

Article

Mapping Tourism Stakeholders and Governance Networks to Advance Sustainable Tourism Development: A Case Study in the Lake Tana Region, Northwest Ethiopia

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Abstract

As an inherently fragmented and multisectoral phenomenon, tourism requires the involvement of a diverse range of stakeholders. The main aim of the present study is to map local tourism stakeholders and analyze governance networks. The researchers recruited respondents from key tourism stakeholders through purposive sampling techniques. Closed-ended questionnaires, semi-structured interviews, and focus group discussions were used for collecting data. We applied the power–interest grid for mapping local tourism stakeholders. In addition, guided by the concept of resource dependency theory, the Social Network Analysis technique was employed for mapping local tourism governance networks. The findings disclosed that the local tourism stakeholder map primarily comprises government institutions, tourism businesses, local communities, and civil society organizations. Although tourism government institutions and large tourism businesses established strong linkages, the network density was found to be moderate. Implementing effective stakeholder mapping techniques and strengthening local tourism governance networks is crucial to promoting sustainable tourism. This study makes a substantive contribution to academia by providing insights into the methods and techniques essential for mapping tourism stakeholders and governance networks. Moreover, the study has practical implications for destination management organizations, policymakers, and destination administrators.

Keywords: actors; Gephi; governance networks; resource dependency; power–interest grid; social network analysis



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1. Introduction

The peculiar characteristics of tourism, including its fragmented and multisectoral nature, policy alignment issues with other sectors, and vulnerability to natural and man-made disasters, ultimately necessitate strong stakeholder collaboration [1,2]. Stakeholder mapping is increasingly used as a crucial tool for identifying actors involved in tourism governance processes [3]. Within this framework, the local tourism governance network encompasses numerous autonomous yet symbiotic stakeholders [4–6]. A well-established stakeholder map and improved governance networks contribute to sustainable tourism development [7].

However, in the context of most emerging destinations, there is a lack of empirical evidence regarding how stakeholder mapping and tourism governance networks contribute to sustainable tourism development [8,9]. This gap is reinforced by dos Anjos and Kennell [10], who noted that a lack of research on governance networks in emerging and less developed tourism destinations is evident. Similarly, Van der Zee and Vanneste [11] also noted a scarcity of empirical studies that ascertain how network structures are formed among tourism stakeholders. In some tourist destinations, superficial stakeholder involvement in local tourism decisions and inadequate tourism guidelines impact the effectiveness of stakeholder mapping and governance networks [12–14]. Furthermore, the lack of methods and techniques contributes to the limited number of studies in tourism stakeholder mapping and governance networks [15–17]. Considering the complexity of tourist destinations, Social Network Analysis (SNA) is a crucial method that can be applied to the study of governance networks [18–20]. Along with applying specific methods and techniques, employing theoretical frameworks would be crucial to providing an in-depth and strong analysis regarding tourism governance networks [21]. As such, given the multistakeholder nature of tourism, applying resource dependency theory (RDT) helps elucidate how actors in tourism are fundamentally interdependent [22]. RDT states that organizations, regardless of their size and activities, rely on each other's resources for success. Hence, understanding this theory is crucial for mapping and analyzing local tourism governance networks.

To add new insights into the field of sustainable tourism governance and pinpoint practical contributions, there is an immediate need for an empirical study in tourism stakeholder mapping and governance networks. Therefore, with the present study, we aim to (1) map local tourism stakeholders according to their level of power and interest in local tourism decisions, (2) examine the local tourism governance networks, and (3) scrutinize the nexus between stakeholder mapping and sustainable tourism development.

2. Literature Review

2.1. Stakeholder Mapping in Tourism: Insights from the Empirical Literature

Developing an inclusive tourism stakeholder map is a crucial step in promoting effective governance as it can help destination administrators assign clear responsibilities to each stakeholder category [22,23]. Stakeholder mapping can also contribute to understanding the interests and power dynamics of each actor in the tourism system [24]. Case studies illustrate the positive impact of stakeholder mapping. For instance, in Costa Rica, the proper implementation of stakeholder mapping for ecotourism activities within the nation helped balance the interests of the government, civil society organizations, tourism enterprises, and communities [25]. In the context of Africa, Tanzania's success in community-based tourism is largely attributed to the effective use of stakeholder mapping, which supported the conservation of cultural heritage [26].

Sustainable tourism governance is realized through the participation of all actors in tourism decisions [27]. Since effective stakeholder management gives adequate attention to stakeholders with low influence, high-influence stakeholders need to be managed

well [28]. This implies the need for governance approaches that explicitly identify and map stakeholders with diverse interests and roles [29,30]. Most tourism stakeholder mapping approaches categorize stakeholders based on their common features [31]. Astriyantika et al. [31] also ascertained that since effective stakeholder mapping promotes inclusivity, it contributes to enhancing the economic, socio-cultural, and environmental sustainability of tourist destinations. In a similar vein, Lisovska et al. [32] indicated that implementing a stakeholder mapping approach is crucial to coordination, power balancing, and collaborative decision-making that fosters the three pillars of sustainability. Building a strong bond between public sectors, private actors, and local communities strengthens governance and promotes long-term benefits [33]. A recent study by Kusumawardhani and Pradhana [34] emphasized that collaborative governance fosters destination viability. Therefore, effective tourism stakeholder mapping ultimately contributes to promoting inclusiveness, responsibility, and sustainable resource management [35,36]. Considering the nature of tourist sites and the necessity of involving different stakeholder categories, some empirical studies have been conducted on tourism stakeholder mapping (Table 1).

Table 1. Some previous tourism stakeholder mapping studies and key insights.

Authors ^a	Key Insights
Grindsted et al. [28]	Identifying stakeholders involved in tourism is crucial to understanding which actors play a vital role in promoting destination development.
Shoukat et al. [29]	Specifying the type, power, and interest of key actors in the tourism industry is essential for defining the responsibility of each stakeholder category.
Waligo et al. [37]	The number of stakeholders involved in achieving sustainable tourism depends on the type and quantity of destination resources.
Roxas et al. [17]	Tourism stakeholder mapping plays a crucial role in managing destination resources and improving collaborations.
Nguyen et al. [14]	Stakeholder mapping highlights the importance of various stakeholders in influencing local tourism decisions and promoting sustainable tourism.
Spenceley and Casimiro [38]	Stakeholder mapping guides how stakeholders interact in the tourism setting.
Byrd [39]	Applying a stakeholder mapping approach is one of the most important steps considered in the sustainable tourism development process.
Sautter & Leisen [40]	Developing a framework for tourism planning and demonstrating the need to identify stakeholders can contribute to destination governance.
Freeman [41]	Understanding stakeholders' behavior and interests is crucial to enhancing sustainable development.

^a List written based on chronological order.

As shown in Table 1, previous studies provided crucial insights about stakeholder mapping. To further examine how tourism stakeholders depend on each other's resources and form networks, a guiding theoretical framework is needed [37–39]. In this regard, in the present study, we employed RDT as a theoretical lens to examine tourism governance networks.

2.2. Resource Dependency Theory

Coined by Pfeffer and Salancik [22], RDT is about how independent organizations manage dependencies through cooperation, agreement, and resource sharing. It states that independent actors or organizations depend to some extent on resources from other institutions [40–42]. The decision of a single actor might have a significant impact on the activities of others [43]. Therefore, an organization's strategy needs to be formulated

by considering the interests and resources of other organizations [44]. In practice, no government, business, or civil society organization is completely self-contained [45,46]. Due to the diversity of resources required, actors involved in tourism-related activities are dependent on each other's resources [47]. As such, applying the concept of RDT is vital for guiding the creation of the tourism governance network map.

Moreover, to systematically identify the keywords used in previous tourism stakeholder mapping studies, a bibliometric analysis is essential. This approach helps to map the dominant conceptual trends while identifying key research gaps and unexplored terms within the extant literature.

2.3. Bibliometric Analysis

Bibliometric analysis is crucial for identifying the keywords in previous studies on tourism stakeholder mapping [48]. For this purpose, articles, reviews, and conference reports that are relevant to the current study were retrieved from the Web of Science (WoS) Core Collection. Co-occurrence analysis, thematic mapping, and keyword clustering can be employed for mapping the keywords [49]. Conducting a co-occurrence analysis allows researchers to highlight keywords that have been overlooked in the previous literature. By using the VOS visualizer, the researchers identified the keywords that appeared in prior tourism stakeholder mapping studies conducted between 2018 and 2024 (Figure 1). The size and proximity of nodes represent the frequency and strength of connections between key terms, while the co-occurrence of keywords in the study establishes their relationship.

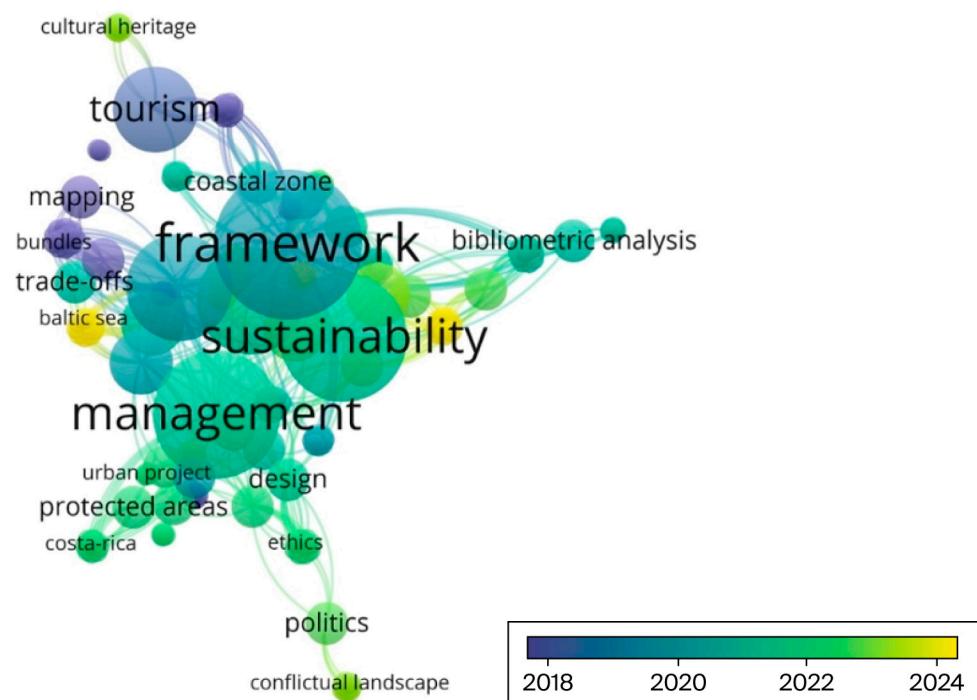


Figure 1. Keyword mapping.

As shown in Figure 1, high-frequency keywords, represented by large nodes, dominate the existing literature on tourism stakeholder mapping. With 68, 64, and 60 occurrences, “framework”, “sustainability”, and “management” are, respectively, the primary focuses of previous studies. In addition, terms such as “tourism” (31), “coastal zone” (22), and “Costa Rica” (11) emerge significantly, highlighting the prevalence of context-specific stakeholder mapping studies. Despite these established trends, a critical gap remains. Key concepts such as “power-interest grid”, “SNA”, “resource dependency”, and “network governance” appear to have been overlooked in previous studies.

3. The Study Area

This study was conducted in the Lake Tana region of northwest Ethiopia. Geographically, it is situated approximately 560 km from Addis Ababa, the capital of Ethiopia. The region is located in Amhara National Regional State, one of Ethiopia's twelve regional states. The Blue Nile Falls (Tis Abay), Bahir Dar City, Dek Island, Lake Tana, and the monasteries on Zegie Peninsula are the most popular tourist sites located in the Lake Tana region (Figure 2). In 2015, Lake Tana was designated as a UNESCO Biosphere Reserve, highlighting its significant natural and cultural values. As the Lake Tana region contains a diverse range of flora and fauna, it is recognized as a vital ecological site that necessitates careful preservation and conservation. International and local non-governmental organizations are also actively participating in environmental conservation activities in the Lake Tana region.

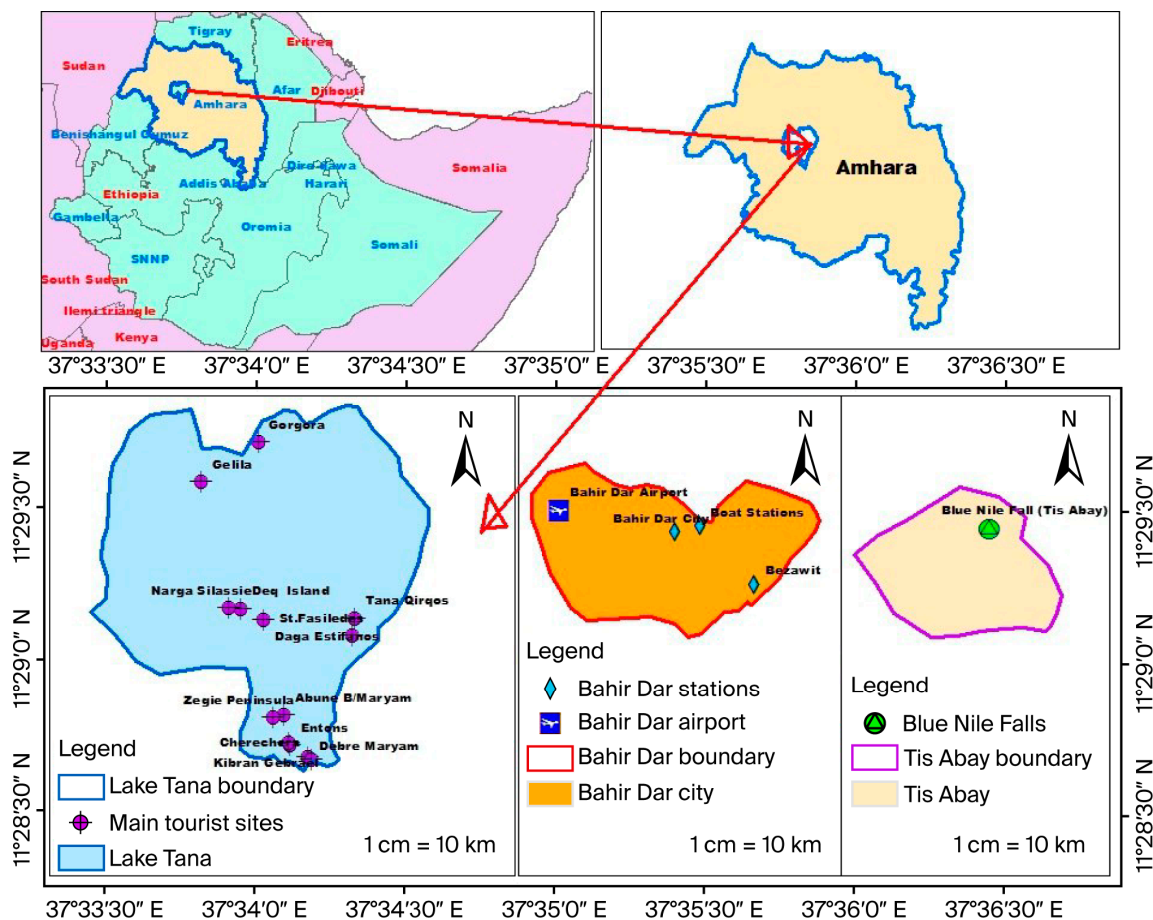


Figure 2. Map of the Lake Tana region.

4. Materials and Methods

In this study, we adopted a mixed-methods research approach. After collecting data from respondents, we applied the power-interest grid to identify tourism stakeholders. We also implemented SNA to map the local tourism governance networks. It should be noted that SNA is a preferred analytical method applied to the inspection of governance networks [50].

In this study, we applied purposive sampling. Before collecting data, the first author held discussions with five tourism experts from the Regional Culture and Tourism Bureau and seven university academic staff to gain insights about how to proceed with the data collection process. These discussions also helped determine how to select research participants from key tourism stakeholders. It was essential to determine the number of

respondents who would participate in the current study, as data collection for stakeholder mapping and network analysis involves listing all actors and administering saturation surveys [51]. Accordingly, in this research, we followed the principles of data saturation. Since SNA largely relies on relational data, data collection ceased when additional data would not significantly alter the local tourism stakeholder map and governance network structure. Data collection and preliminary analysis were conducted concurrently to manage data saturation. Even though some actors have fewer ties, the collected data was sufficient to provide a comprehensive stakeholder and local tourism governance network map.

Considering the saturation point, forty research participants, including six hotel managers, three restaurant managers, three tour and travel operators, seven tour guides, two academic staff, five tourism experts at the government tourism bureau, three boat service providers, five representatives from civil society organizations, three souvenir sellers, and three local community representatives were involved in filling out the closed-ended questionnaires. The respondents were provided with lists of potential actors. Then, they were asked to indicate stakeholders involved in local tourism decisions. The research participants were also asked to add individuals or organizations missing from the list. This provides opportunities for respondents to mention all stakeholders. Subsequently, the 40 respondents identified 54 actors who are directly or indirectly involved in tourism in the Lake Tana region. In our study, the term interaction or connection is used to imply resource sharing, communication, and interdependency between actors involved in the local tourism governance networks. To reveal the interaction between stakeholders in the network map, nodes and ties are used. Nodes represent the types of actors functioning in the Lake Tana region, whereas ties signify connections between actors. In the current study, some stakeholders have established direct networks, while others have undirected networks, resulting in a mixed network type.

Relating to data collection instruments, in the present study, we used closed-ended questionnaires, interviews, and FGD. The closed-ended questionnaire has two parts. The first part contains a list of actors, and the second part was designed to measure stakeholders' level of power and interest in local tourism decisions. In the course of preparing the questionnaires and interview guides, resource dependency theory (RDT) was applied as a guiding theoretical framework. While employing RDT in the design of the data collection instruments, we followed two basic steps. First, we critically analyzed the core concepts of RDT, focusing on themes such as resource interdependencies, power relationships between stakeholders, and strategies that organizations follow to manage dependencies. Second, after comprehending the theoretical framework, we applied the concepts of RDT in the design of the questionnaires and interview guides. This approach ensured that the collected data were both descriptive and theoretically informed, allowing us to provide in-depth analysis concerning local tourism governance networks.

Regarding measurements, in the context of our study, power was defined as the ability of a stakeholder to influence local tourism decisions, whereas interest was conceptualized as the level of concern in local tourism governance. According to Zhu et al. [33], a five-point Likert scale questionnaire, where 1 stands for very low, 2 for low, 3 for moderate, 4 for high, and 5 for very high, is crucial to collecting the data required to conduct a power–interest matrix. In the present study, respondents were asked to rate each stakeholder's level of power and interest in local tourism governance. Since the respondents provided their own assessment for a single stakeholder, the mean value was used for the final analysis. Hence, to categorize each stakeholder and prepare the power–interest matrix, we used the mean scores as a threshold. In the present study, stakeholders with a mean score of power and interest equal to or above 3.5 were grouped under the high power and interest category, while those with mean scores below 3.5 were considered to have low power and interest.

The group mean of each stakeholder category is reported. This data-driven approach is in line with contemporary stakeholder analysis, where relative positioning based on empirical scores can be used to categorize stakeholders [33,35].

In addition, to add qualitative results and ensure data triangulation, 13 key informants were interviewed and 12 respondents selected among key tourism stakeholders took part in the FGD. The researchers assigned codes to each interview and FGD participant (Table 2).

Table 2. List of interviewees and FGD participants.

Interview Participants	Number of Interviewees	Codes Assigned	Gender	Experience (In Years)
Tourism experts at government tourism institutions	3	TR 1	Male	15
		TR 2	Female	13
		TR 3	Male	10
Tourism professionals working in different tourism business institutions	6	TB 1	Male	20
		TB 2	Male	17
		TB 3	Female	8
		TB 4	Female	10
		TB 5	Male	14
		TB 6	Male	16
Representatives from civil society organizations	2	CS 1	Male	22
		CS 2	Male	18
Academics and researchers	2	AC 1	Male	16
		AC 2	Male	14
FGD participants	Number of discussants			
Hotels and restaurants	3	FGD 1	Female	8
		FGD 2	Male	12
		FGD 3	Male	10
Tour operators and travel agents	1	FGD 4	Male	17
Local tour guides	2	FGD 5	Male	17
		FGD 6	Male	6
Boat service providers	2	FGD 7	Male	20
		FGD 8	Male	13
Souvenir sellers	1	FGD 9	Female	14
Local community representatives	1	FGD 10	Male	16
Tourism government institutions	2	FGD 11	Female	14
		FGD 12	Male	7

Data Analysis

In the present study, we applied the power–interest grid to map the stakeholders and Gephi software version 0.10.1 to visualize the local tourism governance network map. Gephi is an important tool used to illustrate relationships between actors [52]. The network density was computed to understand the cohesion and connection between actors in the

local tourism governance network. The density of a network is determined by dividing actual connections by its maximum potential connections [18]. In addition, the degree of centrality measures was also computed to identify which actors play a central role in local tourism governance networks. To do so, the raw degree and normalized degree were calculated, taking into account the number of ties each actor has. According to Butts [53], raw degree is the number of direct connections that each actor has, whereas normalized degree is calculated by dividing the raw degree by the maximum possible connections in the network (i.e., the total number of nodes minus 1) (Appendix C). Along with quantitative SNA, qualitative analysis was also conducted concurrently to add additional insights obtained from interview and FGD participants. Data triangulation was conducted by aligning findings obtained from both quantitative and qualitative data sources. This helped to ensure that the responses provided by each respondent were cross-checked and refined before being included in the final analysis. To further enhance the validity of the findings, the first author presented the preliminary stakeholder and governance network map to six tourism experts. Subsequently, the experts mentioned that the local tourism stakeholder and governance network map contains key actors playing a significant role in tourism development in the Lake Tana region. Ultimately, data triangulation and expert validation processes helped us to increase the robustness of the analysis.

5. Results

5.1. Local Tourism Stakeholder Mapping

In the stakeholder map, actors are positioned based on their level of power and interest in local tourism decisions. This stakeholder map mainly includes tourism government institutions, other government institutions involved in tourism development, local and international civil society organizations, tourism businesses, local communities, and associations (Figure 3).

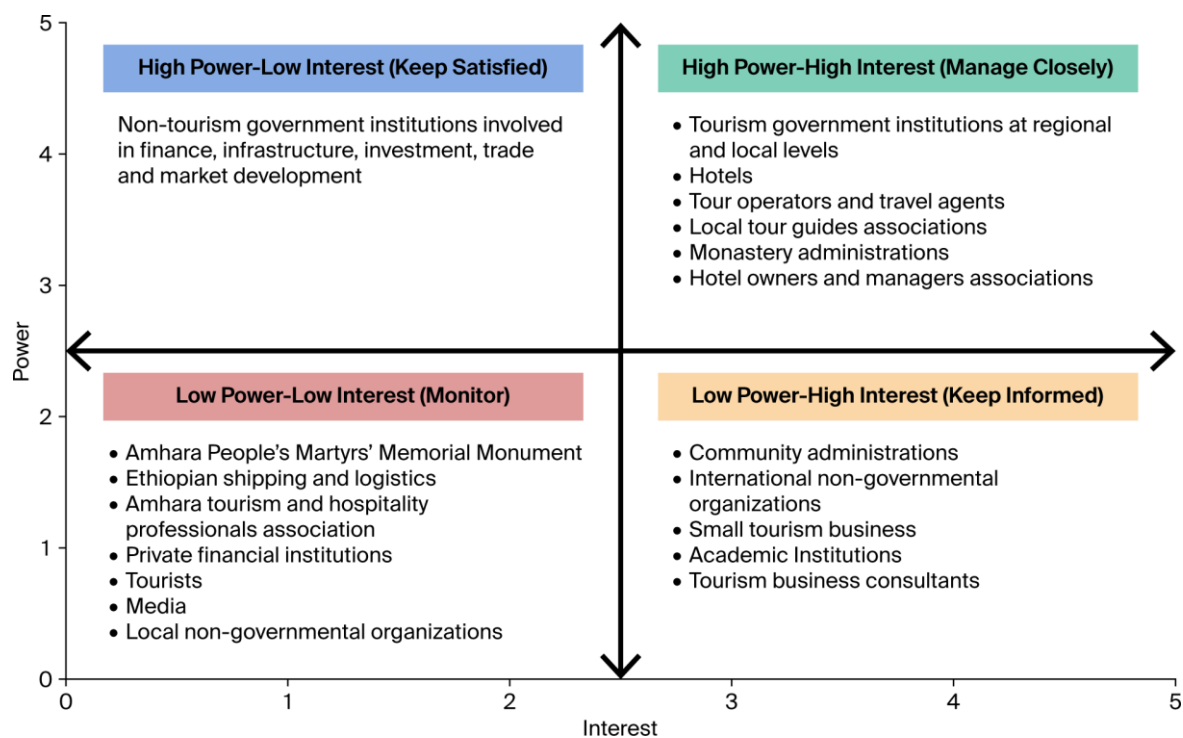


Figure 3. The power-interest matrix.

As shown in Figure 3, in the local tourism stakeholder map, the most prominent actors involved in local tourism decisions and governance are grouped under the high power-high

interest category. The findings showed that the high power and high interest stakeholder group contains stakeholders with a mean power of 4.33 and an interest mean score of 4.55. In this category, tourism government institutions functioning at different levels are included. For instance, as shown in Appendix A, at the regional and city administration levels, the Amhara National Regional State Culture and Tourism Bureau and the Bahir Dar City Culture, Tourism, Youth, and Sport Department experienced high power and interest in local tourism decisions. At the zonal and district level, the North Gojam Zone Culture and Tourism Department and the Bahir Dar Zuria District Culture and Tourism Department are categorized under the high power–high interest group since these institutions are responsible for governing most rural tourist sites. The high power–high interest category also comprises the main tourism service providers in the Lake Tana region, such as hotels, tour operators and travel agents, the Zegie Tour Guides Association, the Tis Abay Tour Guides Association, and the Bahir Dar Tour Guides Association (Appendix A).

High power and low interest stakeholder groups with a mean power of 4.33 and an interest mean score of 2.67 have substantial influence but relatively lower concern for tourism governance and decisions. In the local tourism stakeholder map, the high power–low interest category involves the most crucial non-tourism government institutions. As depicted in the comprehensive local tourism stakeholder map (Appendix A), non-tourism government institutions participating in local tourism decisions embrace the Amhara National Regional State Finance Bureau, the Amhara National Regional State Transport and Logistics Authority, the Amhara National Regional State Environment and Forest Protection Authority, the Amhara National Regional State Urban and Infrastructure Bureau, the Amhara National Regional State Health Bureau, and the Bahir Dar City Mayor’s Office. In addition, other high-power–low-interest stakeholders involved in the local tourism governance process include the Amhara National Regional State Road Bureau, the Amhara National Regional State Peace and Security Bureau, the Amhara National Regional State Industry and Investment Bureau, and the Amhara National Regional State Trade and Market Development Bureau (Appendix A).

It was found that the low power–low interest category contains stakeholders with a mean value of power 2.51 and interest 2.33. This stakeholder group has limited influence and relatively low concern for local tourism governance. This category embraces the Amhara People’s Martyrs’ Memorial Monument, Ethiopian Shipping and Logistics, and the Amhara Tourism and Hospitality Professionals Association. Along with these institutions, the low power and low interest stakeholder category includes private media, public media, domestic visitors, and international tourists. It also comprises private financial institutions, including banks and insurance companies. Local non-governmental organizations, including the Amhara Development Association and the Organization for Rehabilitation and Development in Amhara, are also grouped under the low power and low interest category.

The low power–high interest stakeholder group, with a mean value of power 2.57 and interest 4.57, is highly interested in tourism but has limited power to influence decision-making. This category of the local tourism stakeholder map mainly comprises community administrations and international civil society organizations. As shown in Appendix A, Zegie, Tis Abay, and Dek Community administrations and international civil society organizations, including the Society for Ecotourism and Biodiversity (SETBD), the Nature and Biodiversity Conservation Union (NABU), the German Corporation for International Cooperation (GIZ), and the Jerusalem Children and Community Development Organization (JeCCDO) are incorporated in the low power–high interest category. According to the result of the present study, small tourism businesses such as souvenir sellers, souvenir producers, small-scale food and beverage providers, private boat service providers, cultural restaurants, airport taxi service providers, hotel management supporting technology providers,

car rentals, pensions, and fishermen are included in the low power–high interest stakeholder group. This category of the stakeholder map also comprises the Ethiopian Orthodox Tewahido Bahir Dar Diocese, tourism business consultants, and academic institutions.

5.2. Local Tourism Governance Network

The local tourism governance network shows the presence of interaction among tourism stakeholders in the Lake Tana region (Figure 4). In the network map, nodes represent actors, whereas the arrows or edges connect actors that share complementary resources. Colors are used to identify stakeholder groups and for visualization purposes only.

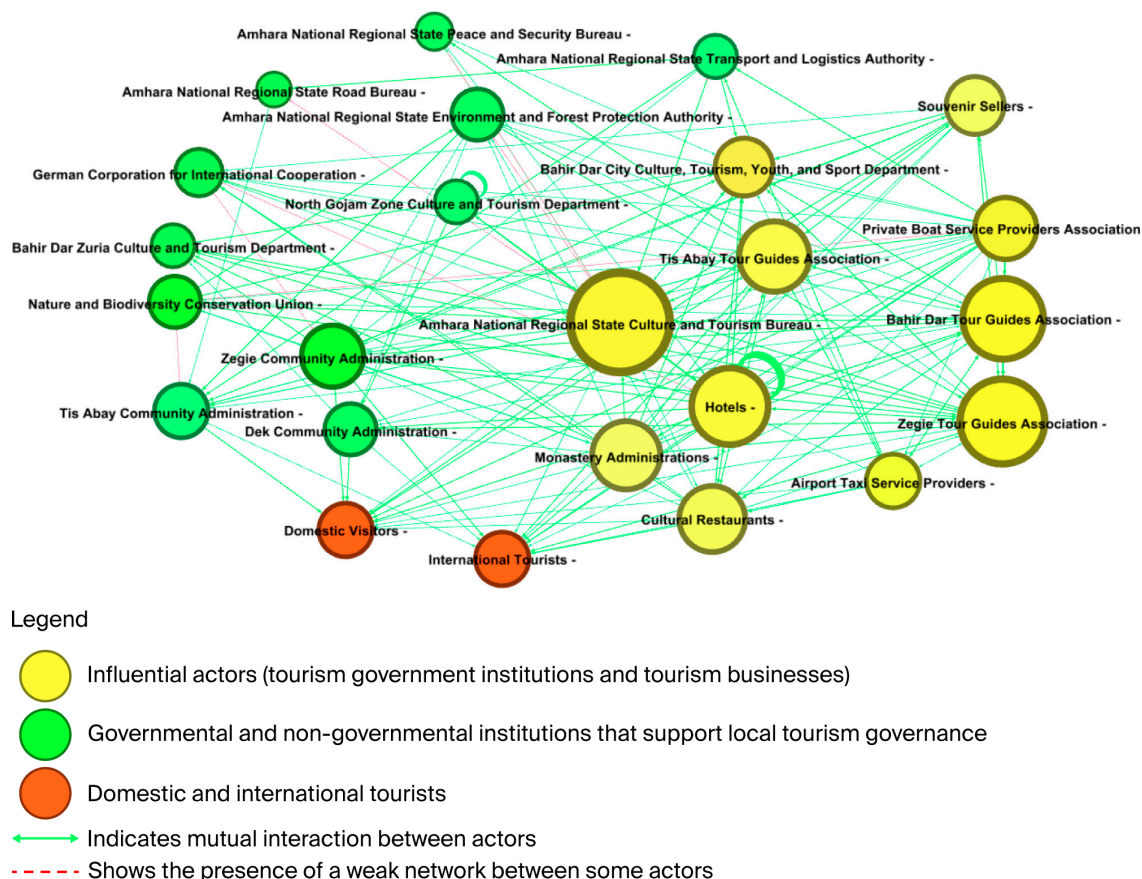


Figure 4. Local tourism governance network map.

As shown in Figure 4, actors indicated by large nodes are influential in local tourism decisions. For instance, among government tourism institutions, the Amhara National Regional State Culture and Tourism Bureau is the most prominent in making and shaping strategic decisions. Tourism businesses, represented by large nodes, include hotels, cultural restaurants, private boat service providers, and tour guide associations, which contribute to local tourism governance in providing quality service to tourists. Actors specified by small nodes are also important in supporting local tourism development.

The Regional Culture and Tourism Bureau and the Bahir Dar City Culture, Tourism, Youth, and Sport Department support local tourism activities in Bahir Dar City, Blue Nile Falls, and the Zegie Peninsula monasteries. An interviewee, TR 2, said, “In my opinion, tourism policy in the Lake Tana region is fragmented. Hence, improving the network between tourism government institutions is essential in enhancing the implementation of local tourism policies.” In addition, a key informant, TR 2, provided the following statement:

“In the Lake Tana region, the network between tourism and non-tourism government institutions mainly relies on strengthening the implementation of local tourism rules,

regulations, and standards. In my opinion, involving other government institutions in the local tourism governance network is also beneficial to enhance tourism infrastructure."

However, as noted by an interviewee, TR 3,

"...As I have observed, in the Lake Tana region, despite their importance in improving tourism infrastructure, non-tourism government institutions working on finance, transport, investment, trade, and market development experienced sporadic interaction with tourism government institutions and tourism businesses. So, this scenario retards, sustainable tourism development..."

As depicted in the detailed governance network map (Appendix B), tourism businesses interact mainly with local communities, visitors, government tourism institutions, and local and international civil society organizations. In this regard, a key informant, TB 3, pointed out that:

"To the best of my experience, large hotels, tour operators and travel agents, tour guiding associations, and boat service providers interact with governmental and non-governmental organizations. Government institutions support the tourism industry by providing additional investment opportunities. Civil society organizations also support tourism businesses in terms of skill development."

Regarding the network between monastery administrations and tour organizers, a research participant, TB 5, emphasized that:

"As far as I know, no tourist activity is allowed within a peninsula or island monastery without the permission of the monastery administration. Therefore, tour operators and local tour guides work in harmony with monastery administrators, which strengthens local tourism governance networks."

As stated by an interviewee, TR 1,

"The involvement of monastery administrators, local communities, civil society organizations, tourism businesses, and domestic and international visitors in the local tourism governance network map is crucial in improving tourism decisions. However, in the Lake Tana region, local and international non-governmental organizations established poor linkages with tourism government institutions."

A key informant representing academic institutions, AC 2, noted that:

"...Weak interactions are also exhibited between tourism government institutions and small tourism businesses. Therefore, as far as I am concerned, in light of the existing network between tourism stakeholders in the Lake Tana region, it is essential to ensure that each stakeholder's interest is considered in the local tourism decision-making process..."

In addition, FGD4, a focus group participant representing tourism businesses, explicated that:

"...one piece of information I would like to add concerns the importance of tourism stakeholders for each other's existence in the sector. To the best of my expertise, it is always feasible to ensure strong interaction between actors involved in tourism service provisions. As such, actors with strong networks need to encourage those actors with weak networks to participate in local tourism decisions. In this regard, actors feel more responsible in the local tourism activities..."

5.2.1. Actors with Strong Ties

In the Lake Tana region, some actors involved in the local tourism governance network established strong ties with each other. As shown in Figure 5, government tourism

institutions, including the Amhara National Regional State Culture and Tourism Bureau and the Bahir Dar City Culture, Tourism, Youth, and Sport Department, built strong interaction with hotels, cultural restaurants, tour operators, private boat service providers, and local tour guides. Local tour guides associations, such as the Bahir Dar Tour Guides Association, the Zegie Tour Guides Association, and the Tis Abay Tour Guides Association, formed robust interactions with hotels, cultural restaurants, private boat service providers associations, and government tourism institutions. Other actors with strong ties include tour operators and travel agents, and monastery administrations.

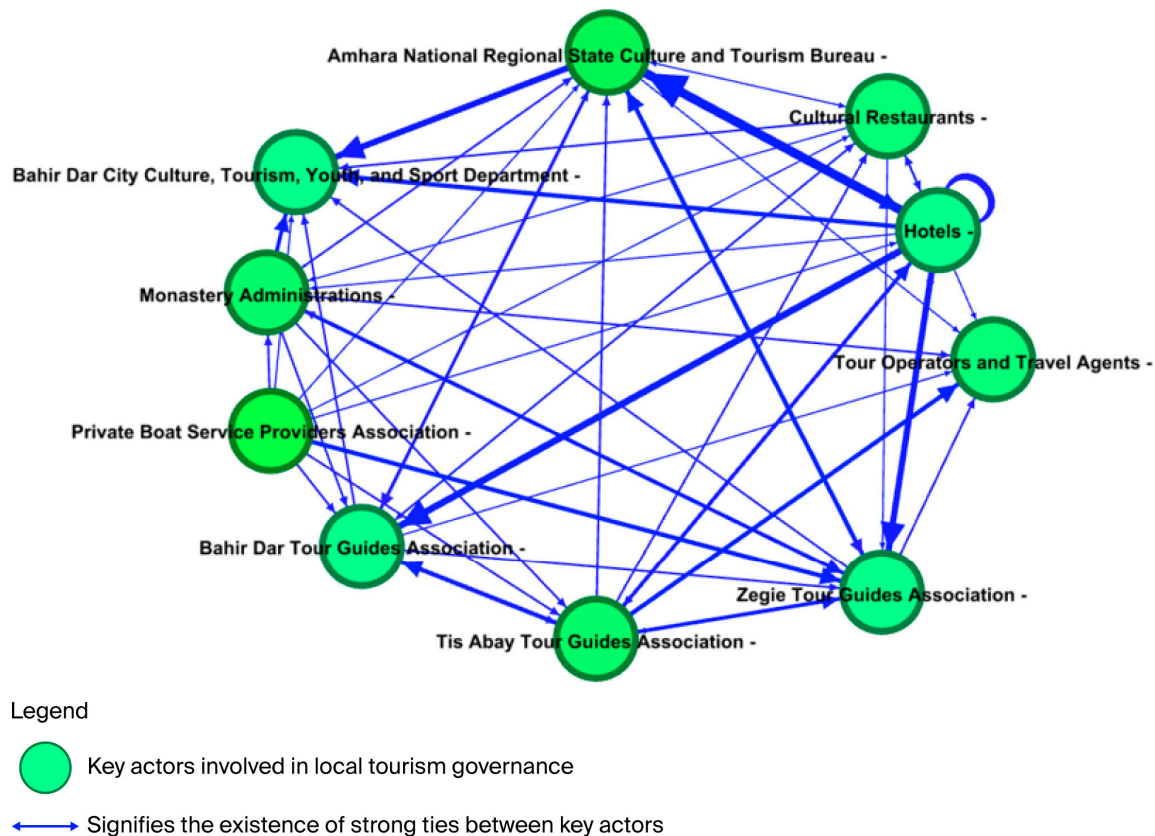


Figure 5. Actors with strong interactions in local tourism governance networks.

Regarding the presence of a robust network among tourism businesses, TB1, stated that:

“...since tourism businesses in the Lake Tana region are highly dependent on each other’s resources, they experience strong interaction. As far as I know, in the Lake Tana region, tour operators rely on hotel rooms, car rentals, boat service providers, and local tour guides to serve local and international tourists. Large hotels and car rentals also depend on tour and travel organizers that arrange tours for international tourists who visit Bahir Dar City, Blue Nile Falls, and Lake Tana monasteries...”

5.2.2. Network Density

Since the local tourism governance network map in this study consisted of 54 nodes or actors, a maximum of $54 \times 53 = 2862$ edges or networks were expected (Table 3). However, the result shows that the total number of actual edges or connections in the network is 712 (Appendix C). The network density is the ratio of the number of actual edges to the total number of expected edges or interactions, which is computed as $712/2862$. Therefore, in the present study, the network density is about 0.25 (25%).

Table 3. Main network metrics in the Lake Tana region.

Number of Actors	54
Total number of expected edges	2862
Total number of actual edges	712
Average degree	13.18
Network density	0.25

Regarding the level of connection between actors, a tourism expert, TR3, mentioned that:

“In my opinion, it is not possible to say that all local tourism stakeholders in the Lake Tana region have established networks with each other. Some actors still do not secure a consistent linkage with other stakeholders. This scenario ultimately influences the entire local tourism governance networks.”

Supporting this argument, a research participant, representing civil society organizations, CS 2, underscored that:

“To mention one important idea, even though local non-governmental organizations are showing interest in getting involved in tourism-related activities, the government does not often consult them regarding how to work together with other tourism stakeholders. So, their contribution to tourism decisions is minimal. This weakens the local governance networks.”

5.2.3. Degree of Centrality

The results of the current study revealed that the average number of connections that each actor has in the network is 13.18, which is calculated as the total number of actual edges (712)/total number of actors (54). The degree of centrality for an actor is computed as the number of direct connections this actor has divided by the total number of actors in the network minus one. For instance, as shown in Appendix C, the Amhara National Regional State Culture and Tourism Bureau has connections with 46 actors, indicating a high degree of centrality, which is 0.87 ($46/54-1$). The Bahir Dar City Culture, Tourism, Youth, and Sport Department established links with 43 actors, with a degree of centrality of 0.81. An interviewee, TE 3, also emphasized that:

“As a tourism expert, I would say that tourism government institutions should establish networks with several stakeholder categories to facilitate the tourism system. A large number of actors are required to consult the government tourism institution to participate in certain tourism-related activities. For this reason, government tourism institutions are placed in a prominent position in the local tourism governance network.”

However, according to the results of the present study, some local tourism stakeholders, such as banks, hotel management support technology providers, media outlets, and the Jerusalem Children and Community Development Organization, were found to have a limited number of edges or connections, and, consequently, a low degree of centrality. In this regard, a key informant representing tourism businesses, TB 5, noted that:

“As I have been working in some government and non-government institutions, let me share my perspective with you. Even though their role in tourism development is crucial, civil society organizations, academic institutions, professional associations, and local communities do not have strong networks or interactions with other tourism stakeholders. In my opinion, this circumstance could impact sustainable tourism development.”

5.3. The Nexus Between Stakeholder Mapping and Sustainable Tourism Development

Stakeholder mapping contributes to improving sustainable tourism, as a key informant, TR 1, mentioned in his statement:

“In my view, developing an inclusive stakeholder map is essential to consider the perspectives of multiple stakeholders in local tourism governance. It is also important in promoting local tourism decision-making that necessitates the participation of different tourism stakeholders, thereby reinforcing sustainable tourism development.”

According to an interviewee, CR 2,

“...In the Lake Tana region, identifying tourism stakeholders and the resources they control is crucial for understanding their level of influence in local tourism. It is also vital to facilitate resource sharing and collaboration. This ultimately supports and guides the development of sustainable tourism. ...”

A tourism professional, TB 1, mentioned that:

“To the best of my experience, tourism service provision in the Lake Tana region is struggling with a lack of coordination among actors involved in tourism activities. Therefore, mapping stakeholders by considering their power and interest in local tourism decisions would improve collaboration. It is also helpful to specify stakeholders’ roles in local tourism, thereby contributing to sustainable tourism development.”

A tourism expert, AC 1, also said, *“...Including local communities and civil society organizations in the local tourism stakeholder map enables them to contribute to promoting environmental conservation and preservation, thereby enhancing sustainable tourism. ...”*

All the above professionals’ views indicated that the Lake Tana region, as a developing geo-tourism site, needs to incorporate and implement the concept of stakeholder mapping in the sustainable tourism development process. Hence, given that the Lake Tana region consists of diversified stakeholder groups, conducting tourism stakeholder mapping is vital for addressing the particular interests of each stakeholder category, thereby contributing to sustainable tourism development.

6. Discussion

The existence of several actors with diverse interests manifests the complexity of tourist destinations. Understanding the level of influence and interest of each actor in the local tourism decision-making guides the creation of the local tourism stakeholder map. This is in line with what Purboyo and Briliyanti [54] pointed out, namely, that developing an inclusive tourism stakeholder map helps destination administrators comprehend the power of each stakeholder in the local tourism governance process. From the perspective of RDT, the level of power and interest of stakeholders relates to the volume of resources that they control. Since most stakeholders do not adequately understand each other’s roles in the local tourism governance, implementing a robust stakeholder mapping approach is crucial. Corresponding to this finding of our study, Lestari et al. [55] and Wu et al. [56] demonstrated that stakeholder mapping is instrumental in guiding effective tourism governance by delineating the specific responsibilities of each actor. In addition, since tourism is complex in its very nature, stakeholder mapping must include a variety of perspectives on local tourism decisions in the Lake Tana region. Consistent with this, Afni [21] emphasized that by including several actors with diverse insights, stakeholder mapping enhances destination governance and informs strategic decision-making.

Our findings demonstrate that building strong relationships between the government, tourism businesses, civil society, and local communities is essential for promoting the sustainable use of destination resources. Consistent with this, Nguyen et al. [14] argued

that reconnoitering the governance network would be crucial to pinpointing prominent actors contributing to local tourism development. Promoting the local tourism governance network improves collaboration among stakeholders and enhances sustainable tourism development in the Lake Tana region. In line with this, Sudini and Wiryani [57] asserted that networks formed by actors functioning at the same level of governance contribute to the establishment of sustainable partnerships between stakeholders.

In the Lake Tana region, the network structure between different stakeholder categories varies depending on the extent to which actors are interdependent. According to Derr [58], a network with a density value above 0.5 is considered high, while values between 0.2 and 0.5 represent moderate density, and low density consists of a value below 0.2. Since the network density in our study is 0.25 (Table 3), the connection level is characterized as moderate. Networks with moderate density imply the presence of some balanced interaction between actors [57,59]. According to the findings of our study, moderate density suggests that actors create connections or networks that align with their interests. However, tourism governance and stakeholder network studies have reported much lower density values due to the inherent fragmentation and diversification of interests among stakeholders. For instance, Cehan et al. [60] obtained a network density value of 0.013, indicating that tourism destinations experience low cohesion among stakeholders. In addition, Herasimovich et al. [61] conducted a network analysis and reported a network density value of 0.003, reflecting minimal connections between stakeholders.

Concerning network centrality measures, key government tourism institutions occupy a prominent position in the network map. A high degree of centrality is often interpreted as greater access to resources and information [60–63]. From the perspective of RDT, stakeholder power and network centrality stem from large control over critical tourism resources [64]. In line with this, Gajdošík [62] emphasized that actors with many connections are required to facilitate coordination and policy implementation. Hence, central actors can facilitate stakeholder collaboration through encouraging other actors to play a role in tourism development [63,65]. However, if central actors control the majority of tourism resources and make decisions without considering the interests of other stakeholders with limited power, this ultimately ruins local tourism governance networks and sustainability. It could also create tension among stakeholder groups. Instead, promoting all stakeholder participation and adequate representation in tourism decision-making would foster the environmental, economic, and socio-cultural sustainability of tourist destinations.

Actors with low centrality measures, including financial institutions, local and international non-governmental organizations, and media, are heavily reliant on central actors in terms of policy and strategic decisions. Limited integration between central actors and actors with a low degree of centrality on the issue of decision-making was also exhibited in this study. This ultimately impacts the responsibility of periphery actors in the sustainable tourism governance process. However, some actors with limited networks are still making significant contributions to tourism development in the Lake Tana region. According to the findings of the current study, non-tourism government institutions, including the Amhara National Regional State Environment and Forest Protection Authority and the Amhara National Regional State Health Bureau, play a crucial role in maintaining the environmental qualities of tourist sites. Corresponding to this, Becken and Loehr [59] and Jamal and Stronza [63] emphasized that non-tourism government institutions contribute to strengthening tourism in terms of promoting destination resources and improving infrastructure crucial for sustainable tourism development.

According to Provan and Kenis [65], there are three main types of governance structures in a network: centralized, decentralized, and network administrator. In the Lake Tana region, since actors share resources for fulfilling their interests and goals, the network

structure is considered shared or decentralized, albeit with some limitations. In line with this finding of our study, Klijn and Koppenjan [66] emphasized that governance networks reveal a web of sustained interactions among interdependent actors. As such, it needs to be shaped and managed by frequent and shared interactions. Since tourism involves several stakeholders with different levels of resource control, promoting shared governance enhances horizontal collaboration between central and peripheral actors. Moreover, the current study underscores that pursuing a shared governance approach is paramount for acknowledging the role of marginalized and less connected actors in tourism governance. This approach simultaneously promotes inclusivity and sustainability by involving different stakeholder categories within the tourism sector.

7. Implications for Tourism Governance

7.1. Theoretical Implications

The findings of the present study indicate that government tourism institutions and large tourism companies hold considerable power in controlling many tourism resources and influencing local tourism decisions. Power imbalance among actors reflects the need to exercise effective governance [27]. Stakeholders with limited power need to be adequately represented in local tourism decisions. Our study's findings shed light on how applying RDT and SNA can provide a robust insight into local tourism governance networks. RDT illustrates how actors with abundant resources often influence those with limited resources. In response, tourist destinations should emphasize enhancing stakeholder participation, improving communication, and clearly defining responsibilities to ensure that all actors contribute to destination governance. Promoting sustainable tourism governance is also instrumental in balancing economic gains with resource conservation. In this regard, all actors, regardless of their level of influence on tourism decisions, should work in harmony to enhance mutual benefits. Through promoting balanced power relations, it is also crucial to improve tourism governance networks and sustainability [66]. As a first study in Ethiopia in terms of introducing methods and techniques of conducting stakeholder mapping and analyzing the governance networks, this study can be used as a reference for future inquiries.

7.2. Practical Implications

To foster tourism governance at the destination level, destination administrators need to identify stakeholders based on their power and interest [17]. In this regard, the current study offers valuable insights. Since our study specifies prominent actors involved in local tourism governance, it enables destination managers to understand which local tourism stakeholders hold significant power and interest in tourism decisions in the Lake Tana region. Hence, establishing a multistakeholder collaboration framework with adequate representation of low-power and high-interest stakeholders facilitates sustainable tourism governance. Promoting an institutional framework would also be vital to strengthening intersectoral linkages. Employing periodic network analysis as a monitoring tool is also instrumental for destination administrators in managing fragmentation and improving governance effectiveness at the destination level. Additionally, for tourism policymakers and planners, the findings of the present study are useful for identifying areas that require immediate policy interventions. The methods and techniques applied in this study can also serve as a reference for other destinations.

8. Conclusions

The main aim of the present study was to conduct local tourism stakeholder mapping and examine the local tourism governance network. This study also scrutinized the nexus between stakeholder mapping and sustainable tourism development. Since the local

tourism stakeholder map comprised actors with different levels of power and interests, it is helpful to devise appropriate stakeholder engagement strategies. Actors with high power and high interest play a significant role in local tourism governance. Hence, they need to be managed thoroughly to facilitate the local tourism governance process. Non-tourism government institutions with high power and low interest in tourism should be kept satisfied to promote their role in sustainable tourism governance. Tourism government institutions should develop an appropriate monitoring strategy to consider other tourism stakeholders with low power and interest in local tourism decisions. From the perspectives of RDT, over-dependency on other resources impacts resilience and sustainable stakeholder collaboration. For instance, if central actors fail to foster inclusive processes, the role of low-power stakeholders in the tourism governance processes could be diminished. As a remedy, promoting a governance network would be vital to enable low-power stakeholders to interact with central actors and contribute to sustainable destination governance. Strong ties between government institutions and private tourism organizations enhance coordination, policy implementation, and economic performance. However, the dominance of government institutions and large private tourism companies limits social inclusiveness. As such, civil society and community actors lack the power to contribute to local tourism governance. This, in turn, implies gaps in terms of resource sharing, communication, and coordination among actors. In addition, to improve local tourism governance with the participation of actors with low power and high interest, tourism government institutions should devise a mechanism to consistently consult them.

Government tourism institutions should also introduce mechanisms to enhance the network between central actors and less-connected actors. It is feasible to involve and empower actors with fewer connections to reduce excessive resource dependence and prevent information asymmetry. Through introducing inclusive policy frameworks and capacity-building initiatives, all peripheral actors need to be actively involved in local tourism decisions. Hence, encouraging the participation of local communities and civil societies in local tourism decisions would be substantial in enhancing tourism governance and sustainable tourism development. The mode of interaction among government tourism institutions was also hierarchical and primarily based on power dynamics. Accordingly, higher-level government tourism officials should establish a more democratic and flexible approach to involve lower-level tourism administrators operating at a destination level. Establishing effective communication channels facilitates the flow of information among government tourism institutions, civil society organizations, and the private sector. Moreover, destination administrators should implement effective strategies to ensure that stakeholders included in the local tourism stakeholder map actively contribute to the economic, socio-cultural, and environmental sustainability of tourist sites.

9. Limitations and Future Research Directions

This study adds important insights into tourism stakeholder mapping and governance networks. However, in terms of method, the application of the purposive sampling technique to select respondents limited the involvement of all stakeholder groups in the study. The subjective nature of power and interest assessment rates could also impact stakeholder representations in the local tourism stakeholder and governance network map. In addition, the use of cross-sectional data may not provide insights into how governance networks evolve through time. Hence, future research in the field of tourism governance networks can employ longitudinal research designs with the participation of all potential stakeholders to capture insights about how governance networks respond over time. By considering cases from different perspectives, a comparative analysis could also be an important avenue for future research in tourism governance networks.

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Institutional Review Board Statement: The study was conducted in accordance with the Declaration of Helsinki and approved by the Research Ethics Review Committee of the College of Business and Economics, Bahir Dar University, Ethiopia, protocol code RERC 017, on 19 September 2025. In addition, since this study is part of PhD research, the proposal was presented at KU Leuven, Belgium, in 2024. Hence, an ethical review report was also obtained from KU Leuven, with an approval number of G-2024-8259-R2 (MAR).

Informed Consent Statement: Informed consent was obtained from all subjects involved in the study.

Data Availability Statement: The current study comprised interviews, focus group discussions, and survey responses. The data generated for the study contains context-specific insights. As such, the datasets are not publicly available. However, anonymized data can be made available from the corresponding author upon reasonable request.

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Appendix A

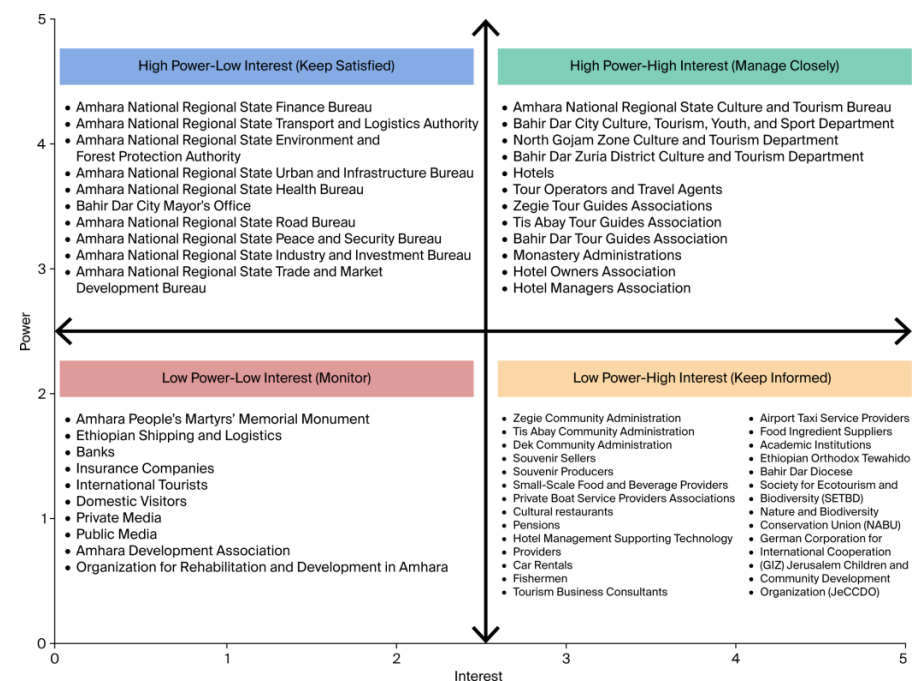


Figure A1. Comprehensive local tourism stakeholder map.

Appendix B

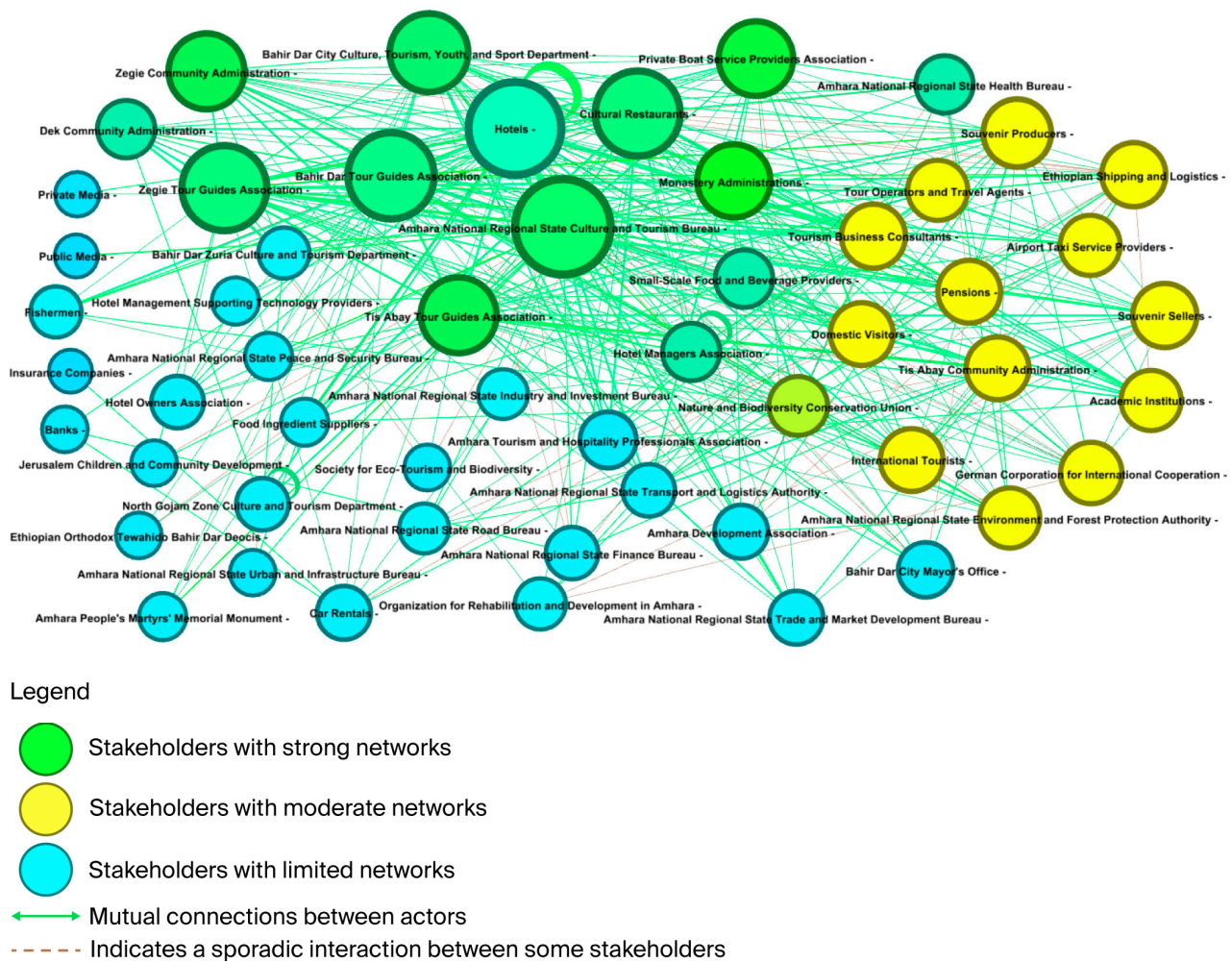


Figure A2. Detailed local tourism governance network map.

Appendix C

Table A1. Degree of centrality (DC) report.

No.	List of Actors	Raw Degree	Normalized Degree
1	Amhara National Regional State Culture and Tourism Bureau	46	0.87
2	Bahir Dar City Culture, Tourism, Youth, and Sport Department	43	0.81
3	Hotels	41	0.77
4	Zegie Tour Guides Association	35	0.66
5	Cultural Restaurants	34	0.64
6	Bahir Dar Tour Guides Association	31	0.58
7	Private Boat Service Providers Association	28	0.53
8	Tour Operators and Travel Agents	28	0.53
9	Tis Abay Tour Guides Association	24	0.45
10	Monastery Administrations	20	0.37

Table A1. Cont.

No.	List of Actors	Raw Degree	Normalized Degree
11	Ethiopian Shipping and Logistics	19	0.36
12	Amhara National Regional State Environment and Forest Protection Authority	18	0.34
13	Tourism Business Consultants	17	0.32
14	Souvenir Sellers	16	0.30
15	Domestic Visitors	16	0.30
16	Souvenir Producer	15	0.28
17	Small-Scale Food and Beverage Providers	14	0.26
18	Airport Taxi Service Providers	14	0.26
19	Nature and Biodiversity Conservation Union	13	0.25
20	Pensions	13	0.25
21	International Tourists	13	0.25
22	Amhara National Regional State Health Bureau	12	0.23
23	Bahir Dar Zuria Culture and Tourism Department	11	0.21
24	Hotel Managers Association	11	0.21
25	Zegie Community Administration	11	0.21
26	North Gojam Zone Culture and Tourism Department	10	0.18
27	Amhara National Regional State Trade and Market Development Bureau	10	0.19
28	Amhara National Regional State Peace and Security Bureau	10	0.19
29	Ethiopian Orthodox Tewahido Bahir Dar Diocese	10	0.19
30	Bahir Dar City Mayor's Office	9	0.17
31	Car Rentals	8	0.15
32	Amhara Tourism and Hospitality Professionals Association	8	0.15
33	Amhara National Regional State Transport and Logistics Authority	7	0.13
34	Amhara National Regional State Road Bureau	6	0.11
35	Amhara National Regional State Industry and Investment Bureau	6	0.11
36	Amhara National Regional State Urban and Infrastructure Bureau	6	0.11
37	Academic Institutions	6	0.11
38	Fishermen	6	0.11
39	Amhara Development Association	6	0.11
40	Tis Abay Community Administration	5	0.09
41	Hotel Owners Association	5	0.09
42	Dek Community Administration	5	0.09
43	Food Ingredient Suppliers	5	0.09
44	Insurance Companies	5	0.09

Table A1. Cont.

No.	List of Actors	Raw Degree	Normalized Degree
45	Organization for Rehabilitation and Development in Amhara	5	0.09
46	Society for Eco-Tourism and Biodiversity	5	0.09
47	Amhara National Regional State Finance Bureau	5	0.09
48	Amhara People Martyrs' Memorial Monument	4	0.08
49	German Corporation for International Cooperation	4	0.08
50	Banks	4	0.08
51	Hotel Management Supporting Technology Providers	3	0.05
52	Private Media	2	0.04
53	Public Media	2	0.04
54	Jerusalem Children and Community Development Organization	2	0.04
Total number of actual edges or connections		712	

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