

Local Perception Scale on Ecotourism Impacts and Quality of Life

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Abstract: The purpose of this paper is to develop a scale to determine the locals' perception on impacts and quality of life in an ecotourism destination. This paper presents the findings and development of main factors determining locals' perception on the ecotourism industry and quality of life in Tasik Kenyir, Malaysia. The variables from previous study of local communities' impacts were combined with new found factors through an initial exploratory investigation to produce a new measurement scale. This combination of existing and new variables provided the important steps to develop the scale. Factor analysis was used as the tool in the reduction method. The significant variables found were extracted and regrouped according to the suitable factors in generating the new scale. As a result, 29 items were identified to have significant contribution in determining locals' perception on ecotourism that was regrouped into 8 factors. This finding can be used in determining locals' perception on ecotourism impacts and quality of life. The scale on locals' perception on ecotourism impacts and quality of life also would be important to contribute policy makers to review and evaluate Malaysia's plans and policies working towards ecotourism development strategy in future.

Key words: Natural Resources • Tourism Benefits • Quality of Life • Local Community • Factor Analysis

INTRODUCTION

Ecotourism is a responsible travel to natural areas, protected and conserved the natural resources and the same time that sustains the well-being of local community [1]. The study of perceptions of ecotourism development impacts in a newly developing ecotourism destination has not received much attention in researchers [2]. Ecotourism development refers to a continuous development process and procedure which use the natural resource area that sustain its identity to become a potential destination for tourists from all over the world. In addition, it is the locals who are usually the people who are exposed to the various impacts of ecotourism development [3]. The value of resources to the local community is affected by their perceptions towards the various types of influence [4, 5].

Hence, this study is focusing in understanding the local perception on an ecotourism destination that would be considered as the views of the main stakeholder.

Ecotourism Study and Practice in Malaysia and Tasik Kenyir- Ecotourism is a sub division of tourism which is closely related to natural based area, tourists and local community. In a broader context, five common variables are being used to describe ecotourism which are the natural environment, education, protection or conservation of resources, preservation of culture and community benefits [1]. However, in Malaysia ecotourism context could be defined as an activity which maximizes the participation of local community including the elements for the site are natural and environmental attractions. Natural resources are being consumed

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intensively in tourism business and well-managed sustainable tourism give great impacts on economy, environment and social [6].

In order for the country to achieve a high income status in 2020, tourism has been identified as the National Key Economic Areas. The government is very dedicated to focus in tourism sector because of the significance contributions to the economy of this country. In addition, according to ECER Master Plan, Tasik Kenyir of Terengganu has been identified as a potential ecotourism site for its natural beauties, recreational facilities and tourism activities [7].

Impacts of Ecotourism and Quality of Life: According to Andereck *et al.* [8] once a community becomes a tourist destination, the lives of that community are affected by economic, social, cultural and environmental impacts. Several measures and scales have been used to measure locals' perceptions of tourism impacts on their quality of life [9, 10]. Positive perception of the ecotourism area is not necessarily related to the intention only, but it is a good starting point for positive action [11]. The involvement of the local community in the tourism development process is a matter that performs naturally because local people feel they are part of the tourism industry [12].

It shows that if local community get more benefits from ecotourism, they will be more positive and be involved and be supportive of the ecotourism development process and the same time will enhance their quality of life.

The success of ecotourism area will only be achieved if the communities get more benefits from its development and participation in good relationship between people and nature [13]. Then, tourism used to enhance the economic and non-economic benefits of the local community [14]. The ecotourism does not only affect locals' impacts toward ecotourism development but also local community overall quality of life. The reason is that once a community becomes a destination, the quality of life of locals' community is also affected by ecotourism development.

Social Exchange Theory: Social Exchange Theory (SET) has been the most commonly accepted framework in explaining locals' perception and reaction to ecotourism development, since it capturing of the differing point of views which are based on observed situation and psychological results [15, 16]. Social exchange theory is the systematic and dynamic process by which an

individual benefits from a sequence of interactions with society. In this interaction, the assessment given by the third party is more valuable than the costs to the giver or vice versa. In other words, the individual makes an independent interaction with society in order to produce positive and valuable results; otherwise the interaction would be of not really beneficial [17]. The aim of this study is to develop a scale to determine the locals' perception on impacts and quality of life in Tasik Kenyir, Malaysia.

MATERIAL AND METHODS

This study has conducted a quantitative approach which is descriptive analysis. This approach allows the perceptions of local communities towards ecotourism development impacts to determine in a scale through exploratory factor analysis. The number of household of local community for three adjacent villages at Tasik Kenyir area was 260. The adjacent villages are located at Tasik Kenyir are Kampung Basung, Kampung Pasir Dula and Kampung Padang Setebu. These villages are located 5 to 7 km away from Tasik Kenyir. These villages are selected as research site because it's located nearest to Tasik Kenyir and most of the villagers are participated in ecotourism development at Tasik Kenyir.

Census data were used in this study which was collected from every household in the community. It was reasonable to include the entire population because these three adjacent villages only have 260 households. The number of household of Kampung Basung, Kampung Pasir Dula and Kampung Padang Setebu are 171, 75 and 14 respectively. Thus, the study is conducted through face to face interview. Heads of household are aged 18 years and above are selected as respondents because they are usually source of income in the family.

This census data collection can reduce bias and highly represent the population of local community. The instrument used in this study was a survey questionnaire. The items in the factors were the combination of relevant questions used in previous studies and newly developed found factors obtained through consultation and pilot survey of the community.

RESULTS AND DISCUSSION

Socio-demographic Profiles: The survey has found out the highest respondents area from Kampung Basung, followed by Kampung Pasir Dula and Kampung Padang Setebu. All of respondents of these villages are Malay

Table 1: Demographic Profile of Respondents

Variables	Frequency	Percentage
Village		
Kampung Basung	171	65.8
Kampung Padang Setebu	14	5.4
Kampung Pasir Dula	75	28.8
Gender		
Male	147	56.5
Female	113	43.5
Age Group		
18-27 years	23	8.8
28-37 years	54	20.8
38-47 years	70	26.9
48-57 years	48	18.5
58-67 years	43	16.5
68 years and above	22	8.5

Table 2: Factor Analysis

Variables	F1	F2	F3	F4	F5	F6	F7	F8	F9	F10	F11	F12	F13
Air Pollution	.828												
Noise Pollution	.892												
Water Pollution	.824												
Littering	.780												
Natural Environment	.814												
Traffic Congestion	.755												
Social Status		.816											
Home Life		.824											
Spiritual Life		.811											
Leisure Life		.769											
Income			.884										
Family Income			.813										
Pay And Fringe			.917										
Public Infrastructure				-.753									
Variety Of Cultural				.786									
Meeting Tourists				.804									
Education					.764								
Public Facilities					.849								
Benefits than Costs						.848							
Growth of Community							.762						
Water Quality								.771					
Cleanliness								.787					
Communication									.829				
Transportation									.869				
More Investor										.818			
Community Facilities											.789		
Image Of Village												.800	
Quality Of Life												.762	
Conflict													-.835
Eigen Value	6.025	4.473	4.190	4.155	2.985	2.692	2.661	2.602	2.462	2.125	2.034	1.933	1.726
% Variance	8.486	6.300	5.902	5.852	4.204	3.791	3.749	3.665	3.467	2.992	2.865	2.722	2.520
% Cumulative Variance	8.486	14.786	20.688	26.54	30.744	34.535	38.284	41.949	45.416	48.408	51.273	53.995	56.515

and the religion is Islam. The majority of the respondents (56.5%) are males. The highest respondent of the males in the sample was due to the reluctant of female villagers to be interviewed. The majority of respondents are married (75.4%), 16.2 % of respondents are widow and 8.5% of respondents are singles. In term of age, 47.6% of respondents are aged between 28 to 47 years old, while 25% are older from 58 years old. Only 8.8% of respondents are 18 to 27 years old.

Next, factor analysis test was carried out to develop the scale for the local perception on ecotourism impacts. Items were rearranged according to the accurate groupings (Factors). Before starting this factor analysis, the KMO and Bartlett's Test were conducted to assess the suitability of the data collected. Factor analysis was performed since the KMO was at a satisfactory level (0.6) and the result of the Bartlett's test (0.000) was significant (Sig. = 0.000). The results of the EFA are shown in

Table 2. The 29 variables are developed accordingly in 8 components. All the 8 components are later named as particular factors which include Good Health, Emotional Domain, Material Domain, Ecotourism Contribution, Community Socio-Economic Well Being, Health Satisfaction, Development Potential and Destination Recognition.

Factor 1: Good Health:

- Ecotourism will decrease air pollution (0.821)
- Ecotourism will decrease noise pollution (0.892)
- Ecotourism will decrease water pollution (0.824)
- Ecotourism will not cause littering (0.780)
- Ecotourism will not damage the natural environment (0.814)
- Ecotourism will not cause the traffic congestion (0.755)

This factor is titled good health because all of these positive items are contributing directly and indirectly to local's good health in a good environmental area. In order for ecotourism to promote good health, these variables must be produced to desire local people health and safety. In the study area, ecotourism development can be most important sectors to create economic activities for most numbers contribute to be involved in business. High seasonality ecotourism may give rise to crowdedness in public area, crimes and environmental damage if not properly misused.

However, the result shows that locals in Tasik Kenyir are satisfied with the environmental impacts which contribute to the good health. They believe that ecotourism does not only help to decrease air pollution but also decrease noise pollution and water pollution as shown by Bjork [18] the size of the tourist group is irrelevant to the damage it causes. Most locals agree that ecotourism will not cause littering that damage to natural resources. If managed properly, ecotourism will not contribute to traffic congestion in this destination ecotourism area although the arrival of tourist is increasing every year. The local has positive feelings that ecotourism will not create fears security risk especially when people from various background come to visit ecotourism destination area.

Factor 2: Emotional Domain:

- Satisfaction towards leisure life (0.811)
- Satisfaction towards social status (0.769)
- Satisfaction towards home life (0.816)
- Satisfaction towards spiritual life (0.824)

Several domains of quality of life are observed in the previous study in literature. For example, in Aref [19] study the strongest tourism impacts are related with emotional well-being. Emotional domain refers to free time, religion or spiritual, ethics, morals, recreation and hobbies. To the communities, ecotourism should also contribute in the emotional domain especially towards social status, home life and spiritual life.

Factor 3: Material Domain:

- Satisfaction towards income from your current job (0.884)
- Satisfaction towards your family income (0.813)
- Satisfaction towards the pay and fringe benefits you receive (0.917)

Most ecotourism outputs contribute to the material domain. According to Andereck *et al.* [9] andereck and Nyaupane [20] and Yu *et al.* [21] this output plays important role in improving the standard of living of local communities by contributing to an increase in family income. Material domain is mostly related to the economic situation of someone. Generally, in all societies, if the people have more money, typically it means more individual are happy.

Factor 4: Ecotourism Contribution:

- Ecotourism will improve quality of public infrastructure (-0.753)
- Ecotourism encourages a variety of cultural activities for local community (0.786)
- Meeting tourists from all over the world is definitely a life enriching experience (0.804)

Contribution of ecotourism is not only focused on material well-being. Social aspects are involved in ecotourism contribution such as it encourages a variety of cultural activities. Furthermore, ecotourism creates quality of public infrastructure. Then will improve the accessibility to ecotourism destination. The same argument raised by Kunasekaran *et al.* [17] by saying investments in infrastructure development that can provide livelihood benefits can be made using tourism as a tool. Apart from that, local community can meet tourists all over the world which can give memorable experiences for them. When locals start interacting with tourists, it would diminish hostility and prejudices. According to Aramberr [22] the welcoming nature of local community towards tourists would encourage the locals to learn from the tourists and get life enriching experience. Locals can

get greater and more positive interaction with tourists especially at Tasik Kenyir.

Factor 5: Community Socio-Economic Well Being:

- Ecotourism will increase the growth of community (0.762)
- Ecotourism will provides environmental education and interpretation (0.764)
- Ecotourism will bring more benefits than costs to community (0.848)
- Ecotourism will cause conflict between locals and visitors (-0.835)
- Ecotourism will increase the growth of community (0.762)

There are several aspects of community life that make the members appreciate neighbourhood area where they live. According to Veenhoven [23] quality of life can be measured by how long and happy people live in that area. If they happy live there, they will stay longer in that area. This situation can be shown by the positive impacts of ecotourism especially for younger people. The result show the positive impacts that ecotourism will ensure the younger generations to continue working here. If the benefits are more than cost, it will create social exchange opportunities. The social exchange theory is the systematic and dynamic process by which an individual benefits from a sequence of interactions with society. If the sequence of interaction with society increases, the growth of community can live happily in an ecotourism destination area. Then, conflicts between locals and visitors will not happen in ecotourism area especially at Tasik Kenyir.

Factor 6: Health Satisfaction:

- Satisfaction on water quality in your area (0.771)
- Satisfaction in environmental cleanliness in your area (0.787)

In some areas, ecotourism development may give rise to environmental damage. The result in this study shows that locals at Tasik Kenyir are satisfied with the environmental effects such as their water quality, environmental cleanliness, air quality and littering in the area. The maintenance of the quality of the environment will factors contributes to their health satisfaction in their life. Malaysian government consistently focus to achieve sustainable tourism practice by focusing a balance between business requirements, cultural heritage preservation and as well as environmental protection [24].

Factor 7: Development Potential:

- Ecotourism will improve the communication facilities (0.829)
- Ecotourism will improve the transportation facilities (0.869)
- Ecotourism will bring more investor in ecotourism development project (0.818)
- Satisfaction towards community facilities (0.789)

All the items listed in terms of communication and transportation facilities are directly related to accessibility. Tourist ecotourism destinations should be accessible to all people, regardless of their physical limitations, disabilities or age. Communication and transportation should be the basis of tourism development which can be benefits the quality of life of local community especially at Tasik Kenyir. These facilities can meet the needs of both local community and tourists. These facilities will increase the satisfaction of tourists during their stay at the destination ecotourism area. If they are happy, their quality of life can increase.. The development potentials can be increased by the inviting investors in the ecotourism development projects who believe the potential benefits and cost that they will get from the development and also help in balancing the quality of life of the community.

Factor 8: Destination Recognition:

- Ecotourism will increase image of village (0.796)
- Ecotourism will increase quality of life (0.766)

According to Govers *et al.* [25] as tourism services are intangible, images become more important than reality. Images play an important role in ecotourism destination choice and to influence possible tourists' travel-related decision making. All the items listed are related to destination recognition. Image of village and quality of life can bring recognition to the destination especially on ecotourism destination. The study showed that the more experiences with the destination the tourists had, the better destination image they would have because they were more familiar with the destinations [26].

Past research has acknowledged the importance of destination quality in supporting the performance of tourism and significantly influences the formation of the image of the destination. In tourism research, images are more important than any tangible resources because what motivate visitors to act or not to act are perceptions, rather than reality [27].

DISCUSSION AND CONCLUSION

Factor Analysis was carried out to develop a new scale to measurement the perception of local community of the impacts of ecotourism development. 8 factors were found in this study. The development of this new scale consists of new developed factors combined with factors that were obtained from previous researchers. Factors, like economics, health and community welfare are important to determine the acceptance of local community on ecotourism. However, the factor of development potential and destination cognition has made a special contribution in these findings. It shows that these factors are directly related to the supply factors that have significant relations if the ecotourism development processes are to take place.

The result of the study is consistent with the Social Exchange Theory. It considers the outcomes of social interactions for the exchange of resources in which people who get benefits from ecotourism will support ecotourism development [28]. The local community tend to have positive perceptions on ecotourism impacts because they are among the stakeholders and will directly be involved in ecotourism development process. If local community gets more benefits from tourism, they will participate in tourism industry [29, 30]. According to Johari *et al.* [31] the community should value as equal partners by the government before taking any decision to develop tourism in their area. The quality of life of local community resulting from the ecotourism development may influence economic, social, environmental and spiritual.

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REFERENCES

1. Fennell, D.A., 2001. A content analysis of ecotourism definitions, *Current Issues in Tourism*, 4(5): 403-421
2. Sinclair-Maragh, G. and D. Gursoy, 2015. Perceptions of Imperialism and Tourism: The case of Developing Island Countries. *Annals of Tourism Research*, 50: 143-158.
3. Brida, J.B., M. Deidda and M. Pulina, 2014. Tourism and transport systems in mountain environments: Analysis of the economic efficiency of cableways in South Tyrol. *Journal of Transport Geography*, 36: 1-11.
4. Voon, B.H., A. Douglas and B. Singh, 2012. Serving the Local Community Customers: Evidence from Multi-Cultural Malaysia. *International Journal of Business and Society*, 13(3): 293.
5. Siow, M.L., S. Ramachandran, A. Shuib and S.H.M. Afandi, 2014. Barriers to community participation in rural tourism: A case study of the communities of Semporna, Sabah, Malaysia. *Life Science Journal*, 11(11): 837-841.
6. Siew, K.M., S. Ramachandran, P. Kunasekaran, S. Herman, N. Fatin, A. Shuib and S. Prabhakaran, 2017. Performance indicators of energy security and sustainable tourism in enhancing service innovation of island tourism. *World Applied Sciences Journal*, 35 (Service Experience and Innovation in Hospitality & Tourism): 27-32.
7. ECER, 2007. East Coast Economic Region Master Plan. East Coast Economic Region Development Council. Kuala Lumpur. [http:// www.ecerdc.com/ecerdc/dc.htm](http://www.ecerdc.com/ecerdc/dc.htm). 23 April 2011
8. Andereck, K.L., K.M. Valentine, R.C. Knopf and C.A. Vogt, 2005. Residents' perceptions of community tourism impacts. *Annals of Tourism Research*, 32(4): 1056-1076.
9. Andereck, K.L., K.M. Valentine, C.A. Vogt and R.C. Knopf, 2007. A cross-cultural analysis of tourism and quality of life perceptions. *Journal of Sustainable Tourism*, 15(5): 483-502.
10. Gursoy, D., C. Jurovski and M. Uysal, 2002. Residents' attitudes: a structural modeling approach. *Annals of Tourism Research*, 29(1): 79-105.
11. Trakolis, D., 2001. Perceptions, preferences and reactions of local inhabitants in Vikos-Aoos National Park, Greece. *Environmental Management*, 28(5): 665-676.
12. Nur Murniza, M.Z., M. Mazlina, W. Hassnah and A.H. Zuliah, 2017. Indigenous resident's attitude towards tourism development and perceived socio-cultural impacts in Carey Island. *World Applied Sciences Journal*, 35 (Service Experience and Innovation in Hospitality & Tourism): 72-77.
13. Anyaoku, C.E. and C. Martin, 2003. Parks and participation, *UNEP Our Planet*, 14 n2: 14-15.
14. Kunasekaran, P., S. Ramachandran, M.R. Yacob and A. Shuib, 2011. Development of Farmers' Perception Scale on Agro Tourism in Cameron Highlands, Malaysia. *World Applied Sciences Journal*, 12(T&H): 10-18.
15. Nunkoo, R. and H. Ramkissoon, 2011. Developing a community support model for tourism. *Annals of Tourism Research*, 38(3): 964-988.

16. Prayag Girish and Chris Ryan, 2011. The Relationship between the 'Push' and 'Pull' Factors of a Tourist Destination: The Role of Nationality-An Analytical Qualitative Research Approach." *Current Issues in Tourism*, 14(2): 121-143.
17. Kunasekaran, P., S.S. Gill, S. Ramachandran, A. Shuib, B. Tom and S. Herman, 2017, Measuring Sustainable Indigenous Tourism Indicators: A Case of Mah Meri Ethnic Group in Carey Island, Malaysia: *MDPI Sustainability*, 9(7): 1256-1276.
18. Bjork, P., 2007. Definition Paradoxes: From Concept to Definition. In P. Higham (Ed.), *Critical Issues in Ecotourism: Understanding a Complex Tourism Phenomenon*. Great Britain: Elsevier Ltd.
19. Aref, F., 2011. The effects of tourism on quality of life: A Case Study of Shiraz, Iran. *Life Science Journal*, 8(2): 26-30.
20. Andereck, K.L. and G.P. Nyaupane, 2011. Exploring the nature of tourism and quality of life perceptions among the residents. *Journal of Travel Research*, 50(3): 248-260.
21. Yu, C.P., S.T. Cole and C. Chancellor, 2016. Assessing community quality of life in the context of tourism development. *Applied Research in Quality of Life*, 11: 147-162.
22. Aramberr, J., 2001. The Host Should Get Lost: Paradigms in the Tourism Industry. *Annals of Tourism Research*, 28(3): 738-761.
23. Veenhoven, R., 2005. Apparent quality-of-life in nations: How long and happy people live. *Social Indicators Research*, pp: 61-86.
24. Kunasekaran, P., S.S. Gill, S. Ramachandran, A.T. Talib and S. Prabhakaran, 2017. Performance of community resources indicators for tourism development: A case study of Mah Meri community in Carey Island, Malaysia. *World Applied Sciences Journal*, 35 (Service Experience and Innovation in Hospitality & Tourism): 10-15.
25. Govers, R., F.M. Go and K. Kulmar, 2007. Promoting Tourism Destination Image. *Journal of Travel Research*, 46: 15-23.
26. Hanafiah, M.H.M, N. Rojulai and M.I. Zulkifly, 2017. Tourist Motivation and Future Behavioral Intention: the Moderating Effects of the Push Factor. *World Applied Sciences Journal*, 35 (Service Experience and Innovation in Hospitality & Tourism): 40-46.
27. Gallarza, M.G., I. Gil and H. Calderón, 2002. Destination Image. Towards a conceptual framework. *Annals of Tourism Research*, 29(1): 56-78.
28. Ko, D.W. and W.P. Stewart, 2002. A structural equation model of residents' attitudes for tourism development. *Tourism Management*, 23(5): 521-530.
29. Liu, A. and G. Wall, 2003. Human resources development for Tourism in a peripheral island: Hainan, China. In S. Goßling (Ed.), *Tourism development in tropical islands: political ecology perspectives*. Sweden: Edward Elgar Publishing: 222-236.
30. Kayat, K., 2008. Stakeholders' perspectives toward a community-based rural tourism development. *European Journal of Tourism Research*, 1(2): 94-111.
31. Johari, S., S. Ramachandran, A. Shuib and S. Herman, 2015. Participation of the Bidayuh Community In Tourism Developmental Initiatives in Bau, Malaysia. *Life Sci J* 2015; 12(2):46-48].