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Ecotourism development and impacts on rural communities: a study in Kalpitiya, Sri Lanka

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Abstract

Ecotourism has become a new trend of Sri Lanka. Though Sri Lanka has a higher ecotourism potential, its actual level has not been achieved. This study was conducted to analyze the ecotourism development and impacts on rural communities in Kalpitiya by using convenience sampling method with 150 target participants. According to the results of the study, 18% of the community currently involved in ecotourism. However, there is a positive attitude among 73% of the local community towards ecotourism, while 69% of the local community is willing to participate in the perception of receiving its benefits. Further, it was observed that there was a significant relation with education ($\chi^2=10.44$, P-Value = 0.034), income level ($\chi^2= 15.691$, P-Value = 0.003) influences and willingness to participate on ecotourism. Further, there was a significant potential for the satisfactory level of tourist during their visit. However, there were some impacts influence against the success of the ecotourism development in the area, and revenue share with the community ($p = 0.0089$), lifestyle changes with foreign culture ($p = 0.0000$) and discharge of waste ($p = 0.0000$). These findings have indicated that more benefits have been brought to the area due to the ongoing ecotourism development activities. However, the local community is not in a position to get the real benefits of the ecotourism development due to lack of proper education, knowledge, experience, capacity etc. Overall, it could be concluded that it is necessary to have a well-planned awareness program about the community involvement in the ongoing ecotourism development activities. Therefore, the authorities should concern more about the community awareness and capacity building programs in order to deliver the benefits of ecotourism development to the local community also to ensure the long-term sustainability of the industry.

Keywords: *Economic benefit, Ecotourism development, Ecotourism impact, Community participation*

1. Introduction

Sri Lanka is a beautiful country in the South Asian region and its pivotal geographical position and the beautiful land structures are mostly attracting the world by its location, beach destinations, favorable climate, rich cultural heritage, national parks and wildlife are welcoming people as tourists from anywhere in the world (Jaafar and Maideen, 2011). Tourism is one of the largest industries in the world which annually generates US\$ 3.4 trillion (Matthews, 2002). World Travel and Tourism Council (WTTC) says, tourism provides nearly 200 million job opportunities around the world and generates the Gross Domestic Product (GDP) of the world of 11% (Eagles, 2001).

Tourism plays a major role for the Sri Lankan economy and contributes as the fifth largest source of foreign exchange earnings in 2012, and third largest in 2013 contributing 5.2 percent to total foreign earnings of the country (Welgamage, 2015). Tourism industry plays a major role in other industries such as; accommodation, transportation, entertainment, catering, tour operators and travel agencies (Matthews *et al.*, 2002). Even though, but the unplanned tourism development will lead to intensive destructive impacts. Mangrove marshy lands, small islands, coastal areas, mountain areas, coral reefs, beaches and desert areas have the risk possibility to be affected from unplanned tourism. It has countless of negative effects with an unstable income since it is largely affected by weather and political instability. (Matthews *et al.*, 2002; Adem, 2008).

As new solution, which is broadly termed as “Alternative Tourism”. As a result, the thought of Ecotourism developed with the cooperation of rural, cultural, nature tourism, and its linked activities as a niche market (Shukri and Yajid, 2015). Ecotourism delivers many advantages to the local society, for example taking care of eco system, increase the country economy by providing the foreign exchange earnings and living standards of the local community people, considering the regional development, reduction of waste, minimize the negative impacts to the environment etc. Nevertheless, ecotourism can play negative impacts on society when poorly organized and accomplished including negative cultural changes, severe environmental degradation and reduced welfare of individuals or local communities (Matthews, 2002).

Apart from this, it is very obvious to investigate the negative effects of the ecotourism on rural community and have to find appropriate solution for the problems which are generated by the ecotourism is the most needed one to the current scenario for the country Sri Lanka. Tourism development in rural regions includes some shareholders who make plans and policies interactively. Most of the time, for rural tourism development, to be sustainable the support of the local community is indispensable (Andereck, 2000).

Native people may remark tourism as a plus point as it affords them with job opportunities, giving them more income, helps infrastructure and facilities develop, and it is one of the way of step up welfare (Sharifzadeh *et al.*, 2012). There are, of course, some cases that local people see tourism as a drawback as it may give environmental and socio-cultural damage (Sharifzadeh *et al.*, 2012). The term “Ecotourism” first appeared in the 1970’s decade that saw the growth of global environmental movement and a convergence of deemed for sustainable improvement and socially liable forms of tourism (Mensah and Ernest, 2013). Real meaning of ecotourism is actually a debate and it is called as undisturbed nature based tourism which allows the tourists for admiring, studying and liking the nature and local values with great responsibility and environmental friendly thus encourage them to uphold a better environment (Chiutsi, 2011). Appropriate arrival to the native community and resource conservation in long term manner are the two main things in the ecologically sustainable tourism (Eagles, 2001).

Research study was conducted at Kalpitiya, which is one of the pre-planned ecotourism development site in Sri Lanka and investigated the influences of the ecotourism on rural community and proposed improvement policies to reduce the negative impacts within a conceptual frame work (

Figure 1)

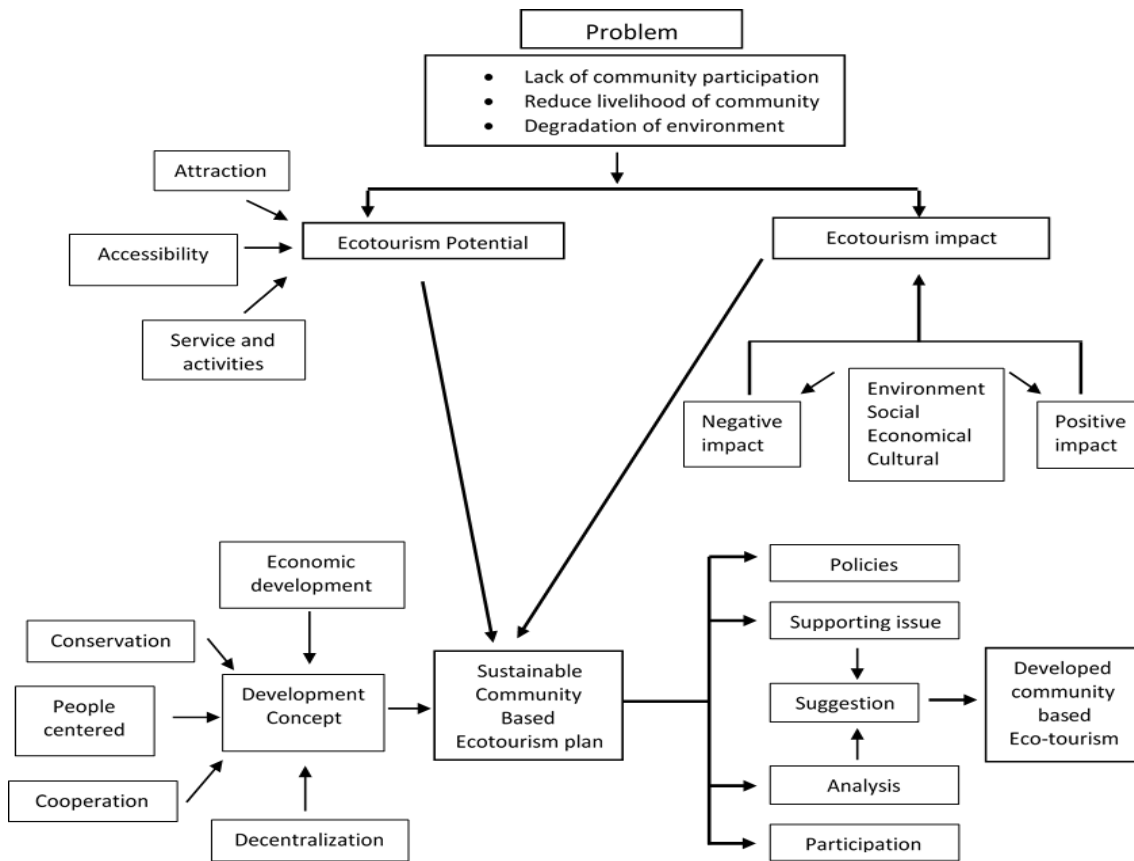


Figure 1.conceptual framework based on objectives

2. Research methodology

2.1. Study area

The study was implemented in one of the planned tourism development sites in Sri Lanka, Kalpitiya which is known as a peninsula in the Puttalam district, comprising of 14 main islands. It is a marine sanctuary with a diversity of habitats ranging from bar reefs, saltpans, flat coastal plains, vast sand dune, salt marshes and beaches mangroves swamps and separates the Puttalam lagoon from the Indian Ocean. There are plentiful of Dolphins, sea turtles and coral reefs in the zone. The total landmass of 14 islands have a 1672.67 hectares (4133.19 acres). 64,908 people (2009 Census) are living in Kalpitiya in which 12,967 are small-scale fishers,

and 25% of women involved in fishing-related activities. Kalpitiya which was formulated as early as 2003, is also one of the 15 sites for Sri Lanka 's Tourism Development Strategy.

2.2. Sampling

A research population was a well-known collection of individuals or objects which have same characteristics. All individuals or objects within a certain population typically have a general, binding trait. Commonly, it is a vast collection of individuals or objects that is the main attention of a scientific query. This research measured community perception related to tourism developments and its effects at Kalpitiya. Therefore, the target population of this study represented all the local communities those who lived under the Kalipinya 31 GN division and it will be taken 100 of respondents from the total population of local community and 50 visitors. Following Figure 2 explains how the sample is selected from population.

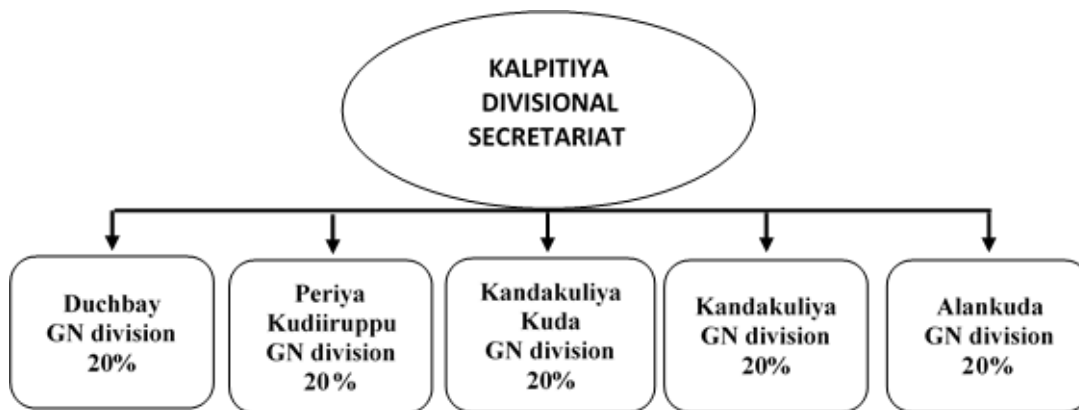


Figure 2.sample frame of local

2.3. Data collection

2.3.1. Primary data collection

Three different methods were utilized to reach the objectives of the research in the primary data collection. These were pre-tested structured questionnaires, inventory and personal observations. To conduct the research, primary data was utilized to measure both service quality and tourist satisfaction. Data was collected through questionnaire from selected sample. Questionnaire was enriched to disclose key indicators which are related to dependent and independent variables to achieve research objectives.

2.3.2. Secondary data collection

Secondary data had been collected in many ways. Such as, internet, newspapers, research articles and magazines. For the rating purpose secondary data was mainly used.

2.4. Data analysis

Data were tabulated in MS – Excel sheets and descriptive statistics have been used to analyse the responses and the survey conducted in a quantitative manner. Chi square test was used to investigate the relationship between the dependent and independent variables. Statistic 10 version used to Wilcoxon signed rank test was applied for the analysis of Likert Scale survey questions. Multiple linear regression was used for prediction, used with several independent variables and one dependent variable. Minitab version 18 was also used for the purpose of inferential analysis.

3. Results and Discussions

3.1. Willingness to participation

To assess the willingness to participation of local community in ecotourism practices of the village, a number of indicator variables were used; gender, age, occupation, education level and income. Gender had no significant effect on participation of local community in sustainable ecotourism practices ($\chi^2 = 0.0376$, p -Value = 0.540). Further, age also had no significant effect on participation of local community in ecotourism practices ($\chi^2=7.688$, p -Value = 0.579). Further, there was no significant difference between land ownership with length of stay and participation of local community in ecotourism practices ($\chi^2= 2.43$, p -Value = 0.488). Further, occupation also had no significant effect on participation of local community in ecotourism practices ($\chi^2=3.341$, p -Value = 0.502).

However, the study found that there are significant difference in the association between the education level and income of the local respondents and the participation of local community in ecotourism practices. The level of education significantly affects the participation of local community in ecotourism practices of the village ($\chi^2= 10.44$, p -Value = 0.034).

In addition, there was significant difference between level of income of the community and the participation of local community in ecotourism practices of the village ($\chi^2= 15.691$, p -Value = 0.003) and Table 1 shows below.

3.2. Visit motivation of tourist

As a result of survey (Figure 3) on the visit motivations of tourists, natural beaches motivation was the highest (46 %) position. Their motivation to visit other sectors followed by motivation of agriculture (20 %), the motivation of village history (16 %), motivation of culture (8%), motivation of ecosystem (6%), other (4%).

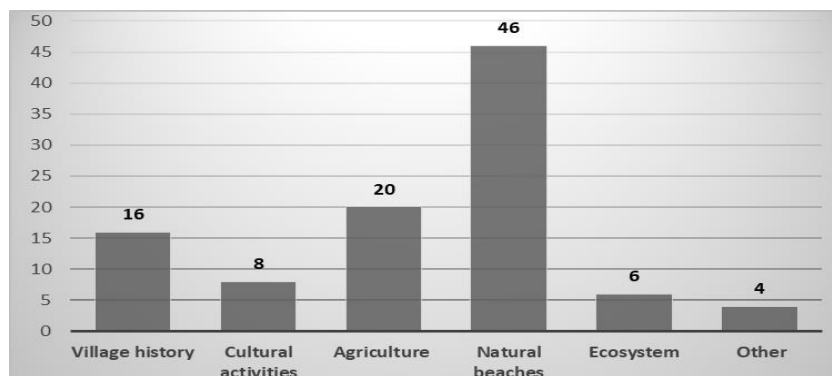


Figure 3.Motivation for visit

Table 1. Association between willingness to participate and gender, age, length of residency, education and occupation

Variables	Yes to participate	No to participate	Pearson chi-square value	P value
Gender				
Male	47	23	0.376	0.54
Female	22	8		
Age				
<25	5	1	7.688	0.104
26-35	18	9		
36-45	27	8		
46-55	14	13		
>55	5	0		
length of residency				
whole life	32	19	2.43	0.488
>20 years	11	5		
<20 years	14	4		
<10 years	12	3		
Education level				
Primary	12	11	10.44	0.034*
Below G.C.E O/L	30	17		
G.C.E O/L	9	0		
G.C.E A/L	13	2		
Diploma/degree	5	1		
Occupation				
Government	8	6	3.341	0.502
Fishing	16	6		
Business	15	6		
Self-employment	23	7		
Unemployment	7	6		
Income level				
<10000	32	3	15.691	0.003*
10001-20000	14	13		
20001-30000	13	7		
30001-40000	8	4		
>40000	2	4		

3.3. Tourist preferences

Figure 5 disclosed the data related to tourists' preferences during the visit. Majority of the respondents (21.9%) selected "being close to nature" as their first preference closely followed by 18.8 % respondents wanted to have fun. 14.6% of the respondents liked to obtain true relaxation, and also 12.5% respondents who desired to learn about nature. 8.3 % wanted to do something new and meeting new people. There were 4.2% of respondents choosing the item "viewing landscapes" and "Other" and provided several reasons for their preference.

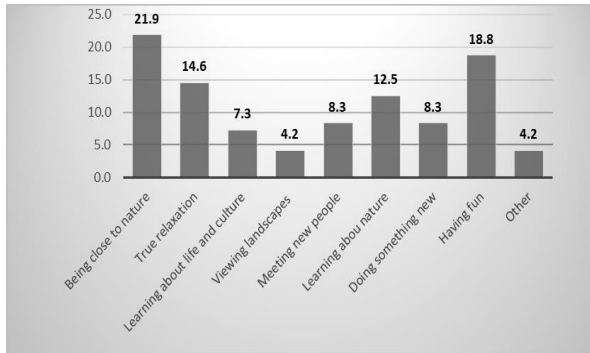


Figure 5.Tourist preferences to visit

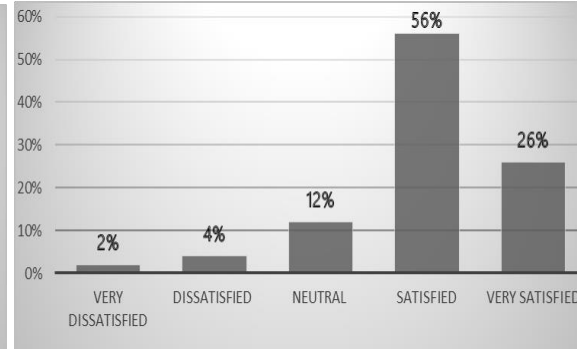


Figure 4.Tourist satisfaction level

3.4. Tourist satisfaction with their visits

The tourists were asked about their satisfactory level of during the visit to the village. As presented in the following Figure 4, majority of the respondents (56 %) were satisfied with their visit while 26% were very satisfied with their visit. Further, 12% were in neutral level while 4 and 2 % of groups were dissatisfied and very dissatisfied with their visits respectively.

Wilcoxon Signed Rank Test was performed to check whether there is a significant potential of satisfactory level of tourists of their visit or not by feeding data to Statistix 10. Table 2 shows the calculated Z value with reference to satisfactory level of tourists as suggested. According to the findings approximately satisfied level, calculated Z- value is higher than 1.96 (Z 5.04, P-0.0000). That means there is a significant potential for satisfactory level of tourists.

Table 2.Potential of satisfactory level

Variable	Mean value	Calculated Z – value**	P value
Satisfaction	1.02	5.04	0.0000*

3.5. Analysis the social, economic and environmental impacts on development of the ecotourism

Wilcoxon Signed Rank Test was performed to check whether there is a significant potential impact level of tourists of their visit or not by feeding data to Statistix 10.

3.5.1. Social impacts

According to Table 3, it reveals that majority of community people identify as living style will be mixed with foreign cultures can be very highly negative impact on host culture. It significantly effects on

local community (Mean 1.51, Z-value- 8.02, P- value- 0.000). Although the people recognize that foreign languages will be highly negative impacts on local dialects as well. Because it is high and significantly negative socio cultural impact (Mean 1.3, Z-value 7.26, P-value 0.0000). The impact of ecotourism bring more recreational facilities which most of the community moderately positive impact and it significantly socio cultural impact (Mean 0.41, Z-value 3.25, P-value 0.0012) and the gambling, sexual abuses, prostitution and alcoholism is lower impact (Mean -0.34, Z-value -2.39, P- value 0.0169) compare to living style of the community will be mixed with foreign culture factor.

Table 3.Social impacts

Factors	Mean	Z-Value	P-Value
1. Foreign Languages will impacts on local dialects	1.3	7.26	0.0000*
2. Living style will be mixed with foreign cultures	1.51	8.02	0.0000*
3. Gambling, sexual abuses, prostitution, and alcoholism	-0.34	-2.39	0.0169*
4. more recreational facilities for local community	0.41	3.25	0.0012*

Note: * indicates that P value < 0.05, Significant

3.5.2. Economic impacts

According to Table 4, it reveals that the majority of community people known as ecotourism developments are developed the public infra-structures under economic impact (Mean 1.24, Z-value- 7.15, P-value- 0.000) that is significantly given appositive impact to community. As well as the mean of increasing investment opportunities gives significantly positive impact to community by the ecotourism developments (Mean 0.96, Z-value- 5.72, P- value- 0.000). Then the factor of new employment opportunities are low and not given significant impact through ecotourism (Mean -0.16, Z-value- -1.24, P- value- 0.2165) and revenue share with community is significant of negative impact to the local community.

Table 4.Economic impacts

Factors	Mean	Z-Value	P-Value
1. New employment opportunities	-0.16	-1.24	0.2165
2. Public infrastructure developed	1.24	7.15	0.0000*
3. Revenue share with community	-0.38	-2.62	0.0089*
4. Investment opportunities	0.96	5.72	0.0000*

Note: * indicates that P value < 0.05, Significant

3.5.3. Environmental impacts

According to Table 5, it reveals that majority of community people identify as Increase discharge solid waste to the natural environment under which gives a statistically significant negative impact (mean-0.91, Z-value- 6.16, P- value- 0.000) and because of the heavy use of boats, it polluted the lagoons (mean- 0.71, Z-value- 5.20, P- value- 0.0000) that is shown not significantly negative impact on ecotourism development and ecotourism developments is low on marine environment (mean- 0.21, Z-value- 1.83, P- value- 0.0676). Increase the noise pollution is very low (mean- -0.15, Z-value- -1.34, P- value- 0.1788) compared to the other effects. It is not significantly impact to the community. The area encompasses with a natural beach area and therefore, the potential development of the industry is mainly depending on the quality of the environment. Therefore, the local community imagine that the tourism development will positively effect on the natural environment of the area.

Table 5.Environmental impacts

Factors	Mean	Z-Value	P-Value
1. impact on marine environnent	0.21	1.83	0.0676
2. increase noise the pollution	-0.15	-1.34	0.1788
3. increase discharge of solid waste	0.91	6.16	0.0000*
4. Heavy use of boats to pollute lagoon	0.71	5.20	0.0000*

Note: * indicates that P value < 0.05, Significant

3.6. Identification of constrains to develop sustainable community based ecotourism development

3.6.1. Impartments needed for the development of community based ecotourism

Out of 100 respondents, 41 % have said that they need a proper waste disposal plan for the area because there was no any authority to collect their wastes regularly. Hence, these area people normally practice burning of wastes. There is a few amount of waste collecting bins. Another 27 percentage of respondents reveals that they need a proper awareness about the field. Some other respondents (9 %) said that they need proper pipeline water system since these areas have no pipe born water supply and they all depend on ground water wells. Hence, during dry season they have to face to the water scarcity. Another 18 % agreed that they need an investment opportunity. As shown in the Figure, 16 % said that they need employment opportunities. Another 13 % and seven percent pointed out that village need more and improved transport facilities and medical centres respectively. Another 8 % and 11 % said that this village needs more banking facilities and other infrastructure facilities respectively. While, some said (16%) they expect proper administration to the village. 1.25 % mentioned about illegal practices of cutting trees in the forest area

3.6.2. Demand in economic benefit of new activities

The most demanded activity (6) was fish massage in mangroves area (58%) and the off-road jeep driving (37%), Camping Tents (22%), Night fish catching (18%), other new activities (14%) were respectively identified a demanded by tourist.

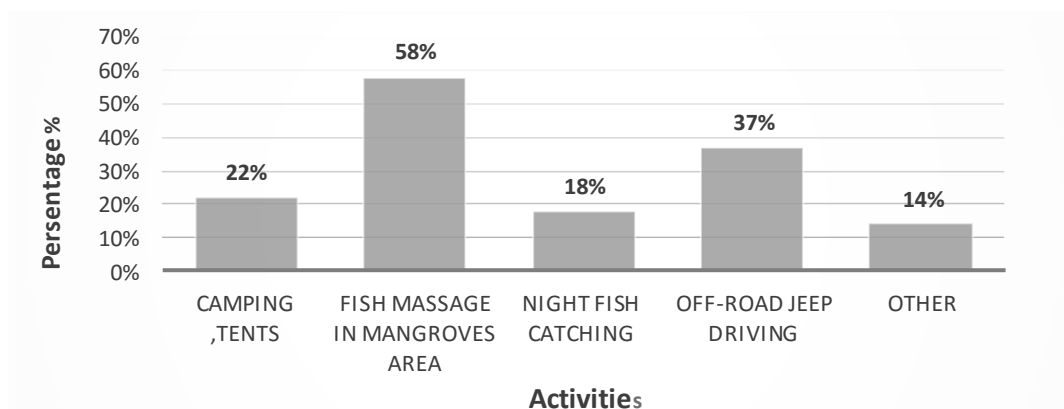


Figure 6. Demanded activities

4. Conclusion

The community had very low involvement in current eco-tourism development because of low awareness but had positive perceptions about the eco-tourism development for their future advantages like as: more employment opportunities and public infrastructural facilities like roads, water, electricity etc. Most of the peoples willing to participate in the ecotourism establishments in the area by providing products and services. The level of education and income had significant effect on their willingness to participate in eco-tourism activities.

More than half of visitors had good satisfaction during the visit of the area. In addition, almost majority of the tourists said that natural beach environment was the motivation of their visit while specific amount of group has stated that major preferences were given for being close to nature and having fun with adventure activities. After the eco-tourism establishment in the area, public infra-structure, investment opportunities and more recreational facilities for local community have shown significant positive impact on local community. But they have a doubt and fear about some aspects related to revenue share with community, foreign Languages mix, and lifestyle change, increase discharge of solid waste and pollution of lagoon with the use of heavy boats, which have shown significant negative impact on local community.

5. Suggestions to improve the ecotourism

5.1. Suggestions by the community people to improve the ecotourism

According to Figure 7, out of 100, Most of the community (41%) suggest to develop stakeholder and community relationship. Following 36% and 33% suggest respectively the supply directly and Government incentives. Children to take tourism as their careers is preferred by 29% and proper waste disposal system is preferred by 21%. Least of the community likes to sell through local industries (19%) and participate natural resource protection (15%) and.

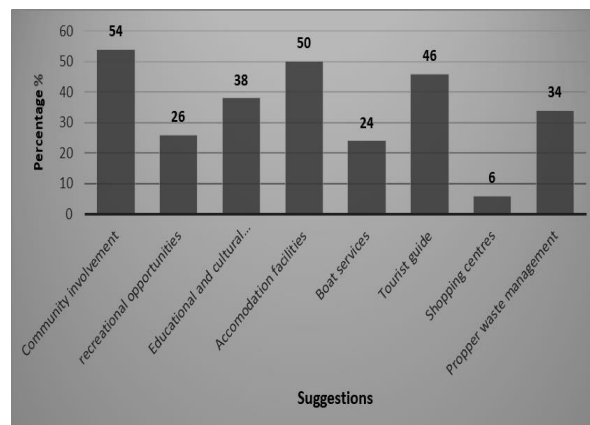
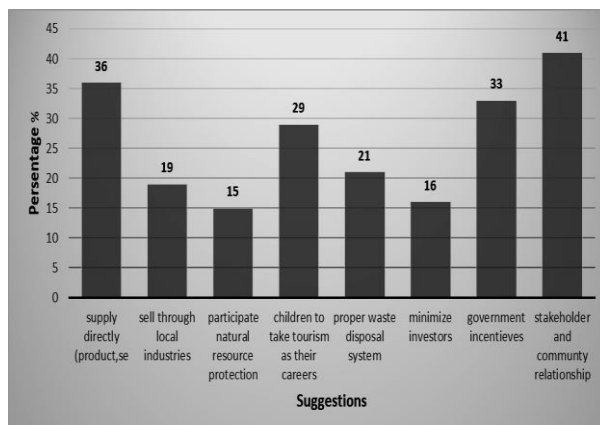


Figure 7. suggestions by the community people to improve the ecotourism Figure 8 suggestions by the tourist people to improve

5.2. Suggestions by the tourist people to improve the ecotourism

With the perception of tourists, 54% suggested more involvement of community in ecotourism activities by providing accommodation facilities (50%) and tourist guiding activities (46%). 38% are preferred for educational and cultural opportunities. Proper waste management (34%) was the next place. Recreational opportunities (26%) and boat services (24%) were next and (6%) tourists were suggested shopping centres

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