

# Review on Role of Biodiversity Conservation for Ecotourism and Sustainable development

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## ABSTRACT

Ecotourism has become increasingly popular over the last decade, both with conservation and development organizations looking for means of generating an income from protected areas, and with tourists from the richer countries looking for new experiences. Biodiversity is not a tourism sector in itself therefore, it is a primary attraction or critical underpinning for a relatively distinct and quantifiable market sector, namely nature, eco and adventure tourism. Sustainable tourism requires the informed participation of all relevant stakeholders, as well as strong political leadership to ensure wide participation and consensus building. Basic purposes of ecotourism are to preserve and utilize natural and cultural resources in a sustainable way and to enable economic development of local people.

**Keywords:** Biodiversity, Ecotourism, Protected Area, Sustainable Development

## I. INTRODUCTION

Any form of industrial development brings impacts upon the physical environment in which it takes place. In view of the fact that tourists have to visit the place of production in order to consume the output, it is inevitable that tourism activity is associated with environmental impacts (Eriksson & Lidström 2013). Ecotourism has become increasingly popular over the last decade, both with conservation and development organisations looking for means of generating an income from protected areas, and with tourists from the richer countries looking for new experiences. Most significantly, ecotourism is seen as an opportunity for local people living in tourism destinations to gain positive benefits from tourism development and the conservation of forests and protected areas (Muhanna, 2006)

The market for ecotourism, however, is finite, and very susceptible to outside factors. Political instability, changes in fashions in the tourist sending

countries, and weather and natural disasters play a major role in the success or failure of a tourism development. For that reason, we see ecotourism as just one aspect of overall forest management, to be integrated with other forest uses, but one which can play an important role. In order for ecotourism to encourage patterns of sustainability, which can benefit local communities, protect the environment, and be economically viable, it must be comprehensive and account for the complexity of issues (Paper et al. 1996).

### Tourism and eco-tourism

Tourism and eco-tourism have a lot in common, as well as some decided differences. Both travel categories work toward the combined goal of fostering visitors, enjoyment, and earning money for the destination. The primary difference between traditional travel and eco-tourism is the earth-friendly focus of the latter. Ecotourism is generally centered on a natural area or attraction. Visitors are encouraged to use natural resources wisely, and

reduce the carbon footprint left on the area. Growing the economy in rural and impoverished areas is a secondary goal of many eco-tourism excursions and attractions(Koch 1994).

Typical ecotourism activities can include biking, hiking, camping, cultural activities, swimming and surfing, snorkelling, rafting and geo-caching. Categories of eco-tourism include adventure travel (such as white water rafting or jungle treks) and nature based eco-tourism (such as wilderness camping trips or responsible use of the land while visiting)(Marzouki et al. 2012)

When one talk about ecotourism, they're talking about actions that have a meaningful impact on the community or region to which they're travelling. Lowering the carbon footprint or reducing the waste they generate while travelling by choosing reusable items like a refillable water bottle, all contribute to lowering their overall impact. But true sustainable travel is about supporting people and infrastructure long after they've departed: supporting a region socially, economically and environmentally (SEE)(Anon 2008).

By seeking ecotourism travel experiences, one will also find unique opportunities to connect more deeply with the people and places they visit, experiencing the culture, people, wildlife and diverse experiences each destination has to offer in a more authentic way. Tourism's economic impact includes industries that depend on travel, such as hotels, restaurants, airlines, trains, cruise lines, attractions, national parks and even roadside businesses on interstate highways(Anon 2008).

People travel for different reasons. Many travel for leisure, such as a trip to the beach or to an amusement park, while others travel to large cities to visit museums, attend plays and dine at famous restaurants. It includes adventure tourism; business tourism, medical tourism, Visiting friends and

families, etc. Another segment of the tourism industry is eco-tourism, a segment where travellers not only discover new experiences, but do so with utmost respect for the environment.

Like ecotourism, such terms as sustainable tourism and responsible tourism are rooted in the concept of sustainable development, or development that "meets the needs of the present without compromising the ability of the future generations to meet their own need"(Steck 2004).

According to the International Ecotourism Society, eco-tourism is "responsible travel to natural areas that conserves the environment and improves the well-being of local people." One main tenet involves minimizing impact, often called "responsible tourism." Eco-tourists leave a tourist area much as they found it without impacting the environment. A kayak trip down a river likely would have little impact on the environment, but a hunting expedition may not only result in animal death, but could affect mating habits and offspring survival. But eco-tourism goes beyond responsible tourism and encourages participants to not only respect the natural environment, but build awareness and respect for people who live in the tourist area. Eco-tourists also make financial contributions to the eco-tourism cause and raise awareness with governing bodies to increase sensitivity to tourism's overall impact to the natural environment and the local people.

### **Benefits of biodiversity to tourism**

From a tourism industry perspective, biodiversity is a tourist attraction, not a market segment. Its economic significance to the tourism industry is large, but difficult to quantify precisely. Whilst tourism is commonly thought of as a service industry, in reality tourism products are bundles of goods and services, with the goods at least as important as the services. Tourism has been described as "renting out other people's environments"; because it is the

environment that provides tourism attractions such as scenery, health, unusual plants and wildlife, and interesting cultures (Goodwin, 1996).

Biodiversity is a significant factor in a wide range of tourism product purchasing decisions. Obvious examples include visits to zoos and wildlife reserves; wildlife watching, bird watching, whale watching and dive tours; and consumptive tourism such as hunting and fishing tours. These, however, are by no means the only examples. Biodiversity is also a critical product component for tourists who travel to look at scenic landscapes, most of which owe their particular character to vegetation and fauna as well as underlying terrain. And in a much broader context, undisturbed ecosystems and their plant and animal communities are critical in maintaining the clean air, clean water and healthy environments which are a key tourism attraction in many destinations (Buckley 2004).

Whilst biodiversity is not a tourism sector in itself, therefore, it is a primary attraction or critical underpinning for a relatively distinct and quantifiable market sector, namely nature, eco and adventure tourism. It is also a significant, but perhaps not critical component of other tourism sectors. As a conservative first approximation, therefore, the economic significance of biodiversity to the tourism industry can be estimated from the size of the sector (Philips, 1985).

### **Impacts of tourism on biodiversity**

The impacts of tourism on biodiversity may be considered at various different scales (Buckley R. , 47-56):

- impacts associated with long- distance travel by air, sea, rail and road; these include diffuse impacts on biodiversity from air and water pollution and the construction and operations of airports, port facilities, roads and rail corridors;

- impacts from urban tourism accommodation and associated facilities; these include diffuse impacts on biodiversity associated with power and water supply, materials consumption, and waste, wastewater and sewage discharge;
- localised impacts on biodiversity from development of resorts, facilities and infrastructure at green fields sites in various locations and land tenures;
- localised on-ground impacts, both direct and indirect, of general nature, eco and adventure tours and associated activities;
- impacts of recreational activities with a deliberate consumptive component, such as hunting, fishing, shell collecting, plant collecting, and purchase of souvenirs or artifacts made from plant or animal parts; and
- indirect role of tourism, in some countries, in contributing to or encouraging trade in endangered plant and animal species, both legal and illegal, and including plant seeds, animal parts, artifacts, medicinal preparations etc.

### **Implication of tourism versus ecotourism on sustainable use of biodiversity & conservation**

Tourists are attracted by natural landscapes which harbour significant biodiversity. Tourists in coastal areas enjoy swimming in clean waters among the fish and coral reefs, and watching whales and seabirds. Others go on safaris to watch wildlife. All these activities require intact and healthy ecosystems. National parks rely on functioning ecosystems to provide visitors recreation, education, culture and fun (Melita & Mendlinger 2013).

Tourism is one of the fastest growing industries and can be a sustainable alternative to economic activities that would be damaging to biodiversity. It can be a sustainable alternative to more damaging industries. The money that tourists spend can serve nature, society and culture in the form of protected areas and other attractions. Sustainable tourism can also make

communities proud of maintaining and sharing their traditions, knowledge, and art, which contribute to the sustainable use of local biodiversity. Tourism can have a variety of negative impacts on biodiversity, particularly when there is no adequate management. Irresponsible and unsustainable tourism can damage nature through habitat destruction, overexploitation of local resources, waste and pollution, invasive alien species, infrastructure development, and greenhouse gas emissions. Tourists expect a clean environment and they will not return to polluted or degraded destinations, which will cause economic losses. Travellers, the tourism industry, governments and investors all have an interest in the conservation and sustainable use of resources. Biodiversity keeps tourism going, not to mention that it meets our most basic needs by supplying food, drinking water and medicines. Sustainable tourism is in everybody's interest (Nasi & Belair 2010).

### **Sustainable development and tourism**

According to Hall (2008) sustainable development and tourism present change which refers to the movement from one state or condition to another. Whether such a transition is positive or negative depends on the original criteria by which change is measured. Sustainable tourism requires the informed participation of all relevant stakeholders, as well as strong political leadership to ensure wide participation and consensus building (Jacobson & Robles 1992). Achieving it requires monitoring of impacts, introducing the necessary preventive and/or corrective measures whenever necessary.

Tourism/Ecotourism is in a special position in the contribution it can make to sustainable development and the challenges it presents: -

- Firstly, this is because of the dynamism and growth of the sector, and the major contribution that it makes to the economies of many countries and local destinations.

- Secondly, it is because tourism is an activity which involves a special relationship between consumers (visitors), the industry, the environment and local communities. This special relationship arises because, unlike most other sectors, the consumer of tourism (the tourist) travels to the producer and the product.

This leads to three important and unique aspects of the relationship between tourism/ecotourism and sustainable development:

- ✓ Interaction: The nature of tourism/ecotourism, as a service industry that is based on delivering an experience of new places, means that it involves a considerable amount of interaction, both direct and indirect, between visitors, host communities and their local environments.
- ✓ Awareness: Tourism/ecotourism makes people (visitors and hosts) become far more conscious of environmental issues and differences between nations and cultures. This can affect attitudes and concerns for sustainability issues not only while travelling but throughout people's lives.
- ✓ Dependency: Much of tourism/ecotourism is based on visitors seeking to experience intact and clean environments, attractive natural areas, authentic historic and cultural traditions, and welcoming hosts with whom they have a good relationship. The industry depends on these attributes being in place.

According to (Cambangay 2006) Sustainable tourism as having four pillars:- economic, ecological, cultural and community sustainability.

1. **Economic sustainability - that is profitable in both the immediate and long term**
  - Form partnerships throughout the entire supply chain from micro-sized local businesses to multinational organisations

- Use internationally approved and reviewed guidelines for training and certification
  - Promote among clients an ethical and environmentally conscious behaviour
  - Diversify the products by developing a wide range of tourist activities
  - Contribute some of the income generated to assist in training, ethical marketing and product development
  - Provide financial incentives for businesses to adopt sustainability principles
2. **Ecological sustainability - development that is compatible with the maintenance of essential ecological processes, biological diversity and biological resources**
- Codes of practice should be established for tourism at all levels
  - Guidelines for tourism operations, impact assessment and monitoring of cumulative impacts should be established
  - Formulate national, regional and local tourism policies and development strategies that are consistent with overall objectives of sustainable development
  - Institute baseline environmental impact assessment studies
  - Ensure that the design, planning, development and operation of facilities incorporate sustainability principles
  - Ensure tourism in protected areas, such as national parks, is incorporated into and subject to sound management plans
  - Monitor and conduct research on the actual impacts of tourism
  - Identify acceptable behaviour among tourists
  - Promote responsible tourism behaviour
3. **Cultural sustainability - increase people's control over their lives and is compatible with the culture and values of those affected and strengthen the community identity**
- Tourism should be initiated with the help of broad based community input
- Education and training programs to improve and manage heritage and natural resources should be established
  - Conserve cultural diversity
  - Respect land and property rights of traditional inhabitants
  - Guarantee the protection of nature, local and the indigenous cultures and especially traditional knowledge
  - Work actively with indigenous leaders and minority groups to insure that indigenous cultures and communities are depicted accurately and with respect.
  - Strengthen, nurture and encourage the community's ability to maintain and use traditional skills.
  - Educate tourists about desirable and acceptable behaviour
  - Educate the tourism industry about desirable and acceptable behaviour
4. **Local sustainability - that is designed to benefit local communities and generate/retain income in those communities**
- The community should maintain control over tourism development
  - Tourism should provide quality employment to community residents
  - Encourage businesses to minimize negative effects on local communities and contribute positively to them
  - Ensure an equitable distribution of financial benefits throughout the entire supply chain
  - Provide financial incentives for local businesses to enter tourism
  - Improve local human resource capacity
- Sustainable development through ecotourism is a concerning issue in the world today. Many countries have ensured their regional development by this concept. Dimensions of ecotourism development refer to the environmental, economic, and social aspects of tourism development, and a suitable

balance between these dimensions must be established to maintain its long-term sustainability(Koch 1994)

Tourism can be sustainable if development meets the needs of tourists and local residents while protecting future opportunities. Ecotourism offers benefits for local residents, conservation, development and educational experiences. Ecotourism is a sustainable form of natural resource-based tourism. It focuses primarily on experiencing and learning about nature, its landscape, flora, fauna and their habitats, as well as cultural artefacts from the locality(Reading et al. 2010)

Ecotourism entails a combination of conservation and tourism (the economics related with it) to benefit local communities, especially focusing on sustainability. Natural and cultural landscape values form a basis for ecotourism. These values are geographical position, microclimatic conditions, existence of water, natural beauties, existence of natural vegetation, existence of wildlife, surface features, geomorphologic structure, local food, festivals and pageants, traditional agricultural structure, local handicrafts, regional dress culture, historical events and people, heritage appeals, architectural variety, traditional music and folk dance, artistic activities and so on(Brandon 1996).

Ecotourism is largely perceived to safeguard natural areas and thereby to contribute to the conservation of biodiversity. It focuses primarily on experiencing and learning about nature, its landscape, flora, fauna and their habitats, as well as cultural artefacts from the locality. In ecotourism planning the first issue that emerges is the environment and its conservation (CBD Secretariat 2013)

Ecotourism destinations are always environmentally sensitive because ecotourism activities directly involve various environmental phenomena including bird watching, trekking, mountaineering, horse riding and elephant riding within the forest

wilderness trail, staying in natural caves, studying about flora and fauna, simple bush walking, fishing, animal behaviour study, ecological studies. Ecotourism always incorporates various activities in nature (hiking, mountain climbing, observing the living beings in their natural habitat, etc.), but it may include cultural activities, too. Ecotourism is an important educational component, it is a chance to learn respect for nature, for the local culture, and for some it is a chance to self-reflection being inspired by the beauty of the surroundings(Estate 2002).

Ecotourism is often perceived as a tool for promoting sustainable development in developing countries. Ecotourism helps in community development by providing the alternate source of livelihood to local community which is more sustainable. Many view ecotourism as a viable way to protect the natural environment and create social and economic benefits for local communities. Ecotourism encompasses a spectrum of nature-based activities that foster visitor appreciation and understanding of natural and cultural heritage and are managed to be ecologically, economically and socially sustainable. Therefore, ecotourism is accepted as an alternative type of sustainable development. Ecotourism has attracted increasing attention in recent years, not only as an alternative to mass tourism, but also as a means to promote a country's economic development and environmental conservation. Its aim is to conserve resources, especially biological diversity, and maintain sustainable use of resources, which can bring ecological experience to travellers, conserve the ecological environment and gain(Drive 2001).

Ecotourism is increasingly being lauded as a sustainable development option for rural communities, one that is able to spur economic development (Vogt, 1997) and instil environmental protection at the same time. If the environment has not at least achieved a net benefit toward its sustainability and ecological integrity, then the activity is not ecotourism.

Basic purposes of ecotourism are to preserve and utilize natural and cultural resources in a sustainable way and to enable economic development of local people. However, achieving the aims in ecotourism depends on whether they are environmentally and ecologically sustainable and economically applicable. In order to achieve these, a participative tourism planning is required (Anon 2010)

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