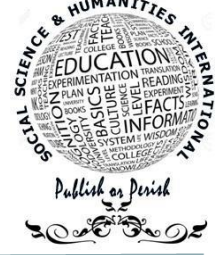


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Ecotourism and Sustainable Livelihood Sources of Women of Bhitarkanika National Park of Odisha

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ABSTRACT

Ecotourism is a form of tourism that focuses on visiting natural areas in order to protect the environment and empower local communities. In an ideal world, communities will receive financial benefits while also receiving environmental education. As a result, societies would be better equipped to manage their natural resources. The main objective of development of Eco tourism is to develop better understanding of environment management, foster economic growth through creating vast potential for employment and revenue generation. It provides viable means to derive a sustained source of livelihood for the local communities especially women through mobilizing the local resources. As far as eco-tourism is concerned, the women community plays a significant role as promoters and facilitators for growth and development of Ecotourism industry. Besides men, women play an important role in preserving the natural assets of the community. They are more or less involved in attracting the tourists from far off places by providing necessary care and services to them. The present study decides on making an in-depth analysis of ecotourism as a viable means for local women for sustained livelihood and how far they have been benefited out of this ecotourism system and how far they are involved to protect these resources for future generations without much exploitation and degradation of natural resources of the community.

Introduction

Eco-tourism is nature based and ecologically sustainable. It blends in a new dimension, the serenity of nature and its resources. The concept has been developed through scientific approach, proper planning and management for maintaining suitability of the ecosystem which is beneficial to the local community. It is a fantastic way for women to advance professionally and socially while staying connected to the communities. Women will benefit from ecotourism in a variety of ways. Its multidisciplinary approach will appeal to women with a wide range of abilities, interests, and passions. Working in the field of ecotourism can be a valuable addition to one's daily routine. It is focused on a place's natural resources, history, and uniqueness. As a result, it enables women to find a reliable source of income that provides not only financial benefits but also joy and satisfaction. Women are also connected to the places they live by ecotourism, which benefits the entire society and future generations. It is focused on a place's natural resources, history, and uniqueness. The state of Odisha, with its abundant natural resources and scenic natural beauty, has enormous potential to become a prominent player on the country's eco-tourism

map. Odisha's Protected Area Network, which includes two national parks, 19 wildlife sanctuaries, and three tiger reserves, is limited to 4.25 percent of the state's total geographical area. These pristine areas are home to the majority of eco-tourism destinations. The population of the state is a critical element in preserving nature's unspoiled tranquilly.

Bhitarakanika, despite its diminutive size, takes pride in its rich mangrove diversity and faunal composition. The Brahmani and Baitarani estuaries in Kendrapara district are home to 62 of the 67 Indian mangrove species, including bani, guan, hental, sundari, sisumara, rai, paniamba, mahasitha, jagula, and others. The fauna includes estuarine crocodile, water monitor lizard, python, king cobra, fishing cat, cheetal, sambar, dolphin and many species of resident and migratory birds like white bellied sea eagle, brahminy and parish kites, vulture, cormorant, darter, king fisher's (6 Spp.), open billed stork, white ibis, painted storks, whistling tells, brahminy ducks, parchards, bar headed geese, herons and egrets etc. Mudskippers, hermit crabs, tortoises, and fish can all be found here.

The tourism industry not only employs a large number of women but also provides them with numerous opportunities for advancement around the world. The advancement of women's roles

not only creates a more balanced society but it also increases economies and social standing. The concerns now are ensuring income parity, improving the standard of jobs, and creating fair working conditions. Women in the tourism industry's organized sector were confined to low-skilled, low-paying, or stereotypical jobs like housekeeping, reception, catering, and laundry services. Women are particularly vulnerable to sexual abuse and coercion and are discouraged from joining unions or alliances to strengthen their position. The wage gap between men and women is narrowing. Women are more likely to work part-time or on a contractual basis and they are usually paid less than men for the same work.

Women are very much invisible in the tourism related economic process, which is generated through the already existing gender based division of labor and double standard of morality. Women have minimum interaction with the tourist. Women don't get many job opportunities because the competition is more when more money is involved. Massage parlors and health clinics are some other areas where women work. Moreover, women don't have any bargaining power because these activities are not accepted by society.

A proper planning with gender perspective can contribute to women's emancipation through the tourism development process. Women should

also come forward to take an active role. Policy makers should take care not to reinforce marginalization of women from development. The opportunities of decentralized planning can be utilized.

It is often said that during tourism development the people from underprivileged sections, including women get more opportunity to enter into the mainstream economy. The traditional image of women and gender-based division of labor are two factors which marginalize women from the tourism industry.

Review of Literature

Gupta and Shah (1999) provide an example of how women in Himachal Pradesh, India, used the tourism industry's dependence on beautiful, healthy mountainsides to mobilize anti-deforestation resistance. Tourism provides spaces for psychological and social women empowerment, as shown by the women's courage to earn money in novel ways. This example demonstrates how, provided the opportunity, women are capable of making choices, controlling processes, and contributing to environmental management while earning incomes, all of which contribute to sustainable development. Wearing and Larsen (1996: 119) believe that ecotourism has the potential to foster community growth by giving local communities

a sense of pride and appreciation of the value of their natural resources, as well as control over their own development. In certain ways, women have a strong bond with their community's physical environment. Maasai women, for example, have a unique understanding of walking routes, craft manufacturing, and useful plants, all of which can be linked to the growth of tourism products and services (van der Cammen, 1997). In this situation, it would seem natural for these women to become involved in the management of tourism projects. According to Ghodsee (2003), assisting economic sectors such as tourism, which employ a significant percentage of women at relatively high salaries, would help increase women's relative economic well-being. Local women, on the other hand, are often ignored in terms of formal employment when lodges and other tourist destinations are built. Women make up the bulk of the tourism workers, according to the UNWTO, but they tend to work in the lowest paying, often even unpaid, and lowest status positions. As a first step toward promoting gender equality, supporting women's opportunities, and ending violence against women, it is important to empower women. The tourism industry will help with this initiative by providing jobs for women and raising gender awareness. One of the most critical ways for women to motivate themselves and seek a better

quality of life for themselves, their families, and their communities is to have access to economic opportunities and education. Following an examination of the scholarly literature on women's advancement in tourism, it's also worthwhile to consider the more realistic consequences. The United Nations World Travel Organization (UNWTO) launched an Action Plan to Empower Women through Tourism during a conference in Berlin in March 2008. (Travel Daily News, 2008). The plan's goals are based on the United Nations Millennium Development Goals, which include helping the poor (including by tourism), protecting the environment, and empowering women. Tourism accounts for more than ten percent of global GDP and employs roughly eight percent of the global workforce. Women make up 60-70 percent of the workforce in the tourism industry (UNWTO, 2008). It provides many opportunities in rural, metropolitan, regional, and cultural areas to both developed and developing countries. Tourism growth can be a powerful motivator for development and, as a result, for women's empowerment, making the WTO's plan a rational encouragement to empower women through this field. Despite several international agreements aimed at evaluating and improving women's rights, the UNFPA states that "women are still much more likely than men to be sick,

malnourished, and illiterate." They have fewer access to medical care, home ownership, credit, training, and jobs than men. They are far less likely to participate in politics than men, and they are far more likely to be victims of domestic violence'(UNFPA,2008).

Women's empowerment could thus play a major role in achieving gender equality. The United Nations defines empowerment as a crucial aspect of gender equality, and both definitions are defined as follows (UNFPA, 2008):

Objectives of the study

- ❖ To assess the participation and contribution of the women community in the ecotourism industry for upholding natural equilibrium at large.
- ❖ To adopt a new strategy for exploring the employment generating potentials to employ the local women in the ecotourism sector.

Methodology adopted for the study

Bhitarkanika spreads over 672 sq. km covering one block named Rajnagar with 299 surrounding villages in Kendrapara. A sample of 2 percent villages which are closely connected to tourist destinations are selected. So, 7 villages have been selected for the study purpose. In Bhitarkanika 389 households have been engaged in tourist activities. 20% of the household, i.e. 78 are selected for the study through simple random

sampling method.

Result and Discussion

The present study was undertaken at Bhitarkanika which is located at Rajnagar block of Kendrapara district. The unique biodiversity of this place attracts tourists to nature's lap. The present study was undertaken at Bhitarkanika in Kendrapara district which is a tourist hub of Odisha. This tourist place covers 8 villages of Rajnagar block such as Bagapatia, Barahipur Dangamal, Gupti, Nalitapatia, Righagada, Satavaya and Bankual. On the basis of the availability of dataset, the present study covers only seven villages such as Bagapatia, Barahipur, Dangamal, Gupti, Nalitapatia, Righagada and Satavaya of Rajnagar block and is unable to cover the last village such as Bankual.

Women beneficiaries involved in tourism activity are mostly married and in the 40 plus (playing there remains a scope for tapping the tourism sector for young and young plus age groups.

Scheduled caste women are more attracted to work in tourism activity and most are illiterate or primary. A great deal of scope is lying for educated women. The average family size of women beneficiaries is quite high (4-5) and a large chunk of women are married.

It is observed that the average monthly income of women beneficiaries in household activity is around 40000.

Vill	No of Benef	Education			Caste				family size	marital status		avg. age
		Illit	Prim	secor	SC	ST	OB C	OC		Married	unmarried	
Baghapatia	14	2	9	3	0	0	14	0	4.3	14	0	48
Barahipur	22	11	11	0	17	0	3	2	4.9	22	0	45
Dangamal	02	0	0	2	0	0	2	0	6	2	0	41
Gupti	10	5	2	3	6		1	3	4.7	10	0	42
Nalitapatia	9	0	7	2	2	0	7	0	5	9	0	46
Righagada	02	0	02	0	0	0	2	0	5.5	2	0	45
Satavaya	19	8	11	0	10	0	9	0	5	17	2	43

Table-1.1: Women beneficiaries (involved in tourist activity) information

Sl. No.	Tourist Vill.	Women engaged in HH activity/ Casual laborer (A)	Women benefited in tourist activity(B)	Avg. monthly income(A) of women in HH activity	Avg. monthly income(B) based on lean and peak period(1 st visit)	Avg. monthly income(B) based on lean and peak period(2 nd visit)
1	Baghapatia	14	14	2500	7314	8200
2	Barahipur	22	22	3700	4834	5200
3	Dangamal	02	02	2900	5600	6600
4	Gupti	10	10	4200	8092	10200
5	Nalitapatia	9	9	3300	8100	10300
6	Righagada	2	02	3000	6000	7800
7	Satavaya	19	19	4300	9670	10700

Table-1.2: Women beneficiaries and income (78 beneficiaries from other HH and 78 beneficiaries from tourist activity: sale of crab, fish, egg, honey interviewed)

Analysis

To compare the monthly income of women beneficiaries in HH activity and Tourist activity

Independent t-test applied

H0: There is no difference in income of beneficiaries

H1: There is difference in income

Result

Group Statistics					
	Group	N	Mean	Std. Deviation	Std. Error Mean
Income	1	78	3610.26	650.392	73.642
	2	78	7301.21	1843.563	208.742

It exhibits a high value of percentage in income with respect to the mean existence of women in tourism activity as compared to household activities.

Independent Samples Test										
		Levene's Test for Equality of Variances		t-test for Equality of Means						
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
									Lower	Upper
income	Equal variances assumed	71.484	.000	-16.675	154	.000	-3690.949	221.352	4128.226	3253.671
	Equal variances not assumed			-16.675	95.875	.000	-3690.949	221.352	4130.336	3251.562

Conclusion:

Average incomes of women beneficiaries in tourist activity and HH activity are significantly different

To compare the monthly income of women beneficiaries in HH activity in 1st visit and 2nd visit

Whether there is any difference in income of the women beneficiaries. Since the sample data are obtained from populations that are related, we have to test the mean difference of income between two related groups using paired t-test.

To test the null hypothesis that

H0: There is no difference in the means of two related groups (H0:μD=0)

Against the alternative hypothesis that means are not same (H1:μD≠0)

$$\text{Equation: } t = \frac{D}{\frac{SD}{\sqrt{n}}}$$

$$S^2 = \frac{n_1 S_1^2 + n_2 S_2^2}{n_1 + n_2 - 2}$$

Paired Samples Statistics					
		Mean	N	Std. Deviation	Std. Error Mean
Pair 1	visit1	7301.21	78	1843.563	208.742
	visit2	8410.26	78	2274.739	257.564

Paired Samples Correlations				
		N	Correlation	Sig.
Pair 1	visit1 & visit2	78	.969	.000

Paired Samples Test									
		Paired Differences					T	df	Sig. (2-tailed)
		Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference				
					Lower	Upper			
Pair 1	visit 1 - visit 2	-1109.051	670.638	75.935	-1260.257	957.846	-14.605	77	.000

Conclusion

p-value:0.00<0.05, hence null hypothesis is rejected. There is a significant difference in average income of women beneficiaries.

Regression model fitting

Dependent variable- Income of women beneficiaries in tourist activities

Independent variables-

- ❖ age of beneficiaries,
- ❖ education years of beneficiaries,
- ❖ foreign tourist arrival=1(if yes, otherwise=0,)
- ❖ accommodation facility=1(if available, otherwise=0)

Taking log of income (in income) of beneficiaries to smoothen the dependent variable. Study correlation on income, age, education year, foreign tourist arrival, accommodation availability, social group, family size, marital status are obtained.

Regression Model Fitting: **Dependent Variable:** log of income **independent variables:** accommodation availability, education year, age of beneficiaries, foreign-tourist, social group, family size, marital status.

Observation: -log of income has positive correlation with education years, foreign tourists. Years of education helps in supplementing income arrivals and accommodation. But it has a negative correlation with the age of beneficiaries.

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.596 ^a	.355	.291	.29430
a. Predictors: (Constant), family size, marital status, accommodation availability, education year, social group, age of beneficiaries, foreign tourist. A high value of R signified that the independent variables highly explain the income.				
b. Dependent Variable: in income log of income				

ANOVA ^a						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	3.344	7	.478	5.515	.000 ^b
	Residual	6.063	70	.087		
	Total	9.407	77			
a. Dependent Variable: log of income						
b. Predictors: (Constant), family size, marital status, accommodation availability, education year, social group, age of beneficiaries, foreign tourist						

Correlations									
		log of income	age of beneficiaries	education year	foreign tourist	accommodation availability	social group	marital status	family size
log of income	Pearson Correlation	1	-.384**	.403**	.306**	.088	.043	.150	-.058
	Sig. (2-tailed)		.001	.000	.006	.442	.707	.190	.615
	N	78	78	78	78	78	78	78	78
age of beneficiaries	Pearson Correlation	-.384**	1	-.338**	-.096	.264*	-.044	-.138	-.180
	Sig. (2-tailed)	.001		.002	.402	.019	.700	.227	.115
	N	78	78	78	78	78	78	78	78
education year	Pearson Correlation	.403**	-.338**	1	.055	-.091	.148	-.118	.127
	Sig. (2-tailed)	.000	.002		.631	.428	.197	.303	.268
	N	78	78	78	78	78	78	78	78
foreign tourist	Pearson Correlation	.306**	-.096	.055	1	.198	-.204	.139	-.256*
	Sig. (2-tailed)	.006	.402	.631		.082	.073	.225	.024
	N	78	78	78	78	78	78	78	78
accommodation availability	Pearson Correlation	.088	.264*	-.091	.198	1	-.028	-.066	.110
	Sig. (2-tailed)	.442	.019	.428	.082		.805	.567	.338
	N	78	78	78	78	78	78	78	78
social group	Pearson Correlation	.043	-.044	.148	-.204	-.028	1	-.175	-.146
	Sig. (2-tailed)	.707	.700	.197	.073	.805		.125	.201
	N	78	78	78	78	78	78	78	78
marital status	Pearson Correlation	.150	-.138	-.118	.139	-.066	-.175	1	.075
	Sig. (2-tailed)	.190	.227	.303	.225	.567	.125		.514
	N	78	78	78	78	78	78	78	78
family size	Pearson Correlation	-.058	-.180	.127	-.256*	.110	-.146	.075	1
	Sig. (2-tailed)	.615	.115	.268	.024	.338	.201	.514	
	N	78	78	78	78	78	78	78	78

** . Correlation is significant at the 0.01 level (2-tailed). * . Correlation is significant at the 0.05 level (2-tailed).

Coefficients						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	9.327	.709		13.156	.000
	age of beneficiaries	-.016	.006	-.308	-2.780	.007
	education year	.057	.018	.339	3.211	.002
	foreign tourist	.117	.078	.167	1.503	.137
	accommodation availability	.194	.106	.194	1.820	.073
	social grp	.008	.033	.025	.240	.811
	marital status	.334	.222	.152	1.505	.137
	family size	-.149	.114	-.143	-1.303	.197
a. Dependent Variable: log of income						

Observation:

R Square= 35.5%

F-statistic is significant. But the coefficients of social group, marital status, family size, foreign tourist arrivals and accommodation are not significant. As such we drop three variables: social group, marital status and family size having higher p-value. We consider variable foreign tourist arrival with p-value equal to marital status as the variable is having less standard error.

Regression model: Dependent variable: in income independent variables: accommodation, education, tour, age

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.566 ^a	.321	.284	.29585
a. Predictors: (Constant), accommodation, ednyr, tour, age				

Observation:

- ❖ R square=32.1% (That 32.1% of variation in income is explained by independent variables).
- ❖ Coefficients of independent variables age, education year and foreign tourist arrival are significant, where accommodation is not significant.
- ❖ Both education year, foreign tourist arrivals and accommodation have a positive impact on income.
- ❖ Whereas, with increase in age, it has a negative impact on income.

Overall model is best fit as F-statistics is significant

ANOVA ^a						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	3.017	4	.754	8.617	.000 ^b
	Residual	6.390	73	.088		
	Total	9.407	77			
a. Dependent Variable: in income						
b. Predictors: (Constant), accommodation, ednyr, ftour, age						
Coefficients						
Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
1	(Constant)	8.965	.254		35.344	.000
	age	-.015	.006	-.299	-2.800	.007
	ednyr	.050	.017	.302	2.947	.004
	ftour	.163	.070	.231	2.322	.023
	accommodation	.149	.103	.149	1.450	.151
a. Dependent Variable: ln income						

Conclusion

Ecotourism is gaining popularity at a rapid and innovative rate. It's a result of environmental awareness. Tourism research is essential since tourism is so important to the world's governments and economy. The rise of ecotourism in India is both a difficulty and an opportunity for more sustainable tourism. Diverting tourist traffic to ensure that a destination's carrying capacity is not surpassed, preparing for natural resource recovery, and creating knowledge in the local community to deal with the negative effects of mass tourism are

all ways to accomplish sustainable tourism. The present paper reveals that the bulk of tourists in the study is between the ages of 25 and 35. Ecotourists are typically well-educated people. There is a reasonable amount of male and female representation. The majority of tourists have an annual income of Rs. 1 lakh to Rs. 5 lakh. The majority of the tourists are from Odisha, according to the total number of answers. The majority of those polled expressed an interest in learning more about nature. The majority of visitors intended to stay for more than a day. Because it is built on nature, more than 35% of

tourists were satisfied with this destination. The majority of visitors felt that the amenities were inadequate and poorly organized. The majority of respondents felt that the site is handy for everyone, and more than 80% of tourists preferred natural tourist areas over man-made ones.

Environmental ecotourism will be successful in making real and significant contributions to the conservation of the natural environment and the development of disadvantaged communities. Tourism's enormous revenue-generating power must be channeled and focused through a conservation framework for tourism to make useful contributions to conservation.

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