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Preparedness of Tourism Stakeholders for Climate Change Impacts in Kenya

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Abstract: *Tourism in Kenya is highly exposed to the adverse effects of climate change due to its dependence on climate-sensitive natural attractions and ecosystems. However, the level of preparedness among tourism stakeholders to effectively respond to these impacts remains insufficiently implicit. This study therefore sought to examine the preparedness of tourism stakeholders for climate change impacts, identify existing gaps, and propose strategies for strengthening resilience within the sector. The study is grounded in the Adaptive Capacity Theory (Folke et al., 2003), which emphasizes that the resilience of socio-ecological systems is determined by the ability of individuals, communities, and institutions to anticipate, cope with, and recover from environmental changes. A descriptive research design was adopted, relying on secondary data drawn from government reports, tourism policy documents, sectoral studies, and peer-reviewed journal articles. Data were collected through systematic review and structured extraction using a data matrix to ensure consistency and comparability. Validity and reliability were enhanced by using credible and authoritative sources, triangulating information across multiple documents, and prioritizing recent publications. Thematic content analysis was used to examine patterns relating to stakeholder awareness, adaptation measures, institutional support, challenges, and levels of preparedness. The findings reveal that although awareness of climate change is generally high among stakeholders, overall preparedness remains moderate. Larger tourism enterprises and government-supported destinations demonstrate relatively higher adaptive capacity compared to small-scale operators and rural-based tourism enterprises. Major constraints include limited financial resources, weak institutional coordination, and inadequate stakeholder collaboration. The study concludes that strengthening adaptive capacity is critical for sustainable tourism development in Kenya. It recommends enhanced technical capacity building, improved policy coordination, strengthened stakeholder partnerships, and increased financial investment in climate-resilient tourism initiatives.*

Keywords*: climate change, tourism stakeholders, preparedness, adaptive capacity, Kenya, resilience, adaptation strategies.*

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1. Introduction

Tourism is a key pillar of Kenya's economy, contributing significantly to gross domestic product, foreign exchange earnings, and employment creation, while supporting livelihoods across multiple sectors (World Travel & Tourism Council (WTTC), 2024; Kenya National Bureau of Statistics (KNBS), 2023). The sector is heavily dependent on natural resources such as wildlife, coastal ecosystems, and scenic landscapes, making it highly sensitive to environmental changes and climate variability (United Nations Environment Programme (UNEP), 2023; Gössling et al., 2022). As a result, climate change presents

a critical threat to the sustainability and competitiveness of tourism destinations in Kenya (Scott et al., 2023; UN World Tourism Organization (UNWTO), 2023).

Kenya has experienced increasing climate variability characterized by prolonged droughts, erratic rainfall patterns, and frequent flooding, all of which have intensified over recent years (Intergovernmental Panel on Climate Change (IPCC), 2022; Ministry of Environment and Forestry, 2023). These climatic changes have had profound effects on biodiversity and ecosystems that underpin tourism, particularly in wildlife conservation areas such as the Maasai Mara National Reserve (Ogutu et al., 2023; IPCC, 2022). Evidence indicates that shifts in rainfall and temperature patterns have disrupted wildlife migration, reduced habitat suitability, and increased mortality rates among key species, thereby diminishing the attractiveness of tourism destinations (Ogutu et al., 2023; Western et al., 2024). Such ecological disruptions threaten not only conservation outcomes but also the economic viability of tourism enterprises dependent on wildlife-based attractions (UNEP, 2023; WTTC, 2024).

Climate change also poses significant risks to tourism infrastructure and service delivery systems in Kenya, particularly through extreme weather events (Becken & Pant, 2023; IPCC, 2022). Flooding and heavy rainfall have damaged roads, lodges, and transport networks, limiting access to key tourist destinations and increasing operational costs for tourism businesses (Ministry of Tourism and Wildlife, 2023; Becken & Pant, 2023). In coastal regions such as Diani Beach, rising sea levels and coastal erosion have threatened hotels and recreational facilities, undermining the long-term sustainability of beach tourism (UNEP, 2023; Scott et al., 2023). These impacts highlight the vulnerability of both natural and built tourism assets to climate-related risks (Gössling et al., 2022; UNWTO, 2023).

Despite growing awareness of climate change impacts, the level of preparedness among tourism stakeholders in Kenya remains uneven and, in many cases, inadequate (Tourism Research Institute (TRI), 2024; Ministry of Tourism and Wildlife, 2023). Preparedness involves the capacity of stakeholders including government agencies, private sector operators, and local communities to anticipate, plan for, and respond to climate-related risks (Scott et al., 2023; Becken & Pant, 2023). However, studies show that many stakeholders lack sufficient technical knowledge, financial resources, and institutional support to implement effective adaptation strategies (TRI, 2024; UNEP, 2023). Additionally, limited integration of climate risk considerations into tourism planning and policy frameworks has constrained proactive adaptation efforts within the sector (Ministry of Environment and Forestry, 2023; UNWTO, 2023).

The Government of Kenya has established policy frameworks such as the Climate Change Act (2016) and the National Adaptation Plan (2015–2030) to enhance climate resilience across sectors, including tourism (Government of Kenya, 2016; Ministry of Environment and Forestry, 2023). These frameworks emphasize the importance of mainstreaming climate change into sectoral planning and promoting stakeholder collaboration in adaptation initiatives (Government of Kenya, 2016; IPCC, 2022). Nevertheless, the translation of these policies into actionable strategies at the local level remains limited, particularly in rural and resource-constrained tourism destinations (TRI, 2024; WTTC, 2024). This disconnect between policy formulation and implementation continues to hinder the effectiveness of climate adaptation efforts within the tourism sector (UNEP, 2023; Scott et al., 2023).

Furthermore, tourism stakeholders in Kenya operate within a complex socio-economic environment where climate change exacerbates existing challenges such as resource competition and community vulnerability (IPCC, 2022; KNBS, 2023). In arid and semi-arid regions, increasing scarcity of water and pasture has intensified human–wildlife conflicts, negatively affecting both conservation and tourism activities (Ogutu et al., 2023; Western et al., 2024). Local communities, who are key stakeholders in tourism development, often lack the capacity and resources to adapt to climate impacts, further undermining resilience at the destination level (UNEP, 2023; Becken & Pant, 2023). This situation underscores the need for inclusive and participatory approaches to climate adaptation that integrate community perspectives and knowledge systems (UNWTO, 2023; Scott et al., 2023). In Kenya, however, empirical evidence on the extent of stakeholder preparedness and the effectiveness of adaptation measures remains limited (TRI, 2024; Ministry of Tourism and Wildlife, 2023). This gap highlights the need for comprehensive research to assess preparedness levels and identify context-specific strategies for enhancing resilience within the tourism sector (WTTC, 2024; Scott et al., 2023)

1.1 Research Objective

To examine the level of preparedness of tourism stakeholders for climate change impacts in Kenya.

1.2 Research Question

What is the level of preparedness of tourism stakeholders for climate change impacts in Kenya?

2. Literature Review

2.1 Conceptual Overview

The nexus between climate change and tourism has increasingly attracted scholarly attention due to the sector's dependence on climate-sensitive natural and environmental resources (Scott et al., 2023; Gössling et al., 2022). Tourism systems are particularly vulnerable to climate variability, which affects destination attractiveness, infrastructure, and visitor experiences (UNWTO, 2023; IPCC, 2022). Over time, research has shifted from focusing solely on climate impacts to examining adaptation and stakeholder preparedness as critical components of sustainable tourism development (Becken & Pant, 2023; Njoroge, 2015). Consequently, understanding how tourism stakeholders prepare for and respond to climate change has become a central theme in contemporary tourism research (Scott et al., 2023; UNEP, 2023).

Climate change refers to long-term alterations in temperature, precipitation, and weather patterns largely attributed to anthropogenic greenhouse gas emissions (IPCC, 2022; UNEP, 2023). Tourism stakeholder preparedness is conceptualized as the capacity of tourism actors including governments, private sector entities, and communities to anticipate, plan for, and respond effectively to climate-related risks (Becken & Pant, 2023; Scott et al., 2023). Adaptation in tourism involves adjustments in operations, policies, and behaviors to mitigate adverse impacts or take advantage of emerging opportunities (UNWTO, 2023; Njoroge, 2015). Additionally, adaptive capacity refers to the ability of systems and stakeholders to adjust to climate change, minimize damage, and recover from its effects (IPCC, 2022; Gössling et al., 2022).

2.2 Global Perspective on Climate Change and Tourism Preparedness

Globally, tourism is recognized as one of the sectors most exposed to climate change impacts, including extreme weather events, biodiversity loss, and sea-level rise (IPCC, 2022; Scott et al., 2023). These impacts affect tourism both directly, through damage to infrastructure, and indirectly, through changes in environmental conditions and tourist preferences (Gössling et al., 2022; UNEP, 2023). Although awareness of climate risks has improved globally, many tourism stakeholders remain inadequately prepared due to limited resources, weak institutional frameworks, and insufficient integration of climate change into planning (UNWTO, 2023; OECD & UNEP, 2011). Therefore, enhancing preparedness through policy support, stakeholder collaboration, and investment in resilience has become a global priority (Becken & Pant, 2023; Scott et al., 2023).

2.3 Empirical Review

In a study conducted in Australia, Becken and Pant (2023) found that tourism businesses exhibited high awareness of climate change impacts but demonstrated low levels of practical preparedness due to financial and technical constraints. The study revealed that most stakeholders focused on reactive rather than proactive adaptation strategies, limiting long-term resilience. These findings highlight a critical gap between awareness and implementation in developed tourism contexts. Similarly, in New Zealand, Becken et al. (2022) established that tourism stakeholders had adopted sustainability practices such as energy efficiency and carbon reduction; however, climate risk assessments were not systematically incorporated into strategic planning. The study emphasized that preparedness remained moderate despite strong environmental awareness. This suggests that sustainability initiatives do not automatically translate into comprehensive climate adaptation.

In another study conducted in the United States, Scott et al. (2023) observed that preparedness levels varied significantly across regions, with coastal destinations showing higher adaptive capacity due to increased exposure to climate risks. The study further revealed that stakeholder collaboration and policy frameworks played a significant role in enhancing preparedness. However, small and medium enterprises lagged behind due to limited resources. Further, a study in Canada by Gössling et al. (2022) found that tourism stakeholders were increasingly adopting adaptation measures such as diversification of tourism products and investment in resilient infrastructure. Moreover, government support was identified as a key driver of adaptation efforts. However, uncertainty and lack of reliable climate data constrained effective decision-making. Moreover, research conducted in the United Kingdom by Hall et al. (2023) revealed that although stakeholders were highly aware of climate change risks, institutional barriers such as fragmented governance and lack of coordination hindered effective preparedness. The study emphasized the need for stronger governance structures to enhance adaptation. However, translating policy into practice remained a major challenge.

In Germany, a study by Kaján and Saarinen (2023) found that tourism destinations were actively integrating climate adaptation into strategic planning, particularly through technological innovations and early warning systems. Similarly, the study highlighted regional disparities in adaptive capacity, with some areas better prepared than others. This indicates the importance of localized

adaptation strategies. Further, a study conducted in China by Si and Tang (2024) revealed that tourism stakeholders were increasingly embracing low-carbon tourism initiatives as part of climate change mitigation efforts. Moreover, the study found a positive relationship between tourism growth and sustainability practices. However, implementation challenges such as limited capacity and rising emissions persisted.

In Europe, a study in Slovenia by Čavlek et al. (2024) established that tourism destinations were highly vulnerable to climate change due to their dependence on climate-sensitive resources. Similarly, the study found that stakeholders lacked systematic approaches to climate risk assessment. This highlights the need for integrating scientific data into tourism planning. Moreover, research in Spain by Gómez Martín et al. (2023) indicated that coastal tourism destinations were adopting adaptation measures such as infrastructure reinforcement and beach nourishment to address climate risks. However, financial constraints limited the effectiveness and sustainability of these interventions. The study underscores the importance of sustained investment in adaptation strategies. In a study conducted in Italy, Serio et al. (2025) found that environmental policies and corporate sustainability initiatives significantly influenced tourism flows. Furthermore, private sector actions were more effective than public policies in driving adaptation outcomes. However, disparities in implementation across regions remained evident.

Similarly, a study in Norway by Steiger et al. (2023) revealed that winter tourism destinations were highly vulnerable to climate change due to declining snow reliability. Moreover, stakeholders adopted technological solutions such as artificial snowmaking. However, these solutions were costly and unsustainable in the long term. In an African context, Rogerson (2023) conducted a study in South Africa and found that tourism stakeholders exhibited low levels of preparedness, particularly among small enterprises. Furthermore, the study identified financial constraints, limited awareness, and weak institutional support as major barriers. This highlights the challenges faced by developing countries in building climate resilience. In study conducted in Kenya, the Tourism Research Institute (2024) found that although stakeholders were aware of climate change impacts, preparedness levels remained low due to inadequate resources and limited integration of climate change into tourism planning. Moreover, the study emphasized the need for capacity building and policy implementation. These findings directly relate to the context of the current study.

Further, a study in Fiji by Becken et al. (2023) revealed that tourism stakeholders adopted community-based adaptation strategies, including ecosystem conservation and disaster preparedness. Similarly, the study highlighted the importance of local community involvement in enhancing resilience. However, financial limitations constrained the effectiveness of these strategies. Finally, a study in Indonesia by Higgins-Desbiolles et al. (2026) found that tourism enterprises recognized climate change risks affecting infrastructure, resources, and tourist behavior. Moreover, the study revealed varying levels of preparedness among stakeholders due to differences in risk perception. However, inconsistent awareness hindered the adoption of comprehensive adaptation strategies.

2.4 Synthesis and Research Gap

The reviewed studies demonstrate that tourism stakeholders globally are increasingly aware of climate change impacts; however, preparedness levels vary significantly across regions and contexts (IPCC, 2022; Scott et al., 2023). Developed countries tend to exhibit higher adaptive capacity due to stronger institutional frameworks and resource availability, whereas developing countries face constraints related to finance, knowledge, and policy implementation (UNEP, 2023; Rogerson, 2023). Moreover, common challenges across all regions include limited integration of climate change into planning, inadequate stakeholder coordination, and insufficient investment in adaptation strategies (Becken & Pant, 2023; UNWTO, 2023). However, despite the growing body of literature, there remains a significant gap in empirical research focusing specifically on stakeholder preparedness at the destination level, particularly in developing countries such as Kenya (TRI, 2024; UNEP, 2023). Furthermore, existing studies largely emphasize climate impacts and adaptation strategies while giving limited attention to the readiness and capacity of stakeholders to implement these strategies (Scott et al., 2023; Becken & Pant, 2023). Therefore, this study seeks to address this gap by examining the preparedness of tourism stakeholders for climate change impacts in Kenya.

2.5 Theoretical Underpinning

This study is anchored on the Adaptive Capacity Theory proposed by Folke et al. (2003). Adaptive Capacity Theory postulates that the resilience of socio-ecological systems depends on the ability of individuals, communities, and institutions to anticipate, respond to, and recover from environmental changes and shocks. It emphasizes that preparedness and adaptation are not merely reactive measures but involve proactive strategies, learning, and the capacity to transform systems in response to long-term environmental stressors. This theory is particularly relevant for tourism, which is highly sensitive to climate variability

and extreme weather events, as it provides a framework to understand how stakeholders can enhance their readiness to cope with climate-related risks. According to Folke et al. (2003), adaptive capacity involves a combination of resources, skills, knowledge, social networks, and institutional support that enables systems to respond to environmental change. In the context of tourism, these components translate into stakeholders' ability to implement climate adaptation strategies, diversify tourism offerings, invest in resilient infrastructure, and develop contingency plans. The theory suggests that preparedness is multidimensional, involving both tangible resources and intangible factors such as knowledge-sharing and stakeholder collaboration.

Linking the theory to the current study, the Adaptive Capacity Theory provides a conceptual framework to examine the preparedness of tourism stakeholders in Kenya for climate change impacts. In focusing on the capacity of different actors government agencies, private tourism operators, and local communities; the study investigates how these stakeholders anticipate risks, respond to climate-induced challenges, and plan for long-term sustainability. The theory supports the view that enhancing adaptive capacity is crucial for resilience in tourism destinations exposed to climate variability. Several scholars have applied Adaptive Capacity Theory to tourism and climate change research globally. For instance, Becken and Pant (2023) applied the theory to assess tourism businesses in Australia, highlighting that stakeholders with higher adaptive capacity were better prepared to implement effective climate adaptation strategies. Similarly, Scott et al. (2023) noted that adaptive capacity at the regional level determines the effectiveness of tourism planning and the ability to withstand climate-related shocks. These studies demonstrate that the theory is instrumental in understanding both strengths and gaps in stakeholder preparedness.

Moreover, other researchers have emphasized that adaptive capacity is influenced by institutional arrangements and governance structures. Hall et al. (2023) argued that even when stakeholders possess knowledge and resources, weak coordination and fragmented governance can limit effective adaptation. This perspective underscores the relevance of examining institutional support and policy frameworks in Kenya, as part of understanding the overall preparedness of tourism stakeholders. Finally, the Adaptive Capacity Theory aligns with the objectives of the current study by providing a lens to evaluate not only the current level of preparedness but also the factors that facilitate or hinder adaptation.

3. Methodology

This study adopted a descriptive research design using secondary data to examine the preparedness of tourism stakeholders for climate change impacts in Kenya. Data were collected from published government reports, policy documents, tourism sector performance reports, institutional studies, and peer-reviewed journal articles relevant to climate change and tourism. The data collection instruments involved systematic review and extraction of relevant information from these sources using a structured data extraction matrix to ensure consistency. Validity and reliability were ensured by selecting credible and authoritative sources, cross-checking information across multiple publications, and using recent and relevant data. Data analysis techniques included thematic content analysis, which involved categorizing and synthesizing information into key themes such as stakeholder awareness, adaptation strategies, challenges, and institutional support. Ethical considerations were observed by properly acknowledging all sources, avoiding plagiarism, and ensuring that the data were used solely for academic purposes.

4. Results and Discussions

The findings are presented under key thematic areas. Each theme synthesizes data from multiple sources to illustrate patterns, challenges, and opportunities.

4.1 Stakeholder Awareness of Climate Change Impacts

The study revealed that awareness of climate change among tourism stakeholders in Kenya is relatively high, particularly among government agencies and large private enterprises. Reports from the Tourism Research Institute (2024) and UNEP (2023) indicate that stakeholders recognize threats such as increased temperatures, erratic rainfall, and extreme weather events affecting wildlife, natural landscapes, and coastal areas. Similarly, other studies highlight that awareness campaigns and training programs have improved understanding of climate risks (Becken & Pant, 2023; Scott et al., 2023). However, despite this awareness, gaps remain in translating knowledge into action. Smaller tourism operators and community-based stakeholders often lack the technical expertise to implement adaptation measures. Moreover, awareness does not always translate into systematic risk assessment or long-term planning. This finding aligns with global research, which suggests that knowledge alone is insufficient without resources and institutional support (Hall et al., 2023; Rogerson, 2023). In another study, it was

noted that media and government communication play a crucial role in shaping stakeholder awareness. However, inconsistencies in information dissemination, particularly in rural areas, hinder comprehensive understanding. This demonstrates the need for targeted awareness programs that reach all levels of the tourism sector. Furthermore, stakeholder awareness varies by region and type of tourism activity. Wildlife conservancies and eco-tourism operators show higher sensitivity to climate risks, whereas cultural and coastal tourism operators are less proactive. These differences suggest that tailored interventions are necessary to address sector-specific vulnerabilities.

4.2 Adaptation Strategies and Measures

Findings revealed that tourism stakeholders in Kenya have adopted a range of adaptation strategies, though implementation is uneven. Large enterprises and government-supported destinations have invested in infrastructure improvements, such as climate-resilient facilities, water management systems, and disaster preparedness plans (TRI, 2024; UNEP, 2023). Similarly, community-based initiatives, such as conservation programs and alternative livelihood projects, have been introduced to buffer climate risks (Becken et al., 2023). However, the adoption of these strategies is often reactive rather than proactive. In another study, it was found that short-term coping mechanisms dominate, with few stakeholders integrating climate adaptation into strategic or long-term planning (Scott et al., 2023; Gössling et al., 2022). Moreover, resource limitations—particularly financial constraints—pose significant barriers to the implementation of effective measures.

Further, diversification of tourism products has been identified as an emerging adaptation strategy. Stakeholders are increasingly combining wildlife tourism with cultural and adventure tourism to spread risk and enhance resilience. Similarly, some destinations are experimenting with eco-tourism practices to reduce environmental pressure while improving sustainability (Becken & Pant, 2023). Nevertheless, institutional support is critical for scaling adaptation efforts. Studies show that coordination between government agencies, private operators, and community groups is limited, which reduces the overall effectiveness of adaptation measures. This finding is consistent with global research emphasizing that strong governance frameworks enhance stakeholder capacity for climate adaptation (Hall et al., 2023; Kaján & Saarinen, 2023).

4.3 Challenges and Barriers to Preparedness

Several challenges hinder the preparedness of tourism stakeholders in Kenya. Financial constraints are consistently cited as the primary barrier, limiting investment in climate-resilient infrastructure and innovative adaptation measures (TRI, 2024; Rogerson, 2023). In another study, limited access to climate data and forecasting tools was highlighted as a major obstacle, particularly for small-scale operators and rural tourism communities (UNEP, 2023; Becken et al., 2023). Moreover, governance and institutional challenges reduce preparedness. Fragmented policy implementation, weak coordination among agencies, and inconsistent enforcement of environmental regulations have impeded effective adaptation (Hall et al., 2023; Scott et al., 2023). Similarly, low levels of technical capacity and expertise among some stakeholders limit their ability to assess risks and implement adaptation measures.

Cultural and social factors also influence preparedness. In some communities, reliance on traditional knowledge and practices can conflict with modern climate adaptation strategies, while perceptions of climate risk vary, leading to uneven engagement in preparedness initiatives (Becken & Pant, 2023; Higgins-Desbiolles et al., 2026). Furthermore, stakeholder prioritization often favors immediate economic gains over long-term resilience. For example, revenue-driven tourism investments may neglect climate risks, undermining sustainability. This aligns with global findings showing that short-term economic pressures frequently override climate adaptation planning (Gössling et al., 2022).

4.4 Institutional and Policy Support

The study found that institutional and policy frameworks in Kenya provide a partial foundation for climate preparedness but are insufficiently coordinated. Government initiatives, including climate policy guidelines, environmental regulations, and tourism development plans, have created awareness and provided some support for adaptation measures (UNWTO, 2023; TRI, 2024). Similarly, partnerships with NGOs and international organizations offer technical assistance and training programs to enhance stakeholder capacity. However, the effectiveness of institutional support is limited by weak enforcement, overlapping mandates, and fragmented governance. In another study, stakeholders reported uncertainty regarding their roles and responsibilities in climate adaptation, which hinders coordinated action (Hall et al., 2023; Becken et al., 2023). Moreover, policy implementation often lacks monitoring

mechanisms to track progress and ensure accountability. Further, stakeholders expressed the need for incentives to promote proactive adaptation. Tax relief, funding for climate-resilient infrastructure, and technical support were identified as key measures that could enhance preparedness. Similarly, aligning adaptation strategies with broader development objectives could improve stakeholder engagement and sustainability outcomes (Scott et al., 2023; UNEP, 2023).

4.5 Community Involvement and Collaborative Efforts

The findings highlight that community involvement is critical to enhancing preparedness, particularly in areas dependent on natural resources and wildlife tourism. Studies show that participatory approaches, such as community-based conservation, disaster preparedness committees, and stakeholder forums, improve awareness and mobilize local resources (Becken et al., 2023; TRI, 2024). Similarly, collaboration between government, private sector, and local communities strengthens adaptive capacity. In another study, destinations with strong multi-stakeholder networks demonstrated more coordinated adaptation measures and better risk management outcomes (Scott et al., 2023). However, the extent of collaboration varies by region, and in some cases, limited trust and communication hinder effective partnerships. Moreover, capacity-building programs targeting local communities have shown promise in enhancing knowledge, skills, and resilience. These include climate education, training in sustainable tourism practices, and early warning systems. Nevertheless, sustained support and funding are required to ensure long-term effectiveness (Becken & Pant, 2023).

4.6 Overall Preparedness and Gaps

The preparedness of tourism stakeholders in Kenya remains moderate, with significant variation across regions, enterprise types, and stakeholder groups. Large-scale enterprises and government-supported destinations demonstrate higher readiness, whereas small-scale operators and rural tourism stakeholders are less prepared (TRI, 2024; UNEP, 2023). Further, gaps exist in integrating climate change into formal planning processes, securing financial resources for adaptation, and coordinating multi-stakeholder efforts. Similarly, technical knowledge, data access, and policy enforcement remain inconsistent. In another study, it was noted that these gaps reduce the overall resilience of tourism destinations to climate-related shocks (Hall et al., 2023; Rogerson, 2023). However, emerging trends such as diversification of tourism products, community-based adaptation, and investment in resilient infrastructure indicate potential pathways for improving preparedness. Moreover, aligning policy, finance, and capacity-building initiatives could strengthen adaptive capacity and long-term sustainability.

5. Conclusion and Recommendations

5.1 Conclusion

The study concludes that while tourism stakeholders in Kenya demonstrate a reasonable level of awareness regarding climate change impacts, overall preparedness remains moderate and uneven across regions, enterprise types, and stakeholder groups. Large-scale enterprises and government-supported destinations show higher readiness, whereas small-scale operators and rural communities face significant challenges due to limited financial resources, technical capacity, and weak institutional support. Adaptation strategies, including infrastructure improvements, product diversification, and community-based initiatives, are emerging but often reactive rather than proactive. Furthermore, gaps in policy coordination, stakeholder collaboration, and access to reliable climate information hinder comprehensive preparedness.

5.2 Recommendations

This paper makes the following recommendations:

1. There is a need to strengthen the adaptive capacity of tourism stakeholders by providing technical training, access to climate data, and resources for implementing proactive adaptation measures.
2. There is a need to enhance policy coordination and governance frameworks to ensure that climate adaptation strategies are effectively integrated into tourism planning, monitored, and enforced across all stakeholder levels.
3. There is a need to promote stakeholder collaboration and community involvement, including multi-stakeholder partnerships between government agencies, private operators, and local communities to improve coordination, knowledge sharing, and collective resilience.
4. There is a need to mobilize financial support and incentives for climate-resilient infrastructure and sustainable tourism initiatives, particularly targeting small and medium-sized enterprises and rural tourism communities to reduce resource-based vulnerabilities.

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