

## Local Community Participation in Ecotourism Development in Tasik Kenyir, Malaysia

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**Abstract:** Participation of local community in ecotourism has been highlighted and researched by many academics because it is a very important input for successful ecotourism development. This current study investigates the factors influencing the level of local community participation in ecotourism development in Tasik Kenyir, Malaysia. A quantitative approach is used in this research. The sample consists of 260 heads of household in three villages in Tasik Kenyir. The findings of the study indicate that four factors influence the level of participation in ecotourism development which include the family members' involvement in ecotourism, perceived environmental impacts by the communities, marital status and the distance of residence to the ecotourism area. The study recommends that the local government ought to increase the accessibility for the local community to participate in ecotourism activities by including more representation of the community in the planning process; the study also suggests that future studies to explore factors like attitudes and readiness of the community that may influence the participation of the local community.

**Key words:** Local Community Behavior • Tourism Impacts • Ecotourism Resources • Family Participation • Tasik Kenyir

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### INTRODUCTION

Ecotourism contributes both to environmental conservation and the economy [1]. Ecotourism is a type of tourism broadly considered as an opportunity for local people to derive positive socio-economic benefits from tourism development while conserving the natural resources. According to Asiedu [2] by developing ecotourism in the rural areas it will help to sustain viable rural communities and at the same time satisfy the preferences of the new breed of tourists. This is because unlike conventional tourism, ecotourism thrives in relatively untouched natural environments commonly found in rural areas and does not compel the communities to put up with massive investments in facilities and infrastructure.

**Ecotourism in Malaysia:** As indicated in the 11<sup>th</sup> Malaysia Plan 2016-2020, the biodiversity assets will be fully utilized for ecotourism development since ecotourism is chosen as the highlight of the tourism industry. Among the ways to achieve the development is through extensive protection and conservation of the natural resources and will be supported by various promotional activities and selected branding. Hence, renowned and competent investors in the field of conservation and preservation of nature and wildlife shall be invited in creating ecotourism products that have the value chain of high-yield tourism. Other elements such as tourism facilities, interpretive centres, communications and safety measures which cater for experience-enriching will also be intensified. In addition, in helping the local communities to increase their living standards, the development of ecotourism will

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be a good platform that offers opportunities the communities to participate in related income-generation activities.

In the area of forest conservation and management, community involvement or participation in ecotourism development has become a viable tool that complements the traditional roles such as law enforcement, control of timber extraction and preservation of endangered species [3]. Thus, community participation in ecotourism development could be seen as a tool for both conservation and development. Additionally, some researchers argue that a lack of involvement and participation of the local community in tourism will reduce the utilization of the rural resources [4, 5].

**Community Participation in Ecotourism:** Drumm [6] defines community participation in ecotourism development as ‘ecotourism programs, which take place under the control and with active participation of local people who inhabit or own a natural attraction’. Through the involvement of host communities, tourism can generate support for conservation as long as the communities derive some benefits [7]. In order to make ecotourism to be successful and sustainable, the local community awareness and commitment are important [8]. The aim of this study is to analyze the level of participation of local community in Tasik Kenyir and the perceptions of local community towards the ecotourism impacts in ecotourism development.

## MATERIALS AND METHODS

This quantitative study was carried out using questionnaire as the instrument for the data collection. Since the study population consisted of 260 households, a census of the population was used in this study; the face to face interview was carried out to obtain data on socio demographic profile, community characteristics, local community perceptions towards ecotourism impacts and level of local community participation in ecotourism development. The perception and level of participation were measured using the five-point Likert scale. The scales for all independent variables were adapted from the previous research; however, modifications were made according to the context of the study. The items for community perceptions toward tourism impacts (Economic, environmental and socio-cultural impact) were modified based on these previous studies such as [9-14]. While, the dependent variable was measured using the ladder of participation as suggested by Arnstein [15] comprising of 21 items. The responses to the questions

Table 1: Number of families in the 3 villages

Village	Residents			No. of families
	Male	Female	Total	
Kampung Basong	360	324	684	171
Kampung Pasir Dula	224	189	413	14
Kampung Padang Setebu	56	49	105	75
Total	640	562	1202	260

Source: *Majlis Daerah Hulu Terengganu*

were based on five-point Likert scales with 1 = strongly disagree, 2 = disagree, 3 = neutral, 4 = agree, 5 = strongly agree. According to Ko and Stewart [16] the use of Likert type scale in tourism research could produce high validity. The data of the studies were analyzed using descriptive analysis and Multiple Linear Regressions.

**Respondents:** The study involved 260 families from Kampung Basong, Kampung Pasir Dula and Kampung Padang Setebu in Tasik Kenyir. The size of families in the three villages in Tasik Kenyir is shown in Table 1. Tasik Kenyir is a prospective ecotourism site identified in the East Coast Economic Region (ECER) development plan [17].

## RESULTS AND DISCUSSION

**Socio-demographic profile:** The socio-demographics of the respondents are presented in Table 2. The majority of the respondents (56.5%) are females because during the survey, the head of families (Males) are out working. In terms of age, the study has found that the highest percentage of the respondents are in a range of 38 – 47 years (26.9%) and most of the respondents are married (75.4%) and having their own family. The majority of the local communities (74.2%) have incomes of under RM1000 per month; this is not uncommon in the rural setting since self-employment forms the large type of employment (38.5%) with most of them being employed as farmers or running their own small businesses.

In regards to the respondents’ occupation, 35.0% are private sector employees. Concerning the education level, the majority (75%) are having the secondary school or higher levels; this is reflective of their occupational status (39%) as wage earners. 43.1% of the family members of the respondents have been indicated to be involved in ecotourism operations as full-time workers in tourist attraction places at Tasik Kenyir such as Kenyir Waterpark, Kenyir Elephant Village, *Taman Herba*, *Taman Rama-rama* and others. In terms of part time involvement in ecotourism, 2.3% of them are working as a boatman during public and school holidays.

Table 2: Socio demographic characteristics of the respondents

Variables	Frequency	Percent (%)
Gender		
Male	113	43.5
Female	147	56.5
Age group		
18-27	23	8.8
28-47	124	47.7
48-67	91	35.0
Above 68	22	8.5
Marital status		
Single	22	8.5
Married	196	75.4
Widow	42	16.2
Level of education		
Non formal	18	6.9
Primary	45	17.3
Secondary	165	63.5
STPM/Diploma	30	11.5
Degree	2	0.8
Occupation		
Government/Private sector	101	39.2
Self-employed	100	38.5
Housewife	41	15.8
Retired/Unemployed	17	6.6
Income (RM)		
0-1000	193	74.2
1001-2000	55	21.2
2001-3000	10	3.8
Above 3001	2	0.8
Family members involvement in ecotourism		
Participate	112	43.1
Full-time	106	40.8
Part-time	6	2.3
Not participate	148	56.9

### Local Community Perceptions towards Ecotourism

**Impacts:** The ecotourism sector in Tasik Kenyir provides employment opportunities to the local residents and this may affect the perception of residents towards the industry. As Ahmad *et al.* [18] and Ahmad and Dora [19] have indicated the perception of the residents is dependent on whether or not the local community has direct involvement in ecotourism related activities.

The perceptions of the community towards impacts of ecotourism development in Tasik Kenyir are divided into three categories, which are economic impacts, environmental impacts and sociocultural impacts. Based on the findings on the level of perceptions towards ecotourism impacts, the highest five impacts in each category are shown in Table 3.

Based on the mean measures of the community perceptions, the environmental impacts receive the highest score of 4.42 for the top 5 items. Some of the

environmental impacts which are favored by local communities are as follows: “environmental diversity must be valued and protected (4.68)”, “community environment will be protected for future generation (4.48)”, ecotourism will increase environmental conservation (4.47)”, ecotourism will increase wildlife protection (4.36)” and ecotourism will improve local community’s awareness on protection of the environment (4.22)”.

According to five items in the environmental impact category, the communities in Tasik Kenyir believe that ecotourism will create positive benefits to them. The communities agree quite strongly that if ecotourism development focuses attention on significant environmental issues, it will stimulate initiatives among the communities to conserve the environment [20]. Issues relating to the impacts on biodiversity, endangered species and humans and the environment must be given a balanced focus in tourism development [21].

Table 3 also shows the five items of perceptions on economic impacts given by the local community. The mean for five items for economic impacts is 4.30. Most of the respondents agree that ecotourism will increase job opportunities for the communities (4.87), followed by ecotourism will increase retailing sector (4.21), ecotourism will increase the income of local villagers (4.18), ecotourism will improve transportation facilities (4.12) and ecotourism can ensure the younger generation to continue working in Tasik Kenyir (4.12). All the variables show that the local community will gain economically from the ecotourism development. It is consistent to the findings of Puvaneswaran *et al.* [5], Johari *et al.* [22], Azwa *et al.* [23] and Siew *et al.* [24] in their studies have shown that more income, additional businesses and job opportunities are directly or indirectly related to economic benefits of ecotourism development. The job opportunities encourage the younger generation to stay at the village with their family [22].

However, the economic impacts of ecotourism may not always be positive because ecotourism also may bring negative economic impacts [25]. For example, the negative economic impacts include leakages [26] increase of prices [27, 28] increase of cost living [29] creating low paid jobs [28]. As Wei *et al.* [25] and Mbaiwa [30] argue, in some cases the ecotourism sector does not bring much benefit to the local community. In the study area, some of these negative economic impacts are happening. Thus, an understanding of the economic impacts of ecotourism in the context of local economy is important so that actions can be taken by the tourism planners to help in balancing the benefits to the local communities [25].

Table 3: Mean for the local community perceptions towards ecotourism impacts (N = 260)

No	Item	Mean	SD
Economic impacts			
1	Ecotourism will increase job opportunities	4.87	0.334
2	Ecotourism will increase retailing sector	4.21	0.451
3	Ecotourism will increase the income of local villagers	4.18	0.536
4	Ecotourism will improve transportation facilities	4.12	0.499
5	Ecotourism can ensure the younger generation to continue working in Tasik Kenyir	4.12	0.688
Mean for economic impacts = 4.30			
Environmental impacts			
6	Environmental diversity must be valued and protected	4.68	0.579
7	Community environment will be protected for future generation	4.48	0.743
8	Ecotourism will increase environmental conservation	4.37	0.801
9	Ecotourism will increase wildlife protection	4.36	0.652
10	Ecotourism will improve local community's awareness on protection of the environment	4.22	0.551
Mean for environmental impacts = 4.42			
Socio-cultural impacts			
11	Ecotourism will increase image of village	4.48	0.545
12	Ecotourism will increase quality of life	4.17	0.405
13	Ecotourism will provide recreation opportunities	4.15	0.578
14	Ecotourism will increase quality of place of worship	4.05	0.404
15	Ecotourism will increase quality of social infrastructures	4.04	0.480
Mean for sociocultural impacts = 4.17			

Note: The community perceptions towards ecotourism impacts measured using the five points Likert scale (1= strongly disagree, 2= disagree, 3= neutral, 4= agree, 5= strongly agree).

Lastly, the findings on the perceptions of local community towards sociocultural impacts show the positive agreement which include ecotourism will increase image of village (4.48), ecotourism will increase quality of life (4.17), ecotourism will provide recreation opportunities (4.15), ecotourism will increase quality of place of worship (4.05) and ecotourism will increase quality of social infrastructures (4.04). The mean for the sociocultural impacts for the 5 items in Table 3 is 4.17. It means that the perception of local community towards sociocultural impacts is in the agreeable ranking. They agree that the ecotourism development will contribute positive impacts such that their life will be better off when ecotourism exists in their locality.

The analysis shows the local communities in the study area have positive reception of ecotourism because they obtain benefits directly or indirectly from the development of ecotourism. This statement is supported by studies about farmer's perception on agro tourism in Cameron Highlands, Malaysia [5].

According to Nur Murniza *et al.* [31] in their findings, when the residents gain more personal benefits, they will agree and believe that tourism can give positive impacts to their community. While, the residents who gain fewer benefits from tourism will tend to perceive tourism to give negative effects on their community.

**Level of Local Community Participation:** The determination of the level of participation by the local community's in this study is based on Arnstein's ladder of participation [15]. According to Arnstein's ladder [15] participation has three main levels; non-participation, tokenism and citizen power. For each ladder of participation, items that imply levels of participation are given to the respondents to measure their level of participation. The level of participation is measured separately for each ladder of participation using the scale of 1 (Lowest level) to 5 (Highest level) of participation. The result of the analysis of the ladder of participation is shown in Figure 1 below.

Based on the mean for each ladder of participation, it is found that, generally the level of non-participation (4.30) in ecotourism development in Tasik Kenyir is higher than tokenism (2.73) and citizen power levels (1.46). Besides, the citizen power level has the lowest score compared to other Arnstein's level of participation. The low level of citizen power implies that the relevant authority (KETENGAH) includes a minimal level of involvement of the local community in the decision-making process. This is expected in a top down decision-making procedure where the authority holds the real power.

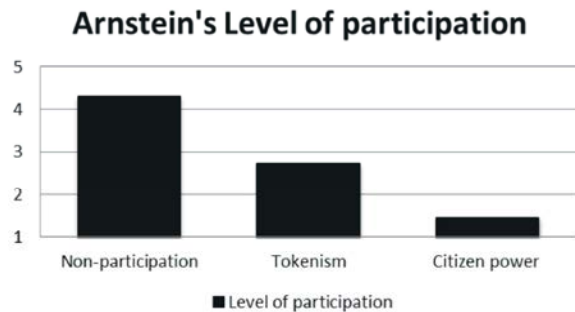


Fig. 1: The differences in Arnstein's levels of participation

Table 4: Overall level of participation

Level	Frequency	Percentage
Low (21 – 49)	89	34.2%
Moderate (50 – 77)	171	65.8%
High (78 – 105)	0	0%
Total	260	100%

Min = 21 Max = 105 M = 54.67 SD = 7.388

Note: Level of participation is measured by Likert scale of 1(Strongly disagree) to 5 (Strongly agree) for each 21 items; the minimum rating was 21 and the maximum was 105 with the standard deviation 7.388

Table 4 indicates the overall level of participation among the local community in ecotourism development in Tasik Kenyir based on the sum of the rating scales of the items. It shows that 65.8% of the local communities believe that their participation in ecotourism development in Tasik Kenyir is at moderate level. None of the community feels that they are highly involved in the development of ecotourism in the area. This is expected since major development of facilities and tourism infrastructures in the area is undertaken by KETENGGAH and other government agencies and corporate bodies.

**Factors Influencing Level of Local Community's Participation:** The main objective of this study is to identify the factors influencing level of local community's participation in ecotourism development. Multiple regression analysis using stepwise method is employed to identify the predictors. A total of 17 independent variables which include 6 socio demographics (Gender, age, marital status, education level, occupation and income), 8 community characteristics (Total numbers of household, residential distance to ecotourism area, residential period, family members involvement in ecotourism, length of involvement in ecotourism, etc.) and three impacts of ecotourism (Economic, environmental and socio-cultural) are tested on the level of local community's participation dimension. The result of the regression estimation is shown in Table 5.

Table 5: Multiple Regression Results

Variables	$\beta$	t	Sig.
(Constant)	1.422	5.576	0.000
Family members involvement in ecotourism	0.343	7.093	0.000
Perception on environmental impact	0.195	3.121	0.002
Marital status	0.143	2.566	0.011
Residential distance to ecotourism area	-0.054	-2.033	0.043
$R^2$	0.219		
Adjusted $R^2$	0.207		
F	17.892		

According to Table 5, from all the independent variables which are initially tested, four variables are found to have significant influences on the dependent variable at the 95% confidence level. The  $R^2$  value for predictor which is 0.219 implies that the four independent variables explain about 21.9% of variance in the level of local community's participation attainment.

Table 5 also shows the influence of the significant predictors on the dependent variable through Beta value ( $\beta$ ). The local community's participation is influenced by the number of family members involved in ecotourism ( $\beta = .343$ ,  $t = 7.093$ ,  $p$ -value = .000). The result shows that if the involvement of family members in ecotourism increases by 1%, the rate of participation of the community in ecotourism development increases by 0.34%. Since the majority of the respondents are married as shown in Table 2, they have children who could be involved in ecotourism development.

The second predictor is the perception on the environmental impacts ( $\beta = .195$ ,  $t = 3.121$ ,  $p$ -value = .002). If the perception on environmental impact increases by 1%, the level of participation will increase by 0.195%. The environmental impact is one of the factors that influence local community opinions about tourism [32,33]. While, the third significant independent variable is marital status ( $\beta = .143$ ,  $t = 2.566$ ,  $p$ -value = .011). Those who are married have higher participation level than the singles. For the married respondents, the level of participation is 1.585 compared to 1.422 for the singles, other things being constant. The ecotourism development in Tasik Kenyir has opened up opportunities for the people to earn more income which is most welcome by the married members of the communities.

The residential distance to ecotourism area ( $\beta = -.054$ ,  $t = -2.033$ ,  $p$ -value = .043) is also significant. It shows that when residential distance to ecotourism area increases by 1%, the level of participation will decrease by 0.054%. The results also prove that distance of the residents to ecotourism area also has influence on ecotourism activities and their participation in ecotourism

development [34]. The result is also supported by Keogh [35] who has also found that those people living closest to the attraction (Ecotourism site) would have the strongest feeling about ecotourism.

## CONCLUSION

Overall, the main objective of this study is to identify the factors influencing level of participation in ecotourism development. The results of the study reveal that in general the local community perceptions towards ecotourism impacts (Economic, environmental and sociocultural) in ecotourism development are positive. While, the framework of Arnstein's ladder of participation [15] has proved to be a useful framework to determine the level of local community's participation in ecotourism development. The finding shows that the level of participation is still low as indicated by the low citizen power in decision making process in ecotourism development in Tasik Kenyir. In order to improve the level of participation in decision making process, the relevant authorities ought to take several steps such as providing more information on the future projects to the communities to enhance their understanding of ecotourism project or activities; this will encourage and motivate them to participate in the forums or meetings and actively express their opinions and views. The government should respect the community's ideas and give them opportunities of trial and error so that, communities can learn and improve their livelihood [5, 36].

The sustainability of the ecotourism development must include the cooperation of the communities and their beliefs that they will obtain benefits from the development. Besides, local community participation plays an important role in successful ecotourism development. Many factors may influence the local community participation in ecotourism development. In this research in Tasik Kenyir, the influencing factors on the level of local community's participation in ecotourism are analyzed using the linear regression model. Four factors are found to influence the participation which are family members' involvement in ecotourism, community's perceptions on environmental impacts, marital status and residential distance to ecotourism area. Accordingly, some recommendations and suggestions can be made to the local government especially KETENGAH and Tourism of Terengganu in enhancing the local community participation in ecotourism; these include increasing the development of various ecotourism activities and facilities

to attract the local residents to be involved in ecotourism operations. The suggestion by [37] in their studies in Sabah revealed that the local tourism stakeholders should play a significant role by providing more assistance like providing substantial knowledge and training related to ecotourism for to the local community in order to sustain their active involvement. With cooperation of local residents and local authority a balance development could be achieved in order to maintain the increasing number of tourists coming to the area and at the same time to continuously give the benefits to the local community. Lastly, to ensure the sustainable development of a community, similar studies can be done in the future to determine the level of participation in other development projects.

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