



Ecotourism as a mechanism for local economic development: the case of communities adjacent to the Oribi Gorge Nature Reserve, KwaZulu-Natal, South Africa

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Abstract

Scholars and stakeholders involved in the tourism industry share a common view that ecotourism has demonstrated a great potential for attracting both local and international visitors. Subsequently, the ecotourism sector has been advocated as one of the fundamental components of the tourism industry resulting mainly from its potential for conserving natural resources whilst enhancing the socio-economies of the nearer communities. A review of literature indicates that most of the developed and developing countries use their scenic natural resources for tourism purposes. The study, therefore, sought to find out how ecotourism contributes towards the local economic development of the study area. The study was conducted at the Oribi Gorge Nature Reserve and surrounding communities (Murchison and Eshobeni). The population of the study comprised of the municipal officials, community tourism organisation, Oribi Gorge Nature Reserve's Management, community leaders, and households of the communities adjacent to the Oribi Gorge Nature Reserve. A sample of 384 respondents was drawn from the population using a convenience sampling technique. Exploratory mixed methods design was adopted by the study, which suggests that both qualitative and quantitative modes of research enquiry were used during the collection, analysis and interpretation of data. Survey questionnaires were used to collect the data through face-to-face mode of enquiry. Qualitative data were analysed through content analysis, while quantitative data were analysed through Statistical Package for the Social Sciences (SPSS version. 24). The findings of the study demonstrate that ecotourism contributes to the local economic development of the study area through employment creation and capacity building.

Keywords: ecotourism, mechanism, local economic development, natural resources, Oribi Gorge Nature Reserve

Introduction

The exponential growth of the tourism industry has had direct bearing on the overall growth of ecotourism sector (Sangpikul, 2010). Ecotourism became popular during the 1980s resulting from the ecological and non-ecological benefits derived from the sector. Ecological benefits refer to services stimulated by the availability of natural resources within or adjacent the nature-based areas, and they include: livestock fodder, food, fresh water, building material and medicinal herbs. Employment, capacity building, multiplier effect and revenue generation



are referred to as non-ecological benefits (Swemmer *et al.*, 2015). These benefits encompass both intangible and tangible benefits derived from natural resources and ecotourism activities (McKercher, 2010; Wang, Zhong & Chen, 2015). Advancement of ecotourism as a service sector and strategy for economic growth served as the basis for the sector to be heralded as a mechanism for alleviating socio-economic constraints without ruining the environment and culture of host destinations (Garrod, 2003). The emergence of ecotourism had been resourceful in addressing environmental, social and economic challenges faced by numerous countries the world over (Amati, 2013). The development of ecotourism activities for each destination could be measured by its level of economic development. This means that local economic development has been used by many destinations as a yard stick through which increase or decline in ecotourism activities could be determined (Anderson, 2009). Despite being characterised by scenic natural resources, numerous sub-Saharan African rural areas have been suffering from high unemployment rates, abject poverty and static socio-economy (Ahebwa *et al.*, 2012; Snyman, 2012). The purpose of the study is to explore the potential of ecotourism for enhancing the socio-economies of the communities adjacent to the Oribi Gorge Nature Reserve.

Theoretical framework

This section pays specific attention to the theoretical framework adopted by this study in relation to its relevance and appropriateness. On the basis of the chosen topic, aim and objectives of the study, neoliberalism theory of development and participatory approach were deemed appropriate to serve as theoretical framework of the study. For the purpose of this paper, this section opens by unpacking how neoliberalism has impacted on the emergence of ecotourism with specific reference to the neoliberalisation of nature. This is followed by a discussion on participatory approach and its significance on ecotourism development.

Neoliberalism theory of development

The development of ecotourism has been deeply embedded in the neoliberalist ideology (Kline & Slocum, 2015). This ideology advocates that market efficiency, promotion of material growth, commodification of natural resources, minimal state interference and maximisation of profit should underpin development (Fletcher, 2009; Kline & Slocum, 2015). It is for this reason that Fletcher (2009) defines neoliberalism as a political ideology which advocates capitalist market system characterised by minimal state interference. The emergence of neoliberalism impacted on staging and commodification of natural resources for tourism purposes. This phenomenon is popularly known as neoliberalisation of nature.

Neoliberalisation of nature refers to a process whereby natural resources have been increasingly subjected to market-oriented systems of management and development (McCarthy & Prudham, 2004). During this process, both public and private sectors work collaboratively to ensure promulgation and expansion of market-oriented regulations to legitimise commodification of natural resources (McCarthy & Prudham, 2004). Commodification of natural resources can be defined as a process whereby natural resources, such as distinct environments, fauna and flora and their habitats are staged and sold to the public for revenue generation purposes (Duffy, 2008). This process is popularly known as ecotourism and has been defined by the Mexican ecologist, Hector Cebellos-Lascurain as travelling responsibly to destinations characterised by distinct natural resources in order to study, admire and enjoy natural scenic environments, culture, and fauna and flora of the host destination (Fennel, 2008).

Natural resources have been used as the central means by which neoliberalism, through ecotourism has been prevailed for the past two decades (Duffy, 2013). The emergence and promotion of conservation of natural resources has been attributed to the neoliberal agenda.



This agenda advocates that natural resources found in local communities should be used as a strategy by which both tourists and foreign investors could be attracted (Jones, 2012). Subsequently, natural resources have been commodified to benefit state agencies, conservation organisations as well as private sector. Neoliberalism provides government agencies power to deprive local communities from accessing both ecological and non-ecological benefits derived from ecotourism activities undertaken within their communities (Jones, 2012). For this reason, McCarthy and Prudham (2004) maintain that neoliberalism has been essentially and necessarily an environmental agenda. It could, therefore, be argued that there has been an inseparable connectivity between environmental change, environmental politics, ecotourism development and neoliberalism.

In the context of developing countries, neoliberalisation of nature has manifested itself through proliferation of privately-owned corporations advocating both conservation of natural resources and community development initiatives (Duffy, 2008). In support of neoliberalisation of nature, the Department of Environmental Affairs and Tourism (1998) upheld nature conservation and tourism should be juxtaposed; hence, they underpin the South Africa's economic growth. Subsequently, the country adopted the commercialisation strategy meant to reduce the strain resulting from government revenue spent on social needs and nature conservation (Ramutsindela & Shabangu, 2013). The strategy resulted in the establishment of eleven concession sites in the country. Seven of these were built within the Kruger National Park (KNP), two were built within the Addo Elephant National Park (AENP), while the other two were awarded to the private tourism operators (Ramutsindela & Shabangu, 2013).

In view of the above discussion, it could be argued that neoliberalisation of nature has been triggered by political and economic agendas held by the public and private sectors. Thus, Buscher (2010) maintains that neoliberalism has been accused by its critics of being a strategy by which commodification of nature is intensified through tourism in order to benefit the state agencies, conservation organisations, and private enterprises while excluding local communities. With this in mind, the next section of this paper discusses the second theory of the study with specific reference to its significance in ecotourism development.

Participatory approach

There are two types of participatory approaches that are applicable in the context of ecotourism, and they are: (1) expert-assisted approach, and (2) expect-initiated approach (Vaidya & Mayer, 2014). The expect-assisted approach enables participants involved in ecotourism activities to make decisions and act in a manner that influence or determine sustainable ecotourism development. The approach provides participants an autonomy to define the problem, identifying sustainability indicators and generating final set of indicators. In this sense, participants take full responsibility for disseminating information and make judgements that support sustainability indicators (Simon & Etienne, 2009). Whereas, the expect-initiated approach accommodates two forms of participants, and they are: (1) community-based participants, and (2) system-based participants.

The former consists of community members or end-beneficiaries with academic researchers by whom are assisted regarding facilitation of discussions for defining problems and suggesting possible solutions (Vaidya & Mayer, 2014). The latter comprises a mix of representatives ranging from the public, private and governing sectors that could influence operationalisation of ecotourism activity.

It depends largely on group discussions and system dynamics modelling which involves more intensive activities and level of commitment of time and resources. It enables participants to identify indicators based on demonstrated utility to monitor activities, thereby expediting the



criteria, indicators, analysis and consensus-building process (Marques *et al.*, 2013). The difference with the expert-initiated approach as opposed to the expert-assisted approach is that it affords non-local experts an opportunity for developing pre-existing framework or set of indicators to be used as a starting point (Vaidya & Mayer, 2014). This approach allows both community-based and system-based ways to participate depending on the objectives set for development activity, time and available often limited resources. However, participation of non-local experts who lack basic information regarding initiatives undertaken often results in failure in addressing key issues and inadequately incorporate perceptions, interests and concerns of all participants (Reed & Dougill, 2002). Despite of its shortcomings, the approach has been used effectively as a mechanism by which sustainability, efficiency, ease of use as well as time saving requirements could be assessed. Moreover, it has been considered as a suitable approach for sustaining nature conservation initiatives (Vaidya & Mayer, 2014).

Literature review

Developing countries, such as South Africa have been classified under the so-called 'Third World' resulting from their wobbling economic landscape, booming population growth and sky rocketing unemployment rate (Schoeman, 2002). Mbaiwa (2015) upholds that South Africa is amongst the developing countries which have been struck by triple challenges, namely: poverty, unemployment and income inequality. Subsequently, extensive proportion of the KwaZulu-Natal Province has also been struck by abject poverty and high unemployment, especially of youths (Jones, 2005). Mostly, these challenges manifest through rampant marauding and poaching, hence local people try to subsist from the utilisation of invaluable animal and plant species. Amongst the widely acclaimed solutions to address these challenges is ecotourism resulting from its potential for enhancing both nature conservation and socio-economies of host destinations (Kotze, 2002; Myeza, Mason & Peddemors, 2010). Consequently, the sector has been growing at a rapid pace both as a tourism market and excellent local economic development strategy (Stone, 2002).

For the purpose of this paper, the review of literature focuses on scholarly writings in relation to the contribution of ecotourism to local economic development with specific reference to employment creation, multiplier effect and capacity building. Scheyvens (2000); Kotze (2002); Kline and Slocum (2015); Snyman (2016) uphold that ecotourism has been used in numerous parts of the world as a strategy through which sustainable job opportunities, capacity building and multiplier effect could be catalysed. Thus, a consensus amongst the proponents of ecotourism is that nature-based tourism has been used in rural settings as a tool for enhancing both socio-economy and community development (Ahebwa *et al.*, 2012).

Ecotourism and employment creation

One of the most palpable non-ecological benefits from ecotourism has been the employment opportunities accessed by members of the communities adjacent to host destinations (Snyman, 2016). Mitchell & Ashley (2010) maintain that employment has been the most important contribution of ecotourism towards local socio-economic development. Employment opportunities derived from ecotourism directly contribute towards improving local socio-economies, hence they provide earnings from which socio-economic livelihoods of the nearer communities could be sustained. Thus, the United Nations Environmental Programme (UNEP) proclaims that both socio-economic development and employment creation remain remarkable yields from ecotourism activities the world over (Stem *et al.*, 2003; Anup, Rijal & Sapkota, 2015).

In the Southern African Development Community (SADC) region alone, approximately 2 436 people from member states, such as Zambia, Zimbabwe, Seychelles, Namibia, Malawi, Botswana and South Africa were employed by the Wilderness Safari, a privately owned



ecotourism company, during 2014 and 2015. The majority (more than 70 percent) of these employees were the members of the local communities and on each of whom at least 7 households were financially dependent (Snyman, 2016). In this sense, revenue earned from ecotourism employment has been used to satisfy financial needs of ecotourism destinations' employees and their relatives (Chirenje, 2017). In her study titled: *"The role of private sector ecotourism in local socio-economic development in southern Africa"* Snyman (2016) reveals that most rural southern Africa's households significantly rely on income obtained from ecotourism-related employment to support their families. For instance, approximately 59 percent of these households had remunerations from ecotourism as only direct financial support for their families. For approximately 93 percent of these households, income obtained from ecotourism-related employment constitute more than 50 percent of the total household income (Snyman, 2014c).

In the South African context, ecotourism has been adopted in many cities, towns and rural areas of the country as a catalyst for employment creation (Ashley, Goodwin & Roe, 2001). As a result, ecotourism initiatives have gained buy-in from both public and private sectors of the country. One of the country's state-owned ecotourism destination mandated to ensure creation of employment opportunities for local people, is the Madikwe Game Reserve. The Reserve is located in the North West Province and is the fourth largest reserve to be built and further developed by the state post 1994 (Davies, 2003). The Reserve's development philosophy is based on the notion that success in ecotourism business could be determined by the extent of equity in which business's benefits are distributed to the local people. Thus, the central vision of the Reserve is strengthening and optimising its economic benefits to the local communities, hence there has been an increasing number of local people employed at all levels of the Reserve (Davies; 2003; Koch & Massyn, 2003).

Amongst the economic benefits derived by the local people from the Reserve is wages earned by local residents employed in game lodges, revenues earned by the local Small, Medium and Micro Enterprises (SMMEs) for the outsourced services, benefits to the local communities from the lodge-planned community development projects e.g. schools, rental and lease fees from communal land holdings, rent and dividends from owners' equity in lodge enterprises (Koch & Massyn, 2003; Rogerson, 2005). Ngala Private Game Reserve located on the boundary of Kruger National Park (KNP) and Jackalberry Lodge located in Limpopo Province provide employment to the majority of people who live 25 km from these attractions. Likewise, located in Sabi Sands Game Reserve adjacent to KNP, Sabi Sabi Private Game Reserve pays approximately 70 percent of monthly wage bill to 140 people living in the proximity of the Reserve on whom at least 7 to 8 people are financially dependent (Spenceley & Goodwin, 2007). Generally, due to lack of local skill, the majority of local people have been employed by the ecotourism sector in low paying baseline positions, while top positions are mostly occupied by non-locals with necessary skills (Chirenje, 2017).

Ecotourism and multiplier effect

The term 'multiplier effect' can be understood as the extent to which benefits from ecotourism activities are expected to give rise to returns, such as employment creation, revenue and profits generated outside ecotourism attractions (Muhanna, 2007). One of the most prevalent forms of multiplier effect derived from ecotourism is tourism Small, Medium and Micro Enterprises (SMMEs). General quest for promoting extensive participation of SMMEs in ecotourism activities has been attributed to the sustainable development campaign over the past two decades. For instance, a call for a greater community participation in the development of tourism policies and initiatives aiming at increasing establishment of SMMEs and local economic impact was made at the Agenda 21 for Tourism (UNEP, 2003). Thus, participation of SMMEs in ecotourism activities has become one of the central subjects which captivated



academic researchers' and policy analysts' attention resulting from these enterprises' potential for enhancing local economic development and reducing poverty (Mshenga & Richardson, 2013). The authors argue that participation of local SMMEs in ecotourism activities contributes to income diversification for poor people. As such, their participation in these activities neutralises anxiety engendered by seasonality of subsistence agriculture and other means of sustaining socio-economic livelihoods (Mshenga *et al.*, 2010). Hence, their extensive participation in ecotourism activities increases regional multiplier effects and spread these effects throughout local communities.

Apart from encouraging local people's positive attitude towards ecotourism activities, SMMEs enhance stability within local communities and empower local people with ensuring their stake in tourism development (Bailey & Richardson, 2010). In his study titled "*Tourism, the poor and other stakeholders: Asian Experience*" Shah (2000) upholds that there is high likelihood of using locally produced supplies when local entrepreneurs own formal-sector tourism enterprises. For instance, 85 percent of Crete's tourism enterprises have been purchasing locally supplied fresh foods of which large supplies of this food have been bought by emerging hospitality firms as opposed to their well-established counterparts. In this sense, participation of local SMMEs in ecotourism activities could increase provided tourism value chain remains the basis onto which local sources of supply are built (Goodwin, 1998). However, local SMMEs, especially those that are owned by poor people could easily participate in ecotourism if they are organised into crafts markets, in particular at prime sites in order to be extensively accessible to the ecotourism market (Ashley *et al.*, 2000). Against this background, participation of local SMMEs in ecotourism initiatives serves as a vehicle through which improved socio-economic livelihoods and poverty reduction could be enhanced, especially in rural settings. This is deemed to be critically important given the high levels of unemployment in the country on the whole.

Ecotourism and capacity building

Provision of benefits such as capacity building through skills development and training programmes has been one of many credits given to ecotourism for its role in local socio-economic development (Snyman, 2013). In the context of ecotourism, capacity building refers to skills development training provided by the sector to its employees and/or members of the nearer communities as an employment package. For example, providing computer literacy and/or environmental conservation skills to personnel and/or community members who are in need of these skills.

Generally, capacity building programmes are used as a platform through which trainees get opportunity to develop new skills that allow them to exercise control over development initiatives and boosting confidence in their abilities. Approximately, 2 558 local people from southern African countries were trained in ecotourism related skills during 2015. Of these, the majority (1348) constituted males, while the minority (1210) constituted females (Wilderness Holdings, 2015). However, most rural households in South Africa heavily rely on social grants for survival resulting from the lack of skills necessary for ecotourism development (Ugu District Municipality, 2015/16; Snyman, 2016).

Contextual setting

The study was conducted at the rural communities (Murchison and Eshobeni) adjacent to the Oriibi Gorge Nature Reserve (OGNR) within the Ray Nkonyeni Local Municipality (RNM) under Ugu District, south coast of the KwaZulu-Natal. Based on the chosen topic and aim of the study, the focus of the study centred on the OGNR; hence, it is the only ecotourism attraction situated in the study area. One of the characteristics of ecotourism is the fact that it takes

place in rural areas with scenic natural resources. However, most of these areas are characterised by low levels of socio-economic development (der Boer & Tarimo, 2012).

In line with this assertion, the study sought to find out how OGNR contributes towards the local economic development of the study area. The RNM was formed resulting from the merger of Hibiscus Coast Municipality and Eziqoleni Local Municipality that took place after the 2016 local government elections. The RNM covers approximately 837km² geographic area and extends 30km into the interior (ISOCARP, 2016). Figure 1 shows geographical position of the RNM and OGNR.

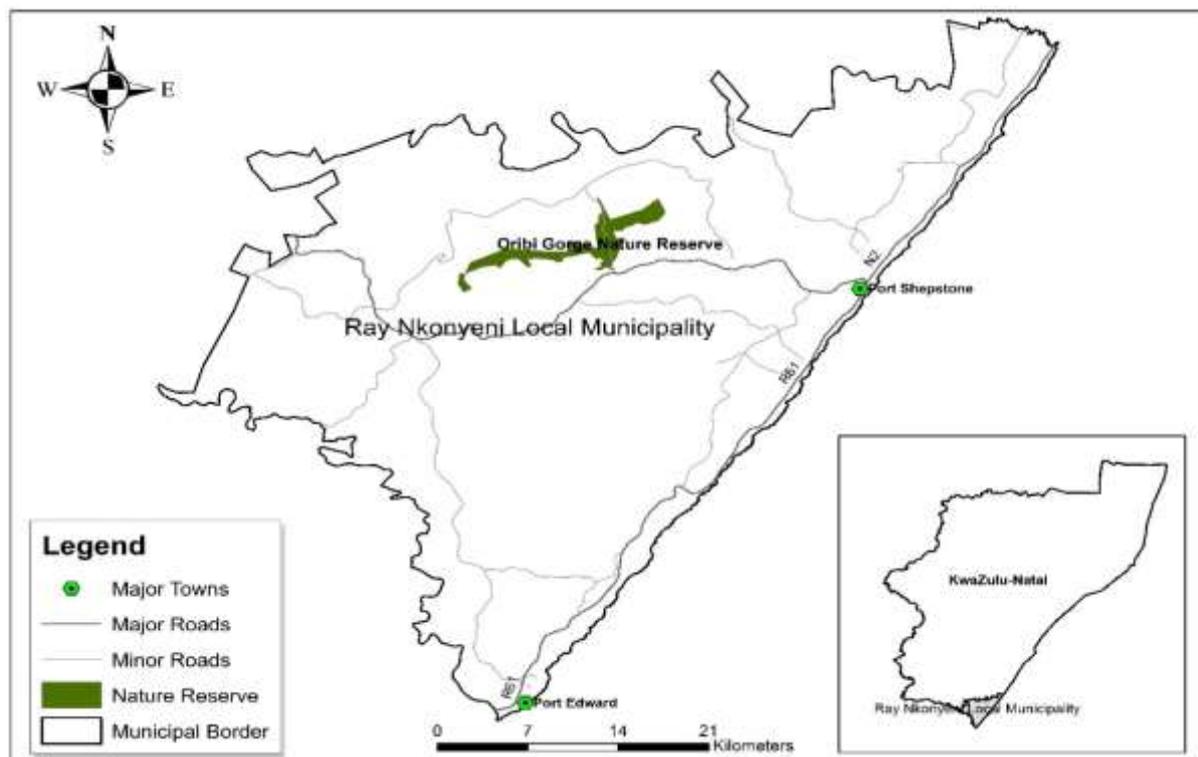


Figure 1. Geographical position of the RNM and OGNR (Source: KZN Demarcation Board, undated).

The total population of the RNM equals to 348 553 and has 36 electoral wards. The Municipality is dominated by Black Africans whom constitute over 82 percent of the total population, with only 11 percent of Whites and 7 percent of Indians and Coloureds. The Municipality has a high percentage of youths between the ages of 14 to 35 years (StatsSA, 2011). The Municipality exemplifies the most concentrated economic hub within the Ugu District. The central economic features of the Municipality include agriculture, tourism and manufacturing centred in Port Shepstone and its vicinity. Most of the Municipality's area is covered by the traditional areas, namely: KwaXolo, KwaNzimakwe, KwaNdwalane, KwaMadlala, KwaMavundla and KwaLushaba (Hibiscus Coast Local Municipality, 2015/2016).

Methodology

This study adopted exploratory design on the basis of the nature of the main question. Hence, research designs tend to vary in forms resulting from the nature of the main questions (Matima, 2000). The main question of this study reads: "How can ecotourism be used as a mechanism for the local economic development in the communities adjacent to the OGNR?" In support, Harrison & Reilly (2011) affirm that the type of question that fits the exploratory design is the "How?" question. The design enabled the researcher to sequentially collect and analyse



qualitative and quantitative data. That is to say, collection and analysis of data were organised into two sequential phases with qualitative data collection and analysis in the first phase followed by the collection and analysis of quantitative data in the second phase. The sequential flow of qualitative and quantitative phases in exploratory design are organised in a manner that enabled the researcher to interpret how quantitative results found in the second phase support qualitative results found in the first phase (Ivankova, Creswell & Plano Clark, 2016). The nature of the chosen design suggests that a mixed methods approach was used in the study during collection, analysis and interpretation of data in order to address the main question and achieve the objectives of the study.

The target population of the study comprised of government officials responsible for tourism and local economic development in the district and local governments, personnel of the OGNR, community leaders, community tourism organisation and households of the communities adjacent to the OGNR. The population were selected based on their knowledge of the chosen topic, importance in the community and geographical proximity to the study area. The respondents from the population were selected through convenience sampling technique on the basis that it enabled the researcher to select these based on their accessibility, geographical proximity, willingness to participate in the study, and knowledge of the chosen topic. Etikan, Musa & Alkassim (2016) attest that convenience sampling technique enables the researchers to select the target population on the basis of accessibility, convenience, proximity, and willingness to participate in the study.

Ethical and safety issues were taken into consideration in this study before the collection of data, and they were as follows: (1) plagiarism, (2) ethical clearance, (3) permission to conduct research, and (4) informed consent. They were taken into account to ensure the originality of the study, eligibility of the researcher to conduct the research, minimisation of potential risks, and acquisition of respondents' voluntary consent to participate in the study. Having been mindful of the impossibility to include the entire population in the study coupled with other important considerations such as financial limitations and deadlines, a sample of 384 was drawn. This sample size was computed through Research Advisory Spreadsheet (2016) at 95 percent level of confidence and 5 percent margin of error. Survey questionnaires consisting of structured and unstructured questions were used to collect primary data from the respondents through face-to-face surveys. Secondary data were collected from text books, electronic journals, discussion and policy documents, internet sources, published and unpublished conference proceedings and theses.

Content analysis was used to analyse qualitative data. During qualitative data analysis, implicit meanings embedded in the responses were sifted to determine the respondents' in-depth understanding and interpretation of the chosen topic. Statistical Package for Social Sciences (SPSS) version. 24 was used to analyse quantitative data. Raw data were cleaned and captured in Microsoft Excel and thereafter transferred to SPSS for statistical analysis. Statistical analysis were performed in order to demonstrate objectivity and to reduce bias (Snyman, 2016) and were performed through Pearson correlation coefficient and Chi-square test. Pearson correlation coefficient was performed to test relationships between bivariate variables, while Chi-square goodness of fit was performed to test the hypotheses. The data were interpreted to generate meanings and to draw conclusions against the research question.

Aim, objectives and hypotheses

This study sought to find out how ecotourism can be used as a mechanism for the local economic development in the communities adjacent to the OGNR. The specific objectives of the study were set as follows:



- (a) To find out how ecotourism contributes to the local economic development of the study area.
- (b) To establish the understanding of ecotourism by the community members of the study area.

In line with the objectives of the study, the following hypotheses were postulated:

H1. *That ecotourism does not contribute towards the local economic development of the study area.*

H2. *That ecotourism is not understood by the community members of the study area.*

Results and discussion

This study greatly relied on the respondents' participation for acquisition of reliable data with specific reference to socio-demographic and socio-economic characteristics of the respondents, relationships between bivariate variables and contribution of ecotourism to LED. This section opens with presentation and discussion of the socio demographic and socio-economic variables with specific reference to gender, monthly income and education of the respondents. The socio-demographic and socio-economic characteristics of the respondents are presented in Tables 1, 2, and 3.

Variable and sub-variable	Frequency	Percentage
Gender		
Males	181	47
Females	203	53
Total	384	100

Table 1. Gender of the respondents

The findings on the gender of the respondents demonstrate that there were more females (53%) who participated in the study as opposed to males who constituted only 47% of the total respondents. It could be said that this finding is informed by two factors as reported in the IDP of RNM 2016/17 that: (1) outmigration of males to other parts of the country in search of job opportunities, and (2) the fact that the total number of males is exceeded by that of females in KZN and country at large.

Variable and sub-variable						
Monthly income	Males	%	Females	%	Frequency	Percentage
No income	39	10	75	20	114	30
Less than R 1000	12	3	26	7	38	10
R 1001-R 5000	78	20	69	18	147	38
R 5001-R 10 000	23	6	16	4	39	10
R 10 001-R 15 000	13	3	7	2	20	5



R 15 001-R 20 000	12	3	10	3	22	6
R 20 001 and above	3	1	1	0	4	1
Total	180	46	204	54	384	100

Table 2. Monthly income of the respondents

The findings demonstrate that 30% of the total respondents had no income. Of these, males accounted for 10%, while females accounted for 20%. Those who earn less than R1000 share a same percentage (10%) with those who earn between R 5001 to R 10 000. In the first category (less than R 1000), males constituted 3%, while females were at 7%. In the second category (R 5001 to R 10 000), males accounted for 6% and females accounted for 4%. The majority (38%) was constituted by those who earn between R 1001 to R 5000 with males at 20% and females at 18%. Those who earn between R 10 001 and R 15 000 constituted 5% with males accounted for 3%, while females accounted for 2%. Those who earn R 15 001 and R 20 000 accounted for 6% of the total respondents. In this category, both males and females shared a same percentage (3%). The last category (R 20 001 and above) accounted for 1% of the total respondents with males at 3% and female at 0%. The findings indicate discrepancies regarding monthly income of males and females, hence males dominated all better paid categories (R1 001-R5 000, R5 001-R10 000, R10 001-R15 000, and R20 001 and above). The finding, therefore, aligns with the IDP report of RNM that income inequality remains one of the key challenges of the municipality (Hibiscus Coast Local Municipality, 2015/16).

Variable and sub-variable						
Education	Males	%	Females	%	Frequency	Percentage
No education	25	6	22	6	47	12
Primary	51	13	65	17	116	30
Secondary	81	21	91	24	172	45
Tertiary	23	6	26	7	49	13
Total	180	46	204	54	384	100

Table 3. Education of the respondents

The findings reveal that the respondents with no education constituted 12%. In this category, both males and females constituted 6%. Those respondents with primary education were 30% with males at 13% and females at 17%. The respondents with secondary education accounted for 45% of the total respondents. The distribution of the respondents in this category indicates that males were at 21%, while females were at 24%. The above category was followed by those who had tertiary education at 13%. In this category, males were 6%, while males were 7%.

The findings show that the study area is characterised by moderate level of education, hence the majority of the respondents were those with secondary education. The results, therefore, corroborate the findings of the StatsSA (2011) that the municipality's literacy rate shows that the majority of the inhabitants is comprised of those with secondary education (grades 8 to 11).



Pearson correlation coefficient was used to establish if there is relationship between dependent and independent variables using bi-variate correlation analysis. Correlations were drawn between gender and income and income and education of the respondents. The purpose was to establish if there is any relationship between gender and income, and any relationship between level of income and level of education. Table 4 presents the results in this regard.

Variables	Correlation <i>r</i>	Significance, <i>p</i> <0.01
Gender and income	-0.191	0.0001
Income and education	0.214	0.0001

Table 4. Correlation between variables and level of significance at *p*<0.01

The findings indicate a low negative correlation (-0.191) between gender and income at 0.0001 level of significance. The relationship between gender of the respondents and income levels demonstrates that females who were found to be the majority (53%) in terms of participation in the survey earned lower monthly income than males who constituted the minority with regards to participation in the survey. In other words, the findings indicate that there was a high percentage of males who earned between R1 001-R5 000, R5 001-R10 000, R10 001-R15 000, and R20 001 and above compared to females who earned less than males in these monthly income levels. In this sense, there is a relationship between gender of the respondents and income levels. This finding is corroborated by Morve (2016) who affirms that South Africa remains one of those countries which are still characterised by gender discrimination in terms of remunerations, such that females earn lower salaries than males who are equally productive.

The second category dealt with the correlation between monthly income and education of the respondents. It was found that there is a weak positive correlation (0.214) at 0.0001 level of significance. This finding indicates that there is a relationship between monthly income earned and level of education. Those respondents with high education earned high monthly income compared to those with low education. The findings, therefore, align with what Wolla & Sullivan (2017) found in the study entitled: *'Education, Income, and Wealth'* that there is a strong relationship between education and income, such that those with high education tend to earn more incomes than those with low education.

With regards to the contribution of ecotourism to the local economic development of the study area, the study found that ecotourism contributes to the employment creation, multiplier effect and capacity building in the study area. Table 5 shows the distribution of respondents' responses regarding contribution of ecotourism to employment creation in the study area.

Response	Frequency	Percentage
Yes	288	75
No	54	14
Not sure	42	11
Total	384	100

Table 5. Contribution of ecotourism to employment creation



The findings indicate that 75% of the total respondents agreed that ecotourism contributes to employment creation in the study area. Those who disagreed accounted for 14%, while 11% revealed that they were not certain in this regard. Based on these findings, it may be safely said that ecotourism contributes to employment creation in the study area. When asked on the type of employment offered by the OGNR, 37% of the respondents stated that local people are employed as field rangers. They were followed by those who said local people are employed as general workers at 35%, while those who were not sure of the type of employment offered by the OGNR constituted 24%. Those who said local people are employed at the OGNR as security guides accounted for only 3% of the total respondents. Distribution of the respondents demonstrate that the majority of the local people are employed at the OGNR as field rangers and general workers. Table 6 shows distribution of responses on the contribution of ecotourism to multiplier effect in the study area.

Response	Frequency	Percentage
Yes	28	7
No	75	20
Not sure	281	73
Total	384	100

Table 6. Contribution of ecotourism to multiplier effect

The findings demonstrate that 7% of the respondents affirmed that ecotourism contributes to multiplier effect, while those who disagreed accounted for 20%. A significant proportion (73%) of the respondents revealed that they were not sure whether ecotourism contributes to multiplier effect or not. Based on the nature of the findings, it could be said that it is not known whether ecotourism contributes to multiplier effect in the study area or not. To support, one of the officials had to say:

I would not be in a position to provide an appropriate answer on the issue of the multiplier effect. I think the local business people, especially those who are in hospitality business, if there are, would be relevant people to respond to that question (RNM Tourism and Marketing Officer: July 2018).

Based on the respondents' responses coupled with the researcher's observations during data collection, the nature of the findings on the contribution of ecotourism to multiplier effect could have been informed by the fact that there were no tourism SMMEs, such as accommodation and food services enterprises that would benefit from ecotourism activities in the study area. Table 7 illustrates perceptions of the respondents on contribution of ecotourism to capacity building in the study area.

Response	Frequency	Percentage
Yes	165	43
No	41	11
Not sure	178	46
Total	384	100

Table 7. Contribution of ecotourism to capacity building



Distribution of the responses demonstrates that 43% of the respondents affirm that ecotourism contributes to capacity building, while 11% held a contrary view in this regard. On the other hand, 46% of the respondents revealed that they were not sure whether ecotourism contributes to capacity building or not. In overall, the findings indicate that it is not known by the majority of the inhabitants of the study area whether ecotourism contributes to capacity building or not. However, it was interesting to find from those who affirmed that it contributes that OGNR hires graduates for internships and/or experiential programmes. To support, one of the OGNR's personnel affirmed:

Definitely, OGNR contributes to capacity building since it hires graduates who studied tourism like myself as interns so that we get opportunity to acquire necessary skill and experience required by potential employers (OGNR's conservation intern: July 2018).

Tables 8 and 9 show the outcomes of hypotheses testing computed through Chi-square goodness-of-fit test. The hypotheses were tested to verify their credibility (Pietersen & Maree, 2016). The Chi-square goodness-of-fit test was used to compute outcome by which basis for rejecting or accepting null hypotheses were informed. The criterion for rejecting or accepting null hypotheses was 0.05. For instance, if the p -value ≤ 0.05 , the null hypotheses had to be rejected. If the p -value is > 0.05 , the null hypotheses had to be accepted (Kothari, 2004).

Test Statistics

	Contribution of ecotourism to employment creation
Chi-square	384.000 ^a
Df	4
Asymp.Sig.	.000

Table 8. a. 3 cells (33.3%) have expected count less than 5. The minimum expected count is .18.

The findings indicate that the Chi-square obtained is 384.000^a. The degrees of freedom is 4, and the level of significance is 0.000. The findings demonstrate that the observed variable in the sample differ significantly from the expected values at $[X^2 (4) = 384.000, p = 0.000]$. This means that there is a significant relationship between ecotourism and local economic development, hence it contributes to employment creation.

Test Statistics

	Contribution of ecotourism to capacity building
Chi-square	379.950 ^a
Df	6
Asymp.Sig.	.000

Table 9. a. 3 cells (25.0%) have expected count less than 5. The minimum expected count is .27.

The findings demonstrate that the Chi-square obtained is 379.950^a. The degrees of freedom is 6, and the level of significance is 0.000. The findings indicate that the observed variable in the sample differ significantly from the expected values at $[X^2 (6) = 379.950, p = 0.000]$. This means that there is a significant relationship between ecotourism and local economic development, hence it contributes to capacity building. Based on the Chi-square tests presented in Tables 8 and 9, the null hypothesis that: "*ecotourism does not contribute towards the local economic development of the study area*" is rejected.



Table 10 shows the understanding of ecotourism by the community members of the study area.

Response	Frequency	Percentage
Yes	138	36
No	243	63
Not sure	3	1
Total	384	100

Table 10. Understanding of ecotourism by community members

The distribution of the respondents in terms of their understanding of the concept 'ecotourism' show that 36% understood the concept. Those who said they do not understand the concept accounted for 63%, while those who were not sure of their understanding of the concept constituted only 1%. Based on the findings, it could be said that ecotourism is not understood by the community members of the study area. Tables 11 shows the outcome of hypothesis testing computed through Chi-square goodness-of-fit test.

Test Statistics	
	Understanding of ecotourism by community members
Chi-square	2.761 ^a
Df	2
Asymp.Sig.	.251

Table 11. a. 2 cells (33.3%) have expected count less than 5. The minimum expected count is .94.

The findings indicate that the Chi-square obtained is 2.761^a. The degrees of freedom is 2, and the level of significance is .251. The findings demonstrate that the observed variable in the sample differ significantly from the expected values at [$X^2(2) = 2.761, p = .251$]. This means that there is no significant relationship between community members and understanding of ecotourism, hence it is not understood by the community members of the study area. Based on the Chi-square test presented in Table 11, the null hypothesis that: "*ecotourism is not understood by the community members of the study area*" is accepted. This could be mitigated through strengthening the relationship between local communities and OGNR by, among other things, ensuring inclusive participation of all stakeholders in ecotourism development processes.

Conclusion

The findings indicated that females were dominant in terms of participation in the study as opposed to males. However, males dominated females in terms of better monthly incomes. This finding was confirmed by the outcome of Pearson correlation coefficient. The outcome of Pearson correlation coefficient also demonstrated a significant relationship between income and education, hence those respondents with high education levels earned more than those with low education levels. The findings indicated that the study area has a moderate level of



education, hence the majority of the respondents had secondary education. Although the findings revealed that ecotourism does not contribute to the multiplier effect, however, it was found that it contributes to the local economic development of the study area in terms of employment creation and capacity building. The types of jobs that are likely to be supported by ecotourism based on the nature of its services include: (1) conservationists, (2) field rangers, (3) curators, (4) security guides, and (5) general workers. Given the increasing rate of unemployment in the country, the study recommends that more internship programmes and/or job opportunities be created by ecotourism sites, such as the OGNR, especially for the local youths with matric and unemployed graduates with relevant qualifications.

Acknowledgements

The authors wish to acknowledge the National Research Foundation and University of Zululand Research and Innovation Office for making funds available for the publication of this paper.

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