

Exploring the Environmental Tourism Potentials in Mubi Town, Adamawa State Nigeria

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ABSTRACT

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The study aims to assess the environmental tourism potentials of Mubi Town Adamawa state, Nigeria with the view to make recommendations. The study employed both spatial and quantitative data. The spatial data involves the geographical information system Arc GIS 10.3, and remote sensing used for location map generation. The quantitative data was generated from one hundred structured questionnaires administered to the sampled populations. A systematic random sampling technique was employed for the questionnaire administration. This is because it allows all individual members to be chosen for the administration. Observation and photographing were conducted as part of the data collection. Descriptive statistics were utilized for correlating Environmental Tourism Potential (ETP) and Physical Tourism Potential (PTP). The correlation analysis between Environmental Tourism Potentials (ETP) indicates a strong correlation indicated a significant perfect and positive correlation of 0.01 at 2 Tailed. Additionally, the respondents' perceptions regarding the environmental tourism potentials were ranked according to a score point to get the results of the prioritized environmental tourism products. The findings demonstrate that the mountains and the hills give a good scenario as the first in the raking; good and conducive weather conditions as the second. At the same time, the attractive natural landscape is the third. Conclusively, if the potentials are appropriately planned, developed, and managed, it will attract both local and foreign tourists to come to Mubi town. Two recommendations are proposed development plan preparation and preservation and conservation of the identified environmental tourism potentials.

Contribution/Originality: This research contributes to the literature on the environmental tourism potentials of Mubi Town in Adamawa State, Nigeria.

1. Introduction

Jaffar, Riaga, Paul, and Saqalain (2021) considered (a) Tourism and travel great contribution to services industry globally, (b) Tourism internationally and regionally contribution to services industry. The tourism sector globally experience a cuts down of 2.86 trillion US dollars and it accounts for 50% revenue lost as covid-19 impact. Ali (2020) revealed that tourism plays a key role in city formation, this is because of its economic and social contribution. Satya and Rennka (2020), before the pandemic, the tourism sector accounts for the fastest globally growing economy through job creation and revenue. Asad (2020), the scholars examined Covid-19 pandemic impacts and its survival strategies in the business tourism sector market. This specifically referenced the example of the UAE MICE tourism industry. Anna, Lisa, and Michelle (2016) showed indigenous sustainable tourism argued that tourism is an active tool that could be used to realize sustainable indigenous development. Stefan and Paul (2015) explained tourism encompasses both local and international trips made purposely for leisure either to visit friends, families, or for business purposes. Sunlu (2003), environmental impacts of tourism are very obvious through (a) Construction processes of infrastructure such as roads, airports, seaports, (b) The main tourist sites and destinations such as restaurants, resorts, shops, golf, and marinas. The tourism industry is therefore damaging the natural environment on which all its activities solely rely. The damage involves depletion of natural resources such as water resources, local resources, and land degradation. It covers air and noise pollution, solid waste littering, sewer, and aesthetic pollution (Sunlu, 2003). Hashim, Zainora, and Abdul Aziz (2018) uncovered that the study investigates the physical tourism potentials of Mubi Town Adamawa state Nigeria

2. Literature Review

2.1. Tourism and Environment

Rafat and Brigita (2021), the tourism industry is environmentally polluting transportation which accounts for 75% carbon emission and 25% carbon emission comes from tourists' accommodations. Ilan (2021) opined tourism resources influence and are being influenced by island sustainability. Emilie (2020) indicated tourism Research is toward environmental psychology distress reference to climate change. Alan (2013), tourists' gazes include environmental gaze, reverential gaze, mediatized gaze, anthropological gaze, and family gaze. Fatemeh, Hassan, Farshid, and Amir (2021) explained that environmental comfort creation of local green space leads to the users' mood improvement, friendliness, place attachments, and social interaction. Nasimi and Mehdi (2021) uncovered environmental impacts of building energy usage are evaluated under three stages (1) Green building construction stage, (2) Building operation stage, (3) Building performance state.

Nathaniel and Lydia (2016) disclosed that it is argued recently that there is a disconnection between behavioral and environmental beliefs concerning hospitality products consumptions. David (2011) evaluated the interaction between tourism and climate change and further that, climate change is not connected with sociocultural and environmental sustainability. Hashim (2018) commented that tourism development brought both positive and negative environmental consequences. Sara (2020) uncovered that the tourism industry's environmental unsustainability received very hot debate recently. The debate uncovers the environmental impacts of the industry

through human activities (Sunlu, 2003), environmental quality of both man-made and natural are essential for tourism, although tourism relation with the environment is very complex, that is because of its significant environmental impacts and consequences. Mimi (2021) disclosed Caribbean islands that over-rely on tourism are facing challenges of climate change together with the pandemic of covid-19.

2.2. Environmental Tourism Potentials in Nations

Ahmad, Mastura, Mohamad, and Summaira (2021) evaluated cultural and natural tourists destination in the northern Malaysia hills as natural tourism site that attracts both international and local tourists. Malaysia National Tourism Policy 2020-2030 detailed the plan covers strategies with three pillars as competitiveness, sustainability, and inclusiveness (Ministry of Tourism, Art and Culture, 2020). The strategies of the handle government capacity strengthen tourism investment zone special creation, smart tourism embracing, demand sophistication enhancement, sustainable tourism response and practice, and human capital upskill. The Ministry of Tourism and Sports Thailand (2017), report covers the tourism vision of Thailand's 2036 and the strategy development road maps towards 2021.

2.3. Tourism Environmental Planning

Bas and Stuart (2007) dwelled on the application of the geographical information system (GIS) concept in sustainable tourism planning (STIP) consisting of transportation facilities and tourist attraction sites. Michelle, Racheal, and Richard (2021) uncovered successful sustainable tourism development is the focus of the study. Islands are special natural features globally with high tourists' economic activities. Aarni, Iis, Erin, Graham, and Lee (2020), study deeply utilized ground theory in the analysis. Sara (2020), study focused on how to minimize environmental damages through actively designing deliberately to environmental sustainability. Designing a tourism experience framework is to focus more friendly and environmentally through (a) Leveraging beliefs, (b) Leveraging social norms, (c) Increasing pleasure. UNWTO (2021) attempts to make tourism readily and inclusive available all through the most conducive ways. Margaret (2009), paper handled cosmopolitan practice as a mediating vision to the tourism industry to strongly build the distinction between friends and strangers.

Ulrika and Shuangq (2021), scholars argued that covid-19 will result to companies, individuals, and government to create new possible ways in-term of thinking behavior and operation towards sustainable development goals. Jannie (2016) revealed voluntourism focuses on the single, young together with college-aged. The study employed face-to-face interaction among the respondents' social groups. Mimi (2021), study deeply assessed how the Caribbean Island could be rebuilt in sustainable ways considering climate change and the covid-19 pandemic. Gogan, Aisha, and Justin (2021), the scholars proposed a thematic framework in response to post covid-19 tourism planning and development. Richard (1999) assessed the distinguishing factors between sustainable tourism and tourism development based on the desired principles of sustainable development. Bill, James, Bernard, and Graham (2017) appraised the journal of sustainable tourism on its 25th anniversary in its efforts towards sustainable tourism understanding and discussion. Xavier and Scott (2017) revealed marketing could effectively employ marketing techniques and skills for the sole purposes of more sustainable products through a behavioral change of persuasive methods of communication.

2.4. Tourism and Covid-19 Pandemic

Mary (2020) disclosed that the covid-19 pandemic caused border closed, airplanes render redundant, and quarantine greater than half of the world population. Rafat and Brigita (2021) stated that the covid-19 pandemic has hit socio-economic in all ramifications. The tourism sector is among the prime sector affected by the pandemic. Ulrika and Shuangq (2021) stated that two major indices were observed on tourists' decision and operation during covid-19 pandemic (a) Attitude of tourist to travel during covid-19, (b) Changes in values of tourists from covid-19. Sabrina (2020) covid-19 changed the international mobility direction, tourism, and leisure purposes for the future. OECD (2020) examined that pandemic affects the tourism ecosystem sector globally, therefore, the tourism economy globally is hit by the coronavirus pandemic. Ulrika and Shuangq (2021) commented that covid-19 is viewed and argued strongly as a great challenge to sustainability in the tourism industry. Pandemic sustainability needs to focus on collaboration, adaptability, flexibility, and cooperation. Sanjay (2020) assessed possible ways adventure tourism could respond after covid-19.

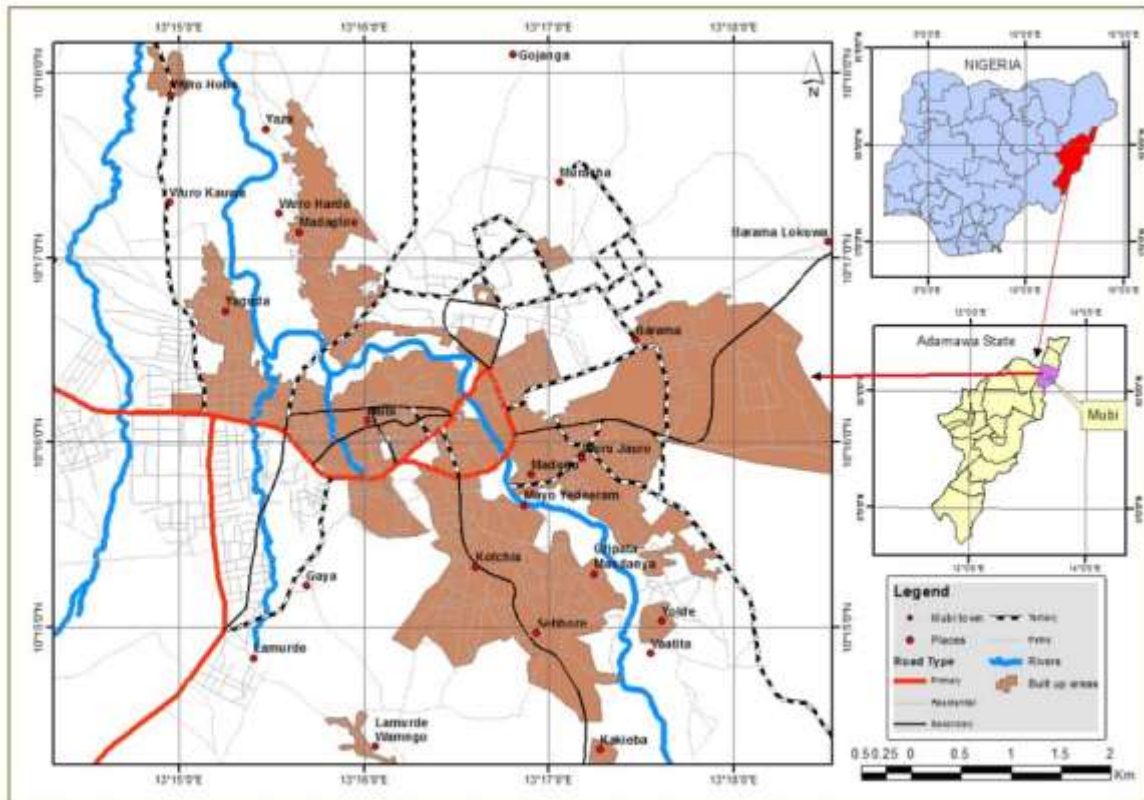
3. Research Method

The study employed temporal and quantitative data. The temporal involves the Arc. GIS.10.3 and Remote Sensing used for location map generations. The quantitative data was generated from one hundred structured questionnaires administered to the sampled populations. A systematic random sampling technique was employed for the questionnaire administration. This is because it allows all individual members to be chosen for the administration. Observation and photographing were conducted as part of the data collection. Descriptive statistics were utilized for the correlating Environmental Tourism Potential (ETP) and the Physical Tourism Potential (PTP).

3.1. Study Area

Hashim, Zainora, and Abdul Aziz (2018) stated that Mubi Town is located in the northern senatorial districts of Adamawa state, Nigeria geographically. Mubi lies on the river Yadzeran banks which bisect the town on the Western Flanks of Mandara Mountain. Mubi town is the second most significant town in the entire Adamawa State. Additionally, it is the most active commercial town in the state, it is a cosmopolitan border town as a gate of Tike international cattle market (Hashim, 2018). The most important landmarks of the town include His Royal Highness Emir of Mubi palace and the central mosque, Tike international cattle market and tertiary institution of federal polytechnic Mubi, Adamawa State University Mubi (Hashim, Umar, and Tinau, 2010). The Town has numerous environmental tourism potential which includes Gude mountain and hills, river Yedzeram, conducive weather, undisturbed natural landscape, vast agricultural land, overhead sun throughout the year, and annual rainfall duration. The major tribes of the Town are the Gude, Fulani, Jani, Pali and the major settlers are the Hausa, Shuwa Arabs, Kanuri among others (Hashim, 2018). Figure 1 demonstrates the geographical location of the study area.

Figure 1: Study Area



4. Results

Correlation analysis was used for statistical prediction of the environmental potentials as it is contained in the questionnaire. These correlations are intercorrelated between the Environmental Tourism Potentials (ETP) and Physical Tourism Potentials (PTP). ETP involves include Gude Mountain and Hills, River Yedzeram, conducive weather, Undisturbed natural landscape, vast agricultural land, overhead sun throughout the year, and annual rainfall duration.

4.1. Environmental Tourism Potentials (ETP) and Physical Tourism Potentials (PTP)

The analysis for the reliability test is carried out using Spearman correlation techniques between the various segments of the questionnaire. This is based on the respondents' responses to ascertain the level of reliability. The Table 1 indicates the descriptive statistics between, and Environmental Tourism Potentials (ETP) and Physical Tourism Potentials (PTP).

Table 1: Descriptive Statistics

	Mean	Std. Deviation	N
Mean of PTP	4.0329	.86358	100
Mean of ETP	3.7420	1.03095	100

(Source: Field survey, 2012)

The [Table 2](#) demonstrates the correlation is highly significant at (0.01, 2-Tailed). This means that the environmental tourism potential (PTP) in Mubi will play an integral role in the tourism potential of Mubi town.

Table 2: Correlations

		Mean of PTP	Mean of EE
Mean of PTP	Pearson Correlation	1	.975**
	Sig. (2-tailed)		.000
	N	100	100
Mean of ETP	Pearson Correlation	.975**	1
	Sig. (2-tailed)	.000	
	N	100	100

** . Correlation is significant at the 0.01 level (2-tailed).

(Source: Field survey, 2012)

4.2. Ranking of Environmental Tourism Potentials

This section tries to display the environmental elements such as weather conditions, natural landscape, vegetation cover, well-distributed Sunshine almost through the year, and the dried season wind. The section aims to assess the relationship between physical and cultural tourism potentials. Mountains and the Hills as environmental elements for tourism planning in Mubi maintain the highest score with exactly 407 while all other elements that can be seen in [Table 3](#) have their total score above 350 except the last element in the ranking table. [Table 3](#) shows the environmental tourism potentials ranking.

4.2.1. The Mountains and the Hills Give Good Scenario

Mountainous regions have been good sites for human habitation; Mubi town is not in isolation for the use of this precious endowed natural resource. Mubi town is blessed with hills and mountains that give the town a spectacular view at all seasons but specifically during the rainy seasons. The respondents judged the above statement by selecting the agreed section with exactly 86% while the remaining balance of 14% goes to the neutral and disagreed section. This indicates that the mountains and the hills give a good scenario in Mubi town and will assist in the planning and development of the potential. It is, therefore, worth visiting by both local and visiting tourists.

4.2.2. Good and Conducive Weather Conditions

Weather condition to some extent determines what man eats, what he wears, and even determine his behavior at a given time and location. The respondents generally accepted the above opinion where 79% of the responses constitutes the strongly agree and agree on sides while neutral and disagree cover only 21% if combined. This shows that Mubi has very good and conducive weather conditions that will play an attractive role in the planning and development of the tourism potential in the town. The town experienced hot or warm temperatures throughout the year.

Table 3: Environmental Tourism Potentials Respondents' Responses Ranking.

Agreements of environmental Tourism Potentials (PTP)	Strongly Agreed		Agreed		Neutral		Disagreed		Strongly Disagreed		Total	
	No. %	Scores	No. %	Scores	No. %	Scores	No. %	Scores	No. %	Scores	No. %	Scores
The mountain and the hills give good scenario	38(38)	(190)	48(48)	(192)	9(9)	(27)	3(3)	(6)	2(2)	(4)	100 (100)	407
Mubi town has very good and conducive weather condition	38(38)	(190)	41(41)	(164)	5(5)	(15)	11(11)	(22)	5(5)	(11)	100 (100)	396
Rainfall is between April and December	28(28)	(140)	45(45)	(180)	15(15)	(45)	6(6)	(18)	6(6)	(18)	100 (100)	389
The natural landscape is preserved	27(27)	(135)	54(54)	(208)	13(13)	(36)	2(2)	(4)	4(4)	(9)	100 (100)	385
There is vast traditional agricultural land	29(29)	(145)	42(42)	(168)	18(18)	(54)	7(7)	(14)	4(4)	(8)	100 (100)	375
River Yadzaram bisect the town	26(26)	(130)	42(42)	(168)	18(18)	(54)	5(5)	(10)	8(8)	(17)	100 (100)	370
Over heads Sun is throughout the year	17(17)	(85)	38(38)	(172)	21(21)	(63)	15(15)	(30)	9(9)	(17)	100 (100)	359
The dry and harmattan seasoning is fascinating	14(14)	(70)	39(39)	(176)	26(26)	(78)	14(14)	(28)	7(7)	(15)	100 (100)	359
The vegetation is conserve	21(21)	(105)	37(37)	(148)	24(24)	(72)	14(14)	(28)	4(4)	(8)	100 (100)	357
Mubi environment is very clean and habitable	19(19)	(95)	37(37)	(148)	28(28)	(84)	9(9)	(18)	7(7)	(15)	100 (100)	322

4.2.3. The Natural Landscape is Attractive

Aesthetic and beauty of the natural environment is indeed a great asset for tourism planning and development. The [Table 3](#) explains that the potential receives 81% acceptance from the respondents while the remaining percentages are shared among neutral and disagree sides. This signifies that the natural landscape is attractive and therefore a good physical potential that will be very resourceful for the tourism planning and development in Mubi town. The landscape in Mubi town is a combination of the low undulating terrain and a series of the mountain range that gives the area a good scenario.

4.3. Environmental Quality Indicators Can Support Tourism in Mubi Town

Environmental quality is determined by three major elements which include: air quality, water quality, and noise level. This section tries to explore the extent of the qualities of the mentioned elements concerning their contribution to the tourism potentials in Mubi town. Modern cities face a lot of environmental problems such as air pollution, water contamination, and noise pollution. These environmental pollutions are the results of human activities in the cities and towns. For example, heavy industrial activities, construction of a physical structure, the emission of solar radiation by the buildings, and site clearance for development. This section tries to assess the extent to which Mubi town is polluted by human activities.

4.3.1. Good Air Quality with Minimum Pollution Particulates

Air is the major resource for the proper physiological function of the flora and fauna in the ecosystem. Therefore, the greatest resource a town can possess is good air quality. The respondents assessed Mubi air quality as excellent, this is because 85% of the respondents testify that, the air quality is absolutely good in Mubi town, this is the combination of both strongly agree and agree merged while the remaining 15% is for other options sum completely together. This shows that Mubi town has pollution-free air with excellent quality that can support tourism development in Mubi town. Pollution is the major source of discomfort to the urban dwellers, especially air pollution. Air pollution affects the respiratory system and it also causes the lung and other vital parts of the human body to malfunction. The level of pollution rates is determined by the questionnaires administered. 61% of respondents accept that the air in Mubi town is free from pollution, while 22% of the respondents only go to those that disagree with the statement and the neutral option maintains 17%. This shows that environmental quality elements are pollution-free in Mubi town. This is, therefore, a great asset for the tourism potentials planning and development.

4.3.2. Portable Water

The availability of abundant underground water in the Mubi town with very shallow water levels made water available in the town at all seasons. The respondents with agree sides are 73%. This is closely four times the neutral and disagrees section joined together. This indicates that the abundant portable water resources will support the tourism potentials planning and development. Water is the major resource required for

life. This is because it supports the activities of various land uses especially, residential, and industrial land uses to which the tourism sector belongs. In addition, the source of water for drinking and other uses is a significant factor to be considered in tourism planning. The judgment made by the respondents proves in no doubt that the water quality needs improvement in Mubi town. Though it is much abundant in the town, for proper planning and development of the sector in the area the quality needs improvement. Neutral retained the greatest percentage with 31% while disagree sections follow with 36% sum together but the agree sides remain closely with the exactly 33%. This demonstrates that water quality in Mubi town is in much abundance but needs improvement for the tourism planning.

4.3.3. Low Noise Level

Noise is any unwanted sound that can cause discomfort to the physiology of an individual. This is judged by the questionnaire administered during the field survey. The survey reveals that the noise level in Mubi town is very low which constitutes 72% of the respondents that agreed with the statement, while the neutral group maintains 13% but the least goes to the disagree sum together. This demonstrates that the major source of noise pollution is very minimal in Mubi town and this is a very good atmosphere for the tourism potentials planning and development. Noise pollution is another source of discomfort in modern towns and cities. Mubi town is a developing town, it has a low noise level. This is assessed by the respondents as follows: disagree sides cover 41%, agree opinion retains 33% while neutral constitutes 26% only. This indicates that the level of noise in Mubi is within the physiologically of the human body system. This will serve as a great treasure or asset for the planning and development of the tourism potential in the town.

5. Recommendations

5.1. Short Term Recommendations

Development plan preparation, involves the comprehensive plan strategies that will guide the planning and zoning of the necessary facilities such as foods and beverages as well as accommodations. This should consider: the floor area ratio, carrying capacity, source of water and transit areas, and the interconnectivity between the various destinations should be detailed in the development plan. The future expansion also is to be integrated with the plan, so that correlation between demand and supply can be done effectively in the future. In addition, experienced tourism planners, urban planners, Environmentalists, Landscape Architects, Sociologists, Quantity surveyors, Estate valuers, Building Engineers, and Land surveyors should form part of the team under the leadership of Urban Planners or City planners as the team leader.

5.2. Preservation and Conservation of the Identified Environmental Tourism Potentials

The study investigated environmental tourism attraction sites in Mubi town. This is strongly supported by the respondents' opinions. Although, there are variations in the magnitude of agreements as the potentials are very numerous. This will help in achieving sustainable tourism. Sustainable tourism will permit the present generation to utilize the environmental tourism potentials, and without preventing the future generation enjoy the same environmental tourism resources.

6. Conclusion

Tourism indeed is the fastest growing and revenue-generating industry that many countries of the world rely on for its foreign revenue-generating. It also provides employment; improves physical well-being and infrastructure development such as accommodation and transport facilities to mention but few. Mubi town is endowed with physical tourism potentials which cover both natural and manmade features, cultural attractions are also numerous. The correlation analysis between Environmental Tourism Potentials (ETP) indicates strong correlation indicated significant perfect and positive correlation 0.01 at 2 Tailed. Additionally, ranking of the respondents' perceptions with regards to the environmental tourism potentials were ranked according scored points as it indicated the mountains and the hills give good scenario as the first in the raking, good and conducive weather conditions as the second, while the natural landscape is attractive is the third. This shows that, if the potentials are properly planned and developed, it will attract not local tourists but foreign as well.

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Conflict of Interest

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