostrand Reinhold.
10. Middleton, V. T. C. (2001). "*Marketing in Travel and Tourism*" (3 ed.). London: Butterworth-Heinemann.
11. Ritchie, J. R. B., Crouch, G. I., & Hudson, S. (2001). "Developing Operational Measures for the Components of a Destination Competitiveness / Sustainability Model : Consumer versus Managerial Perspectives". In J. A. Mazanec & G. I. Crouch & J. R. B. Ritchie & A. G. Woodside (Eds.), *Consumer Psychology of Tourism, Hospitality and Leisure* (Vol. 2). New York : CABI.
12. Godfrey, K., & Clark, J. (2000). "*The tourism Development Handbook: A Practical Approach to Planning and Marketing*". London: Wellington House.
13. Ministry of Tourism. (2012a). "*Identification of Tourism Circuits across India*", Interim Report, Uttar Pradesh, Govt. of India, 1-53
14. Department of Tourism. (2003). "*Project Preparation of 20 Years Perspective Plan for the State of Arunachal Pradesh*", Govt. of India, Market Research Division.

## **CHAPTER -4**

### **SOCIO-CULTURAL IMPACT OF TOURISM IN ARUNACHAL PRADESH**

---

#### **4.0 INTRODUCTION**

Social impacts are people impacts. Tourism is usually 'people to people' industry, and therefore it is an agent of social and cultural change. The social-cultural impacts of tourism are the ways in which tourism is contributing to change in value system, individual behaviour, family relationship, life style, safety level, moral conduct, religion, language and interpersonal relationship at the tourist destination.

This chapter aims to identify the socio-cultural impacts of the tourism by examining the visitors impact on local residents (hosts) lifestyles and their values both material and non-material forms of culture.

#### **4.1 SOCIAL- CULTURAL IMPACT**

Socio-cultural impacts are the 'human impacts' of the tourism industry, with an emphasis on changes in the quality of residents' daily life at the tourist destinations and cultural impacts related to transformations in traditional values, norms, and identities arising from tourism.<sup>1</sup>

These socio-cultural impact has direct and indirect association effect on the local people of host communities with tourists. The reason may be "When the tourist comes in contact with the place he/she visits and its population, social exchanges take place. His social background affects the social structure and mode of life of his/her destination, and he/she is in turn affected by it. And sometimes carries back home with him new habits and ways of life. Every type of civilization, from advanced to the most primitive is a source of attraction and curiosity for mankind, thus making tourism a cultural phenomenon.

In the pursuit of economic prosperity hosts always attempt to satisfy the needs of their guests. They increasingly try to adopt the customs, traditions and socio-cultural expressions of their guests. Thus, tourism proves more influential in bringing changes to the host societies' social and cultural values. The nature of the impact depends upon the

interaction, understanding, relationship, the duration and intensity of the contact between the hosts and the guests.<sup>2</sup>

According to Hashimoto<sup>3</sup> (2002), such impacts are complicated to quantify and calculate and emerge slowly over time in an inconspicuous fashion. Cooper et al. (2013) argued that changes in the norms and values in the short term are apparent but that there are also longer term and gradual changes in a society's values, beliefs, and cultural practices.<sup>4</sup> Tourism can help propel poverty reduction in the least developed countries since even unskilled laborers in remote areas can find jobs in this diverse and labour-intensive industry.<sup>5</sup>

Additionally, in developing countries tourism development creates benefits for the social culture of host communities. The sociocultural value of tourism may include a great sense of community identity, a heightened sense of linking with local environments, and increased social capital following an increase in tourists.<sup>6</sup>

Tourism has an influence on the features of the local social culture, affecting the social habits, customs, values, beliefs, and lifestyles of the residents at a tourist destination.<sup>7,8</sup> Zaei and Zaei (2013) divided the sociocultural impacts of tourism into seven aspects, including the improvement of local facilities and infrastructure, the availability of more events, the conservation of the local cultural heritage, a decrease in the movement of people from rural areas to urban areas, and an increase in youth exchange programmers.<sup>9</sup> Zamani-Farahani and Musa (2012) also noted that tourism has not only ameliorated regional image and infrastructure construction in areas but has also been conducive to the improvement of recreational activities and quality of life among natives.<sup>10</sup>

On the other hand, the negative impacts of tourism can also be found in previous work. Mbaiwa (2004), who examined the sociocultural impacts of tourism development in the Okavango Delta, Botswana, found that in addition to positive impacts, tourism development had negative sociocultural effects on local communities, posing a threat to the quality of life of locals. These impacts include racial discrimination, enclave tourism, the resettlement of traditional communities, the breakdown of the conventional family structure and relations, and an upsurge in crime and prostitution.<sup>11</sup>

## **4.2. THE SOCIETY AND CULTURE OF ARUNACHAL PRADESH**

Arunachal Pradesh is a homeland of multi-ethnic, multi-lingual and multi-cultural entity with its exotic natural surroundings. It is also a homeland of 26 major tribes and 110 sub tribes of Mongoloid stock with a glorious but vibrating heritage of arts and crafts, enchanting folksongs, folkdances, folklores and colourful festivals (discussed in Chapter 3, Table 3.2) depicting their lifestyle, cultural and custom full of traditional wisdom. These are the basic ingredients of socio-cultural life of people of Arunachal Pradesh.<sup>12</sup>

The identity of the ‘Arunachalees’ hinges around difference and is embedded in mythical lore. There is no historical or material support for their origin myth; however, these have been accepted by people as an inalienable part of their history. Each tribe with its distinct languages, social customs and dress codes has continued to live as an identifiable ethnic entity within its social boundary. Racially, the tribes of the State are of Mongoloid, Paleo- Mongoloid and Proto-Mongoloid origins with distinct physical features and genetic traits (Singh, 1995).<sup>13</sup> Linguistically they belong to the Tibeto Burman group, speaking around 22 languages and 60 dialects.

The cultural diversities of tribes within the same geographical area can also be seen (as discussed in Chapter 2, Table 2.6). The district of West Kameng can be a best example. Five different tribes- Monpas, Sherdukpen, Akas, Mijis and Buguns- live in close proximity with each other. But their traditions and cultural practices with regard to religious practices, dress, customs, rituals. Language, dialects, customs, fairs and festivals are often starkly different. Even the different group of the Monpas in two districts, West Kameng and Tawang, have distinctions among themselves. The language of the Lish Monpas, Chug Monpas and But Monpas differ a lot from the rest of the Monpas and closely resembles the language of the Akas, Mijis and Sherdukpen tribes (Barthakur, 1972).<sup>14</sup>

### **4.2.1. Custom**

Customary laws are custom based law existed in the society since time immemorial. Customary laws prevalent in Arunachal Pradesh are not written and codified but memorized out of knowledge and experience. The logic of the laws from the point of view of prevalent customs and traditions of the society and therefore, an act of omission

and commission is held as a crime taking into consideration the overall welfare and convenience of the society and the degree of harm caused to the victim. The procedure followed during trial is much simpler and no record of the proceeding and order of the village council or Kebang is recorded in accordance with the provision of the said regulation. Almost all the tribes of Arunachal Pradesh have their own customary laws to abide by and to settle their own personal problem however with little variation and different names. For example the democratic institution of the Adis is called 'Keba' or 'Kebang', whereas the Apatanis called them 'Buliang'. These institutions are there to settle disputes and deliver judgment.

#### **4.2.2 Donyi-Poloism**

Talom Rukbo, one of the leading advocates of Donyipoloism interpreted Donyipoloism at two levels- material and spiritual. At material level Donyi-Polo, the combination of two terms- Donyi (the sun) and Polo(the moon), and these two physical objects, particularly Donyi - is the source of power and energy of living beings which cannot be disputed scientifically or philosophically. Donyi Polo exercises supremacy over the universe, transforms into spiritual aspects of the entity of physical Donyi and Polo is totally lost. It becomes a synthesis symbolizing a spiritual source of truth, justice, beauty, morality, love and goodness. This Donyi-Polo – the spiritual source and symbol is believed to be the supreme power i.e., – God, who governs the universe. In this concept, Donyi-Polo is omnipresent, omniscient and omnipotent (Rukbo,<sup>15</sup> 1985: 1-3).

The Tanigrouo of tribes of Arunachal Pradesh follow the indigenous Donyi-Polo belief or faith. The Tani group comprises of Adis, Apatanis, Nishis, Tagins and Mishings (Miris) and these tribes are now trying to re-affirm the indigenous tribal faith to form a distinct identity of their own and to provide respectability to their cultural tradition.

#### **4.2.3 Indigenous Faith and Beliefs**

“Indigenous faith” means such religions, beliefs and practices including rites, rituals, festivals. Observances, performances, abstinence, customs as have been found sanctioned, approved, performed by the indigenous communities of Arunachal Pradesh from the time these communities have been known and includes Buddhism as prevalent among the Monpas, Membas, Sherdukpens, Khambas, Khamptis and Singphos, Vaishnavism as practiced by Noctes, Akas and Nature worships, including worships of

Donyi-Polo, as prevalent among other indigenous communities of Arunachal Pradesh (Act 1978).<sup>16</sup>

The traditional religion of the tribal populations of Arunachal Pradesh is characterised as oral religious tradition which lack explanation or philosophical interpretation, and the knowledge of belief is transmitted orally from one generation to the next mainly through myths and in the process of growing up in the society. The religion of the tribal people of Arunachal Pradesh consists of belief in a high-god, supernatural being and also a number of benevolent and malevolent spirits and deities.

On the basis of socio-religious affinities, the tribes of Arunachal Pradesh can be broadly divided into three cultural groups. The first group comprises of the tribes who have taken up Buddhism. The Monpas and Sherdukpens of Tawang and West Kameng districts and the Membas and Khambas of West Siang districts are Buddhists of Mahayana sect and these communities have their Buddhist temples called (Gompa) situated in the village itself. The Khamtis and Singphos of Lohit are Buddhists of Hinayana Sect and they use ancient scripts which were derived from their original homeland, Thailand and Burma. The second group comprises of the Adis, Apatanis, Nishis, Mishmis tribes, are the worshippers of Donyi-Polo or the Sun and the Moon and Abotani, who is believed to be the original ancestor or father of mankind. They do not have any fixed place of worship, and they do not have any written text. Their religious thought and practices are transmitted by word of mouth from generation to generation. The third group of people are the Noctes and the Wanchos, Vaishnavism is practised by the Noctes of Tirap and some other tribes of East Kameng and Subansiri districts. Besides the above, Christianity has also been accepted by some of the tribes of Subansiri, Siang, Dibang Valley and Tirap districts.

#### **4.2.4 Major Festivals**

Arunachal's cultural lifestyle is dominated by colourful festivals. The people of Arunachal Pradesh celebrate various festivals in order to propitiate the spirits and deities and also to keep up the traditional beliefs and customs of the society. Since agriculture is the mainstay here so people generally celebrate festivals as a mark of thanksgiving to the Almighty for giving them a good harvest. These festivals also showcase the artistic skills

of the various tribes. All festivals are cultural in one way or another and play a major role in the development of tourism (as discussed in Chapter 3, Table 3.2).

Tourism Festival emphasizes celebrating, promoting and exploring aspects of our art, culture, music, adventure, and nature. Its substantial influence on nature, culture, and society are the reasons why tourism festival is rapidly growing in Arunachal Pradesh. Some of the prominent tourism festivals of Arunachal Pradesh which have garnered attention over few years are **Ziro Music Festival, Tawang Festival, Dambuk Festival of Music and Adventure, Basar Confluence, Siang River Festival etc.** All these festivals aim to create substantial interest for cultural heritage, such as historical monuments, tradition, sites of important events etc. as well as participation in cultural events or events related to recreation, adventure, and sports. Not only tourists, but artists from across the globe are also enticed to such festivals, as it provides them unique platforms to introduce their music, dance, and other art forms. These festivals have now the power to influence and create awareness on environmental protection, eco-tourism and development of infrastructure.

Festival tourism in Arunachal Pradesh can generate a positive impact on the development of sectors such as economic, socio-cultural, political-administrative institutions, and the environment.

#### **4.2.5 A Paradise of Linguistic Diversity**

Arunachal Pradesh is the homeland of 110 ethnic groups has 82 numbers of different dialects categorized into three groups of the Tibeto-Burman family such as the Tibeto-Himalayan Branch, the Northern Assam Branch and the Assam-Burma Branch. The Bodic cluster consists of the Monpas, Membas, Khambas whereas Himalayan group of Buddhists i.e., Khamptis and the Singphos do not belong in this group. The Sherdukpens of West Kameng does not belong in this group as they speak in allied dialect.

Non-Bodic linguistic group come under the Northern-Assam group of dialects. These groups may be classified into three categories. These are the Central group consisting of tribes who are descendents of Abotani viz. Nyishis, Apatanis, Tagins, Galos and Adis. Eastern groups consisting of the Idu Mishmis, Taraon, Kaman, Tangsas, Noctes and Wanchos. Western group consisting of Hrussos (Akas), Sajolangs (Mijis) and

so on. The Assam-Burma group encompasses two groups, Southern group includes Tangsas, Wanchos and Noctes while Northern group includes Singphos and Khamtis. All dialects spoken in Arunachal Pradesh have distinctive features, tones and mannerism of their own which manifest their specific identity because tone is framed and formed by virtue of environment (Koley, 2017: 37).

#### **4.2.6 Indigenous Cuisine**

The Cuisine of Arunachal Pradesh is simple. They rarely practice any process of cooking other than boiling i.e., frying with oil and spices is avoided. Meat and fish are smoked or dried for using in sacrifice. The meat of Mithun is highly wanted. There is a social system to exchange of meat in festivals as a mark of egalitarian society. Rice is the staple food to almost all communities and is common menu at every meal. Bamboo Rice and Rice bear (*Apung*) is an essential item for all important events of socio-cultural life to welcome guests, session of traditional village council, rites of life ranging from birth to death, festivals and community feasts to marriages and ritual offerings. (Koley, 2017: 50).

The food and cooking of Buddhist tribes in northern region is somewhat alike Tibetan food which consists of noodles and *Thukpa*, *momos*, butter tea. They use local cheese known as *Churpi* using the milk of Yak. (Koley, 2017: 51).

#### **4.2.7 Folk Lore: Mines of Indigenous Wisdom**

Folklore includes numerous folktales, folk songs, folk dances, jokes, proverb, funerals hymns, prayer songs, lullabies etc. Indigenous people of Arunachal Pradesh are natural story tellers. They have inherited vast oral literature of their own continuing from generation to generation by word of mouth since time immemorial. These oral literature or oral tradition or folk literature or folk lore of indigenous tribal communities are valuable addition to Indian literature. These folklore's are mines of wisdom. These folklores are diversified and replica of indigenous social life (Koley, 2017: 54).

#### **4.2.8 Folk Songs: Replica of Cultural Heritage**

Folksongs are important part of folklore of a particular society. It is inherited and perpetuated by oral tradition from one generation to another. Folksongs are attached with the different stages of life of tribal people; viz- birth, marriage or death also in different

occasion; viz- festival, harvesting or building construction. So, folksongs include numerous ballads, teasing and mocking songs, romantic and lyrical songs. Folksong of the tribals of Arunachal Pradesh is replica of tribal life. It also depicts the unique fabric of existing rich culture of the area and its inhabitants.

#### **4.2.9 Indigenous Games: Bi-product of Cultural Evolution**

Indigenous games of the Tribal people in Arunachal Pradesh are surely an extension of the Cultural Heritage in aboriginal tradition which are originated and shaped by sense of truly original creativeness since time immemorial. These are bi-product of cultural evolution of the communities irrespective of ethnic identity. Some of the games are popular to all over the state while some are less known. Some are attached with the celebration of festivals which certainly add extra dimensions of festivity. These are Tug-of-War, Wrestling, Archery, Snake games, Cat and Mouse, Hog's Rub, Dragon's Tail, Cock flight, High jump etc. Mimic warfare and Mock Hunting are also popular forms of recreation among many tribes of Arunachal Pradesh.

#### **4.2.10. Handicrafts: The Testimony of Rich Material Culture**

The ethnic people of Arunachal Pradesh have pride possession of a considerable variety of handicrafts as their living material culture. These have been served for different purposes like religious and social functions, decoration, adornment, carrying, storing straining etc. Arunachal Pradesh is categorized into three zones of art and culture. In the first zone, Buddhist tribes may be framed i.e., the Monpas and Shrdupens in West Kameng and Tawang, the Buguns, Hrussos and Sajolang cluster, Membas and Khambas of Northern Siang and the Khamtis and Singphos of Lohit and Changlang district. They have the delicate skill in masking masks, carpets, painted wooden vessels, thank painting while Hrussos, Buguns and Sajolang are experts in basketry exclusively.

The second zone includes central part i.e., from East Kameng to Lohit. The people of this part are experts in cane and bamboo works. The Apatanis, Nyishis, Galos and Adis have possessed unique material culture- a reflection of their proficiency in handicrafts. They are also expert weavers. Mishmi shawl and coat, *Adi Galle* (skirt), *Galuk* (coat) and shoulder bag and Apatani shawls and jackets are vivid testimony of artistic skills of the people. The third culture zone indicates the South-Eastern part of the state. The people of this culture zone are known as expert artists of wood carving (Koley, 2017: 68-69).

<b>Table 4.1 Traditional Ornaments of Different Tribes of Arunachal Pradesh</b>					
<b>Name of the Item</b>	<b>Tribe</b>	<b>Made-up of</b>	<b>Used by</b>	<b>Nature</b>	<b>Significant</b>
Linggong	Adi	Beads	Male	Necklace	Social
Sampo	Apatani	Beads tied with cotton thread	Male	Necklace	Social
Nyamkha	Nocte	Silvercoins	Female	Headband	Social
Aescheri	Aka	Beads	Female & Male	Necklace	Social
Lekepo	Idu-Mishmis	Beads	Female	Necklace	Social
Gabung	Puriok	Brass	Female	Necklace	Social
Sectur (Sangtar)	Nyishi	Beads	Female	Necklace	Social
Koj (Koji)	Nyishi	Copper	Female	Bangle	Social
Nakho	Lisu/Yobin	Silver & Aluminium	Female	Earring	Social
Lik-thap	Wancho	Beads	Male & Female	Necklace	Social
Phunyeigao	Sherdukpens	Tiger teeth & Silver	Male	Necklace	Social
Tadok	Adi	Beads	Male	Necklace	Social & Religious
Doklu-Likar	Galo	Beads	Female	Necklace	Social
Nayu	Sajolang/Miji	Coins & Beads	Female	Necklace	Social
Kahtnelek	Bugun	Silver & Beads	Female	Necklace	Social
Single & Sengmin	Tagin	Beads	Male & Female	Necklace	Social

Source: Directorate of Research (Culture), 2017

#### **4.2.11 Ornaments: Unique Tradition and Culture**

Alike other parts of the world the tribal people of Arunachal Pradesh fond of using ornaments to adorn their bodies. These ornaments are vivid testimony of their creativeness, innovativeness and obviously aesthetic sense. In Arunachal Pradesh ornaments have gender distinction and demarcation. Almost in all tribal communities of Arunachal Pradesh possession of ornaments are the symbol of social status, pride and dignity. There are many traditional beliefs on wearing particular ornaments. Some ornaments have power to keep aside evil power adding additional powers. When priests adds some extra items, which help to acquire extra divine power to combat against evil

powers. All ancestral ornaments have antique value besides its material or economic value. In this respect every house hold of Arunachal Pradesh is owned some antique artefacts. Thereby Arunachal Pradesh may be called as the land of antiques. Thus the ornaments are the identity of tribes. Some important ornaments of different tribes are mentioned in table 4.1

In the outer world there is a growing demand of traditional tribal ornaments among non-tribal people known as ‘Ethnic Ornaments’. Tourist are very fond of this ornaments and wish to purchase these items.

#### **4.2.12 Legacy of Incredible Culture**

Arunachal Pradesh is the paradise for cultural tradition depicting a variation of intangible and tangible cultural heritage of different ethnic groups. Therefore the area is the destination for the Cultural tourist. For that matter, two sites Thembang Dzong Village, a historic village architectural evidence and Ziro Valley, a land of enigmatic beauty and Cultural Landscapes are included in tentative list of UNESCO World Heritage Sites for Outstanding Universal Value which are recognized as ‘National Heritage’.

#### **4.2.13 New Challenges of Epidemic**

Over fears of the COVID-19 epidemic, the Lower Dibang Valley district in east Arunachal Pradesh, and the East and West Siang districts in the central parts of the State are faced with a new problem. Many villages are hanging carcasses of dogs and animals to scare away evil forces.

The Galo community mainly resides in West Siang and Lepa Rada districts. Such rituals are usually performed in the villages “to fend off epidemics or diseases and following such rituals, people are discouraged to go out of villages,” said a local resident. GWS has imposed restrictions on the movement of the villagers. Anticipating large scale animal sacrifices in adjacent East Siang too, Administration issued an order on similar lines as Lower Dibang, asking locals to refrain from the practice. The order noted that the violators would be booked under the Prevention of Cruelty to Animals Act, 1960. Tourism has dual effect of promoting the provision of improved health care in the destinations and on the other hand, it also act as a vehicle to spread some forms of

disease. It is not uncommon to hear of tourists dying of relatively simple complaints in places with poor hospitals facilities or where certain tropical diseases are endemic.

The very recent threat of diseases like AIDS, SARS, Bird flu and COVID-19 will have important implications for the popularity of some tourist destinations in particular and the tourists and the host country in general.<sup>17</sup>

#### **4.3 SOCIO-CULTURAL IMPACTS INDICATORS OF TOURISM IN ARUNACHAL PRADESH**

For the assessment of socio-cultural impacts of tourism on the indigenous people residing in the Arunachal Pradesh, following indicators has been taken into account:

1. Imparting general awareness towards religion, tradition and cultural heritage
2. Commercialization of tradition and customs
3. Increase in crime rate in the area
4. Increase in the quality of police services
5. Increase in the activities of drug abuse and gambling
6. Improvements of living standard of the people in the area
7. Spreading of epidemics of diseases in the area

#### **4.4 PROFILE OF HOST RESPONDENTS**

To understand the impact of socio-cultural, socio-economic, and environmental impact on the host / local residents community 400 samples were collected from 7 district tourist destinations. In this study there are six independent variables, gender, age-group, marital status, education level and income level as represented in table 4.2 The study made an attempt to understand the gender category of surveyed hosts in the study area. It was found that majority of the surveyed host i.e., 76.8 per cent male and 23.3 percent were female.

The study made an attempt to understand the age-group of surveyed hosts in the study area. It was found that 50 per cent of the surveyed host were in between 31 to 40 years old followed by 31.3 percent above 40 years and 18.8 percent were below 30 years age.

The study made an attempt to understand the marital status of the surveyed hosts in the study area. It was found that majority of the surveyed host i.e., 86.3 per cent were married and only 13.8 percent were unmarried.

The study made an attempt to understand the religion of surveyed hosts in the study area. It was found that majority of the surveyed host i.e., 61.3 per cent were the believers of Donyi Polo followed by 20.3 per cent, 15 per cent, 3.3 per cent and 0.3 per cent with the believers of Buddhism, Christian, Hinduism and Islam respectively.

The study made an attempt to understand the education level of surveyed hosts in the study area. It was found that majority of the surveyed host i.e., 43.5 per cent were graduate followed by 38.5 per cent achieving education up to intermediate level. Only 0.8 per cent host are uneducated and 17.5 per cent host have achieved post graduate and above education.

<b>Table: 4.2: Profile of Tourist Respondents</b>			
		<b>Frequency (N=400)</b>	<b>Percent</b>
<b>Gender</b>	Female	<b>93</b>	<b>23.3</b>
	Male	<b>307</b>	<b>76.8</b>
<b>Age-Group</b>	<b>&lt;=30 years</b>	<b>75</b>	<b>18.8</b>
	<b>31-40</b>	<b>200</b>	<b>50</b>
	<b>&gt;40 years</b>	<b>125</b>	<b>31.3</b>
<b>Marital Status</b>	<b>Married</b>	<b>345</b>	<b>86.3</b>
	<b>Unmarried</b>	<b>55</b>	<b>13.8</b>
<b>Religion</b>	<b>Buddhism</b>	<b>81</b>	<b>20.3</b>
	<b>Christian</b>	<b>60</b>	<b>15</b>
	<b>Donyi-Polo</b>	<b>245</b>	<b>61.3</b>
	<b>Hinduism</b>	<b>13</b>	<b>3.3</b>
	<b>Islam</b>	<b>1</b>	<b>0.3</b>
<b>Education Level</b>	<b>Uneducated</b>	<b>3</b>	<b>0.8</b>
	<b>Intermediate</b>	<b>153</b>	<b>38.25</b>
	<b>Graduate</b>	<b>174</b>	<b>43.5</b>
	<b>Post Graduate&amp; above</b>	<b>70</b>	<b>17.5</b>
<b>Occupation/ Profession</b>	<b>Business</b>	<b>276</b>	<b>69</b>
	<b>Private Job</b>	<b>39</b>	<b>9.75</b>
	<b>Govt. Servant</b>	<b>25</b>	<b>6.25</b>
	<b>Self Employed</b>	<b>7</b>	<b>1.75</b>
	<b>Unemployed</b>	<b>53</b>	<b>13.25</b>
<b>Source: Survey Data, 2017-2019</b>			

The study made an attempt to understand the occupation/ profession of surveyed hosts in the study area. It was found that majority of the surveyed host i.e., 69 per cent hosts are

engaged in business related activities and huge occupational diversity can be seen in other 41 per cent host occupation/ profession as represented in the table 4.7.

#### **4.5: HOSTS RESPONSES ON SOCIO-CULTURAL IMPACT OF TOURISM IN ARUNACHAL PRADESH**

Surveyed Host/ residents community respondents showed quite a positive feeling that the tourism industry helps in imparting general awareness towards religion, tradition and cultural heritage. Table 4.3 represents that total 93.6 per cent host participants were in the agreement side of the scale. On the other hand only 6.3 per cent were in the disagreement part of the scale.

Surveyed Host/ residents community respondents showed quite a positive feeling that Tourism industry Leads to commercialization of tradition and customs. Total 84.3 per cent host participants were in the agreement side of the scale. On the other hand only 15.8 per cent were in the disagreement part of the scale.

60.8 per cent of the host choose to be in the disagreement part of the scale when they were asked ‘Tourism industry Leads to increase in the crime rate in the area and 15.3 per cent strongly disagreed while 21 per cent agreed and 3 per cent strongly agreed when answering the same question.

51 per cent of the host choose to be in the disagreement part of the scale when they were asked ‘Tourism industry Leads to increase in the quality of police service’s in the area’ and 7.8 per cent strongly disagreed while 35.5 per cent agreed and 5.8 per cent strongly agreed when answering the same question.

65.8 per cent of the host choose to be in the disagreement part of the scale when they were asked ‘Tourism industry Leads to increase in activities of drug abuse and gambling in the area’ and 8.8 per cent strongly disagreed while 23.5 per cent agreed and 2 per cent strongly agreed when answering the same question.

Surveyed Host/ residents community respondents showed quite a positive feeling when asked ‘Tourism industry helps in the improvement of living standard of the people in the area. Total 53.6 per cent host participants were in the agreement side of the scale. On the other hand 46.5 per cent were in the disagreement part of the scale.

67.8 per cent of the host choose to be in the strongly disagreement part of the scale when they were asked ‘Tourism industry is responsible for spreading epidemics in the

<b>Table: 4.3: Hosts Response on Socio-cultural Impact of Tourism</b>				
<b>Sl. No.</b>	<b>Questions</b>	<b>Respondents</b>	<b>Frequency (N=400)</b>	<b>Percent</b>
1.	<b>Help in imparting general awareness towards religion, tradition and cultural heritage</b>	Agree	153	38.3
		Strongly Agree	222	55.5
		Disagree	25	6.3
		Strongly Disagree	0	0
2.	<b>Tourism industry Leads to commercialization of tradition and customs</b>	Agree	168	42.0
		Strongly Agree	169	42.3
		Disagree	51	12.8
		Strongly Disagree	12	3.0
3.	<b>Tourism industry leads to increase in crime rate in the area</b>	Agree	84	21
		Strongly Agree	12	3.0
		Disagree	243	60.8
		Strongly Disagree	61	15.3
4.	<b>Tourism industry Leads to increase in the quality of police services</b>	Agree	142	35.5
		Strongly Agree	23	5.8
		Disagree	204	51.0
		Strongly Disagree	31	7.8
5.	<b>Tourism industry Leads to increase in the activities of drug abuse and gambling</b>	Agree	94	23.5
		Strongly Agree	8	2.0
6.	<b>Tourism industry helps in improvement of living standard of the people in the area</b>	Agree	193	48.3
		Strongly Agree	21	5.3
		Disagree	178	44.5
		Strongly Disagree	8	2
7.	<b>Tourism industry spreading of epidemics of diseases in the area</b>	Agree	3	0.8
		Strongly Agree	8	2
		Disagree	118	29.5
		Strongly Disagree	271	67.8

**Source: Survey Data, 2017-2019**

area' and 29.5 per cent disagreed while 0.8 per cent agreed and 2 per cent strongly agreed when answering the same question.

#### **4.6 FINDINGS OF SOCIO-CULTURAL IMPACT OF TOURISM IN ARUNACHAL PRADESH**

To see impact of all hosts responses on Socio-cultural, a score was created in percentage by combining all questions related to Socio-cultural (i.e. Q14-Q20 of Appendix-A). Responses was assigned minimum score 1 and maximum score 4 number. Significant difference was assessed among the categories of each demographic factors using Independent-Samples Mann-Whitney U Test and Independent-Sample Kruskal-Wallis Test.

The results of this study indicate that some demographic variables like gender, age group, education and religion were not related to the perceived socio-cultural impacts of tourism on the respondents. Analyzing all other dependent variables in regard to the respondents gender, age group, education and religion, it can be concluded that there are no significant differences between male and female, between age groups categories, between education categories and between religion categories towards socio-cultural impacts of tourism (Table 4.4), as the differences between the average values of the dependent variables were not statistically significant (Sig. or P- value for gender = 0.596, age group = 0.393, education = 1.000 and religion = 0.158).

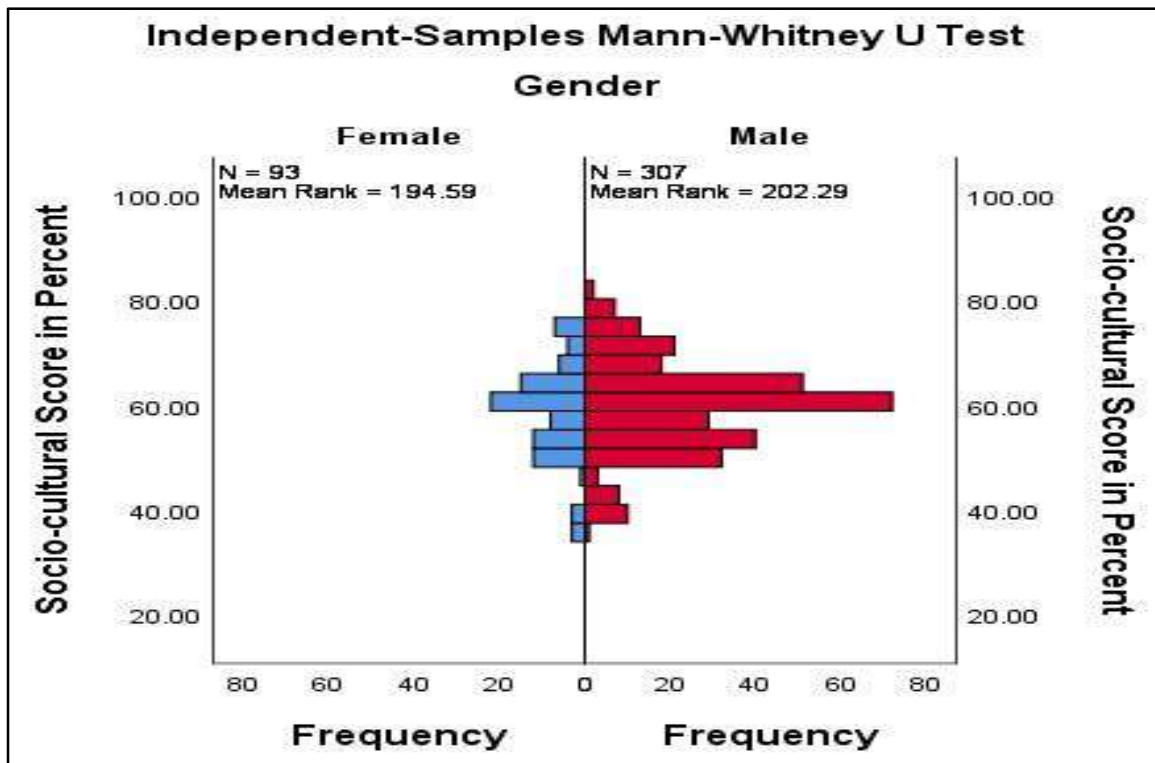
**Table 4.4: Significant / P-Values / socio-cultural impacts of tourism on the respondents of Arunachal Pradesh according to demographic characteristics.**

Item	Significance					
	Gender	Age Group	Marital Status	Education	Religion	Occupation
<b>Socio-cultural Impacts: Q14- Q20</b>	<b>0.569</b>	<b>0.393</b>	<b>0.038</b>	<b>1.000</b>	<b>0.158</b>	<b>0.007</b>

Above table 4.4 shows us the actual significance value of the test. From this significant value, it can be concluded that socio-cultural impact in the gender (male & Female) was not found statistically significantly.

**Fig.4.1** Provides information regarding the output of the actual Independent-Sample Mann-Whitney U test. It shows mean rank for the two groups tested (i.e., the Male and Female): Fig.4.1 it indicates which group (male/female) can be considered as having the higher socio-cultural impact, overall; namely, the group with the highest mean rank. In this case, the female (mean rank = 202.29) group had the highest socio-cultural impact as compared to male (mean rank = 194.59).

**Figure 1: Socio-Cultural Impact of Tourism with Gender**

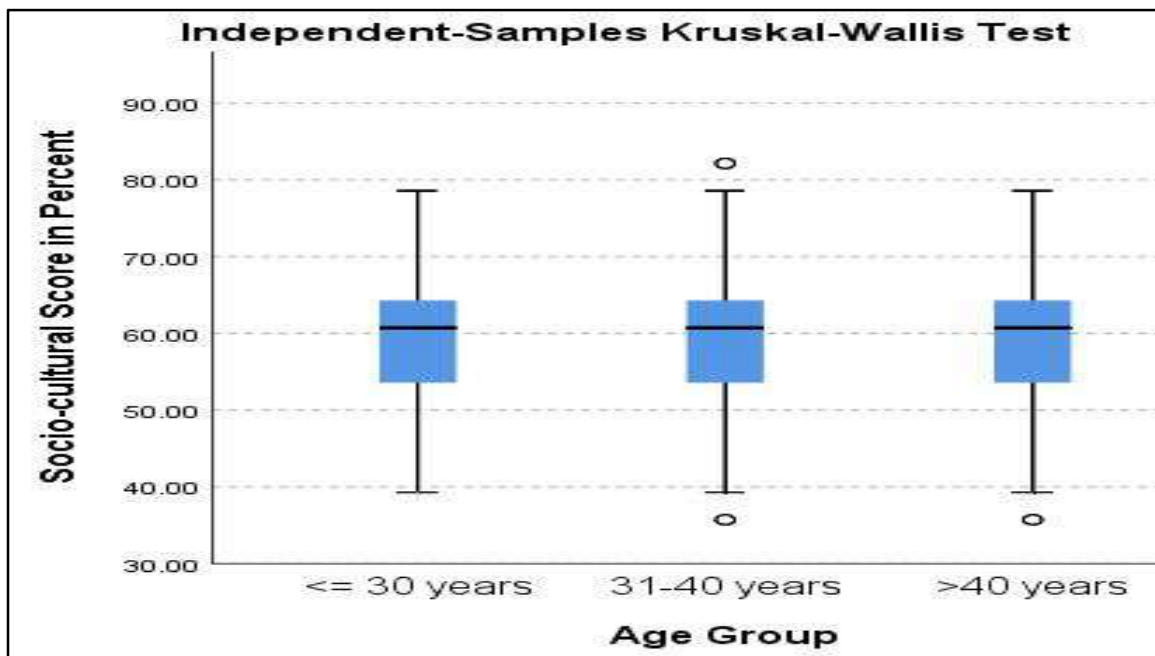


**Table 4.5: Mean Rank of Age Group with Socio-Cultural Impacts of Tourism.**

Items	Ranks		
	Age Group	N	Mean Rank
Socio-cultural Score in Percent: Q14- Q20	<= 30 years	75	186.21
	31-40 years	200	200.52
	>40 years	125	209.04
	Total	400	

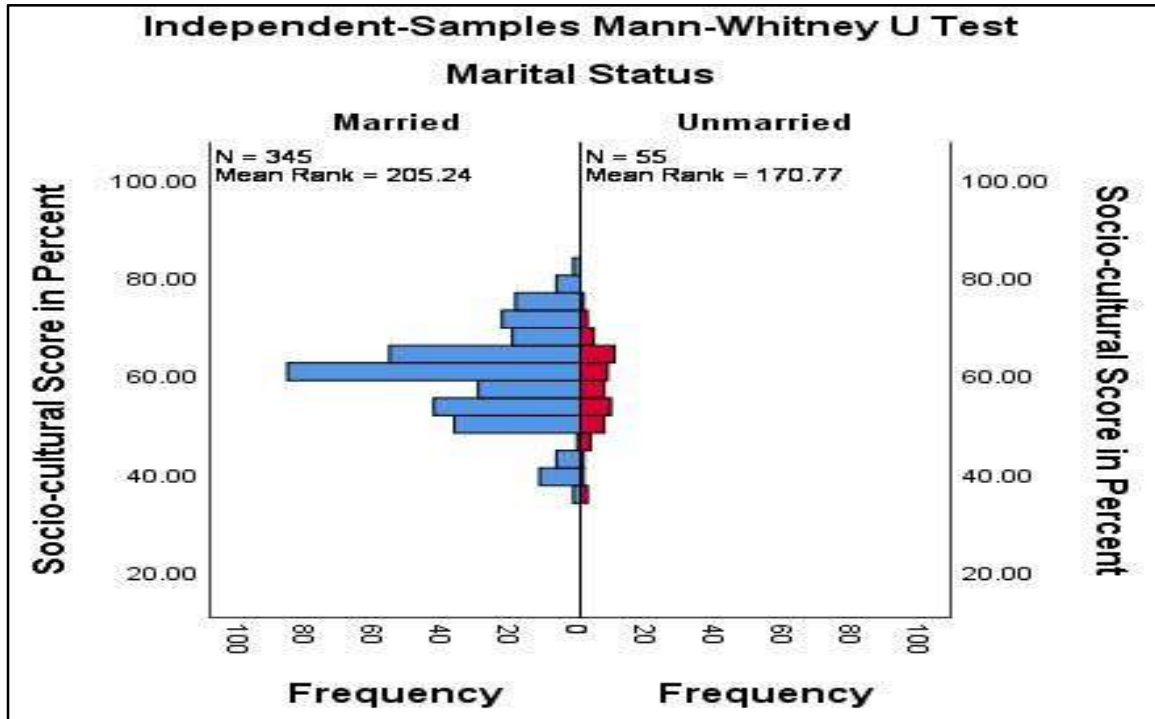
Table 4.5 shows mean rank for the age groups tested (i.e.,  $\leq 30$  years, 31-40 years and  $> 40$  years) by the Independent-Sample Kruskal-Wallis Test. This table indicates the age group which has higher mean rank can be considered as having the higher socio-cultural impact in percent. In this case, the age  $> 40$  years (mean rank = 209.04) had the highest socio-cultural impact followed by 31-40 years (mean rank = 200.52) and  $\leq 30$  years (mean rank = 186.21). Above table 4.4 shows us the significance value of the test. From this significant value, it can be concluded that socio-cultural impact in the age group was not found statistically significantly. **Fig.2** (box plot) shows the distribution of socio-cultural score among the age group as the output of the Independent-Sample Kruskal-Wallis Test.

**Fig.4.2: Socio-Cultural Impact of Tourism with Age Group.**



**Fig.4.3** provides information regarding the output of the Independent-Sample Mann-Whitney U test. It shows mean rank for the two groups tested (i.e., the Married and Unmarried): Fig.4.3 indicates married group can be considered as having the higher socio-cultural impact, overall; namely, the group with the highest mean rank. Above table 4.4 shows us the significance value of the test. From this significant value, it can be concluded that socio-cultural impact in the marital status (married and unmarried) was found statistically significantly.

**Fig.4.3: Socio-cultural Impact of Tourism with Marital Status.**



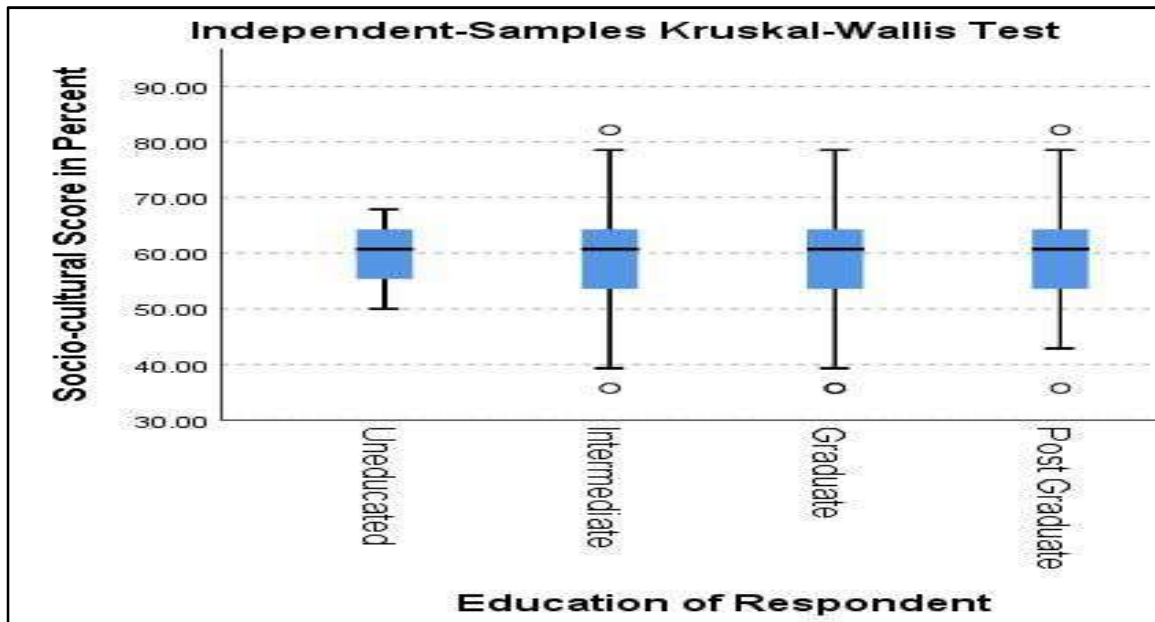
**Table 4.6: Mean Rank of Education with Socio-Cultural Impacts of Tourism.**

Items	Ranks		
	Education of Respondent	N	Mean Rank
Socio-cultural Score in Percent: Q14- Q20	Uneducated	3	198.50
	Intermediate	153	200.74
	Graduate	174	200.36
	Post Graduate& above	70	200.41
	Total	400	

Table 4.6 shows mean rank for the education tested (i.e., uneducated, intermediate, graduation and post-graduation & above) by the Independent-Sample Kruskal-Wallis Test. Table indicates the education which has higher mean rank can be considered as having the higher socio-cultural impact in percent. In this case, the uneducated had the some lowest socio-cultural impact as compared to others education categories but on overall mean rank of all categories seems equal. Above table 4.4 shows us the significance value of the test. From this significant value, it can be concluded that socio-cultural impact in the education was not found statistically significantly. **Fig.4.4(box plot)**

showsthe distribution of socio-cultural score among the education categories as the output of the Independent-Sample Kruskal-Wallis Test.

**Fig.4.4: Socio-cultural Impact of Tourism with Education.**



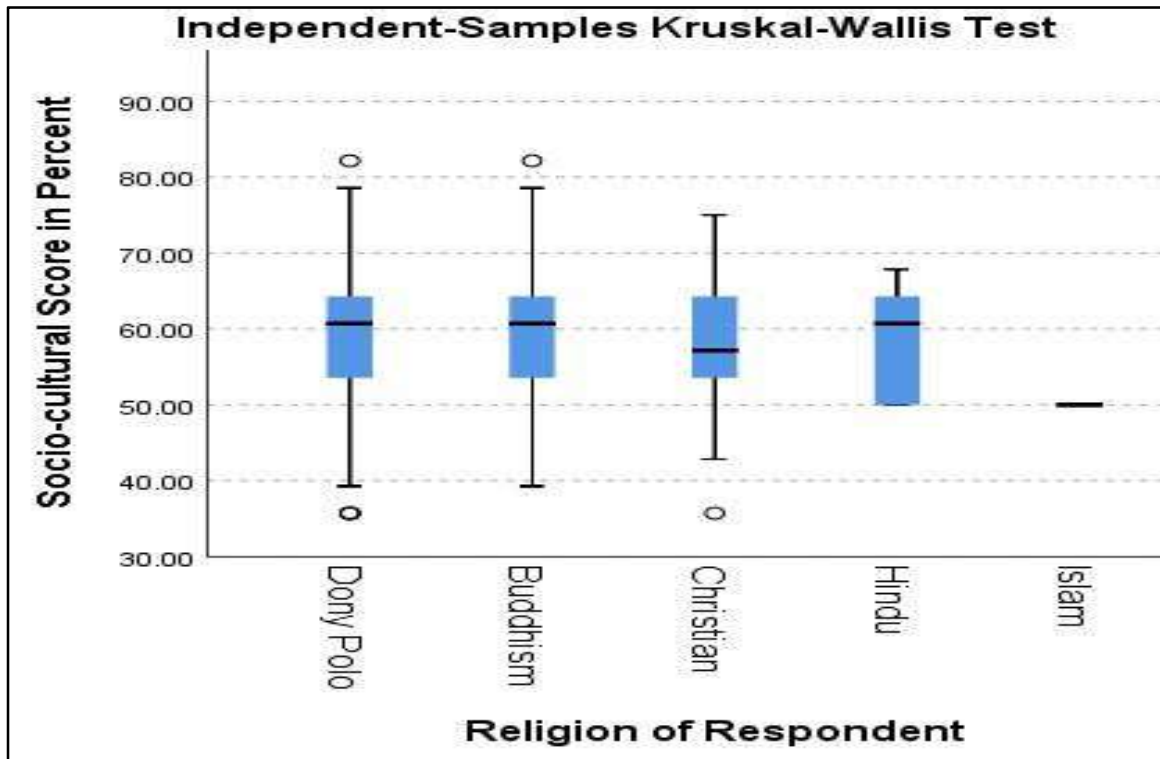
**Table 4.7: Mean Rank of religion with socio-cultural impacts of tourism.**

Items	Ranks		
	Religion of Respondent	N	Mean Rank
Socio-cultural Score in Percent : Q14- Q20	Dony Polo	245	203.19
	Buddhism	81	215.88
	Christian	60	178.19
	Hindu	13	168.35
	Islam	1	51.50
	Total	400	

Table 4.7 shows mean rank for the religion tested (i.e.,Dony polo, Buddhism, Christian. Hindu and Islam) by the Independent-Sample Kruskal-Wallis Test.Table shows the Buddhism (mean rank = 215.88) religion has higher mean rank and considered as having the higher socio-cultural impact in percent followed by Dony Polo, Christian, Hindu and Islam. Above table 4.4 shows us the significance value of the test. From this significant value, it can be concluded that socio-cultural impact in the religion was not found statistically significantly. **Fig.5** (box plot) showsthe distribution of socio-cultural score

among the religion categories as the output of the Independent-Sample Kruskal-Wallis Test.

**Fig.4.5: Socio-cultural Impact of Tourism with Religion.**



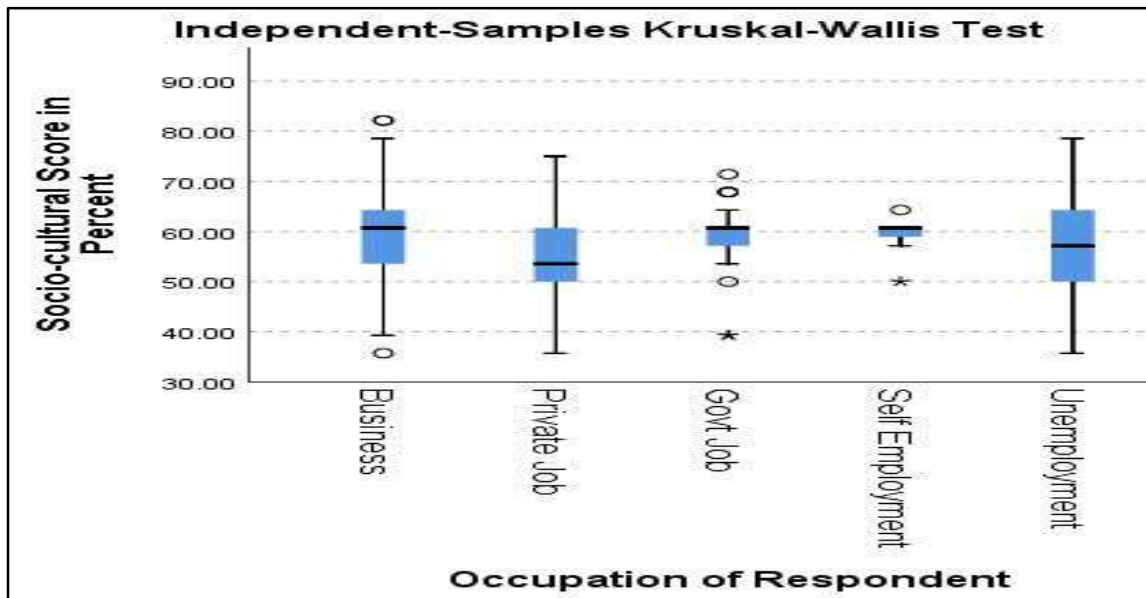
**Table 4.8: Mean Rank of occupation with socio-cultural impacts of tourism.**

Items	Ranks		
	Occupation of Respondent	N	Mean Rank
Socio-cultural Score in Percent : Q14- Q20	Business	276	213.66
	Private Job	39	158.46
	Govt Job	25	198.02
	Self-Employment	7	189.00
	Unemployment	53	165.58
	Total	400	

Table 4.8 shows mean rank for the occupation tested (i.e., Business, Private Job, Govt. Job, Self-employed and unemployed) by the Independent-Sample Kruskal-Wallis Test. Table shows the business (mean rank = 213.66) has higher mean rank and considered as

having the higher socio-cultural impact in percent as compared to other occupation categories.

**Fig.4.6: Socio-cultural Impact of Tourism with occupation**



Above table 4.4 shows us the significance value of the test. From this significant value, it can be concluded that socio-cultural impact in the occupation categories were found statistically significantly. **Fig.6** (box plot) shows the distribution of socio-cultural score among the occupation categories as the output of the Independent-Sample Kruskal-Wallis Test.

**Fig.4.7: Socio-cultural Impact of Tourism with occupation categories pairwise.**

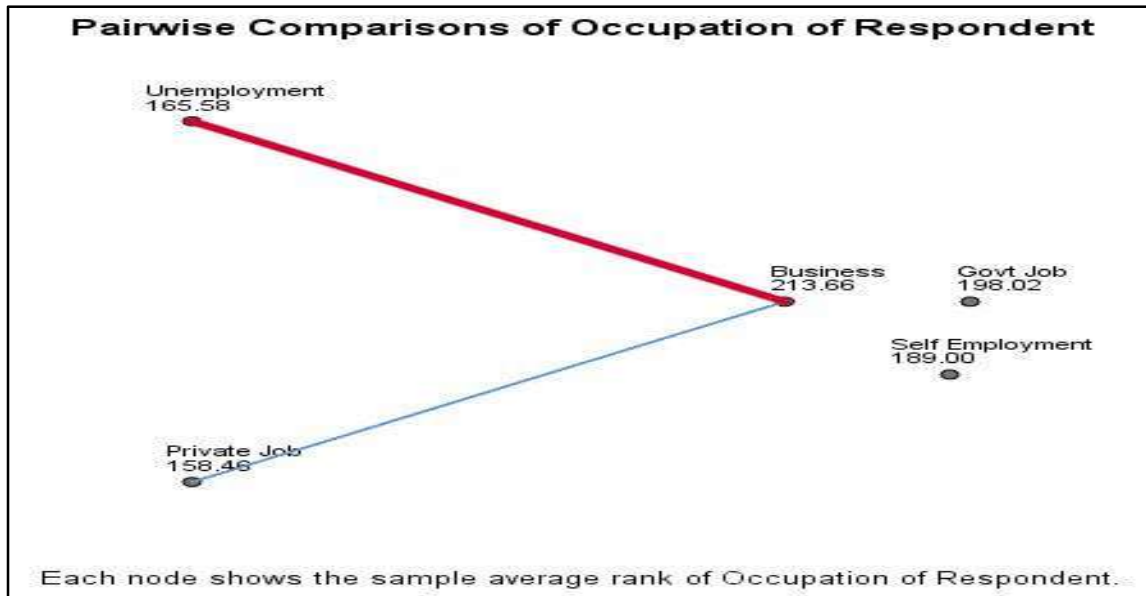


Figure 4.7 shows the pairwise comparison between each categories of occupation, which shows that, unemployed and business man has statistically significant difference on socio-cultural impact followed by business man and private job while others groups does shows any impact between groups.

## REFERENCES

1. Glasson, J.; Godfrey, K.; Goodey, B. (1995). *"Towards Visitor Impact Management: Visitor impacts, Carrying Capacity and Management Response in Europe's Historic Towns and Cities"*. Avebury: Aldershot, UK.
2. Poudel, P.C. (1998). "Mountain Tourism and its Socio-cultural Impact in Ghandruk VDC Annapurna Region", Nepal, *The Himalayan Review*, Vol.xxix, Nepal Geographical Society, Kathmandu, p.37
3. Hashimoto, A. (2002). "Tourism and socio-cultural development issues". In *Tourism and Development: Concepts and Issues*; Channel View Publications: Clevedon, UK, 2002; pp. 202–230.
4. Cooper, C.P.; Fletcher, J.E.; Gilbert, D.C.; Wanhill, S. (2013). *"Tourism: Principles and Practice"*; Pitman Publishing: New York, NY, USA.
5. Dillimono, H.D.; Dickinson, J.E. (2015). "Travel, Tourism, Climate Change, And Behavioural Change: Travellers' Perspectives From A Developing Country", Nigeria. *J. Sustain. Tour.*, 23, 437–454.
6. Ramos, H.; Stoddart, M.C.; Chafe, D. (2016). "Assessing The Tangible and Intangible Benefits of Tourism: Perceptions of Economic, Social, and Cultural Impacts in Labrador's Battle Harbour Historic District". *Isl. Stud. J.*, 11, 209–226.
7. García, F.A.; Vázquez, A.B.; Macías, R.C. (2015). "Resident's Attitudes Towards The Impacts of Tourism". *Tour. Manag. Perspect.*, 13, 33–40.
8. Woosnam, K.M.; Aleshinloye, K.D. (2018). "Residents' Emotional Solidarity With Tourists: Explaining Perceived Impacts of a Cultural Heritage Festival". *J. Hosp. Tour. Res.*, 42, 587–605.
9. Zaei, M.E.; Zaei, M.E. (2013). "The Impacts of Tourism Industry on Host Community". *Eur. J. Tour. Hosp. Res.*, 1, 12–21.
10. Zamani-Farahani, H.; Musa, G. (2012). "The Relationship Between Islamic Religiosity and Residents' Perceptions of Socio-Cultural Impacts of Tourism in Iran: Case Studies of Sare'in and Masooleh". *Tour. Manag.*, 33, 802–814.
11. Mbaiwa, J.E. (2004). "The Socio-Cultural Impacts of Tourism Development in the Okavango Delta", Botswana. *J. Tour. Cult. Chang.*, 2, 163–184.

12. Koley, R. N. (2017).“*Understanding Arunachal Pradesh*”, Directorate of Research, Government of Arunachal Pradesh, Itanagar, p.19
13. Singh, K.S. (1995).“*People of India, Arunachal Pradesh*”, Vol. XIV. Calcutta: Seagull Books, p 21.
14. Barthakur, J. K. (1972): *Census of India, 1971*, District Census Handbook: Kameng District, Shillong, Directorate of Census Operation, Arunachal Pradesh, pp. 100-105.
15. Rukbo, Talom (1985).“Donyi-Polosim – A Religion”, *Arunachal Review*, July – December, pp. 1-4.
16. THE ARUNACHAL PRADESH FREEDOM OF RELIGION ACT (1978)  
Published in the Arunachal Pradesh Gazette, Extraordinary Part III, Vol. II, No. 22  
Dated 13<sup>th</sup> November, 1978
17. Lea, John (2001).“Tourism and Development in the Third World”, Routledge, London, p.70.

## **CHAPTER -5**

### **SOCIO-ECONOMIC AND ENVIRONMENTAL IMPACT OF TOURISM IN ARUNACHAL PRADESH**

---

#### **5. INTRODUCTION**

Tourism brings both economic and non-economic benefits and costs to the host communities. The assessment of socio-economic and environmental impacts has become an important aspects in tourism specially when promoting tourism in indigenous tribal areas having socio-cultural diversity.

This chapter aims to identify the socio-economic and environmental impacts of the tourism by examining the visitors impact on local residents (hosts) standard of living, important infrastructure developments, benefiting the local people and the tourists alike and environment.

#### **5.1 SOCIO-ECONOMIC IMPACT**

The tourism industry generates substantial economic benefits to both host and guest countries. Especially in developing countries, one of the primary motivations for a region to promote itself as a tourism destination is the expected economic improvement. As with other impacts, this massive economic development brings along both positive and negative consequences (UNEP, 2002)<sup>1</sup>.

Tourism, increasingly seen as an important economic activity, has become a significant engine of overall development in many destinations. It generates 10% of employment around the world and accounts for 10.4% of global GDP (WTTC<sup>2</sup>, 2018). Promoting tourism can attract regional investment, create commercial opportunities, and support other industries within a destination area (Lin & Mao<sup>3</sup> 2015: Pappas<sup>4</sup>, 2012 and Ryan<sup>5</sup>, 2003). For example, tourism can upgrade local life through better local infrastructure and common devices (for the sake of sustaining tourism) that can ameliorate health care, education resources, job opportunities, and income levels (Zaei&Zaei, 2013).<sup>6</sup>

According to Howell (2002), the socio-economic impacts of tourism relate to population growth, changing employment patterns, an increased level of income, and rising poverty levels.<sup>7</sup> Tourism provides both direct and indirect employment

opportunities such as in hotels, restaurants, airlines, cruise lines, and resorts which provide direct employment because their employees are in contact with tourists and provide services to the tourists. It stands out among major industries in creating new jobs, resisting economic downturns and providing a major source of jobs for minorities, women and the youth. The travel and tourism industry has proven itself to be a dependable source of job opportunities for all groups of people in the community, as it employs people of all skill levels (Van Harsel<sup>8</sup>, 1994 and Page<sup>9</sup>, 2005).

As tourism stimulates economic activity in a destination, it assists in improving the overall economic status of the country. Tourism can lead to an increase in the country's GDP. For example, in the Caribbean and Pacific Islands, over 50% of the GDP is derived from tourism, which rises to 88% in the case of the Maldives, and in northern Botswana tourism contributed about 45% to the GDP of the country (Mbaiwa, 2003).<sup>10</sup>

Tourism plays a major role in contributing to the increase of income of the host population by creating jobs for the local people. The jobs range from jobs that need skills or qualifications to general work which does not require any expertise. They sell their artefacts and other products to tourists, that has improved the standard of living of the community and has contributed to the economic growth of the local communities concerned. Alderman (1994) in Zupan<sup>11</sup> (2003) believes that tourism can or lead to increased property values and higher costs of living for the local people.

Tourism is a major global industry that provides a huge opportunity for economic growth, foreign exchange earnings, employment and income generation. It has been seen that tourism results in a range of economic impacts, both negative and positive, depending on the socioeconomic characteristics of the tourist destination, and the types of tourism practices in the destination area (Wall & Mathieson, 2006).<sup>12</sup>

In India Tourism contributes 6.8 per cent of the country's GDP and 10.2 per cent to its employment (including both direct and indirect effects). It is the largest foreign exchange earners for the country after gems and jewellery and readymade garments. As per the report of 3<sup>rd</sup> Tourism Satellite Account for India (TSAI) prepared in 2018 for the reference year 2015-2016 and subsequent using for the year viz. 2013-2014 and 2014-2015, the estimate of contribution of tourism to GDP is as given below:

<b>Table 5.1: Contribution of Tourism to GDP</b>				
	2013-14	2014-15	2015-2016	2016-2017
Share in GDP (in per cent)	5.68	5.81	5.10	5.06
Direct (in per cent)	3.06	3.14	2.65	2.63
Indirect (in per cent)	2.62	2.67	2.45	2.43

Source: Report of 3<sup>rd</sup> Tourism Satellite Account for India, 2018

<b>Table 5.3: Contribution of Tourism in the Economy of Arunachal Pradesh</b>		
Gross Value Added (GVA at basic prices in Rs. Lakh)		757651
Tourism Direct Gross Value Added (TDGVA in Rs. Lakh)		14750
Share of TDGVA in GVA	Direct ( in Per cent)	1.95
	Direct and Indirect (in Per cent)	3.59
State Employment (in Lakh numbers)		5.32
Tourism Direct Employment (in Lakh numbers)		0.14
Shares of Tourism Employment to Total State Employment	Direct ( in Per cent)	2.56
	Direct and Indirect (in Per cent)	6.92

Source: National Council of Applied Economic Research, Computations, 2015

<b>Table 5.2: Contribution of Tourism to Employment</b>					
	2013-14	2014-15	2015-2016	2016-2017	2017-18
Share in Employment (in per cent)	11.90	12.09	12.38	12.19	12.13
Direct (in per cent)	5.19	5.27	5.40	5.32	5.29
Indirect (in per cent)	6.71	6.82	6.98	6.88	6.84
Employment/Job (in million)	6.72	69.6	72.3	75.34	80.63

Source: Report of 3<sup>rd</sup> Tourism Satellite Account for India, 2018

Tourism Satellite Account also provided the direct and indirect contribution of tourism in the employment of the country. According to 3<sup>rd</sup> TSA the estimate of job generated in the economy due to tourism during the year 2013-14, 2014-15, 2015-16, 2016-17 and 2017-18 is given in the Table:5.2.

## **5.2 SOCIO-ECONOMIC IMPACT INDICATORS OF TOURISM IN ARUNACHAL PRADESH**

Socio-economic impact of tourism are generally assessed in terms of changes in community demographics, housing, employment and income, market effects, public services, and aesthetic qualities of the community. Assessing this in a socio-economic context will help community leaders and residents to identify potential social equity issues, evaluate the adequacy of social services and determine whether the tourism related projects may adversely affect overall social well-being of the indigenous people of this state. For the assessment of socio-economic impacts of tourism on the indigenous people residing in the Arunachal Pradesh, following indicators has been taken into account:

1. Increase in the density of population in the state.
2. Improvement in the quality of road and transport facilities.
3. Increase in number of public utility services and recreational facilities.
4. Increase in number of hotels.
5. Demand of parking place in the tourist spots.
6. Creation of employments
7. Rise in the level of income of residents.
8. Increase in the value of land.
9. Increase in the general price of goods and services.

## **5.3 HOST RESPONDENTS RESPONSE TO SOCIO-ECONOMIC IMPACT**

Surveyed Host/ residents community respondents showed quite a positive feeling that Tourism leads to increase in the density of population in the state. Total 53.5 per cent host participants were in the agreement side of the scale. On the other hand only 46.5 per cent were in the disagreement part of the scale.

<b>Table 5.3: Contribution of Tourism in the Economy of Arunachal Pradesh</b>		
Gross Value Added (GVA at basic prices in Rs. Lakh)		757651
Tourism Direct Gross Value Added (TDGVA in Rs. Lakh)		14750
Share of TDGVA in GVA	Direct ( in Per cent)	1.95
	Direct and Indirect (in Per cent)	3.59
State Employment (in Lakh numbers)		5.32
Tourism Direct Employment (in Lakh numbers)		0.14
Shares of Tourism Employment to Total State Employment	Direct ( in Per cent)	2.56
	Direct and Indirect (in Per cent)	6.92

Source: National Council of Applied Economic Research, Computations, 2015

Surveyed Host/ residents community respondents showed quite a positive feeling that Tourism leads to increase in the density of population in the state. Total 53.5 per cent host participants were in the agreement side of the scale. On the other hand only 46.5 per cent were in the disagreement part of the scale.

Surveyed Host/ residents community respondents showed quite a positive feeling that Tourism leads to improvement in the quality of road and transport facilities. Total 65.3 per cent host participants were in the agreement side of the scale. On the other hand only 34.8 per cent were in the disagreement part of the scale.

Surveyed Host/ residents community respondents showed quite a positive feeling that Tourism industry Leads to increase in number of public utility services and recreational facilities. Total 76.1 per cent host participants were in the agreement side of the scale. On the other hand only 24 per cent were in the disagreement part of the scale.

Surveyed Host/ residents community respondents showed quite a positive feeling that Tourism industry Leads to increase in number of hotels. Total 51 per cent host participants were in the agreement side of the scale. On the other hand only 49 per cent were in the disagreement part of the scale.

Surveyed Host/ residents community respondents showed quite a positive feeling that 'Tourism industry Leads to needs of parking place in the tourist spots'. Total 82 per

cent host participants were in the agreement side of the scale. On the other hand only 18 per cent were in the disagreement part of the scale.

<b>Table: 5.4: Hosts Response on Socio-Economic Impact of Tourism in Arunachal Pradesh</b>				
<b>Sl. No.</b>	<b>Questions</b>	<b>Respondents</b>	<b>Frequency (N=400)</b>	<b>Percent</b>
1.	<b>Tourism leads to increase in the density of population in the state</b>	Agree	206	51.5
		Strongly Agree	8	2.0
		Disagree	115	28.7
		Strongly Disagree	71	17.8
2.	<b>Tourism leads to improvement in the quality of road and transport facilities</b>	Agree	181	45.3
		Strongly Agree	80	20.0
		Disagree	101	25.3
		Strongly Disagree	38	9.5
3.	<b>Tourism leads to increase in number of public utility services and recreational facilities</b>	Agree	219	54.8
		Strongly Agree	85	21.3
		Disagree	88	22.0
		Strongly Disagree	8	2.0
4.	<b>Tourism leads to increase in number of hotels</b>	Agree	124	31.0
		Strongly Agree	80	20.0
		Disagree	158	39.5
		Strongly Disagree	38	9.5
5.	<b>Tourism there is an ardent need of parking place in the tourist spots</b>	Agree	154	38.5
		Strongly Agree	174	43.5
		Disagree	60	15
		Strongly Disagree	12	3
6.	<b>Tourism helps in creation of employment in the state</b>	Agree	181	45.3
		Strongly Agree	95	23.8
		Disagree	124	31.0
		Strongly Disagree	0	0.0
7.	<b>Tourism industries leads to rise in the level of income of residents</b>	Agree	125	31.3
		Strongly Agree	139	34.8
		Disagree	78	19.5
		Strongly Disagree	58	14.5
8.	<b>Tourism leads to increase in the value of land</b>	Agree	106	26.5
		Strongly Agree	100	25.0
		Disagree	157	39.3
		Strongly Disagree	37	9.3
9.	<b>Tourism leads to increase in the general price of goods and services</b>	Agree	169	42.3
		Strongly Agree	131	32.8
		Disagree	96	24.0
		Strongly Disagree	4	1

Source: Survey Data, 2017-2019

Surveyed Host/ residents community respondents showed quite a positive feeling that 'Tourism industry helps in the creation of employment in the state'. Total 69.1 per cent host participants were in the agreement side of the scale. On the other hand only 31 per cent were in the disagreement part of the scale.

Surveyed Host/ residents community respondents showed quite a positive feeling that 'Tourism industry Leads to rise in the level of income of residents'. Total 66.1 per cent host participants were in the agreement side of the scale. On the other hand only 34 per cent were in the disagreement part of the scale.

Surveyed Host/ residents community respondents showed quite a positive feeling that Tourism industry Leads to increase in the value of land. Total 51.5 per cent host participants were in the agreement side of the scale. On the other hand only 48.6 per cent were in the disagreement part of the scale.

Surveyed Host/ residents community respondents showed quite a positive feeling that 'Tourism industry Leads to increase in the general price of goods'. Total 75.1 per cent host participants were in the agreement side of the scale. On the other hand only 25 per cent were in the disagreement part of the scale.

#### **5.4: ANALYSIS OF SOCIO-ECONOMIC IMPACT OF TOURISM WITH DEMOGRAPHIC FACTORS**

A total 9 questions (i.e. Q. No. 5 to 13) were asked in respect of socio-economic impact of tourism in Arunachal Pradesh. Responses of each question were measure on four point Likert scale, such as agree, strongly agreedisagree and strongly disagree. At the time of analysis these responses were recorded in number from 1 to 4. agree assigned minimum number 1, strongly agree 2, disagree 3 and strongly disagree maximum number 4. To see the impact of all hosts response on socio-economic impact of tourism, a score was created by combining all aforesaid questions. For normalize the scale in analysis (i.e. with socio-cultural impact, environmental impact and potential & prospects), created scores converted in percentage for further analysis. Significant difference was assessed among each categories of demographic factors. Normality of data were checked for each demographic factor with socio-economic impact of tourism using Shapiro Wilk test, which shows data were not normally distributed. Hence, Independent-Samples Mann-Whitney U Test and Independent-Sample Kruskal-Wallis Test (i.e. a non-parametric test)

were used to see the impact of all hosts response on socio-economic impact of tourism in Arunachal Pradesh.

Analyzing dependent variable in regard to the respondents gender, age group, marital status, education, religion and occupation, it can be concluded that there are no significant differences between male and female, between age groups categories, between married and unmarried, between education categories, between religion categories and between occupation categories towards socio-economic impact of tourism (Table 5.5), as the differences between the average values of the dependent variable was not statistically significant (Sig. or P- value for gender = 0.675, age group = 0.983, marital status = 0.065, education = 0.722, religion = 0.370 and occupation = 0.416). Marital status variables may be considered as statistically significant (Sig. or P- value 0.065 at 10% margin of error).

**Table 5.5: Significant / P-Values of Socio-Economic Impact of Tourism on the Demographic Factors of Respondents of Arunachal Pradesh.**

Item	Significance					
	Gender	Age Group	Marital Status	Education	Religion	Occupation
Potential and Prospect Impact of Tourism Q5- Q13	<b>0.675</b>	<b>0.983</b>	<b>0.065</b>	<b>0.722</b>	<b>0.370</b>	<b>0.416</b>

Fig.5.1 shows the graphical presentation between socio-economic impact score and gender under the Independent-Sample Mann-Whitney U test, a non-parametric test. Mean rank for the two groups tested (i.e., the Male and Female) shows that male group having the higher mean rank having the more socio-economic impact of tourism as compared to female. Above table 5.5 shows us the actual significance value of the test. From this significant value, it can be concluded that socio-economic impact of tourism in the gender (male & Female) was not found statistically significantly.

Fig.5.1: Socio-Economic Impact of Tourism with Gender

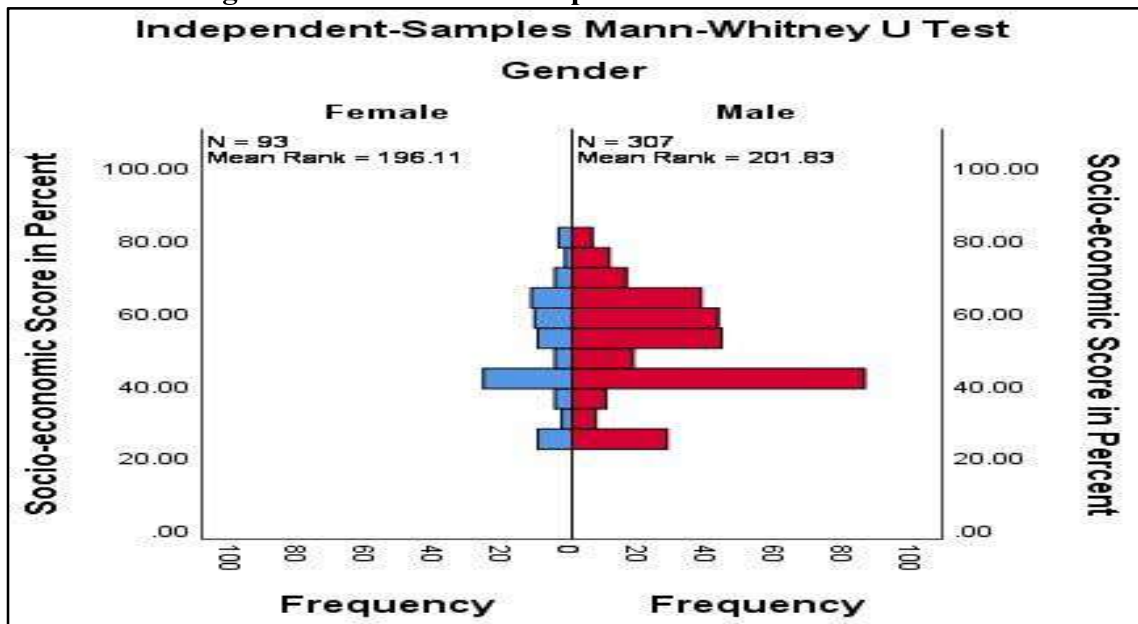


Table 5.6: Mean Rank of Age Group with Socio-Economic Impacts of Tourism.

Items	Ranks		
	Age in Group	N	Mean Rank
Socio-Economic Impact score in percent	<= 30 years	75	198.30
	31-40 years	200	200.92
	>40 years	125	201.15
	Total	400	

Fig.5.2: Socio-Economic Impact of Tourism with Age Group

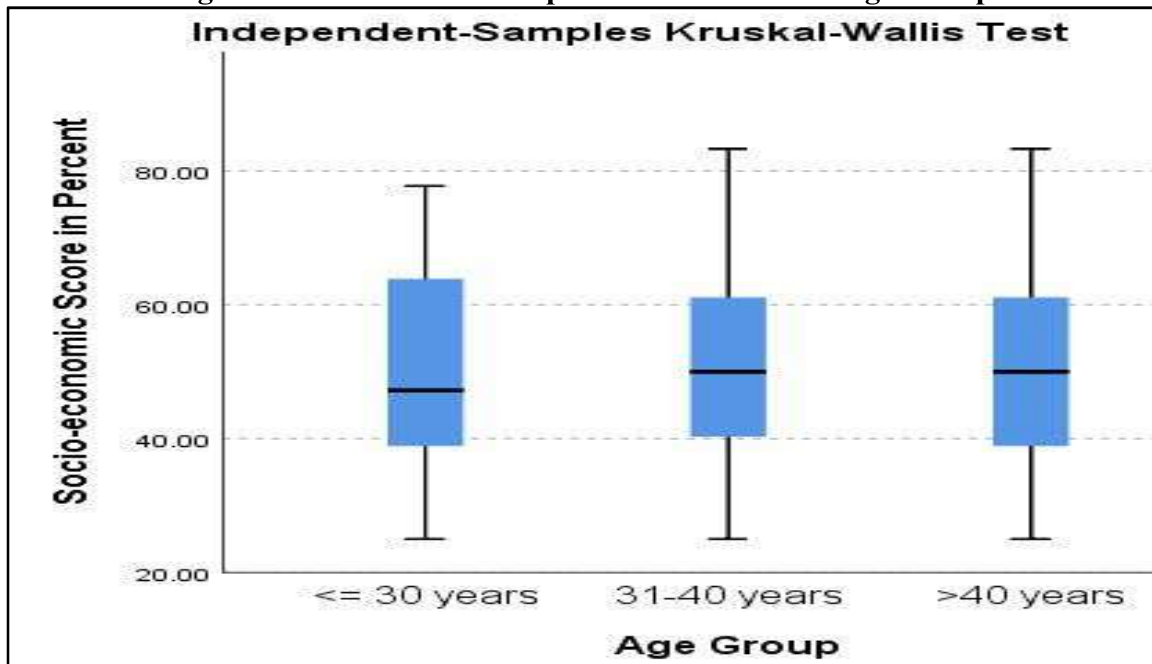
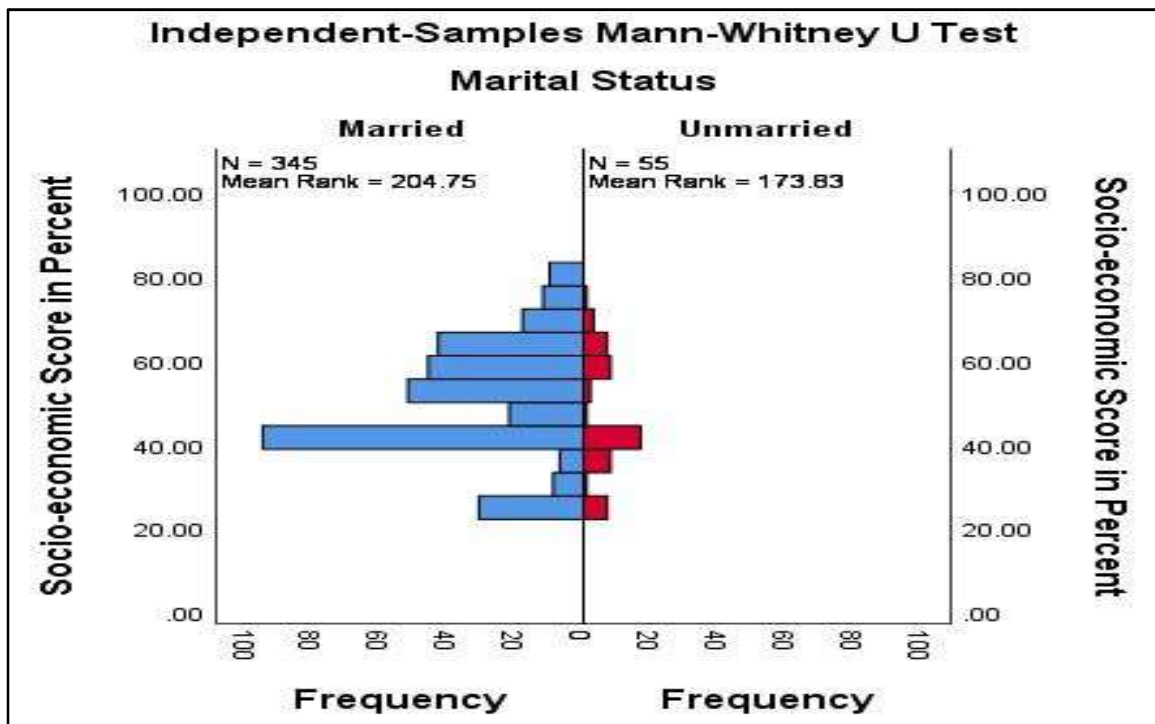


Table 5.6 shows mean rank for the age groups tested (i.e.,  $\leq 30$  years, 31-40 years and  $> 40$  years) by the Independent-Sample Kruskal-Wallis Test. This table indicates the age group  $> 40$  years has higher mean rank and having the higher socio-economic impact of tourism. Age 31-40 years had the second highest socio-economic impact of tourism followed by  $\leq 30$  years. Above table 5.5 shows us the significance value of the test. From this significant value, it can be concluded that socio-economic impact of tourism in the age group was not found statistically significantly. **Fig.5.2** (box plot) shows the distribution of socio-economic impact of tourism score among the age group as the output of the Independent-Sample Kruskal-Wallis Test.

**Fig.5.3: Socio-Economic Impact of Tourism with Marital Status**



**Fig.5.3** shows the graphical presentation of score of socio-economic impact with marital status by using non-parametric Independent-Sample Mann-Whitney U test. Mean rank for the two groups tested (i.e., the Married and Unmarried) indicates married category having the higher socio-economic impact. Above table 5.5 shows us the significance value of the test. From this significant value, it can be concluded that socio-economic

impact in the marital status (married and unmarried) was not found statistically significantly at 5% margin of error but it is significant at 10% margin of error.

**Table 5.7: Mean Rank of Education with Socio-Economic Impacts of Tourism.**

Items	Ranks		
	Education	N	Mean Rank
<b>Socio-Economic Impact score in percent</b>	Uneducated	3	270.67
	Intermediate	153	199.19
	Graduate	174	202.54
	Post Graduate & above	70	195.30
	<b>Total</b>	<b>400</b>	

**Fig.5.4: Socio-Economic Impact of Tourism with Education**

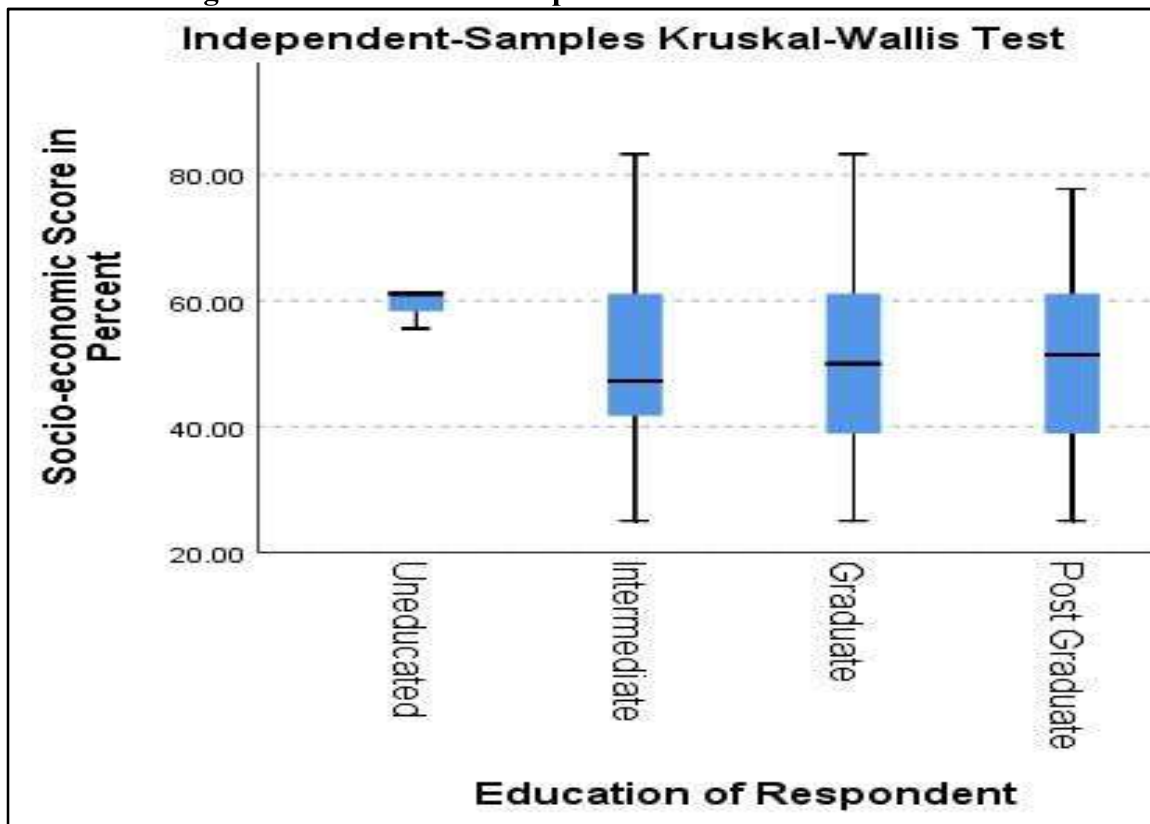


Table 5.7 shows mean rank for the education tested (i.e., uneducated, intermediate, graduation and post-graduation & above) by the Independent-Sample Kruskal-Wallis Test. Table indicates the education which has higher mean rank can be considered as having the higher socio-economic impact in percent. In this case, the uneducated had the highest socio-economic impact followed by graduation, intermediate and post-graduation & above. Above table 5.5 shows us the significance value of the test. From this

significant value, it can be concluded that, impact in the education was not found statistically significance. **Fig.5.4** (box plot) shows the distribution of socio-economic impact score among the education categories as the output of the Independent-Sample Kruskal-Wallis Test.

**Table 5.8: Mean Rank of Religion with Socio-Economic Impacts of Tourism.**

Items	Ranks		
	Religion	N	Mean Rank
Socio-Economic Impact score in percent	Donyi-Polo	245	199.84
	Buddhism	81	187.91
	Christian	60	223.04
	Hindu	13	196.15
	Islam	1	86.00
	<b>Total</b>	400	

**Fig.5.5: Socio-Economic Impact of Tourism with Religion**

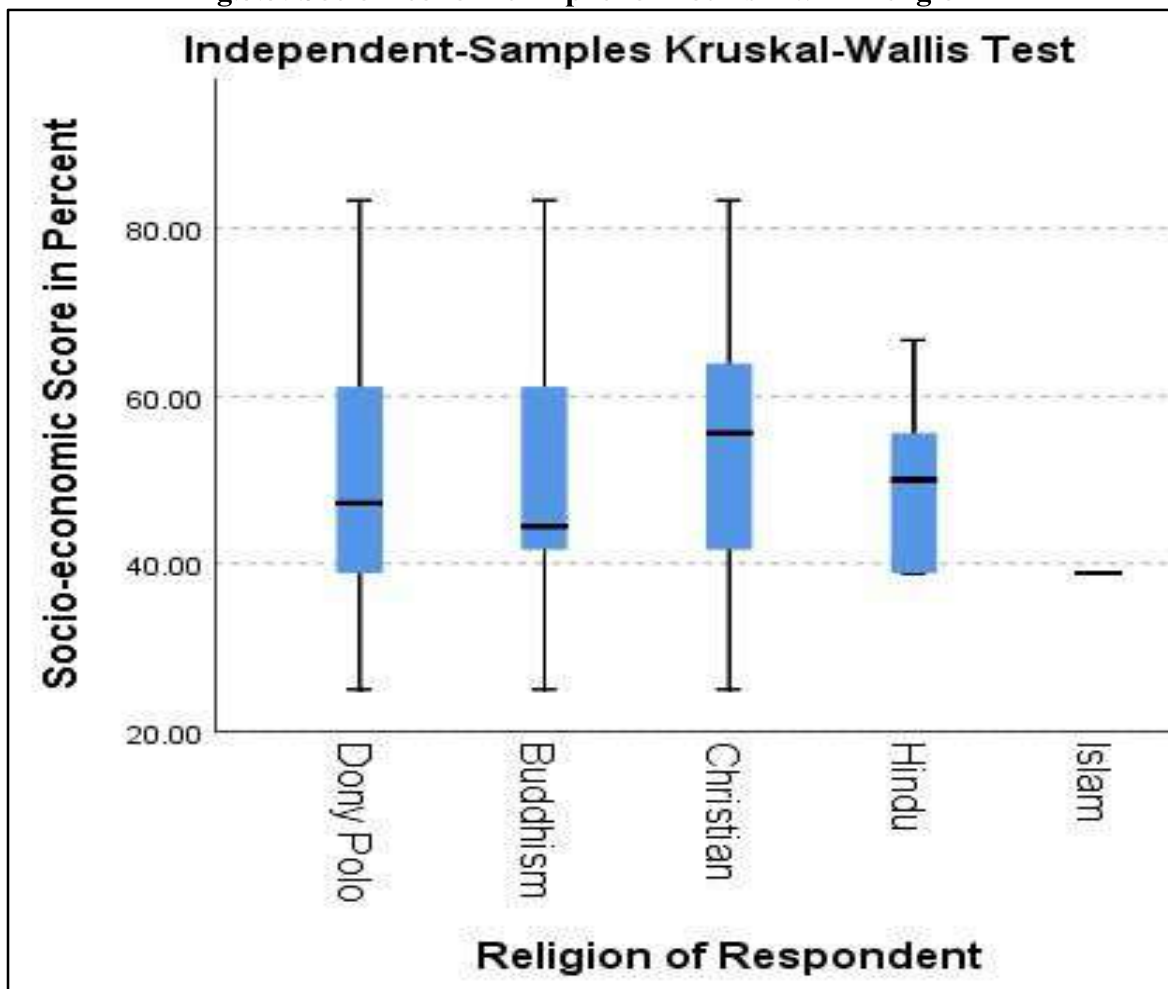


Table 5.8 shows mean rank for the religion tested (i.e.,Donyi-Polo, Buddhism, Christian. Hindu and Islam) by the Independent-Sample Kruskal-Wallis Test. Table shows the christian religion has higher mean rank and considered as having the higher socio-economic impact in percent. Above table 5.4 shows us the significance value of the test. From this significant value, it can be concluded that socio-economic impact in the religion was not found statistically significantly. **Fig.5.5** (box plot) shows the distribution of socio-economic impact score among the religion categories as the output of the Independent-Sample Kruskal-Wallis Test.

**Table 5.9 Mean Rank of Occupation with Socio-Economic Impacts of Tourism**

Items	Ranks		
	Occupation	N	Mean Rank
<b>Socio-Economic Impact score in percent</b>	Business	276	206.32
	Private Job	39	205.10
	Govt. Job	25	182.12
	Self-Employment	7	201.36
	Unemployment	53	175.35
	<b>Total</b>	<b>400</b>	

Table 5.9 shows mean rank for the occupation tested (i.e., Business, Private Job, Govt. Job, Self-employed and unemployed) by the Independent-Sample Kruskal-Wallis Test. Table shows the business has higher mean rank and considered as having the higher socio-economic impact. Above table 5.5 shows us the significance value of the test. From this significant value, it can be concluded that socio-cultural impact in the occupation was not found statistically significantly. **Fig.5.6** (box plot) shows the distribution of socio-cultural score among the occupation categories as the output of the Independent-Sample Kruskal-Wallis Test.

Fig.5.6: Socio-Economic Impact of Tourism with Occupation

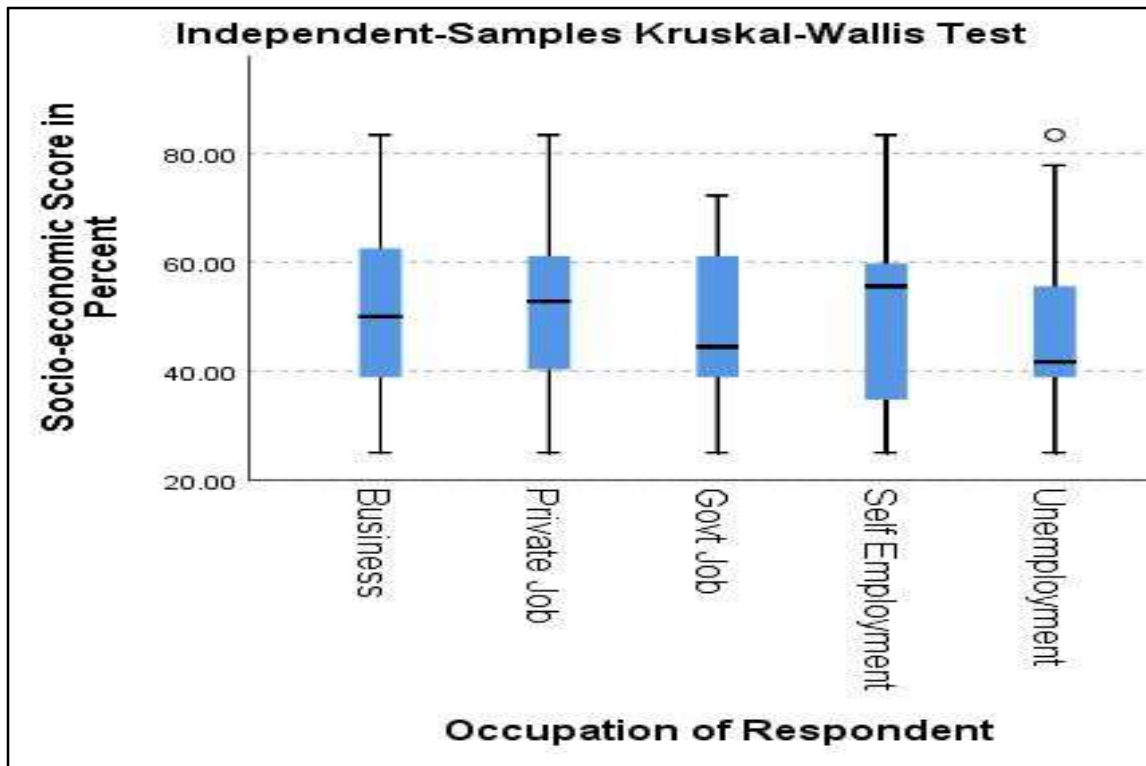


Fig.5.7: Pairwise comparisons of Occupation with Socio-Economic Impacts of Tourism

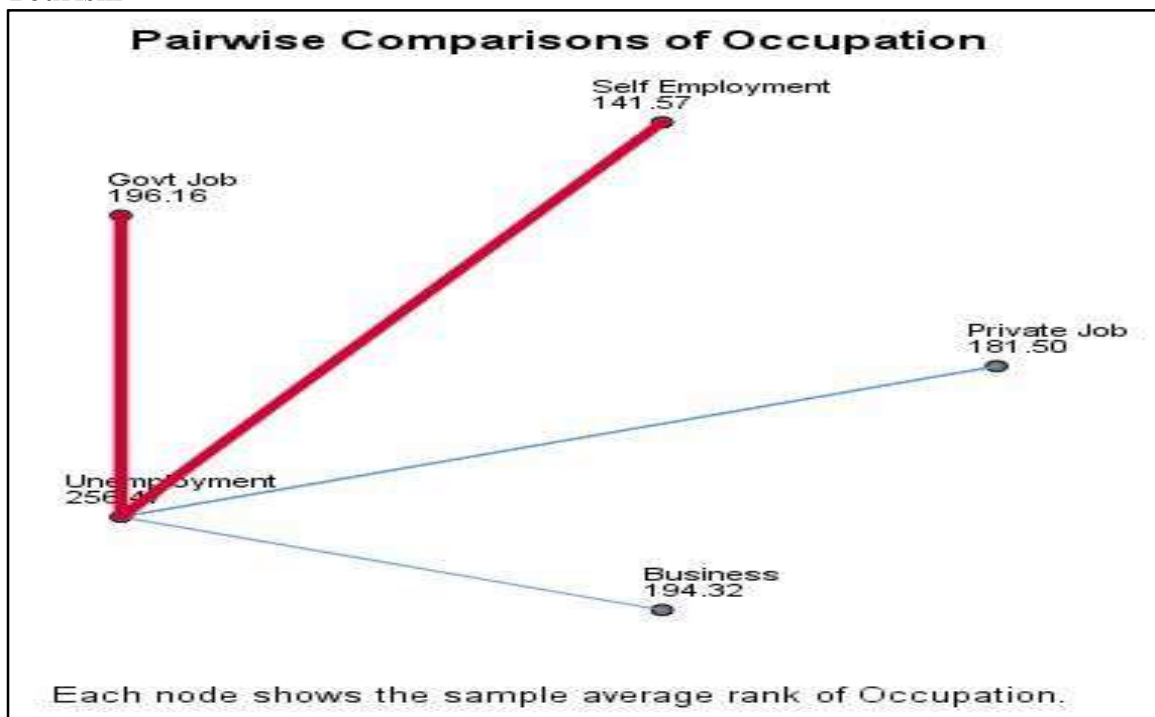


Figure 7 shows the pairwise comparisons within the occupation categories. Above figure shows, pairs govt. job and unemployment, self-employment and unemployment, Private job and unemployment and Business and unemployment have significant difference between the pairs. Significant/ P-value of these above pairs are .031, .013, .002 and .000 respectively.

## **5.5. THE ENVIRONMENTAL IMPACT OF TOURISM**

The quality of the environment, both natural and man-made, is essential to tourism. However, tourism's relationship with the environment is complex. It involves many activities that can have adverse environmental effects. Many of these impacts are linked with the construction of general infrastructure such as roads and airports, and of tourism facilities, including resorts, hotels, restaurants, shops, golf courses and marinas. The negative impacts of tourism development can gradually destroy the environmental resources on which it depends. On the other hand, tourism has the potential to create beneficial effects on the environment by contributing to environmental protection and conservation. It is a way to raise awareness of environmental values and it can serve as a tool to finance protection of natural areas and increase their economic importance (UNEP, 2001).<sup>13</sup> Negative impacts from tourism occur when the level of visitor use is greater than the environment's ability to cope with this use within the acceptable limits of change. Uncontrolled conventional tourism poses potential threats to many natural areas around the world. It can put enormous pressure on an area and lead to impacts such as soil erosion, increased pollution, discharges into the sea, natural habitat loss, increased pressure on endangered species and heightened vulnerability to forest fires. It often puts a strain on water resources, and it can force local populations to compete for the use of critical resources.<sup>13</sup>

As a result of a growing tourism industry, the impact it had on the environment became a major concern, since tourism depend on- the environment, consumers, and local natural and cultural resources. The impact of tourism occurs mainly in four broad categories: on natural ecosystem and resources-soil, fauna, flora; on the built environment; on local societies- culture, values and attitudes; and on local, regional and national economic (Coccossis, Edwards & Priestly, 1996).<sup>14</sup>

The status of the world environment, a growing, even accelerating concern that initially triggered publications such as Rachel Carson's *"Silent Spring"* were combined by the Brundtland Commission's *"Our Common Future"*. Here it is argued that the survival of the human species depends on a new adopted paradigm of economic development termed "sustainable development" (Aronsson<sup>15</sup>, 2000; McCool & Moisey<sup>16</sup>, 2001). This paradigm was somewhat different from previous paradigms in the sense that it calls for environmental protection and economic progress since it represented a combination of both, while attending to quality-of-life needs.

Clearly, sustainable tourism development must have in mind the environment and economic growth. Swartbrooke<sup>17</sup> (1999) and International Energy Agency<sup>18</sup> (2001) define sustainable tourism development as the form of tourism that meet the needs of the tourists, the tourism industry, and host communities today without compromising the ability of future generations to meet their own needs (Hobson & Essex, 2001).<sup>19</sup>

Briassouls<sup>20</sup> (2002) states that sustainable tourism development revolves around a central issue of how to manage the natural, built and socio-cultural resources of the host communities in order to meet the fundamental criteria of promoting their economic well-being, preserving their natural and socio-cultural capital achieving intra-and intergenerational equity in distribution of costs and benefits, securing their self-sufficiency and satisfying the needs of the tourists.

According to Murphy<sup>21</sup> (1995) tourism's interest in sustainable development is logical; this is one industry that sells the environment, both physically and humanity as its products. Tourism is environmentally dependent and the environment is vulnerable to the impact of tourism. It is to a large extent, a resource- based activity, interacting with natural systems and with the capacity to initiate far- reaching changes in the environment (Pigram, 1995).<sup>22</sup> Sustainable tourism development embodies the interdependence of environmental, socioeconomic issues and politics. For successful sustainable tourism development, such interdependence should be taken into consideration (Myburgh&Saayman, 1999).<sup>23</sup>

Iaonnides<sup>24</sup> (2001) says that to achieve a true sustainable development, communities must find a delicate balance between conflicting economic, environmental and socially equitable objectives.

## 5.6 ENVIRONMENTAL IMPACT INDICATORS OF TOURISM

For the assessment of environmental impacts of tourism on the indigenous people residing in the Arunachal Pradesh, following indicators has been taken into account:

1. Over exploitation of natural resources of the state.
2. Overcrowding and congestion.
3. Increase in environmental pollution.
4. Increase in the problems of sewage and garbage disposal.

## 5.7 HOSTS RESPONSE ON ENVIRONMENTAL IMPACT OF TOURISM

In this study 57.8 per cent of the host choose to be in the disagreement part of the scale when they were asked ‘Tourism leads to overexploitation of natural resources’ and 36 per cent strongly disagreed while 3.8 per cent agreed and 10 per cent strongly agreed when answering the same question.

<b>Table: 5.10: Hosts Response on Environmental Impact of Tourism in Arunachal Pradesh</b>				
Sl. No.	Questions	Respondents	Frequency (N=400)	Percent
1.	<b>Tourism leads to overexploitation of natural resources</b>	Agree	15	3.8
		Strongly Agree	10	10
		Disagree	231	57.8
		Strongly Disagree	144	36.0
2.	<b>Tourism leads to overcrowding and congestion</b>	Agree	4	1
		Strongly Agree	3	0.8
		Disagree	317	79.3
		Strongly Disagree	76	19
3.	<b>Tourism industries lead to increase in environmental pollution</b>	Agree	10	2.5
		Strongly Agree	6	1.5
		Disagree	271	67.8
		Strongly Disagree	113	28.2
4.	<b>Tourism industry leads increase in the problems of sewage and garbage disposal.</b>	Agree	4	1
		Strongly Agree	0	0.0
		Disagree	315	78.8
		Strongly Disagree	81	20.3

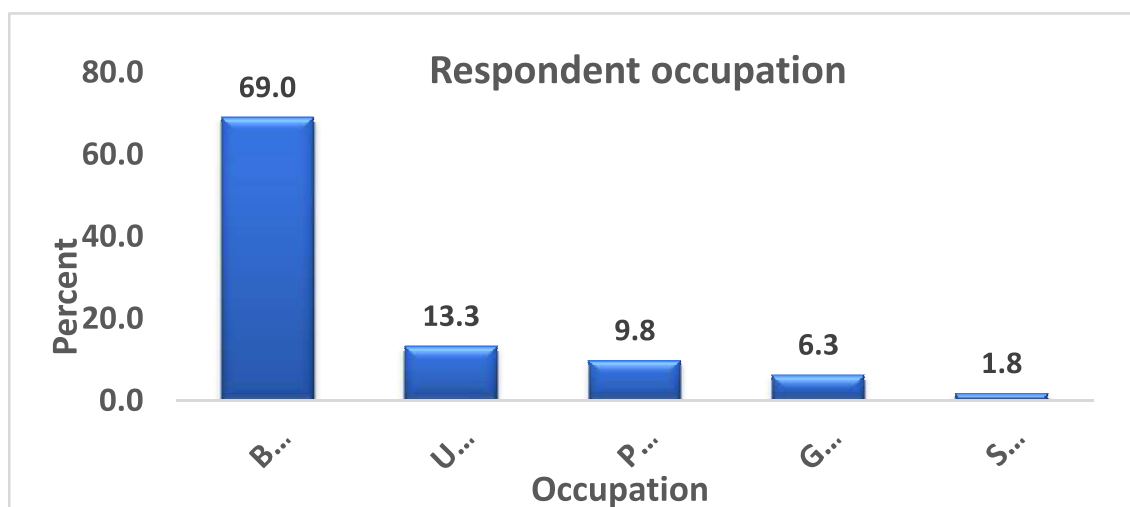
Source: Survey Data, 2017-2019

79.3 per cent of the host choose to be in the disagreement part of the scale when they were asked ‘Tourism leads to overcrowding and congestion’ and 19 per cent strongly disagreed while 1 per cent agreed and 0.8 per cent strongly agreed when answering the same question.

67.8 per cent of the host choose to be in the disagreement part of the scale when they were asked ‘Tourism leads to environmental pollution’ and 28.2 per cent strongly disagreed while 2.5 per cent agreed and 1.5 per cent strongly agreed when answering the same question.

78.8 per cent of the host choose to be in the disagreement part of the scale when they were asked ‘Tourism leads to increase in the problem of sewage and garbage disposal’ and 20.3 per cent strongly disagreed while only 1 per cent agreed when answering the same question.

**Fig: occupation of the syrveyed respondent**



## **5. 8: ANALYSIS OF ENVIRONMENTAL IMPACT OF TOURISM WITH DEMOGRAPHIC FACTORS**

A total 4 questions (i.e. Q. No. 1 to 4) were asked in respect of environmental impact of tourism in Arunachal Pradesh. Responses of each question were measured on a four-point Likert scale, such as agree, strongly agree, disagree and strongly disagree. At the time of analysis these responses were further recoded in numbers. agree assigned minimum number as 1, strongly agree as 2, disagree as 3 and strongly disagree maximum number as 4. To see the impact of all hosts' response on environmental impact of tourism, a score

was developed in percentage by combining all aforesaid questions. Significant difference was assessed among each categories of demographic factors. Normality of data were also checked stated in socio-economic section. Again used Independent-Samples Mann-Whitney U Test and Independent-Sample Kruskal-Wallis Test to see the impact of all hosts response on environmental impact of tourism in Arunachal Pradesh.

Analysis of data indicate that the demographic variables like gender, marital status and religion were not related to the environmental impact of tourism, while age group, education and occupation found related. Analyzing dependent variable in regard to the respondent's gender, marital status and religion, it can be concluded that there are no significant differences between male and female, between married and unmarried and between religion categories towards environmental impact of tourism (Table 5.10), as the differences between the average values of the dependent variable was not statistically significant (Sig. or P- value for gender = 0.750, marital status = 0.768 and religion = 0.313). On the other hand, age group, education variables and occupation variables were found statistically significant (Sig. or P- value for age group = 0.065 at 10% margin of error, education = 0.038 and occupation = 0.029 at 5% level of significance).

**Table 5.10: Significant / P-Values of Potential and Prospect Impact of Tourism on the Demographic Factors of Respondents of Arunachal Pradesh.**

Item	Significance					
	Gender	Age Group	Marital Status	Education	Religion	Occupation
potential and prospect impact of tourism <b>Q1- Q4</b>	<b>0.750</b>	<b>0.065</b>	<b>0.768</b>	<b>0.038</b>	<b>0.313</b>	<b>0.029</b>

**Fig.5.8: Environmental Impact of Tourism with Gender**

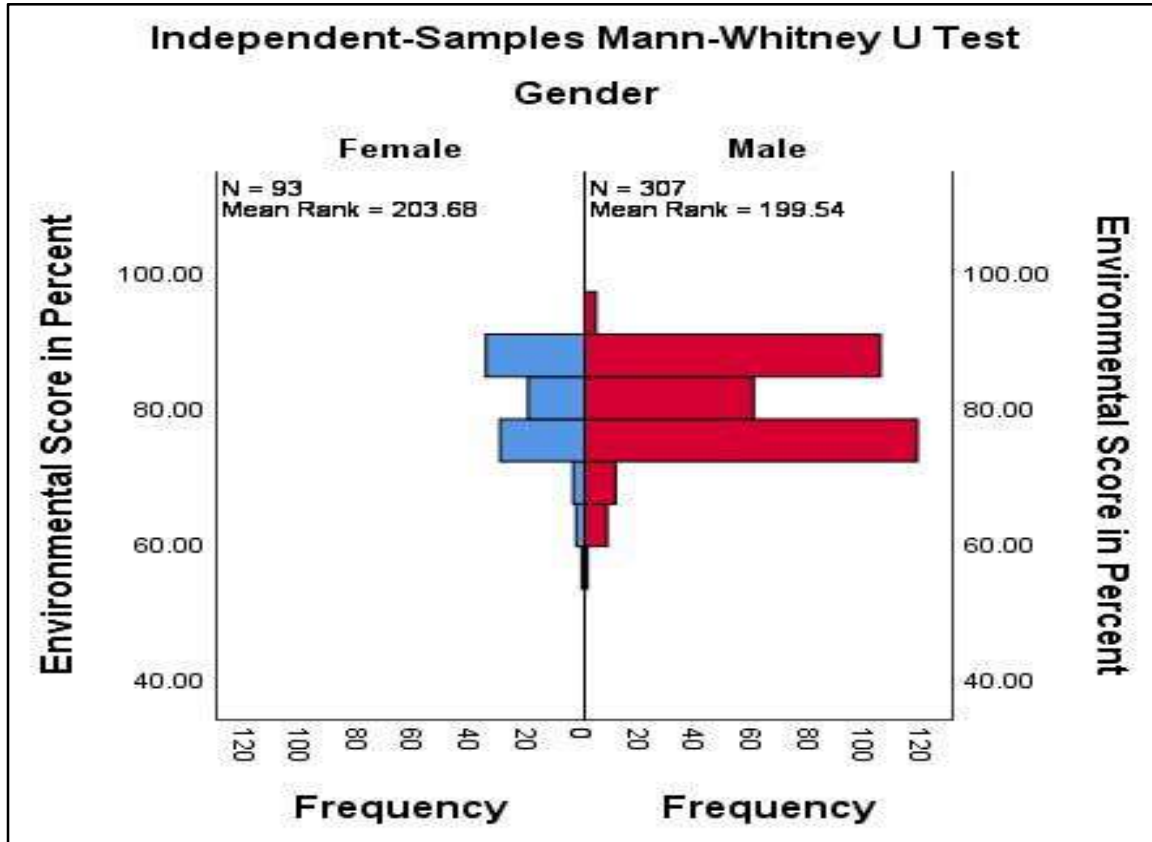


Fig.5.8 shows the output of the Independent-Sample Mann-Whitney U test, a non-parametric test. Mean rank for the two groups tested (i.e., the Male and Female) shows that female group having the higher rank, hence having the more environmental impact of tourism. Above table 5.10 shows us the actual significance value of the test. From this significant value, it can be concluded that environmental impact of tourism in the gender (male & Female) was not found statistically significantly.

**Table 5.11: Mean Rank of Age Group with Environmental Impacts of Tourism.**

Items	Ranks		
	Age in Group	N	Mean Rank
Environmental Impact score in percent	<= 30 years	75	202.99
	31-40 years	200	188.75
	>40 years	125	217.80
	<b>Total</b>	<b>400</b>	

**Fig.5.9: Environmental Impact of Tourism with Age Group**

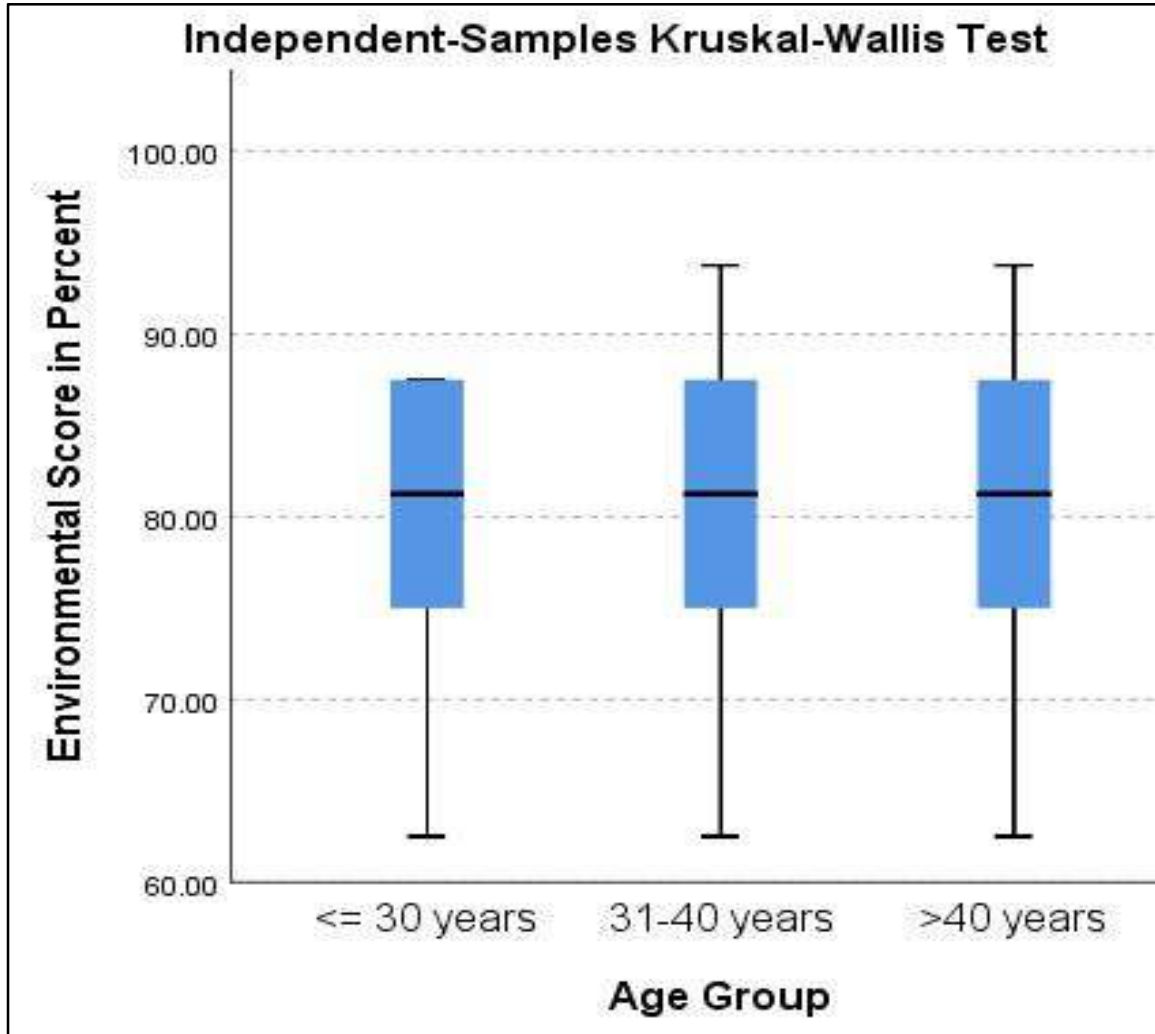
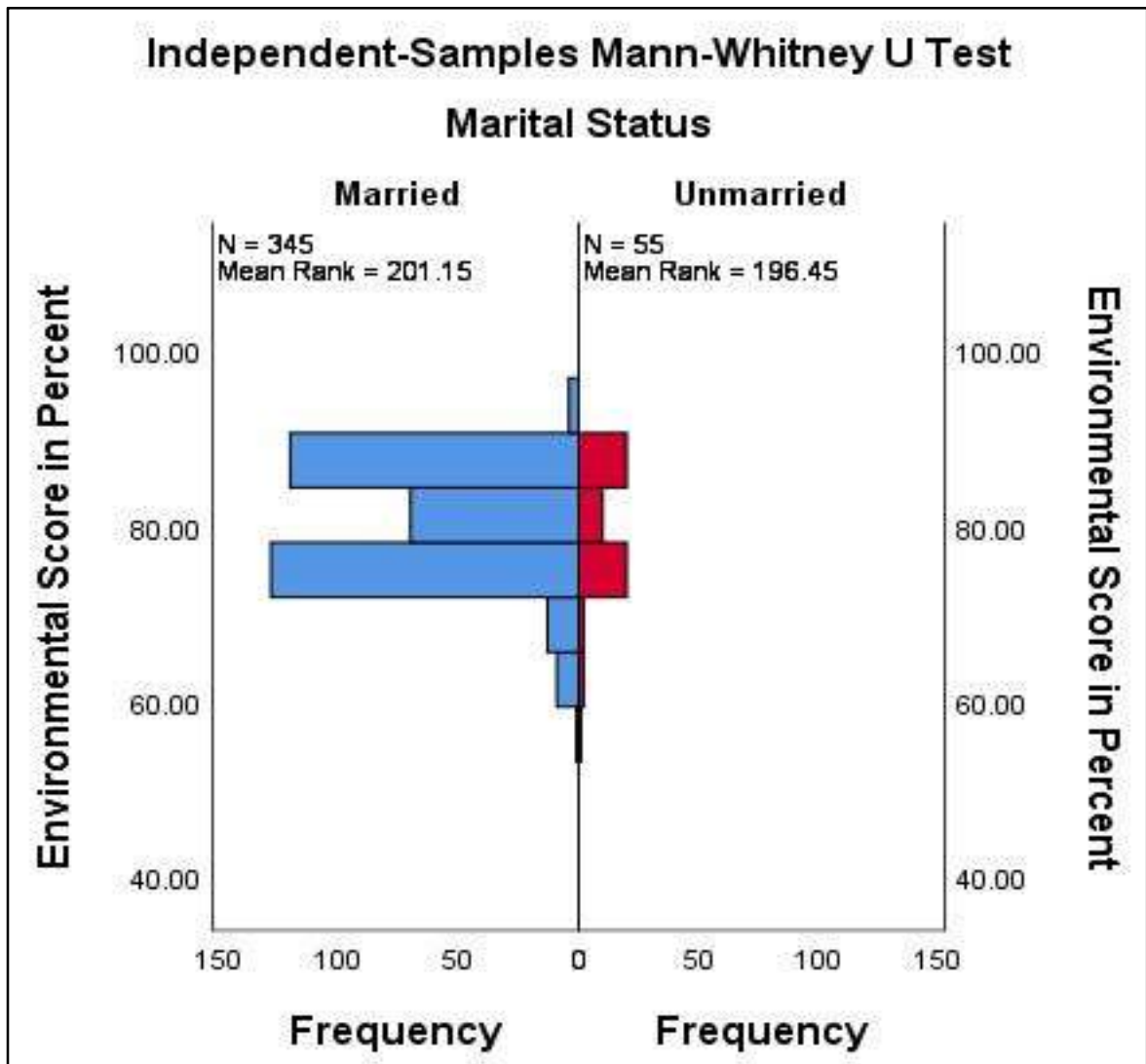


Table 5.11 shows mean rank for the age groups tested (i.e.,  $\leq 30$  years, 31-40 years and  $> 40$  years) by the Independent-Sample Kruskal-Wallis Test. This table indicates the age group  $>40$  years has higher mean rank and having the higher environmental impact of tourism. Age  $\leq 30$  years had the second highest potential and prospect impact of tourism followed by 31-40 years. Above table 5.10 shows us the significance value of the test. From this significant value, it can be concluded that environmental impact of tourism in the age group was found statistically significantly ( $P\text{-value} = 0.065$  at 10% level of significance). **Fig.5.9** (box plot) shows the distribution of environmental impact of tourism score among the age group as the output of the Independent-Sample Kruskal-Wallis Test.

**Fig.5.10: Environmental Impact of Tourism with Marital Status**



**Fig.5.10** shows the graphical presentation of score of environmental impact with marital status by using non-parametric Independent-Sample Mann-Whitney U test. Mean rank for the two groups tested (i.e., the Married and Unmarried) indicates married category having the higher environmental impact. Above table 5.10 shows us the significance value of the test. From this significant value, it can be concluded that environmental impact in the marital status (married and unmarried) was not found statistically significantly.

**Table 5.12: Mean Rank of Education with Environmental Impacts of Tourism.**

Items	Ranks		
	Education	N	Mean Rank
Environmental Impact score in percent	Uneducated	3	102.50
	Intermediate	153	213.17
	Graduate	174	201.50
	Post Graduate & above	70	174.51
	<b>Total</b>	<b>400</b>	

**Fig.5.11: Environmental Impact of Tourism with Education**

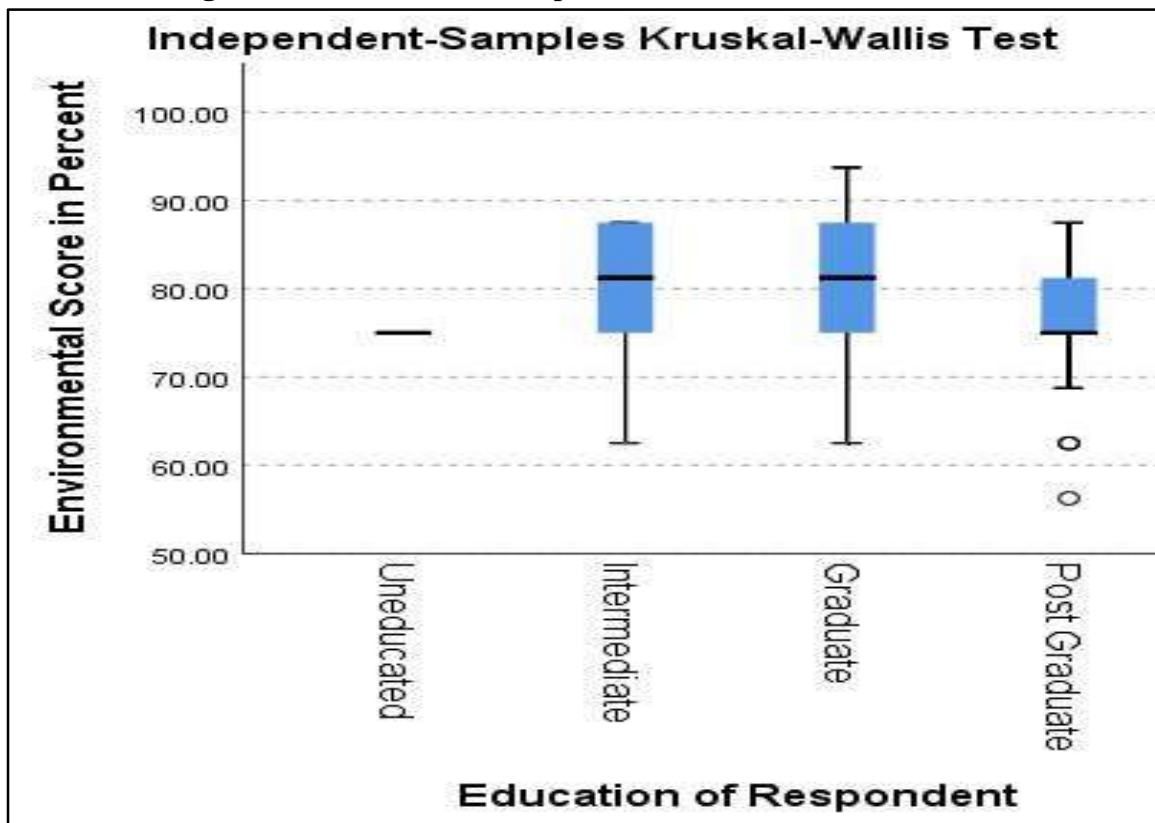


Table 5.12 shows mean rank for the education tested (i.e., uneducated, intermediate, graduation and post-graduation & above) by the Independent-Sample Kruskal-Wallis Test. Table indicates the education which has higher mean rank can be considered as having the higher environmental impact in percent. In this case, the intermediate had the highest environmental impact followed by graduation, post-graduation & above and uneducated. Above table-5.10 shows us the significance value of the test. From this significant value, it can be concluded that environmental impact in the education was found statistically significantly at 5% level of significance. **Fig.5.11** (box plot) shows the

distribution of environmental impact score among the education categories as the output of the Independent-Sample Kruskal-Wallis Test.

**Fig.5.12: Pairwise comparisons of Education categories with Environmental Impact of Tourism**

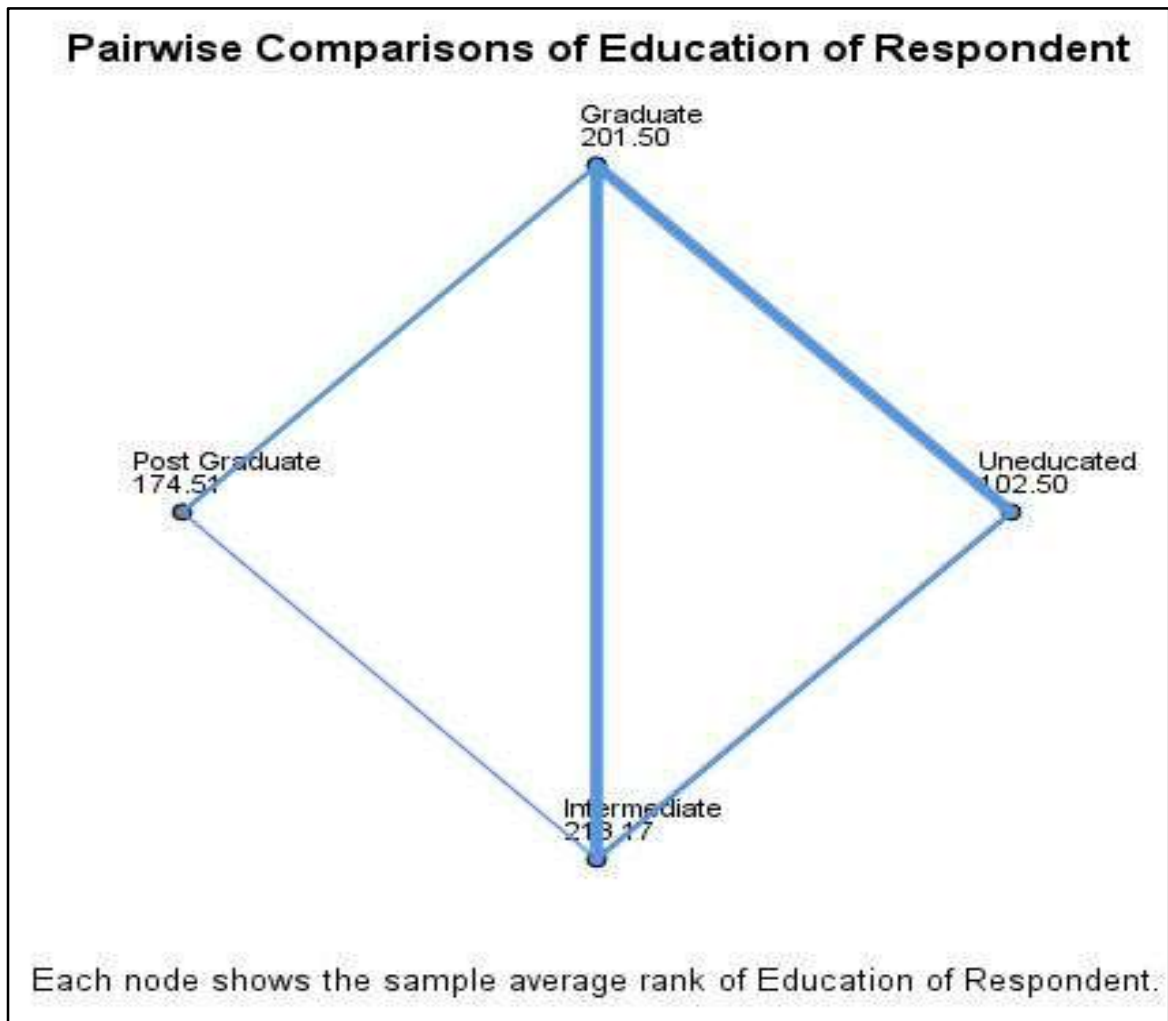


Figure 5.12 shows the pairwise comparisons within the education categories. Above figure shows, pairs postgraduate & above – intermediate (p-value 0.014), post-graduate - graduate (P-value 0.082) and uneducated – intermediate (p-value 0.083) having the significant difference between the pairs at 5% and 10% margin of error respectively.

**Table 5.13: Mean Rank of Religion with Environmental Impacts of Tourism.**

Items	Ranks		
	Religion	N	Mean Rank
Environmental Impact score in percent	Donyi Polo	245	198.94
	Buddhism	81	217.51
	Christian	60	184.86
	Hindu	13	186.38
	Islam	1	326.50
	<b>Total</b>	<b>400</b>	

**Fig.5.13: Environmental Impact of Tourism with Religion**

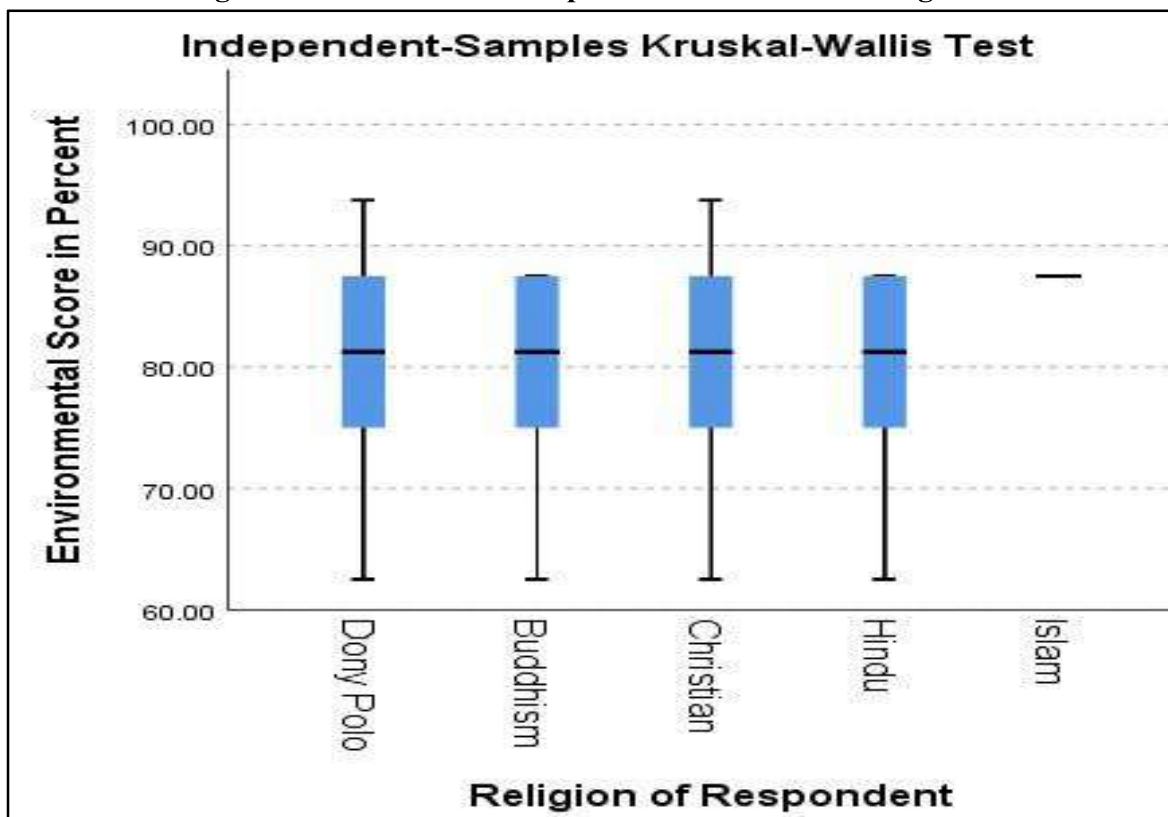


Table 5.13 shows mean rank for the religion tested (i.e.,DonyiPolo, Buddhism, Christian. Hindu and Islam) by the Independent-Sample Kruskal-Wallis Test. Table shows the Islam religion has higher mean rank and considered as having the higher environmental impact in percent followed by Buddhism, Donyi Polo, Hindu and Christian. Above table 5.10 shows us the significance value of the test. From this significant value, it can be concluded that environmental impact in the religion was found statistically significantly. **Fig.5.13** (box plot) shows the distribution of environmental impact score among the religion categories as the output of the Independent-Sample Kruskal-Wallis Test.

**Table 5.14: Mean Rank of occupation with environmental impacts of tourism.**

Items	Ranks		
	Occupation	N	Mean Rank
Environmental Impact score in percent	Business	276	209.49
	Private Job	39	153.32
	Govt. Job	25	185.38
	Self-Employment	7	154.86
	Unemployment	53	201.58
	<b>Total</b>	<b>400</b>	

**Fig.5.14: Environmental Impact of Tourism with Occupation**

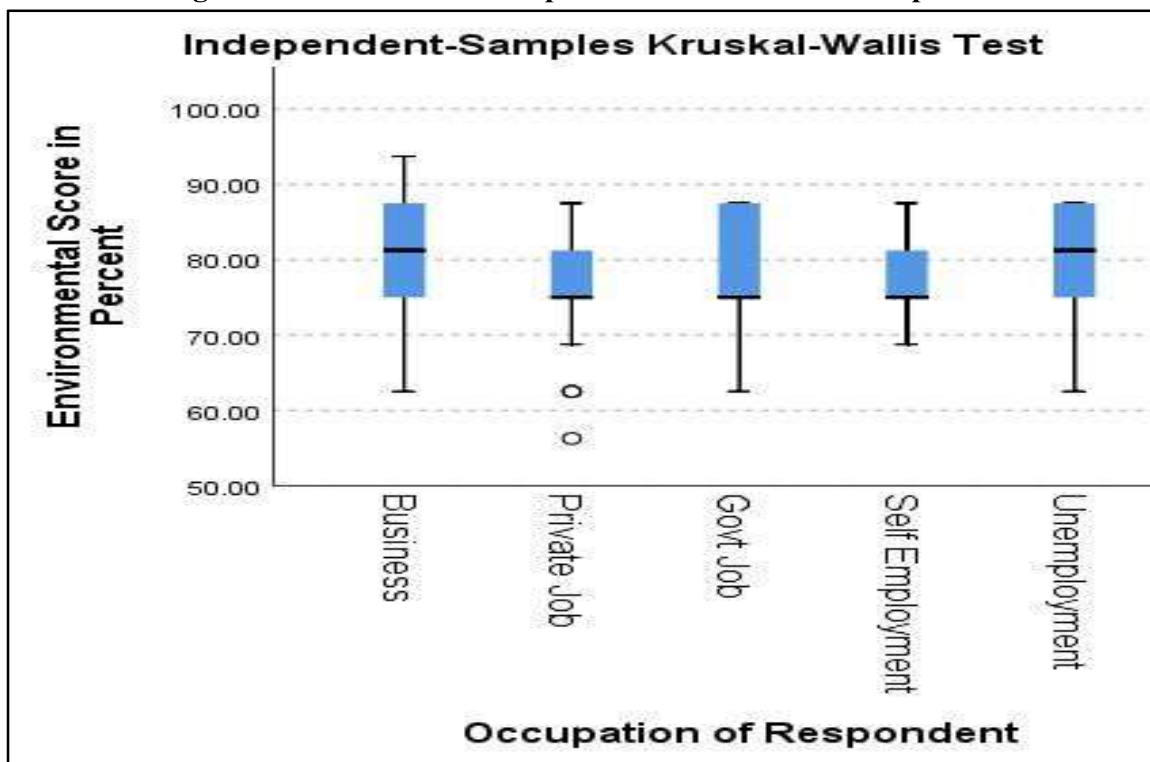


Table 5.14-shows mean rank for the occupation tested (i.e., Business, Private Job, Govt. Job, Self-employed and unemployed) by the Independent-Sample Kruskal-Wallis Test. Table shows the business has higher mean rank and considered as having the higher potential and prospect impact in percent as compared to other occupation categories. Above table 5.10 shows us the significance value of the test. From this significant value, it can be concluded that environmental impact in the occupation was found statistically significantly. **Fig.5.14** (box plot) shows the distribution of environmental impact score

with the occupation categories as the output of the Independent-Sample Kruskal-Wallis Test.

**Fig.5.15: Pairwise comparisons of Occupation category with Environmental Impact of Tourism.**

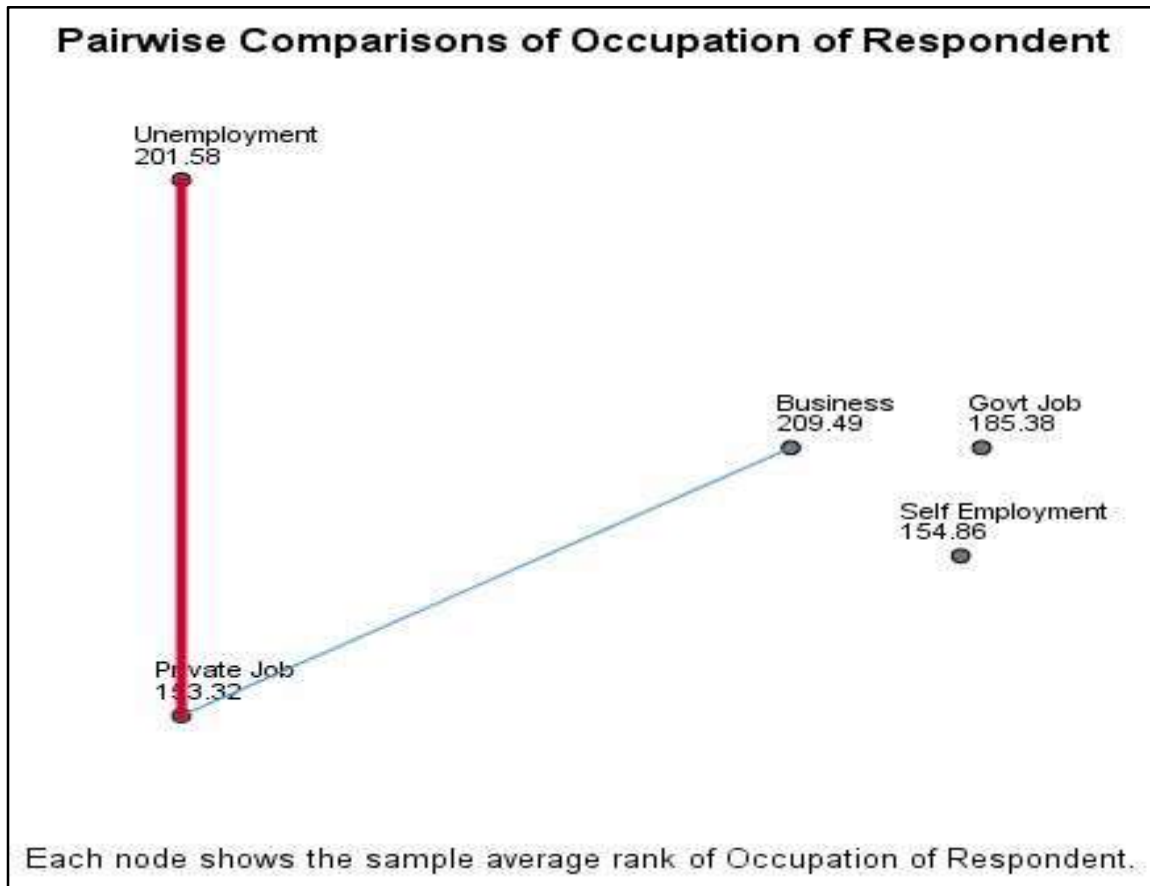


Figure 5.15 shows the pairwise comparisons within the occupation categories. Above figure shows, pairs private job - business ( $p\text{-value} = 0.003$ ) and Private Job-unemployment ( $p\text{-value} = 0.037$ ) has significant difference between the pairs respectively.

## REFERENCES

1. UNEP, (2002). World Economic and Social Survey 2002 (Sales No. E.02.II.C.1), New York, UN
2. WTTC. *Travel & Tourism: Global Economic Impact & Issues 2018*; World Travel and Tourism Council: London, UK, 2018.
3. Lin, L.; Mao, P.C. Food for memories and culture—A content analysis study of food specialties and souvenirs. *J. Hosp. Tour. Manag.* **2015**, *22*, 19–29.
4. Pappas, N. Hosting mega events: Londoners' support of the 2012 Olympics. *J. Hosp. Tour. Manag.* **2014**, *21*, 10–17.
5. Ryan, C. *Recreational Tourism: Demand and Impacts*; Channel View Publications: Bristol, UK, 2003; Volume 11.
6. Zaei, M.E.; Zaei, M.E. The impacts of tourism industry on host community. *Eur. J. Tour. Hosp. Res.* **2013**, *1*, 12–21.
7. Howell, B.J. 2002. Culture, Environment and Conservation in the Appalachian South.
8. Van Harsel, J. 1994. *Tourism; An Explanation*. Englehood Cliffs: Prentice Hall.
9. Page, S.J. 2005. *Tourism Management: Managing for Change*. New York: Elsevier Butterworth Heinemann.
10. Mbaiwa, J.C. 2003. *The socio-economic and environmental impacts of Tourism on the Okavango Delta*. Maun: Harry Oppenheimer Okavango Delta Research Centre.
11. Zupan, S. 2003. *Ecotourism in Croatian National Park and the PAN Parks Potentials*. Buda Pest: Central University.
12. Wall, G., & Mathieson, A. 2006. *Tourism Change, Impacts and Opportunities*. Cape Town: Pearson, Prentice Hall.
13. United Nations Environment Programme (UNEP), 2001  
<https://www.gdrc.org/uem/eco-tour/envi/index.html>
14. Coccossis, H., Edwards, J.A. & Priestly, G.K. 1996. *Sustainable Tourism: European Experiences*. Guilford: Biddles.
15. Aronsson, L. 2000. *The Development of Sustainable Tourism*. New York: Continuum.

16. McCool, S.F. & Moisey, R.N. (eds). 2001. *Introduction: Pathways and Pitfalls in the Search for Sustainable Tourism*. New York: CABI Publications.
17. Swartbrooke, J. 1999. *Sustainable Tourism Management*. New York: Cabi Pub.
18. IEA (International Energy Agency) 2001. *Towards a Sustainable Energy Future*: OECD.
19. Hobson, K. & Essex, 2001. Sustainable Tourism: A View from Accommodation Businesses. *Service Industry Journal*. 21(4), 133-146 Chicago. University of Illinois Press.
20. Briassoulis, H. 2002. *Sustainable Tourism and the Question of the Commons*. *Annals of Tourism Research*, 29(4), 1065-1085.
21. Murphy, P. 1995. *Tourism: A Community Approach*: New York: Methen.
22. Pigram, J.J. 1995. *Resources Constraints on Tourism: Water Resources and Sustainability*. London: Routledge.
23. Myburgh, E. & Saayman, M. 1999. *Ecotourism in Action: Practical Guidelines and Principles*. Potchefstroom: Leisure Consultants and Publications.
24. Ioannides, D. 2001. *Sustainability Development and Shifting Attitudes of Tourism Stakeholders: Toward a Dynamic Framework*. New York: CABI Publishing.