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Standard of Living and Community Perception in the Community Based Ecotourism (CBET) Sites of Kerala: An Inter Zone Analysis

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Abstract

This study is an attempt to situate the quality of life and standard of living of local communities in ecotourism destinations *inter alia* their perception on forest conservation and the satisfaction level of the local community. 650 EDC/VSS members from Kerala demarcated into three zones constitute the data source. Four variables have been considered for evaluating the quality of life of the stakeholders of ecotourism sites, which is then funneled to the income-education spectrum for hypothesizing into the SLI framework. Zone-wise analysis of the community members working in tourism sector shows that the community members have benefited totally from tourism development in the region as they have got both employments as well as secured livelihood options. Most of the quality of life-indicators of the community in the eco-tourist centres show a promising position. The community perception does not show any negative impact on environment as well as on their local culture.

Keywords: Kerala, Community Based Ecotourism, Community Perception, Community Participation, Standard of Living, Local Communities

1. Introduction

Kerala is India's most advanced state with human development index at par with the developed countries. Almost 100 percent literate, the state has the highest life expectancy and lowest infant mortality rates among all Indian states. As a tourist destination, Kerala is famous especially for its ecotourism initiatives. Its unique culture and traditions, linked with its varied demography, has made Kerala one of the most popular tourist destinations in the world. Some of the popular attractions in the state include the beaches at Kovalam, Cherai, Varkala, Kapad; hill stations like Munnar, Nelliampathi, Ponmudi, Wayanad; backwaters in Alappuzha, Kumarakam, Punnamada and wildlife's have accounted for the heavy traffic of tourists. Other heritage sites, such as the Padmanabhapuram palace, Hill palace, Mattanchery Palace etc also gain special importance in Kerala's tourism map.

Kerala was the first state in the country to announce tourism as an industry way back in 1986. Kerala was also the first state to set up agencies for the development of tourism and to formulate policy for the promotion of tourism. Tourism emerged as the major income earner for Kerala's economy to the tune of Rs 81.8 billion. According to WTTC, by 2013 Kerala's travel and tourism is expected to achieve an annual growth rate of 11.4 percent at Rs 569.3 billion (Kerala Development Report, 2008). Within tourism sector ecotourism has obtained a strong presence in Kerala. 56 potential ecotourism destinations from 14 districts have been accepted by Kerala Tourism Department (Govt. of Kerala, 2006). Ecotourism projects in Kerala are based on the concept of sustainability in the tourism sector where there is a balance between the nature and the people living there. 15 wild life sanctuaries and 5 national parks have a predominant role to play in the ecotourism initiative of the state.

Tourism benefits the local community in a significant manner by way of increased income for the local people, generating new jobs and the concomitant increase in the quality of life of the local communities (Smith, 1989). This inevitably is ensuring a sustainable and eco-friendly environment for safe-guarding the livelihood and improving the quality of life of the communities involved in this process (Menkhous and Lober 1996). Ecotourism is a major source of income and employment for the local communities in the ecotourism destinations. In the case of Kerala, most of the eco-tourist destinations are inhabited by the weaker sections of the society including tribes who were left behind. The ecotourism development of Kerala and the simultaneous increase in the flow of tourists to these eco-tourist destinations would help in providing livelihood opportunities to the local communities and the betterment of their lives. Economic development brought forward the buoyant growth in ecotourism demand over the years need to be discussed along with the sustainability issues relating to it as well.

The growth of ecotourism has been phenomenal during the last decade with the increase in tourist inflow and

associated activities. The community linked ecotourism activities, important in Kerala's tourism development helps in the inclusion of the local community in the development discourse of the state through the enlargement of ecotourism base in various parts of the State (Thampi, 2005). The Forest Development Agencies (FDA) aim at providing employment to the local forest dependent communities through afforestation and conservation programmes. Through their activities they create valuable forestry assets for the forest dependent communities and other durable community assets for overall economic development of the target communities. The FDA thus can be stated as a consortium of the Eco Development Committee (EDC) or Vana Samrakshana Samithi (VSS), a specific form of institutional settings in Kerala.

2. Materials and Methods

This paper is an attempt to understand the perception of local communities in ecotourism destinations in the state and the quality of life and standard of living of these communities. Data of 650 EDC/VSS members from three zones, 230 from South zone (Thiruvananthapuram, Kollam, Pathanamthitta and Kottayam), 220 respondents from Central zone (Idukki, Ernakulam and Thrissur) and 200 from North zone (Palakkad and Wayanad) involved in various fields of Community based Ecotourism (CBET) in Kerala are analyzed for this purpose. The number of respondents from each zone was decided on the basis of active EDC's/VSS in the area and their population proportion. A structured interview schedule was used to obtain information about the quality of life as well as perception of the local community. The data were subjected to inter zone comparison for understanding the differences if any in the standard of living or perception of the local community. To validate the results statistical tools such as Chi-Square, Factor Analysis etc have been employed.

3. Standard of Living

3.1 Standard of Living Index (SLI)

Data about four variables namely ownership of house, source of water, source of light and source of information of the respondents in all the zones were analysed to understand the living standard of the communities in these zones.

Table 1 gives information about the four variables (ownership of house, source of water, source of light, and source of information) that were used to determine the living standards of the respondents.

Table 1 about here

Analysis about the ownership of house as given in Table 1 brings to light that 80.80 percent of respondents live in own houses where as 4.20 percent in rented house and 1.70 percent in their parent's house. 12.60 percent of the respondents have other kinds of accommodation facilities such as staff quarters, etc. This shows that in the matter of accommodation/housing facilities, more than 75 percent of the respondents are self-sufficient. Zone-wise analysis also gives similar outcomes.

Source of water is one of the major determinants of the quality of life of the households. From the overall analysis (see Table 1), we can infer that majority, i.e. 63 percent depend on public source of water (33.50 percent on public tap, 23.20 percent on public well and 6.30 percent on canal/river/pond). Only 37 percent have their own source of water out of which only 8.70 percent of the total respondents have their own water connection. This indicates that availability of drinking water is still a problem for community members. Inter zonal analysis of the factor gives wide variation between and among zones (see Table 1). Majority (73.2 percent) of the community members in the south zone depend on their own well for water, however the central zone communities depend more on public sources for water [public tap (40.60 percent) and public well (22.9 percent)]. Only 28.90 percent have their own source for water (17.10 percent have own well and 11.80 percent have house connection). In north zone too more than 60 percent (30.20 percent on public well and 37.20 percent on public tap) depend on public sources for drinking water. Only 30.20 percent of the respondents have own well and 2.40 percent have house connection.

Majority of the respondents (76.2 percent) have electricity connection in their homes. This is followed by kerosene (20.70 percent), 6.2 percent uses other sources and 3.70 percent uses oil lamps (see Table 1). Zone-wise analysis also gives similar pattern with most of the respondents having electricity connection.

Community members were asked to mark the sources from which they received news and information .Across zones (see Table 1), more than half of the respondents (29.6 percent) depend on TV, 21.4 percent respondents considered radio as the source of information, followed by newspaper (19.0 percent), government officials (13.9 percent), neighbors (6.5 percent), public leaders (5.7 percent) and magazines (3.3 percent).

3.2 Comparing SLI with Income, Zone and Education

We can infer from the analysis that there is significant difference between the Standard of Living parameters and

income level of the community members. Community members having low SLI value (57.5 percent) are in the income group of Rs.3001-4000, 18.22 percent constitutes income levels of 2001-3000 and 14.22 percent in the income group of Rs. 4001-5000. Only 5.33 percent of the community members are in the income category of Rs.5000 and above. In the case of medium SLI category, we can see a similar pattern with slight variations in the percentages of medium SLI in 4001-5000 income categories. In the case of high SLI category the income level comes more than Rs.5000/- (see Figure 1).

Figure 1 about here

Table 2 about here

This kind of difference in SLI is further evaluated with the help of Chi-Square test to bring out the significance. The Chi-Square value shows that there is significant difference between income levels and Standard of Living of the community members (Table 2).

Table 3 and 4 about here

When zone-wise analysis of the SLI values for community members is done, it is inferred that there is a minor difference in the proportion of low, medium and high SLI values. This is shown in Table 3. Chi-Square result for this is shown in Table 4 which shows that there is a significant difference between the two. But, it can be seen that majority of the respondents (73.5) coming under high SLI category are from the south and central zones (37.00 percent and 36.5 percent respectively). Only 26.5 percent are from the north zone.

Table 5 and 6 about here

Figure 2 about here

When the effect of educational qualification on the SLI of the community members was analysed, it was found that there is variation in the SLI value based on the educational qualification. The results are shown in Tables 5, 6 and Figure 2. It shows that majority of respondents having low SLI are having the educational qualification of 10th and below (85.78 percent) and undergraduates (12.89). Graduates and post-graduates form only 1.33 percent (0.44 and 0.89 percent, respectively) of the total respondents having low SLI. There is no change in the majority position in the medium SLI category as well with 49.88 percent 10th and below respondents and 26.14 percent undergraduates. But, there is an increase in the share of the other two categories with graduate respondents constituting 15.35 percent and post graduates 8.63 percent of the medium SLI category. In high SLI section, majority (52.86 percent) are post graduates, followed by graduates (24.28) and under graduates (14.29). Only 8.57 percent of the total respondents having qualification of 10th and below are in the high SLI category. This, the respondents having higher educational qualifications showed greater tendency to be in the high SLI category and vice versa as educational qualification declined. Chi-Square test also shows that there is significant difference in the SLI value of the respondents based on the educational qualification attained by them.

4. Community perception

4.1 Perception about Tourism Development

Perception of the local community on 14 factors related to the development of tourism in the area was recorded. The responses fell into one of the following five categories; i.e., strongly agree, agree undecided, disagree and strongly disagree.

Table 7 about here

Majority (65.1 percent of the respondents strongly agreed) to the statement that development of tourism will increase the protection of the natural areas. 90.4 percent believed that their community should turn to full-time tourism business (41.4 percent strongly agreed and 49 percent agreed). 92.5 percent (61.7 percent strongly agree and 30.8 percent agree) opined that tourism business should be encouraged. 2.5 percent of the respondents were undecided and 5 percent disagreed. 49.2 percent of the respondents strongly agreed and 36.1 percent agreed that tourism has had a positive impact on their income and life. While 3.4 percent were undecided and the rest i.e. 11.3 percent said that impact of tourism on their income and lifestyle was negative (9.2 percent disagreed and 2.1 percent strongly disagreed). With regard to the development of infrastructure of the region, 54.2 percent strongly felt that infrastructure development has taken place due to tourism and 24.4 percent agreed to the above statement. 4.6 percent were undecided on this matter whereas 10.1 percent disagreed and 6.7 percent strongly disagreed on the above statement. The opinion of the respondents was mixed with regard to the matter of more waste in the tourist spot or in the locality due to development of tourism of the area. 33.6 percent of the respondents strongly agreed to

the statement and 31.5 percent agreed. 9.2 percent were undecided whereas 25.6 percent did not agree with the statement (21.8 percent disagree and 3.8 percent strongly disagree). Regarding the impact of tourism on environment and local cultures/values, most of the respondents disagreed that tourism is having a negative impact on the environment and local culture and values of the communities. 47.8 percent of the respondents disagreed and 5.7 percent strongly disagreed that tourism had a negative impact on the environment. 41.70 percent felt that tourism had a negative impact on the environment (23.3 percent strongly agreed and 18.4 percent agreed). 7.5 percent were undecided. Most of the community members have their own local culture and beliefs. They are very particular about these beliefs and cannot tolerate any non-acceptance by the community members. The critics of the ecotourism have always pointed out that community values and specific cultural beliefs are rarely integrated into development plans and visit of tourists had a negative impact on the culture and values of the locals. 13.6 percent of the respondents strongly agreed and 23.3 percent agreed that the tourism development is posing a threat to their local culture. 7.8 percent were undecided. Regarding the problem of overcrowding in their area, 46.2 percent strongly agreed that tourism is the main reason for overcrowding in their area. While 25.6 percent agreed to the above statement, 7.1 percent were undecided, 18.9 percent disagreed and 2.1 percent strongly disagreed (see Table 13).

Lack of adequate assistance and funding for the overall development of tourism business was considered as a shortfall by most of the respondents. 54.7 percent strongly agreed and 39.4 percent agreed that the current funding is inadequate and hence government needs to spend more to promote tourism business in the area. Only 3.4 percent disagreed on the above statement and 2.5 percent were undecided. It was inferred that most of the community members working in the tourism business were aware of the need for conservation of natural resources. They felt that it is much more important than the financial gains from the tourism. They were always supporting the development of tourism business in the area but wanted to conserve and preserve the environment together with that. They wanted to implement strict laws to protect environment. 66.2 percent strongly agreed that environment protection is more important than economic gains from tourism. 30 percent agreed and only 1.2 percent disagreed with the above statement. 2.5 percent were undecided on the matter. Regarding the implementation of strict laws, 35.6 percent strongly agreed and 41 percent agreed to the above statement. While 12.1 percent were undecided, 10 percent disagreed and felt that there is no need for any new law as the existing laws are strong and enough and there is only need for the proper application of these laws and rules. Majority (47.9 percent strongly agree and 44.1 percent agree) also agreed that tourism business has created a new market for the local products. This shows that their traditional crafts got a fillip due to the growth in tourism and due to the new market, they are fetching handsome price in the market which, in turn, had a positive impact on their income and standard of living. Only 3.4 percent of the respondents disagreed to this statement and 4.6 percent were undecided. As far as the local guides are concerned, the language, culture, beliefs, lifestyles, etc. of the tourists are different from what they follow. Language is a major issue. As far as the locals are concerned, their knowhow about the tourist spot and the surroundings is a huge advantage. Usually they are given training in language (both national and international), culture, and way of living of these tourists. The respondents were asked whether they feel the training imparted is adequate or they need more training in this regard. Majority i.e. 62.3 percent strongly agreed to this view. 32.6 percent said they agreed to this. 2.1 percent were undecided 1.3 percent disagreed and 1.7 percent strongly disagreed. Imparting the required training to the guides and locals in this field is essential as data from the sample survey reveals that more than 80 percent of the respondents interact with the tourists on a daily basis.

The local community by and large favours the development of tourism business in the area as this has resulted in improvement of their standard of living. However, they are also aware of the need to protect the environment and have stopped to exploit the same as they have got better and secure source of livelihood through tourism business. Their motive has changed from exploitation to conservation and promotion of the tourist spot. They are no longer confined to live within their culture. They have learned to accept the tourists as a part of them and also enjoy sharing their knowledge about the forest to others. Also, a healthy cultural exchange without harming the local sentiments and culture is also happening. Tourism has not only helped their livelihood but has a positive impact on the knowledge and skills of the local community members.

Factor analysis is done in order to identify the underlying factors that shape the perception of community members. The results in the Total Variance Explained along with Rotated Component Matrix (RCM) are given in Table 8,9 and 10.

Tables 8,9 and 10 about here

Based on the RCM, 14 statements can be grouped into 6 components. This is depicted as Component Transformation Matrix in Table 16. Statements 6, 7, 8 and 9 have been termed as Component 1. Component 2 consists of Statements 11, 12 and 13. Statements 10 and 14 have been grouped as Component 3. Statements 3 and 4

and 1 and 5 have been marked as Component 4 and Component 5 respectively. The remaining Statement 6 is marked as Component 6. The first component could be identified as the general concern of the local community as a result of ecotourism activities. The second component indicates their awareness about the need to protect the eco tourism sites. The third component is about the need for the involvement of the authorities in strengthening the eco tourism sector. The realization of the local community about the personal economic benefits as a result of ecotourism activities is depicted by the fourth component. The fifth component is associated with the infrastructural aspects in eco tourism sites and the sixth component could be looked at as the resolve of the local community to involve more in the eco tourism activities.

The analysis shows that the community members are concerned about the negative impacts of ecotourism on environment and cultural values. They are also concerned about the overcrowding caused in their region due to ecotourism. But, they are confident that ecotourism can create market for their local products. However, it is all the more important to protect environment than financial gains for which stricter laws are needed and Government should spend more and give more training to the community members to ensure their participation and for promotion of community based ecotourism. They strongly feel that tourism should be encouraged and promoted as it would increase the protection of natural areas. Another important inference is that the community members have admitted that their income and livelihood have improved due to this endeavour of CBET. They also feel that there has been infrastructural development in their area due to the advent of CBET.

Zone-wise community member's perception based on Factor Analysis show negative impact of ecotourism on environment as well as on their cultures and values. They also prioritize protection of the natural habitat to the economic gains from ecotourism, but, however feel that the new ventures will create a new market for their local products. They also show their concerns about the negative impact of ecotourism due to increasing litter and overcrowding in their region. They feel that infrastructural development has taken place due to the ecotourism projects and feel that such ventures should be encouraged and promoted in the area and strongly believe that there should be active involvement of community members in ecotourism. The community members in the central zone are concerned about the negative impact of ecotourism activities on the local cultural values and environment. There is more waste and overcrowding due to ecotourism. They feel that environment protection is of utmost importance than making financial gains and need stricter laws for environment protection. Other concerns and feelings about the benefits are similar to that of south zone. Community members of north zone showed distinctive characteristics when compared to other two zones in terms of SLI and other demographic features.

5. Results and Discussion

The ecotourism programmes in the mainstream destinations has helped local community to obtain economic benefits. Zone-wise analysis of the community members working in tourism sector shows that the community members have benefited totally from tourism development in the region as they have got both employments as well as secured livelihood options. This has helped to draw attention to reduce overall exploitation of forest land by these communities which in turn perpetuates sustainable development of eco-tourist sites and ecotourism in Kerala.

Community based ecotourism initiatives on the part of the government has benefitted the community in a big way as 56.20 percent of the community members in the sample solely depend on ecotourism as their only livelihood. Any setback, either seasonal or random, will have deleterious effect on their income and livelihood options inasmuch as they find it difficult to unearth alternative vocations in this alienated and difficult terrain. Moreover, the community is also striving hard to conserve the forest and ecosystem with a view to attracting more and more eco-tourists, which in a way expands their livelihood base. This has been well specified by the respondents when asked about their main occupation, of which about 95 percent of the community members answered that their primary occupation is only related to ecotourism.

Most of the quality of life-indicators of the community in the eco-tourist centres show a positive trend once these centres have been active with tourists. This has reflected in monthly income earnings (ranging between Rs. 3001-4000), education attainment of the community, saving habits and related attainments. Chi-Square analyses pertaining to various socio-economic analyses have also confirmed this. Inter-zone analysis to highlight the differences in the socio-economic aspects brings to the fact that difference between and among zones is marginal. This may be either due to the small geographical area of Kerala with which the in-bound ecotourism happening almost equally with the entire eco-tourist centres or may be due to different niche eco-tourist sites are equally preferable to all the visitors coming over to Kerala for ecotourism activities. The community perception does not show any negative impact on environment as well as on their local culture. They believe that infrastructure development in their area has happened due to tourism development. Moreover, tourism has also created a new remunerative market for local handicrafts and other niche products.

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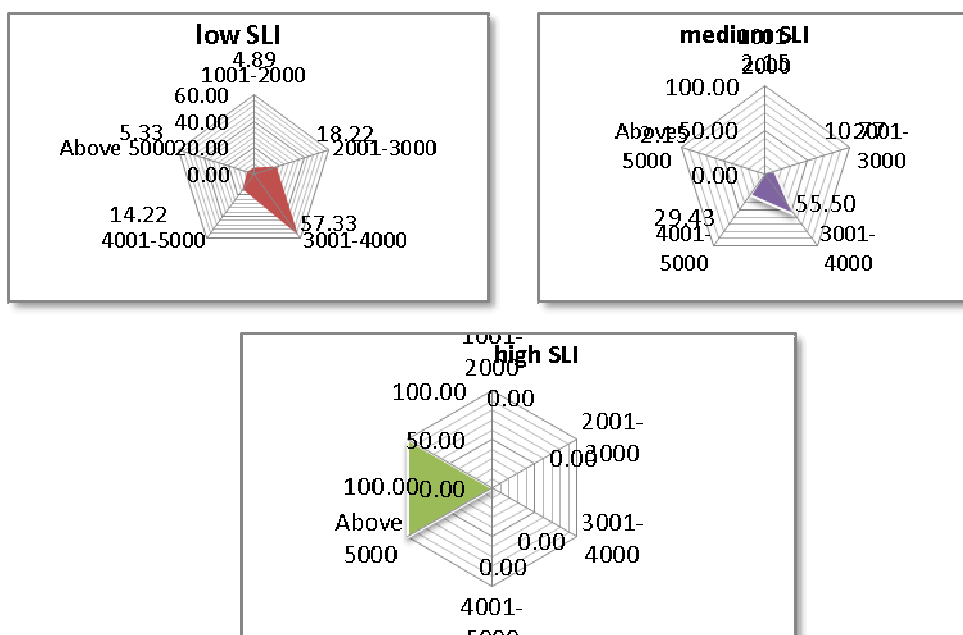


Figure 1 SLI-income percentages

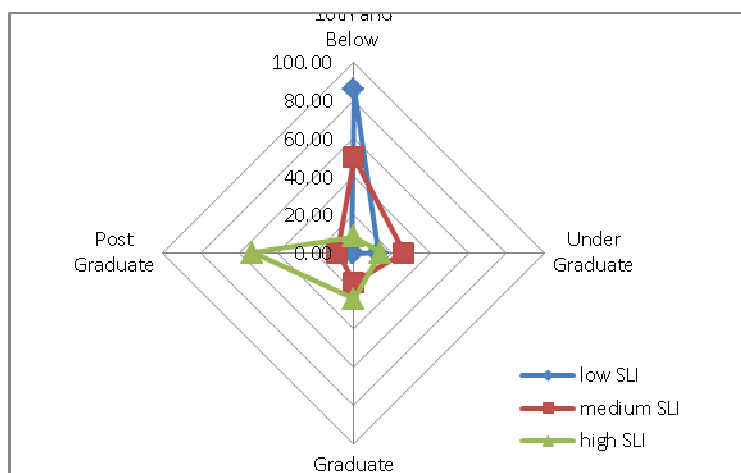


Figure 2 SLI-education cross tab
 Source: (Worked out from Table 5)

Table 1 Zone*Living*Water*Light*Information

	South Zone	Central Zone	North Zone	Total in %
Place of living (in %)				
own house	76.5	83.6	82.5	80.8
rented house	6.1	3.6	2.5	4.2
relatives house	0.9	0.9	0.5	0.8
parents house	1.3	1.8	2	1.7
Other	15.2	10	12.5	12.6
Source of water (in %)				
Own well	73.2	17.1	30.2	28.3
House connection	2.4	11.8	2.4	8.7
Public well	17.1	22.9	30.2	23.2
Public tap	0	40.6	37.2	33.5
Canal/river/pond	7.3	7.6	0	6.3
Source of Light (in %)				
Electricity	75.5	77.6	75.4	76.2
oil Lamp	4.4	3.2	3.5	3.7
Kerosene	19.2	21.5	21.6	20.7
Other	6.1	5	7.5	6.2
Source of Information (in %)				
Newspaper	18.1	17.8	21.4	19
Television	30.4	30.3	27.9	29.6
Magazine	1.9	3.8	4.3	3.3
Radio	22	22.3	19.8	21.4
Neighbors	7	6.3	6.2	6.5
Government officials	15.1	13	13.6	13.9
Public leaders	5.1	6	6	5.7

Other sources	0.5	0.5	0.8	0.6
N	230	220	200	650

Note: Percentages for Source of water, Light and information may add up to more than 100 as these were framed as multiple entry questions.

Table 2 SLI-income Chi-square

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	191.092 ^a	8	.000
Likelihood Ratio	76.136	8	.000
Linear-by-Linear Association	23.307	1	.000
N of Valid Cases	650		

a. 5 cells (33.3%) have expected count less than 5. The minimum expected count is .22.

Table 3 SLI-zone cross tabulation

SLI	Zone			Total %
	South zone	Central zone	North zone	
Low SLI	32.40	29.70	37.80	100
Medium SLI	32.50	28.70	38.90	100
High SLI	37.00	36.50	26.50	100

Table 4 Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	10.389 ^a	4	0.034
Likelihood Ratio	10.246	4	0.036
Linear-by-Linear Association	5.028	1	0.025
N of Valid Cases	650		

a. 0 cells (.0%) have expected count less than 5. The minimum expected count is 22.77.

Source: Worked out from Table 3

Table 5 SLI-formal education cross tabulation

	Formal Education (in %)				Total
	10 th and Below	Under Graduation	Graduation	Post Graduation	
low SLI	85.78	12.89	0.44	0.89	100.00
medium SLI	49.88	26.14	15.35	8.63	100.00
high SLI	8.57	14.29	24.28	52.86	100.00

Table 6 Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	104.624 ^a	6	0
Likelihood Ratio	116.874	6	0
Linear-by-Linear Association	88.266	1	0
N of Valid Cases	650		

a. 4 cells (33.3%) have expected count less than 5. The minimum expected count is .44.

Source: (Worked out from Table 5)

Table 7 Community perception about tourism development (in %)

Statement	Perception					
	Strongly Agree	Agree	Undecided	Disagree	Strongly Disagree	Total
Tourism development would increase protection of natural areas	65.1	26.6	2.9	4.1	1.2	100
Community should get into full time tourism business	41.4	49	3.3	5.9	0.4	100
Tourism Should be encouraged and promoted	61.7	30.8	2.5	5	0	100
income and quality of life has improved due to tourism	49.2	36.1	3.4	9.2	2.1	100
Improvement in Infrastructure	54.2	24.4	4.6	10.1	6.7	100
There is more litter/waste in this region due to tourism	33.6	31.5	9.2	21.8	3.8	100
Tourism has negatively impacted the environment	20.6	18.4	7.5	47.8	5.7	100
Tourism development has negatively impacted our local culture/values	13.4	23.3	7.8	46.1	9.5	100
Tourism is resulting in overcrowding	46.2	25.6	7.1	18.9	2.1	100
More Govt. funds to develop/promote tourism	54.7	39.4	2.5	3.4	0	100
Protecting environment & natural habitat is more important than the economic gains from tourism	66.2	30	2.5	1.2	0	100
Stricter laws are needed to protect the environment	35.6	41	12.1	10	1.3	100
Tourism creates new market for our local products	47.9	44.1	4.6	3.4	0	100
Community needs more training to take part in tourism	62.3	32.6	2.1	1.3	1.7	100

Table 8 Total Variance Explained

Component	Initial Eigen values			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	3.737	26.694	26.694	3.737	26.694	26.694	2.273	16.236	16.236
2	2.111	15.081	41.775	2.111	15.081	41.775	1.727	12.334	28.57
3	1.088	7.774	49.549	1.088	7.774	49.549	1.551	11.076	39.646
4	0.896	6.402	55.952	0.896	6.402	55.952	1.514	10.815	50.461
5	0.866	6.187	62.138	0.866	6.187	62.138	1.322	9.441	59.902
6	0.821	5.861	68	0.821	5.861	68	1.134	8.097	68

7	0.766	5.471	73.47 1						
8	0.713	5.091	78.56 2						
9	0.664	4.745	83.30 7						
10	0.616	4.398	87.70 5						
11	0.589	4.208	91.91 3						
12	0.468	3.34	95.25 3						
13	0.372	2.659	97.91 2						
14	0.292	2.088	100						

Table 9 Rotated Component Matrix

Statement	Component					
	1	2	3	4	5	6
Tourism development would increase protection of natural areas	-.027	.049	.038	.354	.690	.314
More people of this community should get into full time tourism business	.049	.219	.083	.126	.055	.881
Tourism Should be actively encouraged and promoted in this area	-.027	.104	.062	.799	.008	.194
My family's income and quality of life has improved due to tourism in this region	-.079	.126	.089	.712	.247	-.070
The infrastructure in the local area (i.e. roads, sewage systems, electricity, water supply, bridges) has improved due to tourism development	.168	.268	.121	.044	.754	-.137
There is more litter/waste in this region due to tourism	.830	.141	.061	-.078	.028	-.067
Tourism has negatively impacted the environment	.645	-.073	.500	-.116	.004	.112
Tourism development has negatively impacted our local culture/values	.661	.047	.401	-.134	.042	.339
Tourism is resulting in overcrowding in our region	.797	.234	-.217	.119	.135	-.038
Govt should allocate more funds to develop and promote tourism in this region	.041	.235	.716	.293	-.025	-.037
Protecting environment and natural habitat is more important than the economic gains from tourism	.198	.648	.253	.247	.140	.007
Stricter laws are needed to protect the environment	.098	.725	-.048	-.020	.165	.127
Tourism creates new market for our local products	.057	.674	.294	.163	.052	.142
Local community needs more training to take part in tourism	.077	.201	.624	-.021	.378	.164

Extraction Method: Principal Component Analysis. Rotation Method: Varimax with Kaiser Normalization. a Rotation converged in 7 iterations.

Source: (Survey data 2010)

Table 10 Component Transformation Matrix

Component	1	2	3	4	5	6
1	.500	.529	.444	.278	.362	.256
2	-.736	.195	-.029	.592	.243	.100
3	.267	.230	-.700	.148	.375	-.472
4	.166	-.063	-.543	.119	-.131	.802
5	.256	-.780	.131	.466	.300	-.046
6	.210	.132	.002	.565	-.750	-.238

Extraction Method: Principal Component Analysis.

Rotation Method: Varimax with Kaiser Normalization.

Source: (Survey data 2010)

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