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### SOCIAL BENEFITS OF ECOTOURISM: THE MONARCH BUTTERFLY RESERVE IN MEXICO

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#### ABSTRACT

Ecotourism can contribute to both positive and negative socioeconomic impacts at the local level. However, ecotourism's socioeconomic impacts have received limited scholarly attention in the context of developing countries. Based on qualitative interviews and observations, this paper looks at the socioeconomic benefits of ecotourism in a local community in the Monarch Butterfly Reserve in Mexico. It was found that ecotourism replaced most of the economic activities in the locality; the use of forest resources for individual consumption and local trade was largely replaced by ecotourism-related activities. Benefits included locals' consciousness of natural resources and a more systematic organisation of economic activities. Acknowledging that qualitative methods somehow limit the generalisation of these findings, practical implications for the destination are suggested.

#### KEYWORDS

Community development; Ecotourism; Mexico; Socioeconomic impacts; The Monarch Butterfly Reserve.

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#### **1. INTRODUCTION**

Ecotourism has been adopted as a mechanism for environmental conservation, economic growth and the improvement of local livelihoods. Due to its potential to conserve local ecosystems, ecotourism has been regarded as a means to minimise negative impacts on natural environments and to contribute directly to local development in rural areas. Sometimes ecotourism can be adopted as an alternative or complementary productive activity. In this case, local people rely economically on ecotourism and on other traditional activities such as agriculture, fishing or forestry. Therefore, if one of these traditional activities does not fulfil the communities' economic needs, local people may look for alternative economic activities based on the use of the available resources. Ecotourism may then become an option.

Other times, however, ecotourism represents the main or only source of employment and income for communities. This often takes place in natural protected areas where other activities such as forestry or agriculture are not possible due to the restriction on the use of natural resources. Communities, therefore, become more dependent on ecotourism and, thus, more vulnerable to its potential drawbacks. In either case, as the only option or a complementary productive system, ecotourism inevitably acts as an agent of environmental, economic and social change for local communities. While this change may be perceived as positive or negative, it has implications at both individual and collective levels.

Tourism's social impacts may be defined as "the manner in which tourism and travel effect changes in collective and individual value systems, behaviour patterns, community structures, lifestyle and the quality of life" (Hall & Lew, 2009: 57). These changes may take place in any destination where tourism develops, but the type, nature and intensity of such changes are uncertain. When studying tourism's social impacts, the specific type of tourism in the destination is relevant. Social transformations will depend on several factors such as the type of tourists, the sociocultural and economic conditions of the locality and the larger environment. As a particular type of tourism, ecotourism will consequently have specific social impacts on local communities; these may differ from the impacts of other types of tourism and also from those in other ecotourism destinations. The social implications of ecotourism, nevertheless, have been commonly neglected in tourism impact studies in developing countries.

In this vein, this study presents the findings of a research project looking at ecotourism's social impacts on a local community. Specifically, the objectives of the study were three-fold. The primary objective was to explore the changes in the production systems that emerged as a consequence of ecotourism; the second was to identify the local awareness of biodiversity conservation as related to ecotourism; and the third, to identify the impacts of ecotourism on the community's organisation. The Monarch butterfly reserve in Mexico is taken as a research context. For the purpose of the paper, a brief review of the literature on tourism in general and on ecotourism's social impacts is first presented. Then an overview of the reserve is provided, and the methodological procedure is described. Finally, findings with regard to economic activities, awareness of natural conservation and community organisation as benefits of ecotourism are presented.

#### 2. LITERATURE REVIEW

#### Social impacts of tourism

As a social phenomenon, tourism represents an agent of social change not only for tourists but also for local communities (Murphy, 1985). Several aspects of local structures are often transformed as a consequence of tourism and very frequently as an effect of the relationship between tourism and other economic and social phenomena. One of the most widely acknowledged effects of tourism is the generation of employment opportunities for locals. According to Telfer and Sharpley (2008), tourism is an effective generator of both formal and informal employment opportunities, but the number and type of jobs created in the locality largely depend on the type and scale of tourism development. Tourism-related jobs often require lower levels of skills and training and are frequently low-paid. Furthermore, tourism employment opportunities tend to have side effects on other local economic sectors. Tourism may attract workers from traditional sectors of the economy such as agriculture and fishing and can lead to labour shortages in those sectors (Telfer & Sharpley, 2008). The conditions of employment and the economic income that tourism may provide can be higher than those in traditional productive activities such as agriculture (Noia, 2009) and fishing (Villela, 2009). Therefore, when the economic effects of tourism are more beneficial than those of other productive activities,

destination residents may opt for leaving traditional economic activities and engaging partly or entirely in tourism activities.

Tourism may also have direct positive effects on more qualitative social factors such as community identity, environmental values, social cohesion and local culture. Other times, however, issues such as social inequalities within communities are a consequence of tourism implementation, leading eventually to social conflict (González & Iglesias, 2009). Specific cultural aspects such as local arts and crafts may also be transformed positively or negatively due to tourism; while the commoditisation of local culture for tourism purposes may be unfavourable (Cohen, 2004: 100), tourism may also benefit the conservation and revitalisation of traditional arts and crafts (Deitch, 1989). Other beneficial impacts of tourism may be the conservation of areas of unique value or beauty (Mason, 2008).

The large number of research papers published on tourism social impacts suggests that many destinations experience certain impacts in common. This is not surprising, for tourism, regardless of the destination, is an economic, social and environmental phenomenon (Wall & Mathieson, 2006). It must be recognised, though, that the type, nature and intensity of tourism's social impacts will vary from one destination to another and depend significantly on the specific conditions of the locality. According to Ryan (2003), however, when looking at the impacts of tourism, a number of variables are important; factors such as the physical, social and cultural characteristics of the area, and the number and type of tourists are relevant. Therefore, while the sportive characteristics of a destination, the type and number of sport tourists, and the scale (small or large) of sporting events may be relevant for the analysis of sport tourism's implications (Fredline, 2008) and religious ones for religious tourism and pilgrimage (Gatrell & Collins-Kreiner, 2006), it is reasonable to consider the use of local natural resources and the environment of local communities when analysing the specific impacts of ecotourism.

#### Social impacts of ecotourism

Although still scarcely studied, ecotourism is now well established as a field of academic enquiry. The academic study of ecotourism has focused on very specific issues. According to Weaver and Lawton (2007), the literature on ecotourism can be organised into at least three research macro-themes. First, research has focused on the segmentation and expansion of the subject along with products, venues, activities

and markets. Second, a special effort has been made to understand the impacts of ecotourism, particularly the effects of wildlife viewing, and the potential for community-based models to optimize sociocultural impacts. Econometric issues and ethical dimensions of ecotourism impacts are also part of this second macro-theme. Third, there is a divide between less and more developed countries; venues and community-based models dominate in the former while case studies on markets, industry and institutions dominate in the latter.

With regard to the second theme (impacts), although several studies have focused on the effects of ecotourism, the literature reflects an overwhelming attention on the impacts of ecotourism on the natural environment. This is not surprising as natural resources are a core component of ecotourism. Like any other type of tourism, however, ecotourism may bring transformations into the social structures of local communities. In addition to community empowerment identified as a specific area related to sociocultural impacts by Weaver and Lawton (2007), changes in employment, production systems, use of natural resources, gender roles, arts and crafts, to mention but a few, are regarded as consequences of ecotourism. Studying the consequences of ecotourism is relevant not only for the understanding of tourism impacts in general, but for the recognition that the effects of ecotourism might significantly represent a benefit or a cost for local residents who depend largely on this activity. The type and intensity of such impacts, however, have received scant attention.

Existing investigations may help to identify which impacts are commonly attributed or related to ecotourism. By analysing social and economic adjustment processes in relation to the introduction of ecotourism in a community of the Lacandon rainforest in Mexico, Hernandez et al. (2005) observe that the community-based ecotourism project has resulted in positive impacts on the local population. These include the generation of employment, complementary income, the strengthening of local skills, community empowerment, and a multiplier effect on the local economy. Furthermore, the authors observed that the project has promoted the planning and organisation of other ecotourism projects within the community.

Similarly, in their study of three Amazon ecotourism projects, Stronza and Gordillo (2008) found that the local people perceive both positive and negative impacts of ecotourism at both community and individual levels. Income either from direct employment or from the sales of foods, handicrafts, transportation and other services

were reported as the benefits of ecotourism by local people. For some, ecotourism has been added to farming and forest extraction as an economic activity. Also, from working in ecotourism, local people gained the skills to pursue employment in other organisations. Local people also identify favourable changes in healthcare, education, potable water, plumbing, transportation, infrastructures and organisational capacity. Shifts in personal and family life including the adoption of new gender roles were also perceived as benefits of ecotourism. On the other hand, however, the authors claim that ecotourism does not always represent benefits. Leaving the family, loosing links with the community, leaving the farm and having restrictions on the resources use were locally regarded as ecotourism's costs.

Although studies of the social impacts of ecotourism are limited, existing research suggests that the impacts of ecotourism are diverse and complex. Social impacts will depend widely on the specific type of tourism demand and also on the specific conditions of the community in question.

The level of economic and social development together with the cultural background and the possible restriction on the natural resources use will shape the type and nature of ecotourism's social transformations.

#### **3. THE MONARCH BUTTERFLY RESERVE**

The Monarch Butterfly (Danaus plexippus) is a species characterised by its visible migration behaviour from the United States and Canada to west-central Mexico. The species' migration commonly takes place from November to March and has been described as one of the most outstanding biological migration phenomena in the world (Cornejo-Tenorio, et al., 2003). This contemporary phenomenon has become a unique tourism attraction in the country and in the world.

The Monarch Butterfly's overwintering phenomenon has been well known by local residents and adjacent communities for a long time, but it was not until the 1970s that researchers traced its path from Canada. Once the phenomenon became popular, the spectacle of the wintering butterfly attracted visitors (Barkin, 2003) both from abroad and from other Mexican regions.

Due to the biological value of the phenomenon, in 1986, without the consent of local residents, a special biosphere was created in the region for the protection of the species. This protected area is known as the Monarch butterfly biosphere reserve. The reserve was significantly expanded in 2000, and it now comprises a total area of

56,259 ha. (Brenner, 2009). From the creation of the reserve, there has been a significant increase in the number of tourists travelling exclusively to observe the phenomenon in the destination. Nowadays, thousands of tourists visit the destination each season. Although a significant number of visitors are foreign tourists, yet less than five percent of the total visitor population, the main tourism flows belong to domestic visitors (Barkin, 2003).

Nowadays, the reserve is one of the most densely populated and marginalised Natural Protected Areas in west-central Mexico (Brenner, 2009). It is occupied by communities with a high level of poverty (Merino & Hernández, 2004), but with different social conditions. The economic production system has been based for many years on the exploitation of forest resources and the cultivation of basic products. Since the establishment of the reserve, ecotourism has become a major economic activity for local communities. The adoption of ecotourism as an alternative strategy for social and economic development has brought many changes to the social structure of the populations. Although the social, economic and cultural aspects of the reserve's populations have received some attention (see for example Barkin, 2003; Brenner, 2009; Merino & Hernández, 2004), little has been done with regard to the social transformations taking place as a consequence of ecotourism as an economic alternative for social development.

#### 4. METHODS

This paper presents the findings of a project identifying the specific impacts of ecotourism on the local population of the reserve. For the purposes of the study, a particular community named Macheros, with an estimated population of barely 300 people, was analysed. Although it is argued that the communities in the reserve hold different social conditions (Brenner, 2006), preliminary observations and existing case studies (Brenner, 2006) suggest that their economic, environmental and sociocultural structures do not differ significantly; this allowed the authors to assume that the effects of ecotourism would not vary significantly among communities. While the case presented here is by no means representative of the whole reserve population, it is presumed that it somehow indicates the major changes that any of the communities experienced in terms of economic activities, awareness of natural resources and community organisation.

For this study, a qualitative approach was adopted. Qualitative research places special emphasis on the informants' own perspectives and offers rich and detailed information (Bryman, 2008); this was necessary to get a deep understanding of how the production activities, the local awareness of resource conservation and the community organisation have changed in the community. In particular, semistructured interviews, informal conversations with locals and observations were undertaken for the purpose of this study. Sixteen semi-structured interviews were undertaken with local residents. Although representativeness was not pursued at all, a special effort was made to capture a wide variety of voices. In total, ten men and six women between 29 and 70 years old were interviewed during September 2011. Key informants such as the mayor, tour guides, and leading people in the community were interviewed.

The instrument contained questions regarding the type of production activities that local people were involved in before, and started to do after, the implementation of ecotourism; that is, the economic activities that people stopped doing and adopted once the reserve was established. Issues such as the involvement of people in specific ecotourism-related activities were explored. Furthermore, informants were asked about other major changes that the adoption of tourism brought to their community in terms of the importance of biodiversity protection and the way people organise themselves for ecotourism activities during the Monarch season.

The interpretation of the data obtained from the interviews was significantly informed by the observations made during fieldwork. Bearing in mind that observation is learning through personal experience (Lew, 2011), the researchers had close contact with residents' everyday lives and participated in several local activities.

#### 5. FINDINGS

#### **Productive activities**

Historically, the use of natural resources has played an important economic role in the reserve's communities. Before the establishment of the reserve, and thus before the adoption of ecotourism, the local economy relied significantly on four traditional activities; forest extraction, agriculture, breeding domestic animals and migration. A native local man reported:

"We used to have benefits from forestry; we used to extract wood and charcoal from the forest. We used wood and charcoal for personal consumption and for sale to people from surrounding areas. Other people used to cultivate maize or avocado or breed cows and sheep".

Forestry exploitation was mostly based on the extraction of wood for commercial purposes, construction and domestic use. Wood was commercialised within neighbouring communities mainly, and used for the construction of local houses. For domestic use, wood was mainly utilised as fuel for satisfying basic needs such as cooking, heating, traditional healing, hygiene and tortillas. Before the establishment of the reserve, forestry exploitation was not regulated; there was practically no restriction on the extraction of wood for commercial or personal use.

Agriculture ranked second in the local production systems. Although very few people cultivated for commercial purposes, in reality most cultivation was used for family consumption. Maize was the main product; and its production did not exclude the extraction of wood from forests. Other products were vegetables and fruits. Domestic animals such as sheep and hens were raised for commercial use, for barter (exchange of animals or agricultural products for other goods) and for personal consumption. Agriculture and breeding small animals were done only by a few families and were not regarded as profitable activities; they were considered a way of surviving the economic limitations in and around the region. Migration played an important role in the local economy. Since the 1970s, migration to Mexico City, surrounding industrial cities and the United States -particularly by males- became a very important source of income for local people.

With the establishment of the Monarch reserve and the prohibition or strict restriction on resources, significant changes came to local people's lives. The strict control of wood extraction significantly prevented locals from benefiting from the traditional economic activity. The reserve's establishment did not allow locals to carry on extracting natural goods for commercial or personal use, at least in the way they used to do before. This meant a significant negative change in the local residents' everyday lives. A local woman commented:

"The Reserve brought some changes. We could not take out wood from the forest. Now we can extract only wood from 'dead' trees. Yet, this type of wood is not as good as others; it smokes a lot and it is not enough for domestic use. So we have to buy gas but it is quite expensive. Also we used to build houses from wood but,

because now we are not allowed to get wood from the forest, we have to build our houses by using concrete and other materials".

Furthermore, people were relocated but, as Barkin (2003) also found, they were not compensated for the reclassifications of the lands. Neither were local people offered alternative productive opportunities; this led locals to clandestinely remove products from the forest and search for other alternatives. Somehow this situation has caused tensions in the community; while some locals try to protect the forest, others exploit it for survival.

Visitors' arrivals to observe the Monarchs started before the reserve's establishment. According to some informants, fortuitous visitors asked local people to take them to see the butterflies. So people started making money from guiding people to the forest, but economic gain depended completely on how much the visitor was willing to pay. Once the reserve became popular, however, the amount of tourist flows started to grow. Tourists visited the destination only to observe the Lepidoptera; guides were then needed and locals became involved. So people, largely males, started to offer guided tours through the forest to see the Monarchs. In order to see the butterflies, visitors walked long distances (up to two hours), so locals started providing tourists with horse services. The horses that were initially for personal use and sometimes for agricultural purposes were now part of a profitable tourist service. Horses from neighbouring communities were also brought to the reserve for guided tours. The study revealed that these opportunities, however, were mainly available for males, and sometimes for boys. Although informants claimed that the reason for women's scant participation as tour guides was mainly due to the physical effort needed to reach the Monarchs, it was observed that traditional gender roles may also explain much of this, for there seems to be a traditional division of gender roles in the community.

However, although tours are guided mainly by men, ecotourism also brought opportunities for women. Two tourism-related activities were in particular mentioned by locals. First, handicrafts, which were originally made for local trade and personal use, were available for tourists. The local handicraft consists of weaving baskets and similar items made of local pine straw (see Photograph 1).



Photograph 1 Handicrafts made by local women for sale to tourists. Source: Fieldwork, photograph taken by first author.

Women started producing more handicrafts for sale during the tourist season. Some even learnt how to make these handicrafts for sale to tourists. Many women make handicrafts during the whole year, especially as the season approaches, and keep them at home for sale to visitors out of the season. A local woman stated: "we make these handicrafts for tourists; we make baskets and several types of containers. We make them four or five months before the season starts. This allows us to have extra income". Although handicrafts are mainly made for tourists, some are made for sale to surrounding organisations (mainly nearby hotels) during the whole year.

Second, concurring with the work of Stronza and Gordillo (2008), this study revealed that women found further economic alternatives in ecotourism by selling food to visitors. Basic foods, drinks and fruits are sold to tourists, but again only during the season.

Although the number of visitors staying near the reserve is small, some require accommodation services. Special basic accommodation facilities were exclusively built in the community for visitors. Because such accommodation facilities are limited in amount, during the season, some families decide to rent their house or part of it to tourists; this can be for one, two or more days at relatively low prices (as low as 20 USD). When houses are small, some families even leave their house and live

temporarily with other relatives so they can offer their house to visitors and get some additional income.

As the paragraphs above suggest, ecotourism provides locals with productive opportunities during the season, mainly from November to March. As Rogel et al. (2011) state, while tourism-related occupation rates are high during the season, employment for locals is temporary; tourists do not stay in the community before or after the butterfly season. Although locals have to look for alternative economic activities during the time in which the species is not in the locality, for many, such activities represent a valuable and sole source of income. For some ecotourism provides with the only opportunity for employment, yet, for others it becomes simply a complementary source of income. Particularly, the cultivation of maize and avocado, the construction of houses and small infrastructure, the sale of domestic animals, immigration to the United States, pine resin collection, and forestry (commonly illegal) remain productive activities both during the season and for the rest of the year, as a male informant commented.

"Many people work for tourism during the season but a few also have their cultivation at the same time. For example, I rent my horse and I become a guide during the season but I also cultivate maize. When the season is over, though, I work in house construction and sometimes I even have to emigrate to look for a job and send money to my family from there".

#### Increased awareness of natural resources

The local people knew about the existence of the Monarchs before visitors arrived in the reserve. However, they did not know much about the species; thus they were unaware of the importance of the Monarch as a unique biological phenomenon in the world. When scientists, governments and Non-Government Organisations, and tourists started to observe the Monarchs, the local people became aware of the species' importance. A local housewife remembered:

"I think the fact that tourists come to see the butterfly has helped us locals to appreciate the forest and the butterfly. When we were children, we used to see the butterflies but did not know what they were exactly. When people started to come to see the butterflies, we realised that they were important. We all then started valorising our resources, including the butterfly and the forest; they became more important and we protect them now".

People noted that the Monarch was a tourist attraction and therefore a source of income for them. They also became conscious of the importance of safeguarding the species' habitat: the forest. Thus some people acknowledge that thanks to the establishment of the reserve and due to the adoption of ecotourism, their appreciation for and recognition of natural resources have changed for better.

Local residents are now more willing to protect the resources, including the forest and the butterflies themselves. In fact, locals have adopted different strategies to protect them. Some informants claim that awareness of the importance of protecting the natural environment is shared with visitors. Not only are tourists informed about the characteristics, migration and other possibly interesting facts about the butterflies, but they are also told how important it is to protect the local flora and fauna. Tourists are not allowed to visit the Monarchs on their own; for they can adopt behaviours that may disrupt the natural environment. Tour guides therefore have become an important means to protect the Monarchs during tours.

The Monarch is not the only resource that locals have learnt to protect. The forest also gained special protection, although this comes from the recognition of the Monarch as a source of income. Many members of the community are now aware that if the forest is not conserved, then the Monarchs may stop migrating into the reserve; tourists would thus stop coming, and as a consequence income would be significantly reduced. Some of the actions that people –sometimes together with government institutions and through incentive-driven programmes- have implemented are basically reforestation and the implementation of forest rangers to watch for illegal deforestation and fires in the reserve.

#### Community organisation

As a consequence of ecotourism, there has been a change in the local people's organisation. Before the reserve became popular, visitors asked the local people to take them to the Monarchs and offered to pay. But to certain extent the locals' turns to guide tourists, and therefore to benefit from them, was based on "luck"; that is, only the people that were approached by tourists were those who could benefit. Guides back then could not charge a specific amount, since there were no "official" fares for visiting the reserve. As a local man reported,

"At the beginning only a few visitors came in search of the butterflies. We did not have any charge established back then, we did not know how much to charge

visitors to guide them to the butterfly, so the fees to the visitor was established by the 'quide'. There was not a committee who decided how much we had to charge to visitors. We were not organised".

According to the interviewees, the increasing number of visitors required the establishment of specific forms of organisation, because some people benefitted while others did not. Then, in order to extend the benefits of ecotourism to more people, locals created a commission to decide on several issues for the season. Decisions about who will be in charge of the ticket sales, the types of services to be provided, horses, guided visits, and the sale of foods and handicrafts, are made collectively each year. This way, there are now more chances for a larger number of residents to benefit from tourism. The same informant claimed,

"we are now more organised, we now receive training for guiding tourists, and we now know what to tell tourists about the butterfly. There is now more control in the community; we now try to take turns for guiding visitors so that everyone has the same chance to benefit".

Of course, this type of organisation is not totally due to ecotourism. People used to have their own community meetings before ecotourism started. These meetings, however, were held to discuss and make decisions about money distribution, land issues, and other community related issues. Ecotourism, thus, required changes in the existing community organisation to deal with tourism demands.

#### Other impacts

While this study focused mainly on the benefits of ecotourism in the local community, some local concerns inevitably emerged during fieldwork. While the establishment of the reserve opened new economic opportunities for some people, there are people who seem not to have access to the benefits, particularly those who are not involved in the organisation of tourism. For those whose participation in ecotourism activities is for some reason limited or insufficient to make ends meet, the forest remains an option. However, the restriction of access and use to forest resources (wood and pine resin mainly) have led some people to cut down trees clandestinely. This certainly has caused conflicts in the community since, as Brenner (2009) warns, the natural resources are being disputed among different local stakeholders; then, while cutting down trees is a source of income for some locals, for others it represents a threat.

#### 6. CONCLUSION AND DISCUSSION

This paper suggests that ecotourism has brought positive changes to the local communities in the Monarch reserve. Employment opportunities, conservation awareness and local organisation have been positively transformed as a consequence of tourism activity. For some people, this case may represent a "successful story", particularly when taking into account that for many developing countries, ecotourism is promoted as a mechanism for economic growth and environmentally sustainable development (Telfer & Sharpley, 2008: 103). For others, however, the goals of ecotourism have not been met in this case. The literature suggests that despite the large number of visitors in the destination, tourism has not become a socioeconomic development mechanism for local communities; nor has it reduced the pressure on the exploitation of natural resources (Barkin, 2003; Brenner, 2006).

From an outsider's perspective, the nature of employment that tourism generates in the locality may be low-skilled, lower paid and seasonal in nature. For some, therefore, the actual social and economic benefits of ecotourism in the locality are questionable. This may be reasonable when considering that other economic activities or even other forms of tourism are more profitable. However, when assessing the socioeconomic benefits of ecotourism and its contribution to social development, it should be borne in mind that neither ecotourism nor any other form of tourism by itself will become the key to social development. As Barkin (2003: 373) notes, "ecotourism [...] cannot be successful in isolation. Such activity must be actively integrated into a broader institutional nexus in which diversified production and social organization are reinforced". So ecotourism should be accompanied by other economic activities and social capacities not only to increase the probability of success but to reduce possible drawbacks that ecotourism alone may entail.

While there is a general recognition that ecotourism can offer more opportunities for local people, it is also clear that without other complementary productive activities that create jobs and income, they will continue environmentally destructive activities that also threaten the viability of the fir forests in which the Monarch nests (Barkin, 2003: 377).

Nevertheless, when assessing whether ecotourism has brought social benefits to the community, it is necessary to take into account how the community has changed from its original status, and how it perceives this change both at individual and collective levels. In this particular case study, the social and economic opportunities that people had before the introduction of ecotourism were significantly scant; ecotourism brought, for some, a complementary source of income and, for many, the only alternative they have ever had. It is recognised here that the economic income of locals has not dramatically increased as a consequence of ecotourism. However, some residents' living conditions have been considerably improved. The improvement of life quality should not be assessed by the parameters that researchers have set as ideal, but by the local residents' perceived life satisfaction, the feelings of well-being, and the beliefs about the standards of living (Yu, Chancellor & Cole, 2011); social improvement should have to do more with how people in destinations perceive and experience the social changes rather than how we, as researchers, define and measure the benefits of tourism.

This study suggests opportunities for practical implications. In particular, it is observed that regional and local governments' interventions should address the social implications of ecotourism in the communities. Special attention should be given to provide locals with necessary and adequate knowledge, skills and support to benefit from tourism and related activities. While locals have valuable natural resources, they have limited knowledge about how to use them positively for their own benefit. Additionally, governments should also actively provide alternatives for other productive activities. This can eventually have a positive impact on the reduction of high levels of emigration. All these efforts can be supported by organisations —including external tourism enterprises- that benefit from the community and its resources. Hotels, travel agencies and tour operators can significantly contribute to the improvement of people's livelihoods in the communities.

Finally, it must be recognised that the findings presented here, and perhaps also the conclusions drawn, are somehow limited due to the qualitative approach adopted. First, even though different voices were incorporated, the results of this study cannot be extrapolated to the rest of the community and less so to other communities. This is mainly due to the relatively small number of informants participating in the study. Therefore, this study's contribution could be improved by the adoption of quantitative approaches aiming to obtain representative data. Whilst quantitative methods can be

useful to overcome these limitations, however, the qualitative approach adopted in this study does offer an exploratory perspective that can be useful for further research. Second, some longitudinal research may also be useful to overcome some of the possible drawbacks related to the transversal character of the study. By constantly monitoring ecotourism-related changes in the locality, socioeconomic disadvantages can be mitigated before serious harm occurs in the community.

With regard to further research, issues such as the benefits of ecotourism at family and individual levels are still unknown. Analysing how ecotourism in the reserve provides local families with socioeconomic benefits and costs may help identify the actual and potential impact of tourism in the livelihoods of those who experience it. Furthermore, little is still known about how the local culture is being transformed by tourism; the cultural impacts of ecotourism, thus, become not only a research opportunity but also a research need in the location.

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