



HUNGARIAN UNIVERSITY OF AGRICULTURE AND LIFE SCIENCES

**LANDSCAPE FRAMEWORK, SOCIAL AND ECOLOGICAL ASPECTS
OF ECOTOURISM DEVELOPMENT IN GHANA: AN ASSESSMENT OF
ASUOGYAMAN DISTRICT**

THE Ph.D. DISSERTATION

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Table of Content

Contents

Table of Content	iii
List of Figures	vii
List of Tables	viii
LIST OF ABBREVIATIONS	ix
CHAPTER ONE	1
INTRODUCTION	1
1.1 Background of the Study	1
1.2 Research Questions and Objectives	8
1.3 Actuality and Importance of the Study	10
1.4 Scope of the Study	12
1.5 Organization of the Work	13
CHAPTER TWO	16
LITERATURE REVIEW	16
2.1 Introduction.....	16
2.2 Ghana as a Tourism Destination: Academic Perspectives.....	16
2.3 The Concept of Cultural Heritage Landscapes	18
2.4 The Concept of Sustainable Development.....	19
2.4.1 Introduction to Sustainable Development.....	19
2.4.2 Economic Dimensions of Sustainable Development in Ecotourism	20
2.4.3 Environmental Dimensions of Sustainable Development in Ecotourism.....	20
2.4.4 Social Dimensions of Sustainable Development in Ecotourism	21
2.4.5 Integrating Global Sustainability Frameworks	21
2.4.6 Case Study: Sustainable Ecotourism in the Asuogyaman District, Ghana.....	21
2.5 Ecotourism Overview	22
2.5.1 Definition of Ecotourism	22
2.5.2 Principles of Ecotourism.....	22
2.5.3 Ecotourism and Cultural Landscapes	23
2.6 Landscape Characterization for Ecotourism Development	24
2.7 Stakeholder in Ecotourism Development	24

2.7.1 Stakeholder Analysis in Ecotourism.....	24
2.7.2 Forms of Stakeholder Participation in Ecotourism Development	25
2.8 Community and Ecotourism	27
2.8.1 Barriers to Community Participation in Tourism Development.....	28
2.9 Impacts of Ecotourism Development	30
2.10 Spatial Planning and Ecotourism Development	31
CHAPTER THREE.....	35
MATERIALS AND METHODS.....	35
3.1 Introduction and Research Design	35
3.1.1 Research Objectives.....	38
3.2 Study Area: Asuogyaman District	40
3.3 Data Sources and Instruments.....	43
3.3.1 Data Sources	43
3.3.2 Data Collection Instruments	44
3.3.3 Key Data Collection Methods.....	44
3.3.3.1 Interview Methods	44
3.3.3.2 Qualitative Methods.....	46
3.4 Population and Sampling Techniques.....	47
3.4.1 Target Population.....	47
3.4.2 Sampling Procedures	48
3.4.3 Sample Size Determination	49
3.4.4 Sample Allocation and Stratified Sampling:	50
3.4.5 Implementation	51
3.5 Recruitment, Training, and Survey Administration.....	51
3.6 Challenges.....	52
3.7 Preliminary Field Visits	53
3.8 Data Analysis and Presentation	54
3.9 Summary	56
CHAPTER FOUR	57
RESULTS AND DISCUSSIONS.....	57
4.1 Introduction.....	57
4.2 Socio-Demographic Characteristics of Respondent	58
4.2.1 Place of Residence and Community Affiliation	58
4.2.2 Gender and Age Distribution	58

4.2.3 Occupation and Marital Status.....	59
4.2.4 Educational Background and Religious Affiliation.....	59
4.2.5 Ethnicity and Income Levels	60
4.2.6 Summary	60
4.3 Landscape Characterization and Ecotourism Potential.....	62
4.3.1 Physical Landscape Features	62
4.3.2 Cultural Landscape and Heritage.....	63
4.3.3 Ecotourism Potential.....	64
4.4 Stakeholder Roles and Community Involvement in Ecotourism.....	66
4.4.1 Community Participation.....	66
4.4.2 Governmental and Institutional Roles	67
4.4.3 Role of NGOs and Private Sector	68
4.4.4 Challenges to Stakeholder Collaboration	69
4.4.5 Recommendations for Enhancing Stakeholder Involvement.....	69
4.5 Community Perception and Participation in Ecotourism Development.....	70
4.5.1 Perception of Ecotourism.....	70
4.5.2 Community Involvement in Ecotourism Activities	72
4.5.3 Community Perception of Cultural Landscapes for Ecotourism Development.....	75
4.5.4 Anticipated Benefits and Costs of Ecotourism in Asuogyaman District.....	80
4.5.4 Barriers to Participation	84
4.5.5 Recommendations for Enhancing Community Involvement.....	87
4.6 Policy Considerations and Planning for Sustainable Ecotourism.....	87
4.7 Selected Zones Recommended for Ecotourism Planning and Development.....	92
4.8 Summary of Findings.....	98
CHAPTER FIVE	103
CONCLUSIONS AND RECOMMENDATIONS	103
5.1 Conclusions.....	103
5.1.1 Theoretical Contributions and Implications	103
5.1.2 Answering Research Questions and Hypotheses.....	104
5.1.3 Practical Implications	106
5.2 Recommendations.....	107
5.2.1 Recommendations for Ensuring Sustainable Ecotourism Development	107
5.2.2 Recommendations for Active Community Participation and Benefits in Landscape Planning for Ecotourism	108
5.2.3 Recommendations for Landscape Planning for Ecotourism Development.....	109

5.2.4 Recommendations for Improving the Visitor Experience in the Asuogyaman District Tourist Circuit.....	110
5.3 Future Research Directions.....	111
CHAPTER SIX.....	112
NEW SCIENTIFIC RESULTS.....	112
6.1 Methodological Innovations.....	112
6.2 Ecotourism Potential and Landscape Characterization.....	113
6.3 Stakeholder Classification and Roles.....	113
6.4 Community Engagement and Participation Mechanisms.....	114
6.5 Perceived Benefits and Costs of Ecotourism.....	114
6.6 Implications for Policy and Practice.....	115
6.7 Policy Recommendations and Institutional Implications.....	116
CHAPTER SEVEN.....	118
SUMMARY.....	118
7.1 Introduction.....	118
7.2 Literature Review.....	118
7.3 Key Findings and Results.....	119
7.4 Methodological Contributions.....	120
7.5 Conclusions and Implications.....	120
7.6 Recommendations.....	120
REFERENCES.....	122
APPENDIX I.....	137
APPENDIX II.....	152
APPENDIX III.....	153
APPENDIX IV.....	156
Acknowledgements.....	158

List of Figures

Figure 1: Organization of the Research Work.....	15
Figure 2: Map of Study Area - Asuogyaman District	42
Figure 3: Image of the Akosombo Dam/Volta Lake	43
Figure 4: Meeting with the members of the Akwamu Traditional Council	53
Figure 5: Zone 1 (Akwamu Hills Community Forest - AHCFP).....	64
Figure 6: Photographs of some of the District’s Hotels and Recreational Facilities.....	68
Figure 7: Land Ownership.....	71
Figure 8: Stakeholder Contributions to Ecotourism Development	72
Figure 9: Involvement in Ecotourism Planning and Development by Communities.....	73
Figure 10: Involvement in Ecotourism Planning and Development by Native Status.....	74
Figure 11: Role of community members in Ecotourism	74
Figure 12: Anticipated Benefits of Ecotourism by upstream/downstream status	82
Figure 13: Anticipated Costs of Ecotourism by upstream/downstream status.....	83
Figure 14: Barriers in the community Participation by upstream/downstream status.....	86
Figure 15: Needs and Challenges Faced by Stakeholders and Institutions in Ecotourism	86
Figure 16: Indigenous Perspectives for Landscape Conservation and Ecotourism.....	89
Figure 17: Community Perspectives on Specific Infrastructure Needed to Improve the Visitor Experience	91
Figure 18: Views on Policy Considerations for Sustainable Ecotourism Development.....	93
Figure 19: All Zones Considered for Ecotourism Development.....	94
Figure 20: Zone 1 – Akwamu Gorge Community Forest.....	95
Figure 21: Zone 2 – Volta Gorge	95
Figure 22: Zone 5 – Dodi Island.....	96
Figure 23: Zone 3 - Island 1 -Unnamed	96
Figure 24: Zone 6 - Zipline A and B	97
Figure 25: Zone 4 - Island 2 -Unnamed	97
Figure 26: Visitors Views on Their Purpose of Visit	100
Figure 27: Visitors Views on Their Level of Satisfaction.....	101
Figure 28: Who Usually Accompanied Visitors on Tours	101
Figure 29: Tourists Level of Satisfaction	102

List of Tables

Table 1: Arnstein’s and Tosun’s Typologies of Stakeholder Participation in Ecotourism	26
Table 2: Research Questions and Summary of Associated Materials, Methods and Analysis	39
Table 3: List of Key informants for the Study	45
Table 3: Population/Household Figures of Study Sites (Sampling Frame)	48
Table 4: Population, Household Figures and Sample Size of Selected Study Locations.....	50
Table 6: Socio-Demographic Characteristics of Respondents	60
Table 7: Respondents Listing of Potential Ecotourism Sites/Experiences.....	65
Table 8: Forms of Stakeholder Participation in Ecotourism Planning and Development.....	66
Table 9: Roles of Identified Stakeholders Involved in Tourism Development.....	67
Table 10: Perceptions of Local Communities Concerning the Use of Cultural Landscapes for Ecotourism Development by Community Location.....	75
Table 11: Perceptions of Local Communities Concerning the Use of Cultural Landscapes for Ecotourism Development by Native Status.....	78
Table 12: Recommended Zones for Ecotourism	94

LIST OF ABBREVIATIONS

AD – Asuogyaman District
ADA – Asuogyaman District Assembly
ADTC – Asuogyaman District Tourist Circuit
AGCT – Akwamu George Conservation Trust
AIC – Asuogyaman Traditional Council
AT – Alternative Tourism
CBE – Community-Based Ecotourism
CBEP – Community-Based Ecotourism Project
CH – Cultural Heritage
DEM – Digital Elevation Model
EPA – Environmental Protection Agency
ERCC – Eastern Regional Coordinating Council
FGD – Focus Group Discussions
GIS – Geographic Information System
GSS – Ghana Statistical Service
GTA – Ghana Tourism Authority
ITO – Inbound Tour Operators
KII – Key Informant Interviews
LDA – Latent Dirichlet Allocation
LDC – Least Developed Countries
LDC – Least Developed Countries
MoT - Ministry of Tourism
NGO – Non-Governmental Organization
OTO – Outbound Tour Operators
SD – Sustainable Development
STD – Sustainable Tourism Development
TIES – The International Ecotourism Society
UNDP – United Nations Development Programme
UNESCO – United Nations Educational, Scientific and Cultural Organization
UNWTO – United Nations World Tourism Organization
VLTC – Volta Lake Transport Cooperation
VRA – Volta River Authority
WCED – World Commission on Environment and Development
WHL – World Heritage List
WHS – World Heritage Sites

CHAPTER ONE

INTRODUCTION

1.1 Background of the Study

Over the past few decades, ecotourism has emerged as one of the fastest-growing sectors in the global tourism industry, offering tangible economic, ecological, and socio-cultural benefits (Bryce et al., 2016; Dou et al., 2019; Nesbitt et al., 2017; UNWTO, 2019). Central to this growth is the recognition of cultural heritage and indigenous landscapes as vital resources. Multiple academic perspectives highlight the role of cultural landscapes in shaping sustainable tourism experiences, emphasizing their aesthetic, symbolic, and economic value. (Barrena et al., 2014; Bieling, 2014; Dickinson and Hobbs, 2017; Stanik et al., 2018; Xiao et al., 2018). Tourism is one of the few industries that continues to show growth across many less-developed countries, including Ghana, despite economic vulnerabilities. In these countries, tourism's appeal lies in its potential to attract foreign investment, generate employment, and stimulate local economies through natural and cultural attractions (Laetitia, 2020; UNWTO, 2019). This dissertation examines the relationship between ecotourism and cultural landscapes in Ghana, with a specific focus on the Asuogyaman District. It seeks to explore how sustainable development can be achieved through heritage conservation and community-based ecotourism initiatives. Cultural heritage, for the purposes of this research, refers to both tangible artifacts and intangible attributes inherited from previous generations, preserved in the present, and passed on to the future (Brahmantyo et al., 2016; Hu et al., 2018; Ko and Son, 2018; Melicher and Špulerová, 2022). Over time, this concept has evolved from a focus on isolated monuments to a broader appreciation of historic cities, cultural landscapes, and intangible traditions (Ko and Son, 2018; Fish et al., 2016)

The increasing relevance of heritage conservation within sustainable development frameworks is largely influenced by urbanization trends and the need for resilient socio-economic and environmental systems (UNWTO, 2013; Dickinson and Hobbs, 2017; Rewitzer et al., 2017). The 2017 International Year of Sustainable Tourism for Development reaffirmed the importance of aligning tourism with sustainability, emphasizing five key areas: economic growth, community engagement, environmental protection, cultural diversity, and peace (Almuhrzi and Al-azri, 2019).

These global initiatives have called for improved policy integration and stakeholder collaboration to better link tourism and culture at all governance levels. This collaborative approach involving not only governments but also NGOs, academia, the private sector, and local communities is pivotal to the success of ecotourism (Amoako-Atta et al., 2020).

Ecotourism, as endorsed in international agendas, has become a transformative tool embraced by geographers, anthropologists, and development experts for preserving biodiversity, enhancing community livelihoods, and conserving cultural heritage (TIES, 2020). In this dissertation, I explore how the cultural landscapes of the Asuogyaman District can be harnessed to support ecotourism while promoting socio-economic development and environmental stewardship.

Africa, with its rich cultural heritage and proximity to nature, is home to 98 UNESCO-listed heritage sites, 47 of which are cultural properties (UNESCO, 2023). Yet, African sites remain underrepresented on the World Heritage List, prompting efforts to increase recognition and preservation (Deacon, 2014).

In Ghana, where tourism is a significant economic driver, the potential of cultural and natural sites to add economic and social value is increasingly recognized. However, despite their substantial inherent values, these sites remain underrepresented globally, especially on the UNESCO World

Heritage List. Examples include the Sukur (Nigeria), Koutammakou (Togo), Bassari (Senegal), Mapungubwe and Richtersveld (South Africa), Mijikenda Forests (Kenya), Konso (Ethiopia) And Mole National Park (Ghana). Despite the vast variety of sites, the African Heritage sites and cultural landscapes are underrepresented on the UNESCO World Heritage List (WHL). In the early 1990s, the strong emphasis on European properties in the WHL became a concern for the World Heritage Committee, particularly in Africa and South America. Attempts to overcome this imbalance resulted in more Africans ratifying the Convention from 34 in 1995 to 51 in 2012, which also saw the inscription of African World Heritage Sites, both cultural and natural increase from 48 in 1995 to 124 in 2012 (Deacon, 2014). Although this wake-up call was laudable, Africa still lag behind in the global trend.

As a result of their inherent values, the demand of cultural landscapes for tourism at the local and international levels has increased. The social and economic role of heritage sites and cultural landscapes has become a critical tool for development in some countries (Ament et al., 2017; Laforteza and Chen, 2016; Plieninger et al., 2015). Many countries in Africa, including Ghana, have now become aware of the potential of cultural and natural sites to add economic value to their communities by attracting economic and social activities to historical and natural land marks within their political and administrative territories. Communities endowed with cultural and natural heritage sites have enjoyed economic benefits in comparison with other communities that are not endowed. Indeed, the concept of cultural landscape has become prominent product in the promotion of the tourism sector towards a sustainable development (Jacobson and Robles, 1992; Roger, 2015; Wondirad, 2019). The natural and cultural resources are the engine that drives the ecotourism tour-ism industry (Paudyal et al., 2019). The value and attraction of space are so

important in ecotour-ism development that maintaining and preserving the natural landscape, cultural beau-ties, and assets have become imperative.

Like most African countries, Ghana's tourism sector is seen as a major engine of economic growth and development. Attempts to develop a viable tourism industry in Ghana can be traced to the early part of the post-independence period. (MOTAC, 2020). Since the late 1980's, tourism has received considerable attention in the economic development strategy of Ghana. The number of tourist travels and amount of tourists' expenditure has steadily increased, while both public and private investment activities in various tourism sub-sectors have expanded. The government established the Ministry of Tourism in 1993 to demonstrate its commitment to tourism development. With assistance from the United Nations Development Programme (UNDP) and the United Nations World Tourism Organization (UNWTO), this resulted in the preparation of a 15-year tourism development plan from 1996 to 2010 and a more recent plan for 2013 to 2027.(Ministry of Tourism, 2012).

Ghana is one of the most popular tourist destinations in Sub-Saharan Africa due to its year-round attractions, including beautiful landscapes with a warm climate, white sand beaches, historical monuments, and a diverse culture. In 2016, the travel and tourism industry in Ghana generated USD 1,651.67 million in revenue, which increased by 9.3% to USD 1,804.60 million in 2017. In addition, both 2018 and 2019 experienced an increase in revenue, with totals of USD 2,589.90 and USD 3,313.0, respectively (MOTAC, 2020). Due to the emergence of the global pandemic (COVID 19) in 2020, the industry experienced a sharp decline in revenue (USD 387.1m, or 88.3%). According to the projections of the tourism ministry, it will increase by 5.1% annually between 2021 and 2027, reaching GHC 8,626.5m (MOTAC, 2020)

To maximize tourism benefits, it should be community based. Community tourism should be developed and run with the involvement and consent of local communities (Amoako-Atta et al., 2020; Kim and Xie, 2019; Simmons, 1994; Tosun, 1999). Local people should participate in planning and managing tourism at the local level. It should give a fair share of profit back to the community. Community participation should be sustainable. Local people must be involved if eco-cultural and heritage conservation projects are to succeed (Amoako-Atta et al., 2020). Tourism management should respect traditional cultures and social structures and have mechanisms to help communities cope with the impact of tourism (Tosun, 1999).

Ghana's Eastern Region has a lot of natural and cultural attractions that haven't yet been tapped for development. The region is second to the Volta Region of Ghana in terms of how diverse its landscape is. It has many historical and archaeological sites, such as caves, freshwater bodies, indigenous forest ecosystems, wetland ecosystems, hills and mountains, islands, waterfalls, national parks and game reserves, nature conservancies, museums, and different cultures. Some popular attractions within the region include the Aburi Botanical Gardens, Boli Water Falls, Umbrella Rock, Akosombo Dam, Akaa Water Falls, and many others that are still untapped (Ministry of Tourism, 2012).

This study focuses on Ghana's Asuogyaman District, described as a "hidden treasure" due to its rich yet untapped natural and cultural attractions. This research aims to enhance the understanding and development of ecotourism in the region by identifying, interpreting, and promoting its ecotourism resources in alignment with sustainable development principles. The district is described as the "best kept secret" by the country's Ministry of Tourism, as it is the least traveled to by both domestic and international tourists and very little is known about its diverse natural and cultural attractions, hence the term "hidden treasure". In accordance with the principles of

sustainable development as defined by the World Commission on Environment and Development, the region can become one of the leading destinations for ecotourism and if potentials are identified, planned, and utilized effectively (Keeble, 1988).

Thus, the purpose of this research is to contribute to a greater understanding of the AD in terms of its natural and cultural/historical attractions, as well as the opportunities presented by the region for the development of ecotourism. Specifically, it will concentrate on enhancing regional heritage interpretation and promotion. To complete this task, it is necessary to identify the region's ecotourism resources, and the interests and needs of all stakeholders. We chose to employ both spatial and non-spatial techniques in determining the available resources within the region and Getz's (Getz, 1994) stakeholder collaboration model to coordinate the understanding of stakeholder needs and interests.

As indicated above, there are multiple attractions in Ghana's AD. These attractions can be a myriad of things, but this study is focuses primarily on ecotourism attractions; very little has been done in this regard. Several studies have investigated the success of ecotourism by typically approaching it from an economic perspective, evaluating its efficacy in terms of poverty reduction and revenue distribution (Amuquandoh, 2010; Chen and Qiu, 2017; Liu et al., 2012; Mason, 2012; Mathieson and Wall, 1987).

Subsequently, scholarly contributions sought to evaluate models that could contribute to the development of cultural tourism in the post-industrial world. For instance, Long et al., (1990) tested a model of the relationships among rural resident perceptions of tourism impacts and support for additional tourism development. Their scholarly works observed that support for tourism development was negatively related to the perceived future of the community. Murphy and Boyle, (2006) also contributed to the existing scholarly gap in relations to tourism development by testing

conceptual models of cultural tourism development in the post-industrial cities. Their piece also contributed to identifying factors that shaped the development of cultural tourism in the post-industrial cities.

In recent times, most scholarly pieces have largely focused on the roles of cultural heritage in sustainable development frameworks (Ament et al., 2017; Angelstam et al., 2017; Eshun and Tagoe-Darko, 2015; Richards et al., 2018). Though the past and recent scholarly works on the subject of tourism development are relevant to tourism research, the relationship between cultural landscapes and sustainable tourism development is barely established in the above scholarly works. It is unclear how cultural landscapes can contribute to sustainable tourism development.

Despite the promises, the role of tourism in social, cultural, and ecological change cannot be overlooked. Tourism can destroy indigenous cultural traditions through influx of foreign traditions. A number of researchers have criticized the reliance on tourism as a strategy for development (Amuquandoh, 2010; Moscardo and Murphy, 2014). Choices of tourist destinations are susceptible to volatile fluctuations due to economic conditions in the tourist's home country and perceptions of the situation and status of destinations.

While some scholars focused on changes in the (economic, ecological, and social) value placed on forests, other studies examined tourism projects involving educational efforts to promote the preservation of protected areas (Ament et al., 2017; Chung et al., 2018; Liu et al., 2012; Mandić, 2019; Wang et al., 2019). Several studies in Laos, for instance, have examined how local communities view tourism (Maraja et al., 2016; Paudyal et al., 2019; Wijayanti et al., 2017) or, alternatively, the lack of tourist interest in aspects of the local culture (Brahmantyo et al., 2016; Sheehan and Ritchie, 2005). Amoako-Atta et al., (2020) examined the extent to which local communities participate in ecotourism infrastructure management and development. The most

recent COVID-19 Pandemic prompted researchers to also analyze the sector's economic decline (Hervie et al., 2022).

Additionally, studies in Ghana (Almeida García et al., 2015; Frempong and Deichmann, 2017) have primarily focused on the management of ecotourism project benefits. As a result, the identification, interpretation, and documentation of potential ecotourism zones have received less consideration. Thus, the study is therefore based on the assumption that if ecological resources are properly explored, planned and utilized, the understudied regions can grow into one of the leading destinations for ecotourism as defined by the World Commission on Environment and Development (WCED, 2014) Principles of Sustainable.

With only two (2) cultural properties listed, Ghana's presence on the WHL is insignificant. Thus, based on a comprehensive review of the literature, the primary issues with ecotourism development in Ghana can be viewed from three angles:

- ❖ Overreliance on old and under developed attractions;
- ❖ Challenges in tourism planning and development at the regional and local levels and;
- ❖ The extent to which local communities are involved in tourism development.

The goal of this study is to influence the discovery, documentation and increased understanding of the AD in terms of natural, historical and cultural attractions and the opportunities the region presents for ecotourism development.

1.2 Research Questions and Objectives

The main research question seeks to explore innovative pathways for uncovering and developing ecotourism potential within cultural landscapes:

- “How can the hidden and untapped ecotourism treasures in cultural landscapes be discovered and developed?”

To address this, the study sets forth specific research questions, each tied to clear objectives intended to guide the investigation:

1. **Character of the Landscape:** What is the distinctive character of the Asuogyaman District landscape, considering both its physical features and the local community’s perception and connection to it?
 - **Objective:** To characterize the Asuogyaman District’s landscape by identifying its key physical and ecological attributes, as well as capturing local perceptions and cultural connections that can enhance ecotourism planning.
2. **Roles of Stakeholders:** What are the roles and capacities of stakeholders and institutions in sustainable tourism development?
 - **Objective:** To assess different stakeholders’ roles, influence, and contributions towards developing sustainable ecotourism in the region.
3. **Community Sentiments:** What are the sentiments of local communities concerning cultural landscapes for sustainable ecotourism development?
 - **Objective:** To gauge community perceptions and expectations regarding the use of their cultural landscapes for tourism, highlighting areas of support and concern.
4. **Policy Recommendations:** What policy recommendations and proposals regarding institutional needs and capacities can be made in landscape planning and design for ecotourism development?

- **Objective:** To develop strategic recommendations that align policy, planning, and community capacities toward sustainable ecotourism.

1.3 Actuality and Importance of the Study

The relevance of this study in academic terms derives substantially from its integration of community-based ecotourism within the broader framework of sustainable development and heritage conservation in the Asuogyaman District. This integration addresses a critical knowledge gap by delineating the empirical and theoretical intersections of ecotourism and cultural heritage. It provides a structured approach to enhancing local and national development strategies.

Ecotourism, as explored in this research, represents a vital component of sustainable development strategies, particularly in regions identified as Least Developed Countries (LDCs), including Ghana. The study's focus on Asuogyaman District, a region endowed with rich cultural and natural heritage, positions it as a microcosm through which broader developmental challenges and potentials within Ghana can be examined. This investigation aligns with global sustainable development goals, emphasizing ecotourism's role in economic growth, poverty reduction, and environmental stewardship.

In addition to local and national implications, this study responds to global sustainability mandates as articulated in international conventions and processes. Notably, it aligns with the goals of the COP15 on biodiversity, the UN Decade of Ecosystem Restoration, and the climate action frameworks established by COP28. These conventions underscore the urgent need for integrated approaches to sustainable development that consider biodiversity conservation, ecosystem resilience, and climate mitigation strategies. By aligning with these international frameworks, the

study addresses local and national development strategies and contributes to the global discourse on sustainable tourism, making it relevant in both local and international contexts.

The theoretical contributions of this study are manifold:

1. **Bridging Theoretical Gaps:** It extends the theoretical framework of ecotourism by exploring its role in conserving cultural landscapes and contributing to sustainable economic development.
2. **Community-based Focus:** By focusing on community-based approaches, the research underscores the importance of local participation in ecotourism development, thus providing a model for empowerment and sustainable practices that can be replicated in similar contexts globally.
3. **Integrative Models:** The study proposes an integrative model that combines cultural heritage conservation with sustainable economic development strategies, a novel approach in the field of ecotourism research.

In practical terms, the findings of this study are poised to influence policy-making and on-the-ground practices in ecotourism. By identifying and documenting the ecotourism potentials of the Asuogyaman District, the study provides policymakers, stakeholders, and community leaders with actionable data that can lead to informed decisions and sustainable practices. This is particularly critical for Ghana, where tourism is a significant economic driver but requires a nuanced approach to balance growth with conservation and community welfare.

Furthermore, this study acts as a cornerstone for future research in ecotourism development, offering a detailed examination of the interactions between human activities and natural settings.

It provides a robust database for academics and practitioners alike, facilitating further exploration into the sustainable development of tourism in culturally and ecologically sensitive areas.

In summary, this study not only fills a critical academic gap by linking community-based ecotourism with sustainable development in cultural landscapes but also offers practical insights that can drive policy and community initiatives towards more sustainable and inclusive tourism practices in Ghana and similar contexts.

1.4 Scope of the Study

Contextually, the study was embedded in ecotourism planning and development in Ghana. It seeks to uncover a greater understanding of the Asuogyaman District (AD) in terms of its natural and cultural/historical attractions, as well as the opportunities presented by the region for the development of ecotourism. The study employed both spatial and non-spatial techniques in determining the available resources within the region and Getz's (1994) stakeholder collaboration model to coordinate the understanding of stakeholder needs and interests. The AD is home to one of the largest manmade lakes in the world (Volta Lake), which was created as a result of the construction of a hydroelectric dam at Akosombo in the Eastern Region of Ghana. The area has much to offer, both due to the huge diversity of flora and fauna and the new landscape values that emerged after the construction of the dam. Since then, the project has generated an unconscious attraction for both domestic and international visitors.

Geographically, this study is restricted to the portion of the Volta Lake that falls within the Asuogyaman District. The study is also limited to four of the AD's seventeen member communities, two upstream and two downstream. They include Atimpoku, Akwamufie, Mpakadan, and Gyakiti.

1.5 Organization of the Work

This study is organized into seven main chapters, each systematically addressing the core aspects of the research on ecotourism development in the Asuogyaman District, Ghana.

The first chapter introduces the study, outlining the background, problem statement, research questions, and justification and scope of the research. It sets the context for examining the potential of ecotourism as a sustainable development strategy, particularly within Ghana's socio-cultural and environmental framework.

The second chapter conducts a comprehensive review of relevant literature, focusing on ecotourism concepts, stakeholder engagement, and sustainable tourism practices. It also discusses the theoretical underpinnings and conceptual frameworks guiding the study, identifying gaps in the current body of knowledge, particularly regarding community-based ecotourism in the Ghanaian context.

Chapter three details the research methodology. It elaborates on the study design, providing insights into the research area profile, data sources, sampling techniques, data collection methods, and analytical procedures. The chapter highlights the mixed-methods approach, integrating quantitative analysis with qualitative insights, including word frequency analysis, to capture community perspectives.

The fourth chapter presents the research findings and their analysis. It thoroughly examines the landscape characterization, identifying potential ecotourism sites and their spatial distribution. It also explores stakeholder roles, distinguishing between primary and secondary stakeholders and their respective influences on tourism planning. Community perceptions of ecotourism

development are analyzed, highlighting both benefits and challenges, while the chapter also provides policy considerations for sustainable ecotourism development in the Asuogyaman District.

Chapter five summarizes the research findings and discusses their implications for sustainable tourism planning. It articulates targeted recommendations for enhancing community engagement, improving infrastructure, and fostering stakeholder collaboration to support ecotourism initiatives.

Chapter six introduces new scientific results from the research, including methodological innovations such as the application of word frequency analysis in sustainable tourism studies. It also discusses the novel insights gained into stakeholder interactions and community participation in ecotourism planning, emphasizing the importance of local engagement for sustainable outcomes.

The seventh chapter concludes the study by summarizing the key components, including the introduction, literature review, research findings, conclusions, and recommendations. It emphasizes the study's contributions to sustainable ecotourism and outlines potential areas for future research (see Figure 1 below).

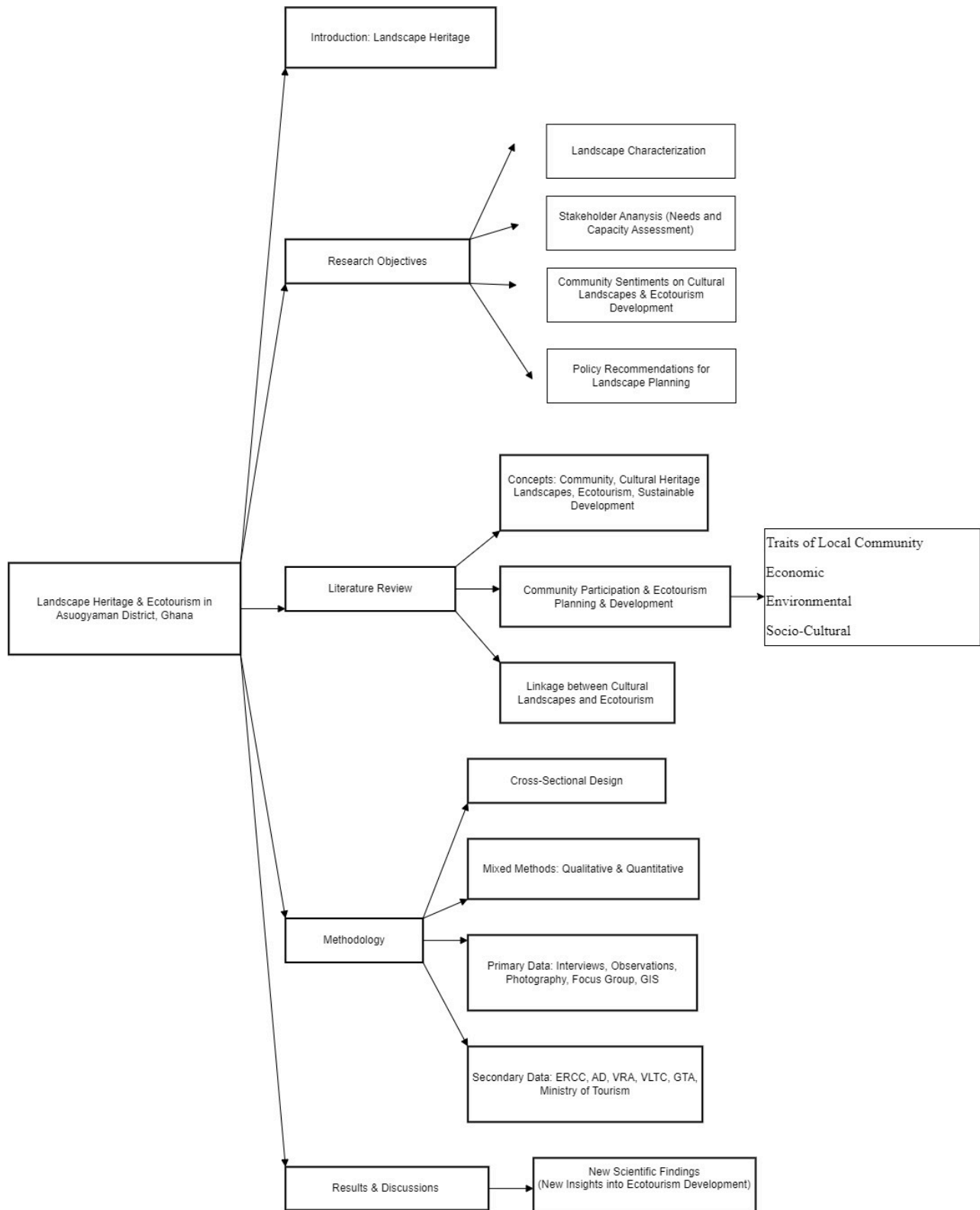


Figure 1: Organization of the Research Work

Source: Author's Construct, (2019)

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

This chapter synthesizes key themes around landscape planning, cultural heritage, and sustainable development within the context of ecotourism. It addresses the conceptualization and operationalization of community participation in ecotourism, exploring how these elements contribute to both local empowerment and broader sustainable development goals. The discussions aim to bridge theoretical frameworks with practical applications, identifying how local conditions and global standards interact in the realm of ecotourism.

2.2 Ghana as a Tourism Destination: Academic Perspectives

Ghana has emerged as a significant tourism destination within Sub-Saharan Africa, known for its diverse cultural heritage, historical landmarks, and natural attractions. The tourism sector in Ghana has been positioned as a critical component of economic diversification, mainly since the 1980s when the government recognized tourism as a key sector for socio-economic development (Boakye et al., 2013; Asamoah, 2013; Deichmann & Frempong, 2016). Despite its potential, the country faces several challenges that hinder the full realization of sustainable tourism growth. Transitioning from these challenges, it is essential to understand the role of cultural heritage landscapes in the tourism sector, as they represent a significant aspect of Ghana's appeal to international visitors.

One of the primary challenges is the inadequate infrastructure that characterizes many ecotourism sites, especially those in rural and peripheral areas. Poor road networks, limited accommodation facilities, and inadequate visitor services significantly restrict accessibility and detract from the visitor experience. These infrastructural deficits are seen as major impediments to achieving the expected economic benefits from tourism (Boakye et al., 2013; Asamoah, 2013). Addressing these infrastructural challenges requires targeted investments in road improvements, eco-friendly lodging, and visitor amenities.

Another significant challenge is the lack of comprehensive and integrated tourism policies. Although Ghana has made significant strides in policy formulation, the implementation of these policies at the local level often remains inconsistent and fragmented. Boakye et al. (2013) and Asamoah (2013) highlight that tourism strategies are predominantly driven at the national level, leaving gaps in local stakeholder engagement and policy execution. Strengthening local policy integration through multi-stakeholder engagement can help bridge this gap.

Despite these challenges, Ghana is making notable progress in promoting sustainable tourism practices. To fully comprehend these developments, examining the intersection between tourism and cultural heritage landscapes is crucial, as they offer unique opportunities for sustainable tourism growth. For instance, community-based tourism initiatives are increasingly being prioritized, particularly in regions such as the Asuogyaman District. These initiatives focus on integrating local stakeholders in tourism planning and management, fostering local empowerment, and promoting sustainable resource use (Asamoah, 2013; Deichmann & Frempong, 2016).

To further enrich this discussion, comparative case studies from other Sub-Saharan African countries, such as Rwanda, which successfully promotes community-based tourism, would offer

valuable insights into replicable practices for Ghana. Additionally, applying mixed-method approaches, including quantitative impact assessments, could provide a more comprehensive analysis of the socioeconomic and environmental impacts of tourism.

Stakeholder collaboration is crucial in addressing these challenges. Local governments, community leaders, private enterprises, and tourism boards must foster inclusive and sustainable tourism initiatives. Practical examples, such as Rwanda's community-based tourism model, can guide Ghana's more resilient tourism development approach.

2.3 The Concept of Cultural Heritage Landscapes

Cultural Heritage has been conceptualized differently by several schools of thought (Beltramo et al., 2021; Petti et al., 2020; Stanik et al., 2018; Xiao et al., 2018). Earlier definitions of the concept combined ecosystem and heritage, reflecting a notion of cultural heritage as derived from the ecosystem/landscape. Other schools of thought also perceived cultural heritage as often reflected in the legal frameworks, such as acts that serve as the governing tools of cultural heritage management. Particularly within a European legal context, cultural heritage tends to be defined as the immediately tangible and intangible human-made remnants of the past, such as archaeological sites (invisible, subsoil remains and visible, standing structures) and historic buildings. Others perceive it as an expression of the ways of living developed by a community and passed on from generation to generation, including customs, practices, places, objects, artistic expressions and values (Ho Huu et al., 2018; Ridding et al., 2018).

According to Tweed and Sutherland (2007), cultural heritage is the traditional process through which heritage is applied as an honorific label to sites, buildings and other cultural objects by experts. In most cases cultural heritage is brought into being through top-down strategy with little

room for contributions from the general public. Commonly, cultural heritages are products of the public behaviors but not appropriation generally emerges from public behaviour rather than through organised lobbying (Tweed and Sutherland, 2007). It can, therefore, be referred to as de facto heritage because it acquires its status through the use and expressions of the ways of living rather than through deliberate consideration (ibid). As a result, most heritage designations are usually predictable and only rarely controversial (Tweed and Sutherland, 2007).

Even though most people think of “cultural heritage” as indicated above, some people also think of it in terms of landscapes (Chrastina et al., 2020; Waverman, 2023). When you think of a property with a heritage designation, you most likely picture a historic building or façade that has been preserved for future generations. David Waverman, concludes in his publication, “what are cultural heritage landscapes” that landscapes, views, and trees can be named heritage sites. He explored and explained “cultural heritage landscapes” as geographical areas that have been modified by people and have heritage value. As a result, this research focuses on the landscapes (including trees, landforms, and even historical views) as possible candidates for cultural heritage designations.

2.4 The Concept of Sustainable Development

2.4.1 Introduction to Sustainable Development

Sustainable Development, defined by the World Commission on Environment and Development (WCED), emphasizes the necessity of meeting current needs without compromising the ability of future generations to fulfill their own. Within the scope of ecotourism, this concept becomes integral to ensuring that economic growth does not occur at the expense of environmental integrity

and social equity (WCED, 2014). The Brundtland Report (1988) by the World Commission on Environment and Development comprehensively defined the concept of sustainable development concept. It established the foundational definition as “development that meets the needs of the present without compromising the ability of future generations to meet their own needs,” a principle that underpins the sustainability practices within ecotourism.

2.4.2 Economic Dimensions of Sustainable Development in Ecotourism

Economic sustainability in ecotourism involves the creation and promotion of tourism practices that contribute to local economies while ensuring resource conservation. Initiatives such as community-owned eco-lodges, local guide services, and conservation fee programs that fund environmental preservation projects not only bolster local employment but also reinvest in the community’s growth and sustainability. These practices align with the principles of sustainable development by fostering an economic environment where both natural resources and local cultures are valued and preserved. According to reports from the United Nations World Tourism Organization (UNWTO), tourism is a major contributor to global economic growth, which reinforces the economic importance of sustainable tourism practices as advocated in ecotourism initiatives.

2.4.3 Environmental Dimensions of Sustainable Development in Ecotourism

Environmental sustainability focuses on minimizing the ecological footprint of tourism activities. This includes practices such as waste reduction, energy efficiency, and water conservation. Moreover, ecotourism often plays a critical role in environmental education, offering visitors insights into local conservation efforts and the importance of biodiversity, thus promoting a global

culture of sustainability. Such educational initiatives enhance the visitor experience and encourage environmentally responsible behaviors among tourists.

2.4.4 Social Dimensions of Sustainable Development in Ecotourism

Social sustainability in ecotourism ensures that the development of tourism helps improve the quality of life for local communities. It encompasses the respect for local traditions and cultures, community participation in tourism planning, and equitable distribution of tourism benefits. By involving local populations in decision-making processes, ecotourism can help preserve cultural heritage and ensure that tourism growth benefits all stakeholders.

2.4.5 Integrating Global Sustainability Frameworks

The implementation of sustainable development within ecotourism should be guided by global frameworks such as the United Nations Sustainable Development Goals (SDGs). Relevant goals include SDG 11 (Sustainable Cities and Communities), SDG 12 (Responsible Consumption and Production), and SDG 15 (Life on Land) (United Nations, 2018). These goals advocate for the integration of sustainability into urban development, production systems, and land use practices. Linking these goals with ecotourism initiatives provides a structured approach to align local actions with global sustainability objectives.

2.4.6 Case Study: Sustainable Ecotourism in the Asuogyaman District, Ghana

A practical application of these concepts is evident in the Asuogyaman District of Ghana, where ecotourism activities are carefully aligned with sustainable development practices. This area showcases how targeted ecotourism strategies can support both the local economy and

environmental conservation efforts, illustrating a successful integration of the SDGs into regional tourism planning.

2.5 Ecotourism Overview

2.5.1 Definition of Ecotourism

Ecotourism, as a distinct segment of sustainable tourism, is often defined as responsible travel to natural areas that conserves the environment and improves the well-being of local people. This concept, supported by various authoritative sources, including The International Ecotourism Society (TIES, 2020) and environmental theorists like Ceballos-Lascurain (1987) and Stronza et al. (2019), emphasizes travel that respects the environment and local cultures. Ecotourism is characterized by its focus on conservation, education, and community participation, differentiating it from broader forms of tourism by its commitment to causing minimal environmental impact and fostering appreciation for nature and local traditions. In recognition of its increasing importance and potential, the United Nations designated 2022 as the “International Year of Ecotourism,” underscoring ecotourism’s role in promoting sustainable travel practices that conserve the environment and enhance the well-being of local communities.

2.5.2 Principles of Ecotourism

The principles of ecotourism are designed to ensure that travel practices support conservation efforts, respect local cultures, promote sustainability, and benefit local communities economically. According to guidelines established by organizations such as TIES (2020), these principles include:

- **Minimizing environmental impacts:** Implementing practices that reduce footprint on natural resources, managing waste, and preserving the integrity of the ecosystem.
- **Educating tourists:** Raising awareness about conservation and cultural sensitivities to foster respect and appreciation among travelers.
- **Empowering local communities:** Ensuring that ecotourism provides financial benefits to local populations and enhances their quality of life.
- **Promoting cultural respect:** Encouraging travelers to engage with and learn from local traditions and customs in a manner that honors their cultural heritage.

2.5.3 Ecotourism and Cultural Landscapes

Ecotourism's interaction with cultural landscapes represents a critical fusion of natural conservation and cultural heritage preservation. Cultural landscape areas where natural features, land use, and cultural practices are intertwined offer unique opportunities for ecotourism. These settings provide a platform for educating tourists about the area's history and ecological significance while contributing to local economies.

Studies such as Kiper (2013) highlight cases where ecotourism contributes to the revitalization of cultural heritage and the enhancement of conservation efforts. In regions like the Asuogyaman District in Ghana, ecotourism is increasingly seen as a strategy for promoting sustainable development. This is achieved by simultaneously preserving ecologically valuable landscapes and fostering pride in cultural traditions. By aligning environmental conservation with community-based cultural engagement, ecotourism supports ecological sustainability while safeguarding the cultural narratives that define these landscapes.

By emphasizing sustainable practices, community involvement, and cultural respect, ecotourism offers a pathway to harmonize tourism development with environmental and cultural conservation. This comprehensive approach ensures that ecotourism remains a tool for positive change, benefiting both the environment and the communities that host these activities.

2.6 Landscape Characterization for Ecotourism Development

Several schools of thought have perceived landscape characterization is a process that involves the identification and description of the physical and cultural features of a landscape (Melicher and Špulerová, 2022; Wartmann and Purves, 2018; Willis, 2015). Landscape characterization is important for ecotourism planning because it provides information about natural and cultural resources that can be used for tourism development (Ho Huu et al., 2018), as well as identifying areas of high ecological and cultural value that can be used for ecotourism activities like hiking, bird watching, and wildlife viewing. Landscape characterization can also provide information about local communities' histories and traditions, which can be used to establish cultural tourist activities.

2.7 Stakeholder in Ecotourism Development

Stakeholder involvement is pivotal for the success and sustainability of ecotourism initiatives. It integrates the expertise, interests, and inputs of diverse groups influencing or impacted by ecotourism activities. This section revisits and expands on the dynamics of stakeholder interactions within ecotourism projects, emphasizing theoretical frameworks and practical applications.

2.7.1 Stakeholder Analysis in Ecotourism

This subsection provides a comprehensive analysis of stakeholder roles within ecotourism, anchored in the classic frameworks provided by Freeman (1984) and updated with contemporary

insights from ecotourism research. The analysis categorizes stakeholders into primary, secondary, and tertiary groups, detailing their respective influences and stakes:

- **Primary Stakeholders:** Local communities, indigenous groups, and ecotourism operators who are directly affected by ecotourism activities.
- **Secondary Stakeholders:** Government agencies, NGOs, and international bodies that play a regulatory, supportive, or funding role.
- **Tertiary Stakeholders:** Researchers, tourists, and media who indirectly influence or are influenced by ecotourism development.

2.7.2 Forms of Stakeholder Participation in Ecotourism Development

Despite the fact that the types of stakeholder participation differ by the authors (Arnstein, 1969; Tosun, 1999), the basic elements that identify the stages within the typologies remain consistent. As a result, these proponents' theories about the forms of stakeholder participation in ecotourism will be adapted for the purposes of this study. They share similar perspectives on the degree to which stakeholders have or are given the ability to make their own decisions. Pretty proposed seven types of community participation in tourism development in 1995 (Pretty, 1995). They include Passive Participation, Participation in information giving, Participation by consulting, Participation for material incentives, Functional participation, Interactive Participation, and Self-mobilization.

Table 1: Arnstein’s and Tosun’s Typologies of Stakeholder Participation in Ecotourism

	<i>Arnstein’s Typology</i>	<i>Relation</i>	<i>Tosun’s Typology</i>
<i>Degree of citizen power</i>	Citizen control Delegated power Partnership	➔	<u>Spontaneous Participation</u> Bottom-up; Active & Direct Participation Participation in Decision Making Authentic Participation Self-Planning
<i>Degree of Citizens Tokenism</i>	Placation Consultation Informing	➔	<u>Induced Participation</u> Top-down; Passive; Formal Indirect; Degree of Tokenism Manipulation; Pseudo-participation Participation in Implementation and sharing benefits; choice between proposed alternatives and feedback.
<i>Non-Participation</i>	Therapy Manipulation	➔	<u>Coercive Participation</u> Top-down; Passive; Indirect; Formal Participation in Implementation but not necessarily sharing benefits Choice between proposed alternatives or no choice; Paternalism, non-participation, high degree of tokenism and manipulation

Source: Adopted from (Anatolia and 1999, 2017; Arnstein, 1969; Bass et al., 1995)

In Table 1, (Tosun, 1999) model emphasizes the provision of full managerial responsibility and authority to the host community, implying an ideal mode of stakeholder participation in tourism development that is similar to (Arnstein, 1969) model’s degrees of citizen power and Pretty’s (1995) model’s self-mobilization and interactive participation. The degree of citizen tokenism in (Arnstein, 1969) the model and functional participation by consultation or participation for material incentives in Pretty’s typology is similar to induced community participation in Tosun’s

(1999) model, in which primary stakeholders have a voice regarding tourism development through an opportunity to hear and be heard. In this type of participation, primary stakeholders are often only partially involved in the decision-making process and have no power to ensure that their views are taken into account for implementation, particularly by secondary stakeholders such as government bodies, multinational corporations, and international tourism organizations, among others, enforcing a degree of tokenism as defined by (Arnstein, 1969) typology. It's a passive and indirect way for primary stakeholders to be involved in the development of ecotourism, and it's most common in developing countries.

Primary stakeholders are not as fully involved in the decision-making process in coercive community participation as they are in induced community participation. Some decisions are made “to address the basic needs of host communities in order to prevent potential socio-political dangers for tourists and tourism growth,” according to (Tosun 1999). Many people think this kind of participation is a substitute for real participation and a way for power holders to help tourism grow based on the desires of decision-makers, tourism operators, and tourists. It is similar to manipulation and therapy in Arnstein's model and passive and manipulative in Pretty's typology.

2.8 Community and Ecotourism

The term “community” is used in some literary works to refer to a small geographical area whose residents share a similar social structure and set of values (Bhattacharyya, 2004; Bradshaw, 2009; Theodori, 2005). Hillery, (1955) reviewed several definitions of community and came to a significant conclusion: no consensus was reached on the concept, with the exception that all the definitions were related to individuals. To his review, he adds that the term “community” consists of three basic parts: (i) physical proximity, (ii) shared interests, and (iii) social contact. In addition, Bhattacharyya, (2004) argued that the concept of community is intrinsically linked to geographical

and social factors like population density and cultural background. The term “community” was coined by Jamal and Getz, (1995) to describe a group of people who share a geographic region. According to Aref, (2011) a community consists of people who live or work in the same area and who have a certain amount of cultural background or mutual interests. Community development's connection to a place's potential to attract and host tourists requires a clear grasp of the geographic boundaries that define it (Kankam et al., 2021; Melicher and Špulerová, 2022).

A key term used in tourism development is a “sense of community”. “Sense of community” is the feeling of obligation and commitment of an individual towards other members in the community developed over time through understanding of collective values, beliefs and interests among community members. Sense of community also is a feeling of belonging to the community (Aref, 2011).

Notwithstanding the numerous definitions encapsulated above view of a community is suitable in the context of this study. Agrawal and Gibson, (1999) defined community as a set of multiple actors with formal and informal rules and norms that shape their interaction in local level processes - a definition which comprise also of institutions which have much influence on community development activities (Agrawal & Gibson, 1999). This definition of a community is most suitable because most local development initiatives are governed by norms and bye-laws.

2.8.1 Barriers to Community Participation in Tourism Development

It could be argued that community participation can be increased by addressing participation barriers and taking the necessary measures to promote the principles of sustainable participation. (Rasoolimanesh and Jaafar, 2016). Numerous scholars have questioned the viability of instituting community participation (Angelstam et al., 2017). Abbey and Taylor, (1995) criticize

“communitarianism” as a non-realistic “illusion” and add that a participatory approach is time-consuming. Other obstacles (e.g., lack of education, business inexperience, insufficient financial assistance, and conflicting vested interests) must be surmounted before public participation can be accepted. Tourism in many less-developed regions has been developed and controlled by large multinational tour companies with little regard for local socio-cultural and economic conditions. This is because most developing destinations and microstates lack the wealth and political power, which make them parties to unfavorable decisions that is beyond their control (Timothy & Ioannidas, 2002). Autocratic power systems have kept grassroots involvement from flourishing in some parts of the world where representation of democracy has been discouraged. As a result, tourism developments shaped by local entrepreneurs have less possibility to survive in the long term.

Tosun (2000), in his study of limits to community participation in the tourism development process in developing countries, pointed out that it is important to involve local communities in the tourism development process. The main aim of the research was to examine the limitations to public participation in the decision-making process of tourism development in developing countries though public participation in the benefits of tourism was not totally ignored.

Tosun (2000) categorized all the barriers to community participation into three, namely; Operational, Structural and Cultural. In his view, Operational limitations include centralization of public administration of tourism; this connotes non decentralization of tourism administration from the national level, preventing those at the bottom from making valuable contributions to it. Also, under this limitation, there is lack of co-ordination and lack of information.

Structural limitations as raised by Tosun (2000) also include attributes of professionals, lack of expertise, elite domination, lack of appropriate legal system, lack of trained human resources and relatively high cost of community participation and lack of financial resources.

Finally, under Tosun's, (2000) barriers, Cultural Limitations were reviewed. This limitation indicates limited capacity of poor people in getting actively involved in tourism development. Also, most local communities have apathy and low level of awareness in the local community. Tosun, (2000) accepted that these limitations may be an extension of the prevailing social, political and economic structure in developing countries, which have prevented them from achieving a higher level of development.

2.9 Impacts of Ecotourism Development

The impacts of ecotourism development can be summarized across three main dimensions: economic, socio-cultural, and environmental.

Economic Impacts: Ecotourism can generate significant economic benefits for local communities by creating jobs and supporting local businesses (Wallace & Pierce, 1996). It promotes the development of small, medium, and micro local tourism enterprises, which can lead to the empowerment of vulnerable groups such as women and ethnic majorities (United Nations, 2018). Ecotourism can also generate substantial revenue from tourists, which can be reinvested into community development and conservation efforts. However, there are negative economic impacts as well, such as job seasonality economic dependence on tourism, which can lead to vulnerability to external shocks, and the potential for financial leakages where profits do not remain within the local economy (Afenyo & Amuquandoh, 2014).

Socio-Cultural Impacts: Ecotourism has the potential to strengthen the cultural identity of local communities by encouraging the preservation of traditional customs, languages, and crafts (Wearing, S., Larsen, 1996). Community involvement in tourism planning and management can also enhance social cohesion. On the downside, ecotourism can lead to cultural commodification, where cultural elements are modified to suit tourist expectations, potentially undermining authentic cultural expressions. It can also cause displacement of local communities, loss of access to resources, and social disruptions (Honey, 2008; Mathieson & Wall, 1987).

Environmental Impacts: On the positive side, ecotourism aims to conserve natural resources and biodiversity, often contributing directly to environmental protection efforts such as wildlife conservation projects and national parks (Ross and Wall, 1999). It promotes environmental awareness among both locals and tourists. Conversely, if not managed properly, ecotourism can lead to environmental degradation through habitat disruption, pollution, and strain on local resources. It can also lead to conflicts over land and natural resources, especially if local communities are excluded from the decision-making processes regarding tourism development.

2.10 Spatial Planning and Ecotourism Development

The tourism sector, particularly in Least Developed Countries (LDCs), has experienced significant growth due to factors such as economic reforms, rising international tourist demand, and abundant natural and cultural assets. This growth has notably contributed to national GDPs through increased foreign exchange earnings, job creation, and infrastructural development (Sambrook et al., 1994; Dwyer et al., 2010; Wondirad, 2019; Brahmantyo et al., 2016; Christofakis and Papadaskalopoulos, 2011; Rewitzer et al., 2017; Wang et al., 2019).

Ecotourism, a sustainable alternative to mass tourism, focuses on undisturbed natural areas and emphasizes conservation and community benefits. We recall that The International Ecotourism Society (TIES) defines it as responsible travel that conserves the environment and improves the well-being of local people (Weyns et al., 2019). It integrates ecological, social, economic, and political considerations into tourism practices, aiming for equitable and sustainable outcomes (Mtapuri and Giampiccoli, 2019). This form of tourism is characterized by ethical travel practices that respect nature and local communities, necessitating active community participation and control from project inception through evaluation.

Spatial planning plays a pivotal role in the effective management and development of ecotourism landscapes. It involves the organization and arrangement of spatial entities to optimize tourism potentials while minimizing adverse impacts. This planning is essential for addressing wide-ranging issues from economic development and infrastructure to education, healthcare, and environmental conservation at national, regional, and local levels (Acheampong and Ibrahim, 2016; Acheampong, 2019; Bieling, 2014; Sutherland et al., 2016; Marija, 2017).

Countries like Cambodia, China, Laos, Tanzania, Myanmar, Thailand, and Vietnam have successfully integrated community-based ecotourism as a strategy for poverty alleviation and biodiversity conservation (Chen and Qiu, 2017; Laplace et al., 2019). These examples highlight the necessity of considering spatial planning within the broader framework of sustainable tourism development, ensuring that ecotourism initiatives are strategically aligned with both conservation efforts and community needs.

Given the critical nature of spatial planning, this study aims to examine its role and implementation in Ghana. This includes a review of the legal and institutional frameworks and an analysis of spatial

planning at the national, regional, and district levels as they relate to ecotourism and tourism planning.

At the conclusion of this literature review, several pivotal insights emerge, laying a solid foundation for a conceptual framework aimed at exploring the nuanced interplay of ecotourism with cultural heritage and sustainable development. The review underscores the integral role of integrating cultural and natural heritage, advocating for ecotourism approaches that not only enhance visitor experiences but also promote the conservation of diverse heritage assets. Central to the discourse on ecotourism is the principle of sustainable development, which is highlighted through the literature as essential for ensuring that ecotourism operations balance economic growth with the imperative of environmental stewardship and social equity.

A recurring theme in the review is the critical role of community participation. It is evident that the success and sustainability of ecotourism initiatives heavily depend on active and meaningful engagement of local communities, which ensures equitable distribution of benefits and enhances project acceptance. The economic implications of ecotourism are double-edged; while providing significant opportunities for local economic stimulation and infrastructural enhancements, they also pose challenges such as potential economic dependency and financial leakages that must be meticulously managed.

Ecotourism's socio-cultural impacts are profound. It offers avenues for cultural preservation and community pride while cautioning against the risks of cultural commodification and disruption of local traditions. In terms of environmental conservation, the review highlights ecotourism's potential as a conservation tool but also notes the necessity for stringent management practices to prevent ecological degradation.

Furthermore, the significance of spatial planning in ecotourism development is thoroughly discussed, emphasizing the need to develop ecotourism sites that effectively support both conservation efforts and tourism needs. Based on these comprehensive insights, the proposed conceptual framework for this study will focus on leveraging ecotourism as a strategic tool for sustainable development, emphasizing policy support, community-centric approaches, and the integration of environmental, economic, and socio-cultural dimensions. This framework aims to guide practical applications in policy-making and ecotourism development, ensuring that such initiatives are both sustainable and beneficial to all stakeholders involved.

CHAPTER THREE

MATERIALS AND METHODS

3.1 Introduction and Research Design

This chapter describes the research methodology, which combines a cross-sectional quantitative design with qualitative components. This mixed-methods approach, selected for its ability to provide contextual insights, captures a snapshot of current conditions within the study area, enabling the examination of both quantitative trends and qualitative perceptions (Kumar, 2011). By integrating diverse data sources, this design yields a more comprehensive understanding of the research questions (Creswell, 2007).

The methodology in this dissertation is structured to ensure a holistic understanding of ecotourism's impact within the Asuogyaman District, addressing both spatial and non-spatial elements. The research process is divided into two primary phases, each designed to interlink theoretical groundwork with empirical investigation, as depicted in the provided flowchart in Figure 1.

To enhance the ecological and physical characterization of the landscape, this study integrates participatory approaches with spatial and remote sensing techniques. The study gathers local perceptions of ecological value and landscape character through semi-structured interviews and participatory mapping. This hybrid approach ensures that both the scientific features (e.g., slope, aspect, vegetation, proximity to water bodies) and cultural-ecological significance as perceived by the local population are captured, providing a fuller picture of landscape character relevant to ecotourism development.

Phase 1 involves an extensive Literature Review aimed at establishing a theoretical base by synthesizing existing academic studies sourced from renowned databases such as Science Direct, JSTOR, Taylor and Francis, Google Scholar, UNESCO, and SAGE. This review supports the development of ecotourism mapping indicators which are pivotal in the subsequent empirical analysis. The Cartographic Data and Remote Sensing Data (DEM) serve as foundational inputs, facilitating detailed spatial analysis. This includes creating several key maps such as the slope map, elevation map, aspect map, land use map, and a map illustrating the distance to main roads and urban areas, which are critical for assessing the physical landscape's suitability for ecotourism.

The preliminary field survey is instrumental in validating these cartographic inputs and enhancing the qualitative aspects of the research through Community Entry, Mobilization of Research Team and Participants, and Validation of Research Methods and Instruments. These activities are crucial for integrating local perspectives and ground realities into the research framework.

Methodological Approaches employed in the field include:

1. Focus Group Discussions, providing in-depth insights into community perceptions and expectations.
2. Face-to-Face Interactions, which enable the collection of nuanced socio-economic data.
3. Participant Observation, offering observational data crucial for understanding daily interactions and activities within ecotourism sites.
4. Pretesting of Instruments, ensuring the reliability and validity of research tools.

5. Site Visits, which are essential for firsthand observation of ecotourism operations and stakeholder engagement dynamics.

This approach not only encapsulates the spatial dynamics through quantitative data but also deeply explores the socio-economic and environmental impacts through qualitative assessments, ensuring a comprehensive understanding of ecotourism development in the region. The integration of these methodologies underscores the dissertation's aim to offer practical and theoretical contributions to the field of sustainable tourism development.

A broad range of data collection methods was utilized to gather the required data. Key informant interviews involved professionals such as local government officials, tourism industry stakeholders, and community leaders. In contrast, focus group discussions were conducted exclusively with community members. Interviews generally lasted 45-60 minutes, while focus groups ranged from 90-120 minutes. A structured set of research questions guided each session to ensure consistency and reliability in data collection.

The chapter also outlines the study area, the target population, and the sampling procedures. It also details the research instruments and the processes followed for data collection, processing, analysis, and presentation. The four objectives introduced in Chapter 1 are addressed with specific materials and methods described in the following sections.

3.1.1 Research Objectives

The primary objective of this research is to explore innovative pathways for uncovering and developing the ecotourism potential within cultural landscapes. Specifically, the study seeks to:

1. **Characterize the Landscape:** Identify the distinctive character of the Asuogyaman District landscape, considering both its physical features and the local community's perception and connection to it.
2. **Assess Stakeholder Roles:** Evaluate the roles and contributions of stakeholders, including community members, institutions, and decision-makers, in promoting sustainable tourism.
3. **Understand Community Sentiments:** Gauge local perceptions, attitudes, and preferences toward cultural landscape use for ecotourism and sustainable rural development.
4. **Develop Policy Recommendations:** Propose institutional policies and strategic planning approaches that balance conservation needs with community-driven ecotourism goals.

In addition to these objectives, the research utilizes Geographic Information Systems (GIS) and remote sensing techniques to support landscape assessment, particularly in mapping elevation, slope, aspect, and land use patterns. These tools were employed to inform spatial interpretation rather than to construct a comprehensive model, providing a foundational understanding of the district's ecotourism-relevant features. This holistic approach provides a comprehensive understanding of the district's ecotourism potential, ensuring that the findings are both practical and aligned with sustainable development principles. As shown in Table 2, each research question is paired with a distinct set of materials, methods, and analysis techniques, ensuring a structured approach to data collection and interpretation.

Table 2: Research Questions and Summary of Associated Materials, Methods and Analysis

No.	Research Question	Research	Data Collection	Data Analysis
		Methodology	Instruments	
1	What is the character of the cultural landscape understudy?	Structured Interviews -Survey / GIS/ Transect Walk / Observation / Photos	Questionnaire / Cartographic / Remote Sensing Data	RStudio / GIS / Pictographic Analysis
2	Roles of Stakeholders in Sustainable Tourism Development	Structured Interviews -Survey / Key Informant Interviews	Questionnaire / Interview Guide/Checklist	RStudio / Recording & Transcription
3	Sentiments of local communities concerning the use of landscapes for Sustainable Tourism Development	Community Surveys/ Focus Group Discussions	Questionnaire / Discussion Checklist	RStudio / Recording & Transcription
4	Policy recommendations and proposals for landscape planning and design in	Community Surveys/ Key Informant Interviews	Questionnaire / Interview Guide/Checklist	RStudio / Recording & Transcription

ecotourism

development?

Source: Authors Construct

3.2 Study Area: Asuogyaman District

The Asuogyaman District Assembly is one of the 260 Metropolitan, Municipal and District Assemblies in Ghana and forms part of the thirty-three Municipalities and Districts in Eastern Region. It covers a total estimated surface area of 1,507 square kilometers and constitutes 5.7% of the total area of the Eastern Region. Geographically (Figure 2), the district is situated between latitudes 6° 34' N and 6° 10' N, and longitudes 0° 1' W and 0° 14' E, with Atimpoku serving as its administrative capital.

The district shares borders with Kwahu Afram Plains South District to the north, Upper Manya Krobo District and Lower Manya Krobo Municipal to the south and west, and to the east with Kpando Municipal, North Dayi District, Ho Municipal, and the North Tongu District of the Volta Region. As of the 2010 population and housing census, the district has a population of 98,046, comprising 47,030 males and 51,016 females.

Asuogyaman District is critically acclaimed for hosting the Akosombo Dam (Figure 2), one of Ghana's foremost tourist attractions. Initiated in 1965 following the discovery of bauxite reserves on the Kwahu Plateau, the dam harnesses the Volta River's water for generating power essential for the smelting of aluminum. Comprising a rock-fill dam, spillway, and powerhouse, the Akosombo Dam was officially commissioned on January 22, 1966, by Osagyefo Dr. Kwame Nkrumah, then-President of Ghana. Standing 132 meters tall and extending 660 meters long, the

dam has created a vast reservoir with a surface area of 780 square kilometers and a total storage capacity of 148 million cubic meters, significantly contributing to both domestic and export power supply.

The resultant Volta Lake, extending nearly the entire length of Ghana from Daboya in the north to Akosombo in the south, is the world's largest man-made lake by surface area. It supports a rich biodiversity including approximately 114 different fish species, with an annual fish population catch ranging from 35,000 to 40,000. Tourist visits peak during July and August, and since 1997, the dam has been repeatedly recognized as the Best Tourist Attraction in the Eastern Region by the Ghana Tourist Board.

In recent years, the Asuogyaman District has experienced a notable increase in tourism activities, necessitating the expansion of infrastructure such as hotels and roads. However, this growth has not come without challenges, including significant land use conflicts and environmental degradation (Reed, et al., 2024). Efforts are underway to balance development with conservation, ensuring sustainable use of the region's natural resources.

The district experiences a tropical climate with significant implications for both agriculture and tourism. Changes in rainfall patterns and hydrological conditions have affected water levels in the Volta Lake, impacting local ecosystems and community livelihoods dependent on fishing and agriculture. In response to these changes, local policies now emphasize sustainable tourism that respects the ecological balance and supports economic development. The Asuogyaman District's strategic approach to tourism, coupled with its rich cultural and ecological tapestry, makes it a unique case study for sustainable regional development.

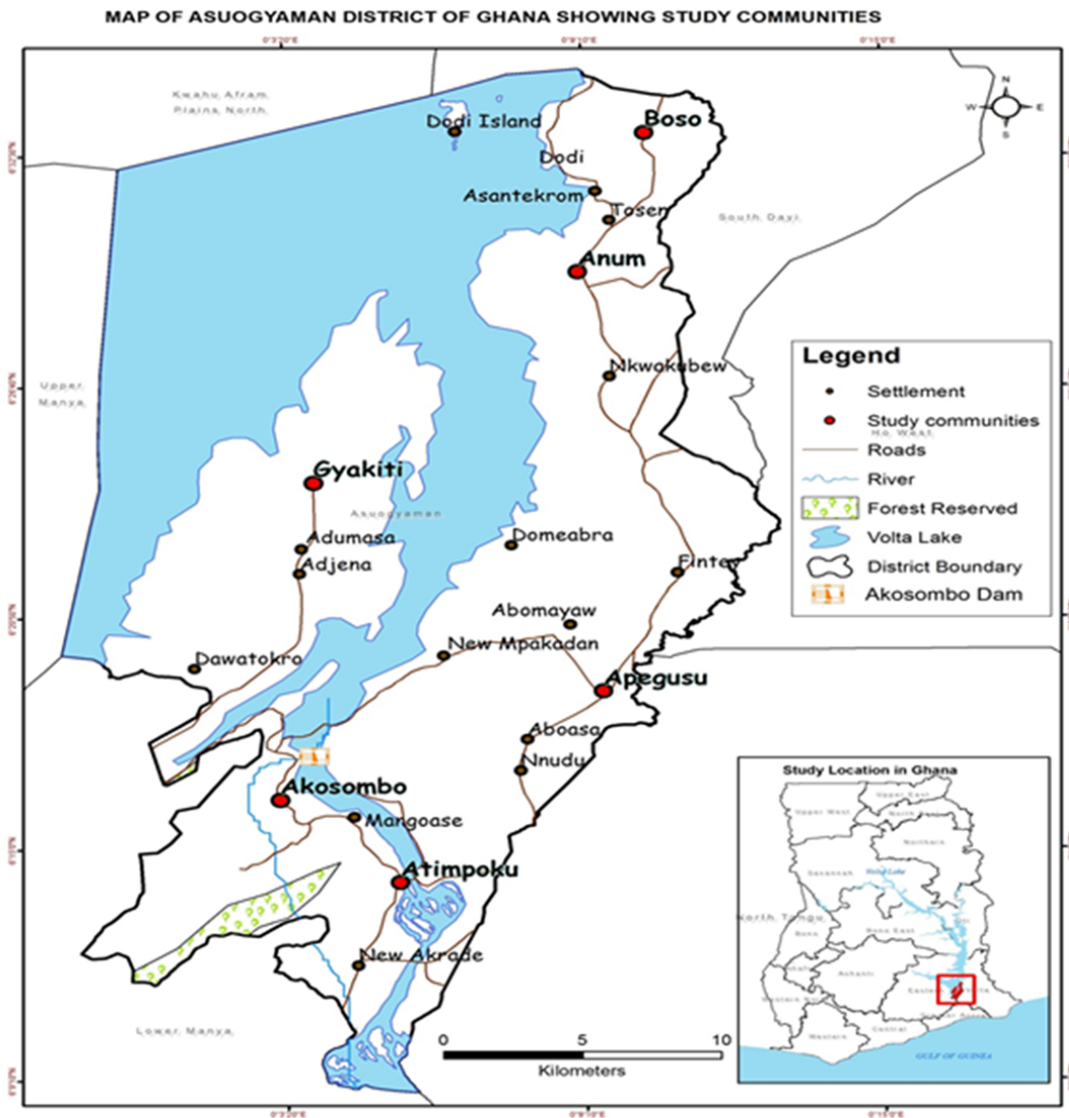


Figure 2: Map of Study Area - Asuogyaman District

Source: Authors Construct



Figure 3: Image of the Akosombo Dam/Volta Lake

Source: Author's Construct, (2019)

3.3 Data Sources and Instruments

3.3.1 Data Sources

Data for this study was collected from both primary and secondary sources. A hallmark of qualitative research is using multiple data sources, a strategy that enhances data credibility. The primary data sources include interviews, observations, photography, and a focus group discussion. Secondary sources would be mostly documentary analysis from books, journals and other publications. Also, data was sought from the strategic plan documents of the Eastern Regional Coordinating Council (ERCC), Asuogyaman District (AD), Volta River Authority (VRA), Volta Lake Transport Cooperation (VLTC), Ghana Statistical Service database (for the population and demographic characteristics of the district assemblies), the Ghana Tourism Authority (GTA) and the Ministry of Tourism. These resources yielded the comprehensive data needed to address the research objectives.

3.3.2 Data Collection Instruments

The study employed a range of established data collection instruments and methodologies to ensure that the gathered information was robust and multidimensional. By utilizing diverse methods and tools, the research captured various stakeholder perspectives, documented the dynamics within the study area, and provided a solid basis for analysis. Each data source was aligned with the research objectives outlined in Chapter 1, ensuring that the data collected was credible, detailed, and contextually rich (Creswell et al., 2004; Frels et al., 2013).

3.3.3 Key Data Collection Methods

3.3.3.1 Interview Methods

A semi-structured interview format was used to engage respondents from the communities of Atimpoku, Akwamufie, Mpakadan, and Gyakiti. This method provided the flexibility to explore participants' views, attitudes, and experiences in depth. Both open-ended and closed-ended questions were employed, allowing respondents to provide nuanced, detailed responses while still maintaining some structure in the data collection process. The choice of a less rigid format enabled the researcher to facilitate relaxed, meaningful conversations, particularly helpful given the observed low literacy levels in these areas (Kallio et al., 2016; McIntosh and Morse, 2015).

A total of 258 participants-representing a diverse array of occupations, including local entrepreneurs, tour guides, farmers, and permanent residents were selected. These individuals were asked about their perspectives on ecotourism, their level of involvement in tourism activities, and their expectations regarding the social, cultural, and environmental impacts of ecotourism. The interview schedule, detailed in Appendix 1, was divided into six main sections, ranging from demographic information to community-driven suggestions for improving landscape planning.

This approach ensured comprehensive coverage of all research objectives, while also addressing logistical challenges through flexible scheduling and tailored assistance for respondents.

In-depth interviews complemented the semi-structured approach by targeting key informants with substantial knowledge and expertise in the study area. These interviews provided a resource for obtaining detailed, context-rich information, particularly when initial data indicated the need for deeper investigation (Kallio et al., 2016). Key informants included representatives from the Eastern Regional Coordinating Council (ERCC), Asuogyaman District Assembly (ADA), Volta River Authority (VRA), Ghana Tourism Authority (GTA), and local traditional authorities. As shown in Table 3, these sessions provided insights into institutional roles, stakeholder relationships, and broader strategic considerations that informed the study’s findings.

By integrating semi-structured and in-depth interviews, the research captured both grassroots perspectives and institutional knowledge, resulting in a robust, multidimensional understanding of the factors influencing ecotourism development in the Asuogyaman District.

Table 3: List of Key informants for the Study

Informants	Data Collection Approach	No. Respondents
1. Association of Hotels and Recreational facilities	Online Workshop	30
2. Community Members (Akwamu/Anum/Boso)	Focus Group Discussion	12
3. Eastern Regional Coordinating Council (ERCC)	Key Informant interview	1

4. Asuogyman District Assembly (ADA)	Key Informant interview	2
5. Volta River Authority (VRA)	Key Informant interview	3
6. Ghana Tourism Authority (GTA)	Key Informant interview	1
7. Traditional Authority (TA)	Key Informant interview	1
Total		50

Source: Field Work: 2021

3.3.3.2 Qualitative Methods

To understand stakeholder perceptions and participation, focus group discussions were conducted with community members from Akwamu, Anum, and Boso, as well as representatives from the Association of Hotels and Recreational Facilities. These discussions provided valuable insights into how primary stakeholders interacted with secondary stakeholders, highlighting the challenges and roles they play in the district's tourism planning and development. Each focus group, comprised of four participants, lasted approximately two hours. By fostering a natural, relaxed atmosphere, the discussions allowed participants, who were working-class community members, to express their thoughts openly and fully. Greenwood et al. (2014) affirm that focus group discussions are effective for gathering diverse perspectives and bringing previously unconsidered topics to light, significantly enriching this study's qualitative findings.

Complementing the focus group discussions, structured observational methods were used to record the physical conditions, local activities, and landscape features contributing to the Asuogyaman District's ecotourism potential. Field visits involved thorough on-site inspections of cultural heritage landmarks, ecologically significant areas, and existing tourism infrastructure. Observations focused on documenting changes in environmental conditions, land use patterns, and infrastructure improvements. These detailed visual records provided critical context for interpreting qualitative data gathered through focus group discussions and interviews. As part of the qualitative approach, community members were also asked to describe places of cultural or ecological significance through participatory mapping exercises. These exercises helped to document areas perceived by locals as sacred, scenic, or ecologically rich, offering critical insights that may not be evident from spatial data alone. This method complements physical assessments with subjective, community-informed perspectives, thus enriching the landscape characterization. Together, these qualitative methods offered a holistic view of the district's social and ecological landscape.

3.4 Population and Sampling Techniques

3.4.1 Target Population

The target population for the study was both male and female residents of Atimpoku, Akwamufie, Mpakadan and Gyakiti who were aged 18 years and above. This is because age 18 is the age of maturity in Ghana. Aside from that, they are the active group that can participate in tourism development and could give relevant and discerning information about the study region/phenomenon. Also, the role of stakeholders in the development of Community-Based Ecotourism, is very critical as they help in the identification of prospects, implementation of

planned projects and co-management of ecotourism sites (Kininmonth et al., 2015; United Nations., 2018). Stakeholders and institutions, such as the Eastern Regional Coordinating Council (ERCC), Asuogyaman Traditional Council (Chiefs and Community Elders), Volta River Authority (VRA), Asuogyaman District Assembly (ADA), Volta Lake Transport Cooperation (VLTC), Ghana Tourism Authority (GTA), Ministry of Tourism (MoT).

Council for Scientific and Industrial Research (CSIR), Volta Hotel (In charge of Tourism Development within the Enclave) were interviewed.

3.4.2 Sampling Procedures

Population data from the Ghana Statistical Service was used to establish a sampling frame. Table 3 below outlines the total population and the number of households for the four selected communities:

Table 4: Population/Household Figures of Study Sites (Sampling Frame)

Name of Communities	Total Population	No. of Household (Sampling Frame)
1. Atimpoku,	7631	1861
2. Akwamufie,	2160	586
3. Mpakadan	1584	473
4. Gyakiti	1940	386

Data source: Ghana Statistical Service (2010): Population and Housing Census

3.4.3 Sample Size Determination

Using the International Fund for Agriculture Development formula, the study determined a desired sample size of approximately 246. A 5% adjustment was applied to account for non-responses, resulting in a final sample size of 258 participants. The calculation formula is as follows:

$$n = \frac{t^2 p(1 - p)}{m^2}$$

Where:

- n - Desired sample size
- t - Confidence level set at 95% (standard value = 1.96)
- p - Estimated proportion of the target population with similar characteristics (0.85)
- m - Margin of error set at 5% (standard value = 0.05)

Given the scope of the study region, a combination of probability and non-random sampling techniques was employed. Communities were categorized into two cohorts, downstream and upstream, and stratified sampling was used to ensure proportional representation. Atimpoku and Akwamufie were deliberately selected as study sites based on their administrative significance and central geographical positioning, while Mpakadan and Gyakiti were selected for their potential as isolated, economically disadvantaged areas often overlooked in tourism initiatives.

3.4.4 Sample Allocation and Stratified Sampling:

The sample size allocation among the four communities was based on household ratios. Atimpoku had the most significant number of households, followed by Akwamufie, Mpakadan, and Gyakiti. Proportional sampling ensured each community contributed fairly to the overall sample size, as detailed in Table 4:

Table 5: Population, Household Figures and Sample Size of Selected Study Locations

Name of Communities	Total Population	No. of Household (Sampling Frame)	Sample Size
1. Atimpoku,	7631	1861	103
2. Akwamufie,	2160	586	77
3. Mpakadan	1584	473	52
4. Gyakiti	1940	386	26
Total Sample Size	13315	3,306	258

Source: Fieldwork, 2021

Despite the comprehensive sample size plan outlined in Table 4, it is noteworthy that there was an increase in the initial sample size from 258 to 271. This adjustment arose due to unforeseen additional responses. The revised distribution of the sample is as follows: Atimpoku (104 instead

of 103), Akwamufie (78 instead of 77), Mpakadan (54 instead of 52), and Gyakiti (31 instead of 26).

3.4.5 Implementation

A systematic numbering system was used to assign unique identifiers to each household. Then, a simple random sampling approach selected households until the allocated quotas were met. One participant, aged 18 years or older, was chosen from each household based on their willingness and ability to provide relevant information. This rigorous approach ensured that the study's sample was representative and diverse.

3.5 Recruitment, Training, and Survey Administration

A total of eight field assistants, proficient in the languages of Ga-Adangbe, Akan, and Ewe, were enlisted to assist with data collection. Four individuals were National Service workers affiliated with the Volta River Authority (VRA), while one assistant was selected from each of the designated study communities. Before the fieldwork, the assistants underwent a one-day training program. This session covered the study's objectives, procedures for translating instruments into local languages, and a simulated administration of the surveys. Their prior experience in local data collection made them well-suited to facilitate accurate and reliable responses.

The surveys were administered face-to-face using printed questionnaires. Field assistants conducted the surveys at participants' homes or community meeting venues, ensuring respondents could ask questions and provide detailed answers. By using printed forms and in-person interactions, the survey process maintained a consistent and structured approach, enhancing the credibility of the data collected.

Although field assistants handled the logistical aspects of survey administration, all subsequent phases of the research—including data analysis, interpretation, and writing—were solely carried out by the author. This ensured that the integrity and quality of the research findings were maintained under the author’s direct oversight and accountability.

3.6 Challenges

The data collection process encountered several significant challenges, primarily due to the COVID-19 pandemic, which caused substantial delays and necessitated adjustments to the original methodology. The pandemic-related travel restrictions required a combination of online and in-person methods to ensure the completion of data collection. Gaining access to key participants was also difficult, as logistical obstacles and scheduling conflicts made securing interviews and focus group attendance challenging.

Another notable challenge was the limited availability of some community members during daytime hours, as many were occupied with daily subsistence activities. This necessitated evening visits to ensure sufficient participation, extending the data collection timeline. Additionally, the lack of geographic data and insufficient secondary sources posed difficulties in conducting the desired level of spatial analysis. Lastly, concerns about confidentiality and safeguarding participants’ personal information required extra time and effort to reassure respondents and ensure their trust. Despite these challenges, the field assistants implemented flexible approaches and worked closely with local leaders to successfully gather the necessary data.

3.7 Preliminary Field Visits

In January 2021, preliminary field visits were undertaken to ascertain the current on-site conditions and authenticate the research methodology. During the aforementioned visit, a formal letter of introduction from the Department was used to request authorization from the Akwamu Traditional Council (ATC) to gain access to the community for the purpose of conducting a research investigation. The engagement with the traditional council entailed a tour of the three main traditional areas (Akwamu, Anum, and Boso) situated inside the district. The research team provided a briefing to the participants regarding the investigators working on the study, the study's objectives, and the anticipated questions directed toward the respondents. The chiefs and elders subsequently agreed to employ traditional communication methods to notify their constituents about the opportunity to participate in the study within the designated timeframe.



Figure 4: Meeting with the members of the Akwamu Traditional Council

Source: Field Work, 2021

In addition, a series of introductory letters were dispatched to influential stakeholders whose participation would greatly impact the study. These stakeholders encompassed the Eastern Regional Coordinating Council (ERCC), the Asuogyaman Traditional Council (comprising Chiefs

and Community Elders), the Volta River Authority (VRA), the Asuogyaman District Assembly (ADA), the Volta Lake Transport Cooperation (VLTC), the Ghana Tourism Authority (GTA), the Ministry of Tourism (MoT), the Council for Scientific and Industrial Research (CSIR), Akwamu George Conservation Trust (AGCT) and the Volta Hotel (VH).

3.8 Data Analysis and Presentation

A combination of quantitative and qualitative approaches was applied to analyze the data collected. Out of the 271 completed questionnaires, all were carefully edited and confirmed as suitable for the analysis. Quantitative data analysis focused on identifying statistical trends, which were established and visualized using RStudio version 4.2.2. Due to the non-normal distribution of Likert scale data, non-parametric methods were employed. Specifically, the Wilcoxon rank sum test (Rosner et al., 2003) was utilized to compare groups, ensuring the robustness of the results. Descriptive statistics, including point estimates and 95% confidence intervals, were calculated. P-values were also reported to assess the statistical significance of findings. Advanced statistical and computational techniques allowed for deeper exploration of relationships and patterns in the data.

The word frequency analysis was integrated into the thematic coding process to ensure that the qualitative analysis aligned closely with the study's conceptual framework. Identified themes were systematically coded about the conceptual framework, ensuring that frequently occurring terms were descriptive and analytically relevant. This approach allowed for a deeper understanding of the data, linking keywords and phrases to the study's theoretical constructs.

Latent Dirichlet Allocation (LDA) (Jelodar et al., 2019) was employed as an advanced topic modeling technique to uncover latent themes within the textual data. The process began with pre-

processing steps, including tokenization, stopping word removal, and lemmatization. The resulting standardized text was transformed into a document-term matrix, enabling the LDA algorithm to identify word co-occurrence patterns. The number of topics was determined through exploratory analysis, ensuring a balance between granularity and interpretability. The algorithm then iteratively assigned words to topics and refined the topic distributions to optimize the fit to the data. Each topic was represented by a set of terms with high probabilities, which were carefully interpreted and named in alignment with the conceptual framework.

Through this approach, the word frequency analysis and LDA provided a structured and refined understanding of the qualitative data, allowing for the identification of key themes grounded in the study's theoretical foundations. These themes were subsequently cross-referenced with the quantitative findings, creating a more cohesive and comprehensive interpretation of the results. LDA was performed using RStudio version 4.2.2, which enabled a systematic and replicable approach to identifying latent topics and interpreting underlying themes within the qualitative data.

The perceptual data gathered through interviews and participatory mapping were thematically analyzed to identify recurring community-defined landscape features, such as sacred groves, ritual paths, fishing grounds, and scenic views. These findings were cross-referenced with GIS-based ecological and terrain data to highlight areas of overlap between local valuation and geophysical suitability for ecotourism. This fusion of local knowledge with scientific mapping enhances the robustness of the landscape characterization.

Geospatial analyses were performed to complement the above methods. Geographic Information System (GIS) software, including ArcGIS (ArcPro and ArcMap), was employed to map and analyze the physical and cultural features of the landscape. GIS data were processed using Python

scripts and supported by other tools such as Visual Studio. The analysis identified priority areas for conservation and ecotourism development by integrating spatial data with community and stakeholder input. Remote sensing techniques, incorporating satellite imagery, further enhanced the understanding of ecological patterns, biodiversity, and regions prone to environmental degradation. These spatial analyses were critical in contextualizing the qualitative and quantitative data, ensuring that the findings addressed the research questions and the broader geographical context.

Overall, the data analysis employed a structured and multidimensional approach. The integration of statistical tests, thematic coding, topic modeling, and geospatial techniques ensured the rigor and reliability of the results and provided a robust foundation for subsequent conclusions and recommendations.

3.9 Summary

This chapter outlined the research context, detailing the mixed-methods design, study location, and sampling strategies used. It describes the tools and techniques applied in data collection and analysis, including both qualitative and quantitative approaches. Key elements, such as the recruitment and training of field assistants, the implementation of fieldwork, and the challenges encountered throughout the research process, are also examined. The next chapter presents the study's findings and offers an in-depth interpretation of the analyzed data.

CHAPTER FOUR

RESULTS AND DISCUSSIONS

4.1 Introduction

This chapter presents the findings and analysis of the research conducted on ecotourism development within the Asuogyaman District. The chapter is structured to systematically present the results, beginning with broader socio-demographic characteristics of respondents and subsequently delving into more specific analyses, including landscape characterization, stakeholder perspectives, and community engagement in ecotourism development. By structuring the results this way, the study ensures coherence and logical progression, allowing for a comprehensive understanding of the diverse factors influencing ecotourism within the study area.

The chapter is organized as follows:

1. Introduction
2. Socio-Demographic Characteristics of Respondents
3. Landscape Characterization and Ecotourism Potential
4. Stakeholder Roles and Community Involvement in Ecotourism
5. Community Perception and Participation in Ecotourism Development
6. Policy Considerations and Planning for Sustainable Ecotourism
7. Summary of Findings

This structured approach enhances clarity and aligns the presentation of results with the research objectives, thereby offering a holistic view of the factors shaping ecotourism potential and sustainability within the Asuogyaman District.

4.2 Socio-Demographic Characteristics of Respondent

Understanding the socio-demographic characteristics of the respondents is essential in analyzing their perceptions and participation in ecotourism activities. This section presents the demographic distribution of the study participants, including their place of residence, gender, age, occupation, educational background, marital status, religious affiliation, ethnicity, and monthly income.

4.2.1 Place of Residence and Community Affiliation

The data (See Table 6) indicates that the largest proportion of respondents (39%) reside in Atimpoku, followed by Akwamufie with 29%, Mpakadan with 20%, and Gyakiti with 12%. This distribution highlights that the majority of the study population is concentrated in Atimpoku and Akwamufie, which are considered downstream communities, and Mpakadan and Gyakiti constitute the upstream communities. Approximately 68% of respondents are associated with downstream communities, while 32% belong to upstream areas. This distribution reflects the socio-economic dynamics of the Asuogyaman District, where downstream communities are more actively involved in tourism due to their proximity to major attractions like the Akosombo Dam and Volta Lake.

4.2.2 Gender and Age Distribution

The gender distribution among the respondents is relatively balanced, with 52% identifying as male and 48% as female. This near-equal representation ensures that the perspectives of both genders are adequately captured. Regarding age distribution, the most significant proportion of respondents (28%) fall within the age range of 18 to 24 years, followed by 22% aged 32 to 38, 19% aged 25 to 31, and 16% aged 39 to 45. The representation of older age groups (46-59 and

60+) is comparatively lower, indicating that the study population predominantly consists of younger individuals.

4.2.3 Occupation and Marital Status

The primary occupations of the respondents vary, with the largest group (27%) being small-scale traders, followed by civil servants (20%), farmers (16%), students (13%), fishermen (11%), and others (13%). The diversity in occupational backgrounds provides a comprehensive perspective on the community's economic activities. In terms of marital status, 53% of respondents are single, while 45% are married. A minority (2.3%) reported being divorced. This demographic insight reflects a predominantly single or married population, which may influence perspectives on community participation and tourism initiatives.

4.2.4 Educational Background and Religious Affiliation

The educational attainment of the respondents reveals that 39% have completed secondary, vocational, or technical education, 34% hold tertiary qualifications, and 22% have basic education. A smaller proportion (5.6%) have no formal education. This varied educational profile highlights the community's potential for engaging in tourism activities, especially given the significant proportion with vocational skills. In terms of religious affiliation, 91% of respondents identify as Christians, followed by Muslims (6.4%) and adherents of traditional religions (3.0%). This distribution underscores the predominantly Christian demographic in the Asuogyaman District.

4.2.5 Ethnicity and Income Levels

Ethnically, the majority of respondents are Akan (49%), followed by Ewe (32%), Ga-Adangbe (14%), and other ethnic groups (4.9%). This diversity reflects the multi-ethnic composition of the district, with a significant presence of indigenous Akan communities. The income distribution shows that 37% of respondents earn below GHC 500 per month, 34% earn between GHC 501 and GHC 1000, 20% earn between GHC 1001 and GHC 2000, and 8.4% earn above GHC 2001. The prevalence of low-income levels indicates economic challenges, which could impact community involvement in tourism initiatives.

4.2.6 Summary

The socio-demographic analysis reveals that the respondents are predominantly young, with balanced gender representation and diverse occupational and educational backgrounds. The majority reside in downstream communities, where tourism activities are more prevalent. Understanding these characteristics is crucial for formulating targeted interventions that enhance community participation and optimize the benefits of ecotourism within the Asuogyaman District.

Table 6: Socio-Demographic Characteristics of Respondents

Background Characteristics	N = 267	Percentage (%)
<i>Place of Residence</i>		
Akwamufie	78	29
Atimpoku	104	39
Gyakati	31	12
Mpakadan	54	20
<i>Community Location</i>		
Downstream	182	68
Upstream	85	32

<i>Native Status</i>		
Indigene	175	66
Non-indigene	90	34
Unknown	2	
<i>Duration of Stay in Community</i>		
10 – 20 years	67	25
5 – 10 years	58	22
Above 20 years	85	32
Less than 5 years	57	21
<i>Gender</i>		
Female	127	48.0
Male	137	52
Unknown	3	
<i>Age</i>		
18-24	74	28
25-31	50	19
32-38	60	22
39-45	42	16
45-52	25	9.4
53+		
<i>Main Occupation</i>		
Civil Servant	54	20
Farmer	43	16
Fisher	29	11
Other	34	13
Petty Trader	43	27
Student	34	13
<i>Marital Status</i>		
Divorced	6	2.3
Married	119	45
Single	141	53
Unknown	1	
<i>Educational Level</i>		
Basic	59	22
No Formal Education	15	5.6
Secondary/Vocational/Technical	103	39
Tertiary	90	34
<i>Religion</i>		
Christianity	240	91
Islam	17	6.4
Traditional	8	3.0
Unknown	2	

<i>Ethnicity</i>		
Akan	130	49
Ewe	84	32
Ga-Adangbe	38	14
Other	13	4.9
Unknown	2	
<i>Monthly Income</i>		
Above GHC 2001	21	8.4
GHC 1001 - GHC 2000	50	20
GHC 501 - GHC 1000	86	34
Less than GHC500	93	37
Unknown	17	

Source: Field Work, (2023)

4.3 Landscape Characterization and Ecotourism Potential

The Asuogyaman District possesses diverse landscapes that present significant ecotourism potential. This section explores the physical and cultural attributes of the district, which form the foundation for sustainable tourism development.

4.3.1 Physical Landscape Features

The district's geographical position between latitudes 6° 34' N and 6° 10' N, and longitudes 0° 1' W and 0° 14' E, places it in a region characterized by varied topography, water bodies, and vegetation. The presence of the Akosombo Dam and Volta Lake are central to the district's ecological and tourism landscape. These natural and man-made features create opportunities for activities such as boating, fishing, and sightseeing, which are integral to the local tourism economy.

The Volta Lake, formed by the Akosombo Dam, is the world's largest man-made lake by surface area, stretching from Daboya in the north to Akosombo in the south. Its biodiversity, including

114 different fish species, supports both local livelihoods and ecotourism. The lake's scenic beauty attracts numerous visitors, particularly during peak seasons such as July and August. The district's rich biodiversity and unique landscape features are pivotal in promoting ecotourism.

4.3.2 Cultural Landscape and Heritage

In addition to its natural resources, the district boasts a rich cultural heritage that enhances its ecotourism appeal. The communities within the district, including Atimpoku, Akwamufie, Mpakadan, and Gyakiti, are renowned for their traditional practices and cultural artifacts. Cultural events, rituals, and festivals, such as the annual Akosombo Festival, provide unique attractions for both domestic and international tourists.

Local crafts and traditional dance performances are integral to community-based tourism initiatives, particularly in downstream communities. These cultural expressions not only support local economies but also preserve the district's intangible cultural heritage. Figure 5 showcases some of the prominent cultural attractions and community-driven initiatives within the region.



Figure 5: Zone 1 (Akwamu Hills Community Forest - AHCFP)

Source: Fieldwork (2021)

4.3.3 Ecotourism Potential

The integration of physical and cultural landscapes positions the Asuogyaman District as a prime destination for ecotourism. The combination of natural beauty and rich heritage fosters a diverse tourism experience, appealing to nature enthusiasts and cultural tourists alike. Ecotourism projects focusing on community involvement and sustainable practices have the potential to enhance local development while preserving ecological integrity.

Several ongoing initiatives aim to improve ecotourism infrastructure, including the development of eco-lodges and the promotion of guided eco-tours. These initiatives align with global trends that

emphasize low-impact tourism and environmental stewardship. As shown in Table 7, the spatial distribution of ecotourism resources highlights the need for strategic planning to maximize the district's tourism potential.

The analysis of the district's landscape indicates that targeted interventions can further boost tourism while ensuring sustainable resource management. By prioritizing areas with high ecological and cultural value, the district can position itself as a model for community-driven ecotourism in Ghana.

Table 7: Respondents Listing of Potential Ecotourism Sites/Experiences

Landscape value	Specific Examples & Location	Type of Ecotourism	Utilization Rate for Ecotourism Development
Cultural Value	Rich culture of Anum, Boso and Akwamu Traditional Council	Cultural	Moderate
	Easter picnic at Gyakiti shoreline	Cultural	Moderate
	Cultural Museum at Akwamufie	Cultural	Low
Spiritual Value	Santa Barbara Church - Akosombo	Religious	Low
	Mami water shrine - Adomi	Religious	Low
	Mahu temple of the Mozama Disco Christo Church	Religious	Low
	Tutu Abo Shrine	Religious	Low
Economic Value	VRA Country's largest hydro-electric dam-Akosombo	Historical	Moderate
	Suspension bridge - Atimpoku	Archeology	Low
	Inland port - Akosombo	Archeology	Low
	Art and Craft industry - Atimpoku	Cultural	Low
Aesthetic Value	Aquaculture	Nature	High
	Akosombo Gorge of the Volta River	Nature	Low
	Akwamu Hills Community Forest	Nature	Low
	The 99 Islands of the Volta Basin	Nature	Low
	Volta Lake	Nature	Moderate

Source: Fieldwork (2023)

4.4 Stakeholder Roles and Community Involvement in Ecotourism

Stakeholders play a pivotal role in the planning, developing, and managing ecotourism within the Asuogyaman District. This section examines the involvement of key stakeholders, including local communities, government institutions, and tourism-related organizations, in promoting sustainable tourism practices.

4.4.1 Community Participation

Community involvement is crucial for the success of ecotourism projects. In the Asuogyaman District, community members actively engage in tourism activities, ranging from guiding services to producing local crafts. According to the survey data (Table 8), approximately 65% of respondents reported coercive participation, indicating they felt they were only informed about tourism development decisions after they were made by top management. This suggests a significant gap between community involvement and decision-making processes.

Table 8: Forms of Stakeholder Participation in Ecotourism Planning and Development

Forms of Participation	Total	Agree	Uncertain	Disagree	Rank
Coercive	N 30 % 100	20 (65)	2 (8.3)	8 (26.7)	1
Spontaneous	N 30 % 100	18 (59.2)	2 (6.8)	10 (34.0)	2
Induced	N 30 % 100	12 (40.3)	2 (4.9)	16 (54.8)	3

Source: Preliminary Field Visit, 2021

The downstream communities, particularly Atimpoku and Akwamufie, demonstrate higher levels of participation compared to upstream areas. This difference is attributed to the proximity to major tourist attractions such as the Akosombo Dam and Volta Lake. Community-based tourism projects

in these areas focus on cultural performances, guided tours, and the sale of handmade souvenirs, leveraging local traditions and skills.

4.4.2 Governmental and Institutional Roles

Government agencies, such as the Volta River Authority (VRA), the Asuogyaman District Assembly (ADA), and the Ghana Tourism Authority (GTA), play significant roles in ecotourism planning and support. The VRA’s management of the Akosombo Dam area contributes to maintaining the site’s environmental integrity, while the ADA facilitates local community involvement through capacity-building workshops and tourism promotion initiatives (Table 9).

Table 9: Roles of Identified Stakeholders Involved in Tourism Development

Category	Stakeholder	Roles
Primary	Association of Hotels and Recreational facilities	They are mostly the first point of call for tourists. They provide accommodation and recreational services.
	Community Members (Akwamu/Anum/Boso)	They bear the brunt of tourism's effects, whether positive or negative. They typically act as hosts and guides for tourists and also operate businesses that cater to tourists.
Secondary	Eastern Regional Coordinating Council	This institution acts as a link between the national and district levels, ensuring that district programmes correspond with the national agenda.
	Asuogyaman District Assembly	The planning institution responsible for conducting government business at the local level.
	Volta River Authority	This development authority was institutes to design and implement the development of the Volta Lake, including the construction and operation of a dam, a power station, and a transmission system.
	Ghana Tourism Authority	They serve as the implementing agency of the Ministry of tourism at the national regional and district levels
	Traditional Authority	Traditional leaders are the guardians of community lands, culture, customary laws,

traditions, and history of their domains. They also help to keep law and order in their communities and initiate development through development partners.

Source: Preliminary Field Visit, 2021

4.4.3 Role of NGOs and Private Sector

NGOs and private sector entities contribute significantly to sustainable tourism by facilitating capacity-building programs and funding eco-friendly projects. Collaborative efforts between the VRA, NGOs, and local communities have created community tourism committees. These committees are tasked with maintaining local attractions and promoting responsible tourism practices. Private investors have also improved visitor facilities and trained local youth as tour guides (See Figure 6).



Figure 6: Photographs of some of the District's Hotels and Recreational Facilities

Source: Fieldwork, (2021)

4.4.4 Challenges to Stakeholder Collaboration

Despite positive involvement, challenges persist in stakeholder coordination. Some community members express concerns regarding unequal benefit distribution, particularly in upstream areas with less developed tourism infrastructure. Additionally, limited funding and capacity-building opportunities hinder the active involvement of marginalized groups.

Efforts to address these challenges include strengthening stakeholder networks and fostering participatory decision-making processes. By enhancing communication and resource sharing among stakeholders, the Asuogyaman District can ensure more equitable and inclusive ecotourism development.

4.4.5 Recommendations for Enhancing Stakeholder Involvement

To strengthen stakeholder collaboration, it is recommended to develop formal frameworks that outline roles and responsibilities among government bodies, NGOs, and local communities. Additionally, establishing community-based tourism associations would empower residents to actively participate in decision-making and project implementation.

Investment in capacity-building programs, particularly in upstream areas, would also ensure that all communities can equally benefit from tourism development. Implementing these strategies would foster a more inclusive and sustainable ecotourism model in the Asuogyaman District.

4.5 Community Perception and Participation in Ecotourism Development

Community perception and participation are crucial components in the sustainable development of ecotourism. This section discusses how the local communities in the Asuogyaman District perceive ecotourism and their level of involvement in related activities.

4.5.1 Perception of Ecotourism

The perception of ecotourism among community members varies significantly based on proximity to tourist attractions and socio-economic factors. According to the survey data, traditional authorities possess the largest proportion of land (67%) utilized for ecotourism, followed by the government (12.9%), the community (11.4%), and private operators (8.7%) (Figure 7). However, upstream and downstream communities display notable differences in land ownership patterns. Upstream communities have traditional authority ownership at 60%, community ownership at 22.4%, government ownership at 15.3%, and private operators at 2.4%. In downstream communities, traditional authorities own 70.4% of the land, followed by the government and private operators with 11.7% each, and the community with 6.1%.

Community perception of stakeholder contribution to ecotourism development shows a positive outlook, as approximately 74% of respondents perceive ecotourism as a beneficial endeavor that promotes local development. This is particularly evident among downstream communities, such as Atimpoku and Akwamufie, where tourism has significantly contributed to local businesses and employment opportunities.

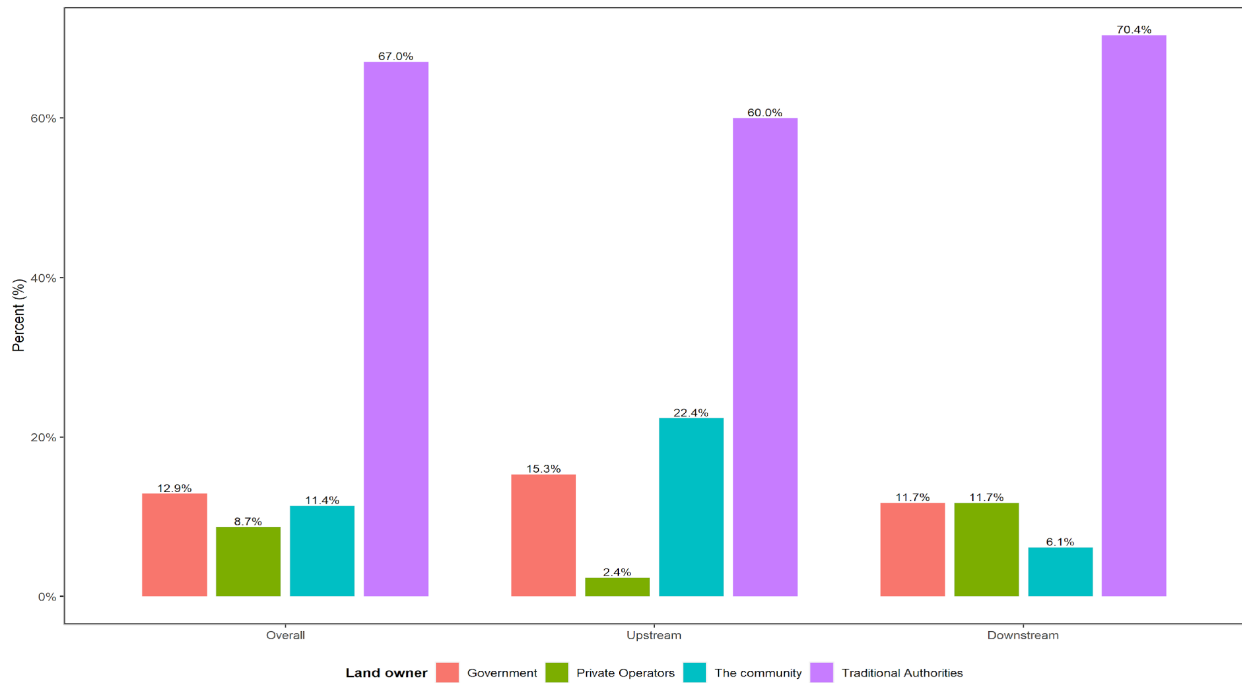


Figure 7: Land Ownership

Source: Fieldwork, (2023)

This perception is corroborated by word frequency analysis (Figure 8), which highlights the frequent use of terms such as “building,” “ecotourism,” and “local,” indicating that the community views tourism infrastructure and local engagement as crucial components of successful ecotourism initiatives. Additionally, the word frequency analysis reveals that terms like “cultural,” “visiting,” and “awareness” were recurrent, underscoring the community’s emphasis on cultural preservation, tourist engagement, and public awareness as pivotal elements of ecotourism.

The most common roles of community members include communal labor (51.4%), selling items to tourists (43.9%), providing recreational activities, hosting visitors, inviting acquaintances to local attractions, following environmental conservation regulations, and guiding tourists (Figure 11).

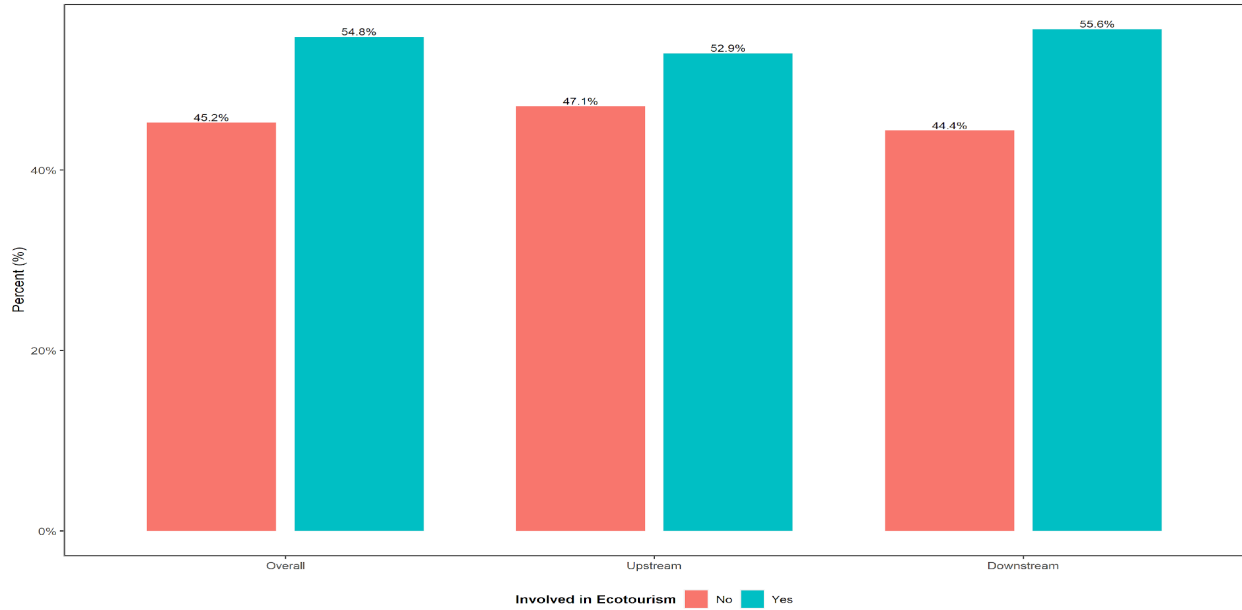


Figure 9: Involvement in Ecotourism Planning and Development by Communities

Source: Fieldwork, (2023)

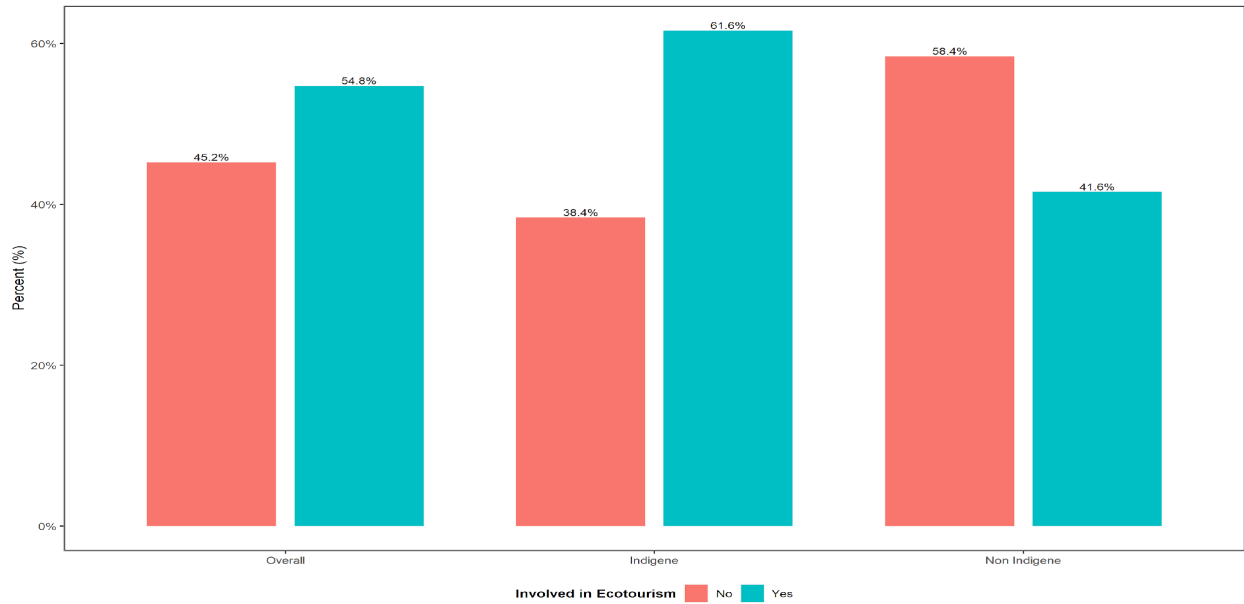


Figure 10: Involvement in Ecotourism Planning and Development by Native Status

Source: Fieldwork, (2023)

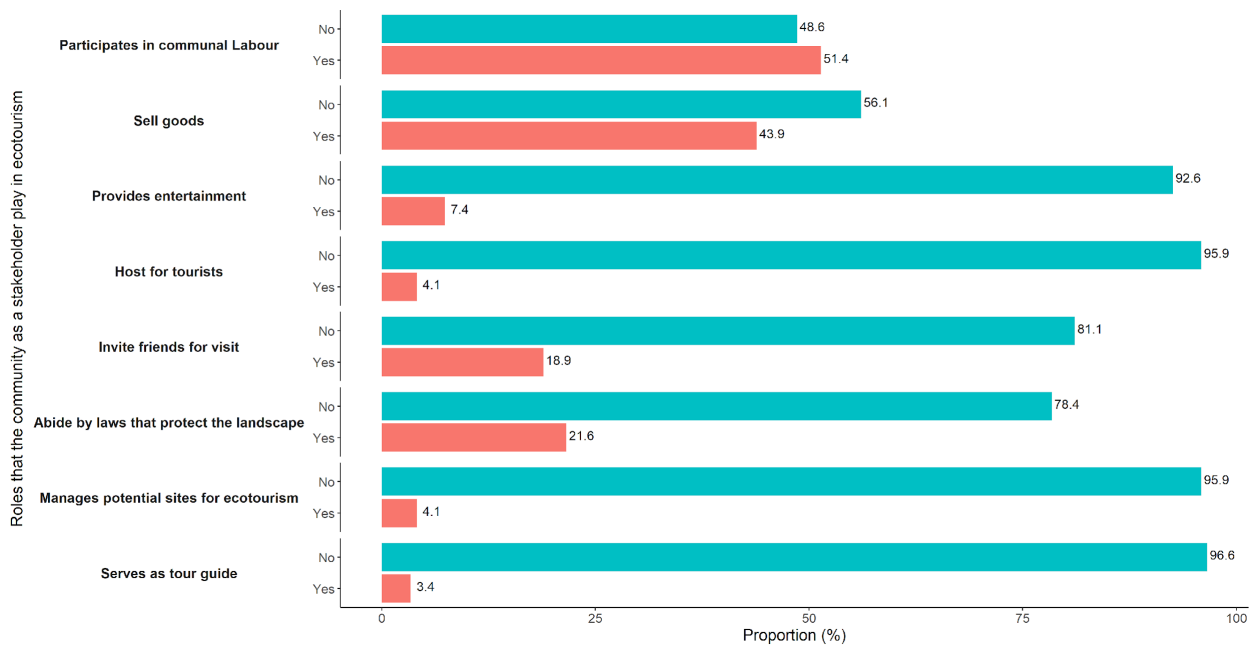


Figure 11: Role of community members in Ecotourism

Source: Fieldwork, (2023)

4.5.3 Community Perception of Cultural Landscapes for Ecotourism Development

The Likert-scale analysis provided valuable insights into local communities' perceptions of using cultural landscapes for ecotourism development. The analysis was stratified by community location (upstream and downstream communities) and native status (indigenes and non-indigenes). Mean scores (standard deviation) were reported for each question, both for the entire sample and for each community location (See Table 10) and native status (See Table 11), along with p-values from hypothesis tests comparing the two community locations and native status.

Table 10: Perceptions of Local Communities Concerning the Use of Cultural Landscapes for Ecotourism Development by Community Location

	Question	All (N=267)	Downstream (N=182)	Upstream (N=85)	P-value
Active	Ecotourism Planning and development decisions is in total control of the community	3.2 (1.1)	3.2 (1.1)	3.1 (1.1)	0.54
	Community is consulted before key decisions are taken	3.0 (1.2)	3.0 (1.2)	2.9 (1.1)	0.87
	The community is directly involved in providing goods/services to visitors	3.7 (1.0)	3.8 (1.0)	3.5 (1.1)	0.06*
	Ecotourism planning team made up of representatives of all groups in the community	3.3 (1.1)	3.4 (1.1)	3.2 (1.1)	0.15
Induced	People would have the chance to participate if they belonged to a certain group	3.3 (1.0)	3.3 (1.0)	3.4 (1.0)	0.27
	Alternative decisions are made available to the community but there is no room for feedback	3.4 (1.1)	3.3 (1.1)	3.6 (1.0)	0.08*

	Question	All (N=267)	Downstream (N=182)	Upstream (N=85)	P-value
	I participate due of the material and financial benefits I gain	2.8 (1.2)	2.9 (1.3)	2.7 (1.2)	0.31
Passive	We have no say in the tourism development of the community	3.3 (1.1)	3.3 (1.1)	3.3 (1.0)	0.79
	Community is told about tourism development decisions after they are made by top management	3.4 (1.1)	3.3 (1.1)	3.5 (1.1)	0.16
	External organizations and businesses take the leading role in the planning and development process	3.6 (1.0)	3.6 (1.0)	3.6 (1.0)	0.98
Operational	The centralized nature of tourism planning is not favorable	3.4 (0.9)	3.4 (0.9)	3.2 (0.9)	0.06*
	Lack of co-ordination among the Stakeholders	3.4 (1.0)	3.4 (1.0)	3.3 (1.0)	0.54
	I have very little information on tourism development related activities	3.6 (1.0)	3.7 (1.0)	3.6 (1.1)	0.89
Structural	Bad timing of gathering	3.3 (1.0)	3.4 (1.0)	3.1 (0.9)	0.13
	Community disagreement	3.4 (1.1)	3.4 (1.1)	3.5 (1.0)	0.21
	Insufficient committee meetings	3.5 (1.0)	3.5 (1.0)	3.5 (0.9)	0.78
	Inadequate finance	3.4 (1.1)	3.5 (1.1)	3.3 (1.1)	0.16
	External influence on ecotourism	3.6 (1.0)	3.6 (1.0)	3.6 (1.1)	0.76
	Inadequate education/skills of respondent	3.2 (1.2)	3.1 (1.2)	3.2 (1.1)	0.88
	Inadequate training by project management	3.4 (1.1)	3.4 (1.2)	3.4 (1.0)	0.89
	High level of elite dominance in the industry	3.6 (0.9)	3.6 (0.9)	3.5 (0.9)	0.20
Cultural	Religion forbids me from participation in ecotourism	2.0 (1.0)	2.0 (1.1)	1.8 (0.7)	0.54
	Age prevents me from participating in ecotourism development	2.0 (1.0)	2.1 (1.1)	1.8 (0.7)	0.41
	Poor people do not get the chance to participate in ecotourism development	2.3 (1.2)	2.5 (1.3)	2.0 (0.9)	0.023**
	Marital status prevents me from participating in ecotourism development	2.0 (1.0)	2.1 (1.1)	1.8 (0.7)	0.23
	Prescribed gender roles/responsibilities restrict my participation in tourism development	2.3 (1.2)	2.3 (1.2)	2.3 (1.1)	0.99
Economic (Benefits)	Increased Employment	4.1 (0.8)	4.1 (0.7)	4.0 (0.8)	0.23
	Improved Transport Infrastructure	3.5 (1.2)	3.6 (1.3)	3.5 (1.2)	0.35
	Contribution to personal income levels	4.0 (0.9)	4.0 (0.9)	4.0 (0.8)	0.96
	Improved Social Amenities	3.7 (1.1)	3.8 (1.1)	3.4 (1.1)	0.005**

	Question	All (N=267)	Downstream (N=182)	Upstream (N=85)	P-value
Socio-Cultural (Benefits)	Utility among residents	4.0 (0.7)	4.0 (0.7)	4.1 (0.6)	0.50
	Increased demand for local artifacts	3.9 (0.7)	3.9 (0.8)	4.0 (0.5)	0.10
	Cultural diffusion	3.9 (0.7)	4.0 (0.7)	3.8 (0.6)	0.08*
	Increased community sense of pride	4.1 (0.7)	4.1 (0.7)	4.1 (0.5)	0.16
Environmental (Benefits)	Increased awareness on issues of conservation	4.0 (0.7)	4.0 (0.7)	4.1 (0.5)	0.56
	Increased efforts to maintain a clean environment in the community	4.0 (0.7)	4.0 (0.8)	4.1 (0.6)	0.87
	Increased effort to preserve natural resources	4.2 (0.7)	4.1 (0.8)	4.2 (0.5)	0.76
Economic (Costs)	Increase in price of goods/services	3.7 (1.0)	3.7 (1.1)	3.7 (1.0)	0.74
	Reduced concentration on farming	3.4 (1.2)	3.3 (1.2)	3.5 (1.0)	0.17
	Increased cost of land and housing	3.9 (1.0)	3.8 (1.0)	4.0 (0.8)	0.51
Socio-Cultural (Costs)	Loss of cultural values	3.1 (1.1)	3.1 (1.2)	3.2 (0.9)	0.76
	Increased prostitution	3.3 (1.2)	3.3 (1.3)	3.4 (1.1)	0.82
	Increased crime rates	3.5 (1.1)	3.5 (1.2)	3.5 (1.0)	0.42
	Increased alcoholism/drug addiction	3.5 (1.2)	3.6 (1.2)	3.4 (1.1)	0.10
Environmental (Costs)	Increased Pollution	2.8 (1.1)	2.8 (1.2)	2.7 (1.0)	0.64
	Increased Noise making	3.1 (1.2)	3.1 (1.2)	2.9 (1.1)	0.19
	Increased bush burning and tree cutting	2.6 (1.1)	2.5 (1.1)	2.8 (1.1)	0.052*

* Means significant at 0.1 significance level

** Means significant at 0.05 significance level

Source: Fieldwork (2023)

Overall, the perceptions of both downstream and upstream communities are relatively similar, as are the perceptions of indigenes and non-indigenes, as indicated by comparable mean scores for most questions. The p-values from the hypothesis tests suggest no significant differences in perception between the two community locations and native status for most of the questions analyzed.

However, there were a few questions that revealed notable differences. P-values below the conventional thresholds of 0.05 and 0.10 suggest statistically significant differences in perception between downstream and upstream communities. Two areas where significant differences are observed relate to poor people not getting the chance to participate in ecotourism development and ecotourism bringing improvements in social amenities.

Table 11: Perceptions of Local Communities Concerning the Use of Cultural Landscapes for Ecotourism Development by Native Status

	Question	All (N=265)	Indigene (N=175)	Non-Indigene (N=90)	P-value
Active	Ecotourism Planning and development decisions is in total control of the community	3.2 (1.1)	3.2 (1.1)	3.2 (1.1)	0.78
	Community is consulted before key decisions are taken	3.0 (1.2)	2.9 (1.2)	3.0 (1.1)	0.72
	The community is directly involved in providing goods/services to visitors	3.7 (1.0)	3.7 (1.0)	3.7 (1.1)	0.82
	Ecotourism planning team made up of representatives of all groups in the community	3.3 (1.1)	3.3 (1.1)	3.4 (1.0)	0.51
Induced	People would have the chance to participate if they belonged to a certain group	3.3 (1.0)	3.4 (1.0)	3.2 (1.1)	0.07*
	Alternative decisions are made available to the community but there is no room for feedback	3.4 (1.1)	3.5 (1.0)	3.2 (1.2)	0.020**
	I participate due of the material and financial benefits I gain	2.8 (1.2)	2.9 (1.2)	2.7 (1.2)	0.19
Passive	We have no say in the tourism development of the community	3.3 (1.1)	3.3 (1.0)	3.2 (1.1)	0.29
	Community is told about tourism development decisions after they are made by top management	3.4 (1.1)	3.4 (1.1)	3.4 (1.1)	0.48

	Question	All (N=265)	Indigene (N=175)	Non- Indigene (N=90)	P- value
	External organizations and businesses take the leading role in the planning and development process	3.6 (1.0)	3.6 (1.1)	3.5 (1.0)	0.33
Operational	The centralized nature of tourism planning is not favorable	3.4 (0.9)	3.3 (0.9)	3.5 (0.9)	0.17
	Lack of co-ordination among the Stakeholders	3.4 (1.0)	3.4 (0.9)	3.4 (1.0)	0.98
	I have very little information on tourism development related activities	3.7 (1.0)	3.8 (1.0)	3.4 (1.1)	0.017**
Structural	Bad timing of gathering	3.3 (1.0)	3.3 (1.0)	3.3 (0.9)	0.98
	Community disagreement	3.4 (1.1)	3.5 (1.1)	3.3 (1.0)	0.016**
	Insufficient committee meetings	3.5 (1.0)	3.4 (1.0)	3.6 (0.9)	0.34
	Inadequate finance	3.4 (1.1)	3.5 (1.1)	3.3 (1.1)	0.39
	External influence on ecotourism	3.6 (1.0)	3.7 (1.0)	3.5 (1.0)	0.27
	Inadequate education/skills of respondent	3.2 (1.2)	3.3 (1.2)	3.0 (1.2)	0.08*
	Inadequate training by project management	3.4 (1.1)	3.4 (1.1)	3.4 (1.1)	0.88
	High level of elite dominance in the industry	3.6 (0.9)	3.7 (0.9)	3.5 (0.9)	0.12
Cultural	Religion forbids me from participation in ecotourism	2.0 (1.0)	1.9 (1.0)	2.0 (1.0)	0.55
	Age prevents me from participating in ecotourism development	2.0 (1.0)	2.0 (1.0)	2.0 (1.1)	0.97
	Poor people do not get the chance to participate in ecotourism development	2.3 (1.2)	2.3 (1.2)	2.5 (1.2)	0.08*
	Marital status prevents me from participating in ecotourism development	2.0 (1.0)	2.0 (1.0)	2.0 (1.1)	0.91
	Prescribed gender roles/responsibilities restrict my participation in tourism development	2.3 (1.2)	2.4 (1.2)	2.2 (1.1)	0.68
Economic (Benefits)	Increased Employment	4.1 (0.8)	4.1 (0.7)	4.2 (0.8)	0.20
	Improved Transport Infrastructure	3.5 (1.2)	3.5 (1.3)	3.6 (1.2)	0.85
	Contribution to personal income levels	4.0 (0.9)	4.0 (0.8)	3.9 (1.0)	0.62
	Improved Social Amenities	3.7 (1.1)	3.6 (1.1)	3.8 (1.0)	0.12
Socio-Cultural (Benefits)	Utility among residents	4.0 (0.7)	4.0 (0.7)	4.0 (0.7)	0.54
	Increased demand for local artifacts	3.9 (0.7)	3.9 (0.8)	3.9 (0.6)	0.48
	Cultural diffusion	3.9 (0.7)	3.9 (0.6)	3.9 (0.8)	0.51
	Increased community sense of pride	4.1 (0.7)	4.1 (0.6)	4.1 (0.7)	0.49
Environmental (Benefits)	Increased awareness on issues of conservation	4.0 (0.7)	4.0 (0.7)	4.1 (0.6)	0.89

	Question	All (N=265)	Indigene (N=175)	Non- Indigene (N=90)	P- value
	Increased efforts to maintain a clean environment in the community	4.0 (0.7)	4.1 (0.8)	4.0 (0.7)	0.13
	Increased effort to preserve natural resources	4.2 (0.7)	4.2 (0.7)	4.1 (0.7)	0.07*
Economic (Costs)	Increase in price of goods/services	3.7 (1.0)	3.7 (1fd.0)	3.7 (1.0)	0.33
	Reduced concentration on farming	3.4 (1.2)	3.5 (1.1)	3.2 (1.2)	0.025**
	Increased cost of land and housing	3.9 (1.0)	3.9 (0.9)	3.8 (1.0)	0.48
Socio- Cultural (Costs)	Loss of cultural values	3.1 (1.1)	3.2 (1.1)	3.0 (1.2)	0.35
	Increased prostitution	3.3 (1.2)	3.4 (1.2)	3.2 (1.3)	0.19
	Increased crime rates	3.5 (1.1)	3.6 (1.1)	3.4 (1.2)	0.34
	Increased alcoholism/drug addiction	3.5 (1.2)	3.5 (1.1)	3.5 (1.3)	0.71
Environment al (Costs)	Increased Pollution	2.8 (1.1)	2.8 (1.1)	2.7 (1.2)	0.50
	Increased Noise making	3.1 (1.2)	3.0 (1.1)	3.2 (1.2)	0.39
	Increased bush burning and tree cutting	2.6 (1.1)	2.7 (1.1)	2.6 (1.1)	0.55

* Means significant at 0.1 significance level ** Means significant at 0.05 significance level

Source: Fieldwork (2023)

4.5.4 Anticipated Benefits and Costs of Ecotourism in Asuogyaman District

The research on ecotourism within the Asuogyaman District reveals a complex interplay between potential benefits and costs as perceived by the community. These anticipated outcomes are categorized into economic, socio-cultural, and environmental dimensions, as reflected in previous research (Agrawal et al., 2017; Ament et al., 2017; Brahmantyo et al., 2016; He et al., 2008; Onuma and Tsuge, 2018; Roger, 2015).

The economic benefits of ecotourism are significant, as communities anticipate increased employment opportunities, particularly in hospitality, guiding, and local craft production. Moreover, there is a positive expectation regarding improved transport infrastructure, as tourism-related development often enhances roads, visitor centers, and local amenities. Additionally,

community members foresee a rise in personal income levels due to direct involvement in tourism activities, which is expected to improve living standards. Figure 12 illustrates that both upstream and downstream communities largely agree on the positive economic impacts of ecotourism, affirming the potential for job creation and infrastructure enhancement.

Socio-culturally, ecotourism is viewed as a means of preserving local culture and fostering community pride. Activities related to tourism encourage the maintenance of traditional practices and celebrate cultural heritage, promoting a sense of unity and belonging among residents. Furthermore, the engagement of community members in tourism projects enhances social cohesion, as reflected in the positive feedback from both indigenous and non-indigenous groups (see Table 11). Figure 12 also highlights these socio-cultural benefits, emphasizing cultural preservation and increased community pride as key outcomes.

Environmentally, ecotourism is expected to promote conservation awareness, particularly through initiatives that highlight the importance of natural habitat preservation and biodiversity protection. Integrating eco-friendly practices within tourism projects is seen as a way to minimize environmental degradation. The community's positive perception of environmental benefits is evident in Figure 12, which shows strong agreement on the role of ecotourism in fostering sustainable practices.

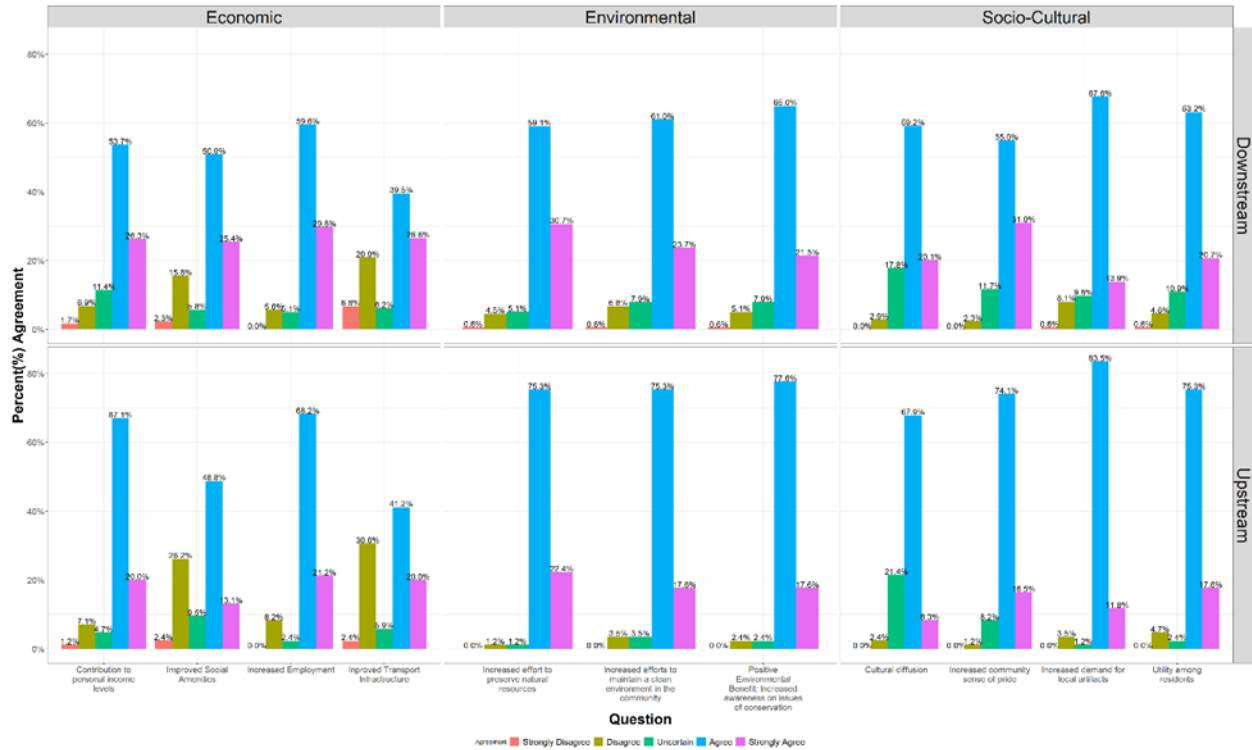


Figure 12: Anticipated Benefits of Ecotourism by upstream/downstream status

Source: Fieldwork (2023)

However, the community also recognizes the potential economic costs associated with ecotourism. These include inflation due to higher demand for goods and services, increased property prices, and the displacement of traditional livelihoods such as farming and fishing. Figure 13 captures community concerns, particularly the fear that tourism-driven economic changes may marginalize local residents.

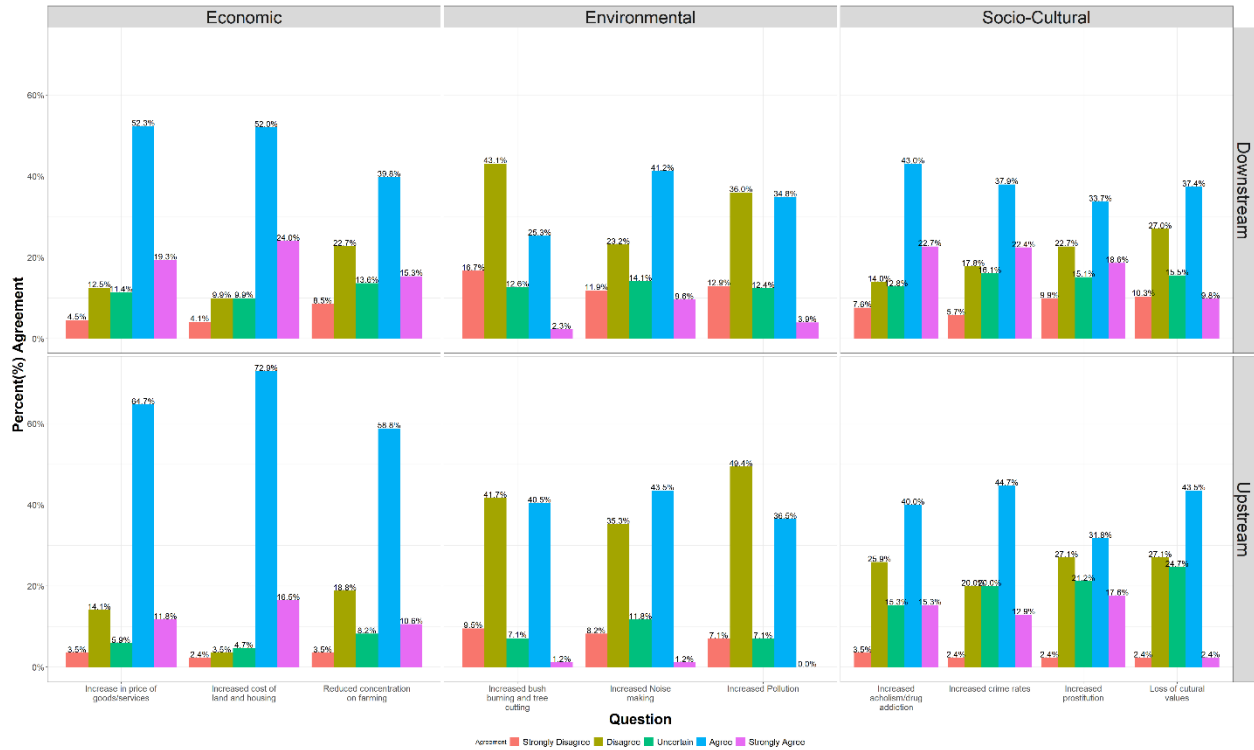


Figure 13: Anticipated Costs of Ecotourism by upstream/downstream status

Source: Fieldwork (2023)

Socio-cultural costs are also anticipated, including the risk of cultural dilution due to tourist influence. Some community members fear that the introduction of external values might erode traditional practices. Additionally, increased tourism may lead to social challenges, such as substance abuse, crime, and social inequality, particularly if the benefits are not evenly distributed. Figure 13 highlights that both downstream and upstream respondents express concerns about these socio-cultural risks.

Environmental challenges are similarly recognized, including pollution from increased waste and habitat disruption due to the influx of visitors. There is also concern about the potential for resource depletion as local supplies are strained by higher tourist demand. The fear of environmental damage is particularly strong among communities directly involved in ecotourism activities.

Figure 13 visually represents these concerns, showing a significant acknowledgment of the environmental costs among participants.

In summary, while the Asuogyaman District community acknowledges the potential of ecotourism to enhance economic, socio-cultural, and environmental well-being, they are equally aware of the associated risks. Balancing these anticipated benefits and costs requires strategic planning and active community engagement to ensure sustainable development. Effective policy interventions should address community concerns to maximize the positive impacts while mitigating potential drawbacks.

4.5.4 Barriers to Participation

The study identified several barriers that hinder community involvement in ecotourism within the Asuogyaman District. One significant barrier is the lack of training among community members. Many individuals lack the necessary skills for guiding, craft production, and hospitality management. This limitation reduces their ability to participate meaningfully in tourism-related activities and capitalize on potential economic benefits. Addressing this gap through capacity-building initiatives would enable more community members to engage in and benefit from ecotourism.

Another major barrier is the economic constraint faced by the community. Insufficient financial resources hinder the community's ability to initiate or sustain tourism-related projects. This financial limitation is especially pronounced in upstream areas where tourism infrastructure is underdeveloped. Consequently, the lack of funding prevents the community from investing in essential facilities and services that could boost tourism activities.

Infrastructure deficits also pose a significant challenge to ecotourism development. In particular, inadequate road networks and a lack of tourist facilities make it difficult for visitors to access key ecotourism sites. Upstream areas, in particular, suffer from poor connectivity, which not only hampers tourist mobility but also affects the attractiveness of the area as a tourism destination.

Information gaps further impede community involvement. There is limited awareness among community members regarding available tourism opportunities and the potential benefits of ecotourism. This lack of information results in reduced community enthusiasm and participation in tourism initiatives. Additionally, there are challenges related to land ownership conflicts. Disputes over land tenure and ownership complicate efforts to establish community-driven ecotourism projects. These conflicts often lead to disagreements among stakeholders, making it difficult to achieve consensus on land use and tourism planning.

Figure 14 provides an overview of the barriers to community participation, highlighting that while cultural barriers are minimal, operational and structural barriers significantly affect engagement. Additionally, word frequency analysis (Figure 15) indicated that terms like “lack,” “roads,” and “funding” were frequently mentioned, emphasizing challenges related to infrastructure and financial support.

4.5.5 Recommendations for Enhancing Community Involvement

To enhance community participation in ecotourism, it is crucial to focus on capacity building. Organizing training sessions that concentrate on guiding, craft making, and customer service, particularly targeting upstream areas, would equip community members with the skills necessary to actively engage in tourism initiatives. Additionally, improving road connectivity and establishing basic tourist amenities in upstream locations would address infrastructural challenges, making the area more accessible and attractive to tourists.

Effective communication strategies are essential to bridge the information gap. Utilizing community notice boards and digital platforms to share tourism-related information can foster awareness and enthusiasm. Moreover, implementing incentive mechanisms, including both financial and non-financial rewards, would motivate greater community involvement.

Resolving land ownership conflicts requires the development of frameworks that clearly define land tenure and ownership rights. Such measures would promote community-driven ecotourism projects by minimizing disputes. Addressing these barriers through targeted interventions would foster a more inclusive approach to ecotourism, enhancing both community engagement and sustainable development.

4.6 Policy Considerations and Planning for Sustainable Ecotourism

Sustainable ecotourism requires deliberate policy planning and strategic implementation to balance environmental preservation, community involvement, and economic development. In the Asuogyaman District, formulating policies that align with community needs while promoting environmental sustainability is critical.

Developing a comprehensive ecotourism policy framework should involve the active participation of multiple stakeholders, including local communities, traditional authorities, government agencies, non-governmental organizations (NGOs), and private sector entities. This inclusive approach ensures that the policies formulated are holistic and represent diverse perspectives.

Figure 16 illustrates the indigenous perspectives on landscape conservation and ecotourism, emphasizing the importance of local knowledge in shaping sustainable practices. Key policy recommendations derived from these insights include formulating community empowerment policies that allow local residents to manage and benefit from ecotourism initiatives. Such policies should formally recognize community-led tourism projects and support local entrepreneurship. Additionally, implementing environmental conservation regulations is crucial. These regulations should mandate sustainable practices, including waste management and the conservation of biodiversity hotspots. To support effective community involvement, capacity-building programs should be developed to train community members in ecotourism management, customer service, and environmental stewardship. Financial support mechanisms are also vital, including establishing funds or grants to support community-driven ecotourism projects and infrastructure development. Furthermore, introducing monitoring and evaluation frameworks can ensure the continuous assessment of ecotourism activities, maintaining alignment with sustainability goals.

Establishing local tourism management boards with diverse stakeholder representation can facilitate joint decision-making and conflict resolution.

Enhancing infrastructure and accessibility is also essential for promoting sustainable ecotourism. Strategic investments in infrastructure can significantly improve the ecotourism experience while minimizing environmental impacts. Policies should prioritize improving road networks to boost visitor numbers by providing better access to remote tourist sites. Figure 17 presents community perspectives on specific infrastructure improvements necessary for enhancing the visitor experience. Improved roads and building eco-friendly facilities, such as low-impact visitor centers, restrooms, and lodges that blend with the natural landscape, is recommended. Additionally, integrating digital infrastructure by implementing online platforms for promoting ecotourism, booking tours, and disseminating information about local attractions can enhance tourism engagement.

to balance conservation priorities with economic aspirations is crucial for maintaining stakeholder cooperation.

Effective policy planning is fundamental to promoting sustainable ecotourism in the Asuogyaman District. By adopting inclusive, community-focused, and environmentally sound policies, stakeholders can collectively foster a thriving ecotourism sector that benefits both the local population and the natural environment. Future policy efforts should prioritize adaptive management approaches that respond to emerging challenges while maintaining sustainability as a core principle.

4.7 Selected Zones Recommended for Ecotourism Planning and Development

Based on the geospatial analysis of landscape characteristics such as hillshade, aspect, slope, and roughness, the following zones in the Asuogyaman District were identified in collaboration with key stakeholders as suitable for ecotourism development. These zones exhibit features conducive to outdoor recreational activities and have been selected to optimize both environmental sustainability and visitor engagement (see Table 12 and Figures 19 to 25).

The selected zones are strategically positioned to offer a variety of ecotourism activities that enhance visitor experience while promoting environmental stewardship. Recommended activities include:

- **Rafting and Kayaking:** Utilizing the water bodies within these zones for adventure water sports.
- **Camping and Rock Climbing:** Creating designated areas for overnight stays and challenging climbs.

Source: Fieldwork, (2023)

Table 12: Recommended Zones for Ecotourism

Zone	Description	Latitude	Longitude
1	Akwamu Gorge Community Forest	6°15'38.43"N	0° 6'13.52"E
2	Volta Gorge	6°17'59.33"N	0° 4'16.44"E
3	Island 1 -Unnamed	6°19'3.35"N	0° 4'40.81"E
4	Island 2 -Unnamed	6°24'23.69"N	0° 7'26.15"E
5	Island 3 – Dodi	6°33'24.05"N	0° 6'43.50"E
6	Zipline A and B	6°18'59.64"N	0° 3'18.29"E

Source Fieldwork, (2023)



Figure 19: All Zones Considered for Ecotourism Development

Source: Fieldwork, (2023)



Figure 20: Zone 1 – Akwamu Gorge Community Forest

Source: Fieldwork, (2023)



Figure 21: Zone 2 – Volta Gorge

Source: Fieldwork, (2023)



Figure 22: Zone 5 – Dodi Island

Source: Fieldwork, (2023)



Figure 23: Zone 3 - Island 1 -Unnamed

Source: Fieldwork, (2023)



Figure 24: Zone 6 - Zipline A and B

Source: Fieldwork, (2023)



Figure 25: Zone 4 - Island 2 -Unnamed

Source: Fieldwork, (2023)

4.8 Summary of Findings

The study set out to assess the potential and challenges of ecotourism development in the Asuogyaman District, focusing on community perceptions, stakeholder contributions, policy considerations, and infrastructure needs. The key findings reveal insights into how local communities and stakeholders perceive ecotourism and the necessary steps to ensure sustainable development.

Key Findings:

1. Community Perceptions:

- Local communities demonstrate a positive outlook on the potential of ecotourism to bring economic benefits, foster pride, and preserve cultural heritage. However, there is concern over limited participation and a perceived lack of opportunities for marginalized groups.
- Both downstream and upstream communities share similar perceptions, but there are nuanced differences in terms of access to participation and economic opportunities. Indigenous community members are more likely to express concerns about the economic impact on farming and community disagreements.
- A critical analysis reveals that while positive perceptions exist, the socio-economic disparities and lack of awareness limit active participation, especially among upstream communities. Addressing these gaps will require targeted

interventions that bridge the information divide and create more inclusive tourism policies.

2. Stakeholder Contributions:

- Stakeholders, including government agencies, NGOs, and local leaders, play pivotal roles in financing, constructing infrastructure, raising awareness, and conserving cultural heritage. However, challenges related to insufficient funding, inadequate collaboration, and the absence of a clear long-term strategy for ecotourism development exist.
- External influences from NGOs and private entities can support and hinder community-led initiatives, particularly when local input is minimal. Therefore, enhancing local stakeholder involvement in planning can mitigate these challenges.

3. Infrastructure and Accessibility:

- The community emphasizes the need for improved roads, quality accommodation, effective waste management, and emergency services to enhance the visitor experience. Figures 17 and 18 illustrate community perspectives on essential infrastructure and policy considerations.
- The lack of digital infrastructure and modern amenities is seen as a barrier to attracting international tourists. Addressing these infrastructure gaps requires strategic partnerships with private entities and local governments.

4. Policy Recommendations:

- Effective policy formulation should prioritize community involvement, environmental conservation, stakeholder collaboration, and capacity building.

Policies should also address operational challenges such as funding gaps and insufficient local engagement.

- Integrating traditional knowledge and cultural practices into tourism strategies can promote sustainability and community ownership.

5. Visitor Experiences:

- Tourists view the region as a relaxation, adventure, and cultural exploration destination. However, satisfaction levels vary based on infrastructure quality and service delivery. Figures 26 to 29 detail tourists’ perceptions and satisfaction levels.
- Improving guided tours, road networks, and accommodation facilities can enhance visitor retention and boost community-driven economic gains.

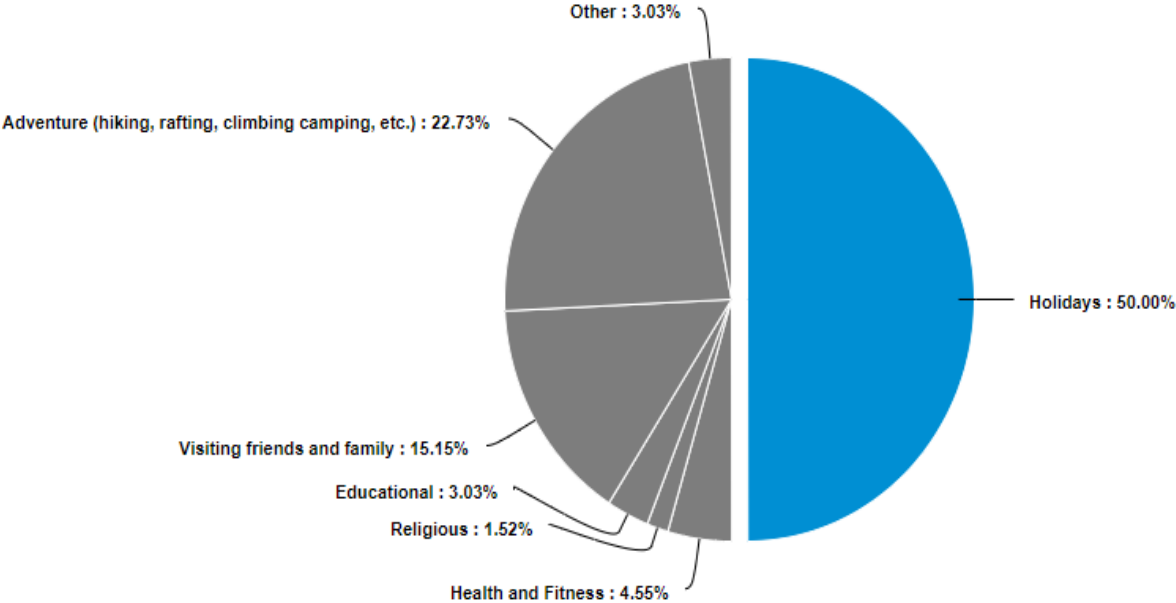


Figure 26: Visitors Views on Their Purpose of Visit

Source: Fieldwork, (2023)

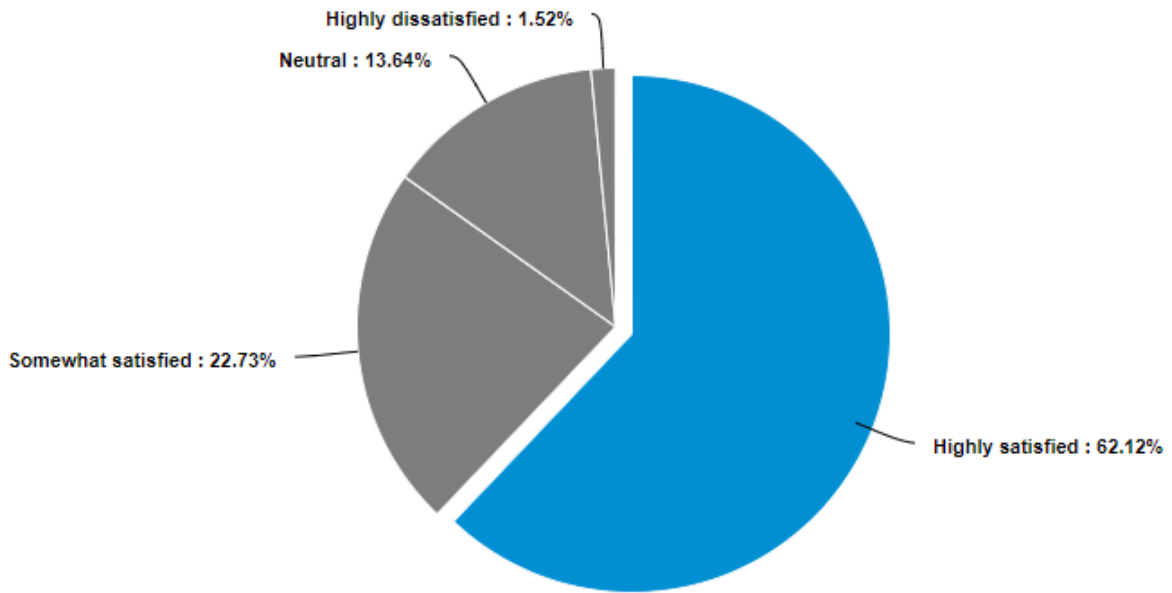


Figure 27: Visitors Views on Their Level of Satisfaction

Source: Fieldwork, (2023)

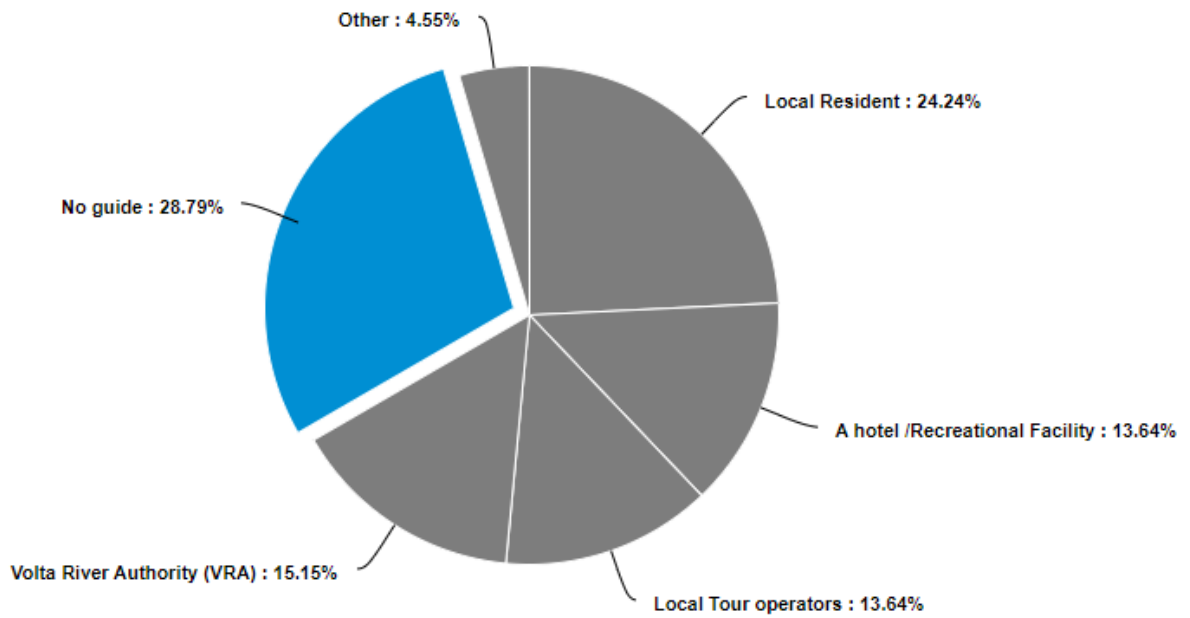


Figure 28: Who Usually Accompanied Visitors on Tours

Source: Fieldwork, (2023)

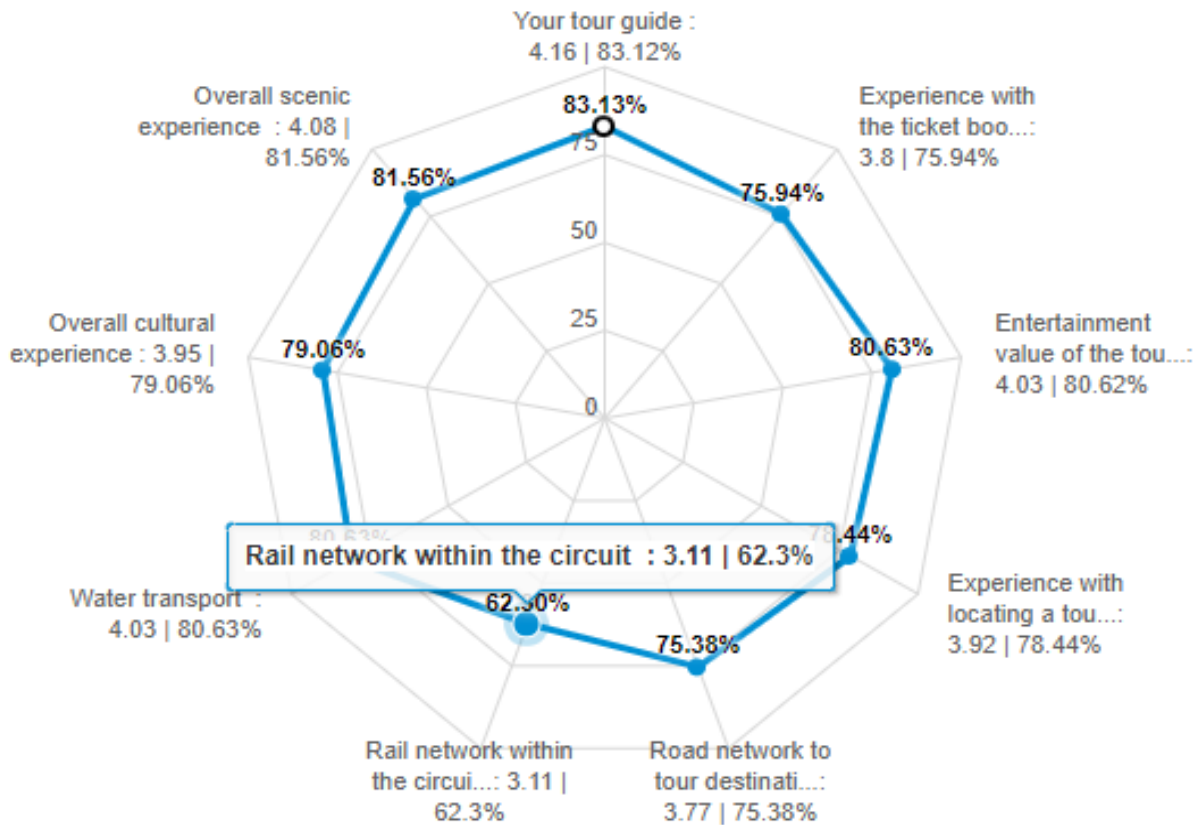


Figure 29: Tourists Level of Satisfaction

Source: Fieldwork, (2023)

The findings underscore ecotourism’s potential to contribute to economic development and cultural preservation in the Asuogyaman District. However, addressing infrastructural deficits, improving community engagement, and formulating inclusive policies are vital to realizing this potential. Strengthening stakeholder partnerships and fostering a participatory planning process will be essential for the long-term sustainability of ecotourism initiatives.

CHAPTER FIVE

CONCLUSIONS AND RECOMMENDATIONS

5.1 Conclusions

The primary goal of this study was to explore innovative pathways for uncovering and developing ecotourism potential within cultural landscapes, focusing on the Asuogyaman District. The research set out to answer the following key question: “How can the hidden and untapped ecotourism treasures in cultural landscapes be discovered and developed?” The study’s findings, drawn from community perceptions, stakeholder engagement, infrastructure analysis, and policy considerations, have significant theoretical, empirical, and practical implications.

5.1.1 Theoretical Contributions and Implications

The study contributes to the body of knowledge on ecotourism by bridging gaps between theoretical concepts and practical implementation in community-based ecotourism. By examining the role of cultural landscapes in promoting sustainable tourism, this study aligns with the principles of community development as postulated by Aref (2011). The study supports the assertion that community acceptance and involvement are fundamental to sustainable ecotourism development. Furthermore, the research integrates community perspectives with theoretical models, including Arnstein’s (1969) ladder of participation and Tosun’s (1999) typology of community involvement, revealing that the Asuogyaman District predominantly follows a top-down, passive participation model.

The findings also confirm the theoretical position that stakeholder collaboration is essential for long-term tourism sustainability, as echoed in previous works (Amoako-Atta et al., 2020).

However, the study also highlights the tension between conservation and tourism expansion, indicating the need for policies that balance environmental protection with economic opportunities.

5.1.2 Answering Research Questions and Hypotheses

The study addressed several specific research questions, each aligned with the main objective of uncovering innovative pathways for discovering and developing ecotourism potential within cultural landscapes, particularly in the Asuogyaman District. The following elaborate on the answers derived from the study findings.

Character of the Landscape: The Asuogyaman District's landscape is distinguished by a combination of physical and cultural features, making it a prime location for ecotourism. Key physical features include the Volta Lake, the Akwamu Hills, and a rich diversity of flora and fauna. Culturally, the district is renowned for traditional crafts, rituals, and significant historical sites such as the Akosombo Dam. The integration of these natural and cultural resources contributes to a unique landscape character that supports ecotourism activities. Additionally, the landscape's diverse topography and ecological attributes offer opportunities for outdoor activities like hiking, boating, and cultural exploration. The research underscores that leveraging both physical and cultural assets is crucial for sustainable ecotourism development.

Roles of Stakeholders: The research identified various stakeholders essential to ecotourism development, including government agencies (e.g., ADA and VRA), non-governmental organizations, community leaders, and local residents. These stakeholders fulfill diverse roles such as infrastructure development, community mobilization, policy formulation, and tourism

promotion. While these roles are significant, the study revealed a gap in active community participation, indicating a need for more inclusive and collaborative decision-making processes. Additionally, there is a tendency for centralized management approaches that limit community agency, highlighting the necessity of decentralized governance models to ensure long-term sustainability.

Community Sentiments: Community perceptions towards ecotourism are predominantly positive, with residents recognizing its potential to enhance economic opportunities, preserve cultural heritage, and foster community pride. However, there is a notable disparity in sentiment between upstream and downstream communities, with downstream communities exhibiting higher engagement levels. The study also revealed that marginalized groups, particularly those residing in remote areas, feel excluded from decision-making processes. Addressing these disparities is essential for fostering a more inclusive ecotourism model. Furthermore, respondents expressed that while ecotourism holds significant promise, there is a pressing need for structured benefit-sharing mechanisms to prevent inequalities.

Policy Recommendations: The study emphasizes the importance of integrated policy frameworks that align community perspectives with sustainable development goals. Policies should prioritize enhancing infrastructure, promoting environmental stewardship, and fostering community-driven tourism initiatives. To address existing challenges, such as inadequate infrastructure and passive stakeholder engagement, the study recommends formulating policies that support community capacity building and stakeholder collaboration. The integration of traditional knowledge systems into policy frameworks can also facilitate more culturally relevant and community-supported ecotourism projects. Based on 84% of respondents in Atimpoku and Akwamufie indicating

institutional neglect, and supported by GIS spatial planning gaps identified in buffer zones, we recommend the establishment of decentralized ecotourism planning units at the district level. These units should be supported by legal mandates derived from existing Local Governance Acts.

In conclusion, the research has successfully addressed the core research questions by comprehensively analyzing the landscape characteristics, stakeholder roles, community perceptions, and policy needs within the Asuogyaman District. The study contributes valuable insights into promoting local development while preserving cultural landscapes by focusing on sustainable and community-inclusive ecotourism practices.

5.1.3 Practical Implications

The research findings have significant practical implications for policymakers, community leaders, and tourism developers within the Asuogyaman District and similar contexts. One key implication is strengthening community engagement by decentralizing decision-making processes. By involving local residents more directly in tourism initiatives, there can be enhanced support and a stronger sense of ownership among community members, which is essential for sustainable ecotourism development.

Infrastructure development is another critical area highlighted by the study. Addressing infrastructure deficits, particularly road connectivity and tourist amenities, is vital to improving visitor satisfaction and boosting the district's tourism potential. Improved infrastructure facilitates access to ecotourism sites and enhances the overall visitor experience, leading to increased tourist numbers and extended stays.

Capacity building is equally important in enhancing community participation in the tourism value chain. Providing training in tourism management, customer service, and hospitality can empower community members to take on more active roles within the industry. Building local capacities will also ensure that the economic benefits of tourism are more equitably distributed and sustainable in the long run.

Moreover, fostering stakeholder collaboration is essential for sustainable tourism practices. Developing multi-sectoral partnerships between government agencies, NGOs, local communities, and private enterprises can ensure equitable economic benefits. Collaboration can also help align tourism development with environmental conservation, making the district's tourism sector resilient and adaptable to changing demands.

In summary, implementing these practical strategies can significantly contribute to sustainable ecotourism development in the Asuogyaman District. The district can realize its full potential as a thriving ecotourism destination through community engagement, infrastructure enhancement, capacity building, and multi-sectoral collaboration.

5.2 Recommendations

5.2.1 Recommendations for Ensuring Sustainable Ecotourism Development

To promote sustainable ecotourism development, it is crucial that the traditional council, along with other key stakeholders, implement specific regulations and policies to address concerns and reservations regarding using cultural landscapes for ecotourism purposes. Effective prevention and management of bushfires are essential in maintaining the natural environment's integrity. The Environmental Protection Agency (EPA), working under the Asuogyaman District Assembly

(APA) and the Volta River Authority (VRA), should establish robust policies and procedures to minimize the risk of wildfires and their impact on the environment.

Additionally, secondary stakeholders, particularly the Traditional Council (TC), ADA, and VRA, should seek support from various partners, including the central government, domestic and foreign businesses, and external development organizations. Such collaborations are vital for sustaining ecotourism within cultural landscapes, fostering a cooperative environment that nurtures ecotourism initiatives. Moreover, maintaining cleanliness and implementing effective waste management practices are essential to preserve the cultural landscapes' natural beauty. In collaboration with the VRA, the ADA should enforce these practices as part of the ecotourism development process, ensuring the environment remains pristine and appealing to visitors.

5.2.2 Recommendations for Active Community Participation and Benefits in Landscape

Planning for Ecotourism

Active community participation in landscape planning for ecotourism is essential to fostering collaboration, facilitating community input, and ensuring that residents have a meaningful role in planning and decision-making processes. The study recommends that secondary stakeholders, such as the ADA and VRA, avoid passive engagement when involving primary stakeholders in tourism development. Stakeholder roles are critical for ecotourism and community development, and more participatory approaches lead to greater success in tourism initiatives.

One significant aspect of community participation is creating and preserving job opportunities for local residents. By prioritizing local employment, especially for youth, tourism-related activities can become a sustainable source of income, supporting the local economy. Additionally, engaging

young community members in planning and implementing ecotourism projects fosters personal growth and ensures the long-term viability of these initiatives. Training and skill development in ecotourism-related fields can empower youth and increase their active involvement.

Secondary stakeholders can further promote sustainable tourism by adopting environmentally friendly practices, conserving natural resources, and mitigating the negative impacts on the local ecosystem. Incorporating sustainability principles into landscape planning allows the local community to engage actively and derive long-lasting benefits from ecotourism development.

5.2.3 Recommendations for Landscape Planning for Ecotourism Development

Strategic streamlining of operations is essential for the Asuogyaman District Assembly (ADA), Volta River Authority (VRA), and related secondary stakeholders to ensure inclusive participation in development processes. The central government, alongside the VRA and ADA, should focus on decentralizing and integrating spatial and tourism planning at the local level. This strategy will enhance the management of marketing opportunities, tourism potential, and socioeconomic goals, while minimizing the adverse social, economic, and environmental impacts of ecotourism.

Operational barriers, identified as the primary obstacles to local participation, should be addressed promptly. The ADA and VRA should move away from centralized management models and adopt decentralized systems to improve the dissemination of tourism information. Community members expressed that access to tourism information significantly boosts participation. Implementing transparent and accountable information-sharing mechanisms will increase community involvement and support.

5.2.4 Recommendations for Improving the Visitor Experience in the Asuogyaman District

Tourist Circuit

Improving the visitor experience requires targeted infrastructure and facility improvements. The ADA, VRA, and associated organizations should prioritize upgrading road networks to enhance accessibility within the tourist circuit. Smooth and well-maintained roads will make travel more enjoyable for visitors, and establishing a connected network of roads and transportation options will facilitate movement throughout the area.

Accommodations are another critical factor in promoting tourism. Engaging stakeholders, particularly community members with investment potential, will help establish a diverse range of lodging options, including hotels, guesthouses, and eco-lodges. A well-organized system for managing transportation, accommodation, and tourist services will significantly improve the overall guest experience, contributing to visitor satisfaction and positive feedback.

Ensuring the safety of tourists is paramount, and establishing robust emergency services and response systems is crucial. Secondary stakeholders should implement proactive measures to manage unforeseen incidents or emergencies during visitors' stays. Furthermore, considering the geospatial characteristics of the district, such as hillshade, slope, and terrain roughness, it is recommended that the ADA and VRA collaborate with tourism planners and landscape architects. These experts can develop diverse activities like rafting, kayaking, camping, rock climbing, hiking, landscape photography, and other nature-based adventures, enriching the visitor experience while maintaining environmental stewardship.

5.3 Future Research Directions

Future studies could explore the longitudinal impacts of ecotourism on local livelihoods, assess visitor satisfaction over time, and investigate the socio-cultural dynamics influencing tourism acceptance. Comparative analyses with other ecotourism destinations could also provide deeper insights into best practices and transferable strategies.

In conclusion, the Asuogyaman District holds substantial ecotourism potential. Addressing community involvement, infrastructure, and policy coherence challenges will be pivotal to unlocking this potential. By fostering inclusive and sustainable tourism practices, the district can position itself as a model for ecotourism development in Ghana and beyond.

CHAPTER SIX

NEW SCIENTIFIC RESULTS

This chapter outlines the key scientific contributions and novel findings derived from the research on ecotourism development in the Asuogyaman District. The study employed an innovative blend of qualitative and quantitative approaches, which offered comprehensive insights and introduced methodological advancements within the field of sustainable tourism research.

6.1 Methodological Innovations

One of this study's most significant methodological innovations was integrating quantitative data analysis with word frequency analysis. Traditionally, ecotourism research heavily relies on quantitative metrics such as socio-economic indicators, visitor statistics, and structured questionnaires. However, this study incorporated word frequency analysis to capture community members' nuanced perceptions and sentiments regarding ecotourism (See Chapter 4, Section 4.5.1). The word frequency analysis revealed recurring themes such as "building," "ecotourism," and "local," highlighting the community's focus on infrastructure development and local engagement. Additionally, terms like "cultural," "visiting," and "awareness" emphasized the importance of cultural preservation and tourism awareness among residents. This innovative approach enabled a more nuanced understanding of how communities perceive the impacts and benefits of ecotourism, which is rarely used in sustainable tourism research.

Another novel aspect was the stratification of community perceptions based on location (upstream and downstream) and native status (indigenes and non-indigenes). This stratification allowed for a more granular analysis of how community engagement and perceived benefits differ across

geographic and demographic lines (See Chapter 4, Section 4.5.3). Such an approach provided deeper insights into the socio-cultural dynamics affecting ecotourism participation.

6.2 Ecotourism Potential and Landscape Characterization

One of the primary scientific contributions of this research is the comprehensive, participatory characterization of the landscape within the Asuogyaman District. The identification of ecotourism potential zones such as the Akosombo Dam, Volta Lake, and the Akwamu Hills Community Forest was not based solely on cartographic analysis. Rather, it was derived through a multi-method approach that combined geospatial techniques (e.g., slope, elevation, aspect, and proximity analysis using GIS) with participatory fieldwork involving community members and local experts (see Chapter 3, Section 3.7 and Chapter 4, Section 4.7). These areas were validated through focus group discussions, interviews, and site visits, ensuring that both ecological value and cultural significance were jointly considered. The spatial distribution of the selected landscapes and their varying levels of use and perceived ecotourism value were then systematically mapped and analyzed. This integrated methodology supports a scientifically grounded basis for targeted interventions in sustainable tourism and offers a replicable framework for landscape-based ecotourism planning.

6.3 Stakeholder Classification and Roles

The research systematically categorized stakeholders into primary and secondary groups, highlighting their distinct roles in the development of ecotourism (See Chapter 4, Section 4.4.2). Primary stakeholders, including local communities and small-scale businesses, were found to be directly impacted by tourism activities, while secondary stakeholders, such as the Ghana Tourism

Authority (GTA), Volta River Authority (VRA), and traditional councils, played a strategic role in planning and regulation. This nuanced classification advances scientific understanding by illustrating the interconnected roles of various actors in shaping sustainable tourism.

6.4 Community Engagement and Participation Mechanisms

A significant scientific outcome of this research is the identification of community engagement mechanisms in tourism planning. The study revealed that community involvement is often characterized by spontaneous, induced, and coercive participation, with spontaneous engagement being more prevalent in downstream areas closer to major tourist attractions (See Chapter 4, Section 4.4.1). This distinction provides a scientific framework for assessing participatory approaches and identifying gaps between community expectations and actual involvement in tourism initiatives.

6.5 Perceived Benefits and Costs of Ecotourism

The research contributed to the scientific discourse by systematically analyzing the perceived economic, socio-cultural, and environmental benefits and costs of ecotourism from the community's perspective (See Chapter 4, Section 4.5.4). Economic benefits, such as increased employment and improved infrastructure, were widely recognized, while socio-cultural benefits included cultural preservation and community pride. Conversely, economic costs related to rising commodity prices and socio-cultural costs involving the erosion of traditional values were identified as critical concerns. The environmental dimension highlighted positive aspects, such as conservation awareness, and negative impacts, like pollution and resource degradation.

6.6 Implications for Policy and Practice

The integration of word frequency analysis within ecotourism research presents a novel way to understand community perspectives, offering policymakers richer qualitative data to guide decision-making (See Chapter 4, Section 4.6). Additionally, the stratified analysis of community perceptions can inform targeted interventions considering geographic and demographic differences, thereby enhancing community involvement and sustainability.

One of the novel contributions of this dissertation is the articulation of “landscape policy” not merely as a planning instrument, but as a participatory governance framework. The findings demonstrate that effective landscape management for ecotourism requires policies that are both spatially grounded and socially inclusive. The research highlights how public participation, through shared management, planning dialogues, and engagement with traditional authorities, can be harnessed to conserve the heritage value of landscapes while addressing evolving socio-economic and environmental needs (See Chapter 4, Section 4.5). This multi-scalar approach positions landscape policy as a bridge between institutional planning and grassroots stewardship, and underscores its importance as a scientific and practical contribution to sustainable ecotourism development.

The study’s findings also emphasize the need for policies that support inclusive participation while mitigating negative impacts, such as gentrification and cultural loss. Stakeholder collaboration and adaptive management practices are recommended to sustain community-driven ecotourism development in the Asuogyaman District.

6.7 Policy Recommendations and Institutional Implications

This research makes a novel contribution by transforming community-derived insights and empirical findings into actionable policy recommendations specifically tailored to the landscape planning and ecotourism context of the Asuogyaman District. These policy proposals are rooted in both the qualitative and quantitative dimensions of the study and represent scientifically grounded institutional responses to the challenges and opportunities identified (See Chapter 4, Section 4.6).

Key scientific results supporting these recommendations include:

- The stratified analysis of stakeholder perceptions reveals spatial and demographic variations in needs and expectations.
- The identification of participation typologies, spontaneous, induced, and coercive, help assess institutional inclusion and responsiveness.
- The mapping of landscape features and ecotourism potential, highlighting priority zones for intervention.

Based on these findings, the following policy recommendations emerge as new scientific contributions:

1. Establish decentralized ecotourism planning councils within districts, incorporating traditional leaders, local government, and civil society to enhance authentic participation.
2. Integrate GIS-based landscape characterization into regional spatial planning frameworks, enabling data-driven zoning of ecotourism and conservation areas.

3. Adopt community-informed ecotourism guidelines, emphasizing benefit-sharing mechanisms, cultural sensitivity, and ecological thresholds.
4. Institutionalize participatory monitoring and evaluation systems that use qualitative sentiment data (e.g., word frequency and LDA analysis) alongside traditional performance indicators.
5. Develop capacity-building programs targeting local entrepreneurs, women, and youth to build ecotourism-related livelihoods while preserving cultural identity.

These policy interventions are novel in their grounding within localized data, particularly the use of qualitative computational methods, spatial mapping, and stakeholder modeling. They provide a scientifically robust framework for aligning national tourism objectives with the realities of district-level implementation.

This chapter demonstrates how innovative methodological approaches can yield deeper insights into community perceptions and participation, ultimately contributing to more sustainable and inclusive ecotourism practices.

CHAPTER SEVEN

SUMMARY

This chapter provides a comprehensive summary of the study's key components, including the introduction, literature review, results, conclusions, and recommendations. The research aimed to evaluate the potential of ecotourism development in the Asuogyaman District in Ghana, focusing on land characterization, stakeholder engagement, community perceptions, and sustainable practices. This summary encapsulates the main scientific contributions, theoretical implications, methodological innovations, and practical recommendations.

7.1 Introduction

The study was motivated by the increasing global interest in ecotourism for sustainable development, particularly in regions with rich natural and cultural resources. The Asuogyaman District in Ghana, characterized by landmarks such as the Akosombo Dam, Volta Lake, and the Akwamu Hills Community Forest, presents a unique case for exploring ecotourism potential. The research assessed community involvement, stakeholder roles, and the benefits and costs associated with ecotourism initiatives. A mixed-method approach was employed to address these objectives, combining quantitative data with qualitative insights through word frequency analysis, stakeholder mapping, and community surveys.

7.2 Literature Review

The literature review examined existing theories and empirical studies on ecotourism, stakeholder engagement, and sustainable tourism development. A gap was identified in the nuanced understanding of how local perceptions influence ecotourism planning and development. Previous

studies often overlooked the specific socio-cultural dynamics that shape community participation, particularly in the context of Ghana. This study contributes to the field by integrating word frequency analysis with traditional quantitative metrics to capture community perceptions more holistically.

7.3 Key Findings and Results

The research revealed that the Asuogyaman District in Ghana has substantial ecotourism potential, with diverse landscapes that include natural and cultural assets. The study's landscape characterization mapped areas of high ecological value and identified the challenges in promoting sustainable tourism in less accessible regions. The stakeholder analysis distinguished between primary and secondary groups, highlighting the direct involvement of local communities and small-scale businesses, contrasted with the strategic roles of government agencies and traditional authorities.

Community engagement was found to vary significantly between upstream and downstream areas. Spontaneous participation was more common downstream, while induced or coercive involvement prevailed upstream. This spatial differentiation underscores the importance of tailored community engagement strategies. The study also identified both the positive and negative impacts of ecotourism. Economic benefits included job creation and improved infrastructure, while socio-cultural benefits encompassed cultural preservation and community pride. Conversely, economic drawbacks such as increased living costs and socio-cultural challenges related to cultural erosion were noted. Environmental impacts were mixed, with positive aspects like conservation awareness contrasted with concerns over pollution and resource degradation.

7.4 Methodological Contributions

A major innovation of the study was the use of word frequency analysis to reveal thematic concerns within the community's discourse on ecotourism. This approach is rarely applied in sustainable tourism research and offers valuable insights into local priorities, emphasizing themes like infrastructure development, cultural engagement, and environmental stewardship. The stratified analysis based on community location and native status provided further depth, highlighting geographic and demographic differences in perception.

7.5 Conclusions and Implications

The study concludes that promoting sustainable ecotourism in the Asuogyaman District requires a multi-faceted approach, involving active community participation, stakeholder collaboration, and the integration of indigenous knowledge. Policies must address barriers to participation, such as inadequate training, financial constraints, and infrastructure deficits. By fostering local ownership and supporting community-driven initiatives, sustainable tourism can be achieved without compromising cultural integrity or environmental health.

7.6 Recommendations

The study recommends enhancing community capacity through targeted training programs, particularly in guiding and hospitality services. Improving infrastructure, especially in upstream areas, will also facilitate greater tourist access and local involvement. Additionally, policies should focus on conflict resolution, particularly regarding land ownership, and establish frameworks for equitable benefit distribution among stakeholders. Future research could further explore the long-term socio-economic impacts of ecotourism and assess the effectiveness of implemented policies.

In summary, this study makes significant contributions to the field of sustainable ecotourism by combining innovative methodological approaches with a comprehensive analysis of community perceptions and stakeholder roles. The insights derived from this research have practical implications for policymakers, community leaders, and tourism planners aiming to foster sustainable ecotourism in the Asuogyaman District in Ghana.

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APPENDIX I

**HUNGARIAN UNIVERSITY OF AGRICULTURE AND LIFE SCIENCES
FACULTY OF LANDSCAPE ARCHITECTURE AND LANDSCAPE ECOLOGY
DEPARTMENT OF LANDSCAPE PLANNING AND REGIONAL DEVELOPMENT**

**Landscape Heritage, Social and Ecological Resilience and Its Relation to Sustainable
Tourism Development: An Evaluation of The Lake Volta-Ghana**

Questionnaire for residents of Asuogyaman District

Introduction

The purpose of this questionnaire is to assess local community sentiments regarding the use of cultural landscapes for sustainable tourism development. It would be greatly appreciated if you could fill out this survey. This study's findings would only be used for academic purposes. You are assured of complete anonymity.

Thank You.

SECTION A: SOCIO DEMOGRAPHIC CHARACTERISTICS

1. Place of residence:

- a) Atimpoku []
- b) Akwamufie []
- c) Mpakadan []
- d) Gyakiti []

2. Native status:

- a) Indigene []
- b) Non indigene []

3. How long have you been staying in the community?

- a. Less than 5 years []
- b. 5 – 10 years []

- c. 10 – 20 years []
- d. Above 20 years []

4. **Sex:**

- a) Male []
- b) Female []

5. **Age of respondent:**

- a. 18 – 24 []
- b. 25 – 31 []
- c. 32 – 38 []
- d. 39 – 45 []
- e. 46 – 52 []
- f. 53 – 59 []
- g. 60+ []

6. **Main occupations:**

- a. Farmer []
- b. Fisher []
- c. Petty Trader []
- d. Civil Servant []
- e. Others (specify)

7. **Marital status:**

- a. Single []
- b. Married []
- c. Divorced []

8. **Educational level**

- a. Basic []
- b. Secondary , Vocational, Technical []
- c. Tertiary []

- d. No Formal Education []
- e. Others

9. Religion

- a. Christianity []
- b. Islam []
- c. Traditional []
- d. None []
- e. Others

10. Ethnicity of respondent:

- a) Ewe []
- b) Ga-Adangbe []
- c) Akan []
- d) Others (specify)

11. Average monthly income:

- a. Less than GHC 500 []
- b. GHC 501 – GHC 1000 []
- c. GHC 1001 – GHC 2000 []
- d. Above GHC 2001 []

SECTION B: CHARACTERIZATION OF THE LANDSCAPE

12. Briefly state what you know about ecotourism.

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13. Are you aware of any ecotourism potential?

- a) Yes []
- b) No []

14. If “Yes” in 13 above, please list them

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15. How would you describe the natural features and resources of the ecotourism potential?

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16. What types of flora and fauna are present in the landscape?

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17. How would you characterize the overall visual appeal of the landscape? (1 is not appealing, and 5 is the most appealing)

- a) 1 []
- b) 2 []
- c) 3 []
- d) 4 []
- e) 5 []

18. How often do natives visit these potentials?

- a) Not at all []
- b) Not often []
- c) Often []
- d) Very often []

19. How often do foreigners visit these potentials?

- a) Not at all []
- b) Not often []
- c) Often []
- d) Very often []

SECTION C: ROLES OF STAKEHOLDERS IN ECOTOURISM DEVELOPMENT.

20. Who owns the land that holds these ecotourism potentials?

- a) Traditional Authorities []
- b) Government []
- c) The community []
- d) Private Operators []
- e) Others (specify)

21. Are you in any way involved in ecotourism planning and development in your community?

- a) Yes []
- b) No []

22. a. If “Yes”, what role do you play? (Tick all that apply)

- a) I engage in communal labour []
- b) I sell goods to tourists/visitors []
- c) I provide entertainment to tourists/visitors []
- d) I host tourists/visitors in my home []
- e) I invite distant friends to visit the site []
- f) I provide security to tourists/visitors []

- g) I abide by the by laws that protect the landscape []
 - h) I'm involved in managing the potential []
 - i) I provide tour guide services []
 - j) Others (specify).....
- 22 b. if No, why?

23. Is the District Assembly making any effort in developing the identified potential?

- Yes []
- No []
- No idea []

24. Are you aware of the involvement of any other stakeholders involved in the development of identified potentials?

- a) Yes []
- b) No []
- c) No idea []

25. If yes, then mention any that you are aware of.

- a)
- b)
- c)
- d)

26. In what ways do stakeholders currently contribute to the development of ecotourism through cultural landscapes?

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27. What are the major needs and challenges faced by these stakeholders and institutions in their efforts to develop ecotourism?

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SECTION D: PERCEPTIONS OF LOCAL COMMUNITIES CONCERNING THE USE OF CULTURAL LANDSCAPES FOR ECOTOURISM DEVELOPMENT

28. How do you feel about the idea of utilizing cultural landscapes for ecotourism development?

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29. What cultural aspects or traditions do you believe should be highlighted to attract tourists to the area?

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30. Do you think ecotourism development in cultural landscapes will bring economic benefits to the local community?

a. 1 []

- b. 2 []
- c. 3 []
- d. 4 []
- e. 5 []

31. Are there any concerns or reservations you have regarding the use of cultural landscapes for ecotourism?

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32. Please indicate your agreement with the following statements on community participation in ecotourism planning and development in your community. Scale: 1- A (Agree), 2- S/A (Strongly Agree), 3- U (Uncertain), 4- D (Disagree), 5- S/D (Strongly Disagree)

STATEMENTS (FORMS OF PARTICIPATION)	SCALE				
	A	S/A	U	D	S/D
Active					
1. Ecotourism Planning and development decisions is in total control of the community.					
2. The entire community is consulted before key decisions are taken.					
3. The community is directly involved in providing goods/services to visitors					

4. The ecotourism planning team is made up of representatives of all groups in the community					
Induced					
5. People will have the chance to participate if only they belonged to certain groups.					
6. Alternative decisions are made available to the community but there is no room for feedback					
7. I participate because of the material and financial benefits I will get in return.					
Passive					
8. We have no say in the tourism development agenda of the community.					
9. The community is told about tourism development decisions after they are made by top management.					
10. External organizations and business men take the leading role in the planning and development process.					

33. Please indicate your level of agreement with the following statements by ticking all that applies. Scale: 1- A (Agree), 2- S/A (Strongly Agree), 3- U (Uncertain), 4- D (Disagree), 5- S/D (Strongly Disagree). I am unable to get involved in tourism activities in my community due to the following reasons.

STATEMENTS (Barriers of Community Participation)	SCALE				
	A	S/A	U	D	S/D
OPERATIONAL BARRIERS					
1. The centralized nature of tourism planning is not favorable.					
2. There is total lack of co-ordination among the Stakeholders responsible for planning and development.					
3. I have very little information on tourism planning/ development related activities.					
STRUCTURAL BARRIERS					
1. The timing of community gatherings is inconvenient.					
2. The community has far too many disagreements.					
3. There are insufficient committee meetings.					
4. I lack financial resources to actively participate.					
5. External business operators are leading in ecotourism planning and development					
6. I lack the required education and skills required to participate in ecotourism planning and development.					

7. Project management committee members lack the required training to enable them properly manage ecotourism development in the region					
8. There is high level of elite dominance in the industry.					
CULTURAL BARRIERS					
1. My religion forbids me to participate in tourism development					
2. My age prevents me from participating in tourism development					
3. Poor people do not get the chance of participating.					
4. My marital status prevents me from participating in tourism development.					
5. Prescribed gender roles and responsibilities restrict my participation in tourism development.					

ANTICIPATED BENEFITS AND COSTS DISTRIBUTION FROM THE DEVELOPMENT OF POTENTIAL ECOTOURISM VALUES.

34. Which group of people do you think should benefit most from a fully developed ecotourism system within the region?

- a) Traditional Authorities []
- b) Government []
- c) The community []
- d) Private Operators []
- e) Others (specify)

35. Who should decide on the use of revenue generated from fully developed ecotourism sites?

- a) Traditional Authorities []
- b) Government []
- c) The community []
- d) Private Operators []
- e) Others (specify)

36. To what extent do you agree with the following statements regarding the impacts of a fully developed ecotourism sector within Asuogyaman District? Scale: 1- A (Agree), 2- S/A (Strongly Agree), 3- U (Uncertain), 4- D (Disagree), 5- S/D (Strongly Disagree).

STATEMENTS	SCALE				
	A	S/A	U	D	S/D
Economic (Positive)					
1. Increased employment opportunities for individuals in the community					
2. Improved transport infrastructure					
3. Contributes to personal income levels					
4. Improved social amenities					
Economic (Negatives)					
5. Increase in prices of goods/services					
6. Reduced concentration on farming					
7. Increased cost of land and housing					

Socio-Cultural (Positives)					
8. Unity among residents					
9. Increased demand for local artifacts					
10. Cultural diffusion					
11. Increased community sense of pride					
Socio-Cultural (Negatives)					
12. Loss of cultural values					
13. Increased prostitution					
14. Increased crime/robberies/vandalism					
15. Increased alcoholism/drug addiction					
Environmental (Positives)					
16. Increased awareness on issues of conservation					
17. Increased efforts to maintain a clean environment in the community					
18. Increased effort to preserve natural resources					
Environmental (Negatives)					
19. Increased hunting of hippos					
20. Increased pollution					

21. Increased noise making					
22. Increased bush burning and tree cutting					

SECTION E: RECOMMENDATIONS THAT CAN BE MADE IN LANDSCAPE PLANNING FOR ECOTOURISM DEVELOPMENT

37. How can the landscape be better managed and preserved to support ecotourism activities?

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38. What specific infrastructure or facilities are needed to improve the visitor experience in the Asuogyaman District Tourist Circuit?

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39. Are there any regulations or policies that should be implemented to ensure sustainable ecotourism development?

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40. How can local communities actively participate and benefit from landscape planning for ecotourism?

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APPENDIX II

**HUNGARIAN UNIVERSITY OF AGRICULTURE AND LIFE SCIENCES
FACULTY OF LANDSCAPE ARCHITECTURE AND LANDSCAPE ECOLOGY
Department of Landscape Planning and Regional Development
Landscape Heritage, Social and Ecological Resilience and Its Relation to Sustainable
Tourism Development: An Evaluation of The Lake Volta-Ghana**

In-depth interview guide for key informants

Introduction

The purpose of this interview guide is to evaluate the potential touristic landscapes within the Asuogyaman District. It would be extremely appreciated if you could participate in this brief interview. The findings of this study would be solely used for academic purposes. You are guaranteed of total confidentiality.

Thank You.

❖ Landscape Characterization

- a) What are some of the natural features
- b) Management Committee (Structure, Tenure, Mandate, Capacity [skills, training, authority], other related issues.
- c) Bylaws for the project (preparation, content, implementation, usefulness and challenges associated with its use).
- d) Source of funding for the project.
- e) Conflicts (sources, forms and management strategies)

❖ Role in Ecotourism Planning and Development

- a) What role do you play in ecotourism planning and management
- b) What is the state of community participation in terms of (management, distribution of benefits and general decision making)
- c) Information flows (method, frequency and feedback)

❖ Cost-Benefit Analysis

- a) What are some anticipated benefits and costs associated with ecotourism

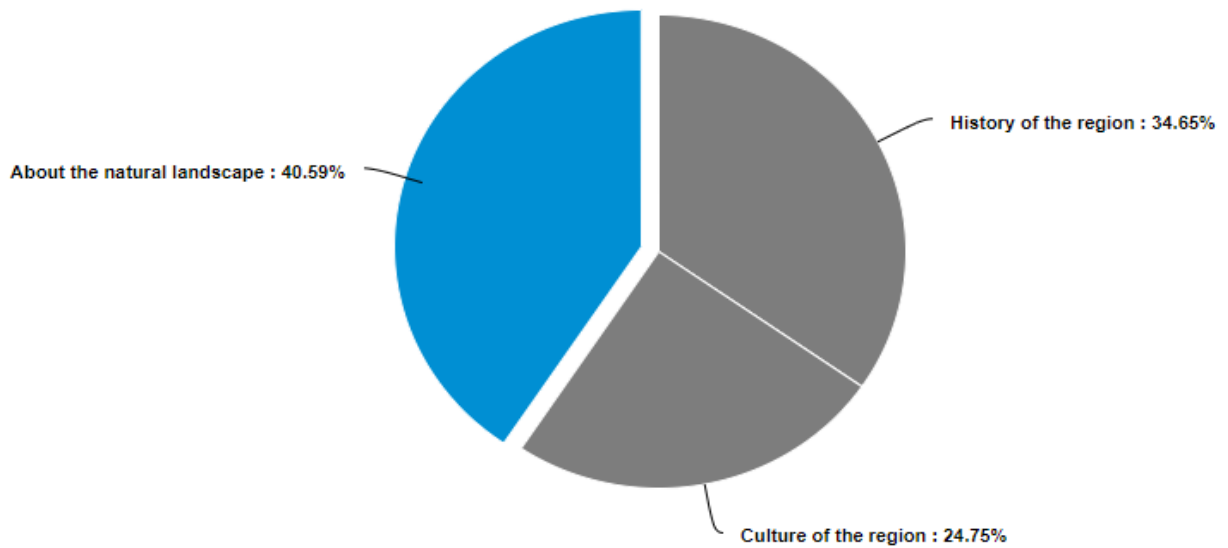
b) Economic, socio-cultural, environmental impacts

❖ **Challenges Associated with Ecotourism Development**

a) Challenges affecting sustainable tourism development within the district. (Funding, market access, conflict, traditional authority and others.

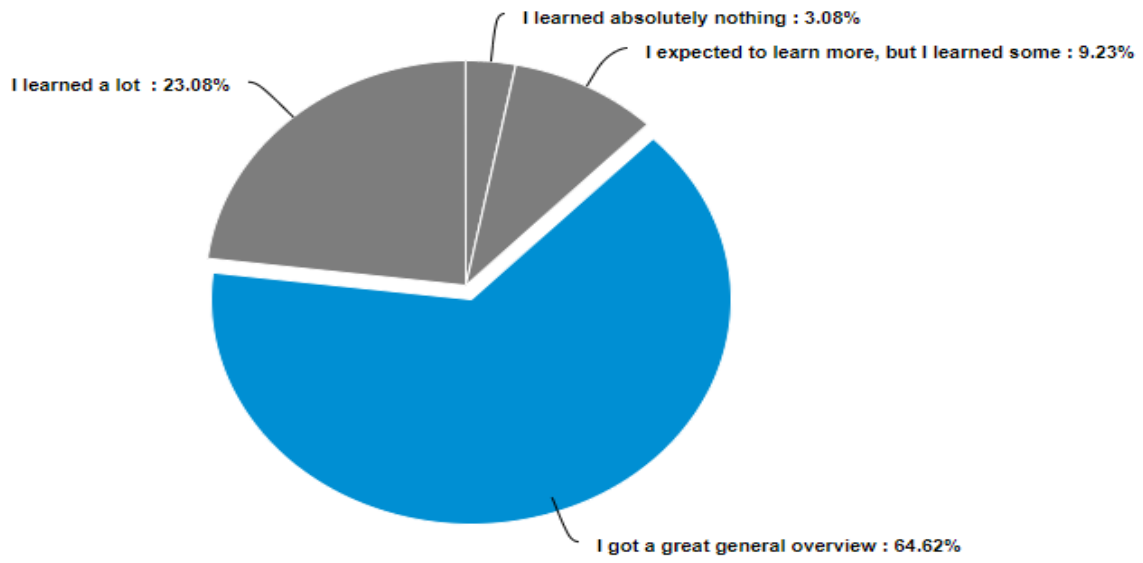
APPENDIX III

FIGURES RELATED TO VISITOR EXPERIENCES IN THE STUDY REGION

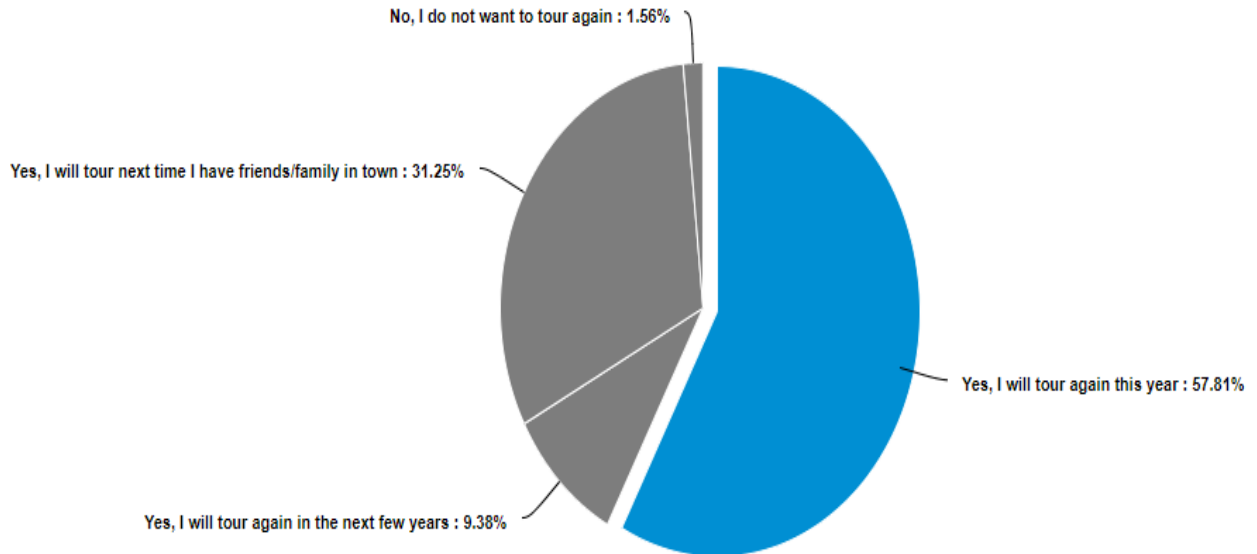


Appendix 3.1: Lessons Learned by Visitors on their Tour of the Region

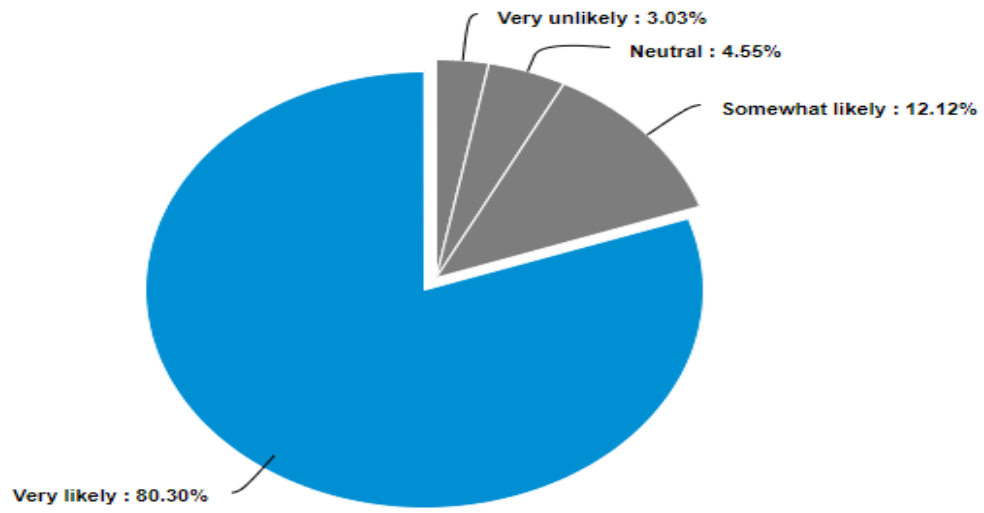
Source: Fieldwork, (2023)



Appendix 3.2: How Much Information Visitors Gained from the Tour
 Source: Fieldwork, (2023)



Appendix 3.3: Visitor Views on Touring the Region Again
 Source: Fieldwork, (2023)

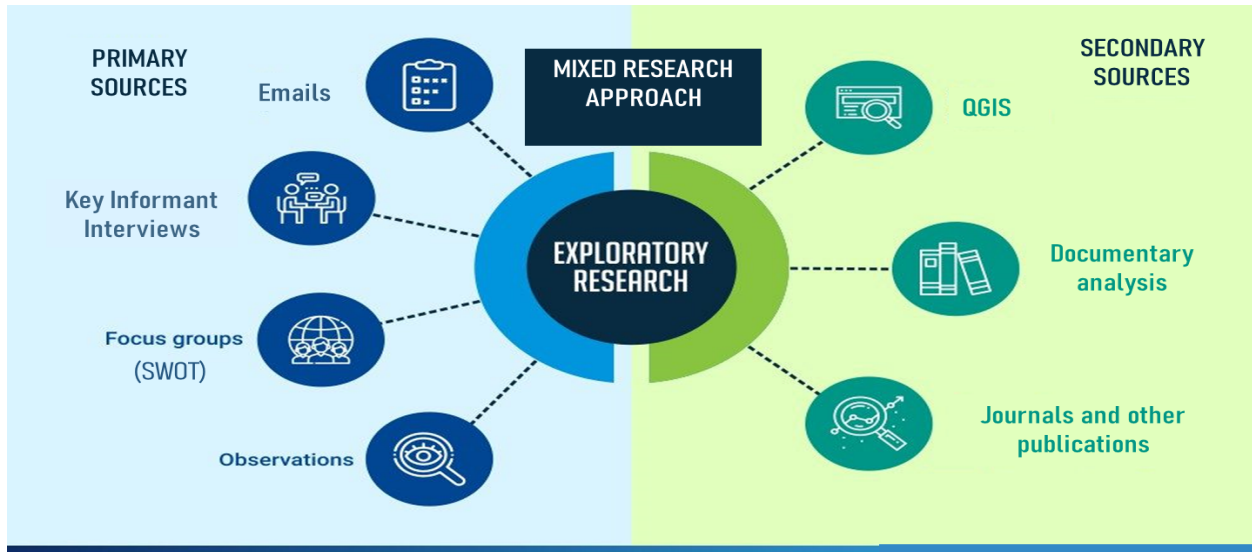


Appendix 3.4: How likely Visitors would Recommend the Region to Acquaintances

Source: Fieldwork, (2023)

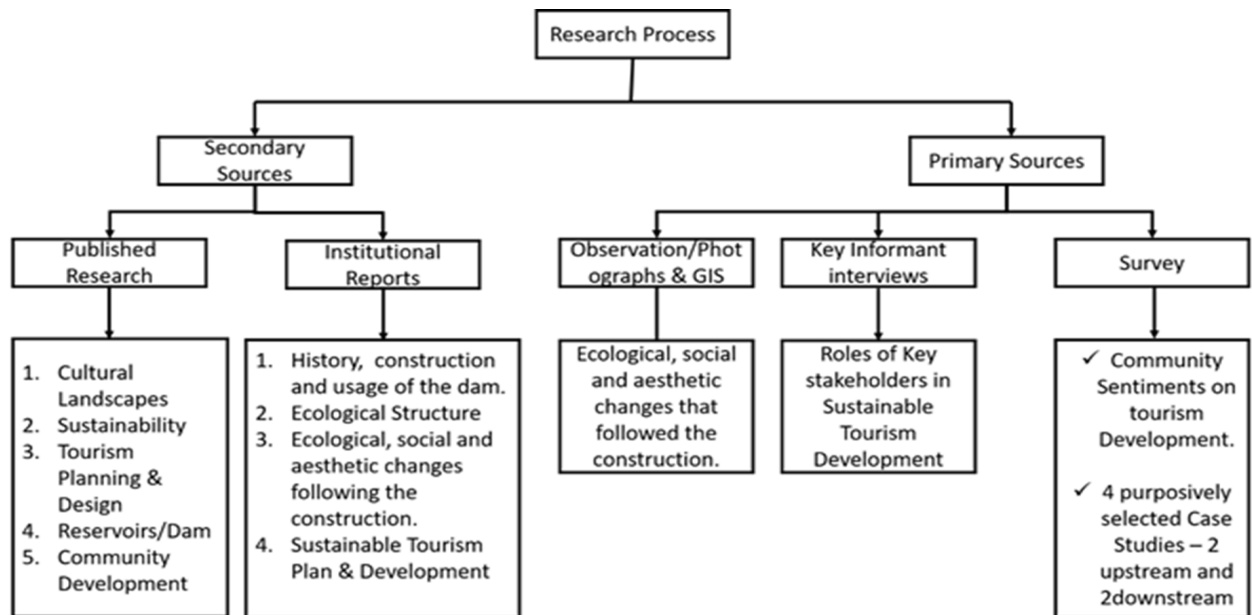
APPENDIX IV

FIGURES RELATED TO RESEARCH METHODOLOGY



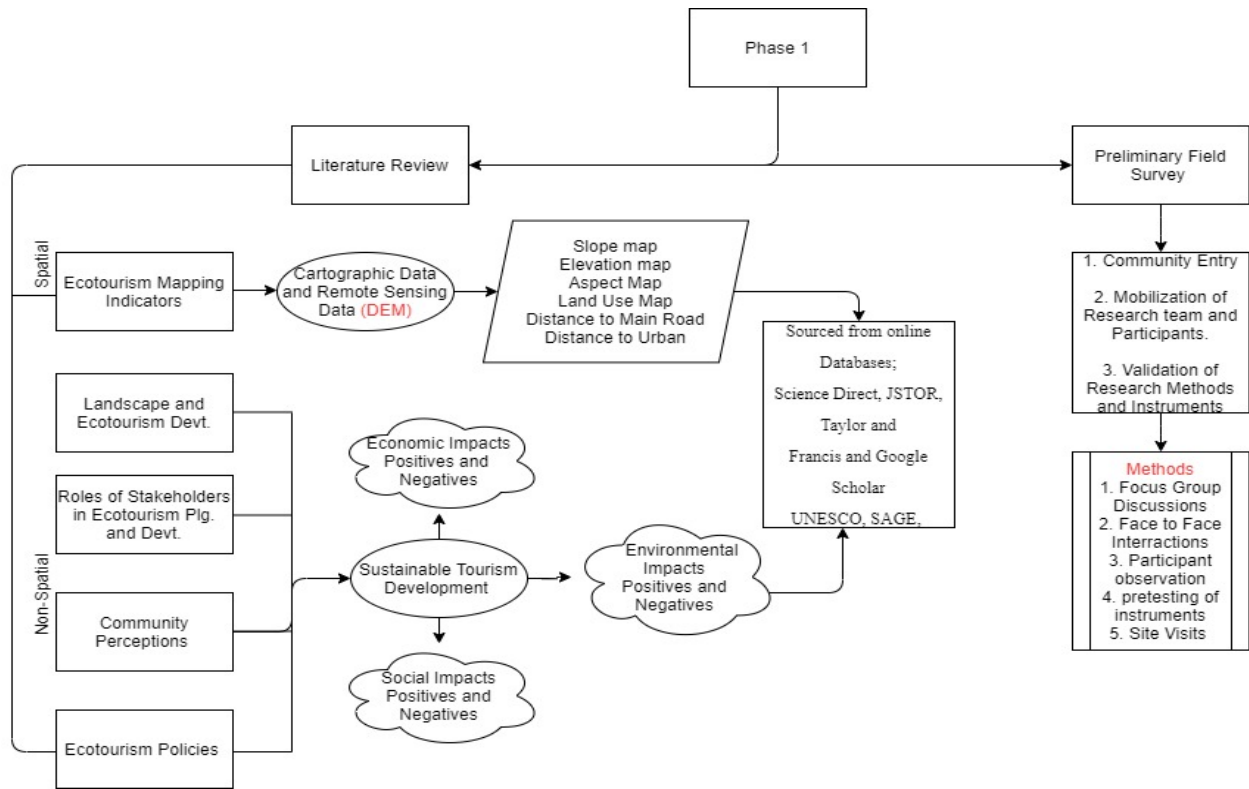
Appendix 4.1: Research Design

Source: Fieldwork, (2021)



Appendix 4.2: Materials and Methods Employed

Source: Authors Own Construct, (2021)



Appendix 4.3: Research Process Based on the Scope

Source: Authors Own Construct, (2021)

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