



Assessing the Governance of Ecotourism in a Forest-Protected Area using Social Network Analysis: Sungei Moroli, Kampung Luantu Baru, Kawang Forest Reserve, Sabah.

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ABSTRACT. Community-based management has been heralded to practice stakeholder inclusivity and is claimed to be the panacea in overcoming problems and dilemmas in governing ecotourism in a forest-protected area. Sungei Moroli, Kawang Forest Reserve (SMKFR) at Kampung Luantu Baru Sabah, a unique destination offering Kelah fish massage is selected as the study site on account of being associated with co-management governance. This study aims to identify the key stakeholders within the governance network in this area who are involved in eco-tourism management and to understand the interests and roles of these stakeholders. Social Network Analysis (SNA) is utilized in this study. SNA is a tool to measure the criteria used, the number of ties, density, and geodesic distance, together with the degree and betweenness centralities of the network map. The social network map obtained suggests that the local community management is the most critical stakeholder in ensuring the effective operation of the ecotourism set-up in SMKFR. The bottom-up management approach with high participation and commitment of the stakeholders was indeed in place and is its critical success factor of eco-tourism activities in SMKFR. The implications of these findings to ecotourism management in the protected area for greater inclusivity of stakeholders, especially among the local communities.

Keywords: *Community Based Management, Ecotourism, Kawang Forest Reserve, Social Network Analysis*

INTRODUCTION

With the rising potential of ecotourism in a protected area, it is necessary for providers to maintain high-quality services for visitors while retaining biodiversity conservation values. Environmental-friendly services and products have been ranked as one of the most important criteria in ecotourism service quality (Jeong et al., 2021; Mulyani et al., 2021). Another important service construct is the design of the attractions and facilities provided. Tangible aspects of the service environment such as public facilities also had a critical impact on the affective responses of customers, and this may influence their perceptions of the place (So et al., 2021). Tourist service quality reactions are also easily affected by the actions of service providers and other tourists as well (Abdullah et al., 2021). The ability of

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management and employees to respond satisfactorily to visitors' requests and grievances regarding security and special requests will determine their satisfaction and intention for repeat visits (de Guzman *et al.*, 2020). Ecotourism providers must take heed and not be left out of the opportunities that beckon.

However, the local community living inside the tourist site has often been left out from the receiving end of this benefit. There is a need to move from the conventional tourism supply chain where only travel agents, operators, visitors, and attractions are being emphasized (Wang *et al.*, 2019). The local peoples that inhabit and at the periphery of the protected area also need to have their rights heard and the policy works for their well-being (Molinsky & Forsyth, 2022). Situations where communities maintain their own natural resources in their localities are still something of a rare occurrence. The communities are rarely employed in tourism areas with the job given to someone outside the community (Eshun & Tichaawa, 2020).

The success of eco-tourism activities in certain places will be acknowledged when there is a network relationship between the local communities and government authorities (Shasha *et al.*, 2020). Local community participation is important as they are the ones who will support and benefit from the eco-tourism activities (Dey *et al.*, 2020). Besides, Beltramo *et al.* (2021) have also shown that the local community is capable of handling different types of actors and stakeholders in tourism sites by themselves. Community-based tourism is also seen as a better approach by being bottom-up with broad-based management in avoiding manipulation by the local elite (Abdullah *et al.*, 2021). Recent researchers have found that incorporating the social network has been effective in overcoming the problems and dilemmas in governing tourism (Abdullah *et al.*, 2021; Valeri & Baggio, 2021). The social network has been proven to be more important than any existing formal institution in encouraging the stakeholders to deal with environmental law and enforcement (Ghorbani & Azadi, 2021).

Given the participatory significance of the local community, the research questions for this study are concerned with what and who comprise the social network of ecotourism in a protected area, and how the social network affects the effective management of the ecotourism site. Hence, the main objective of this study is to identify the stakeholders, analyze their interests, roles, and inter-relationships in the social network; and determine how these network characteristics influence the governance of the ecotourism site.

LITERATURE REVIEW

Ecotourism in a Forest-Protected Area

Ecotourism in a forest-protected area is integrating traveling activities with environmental preservation. The tourists should deliberately and intentionally organize their excursions to ensure that they can both have the greatest experience they want and have a positive impact on the location, its community, environment, and wildlife (Sánchez-Prieto *et al.*, 2021). Most countries are encouraging the ecotourism industry as it has become an important sector of economic activities that manages to boost the Gross domestic product (GDP) (Uddin *et al.*, 2021).

Community-based management in ecotourism

Ecotourism may have a positive impact on the local community and the management of the site. The development of infrastructure, job opportunities, and income generation are among the benefits received by local communities living at the ecotourism site (Chan et al., 2021). Local businesses such as craftsmen, innkeepers, homestays, restaurant owners, and all other services are also positively affected by ecotourism. Local communities may strive harder and bond together to conserve their natural resources when they learn to consider them as sources of tourist income (Dey et al., 2020). They often find work as tour guides and discover that their jobs are dependent on local conservation efforts (Chan et al., 2021). However, some studies critically discussed the negative impact of ecotourism on the local community and environment. Some found that despite generating income for the destination, tourism development is linked to several negative effects, including habitat degradation, increased water pollution, increased littering, disruption of regional social norms, social inequalities, and others (Baloch et al., 2022) while some tourism industries operate in small-scale businesses that excluded the local community or they are being paid with low payment (Yachin & Ioannides, 2020). Nevertheless, the involvement of all stakeholders such as the government, various authorities, non-governmental organizations, the private sector and industry, educators, and community members is very important in ensuring that valuable heritages can continue to be preserved and restored to ensure sustainable socio-economic development for the future generations (Chan et al., 2020; Salman et al., 2021; Wondirad et al., 2020). In fact, cooperation in terms of coordination and collaboration of all stakeholders is very important in this regard.

Theoretically and empirically, social networks that lead to cooperation and mutual influence between actors will lead to mutual benefits for actors and their network groups. Basically, a social network is formed by at least two social actors that are individuals who establish social relationships (Borgatti et al., 2018; Newman, 2018; Perry et al., 2018; Robins, 2015; Scott, 1991). The social relations between the actors can be combined with other social relations to form a series of wider social networks (Borgatti et al., 2018; Newman, 2018; Perry et al., 2018; Robins, 2015; Scott, 1991). The analysis of the results discussed in this article applies two different and complementary theories, namely the theory of homophily and the theory of embeddedness of economic activity in social relations. Basically, according to the theory of homophily, any social relationship and subsequently this social network is formed when an individual interacts and connects with other individuals who have some of the same characteristics (Kilduff & Tsai, 2003).

Social Network Analysis in Ecotourism

Social Network Analysis has a major limitation in the fact that human social network is rarely static. Human nature is constantly changing with time, and this affects their ties with each other, which are changing as well. Thus, it is important to make sure that the undertaken research understands the nature of this change and the consequences of it. In the literature, much of the research has focused on static network analysis (Sosa et al., 2020; Pan, 2019) and to overcome this problem, the researchers need to understand the consequences of the change in the network.

According to sociology, the embedded social network among community members is seen as an important factor in ensuring the direction of success for economic activity. Social network interactions influence beliefs and attitudes,

including behaviors, actions, and outcomes. Social networks also affect the way an individual interacts and connects with other individuals, of whether they know each other or not, or if they have the same goals (Bian *et al.*, 2018). For instance, the presence of a working relationship that exists between several public and private agencies which are involved in activities related to the development of a geopark in Langkawi (Chan *et al.*, 2020). The similarities found in this network of relationships have led to the success of the activities which are carried out and helped form a more effective network of relationships.

To date, there have been several studies by sociologists that touch on issues related to social networks as a driving force for community involvement in ecotourism activities, particularly in Malaysia. A study by Chan *et al.* (2020), for example, shows that the development of Langkawi as a geopark requires the involvement of all government, private and non-governmental organizations (NGOs) in many geopark projects and activities. However, there are some involvements that require “top-down” governance while there are also some by individuals who do not collaborate with others. Therefore, the governance system needs to be further improved so that geological, ecological, cultural, and historical resources do not disappear and can contribute to internal development. More effective involvements by all stakeholders can be achieved if there is a governance network system developed by at least two stakeholders from the government and non-government organizations regardless of social status, ethnicity, gender, and level of wealth and income. Consequently, stakeholders will be able to work together and build a network in a transparent, responsible, fair, consistent, and reliable manner. The basic principle of reciprocity will guide and sustain the formation of networks.

METHODOLOGY

Research Framework

Figure 1 shows the research framework for this study. It is a summary of how the research methods were carried out in this study.

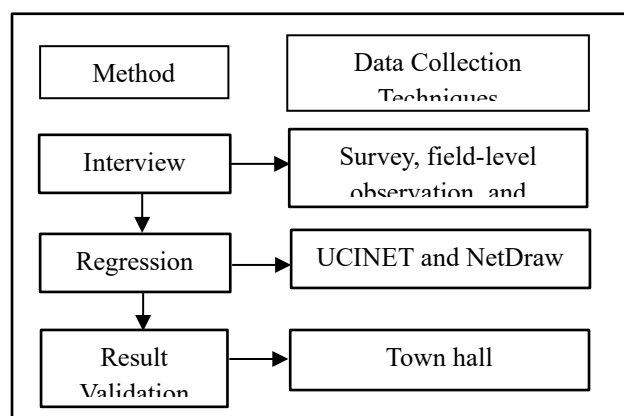


Figure 1. Research Framework

Analytical Model

To better understand how social networks affect tourism governance processes, one needs to start by acknowledging some key characteristics that have different social network analysis from other types of methods usually used in social science study. SNA focuses on the relationship between actors, and on the implications of these patterns and their relations. Knoke & Yang (2019) stated that in resource management, there are two types of SNA that can be analyzed. The first type of analysis is on the pattern of relations among the actors or stakeholders. The term for this different pattern of relational ties is referred to as the structural characteristics of the network. The other analysis of social networks is how the relational ties differed between each type of group. In this study, the relational ties will be valued by the knowledge-sharing interaction between important stakeholders regarding the management of the tourism site. The relational ties of interest were on information sharing from and to whom at the tourism site.

Based on the two mentioned types of analysis on social networks, five SNA measurements were computed. The first is the total number of ties in a network that provides the total number of links established among the individuals interviewed in the network. The second measurement is density, which reports the number of other actors to which an average actor is connected. The highest level of density is 1, implying that an average actor would know all the actors in the network. The third measurement is the geodesic distance which tells us how many people must be informed after which the information regarding tourism activities at the site will be passed around the network. Geodesic distance gauges the level and speed of information sharing occurring in the network. A shorter distance means that the information is relayed faster. The fourth measurement is the degree of centrality which shows the number of ties or actors that each actor is connected to. The person who has the highest degree in a network has the greatest influence and with his position, he can enact changes and make improvisational decisions. In other words, he is the central figure. The fifth measurement is the betweenness centrality. The betweenness centrality score depicts the frequency of how an actor serves as the connector in relaying information flow across the network. These measurements are used to investigate how tourism governance is affected. The formula of each of the measurements and its explanation are given in Table 1.

The network study is first commenced by identifying the actors or stakeholders, how the ties or relationships between two or more actors are described, and how the network boundary is defined. The demographic characteristics of the network actors such as their gender, income, and other traits are recorded. Actors included in this study are the ones who are involved or affected by the tourism activities conducted and offered to visitors. In this study, the actors will be defined as a respondent that belongs to certain stakeholder categories such as tourist activity provider, material suppliers, government administrators, visitors, and non-governmental organizations (NGOs). The actors are the ones that have a stake in the tourist site and will be affected by any policies or laws which are being implemented. Even an individual lacking in formal mandate to govern can be included as an actor in an SNA of a tourism site. These actors will later be placed in several stakeholder categories, depending on their functions.

Table 1. Social Network Analysis Measurements and Variables

Centrality	Definition	Formula
Total Number of Ties (TN)	Sum of ties in the network	$TN = \sum_i^I T_i$ Where T_i is the number of ties of individual i from 1 I I is the total number of individuals or actors in the network
Density (D)	Proportion of the network that is connected. Measured as the sum of ties in the network as a proportion of the total possible ties in the network.	$D = TN / TP$ Where TP the total number of possible ties inside the network. $TP = [(I-1) \times (I-1)]$.
Geodesic Distance (GD)	Proportion of the number of individuals or actors that must be connected for information on the activities in the network to be circulated.	$\sum \frac{d(n_j, n_i)}{I_i}$ Where d is the number of nodes j and node i and I is the number of actual ties inside the network
Centralization	A network with too high or too low centralization measure will see that the distribution of power or control is unbalanced	
Degree	Number of other actors a particular actor is directly connected to	$C_D^{SN} = \frac{d(i)}{n-1}$ for normalized node (node i) and $C_D^{SN}(G) = \frac{ N(G) }{n- G }$ For a group node (node G) Where n is the number of nodes in the network SN, $d(i)$ is the degree (number of edges) of node i, and $N(G)$ is the set of nodes which do not belong to group G but are adjacent to an element of the group.
Betweenness	Frequency with which an actor falls in between pairs of other actors on their geodesic (i.e., path of shortest distance between any two actors)	$C_B^{SN}(i) = \frac{2 \times \sum_{i \neq j \neq k} \frac{p_{jk(i)}}{p_{jk}}}{(n-1)(n-2)}$ for node i and $C_B^{SN}(G) = \frac{2 \times \sum_{j < k} \frac{p_{jk(G)}}{p_{jk}}}{(n- G)-(n- G -1)}$ for a group of G nodes Where n is the number of nodes in the network SN, $p_{jk(i)}$ is the number of shortest paths between nodes j and k that cross node i (resp. G) and p_{jk} (resp. $p_{jk(G)}$) is the number of shortest paths between nodes j and k that cross node i (resp. G)

Study Site and Population

Sungei Moroli at Kampung Luanti Baru (SKLMB), is located in the Sabah Kawang Forest Reserve. It offers visitors a unique Kelah fish massage experience in a protected area setting and is selected as the study site on account of being associated with co-management governance. The villagers are among the Kadazan-Dusun people who practice the tagal system. Tagal which originates from the Dusun language means ‘no’ or specifically in this context ‘No fishing’. This is a customary practice being practiced for many years in Sabah where a stick with its end sharpened is affixed to the land as a notification to outsiders that the forest produces or fish from that area is not to be taken. This ancestral practice is now modified and mainly used as a method to preserve the environment and biodiversity of the river (Adam et al., 2021).

Questionnaire

The data was collected through a field survey using a questionnaire. The draft questionnaire was pre-tested at the study site and minor corrections were made to the questionnaire, especially on the list of stakeholders or actors. This study relied heavily on the survey, field-level observation, and insights gained from detailed discussions with individuals who have been verified as stakeholders. A team of four experienced enumerators was trained to acquaint them with the study objectives, survey purposes, and proper fieldwork data collection process.

Sampling technique

The purposive sampling technique is used in identifying the respondents. The respondents were nominated by the head of the village namely a representative of Tioman Holding, Royal Malaysian Customs Department (Sabah), four representatives from the villagers, and three researchers. However, during the interview, the respondents may nominate any other respondents that are related to the issue. This process will be stopped when the answers given by the respondents are saturated (Weller et al., 2018). Therefore, in this study, the total number of respondents with the sampling technique is 71. The SNA is to make sure that every actor involved in this network will have his/her interests and roles recorded. The questionnaire will also inquire about the frequency of the interactions within the network for each actor. The frequency will be grouped into four types: daily, weekly, monthly, and once or twice a year.

The comprehensive interviewing process of nominated respondents helped complete the mapping of social relations of the study site to get the network structure. Data from the interview were inputted into a datasheet by following the SNA data entry system. UCINET and NetDraw software were used to analyze the data while SPSS software was used to conduct regression analyses of the relationships between the demographic profile of the stakeholders and network characteristics with their network centralities measurements. The equations for regression as in equations 1 and 2.

$$DC = 31.30 GD^{-1.98} \quad (1)$$

$$BC = 192.21 GD^{-5.63} \quad (2)$$

Validity and Reliability Issues

Following (Hajar et al., 2019), to test for validity, the results of the SNA were presented and discussed with the co-authors and the management of the SMKLB in a session called ‘town hall’. The result of the SNA is valid when all participants of the ‘town hall’ agreed. Whereas the reliability test was overcome by using a case study protocol and case study database. The SNA protocol was used whereby all data collected were archived and the results documented. This protocol requires studying the relations between people of different expert levels to avoid bottleneck problems (Weber et al., 2020).

RESULTS AND DISCUSSION

Demography of Respondents

The demographic profiles of the 71 surveyed respondents are given in Table 2 which provides the gender, age categories, marital status, education, and monthly incomes. The breakdown of the roles of stakeholders or actors surveyed is provided in Figure 2.

Table 2. Summary of the demography data from the Sungei Morali, Kampung Luantu Baru.

Population Metrics		Sungei Morali, Kampung Luantu Baru	
Characteristic		No. of Respondent	%
Gender	Male	44	62
	Female	27	38
Age (years old)	Below 20	6	8.5
	21 – 30	13	18.3
	31 – 40	17	23.9
	41 – 50	23	32.4
	More than 50	12	16.9
Marital Status	Married	55	77.5
	Single	16	22.5
Education	No formal education	6	8.5
	Primary School	25	35.2
	Secondary School	30	42.3
	Diploma	7	9.9
	Degree and above	3	4.2
Income/Month (RM)	1001– 2000	24	33.8
	2001– 3000	16	22.5
	3001– 4000	18	25.4
	4001– 5000	4	5.6
	> 5000	9	12.7

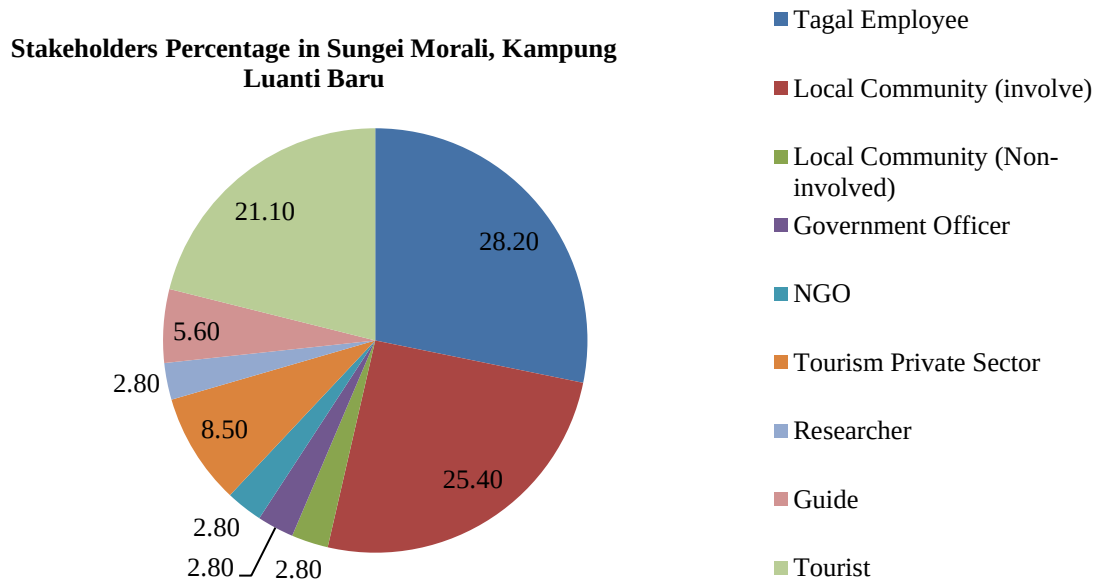


Figure 2. Distribution of the Stakeholder Categories at Sungei Morali Kampung Luanti Baru.

Based on Table 2 and Figure 2, there are nine roles which were identified, and the largest number of surveyed respondents were the tagal employee (28.2%), eco-tourism participating local communities (25.2%), and tourists (21.1%). These three actors are perceived to have strong interests and be influential on the services of SMKLB.

Social Network Measurement

Table 3 shows the summary of the five measurements of the social network at SMKLB. The total number of ties established in the network was 1,184. A graphic representation of the total number of ties among the actors is provided in Table 3 and Figure 3. From the observation, the actors having the highest ties came from the tagal employees that include the head of the community-based ecotourism management, local communities that ascribe and not to the tagal system, government officers particularly from the Forestry Department, the tour guides, and agents. Other actors such as the tourists, tourism private sectors, NGOs, and researchers did not have many ties and normally were at the peripheries and some were even isolated.

Table 3. Summary of measurements for the social network analysis at SMKLB

Network Indices	SMKLB
No. of Respondents	71
Total Number of Ties	1,184
Mean Network Density	0.24
Mean Geodesic Distance	1.80
Highest/Mean Degree of Centrality	31/13.30
Highest/Mean Betweenness Centrality	126.51/56.38

Table 4 shows the legend and categories of actors at SMKLB. The color coding is used to represent the type of stakeholders as shown in Figure 3.

Table 4. Legend for the categories of actors at SMKLB

Type of Stakeholder in Sungei Morali, Kawang Forest Reserve	Color
Tagal Employee	Yellow
Local Community (Tagal)	Red
Local Community (Non Tagal)	Light Blue
Government Official	Pink
NGO	Magenta
Tourism Private Sector	Olive Green
Researcher	Dark Blue
Guide & Travel Agent	Dark Purple
Tourist	Teal

Figure 3 represents the whole network for SMKLB. It shows the ties from one stakeholder to other stakeholders.

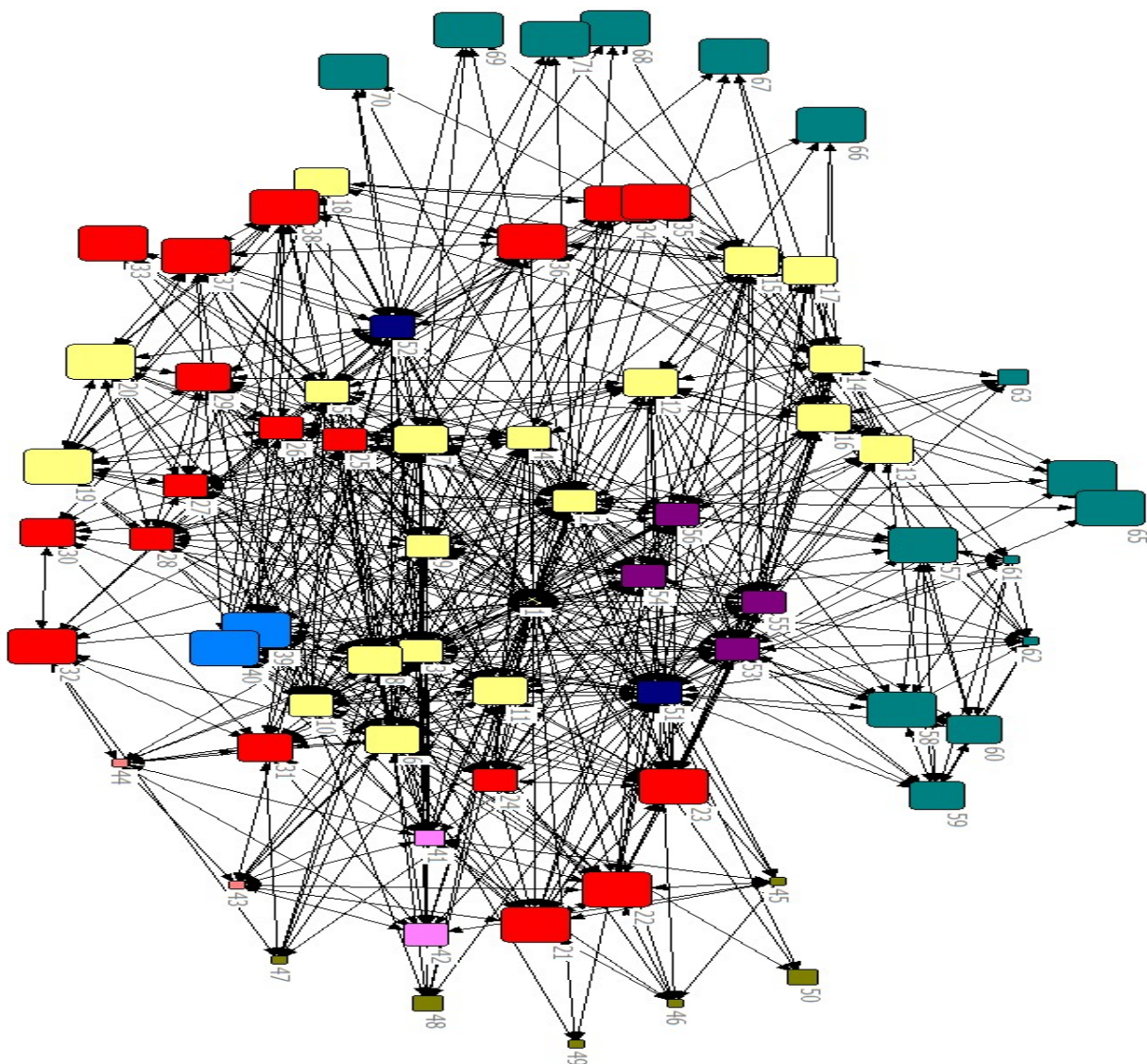


Figure 3. Whole Network of SMKLB

The density which is also defined as the proportion of 1,184 available total ties over the total possible ties by all actors of 4,900 ties $[(71-1) \times (71-1)]$ or 0.24 implies that the actors altogether only managed to establish 24% of all possible ties within the network at the site. The maximum possible density is 1. Despite that, a density of 0.24 at SMKLB is still highly cohesive. Zhong et al. (2021) found that density ranges of 0.2 to 0.5 are considered highly cohesive for a network with an actor population larger than 50. A network with a high number of social ties has greater participation in joint management (Knoke & Yang, 2019). This is happening at the ecotourism site; hence the state of co-management is apparently in place.

Another relevant measurement is the geodesic distance that gauges the level of information sharing. SMKLB needed 1.8 people for information regarding tourism activities to be well circulated. Knoke & Yang (2019) stated that a good information network is when the geodesic number is approaching 1 while Zhong et al. (2021) found that a network is considered well-circulated if the geodesic distance is below 2.15. With this relatively low geodesic distance, the information moves faster. Knoke & Yang (2019) also suggest that for the co-management of an ecotourism site to excel and have a good chance of surviving, the level of information sharing needs to be high and fast, as was the case at SMKLB.

The highest and mean degree of centrality obtained were 31 and 13.30 respectively. The actor with the highest degree of centrality was the head of the SMKLB community-based ecotourism program. The program adopts the Tagal system of conservation management of the Kelah fishery along Sungei Moroli. As head of the program, he monitors compliance with the Tagal system in the community. Any member of the community not complying will be sanctioned and penalized. He belongs to the Tagal Employee stakeholder. With a degree of centrality of 31, this actor is connected to diverse actors in the network including those who are isolated and would otherwise be disconnected. He acted as the bridge within and beyond the community to numerous actors along the tourism supply chain. This actor has the highest influence in the network and with the widespread information that he has he can take advantage of it to shape the management of the ecotourism site.

This is confirmed by Knoke & Yang (2019) who depict the effect of a high degree of centrality for an actor with formal authority to make him/her have greater information and good influence in making any decision on the regulation and policy at the tourism site. This can ensure effective co-management practices. This is unlike many other eco-tourism sites such as forest recreational areas (FRAs) and wildlife sanctuaries in the country that are formally authorized to the officers of the Forestry Department and Wildlife Department respectively with limited co-management opportunities given to local communities.

The betweenness centrality scores at SMKLB revealed that the mean score is 56.38 with the highest score again being the head of its community-based ecotourism program. This actor plays a central role in being connected from and to many other stakeholders in the network. In this role, he can ensure smooth information flow coming from and to various stakeholders in the network (Table 5).

Table 5. Betweenness Score for Each Actor at SMKLB

Type of Stakeholder	Mean
Tagal Employee	126.51
Local Community (Tagal)	14.42
Local Community (Non Tagal)	35.02
Government Official	18.21
NGOs	4.05
Tourism Private Sector	1.14
Researcher	10.50
Guide	60.37
Tourist	1.48

Government officials only have a score of 18.21, implying that they are not well-consulted and informed of the management and instead have delegated the roles to the head of the community-based ecotourism program. An essential element of co-management at the ecotourism site. Interestingly, the second highest actor was in the tour guide/agent category with a score of 60.37. This suggests the existence of a strong networking with the industry operators handling tourist flows into the ecotourism site. The lowest betweenness centrality score comes from the tourists' stakeholders who as expected are infrequent keen visitors, but not involved in the management of the site.

Regression analyses of the relationships between the stakeholders' profiles and network characteristics with their network centralities measurements were attempted. The statistical analyses found that the demographic profiles of the stakeholders did not influence their centrality measurements. Degree Centrality (DC) and betweenness centrality (BC) individually are influenced by the value of their geodesic distances (GD) with t and F statistics all significant at the 1% level with a coefficient of multiple determinations (R^2) of 59.99% and respectively (Equations 1 and 2). The relationships are extrapolative with negative coefficients. A one-unit reduction in the mean GD of 1.80 will result in an increase in the DC to 48.69 from a mean DC of 13.3. Similarly, a one-unit decrease in the mean GD will result in an increase in the BC to 675.12 from a mean of 56.38.

CONCLUSION AND POLICY IMPLICATIONS

The main objectives of this study are to identify the stakeholders and their roles in the social network, characterize their relationships, and investigate their effects on the governance of ecotourism in a protected area. SMKLB has an overall good social network mainly because of the high involvement of the stakeholders. The stakeholders at SMKLB have a relatively high total number of ties and density, enabling the organizing of more collective actions among the different categories of actors. With the relatively low geodesic distances and few isolated actors, information moves faster and is more accurate. The stakeholders within the network tend to have a common vision and understood the significance of cooperation and abiding by the tagal system. Network members follow the policy of fishing control and for about 10 years, there is a strong compliance record.

The actor and category of actors that have the highest degree and betweenness centralities are also the ones who have the authority to enact changes in policy and practices at the site. The Government agency managing the forest reserve has vested the autonomy in managing the Sungei Morali to the community-based ecotourism management. When changes are required and planned, these actors who are well-connected with the widespread ties could easily obtain the necessary support to push for the policy change.

However, a higher density did not mean a good thing all the time. A higher density can lead to a homogenization of knowledge and information that can result in the loss of resources and no capacity to adapt to change. Despite the many stakeholders at SMKLB, they are likely thinking and acting as one group. It is certainly good for a new tourism venture in the short term, but it will have a stagnate effect in the long term if new ideas and innovations are not introduced.

The economic return from a project alone is not enough in portraying sustainable development. The environmental and social values also need to be emphasized as these three dimensions are important and need to be integrated to achieve sustainability. This study on the social network of the ecotourism site in a protected area depicts the role of the social aspects in the sustainable development of the site.

The social network attributes at SMKLB have several lessons that could be practiced at other forest reserve areas and national parks. Greater co-management with local communities who have indigenous knowledge could potentially improve governance and provide quality services to visitors.

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AUTHOR CONTRIBUTIONS

Conceptualization, **Mohd Iqbal Mohd Noor**; Data collection, **Nor Aziah Abd Kadir, Mohd Iqbal Mohd Noor**; Methodology, **Mohd Iqbal Mohd Noor**, Supervision: **Amirah Azzeri, Mohd Hafiz Jaafar, Mohd Iqbal Mohd Noor**; Writing – original draft, **Mohd Iqbal Mohd Noor, Nor Aziah Abd Kadir**; Writing – review & editing, **Nor Aziah Abd Kadir, Mohd Iqbal Mohd Noor**.

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COMPETING INTEREST

The authors declare no competing interests.

COMPLIANCE WITH ETHICAL STANDARDS

All participants were given a consent form that requires them to sign and agree to participate in this study. This form is available in multiple languages.

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