African Journal of Agriculture, Technology and Environment Vol. 2(2): 49-55 August 2013
E-ISSN: 2346-7290

Full Length Research Paper

Impact of ecotourism development on selected communities bordering Yankari Game Reserve, Nigeria

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Received:Sep. 2012 Accepted:Oct. 2012

ABSTRACT

Ecotourism development in protected areas can have both negative and positive impacts on the adjoining local communities. The study assessed the positive social and economic impacts of ecotourism development in Yankari Game Reserve (YGR) of Nigeria on local communities adjoining YGR. A two stage sampling technique was employed for the study. The first stage involved selection of four communities namely Mainamaji, Dagudi, Bogwas and Rahama from fourteen local communities bordering the reserve within 10km radius to the North, West, South and East respectively. In the second stage, 92 respondents were randomly selected from each community earlier selected. In all, a total of 368 structured questionnaire were administered on the local residents. Data obtained were analyzed usingdescriptive statistics.The result revealed that 24.7% of the respondents generate monthly income from the sales of food items, provisions and souvenirs. About 11.7% generate ≤ ₦5,000.00; 8.3% generate between >=₦5,000.00 and ₦10,000.00 while 4.7% generate >₦10,000.00. In addition, the adjoining local communities also derive some benefits from the provision of infrastructural facilities such as electricity supply, health care centres/ facilities and roads by the federal government of Nigeria, as a strategy to enhancing ecotourism in YGR. It is recommended that management strategies and development plans should be geared towards assisting the indigenous communities to become more involved in tourism enterprise as that would enable local residents utilize opportunities arising from ecotourism development in YGR.

Key words: Ecotourism, local communities, socio-economic environment,Yankari Game Reserve

INTRODUCTION

Ecotourism is a growing niche market and the most dynamic segment of the international tourism industry and accounts for billions of dollars in annual sales (Wood, 2002). Its mode of operation is quite different from that of the traditional mass tourism which is primarily aimed at meeting the needs of tourists with little attention paid to its negative impacts on the local residents. Ecotourismencourages responsible travel to natural areas that conserve the environment and seeks to improve the welfare of local people who are central to biodiversity conservation on which ecotourism thrives. The economic and social well-being of the local residents are given

much consideration because they are very critical to the sustenance of ecotourism.It was on this basis thatsome experts such as Agrawal and Redford (2006) and Leitis, (2011) described ecotourism as a specific segment of tourism that represents a set of idealized development objectives which appeal to an explicit tourism market. It encourages local community's participation when properly planned and managed, and presents excellent opportunities for the development of local economies.

Ecotourism is particularly effective in providing both economic and social benefits to poor communities bordering protected areas. For example, visitors to national parks and other protected areas spend money on lodging, food, souvenirs, guided tours, and on other goods and services provided by local residents, thereby stimulating the growth of local economies andadding value to local products. Some benefits of ecotourism such as biodiversity conservation, watershed management and maintenance of ecological balance are intangible (Lindberg, 1996, Gurung andSeeland, 2008; and Habibah*et al.*, 2012).Sustainable provisions of such very relevant but hardly quantifiable services by ecotourism result in increased support for protected areas when local people are involved.

Ecotourism can contribute to reduction in social and economic pressures on biodiversity. Due to benefits derived by local residents from ecotourism, they will most likely promote responsible actions towards the conservation of wildlife species and their habitat, which are the major resources that attract tourists. Hence, incidences of wildlife hunting, harnessing of fuel wood and harvesting of wild leaves and fruits to meet different social, economic and cultural needs will be drastically reduced.

It plays prominent role in creating employment opportunities for the host population bordering protected areas. Ecotourism is a major source of income for households near Tortuguero National Park in Costa Rica(Troeng and Drews, 2004). Ecotourism creates jobs in remote areas as most national parks and other protected areas, which are prominent global eco-destinations, are often located in the rural and remote areas (Lindberg, 1996). Ecotourism development leads to the establishment of facilities such as hotels and lodges for tourists which also facilitate employment opportunities in rural communities (Winson, 2006). In Papua New Guinea, tourism influenced the creation of job opportunities for women who produce handicraft to sell to tourists (West, 2006). Tourism activities in some Latin American national parks in 1993 created 200,000 jobs (UNEP, 2002). However, a major concern of development analysts is the nature of ecotourism jobs: many of them are temporary because of seasonality or profound influence by external economic precariousness (Zambrano *et. al.*, 2010).Similarly, Ezebilo*et al.*(2010) reported that ecotourism development in the Okwango Division of the Cross River National Park of Nigeria, contributed to income generation and development of infrastructural facilities such as good road network, education, water supply as well as electricity supply among local residents within park host communities.Identifying positive impacts of ecotourism and the distribution of economic benefits on the local communities can assist the management of YGR in making informed decisions on how ecotourism development can spread to many local inhabitants. The study therefore investigates the positive contributions of ecotourism to communities around Yankari game reserve, the sources, distribution and level of the benefits among respondents from host communities.

METHODOLOGY

The study area

The Yankari Game Reserve (YGR) is located in the Dagudi, Gwana and Pali Districts of the Alkaleri Local Government Area of Bauchi State, occupies an area of about 2,244.10km^2 and lies between longitudes 9^{0}30^1 N and 11^0 00^{1}E (Ubaru,2000). It is situated in the south central belt of Bauchi State in the North Eastern belt of Nigeria. The park is located in the southern portion of the Sudan savanna zone of Nigeria (Marguba, 2000). Its main entrance is at Mainamaji village, about 29km from Didinma. It has two distinctive seasons: the rainy season and dry season. The rainy season is between late April and October while the dry season is between November and May. Its mean maximum and minimum temperatures are 35^{0}C and 18^{0}C (Olokesusi, 1990).

Data collection

Two sets of structured questionnaire, personal observation and in depth interviews were employed for this study. A set of questionnaire was administered randomly on selected members of the selected communities. Another set of questionnaire was also administered toecotourism and hospitality staff of the reserve. In depth interviews were conducted with households and park officials who have lived in the selected communities bordering the reserve for a minimum period of ten years. Also,25 staff of the reserve from the ecotourism and hospitality units who have worked in the reserve for a minimum of 5 years was also sampled because of their knowledge of these communities on tourism/ hospitality in the reserve. In all, a total of 393 questionnaire were administered for the study, however,300questionnaire were retrieved.

Sampling technique

Out of the fourteen local communities close to YGR,four (Mainamaji, Dagudi, Bogwas and Rahana) bordering the park within 10km radius to the North, West, South and East of the park respectively were selected for the study, and 92 respondents were randomly selected from each selected community in such a way that the number of males and females were equal.

RESULTS

Only 25.7% of the respondents claimed to have benefited from ecotourism activities in the YGR while the majority(70%) have not benefitted (Table 1).

Table 1. Respondents' perception on ecotourism contributions in communities

Type of contribution	Frequency	Percentage
Not beneficial	223	74
Beneficial	77	25
TOTAL	300	100

Gender perception of respondents on basis of community is presented in Table 2. The Table showsthat 25.6% of maleand 22.6% of female respondents admitted that ecotourism contributed to their socioeconomic environment.

Table 2 Gender perception on type ofcontribution made by ecotourism

Gender	Response	Percentage respondents per community (%)			
		MAINAMAJI	DAGUDI	BOGWAS	RAHAMA
MALE	positive	46	24	19	14
	Negative	54	76	81	86
	total	100	100	100	100
FEMALE	Positive	41	25	7	4
	Negative	60	75	93	86

Majority of the males (74.4%) and (77.4%) females perceive that ecotourism has not impacted their socioeconomic environment positively. Sale of rice (6.3%) and chicken (6.0%), are the highest source of income to the respondents while souvenir was the least (2.3%) (Table 3). The distribution of respondents from various communities based on monthly generation of income from ecotourism on community basis is shown in Table 4. Greater percentage of Respondents from Mainamaji (27.5%) generates income on monthly basis through ecotourism activities than those from other sampled communities.

Table 5 shows the distribution of respondents based on range of monthly income generated from ecotourism. About 11.7% of the respondents generate less than ₦5,000.00 on monthly basis from ecotourism while 4.7% generate more than ₦10,000.00 monthly

Table 3: Sources of income to local communities from ecotourism in YGR

Commodities	Frequency	Percentage
No response	225	75.0
Rice	19	6.3
Chicken	18	6.0
Goat	17	5.7
Guinea fowl	14	4.7
Souvenir	7	2.3
TOTAL	300	100.0

Table 4: Distribution of communities based on frequency of income generation

Mode of generation	MAINAMAJI		DAGUDI		BOGWAS		RAHAMA	
	Freq.	%	Freq.	%	Freq.	%	Freq.	%
Monthly	22	28	16	22	17	23	19	26
Not Monthly	58	72	58	78	56	74	54	74
TOTAL	80	100	74	100	73	100	69	100

Table 5: Distribution of respondents based on range of monthly income generated

Amount (₦)	Frequency	Percentage
NO RESPONSE	226	75
<5,000	35	12
5,000-10,000	25	8
>10,000	14	5
TOTAL	300	100

DISCUSSION

Ecotourism is making positive contributions towards the socio-economic environment of the local communities adjoining YGR.Every member of the community cannot be directly employed by the management of the Yankari game reserve. Few members of the local communities are in the employment of the YGR and several others are indirectly employed especially in such areas like transportation and tour guiding services. Some of the communities along Didinma-Mainamaji road are provided with infrastructures such as improved communication facilities, good road network, educational facilities, health care services, portable water and electricity supply. Community development projects such as woodlots and honeybee production, animal

fattening, groundnut oil extraction and processing mill are sited in some selected local communities close to the park. All of these immensely contribute to improve socio-economic wellbeing of the rural residents adjoining the reserve. This agrees with the findings of Gurung and Seeland (2008), Dicken and Hosking (2009) and Habibah *et al.*(2012) that ecotourism contributes to socioeconomic environments of rural communities bordering protected areas in Buthan, Malaysia and South Africarespectfully. It also agrees with Ezebilo *et al.* (2010) whosurmised that ecotourism contributes to local communities in Okwango Division of the Cross River National Park, Nigeria. However, the spread of benefits from ecotourism in YGR is quite low (Table 1) as majority of the respondents irrespective gender (Table 2) are not deriving any benefit from tourism.Selling of rice which is the most spread source of income to respondents (Table 3) is benefiting only about 6% of the sampled population. Though some respondents derive benefits from selling of other items such as chicken and goat but the percentage of respondents involved in these activities is still relatively very low. The fact that over 70% of the respondents complained of not deriving any benefit from ecotourism (Table 4) is an indication that majority of the respondents are not deriving tangible benefits. This obviously shows that the distribution of economic benefits is unequal among the rural residents bordering the reserve.He *et al.* (2008)reported similar lopsidednessin the distribution of economic benefits among local communities in Wolong Nature Reserve for Giant Pandas in China.Respondents' perception of ecotourism is influenced by what they derive from the park. Those respondents who generate income from ecotourism considered it beneficial unlike those who are not generating income from it.This agrees with the observation of Haralambopoulos and Pizam, (1996)that local residents who engaged in and derive benefits from ecotourism are more positive towards tourism and consequently, will consider tourism to be beneficial.

Derivation of benefit from ecotourism depends on respondents' level of participation in activities within the park. Participation sometimes depends on opportunities, park management policies and availability of markets created by ecotourism.The local residents are predominantly Muslim where males are more visible and participate more than females in petty trading and other commercial activities.

The study shows that proximity plays significant role in income generation and contribution to socio-economic environment. Majority of the respondents who stated that tourism is beneficial are from Mainamaji village (Table 4). Purchases by tourists are usually made in the communities along Didinma-Mainamaji road which is the main route for tourists visiting the reserve. Mainamaji village is also the most developed of the four sampled communities in terms of road, health service and power supply. The other communities are less visited by tourists compared to Mainamaji village.This also agrees with the work of He *et al.* (2008) that most rural households that benefit from ecotourism are usually located along the main road leading to protected areas.

According to findings from the study, local communities generate more income from the sale of consumable goods such as rice, chicken, guinea fowl and goat. These consumable goods such as goat are often purchased directly by tourists from the local residents and roasted for celebration or 'partying/bonfire'.The hospitality department also source for some local food stuffs from the local communities to meet tourists' needs. It is a policy of the management of YGR to be sourcing for foodstuffs and other items from the park host communities in order to enable them generateincome. This agreeswith the report of Baez and Fernandez (1992) that there

must be products and services for tourists to spend money on before local residents can gain economic benefits from ecotourism activities. Though the income generated from selling these consumables has been helping households but it is not regular and majority of the respondents generate below five thousand naira on monthly basis. This level of income generation can hardly sustain a family especially in northern Nigeria where household size is always high due to polygamy.

CONCLUSION

Ecotourism activities in YGR contribute positively to socioeconomic environment of some local residents adjoining the reserve. Some members of the local communities bordering the park generate direct income by selling some items/products such as souvenirs and consumables that enhanced tourists' stay in the parks. This affirms the economic benefits inherent in ecotourism. These benefits seem quite promising but the spread is very limited. Continuous flow of these benefitscannot be guaranteed as visitation to the park is seasonal. Hence, total dependence on ecotourism for substantial revenue and improved well-being by the local communities might just be a mirage. There is therefore, a need for synergy between the local communities and the management of the reserve to discover other local ventures and enterprises with the intent of diversifying and improving the revenue generation base of the local people which will further improvetheir socio-economic environment. Further studies aretherefore required to identify factors that could enable greater number of the local communities generate more income from ecotourism activities in the reserve.

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