Ecotourism in Protected Areas, A Literature Review

by

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1. Introduction

As globalization continues, several fragile protected areas in the world become popular tourism destinations, whereas others remain less known and undeveloped. But tourism is usually responsible for environmental degradation and local cultural heritage loss, due to the “invasion” of large numbers of visitors who also bring foreign behaviours and material assets. So, why not leave protected areas isolated from tourist markets, allowing them to remain unspoiled and naturally balanced? This may be a good answer, however, often, foreign tourism operators and individual or/and external financial interests drive tourism development in protected areas. Moreover, it is the local communities themselves that seek tourism development to escape from social marginality and improve their financial position.

The most suitable practice for tourism in protected areas is ecotourism. Not only because it supports local communities, but also because it deals with environmental conservation. To this end, this paper offers an overview and sets the basis for future research work for ecotourism in protected areas. First, we provide definitions of key terminology, and review the literature related to ecotourism definitions, emphasizing its principles. Then, we describe our approach of ecotourism, as integrated tourism in theory and practice, emphasizing the key role of technology. We conclude by discussing our main findings and opportunities.

2. Research Background

To set the context for our discussion, we start by providing widely accepted definitions for the concepts of (i) protected areas (PAs), and terms related with protected areas such as (ii) biodiversity, and (iii) cultural diversity.
According to the International Union for Conservation of Nature [IUCN] (1994), ‘protected area is an area of land and/or sea especially dedicated to the protection and maintenance of biological diversity, and of natural and associated cultural resources, and managed through legal or other effective means’ (p.7).

First comes biodiversity: ‘Biological diversity means the variability among living organisms from all sources including, inter alia, terrestrial, marine and other aquatic ecosystems and the ecological complexes of which they are a part; this includes diversity within species, between species and of ecosystems’ (UN, 1992, p.3). Biodiversity is the result of an evolutionary process over thousands and millions of years. Without biodiversity earth will become uniform and, ultimately, without natural resources. The loss of biodiversity is irreversible. This is why the concept of PAs was introduced, and why their conservation is of paramount importance. Obviously, the designation of a PA is not a guarantee of biodiversity protection. Effective management is needed, focusing on species, habitats and ecosystems.

Secondly, but equally important, comes cultural diversity and resources:

‘cultural resources are all the aspects of the physical and supraphysical environment that human beings and their societies value for reasons having to do with culture. Included are culturally valued sites, buildings, and other places, plants and animals, atmospheric phenomena, sights and sounds, artefacts and other objects, documents, traditions, arts, crafts, ways of life, means of expression, and systems of belief’ (King, 2011, p. 2). The dimension of culture is inherently coupled with the very existence of mankind. In fact, ‘as a source of exchange, innovation and creativity, cultural diversity is as necessary for humankind as biodiversity is for nature’ (UNESCO, 2002, p.4). As argued (Maffi, 1998; Gunderson and Holling, 2002; Harmon, 2002;
Pretty, et al., 2009), just as biological diversity increases the resilience of natural systems, in an analogous way, cultural diversity has the capacity to increase the resilience of social systems.

According to WWF (2010), all touristic activities, in one way or another, induce changes to the natural, social, economical and cultural environment of the respective destination. Gössling (2002) argued that, from a global perspective, tourism contributes to: changes in land cover and land use; energy use; biotic exchange and extinction of wild species; exchange and dispersion of diseases; and changes in the perception and understanding of the environment. Hall (2010) conservatively estimated that tourism is responsible for approximately 3.5-5.5% of species loss, which could further increase in the future due to climate change. So, the general model of tourism is highly unsuitable and should not be adopted for PAs. Indeed, it is difficult to measure the environmental pressure caused by tourism as PAs are actually receiving globally roughly 8 billion visits per year (Balmford, et al., 2015). Empathising the strong relationship among biodiversity and tourism, “A Manual on applying the CBD Guidelines on Biodiversity and Tourism Development” was recently published by the Secretariat of the Convention on Biological Diversity (2015), with the aim to make “tourism and biodiversity more mutually supportive, engaging the private sector and local communities and indigenous peoples, and promoting infrastructure and land use planning based on the principles of conservation and sustainable use of biodiversity.”(p.11).

3. Ecotourism, as integrated tourism in theory and practice

Ecotourism, as defined by Hector Ceballos-Lascurain and officially adopted by the International Union for Conservation of Nature (IUCN) during its 1st World Conservation Congress held in Montreal ‘…is environmentally responsible travel and visitation to relatively undisturbed natural areas, in order to enjoy and appreciate nature (and any accompanying
cultural features - both past and present) that promotes conservation, has low negative visitor impact, and provides for beneficially active socio-economic involvement of local populations (Ceballos-Lascurain, & IUCN, 1996).

There is a lot of discussion around the definition(s) of ecotourism ‘as it is a vibrant movement that has so many definitions that can be defined by its lack of definition’ (Singh, 2008, p.113). This view is justified considering that Fennell (2001) reports as much as 85 ecotourism definitions; also a research study for ecotourism that was performed in the US noticed that out of 25 different governmental agencies that were involved with ecotourism, 21 decided to create their own ‘homegrown’ definition (Edwards, McLaughlin, and Ham, 2003). On the other hand, but in the same direction, Ziffer (1989) suggests that ‘the term has eluded firm definition because it is a complex notion which ambitiously attempts to describe an activity, set forth a philosophy and espouse a model of development’. Despite this rich variety of definitions, in general, according to Fennell’s (2001) content analysis, most common elements in ecotourism definitions refer to (1) where ecotourism occurs, e.g. natural areas (2) conservation, (3) culture, (4) benefits to locals, and (5) education.

For ecotourism principles, the same issue with definition appears: many quite similar but different lists exist of the so called ecotourism principles, characteristics, dimensions, components etc. To name a few: key aspects of ecotourism (Wearing and Larsen 1996); principles which distinguish ecotourism from the wider concept of sustainable tourism (UNEP, & WTO, 2002); ecotourism specific elements (Drumm, & Moore, 2002); components of ecotourism (Wood, 2002); six key tenets (Donohoe, and Needham, 2006); ecotourism principles (TIES, 2015). And the list goes on. To have a better view on ecotourism principles, we quote a widespread example, the seven ecotourism characteristics induced by Honey (1999): ‘(1) involves travel to natural destinations; (2) minimizes impact; (3) builds environmental
awareness; (4) provides direct financial benefits for conservation; (5) provides financial benefits and empowerment for local people; (6) respects local culture; (7) supports human rights and democratic movements’ (p. 22-24).

Considering the variety of existing definitions and principles, it is obvious that ecotourism represents a developmental process that benefits both local people and the area in question. The so-called ecotourism principles/characteristics/dimensions found in the literature have similarities but are not the same, as every area has its own, possibly widely different, reality context. Therefore, these principles must be separately defined for each PA, and redefined after a period of time, as several real-world conditions in the area might change. Keeping a symbiotic balance between environmental protection and local community well-being is always a challenge. In PAs, this challenge is of a greater importance compared to other areas, because of the biodiversity that needs to be preserved.

We accept that ecotourism is the best tourism practice for PAs. Actually, we consider that ecotourism is more than a tourism activity: it is an ideal way of life in PAs; it is in practice an integrated development process. We assert that ecotourism is synonymous with ‘integrated tourism’ which ‘... is part of a complete system that includes the environment, community, industry, economy and the legislative environment. Its planning should be democratic and integrated with related planning processes. Its planning should help tourism to contribute to a community’s well being’ (McVetty, as cited in Diamantis 2004, p. 50).

Along the same lines, Rokos (2004), a strong supporter of the ‘worth-living integrated development’, claims that the character of development is congenital with the character of nature and society. It follows that the character of development should also be determined by the
dialectic relationship between natural and socio-economic reality, the respective
interdependencies, interactions as well as evolutionary and revolutionary changes.

Based on the concept of worth-living integrated development, we have to view ecotourism
through the ecosystem of the dynamic and interrelated processes (environmental, cultural,
social, economic, political, technical/technological) pertaining to the specific PA in question.

**Figure 1.** Ecotourism complex and its dynamic interactions and interrelations (source: produced
in this study)

Figure 1, illustrates these dynamic relations between ecotourism and PA’s capitals according to
the theory of worth-living integrated development. It shows their interrelations, which are
actually represented by ecotourism principles. As an example, six out of the seven Honey’s
(1999) ecotourism characteristics are marked in the relative interrelations/interactions between the PA’s capitals. The first characteristic, ‘involves travel to natural destinations’ is not marked, as this study by default focuses on highly natural destinations. Every area has relations linked both with external capitals (regional, national, global) and external forces such as tourism opportunities. Both tourism and globalization interact with each other, assisting or disturbing the ecotourism development of the area in question.

4. Technology and ecotourism

We assert that ecotourism is a complex system and it is impossible to separate its PA’s capitals of development. Fig.1 shows the interactions and interrelations to the technological capital that should exist according to the theory of worth-living integrated development, but are missing in most of the theory of ecotourism principles, characteristics, elements etc. This means that according to literature on ecotourism framework, the technological capital has not gained an important theoretical position among capitals for achieving ecotourism goals set in a PA. The reason is probably because the evolution and application of technology runs faster than the evolution of ecotourism’s theoretical and practical framework.

We believe that there is a strong need to revise the theory of ecotourism, and to add technological capital interactions and interrelations as part of ecotourism principles. Such examples of relations among technological capital and the rest of PA capitals could be: (1) benefits for conservation of the natural and cultural environment by using technology (e.g. environmental monitoring and modeling/forecasting); (2) technology to improve the life of local people (e.g. online education, also for boosting the community’s own environmental awareness) and tourism enterprises (e.g. advertisements, marketing, promotion); (3) financial benefits to
ecotourism stakeholders from the use of advanced technology (e.g. smart eco-buildings); (4) technology to support accessibility to human rights (e.g. telemedicine).

About 177,500 designated PAs are scattered all over the earth’s surface, many of which are located to remote areas. In some of them, usually the poorest ones, technology has not reached the local communities yet. As Marc Zuckerberg, Facebook CEO, mentioned in a recent interview (19 February 2015) in Bloomberg TV, two-thirds of world’s population do not have any access to the Internet, and suggested that Internet connectivity should be a human right. This last statement might be an exaggeration (possibly biased by financial interests), but highlights the importance of technology for the well-being of every community and every citizen in our globalised world.

This is not something new. It is about 42 years since the first publication of Ernst Fritz Schumacher’s famous work, ‘Small is Beautiful: A study of Economics as if People Mattered’. Since then, his organisation called ‘Practical Action’, promotes the use of technology to reduce poverty based on the idea that technology should be “compatible with the laws of ecology, gentle in its use of scarce resources, and designed to serve the human person”’(Grimshaw, 2011).

In many cases, even in PA ecotourism destinations of developed countries, ICT (Information Communication Technology) tools are applied only to a limited degree, or not at all. As Katsoni and Venetsanopoulou (2013) argue, ‘paradoxically, as technology progresses, the gap between the “ICTs-included” and “the ICTs-excluded” widens, further jeopardizing the social, cultural, and economic development at the global level. Highly developed tourism markets and destinations that systematically use and benefit from advanced computer-based and Internet applications will continue to strengthen their position and affect the evolution of the sector.
Conversely, others who are able to use basic or simple electronic applications, or those that do not use them at all, will stay behind …’ (p. 65-66).

At the same time, through globalization, information has become much more easily accessible for visitors. They prepare their trip, book accommodation, get practical information before/during their stay, and share their impressions on the visited destinations during/after their trip. In addition, the electronic word of mouth, as a way to choose a trip destination via travel reviews websites and social media, becomes increasingly popular and important. The online opinion of the visitor can be more integrated, accurate and honest than that of a formal certifier or delegate media reporter. Moreover, it is for free. This is quite relevant since local stakeholders are usually not sufficiently profitable to afford costly advertisement and certification, as ecotourism is of a small scale by definition. If the visitor shares his experience, he is becoming a part of the effort for the promotion and development of the area. If his opinion is negative, he can share his complaints with social networks, ecolodges, park managers etc, in order for them to become better.

5. Ecotourism stakeholders

To better understand ecotourism, a brief description of stakeholders is required, as each potential ecotourism stakeholder has its own unique perspective for the PA and different benefits and incentives for ecotourism. An effort has been made to produce a list of all the potential ecotourism stakeholders and practitioners (Table 1).
It is commonly accepted that the collaboration of the different ecotourism stakeholders is vital for the sound planning of development activities in the respective destination area (Simmons, 1994; Mandell, 1999; Ladkin, and Bertramini, 2002; Pforr, 2006; Agüera, 2013; Aleksandrov, 2014). PA managers, local community and visitors are by definition key stakeholders. The extent to which secondary stakeholders are defined and involved in a PA vary and depend on how active, powerful and how much respected they are in their region. For example, in some PAs, Non-Governmental Organisations (NGOs) are strongly involved in the ecotourism

Table 1. Potential ecotourism stakeholders and practitioners in a protected area [source: produced in this study, taking into account related work by Eagles, McCool, Haynes, (2002) and Alexandrov, (2014)]
planning, management and implementation, and thus they should be considered as key ecotourism stakeholders as well.

In meeting the worldwide increase in tourism demand for protected areas, PA management agency must increasingly pay attention to the type and quality of visitor experience offered, and at the same time must protect the ecological integrity of the park (Priskin, and McCool, 2006). In some cases, park management agencies are by the law responsible for the ecotourism in the area.

Elsewhere, destination marketing organizations (DMOs) are normally charged with the mission of boosting the number of visitors to increase expenses that have positive impact on the local economy. On the other hand, the park managing agency holds the mission of protecting wildlife populations, ecosystems and natural resources. Park managers are concerned about controlling and informing visitors in order to behave with minimum environmental impacts (Manfredo, Vaske, Brown, and Decker, 2008). According to Buhalis (2000) ‘four key generic strategic objectives should be addressed by DMOs: (1) enhance the long term prosperity of local people; (2) delight visitors by maximising their satisfaction; (3) maximise profitability of local enterprises and maximise multiplier effects; (4) optimise tourism impacts by ensuring a sustainable balance between economic benefits and socio-cultural and environmental costs’ (p.100).

These objectives are consistent with the principles of ecotourism described previously.

In other destinations, community based management (CBM) suggesting participatory management of the area, is a popular solution (Christie, White, and Deguit, 2002; San, 2005; Dearden, and Bennett, 2005; Fox, Bushley, Miles, and Shimona, 2008; Lane, 2010). CBM can be considered holistic and integrative because it is generally designed with multiple objectives,
dealing with the numerous problems the community may be facing, which may also change over time (Senyk, 2005). Ziffer, (1989) pointed out, that if planning and decision-making do not involve local populations, then ecotourism will not succeed, and may even be detrimental to local communities. In our days, similar directions exist, as for example the tourism guidelines from the Secretariat of the Convention on Biological Diversity (2015) that stresses the need for a multi-stakeholder and participatory approach for the tourism development in PAs.

6. Discussion and opportunities

Ecotourism in PAs requires a holistic approach, taking into account several environmental, social, cultural, economic, political and technological processes and parameters, while at the same time also respecting ecotourism principles.

Our position can be summarized as follows: (i) Ecotourism principles must be safeguarded for ecotourism development to be successful. Each principle must be examined in order to adopt/develop the tools that are most appropriate for ecotourism. (ii) Social capital of the PA refers to ecotourism stakeholders. In essence, these are the end-users of the potential tools for ecotourism in a PA. Priority and emphasis must be given to develop tools for the key stakeholders (highlighted bold in Table 1) in order to apply the suitable solutions for their PA. (iii) Worth-living Integrated Development is taking into account not only the economic, social, environmental, political levels, but the technological level as well. However, in the literature, technological capital have received less attention compared to the other capitals of ecotourism development for PAs.

Although ecotourism is regarded as a developmental process ‘a set of principles and not a tourist product’ (Cater, 1994; Cheia, 2013), we believe that one should not ignore its touristic dimension and its relation with the evolution of the global tourism sector. As Amin and Thrift
(as cited in Williams, 2004, p.98) note so succinctly, the real question is ‘not whether globalization allows scope or national or local action, but what kind of action is necessary for positive engagement with the global economy’. If there are no external forces (e.g. no tourism opportunities) or external forces are intense (e.g. uncontrolled amount of visitors), then it is difficult to maintain an internal balance in the PA. Consequently, global tourism market influences and gets influenced by ecotourism.

As Butler (1998) argues, ‘inevitably any form of [tourism] development can only be judged sustainable or unsustainable after a long period of operation, when it can be ascertained if the demands of the activity have not prejudiced the needs of what were future generations when the development began’ (p. 31). The same issue exists for ecotourism. But contrary to conventional tourist destinations, PAs are unique, and vulnerable. There is no room for casual experiments and management failures. And as with every developmental process, things may change faster than expected, so that policy reaction may come too late to manage a negative impact. It is better not to develop ecotourism at all, if PA managers cannot safeguard the environment, or if the locals are against ecotourism development. Unfortunately, some ecotourism practices are only miniaturized versions of mass tourism concepts in areas that (still) have unique natural and cultural environments. So, we believe that it is better to keep a PA closed for visitors than try to offer an ecotourism-like product, in a poorly managed or uncontrolled way. This said, one should keep in mind that the majority of bad practices have not been designed according to the principles of ecotourism in the first place: ‘There can be no “bad” ecotourism. “Bad” ecotourism does not exist; it’s precluded by the definition. What they are usually deploiring is bad tourism that was marketed as ecotourism’ (Shores, 2003), mainly for promotional and financial reasons.
However, there is no silver bullet and no one-size-fits-all blueprint to follow in order to properly plan, manage, promote and maintain a balanced ecotourism development in a PA. The ultimate challenge remains open: namely, to understand the particular context of each PA system, and to carefully plan for its balanced development, as every PA is unique (Dearden, Benett, and Johnston, 2005).

7. Conclusion

Protected areas currently cover about 21% of terrestrial territory and inland water (EEA 2015). As sensitive and often remote areas, not all of them are currently suitable for ecotourism development. Actually, even good examples of ecotourism are simply attempts to reach the theoretical ideal of ecotourism. Natural, cultural environment and local communities of protected areas are in a constantly changing balance, affected by internal and external forces.

This conceptual paper offers a better understanding to PA managers, local communities and other ecotourism stakeholders for the context of ecotourism and about managing this dynamically evolving process, which interacts and interrelates with the particular environmental, social, cultural, economic, political and technological features of each individual protected area. Finding the right balance is the key for ecotourism development of every PA.

Limited or no access to technology by local stakeholders is an unsolved issue, which limits the ICT adoption in PA areas and makes proper ecotourism development even more difficult to achieve. Introducing and/or enhancing technological involvement, especially in remote PAs and their communities, is a challenging but necessary task for the future; for ecotourism goals to be successful implemented; for PA being part to the global ecotourism market; for local people to be equal citizens of our globalised world.
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