

Local Community Participation in Sustainable Ecotourism Development At Bagan Sungai Burung, Perak

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Article Info**Volume 82****Page Number: 1062 - 1077****Publication Issue:****January-February 2020****Abstract**

Abstract: The participation of the local community in ecotourism is an important criterion for successful ecotourism development. In Malaysia, there is still lack of specific research on the Chinese community and their participation in ecotourism. The Nine Islands in Bagan Sungai Burung, Perak is a new ecotourism destination where the local Chinese community there are the main stakeholders under Nine Island Agency. The lack of local people involvement had resulted in the islands to be officially closed on 1st April 2017 by Perak State Government due to excessive tourism. Therefore, this study is to determine the factors that influence the participation level of the local community in Bagan Sungai Burung. A quantitative approach was used with a sample size of 200 respondents. Descriptive analysis and multiple regression analysis were carried out to measure the participation level of local community in sustainable ecotourism development. Overall, the four dimensions of ecotourism impact had an average and strong relationship with each level of ladder of participation. The community believed that perceived ecotourism impacts influenced their willingness to participate in the ecotourism industry. Hence, local government should include more community participation in planning, management, and decision-making process in order to ensure the well-being of the local community..

Keywords: *development; ecotourism; ecotourism impacts; local community; participation.*

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INTRODUCTION

Tourism is the greatest and quickest thriving industry globally. It generates income and supports economic growth as the demands for ecotourism are increasing. According to Tourism Malaysia (2019), Malaysia registered 25.83 million tourist arrivals and RM84.1 billion in receipts in 2018. Nowadays, tourism marketers must understand the preferences and interests from different segments of consumers to ascertain the level of demand for them. Rising in the

number of foreign tourists coming to Malaysia is due to the natural settings, unique attractions and a variety of cultures from different races that allow them to experience life. In the context of ecotourism, it is comprising of the environment, local community, and visitors that play important roles in developing the tourism sector. Travelling to ecotourism sites can help in gaining a better understanding of the culture and history of the places, taking care of the surrounding

environment, while also creating economic opportunities to local people (Kiper, 2013).

LITERATURE REVIEW

Ecotourism Development in Malaysia

Ecotourism in Malaysia is developing at a high speed due to the 60% of the virgin tropical rainforest covered with immeasurable large quantity of biodiversity. Tourists can feel the tranquillity of mother nature while gaining the most exciting and beloved experiences which all have to do with outdoor recreation. Besides, ecotourism is a type of tourism that highlights community involvement throughout its development. As a result, ecotourism can be viewed as a concept of sustainable tourism that cares about environmental preservation and increases the level of community involvement in its implementation (Nair, 2013).

In order to develop tourism, Malaysia gives emphasise on ecotourism for tourism promotion (Anowar, Chamsuri andShaharuddin, 2012). The government has designed a separate plan for sustainable ecotourism development in Malaysia.The National Ecotourism Plan 2016-2025 had drawn up comprehensive guidelines to achieve ecotourism development through extensive protection and conservation of natural

resources. The plan serves as an instrument within the overall sustainable development of Malaysia and acts as a tool for the conservation of ecotourism sites in the country. In addition, the development of ecotourism becomes a good platform that provides opportunities to the communities to participate in income-generation related activities and subsequently improve their living standards.

Arnstein’s Ladder of Participation Theory

The theory of community participation called ‘a ladder of citizen participation’ was introduced by Sherry Arnstein in the year 1969 (Figure 1). Arnstein (1969) explains that this classification is necessary to reveal the manipulation of people in the grab of community participation projects by authorities and policy holders. The ladder has eight rungs which each of it matching a different level of participation, that is manipulation, therapy, informing, consultation, placation, partnership, delegated power and citizen control. This theory is relevant to the study where there is manipulation done by local authorities and local leaders about community development projects funds which leads to community loss of interest on participation in development projects (Arnstein, 1969).

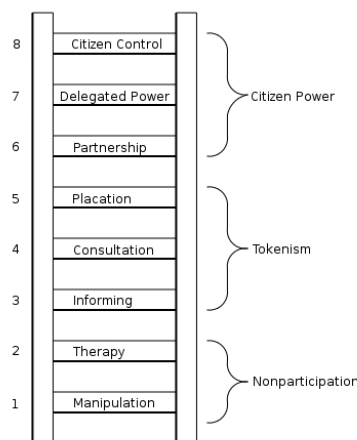


Figure 1: Arnstein’s Ladder of Participation (Arnstein, 1969)

Thus, the Arnstein's Ladder of Participation model is very important for the local community to ensure sustainable ecotourism development. It can reduce pressure on both local community and tourism planners in the ecotourism area. Local communities must undergo eight stages of the ladder to establish ecotourism development. Hence, this theory will carve the path for the researchers to evaluate whether the Arnstein's Ladder of Participation can be implemented as a model for the betterment of the community and for enabling the development of sustainable ecotourism with active participation from the local community.

Community Participation in Ecotourism

Mensah and Adofo (2013) define community participation in ecotourism development as an ecotourism program that takes place under the control and with the active participation of local people who inhabit or own a natural attraction. The participation of local people can create support for conservation among the residents as long as they get some benefits (Kiss, 2004) and will also enhance their well-being in terms of income, personal growth, self-confidence or other values that they appreciate (Oakley, 1991; Paul, 1987). On top of that, community involvement is the key instrument to sustain tourism resources and the economic, socio-cultural and environmental benefits (Jamwal, 2015). In order to ensure ecotourism achieves sustainable development, the communities are encouraged to contribute their opinions and assured that the concerns are taken into considerations by the authorised party (Prabhakaran, Nair and Ramachandran, 2014). The aim of this study is to determine the perception of the local community towards the ecotourism impacts, analyse the level of local community's participation and factors influencing

the local community's participation in sustainable ecotourism development.

MATERIALS AND METHODS

Study Area

The study site of this research, Bagan Sungai Burung, is located in Bagan Datuk District as one of the eight biggest fishing villages in Hilir Perak, Malaysia. This village is named Village of River Birds because there are many coastal birds inhabit along the beaches. Fishing is the main source of income in the village. According to the Head of the village, Mr. Heng Lai Heng, there are about 400 villagers and 70 families staying in Bagan Sungai Burung (personal communication). The population structure is made up of 30% of children, while the remaining 70% belongs to teenagers and elderly people. The first generation of settlers shared the same family name, which is "Heng (王)" means the "King" in China during ancient time and eventually it becomes the largest family name in this village. Most of the villagers are belonging to *Teochew* (95%) dialect group with a small percentage of *Hokkien* (5%) dialect group. The main languages spoken are *Teochew* and Mandarin. Bagan Sungai Burung has been acknowledged as a potential ecotourism site for its natural beauties such as sky mirror, blue tears and firefly tour. Majority of the tourists come from all states of Malaysia, Singapore, Thailand, and China.

Study Framework

The conceptual framework used in this study (Figure 2) is adapted from sustainability tourism which focused on economic, social, cultural and environmental dimensions and the level of participation is based on the ladder of participation by Arnstein (1969). The study seeks to identify the factors that influence the level of the local community's participation in ecotourism at Bagan Sungai Burung, Perak.

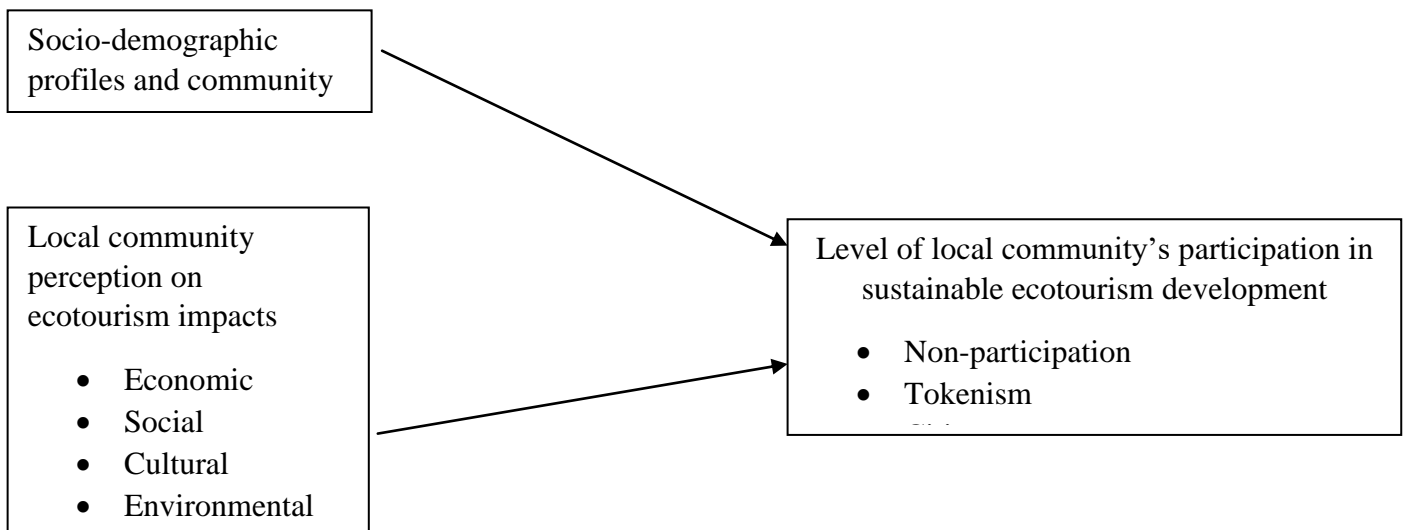


Figure 2: Conceptual framework

The left-hand side of the model shows the independent variables including socio-demographic profiles and community characteristics that are adapted from Ismael (2016) as well as perception of ecotourism impacts that are adapted from Kamilah (2018). These dimensions are proposed as the factors influencing the level of the local community's participation in ecotourism development.

Sampling and Analysis

In this study, data collection was performed using purposive sampling where the sample will focus on particular characteristics of population that are of the interest only. It is an efficient and practical tool when being used properly, and it can be as effective as random sampling (Dolores and Tongco, 2007). Therefore, only the local community who are aged 18 and above, were chosen as the sample of this study. The data was collected from house to house and the researcher managed to approach the respondents from all families in the village.

A pilot survey had also been carried out with 40 samples prior to the actual survey. According to Murphy and Davidsholder (1988), the Cronbach's Alpha coefficient estimate for the instrument and subscale will be acceptable and

reach the target reliability of at least 0.7, since the Cronbach's Alpha for the perception towards ecotourism impacts with 40 items was 0.853 while the Cronbach's Alpha for the overall level of participation with 21 items was 0.874, the instrument for both the dimensions were considered acceptable and reliable.

The data was analysed using the IBM SPSS Statistics 23. The measurement for community perception towards ecotourism impacts was measured using the mean and the percentage obtained from all the attributes by descriptive analysis. All the levels were measured using a Likert scale. For the level of local community's participation in ecotourism development, the chosen Likert scale is ranged from 1 to 5. This scale reduces the confusion or time delays in providing a range that is effective for evaluation (Lawton, 2005). The Likert scale used is stated as below:

- 1=Strongly disagree, 2=Disagree, 3=Neither nor,
4=Agree, 5=Strongly agree

Multiple regression analysis, a statistical analysis tool used to estimate the causal relationship between variables was carried out. It focuses more on the relationship between a dependent variable with other independent

variables. In this case, the relationship refers to the socio-demographic profiles, community characteristics and community perception towards ecotourism impacts that affect the local

community's participation in sustainable ecotourism development. The regression model used is

$$Y = \alpha + \beta_1 X_1 + \beta_2 X_2 + \dots + \beta_p X_p + \mu$$

Where,

- Y = dependent variable (overall participation level)
- α = constant value
- $\beta_1 \dots \beta_p$ = parameter to estimate from the sample
- $X_1 \dots X_p$ = independent variables
- μ = random error term

The confidence interval that will be used in this analysis is a 95% confidence interval with *t*-value of 1.96, which means any value that falls between *p*-value < 0.05 and *t*-value > 1.96 will be accepted as significant. F test, coefficient of multiple determination (R^2) and Beta (standardised regression coefficients) will be used to determine the significance of the model, the explanatory power of the model and the strength of the independent variables towards the dependent variables.

RESULTS AND DISCUSSION

Socio-demographic Profiles

The socio-demographic profiles of the respondents are presented in Table 1. The

majority of the respondents are male, which contributes up to 56.0% of the total respondents. On the other hand, the proportion of female respondents is 44.0%. It is observable that the respondents aged from 18 to 27 years old dominated the highest percentage of 29.0%. There are 61.0% of the respondents who had married and having their own family. The majority of the respondents (89.5%) are made up of *Teochew* descent. In terms of the highest education level, approximately 47.5% of the respondents have attended up to secondary school. Concerning the occupation, there are 32.5% of the respondents who are self-employed. It is notable that most of the respondents with no income ranked the first with 31.5%.

Table 1: Socio-demographic profiles of the respondents

Variables	Frequency	Percentage (%)
Gender		
Male	112	56.0
Female	88	44.0
Age group		
18 - 27	58	29.0
28 - 37	25	12.5
38 - 47	55	27.5
48 - 57	28	14.0
58 - 67	20	10.0
68 and above	14	7.0

Marital status		
Single	71	35.5
Married	122	61.0
Divorced	3	1.5
Widowed	4	2.0
Sub-ethnic		
<i>Teochew</i>	179	89.5
<i>Hokkien</i>	17	8.5
<i>Hakka</i>	1	0.5
<i>Cantonese</i>	2	1.0
Others	1	0.5
Religion		
Buddhist	193	96.5
Hindu	1	0.5
Others	6	3.0
Education level		
Informal	5	2.5
Primary	83	41.5
Secondary	95	47.5
STPM/Diploma	11	5.5
Degree	6	3.0
Occupation		
Student	26	13.0
Housewife	37	18.5
Retired	18	9.0
Self-employed	65	32.5
Private sector	54	27.0
Income (RM)		
No income	63	31.5
Below 1000	9	4.5
1001-2000	40	20.0
2001-3000	41	20.5
3001-4000	16	8.0
4001-5000	17	8.5
Above 5000	14	7.0

Community Characteristics

Table 2 shows the majority of the respondents (96.0%) have been staying in their respective residences for more than 10 years. There are 84.0% of the respondents having their residential distance less than 600 metres from their houses to the jetty. Besides, there are 49.5%

of the respondents have participated in ecotourism which is one year and above. Sky mirror and blue tears activities contributed 38.1% and 36.3% of the respondents respectively. The majority of the respondents involved in guide service and accommodation made up of 27.5% and 24.2%. There are 76.0% of the family members involved

in the ecotourism industry. Local community indicated that their involvement in ecotourism

operations as full time and part time employees in tourist attraction place.

Table 2: Community characteristics of the respondents

Variables	Frequency	Percentage (%)
Residential period (years)		
Below 10	8	4.0
11 - 20	42	21.0
21 - 30	33	16.5
31 - 40	27	13.5
41 - 50	50	25.0
51 and above	40	20.0
Residential distance to jetty (metre)		
Below 200	71	35.5
201 - 400	52	26.0
401 - 600	45	22.5
601 - 800	27	13.5
801 and above	5	2.5
Duration of involvement in ecotourism		
0	101	50.5
1 year	36	18.0
2 years	29	14.5
3 years	24	12.0
4 years and above	10	5.0
Participation in ecotourism activities (can tick more than 1)		
Sky mirror	85	38.1
Blue tears	81	36.3
Firefly tour	57	25.6
Nature engagement in ecotourism (can tick more than 1)		
Accommodation	57	24.2
Guide service	65	27.5
Local product business	38	16.1
Restaurant	32	13.6
Transportation	31	13.1
Others	13	5.5
Number of family members involved in ecotourism		
None	48	24.0
Only one people	63	31.5
Two to three people	65	32.5
Four people and above	24	12.0

Local Community Perceptions towards Ecotourism Impacts

According to Perdue, Long and Allen (1987), they had considered the studies on residents' perceptions and opinions or views as important steps in developing tourism in a particular destination. The ecotourism sector in Bagan Sungai Burung provides employment opportunities to the local people and this may

affect their perceptions towards the ecotourism industry. The community perceptions towards ecotourism impacts in sustainable ecotourism development in Bagan Sungai Burung are divided into four dimensions which are economic, social, cultural, and environmental impacts. Based on the findings on the perceptions towards ecotourism impacts, the highest five indicators in each category are shown in Table 3.

Table 3: Mean scores for community perceptions towards ecotourism impacts

No.	Indicators	Mean	SD
Economic impacts		M=4.16	
Ecotourism development highly			
1.	contribute to local community development.	4.22	0.778
2.	encourage local products industry.	4.21	0.669
3.	increase standard of living.	4.20	0.723
4.	increase job opportunities.	4.14	0.833
5.	increase purchasing power.	4.05	0.898
Social impacts		M=3.62	
Ecotourism development highly			
1.	improve cooperation among community.	3.80	0.868
2.	create responsible local community.	3.78	0.859
3.	increase quality of infrastructures.	3.64	0.881
4.	increase bonding between tourists and local community.	3.45	0.890
5.	improve the skills of women - venturing into small industries.	3.44	0.872
Cultural impacts		M=3.46	
Ecotourism development highly			
1.	maintain community lifestyle.	3.62	0.943
2.	preserve local's traditional houses.	3.51	1.089
3.	improve local cultural consciousness.	3.41	0.936
4.	provide cultural exchange between tourists and community.	3.40	0.897
5.	preserve cultural identity of community.	3.36	0.993
Environmental impacts		M=3.88	
Ecotourism development highly			
1.	encourage recycling activities.	3.95	0.867
2.	improve in waste management system.	3.91	1.057
3.	enhance image of village.	3.89	0.960
4.	encourage environmental conservation.	3.83	0.990
5.	improve cleanliness level in community.	3.82	1.006

M, mean; SD, standard deviation

There is no doubt that sustainable ecotourism development must encompass the economic aspect as it receives the highest mean score of 4.16 among the top five indicators. In general, the results show that the respondents viewed the economic impact to be positive. Based on Table 4.3, it is evident that the respondents agreed with the statements “ecotourism contributes to local community development”, “ecotourism encourages local products industry”, “ecotourism increases standard of living”, “ecotourism increases job opportunities” and “ecotourism increases purchasing power” with the mean scores of 4.22, 4.21, 4.20, 4.14, and 4.05, respectively.

All the variables showed that the local community will gain economic benefits from the ecotourism industry. This is consistent with the findings of Kamilah et al. (2018), Azwa, Ramachandran and Herman (2015), Johari et al. (2015), and Kunasekaran et al. (2011) in their studies of community participation in tourism. They stated that job opportunities, high income, and additional businesses are related to the economic benefits of ecotourism. Thus, an understanding of the local economy in the ecotourism context is crucial so that the tourism planners can take appropriate action to help in balancing the benefits to local communities (Wei et al., 2013).

According to the five indicators in environmental impact, the mean score is 3.88 which shows that the communities in Bagan Sungai Burung believe ecotourism will create positive benefits to them. Some of the environmental impacts which are favoured by local communities are “ecotourism encourages recycling activities” and “ecotourism improves in waste management system” with the mean scores of 3.95 and 3.91, respectively. Local communities agree with these two statements because the ecotourism development helps them to manage their waste problem. The existence of recycle bins

in the village reduces the open burning and rubbish throwing directly into the sea.

Other positive perceptions towards environmental impact are “ecotourism enhances the image of village” and “ecotourism encourages environmental conservation” with mean scores of 3.89 and 3.83, respectively. In Bagan Sungai Burung, sky mirror and blue tears are the two important features of ecotourism attractions that is depending on the natural environment. Based on Doswell(1977), ecotourism development that is focused on environmental issues will stimulate the local community to participate in ecotourism and conserve the environment. Issues relating to the impacts on biodiversity, endangered species, and humans as well as the environments must be given a balanced focus in tourism development (Amuquandoh, 2010).

In addition, the results indicate that the mean score of the top five statements in community perceptions towards social impact is 3.62 which is more likely to perceive social impacts from ecotourism. The highest level of agreement are the statements “ecotourism improves cooperation among community” and “ecotourism creates responsible local community” with the mean scores of 3.80 and 3.78, respectively. Local community believes that ecotourism development would bring positive impacts as their life would be better when ecotourism exists in their locality. Social benefits might be enhanced through the intercultural appreciation and understanding between the host community and visitors (Hunt et al., 2014).

Lastly, the findings on the perceptions of the local community towards cultural impact shows the lowest mean score, which is only 3.46. From the results, it can be observed that the statement “ecotourism maintains community lifestyle” ranks the first with the mean score of 3.62, followed by “ecotourism preserves local’s traditional houses” and “ecotourism improves local cultural consciousness” with mean scores of 3.51 and 3.41, respectively. Culture can satisfy the

needs of visitors and at the same time, it preserves local cultural resources (Ezenaguand Iwuagwu, 2016). The uniqueness of cultural resources in Bagan Sungai Burung refers to the houses were built on high stilts so that they stay above water level even during high tides and the signboards with the surname of the family above the main door.

The analysis shows that the local communities in the village have a positive perception of ecotourism impacts in terms of economy, social, culture and environment because they gain benefits either directly or indirectly from sustainable ecotourism development. This statement is supported by the study of Kamilah et al. (2018) about the local community participation in ecotourism development at Tasik Kenyir, Malaysia. According to Chili (2015), the more benefits perceived by residents, the more they tend to agree with the statement that tourism has positive impacts, while residents who gain fewer benefits from tourism will tend to perceive negative effects on the community.

Opportunities of Involvement in Planning and Decision Making

In this study, the participation level of the local community is determined by Arnstein's

Ladder of Participation (Arnstein, 1969). According to Arnstein (1969), the categorisation of participation has three main levels, (i.e. non-participation, tokenism, and citizen power). For each ladder of participation, indicators that imply the differences between the level of the local community's participation are given to measure their participation level. Therefore, the level of participation is measured separately for each ladder of participation using the scale of 1 (i.e. the lowest level) to 5 (i.e. the highest level) of participation. The analysis results of ladder of the participation are shown in Figure 3.

By using the mean score as a standard indicator, it is found that the local community's participation in ecotourism development at Bagan Sungai Burung has not reached the citizen power level. Overall, the level of non-participation (3.37) is higher than tokenism (2.89) and citizen power (2.82). Besides, citizen power has the lowest score when compared with other Arnstein's levels of participation. The low level of citizen power implies that the Perak State Parks Corporation includes the local community at a minimal level in the decision-making process. However, this is expected in a top-down decision-making procedure where the authority holds the real power in making decisions.

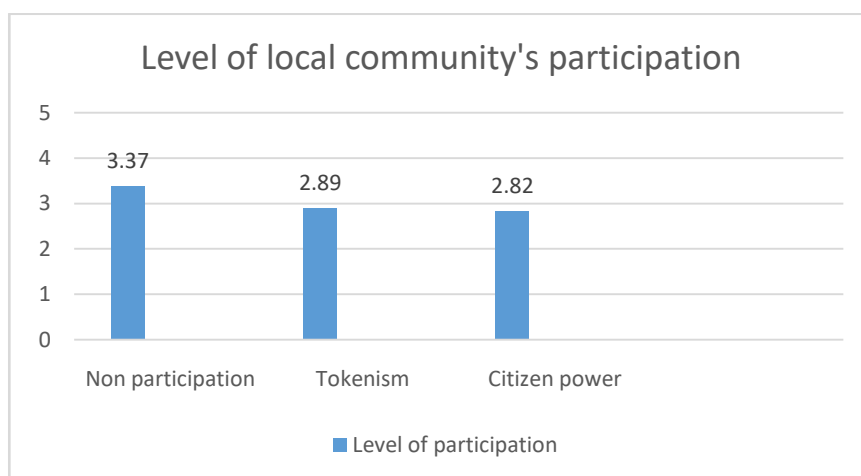


Figure 3: Mean score of each level in Arnstein's Ladder of Participation

Table 4 indicates the overall level of participation among the local community in sustainable ecotourism development at Bagan Sungai Burung based on the sum rating scales of the items. It shows that 72.5% of the respondents believe that their participation in ecotourism is at a moderate level. There is 17.0% of the respondents

involved in ecotourism at a low level whereas only 10.5% of them were highly involved in the development of ecotourism in this area. The finding implies that the local people are not involved in a high level of participation and they do not play a significant role in the decision-making process in the ecotourism industry.

Table 4: Overall level of participation

Level	Frequency	Percentage (%)
Low (21 - 49)	34	17.0
Moderate (50 - 77)	145	72.5
High (78 - 105)	21	10.5
Total	200	100.0

M = 25.36 SD = 7.81 Min = 36 Max = 105

Note: Level of participation is measured by a Likert scale of 1 (ie. strongly disagree) to 5 (ie. strongly agree) for each 21 items; the minimum rating was 21 and the maximum was 105 with a standard deviation of 7.81

Factors Influencing Level of Local Community's Participation

The main objective of this study is to identify the factors influencing the local community's participation level in ecotourism development. Multiple regression analysis with a stepwise method was employed to identify the predictors. A total of 18 independent variables which include eight socio-demographics, six community characteristics as well as perception towards four ecotourism impacts are tested on each level of the local community's participation dimensions. Table 5 shows the results of the beta coefficient and *p*-value that can explain the significant factors and how they affect the participation level of local community in ecotourism.

The result from the factors affecting the local community's participation in each level of ladder of participation is summarised in Table 5. In non-participation level, perception on economic impact ($t = 5.660, p = 0.049$) carries the strongest predictor. This indicates that the more favourable

is the perception of economic impact, local people only focus on the ecotourism business and emphasise the economic benefit but they are not interested to be involved in any planning or decision-making process. Based on a study in the Jiuzhaigou Biosphere Reserve of China, it is demonstrated that despite weak participation in decision-making process, the local community can benefit sufficiently from tourism (Li, 2006). Besides that, the findings indicate the perception of environmental impact ($t = 3.578, p = 0.035$) also affect the participation in ecotourism. This result is aligned with the study of Wanga et al. (2013), where they found an association between resident's perceived environmental impact and their attitude towards ecotourism. Positive environmental externalities explained that the local community in Bagan Sungai Burung live in a good and protected environment, so they would not interfere with the management of ecotourism.

In tokenism level, perception on social impact ($t = 3.008, p = 0.003$) is a more impactful factor that influence local community's participation than the perception on economic impact ($t = 2.617, p = 0.010$). Direct community benefits contribute to the perceived social impact of the local community. Local community in Bagan Sungai Burung was satisfied that the ecotourism development had improved and

increased the quality of infrastructures so that they can live in a more comfortable condition. In order to increase the community to be at the tokenism level, local authorities should increase the economic and social impacts of the community bring by ecotourism development.

For citizen power level, the perception of cultural impact ($t = 2.736, p = 0.007$) carries the stronger predictor. It means this factor is the most important factor influencing the local community's participation. The result supports

previous research where local communities who have good interaction with the local culture had a higher level of participation in ecotourism (Gwo, 2013). The next factor of participation is perception on social impact ($t = 2.006, p = 0.046$). Community well-being is the indicator of local people received in the ecotourism development area. Local communities must perceive higher social impact in order to increase their participation in citizen power level.

Table 5: Multiple regression analysis on participation level

Independent Variables	B	t-value	p-value
Non-participation			
(Constant)	2.387	6.948	0.000
Perception on economic impact	0.560	5.660	0.049
Perception on environmental impact	0.548	3.578	0.035
F = 2.759, R² = 0.540, Adjusted R² = 0.340			
Tokenism			
(Constant)	1.109	2.893	0.004
Perception on economic impact	0.249	2.617	0.010
Perception in social impact	0.328	3.008	0.003
F = 9.438, R² = 0.621, Adjusted R² = 0.451			
Citizen Power			
(Constant)	1.132	0.304	0.005
Perception on social impact	0.247	2.006	0.046
Perception in cultural impact	0.272	2.736	0.007
F = 13.602, R² = 0.218, Adjusted R² = 0.202			
Overall Participation Level			
(Constant)	2.236	3.129	0.002
Occupation - private sector	0.314	2.619	0.010
Duration of involvement in ecotourism	0.115	2.092	0.038
Number of family members involved in ecotourism	-0.394	-2.464	0.015
- none			
Perception on cultural impact	0.319	2.206	0.029
F = 4.003, R² = 0.502, Adjusted R² = 0.376			

B, Beta (standardised regression coefficients); F, F-test; R², coefficient of multiple determination

In Table 5, there are four variables found to have significant influences on the overall level of participation at the 95% confidence level, from

all the independent variables which are initially used. The R² obtained is 0.502 indicating that four independent variables account for approximately

50.2% of the variation in the overall local community's participation level. The t -values could be used to explain the relative importance of the independent variables (i.e. socio-demographic, community characteristics, perception towards ecotourism impacts) in contributing to the variance in the dependent variable (i.e. overall participation level). The higher is the t -value of the variable, the greater is the significance relative to the other variables.

In addition, occupation ($t = 2.619$, $p = 0.010$) carries the strongest predictors, it means that this factor is the most important factor in influencing the participation level of the local community in ecotourism development. Local community who works for the private sector have a higher level of participation when compared to student, housewife, retired people and self-employment workers. This scenario is caused by the local community who works under the Nine Island Agency always stays in contact with ecotourism. They are more aware of ecotourism development thus willing to participate more in the ecotourism sector.

The second predictor is the perception of cultural impact ($t = 2.206$, $p = 0.029$), which means that the factor will increase the level of the local community's participation in ecotourism development. The cultural impact influences local community opinions about tourism rather than economic, social and environmental impacts (Esshun and Tonto, 2014). TIES (2012) emphasises the need for ecotourism to improve the well-being of local people which include their culture. Residents' personal cultural exposure and interaction positively affect the resident's perceived ecotourism development (Emmanuel et al., 2017).

The next significant factor is the duration of involvement in ecotourism ($t = 2.092$, $p = 0.038$). It shows that the longer period of local community involved in ecotourism, the higher the level of participation in ecotourism development. Based on Mohd et al. (2009), the length of

involvement in ecotourism by local people has a positive influence on ecotourism activities and their participation in ecotourism development. The statement is also supported by Keogh (1990), who found that those people involve in ecotourism with a longer period would have a stronger feeling and enthusiasm about ecotourism.

Lastly, the number of family members involved in ecotourism ($t = -2.464$, $p = 0.015$) is the other predictor that affects the local community's participation level in ecotourism development. From the negative sign of beta coefficient, local community with none of the family member involved in ecotourism have lower participation level. According to Salleh et al. (2016) in their findings, local people should receive continuous support from their family members in order to increase the level of involvement in tourism-related business.

CONCLUSIONS

In a nutshell, it is essential to increase the participation of the local community in ecotourism development. This study successfully shows that there is a significant relationship between perceived ecotourism impacts towards participation level in ecotourism development. Meanwhile, the framework of Arnstein's Ladder of Participation has validated to be a useful tool to determine the local community's participation in ecotourism context. The findings show that the low level of citizen power implies that the local authority includes a minimum level of local community's involvement in the decision-making process in ecotourism development at Bagan Sungai Burung.

A successful tourism destination requires sustainable development regardless of whether it is in the form of economic, social, cultural and environmental sustainability. The sustainability of ecotourism development must include the cooperation of the communities and their beliefs that they will obtain benefits from the

development. In this study conducted at Bagan Sungai Burung, the four dimensions of ecotourism impacts influence the local community's participation level in successful ecotourism development. This means that the perception of the local community on economic, socio-cultural and environmental impacts will contribute to the willingness of the local community's participation in sustainable ecotourism development.

Apart from that, some recommendations can be made to local government in enhancing the local community's participation in ecotourism. Relevant authorities are ought to provide more assistance in training and knowledge related to ecotourism for the local community in order to motivate them to participate in meetings and actively express their opinions. Local tourism stakeholders should play a significant role to increase the development of various ecotourism activities and facilities to sustain the active involvement of local residents in ecotourism operation.

With the cooperation of the local community and local authorities, a balanced development can be achieved to maintain the increasing number of tourists and at the same time to give benefits to the local community continuously. Last but not least, similar studies can be done in the future to determine the participation level of the local community in other ecotourism sites so that it can ensure sustainable development of both the community and ecotourism.

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