
Ahmad Salman

Universiti Sains Malaysia

Mastura Jaafar

Universiti Sains Malaysia

Diana Mohamad

Universiti Sains Malaysia

A comprehensive review of the role of Ecotourism in sustainable tourism development

Sustainable tourism alone without ecotourism was facing difficulty in achieving environmental protection goals, awareness, socio-cultural protection, and economic development. Ecotourism can be seen as a tool to strengthen sustainable tourism because it emphasizes sustainable tourism principles. Thus, this paper aimed to understand the role of ecotourism in achieving sustainable tourism. To achieve this aim, the study shortlisted and reviewed 22 articles from peer-reviewed journals dated from 2005-2018 and analyzed journal articles related to ecotourism that focused on understanding the significance of ecotourism's role in supporting sustainable tourism development. Three main themes emerged after analyzing the articles, which were economic, environmental, and socio-culture. The proper implementation of ecotourism can help the destination economically, socially, and environmentally by creating more jobs, developing investment opportunities, protecting the culture, environment, and destination's natural resources. This paper identified three critical roles of ecotourism in achieving sustainable tourism and described its benefits as well. Moreover, with the help of this review, this study reduces the knowledge gap regarding the paucity of research on this topic, which is one of its major contributions.

Keywords: Ecotourism, sustainable development, ecotourism role, cultural conservation,

economic benefits, environmental protection

Ahmad Salman

PhD Researcher

School of Housing Building & Planning

Universiti Sains Malaysia

Email: ahmad.salman111@gmail.com

Mastura Jaafar

Faculty of Housing Building & Planning

Universiti Sains Malaysia

Email: masturaj@usm.my

Diana Mohamad

Faculty of Housing Building & Planning

Universiti Sains Malaysia

Email: diana_mohamad@usm.my

Sr Dr Mastura Jaafar

She has numerous years of experience in the construction industry dealing with project estimation and costing, finance and project management, development proposals, and project evaluation. Her areas of research, publication, and supervision interests include strategic management in the construction, housing, and tourism industries, entrepreneurship, project management and procurement management. She was the recipient of the Emerald Literati Network ‘Highly Commended Award’ in 2007 and 2015. Her publications have featured in *Tourism Management*; *International Journal of Hospitality Management*; *Habitat International* and many more.

Dr Diana Mohammad

Dr Diana has numerous years of experience in the tourism and planning field. She is currently teaching tourism in University Sains Malaysia, and her main research interest is in sustainable tourism development. She has published many articles in the field of tourism and planning.

Ahmad Salman

Mr Salman has published articles in Scopus, ERA and ISI. He has a vast experience in stakeholder management and tourism. His area of expertise includes ecotourism, stakeholder management, destination management and project management.

Introduction

The concept of sustainable development has gained wide acceptance in tourism because of environmental protection, conservation of resources, and awareness creation (Getz & Timur, 2005; Hossain Bhuiyan, Chamhuri, Ismail, & Islam, 2012). Sustainable tourism, as pointed out by the World Tourism Organization (WTO), should:

- 1- Conservatively utilize ecological resources, protects ecological processes.
- 2- Respect the host communities' values and cultural heritage
- 3- Safeguard sustainable economic operations that benefit the region and offers income-earning opportunity to eliminate poverty from the region

The concept of sustainable tourism has been evolving with the main focus on protecting the environment and conservation of resources (Unathi Sonwabile & Tembi M., 2018; Development, Bird, & View, 2011). It tries to overcome the adverse effects of mass tourism, which can be observed across different tourism sectors such as recreation, adventure and attraction, and accommodation. It is because of this continuous evolvement of the term sustainable tourism and the adverse effects of mass tourism, the concept of ecotourism emerged (Chen & Liu, 2017; Nigar, 2017; Morgera, Razzaque, & Peralta, 2017; Coria & Calfucura, 2012; Picard, 2015).

Ecotourism has gained significant support at a global level in recent years by supporting the protection of the environment, biodiversity, resources, enhancing natural resource conservation, and increasing knowledge about the destination's culture (Khallaf, 2014). Ecotourism is considered a sub-sector of sustainable tourism (Sarhan et al., 2016; Rivera, Gutierrez, & Rivera, 2018). The International Ecotourism Society stated ecotourism as a "responsible travel to natural areas that conserves the environment, sustains the well-being of the local people and involves interpretation and education" (The International Ecotourism Society, 2015).

The International Ecotourism Society explored deeper and provided a list of specific principles to implement and practice ecotourism. Ecotourism focuses on learning about landscape, nature, their habitats, safeguarding the ecosystem, and promoting socio-economic development in the area (Krüger, 2005; Ayachi & Jaouadi, 2017; Hakim, 2018). Ecotourism also helps the local community of the area by providing them with an alternate living source, which is considered to be more sustainable (Harilal and Tichaawa, 2018). The aim of ecotourism is to conserve the resources of the area, protect the biodiversity in the region and try to develop a way for the minimum utilization of resources which can not only bring the natural experience to the tourists but also generate economic benefits for the local community (Hunt et al., 2015).

Although researchers agree that ecotourism helps conserve resources and protect the environment in a destination, studies have reviewed the literature to identify and analyze the combined insights into ecotourism's role in sustainable development. Therefore, this study aims to address this gap by presenting a thematic review of the literature on ecotourism and its role towards sustainable tourism to strengthen further the study knowledge and understanding of the role of ecotourism in sustainable tourism.

Background

The need for sustainable tourism has significantly increased because of mass tourism's adverse effects (Shi et al., 2015). Ecotourism helps to provide economic and cultural benefits to the area, but it also reduces carbon footprints by providing alternate ways to reduce pollution. Moreover, it not only helps human beings, but it also promotes the protection of flora and fauna. Also, TIES (2015) stated that ecotourism is also required to enhance the living of the locals and protect the environment.

Tourism, if not managed and monitored, will affect sustainability negatively in the area. It will hinder the fiscal, communal, and ecological aspects of the region. Some of the

main aspects hindered by the mass tourism activities are (Journal et al., 2009; Morgera et al., 2017).

- 1- Ecosystem
- 2- Water
- 3- Air
- 4- Wildlife

Moreover, tourism activities that result in interference with the ecologically fragile areas can cause permanent damage to the current ecological process. These issues can be seen in the form of degrading the resources, reducing the size of the habitat, and more deforestation. Researchers have pointed towards ecotourism to solve these issues mentioned above (Reed and Massie, 2014; Coria and Calfucura, 2012). As the number of tourists rises every year, tourism destinations need to ensure that growth is sustainable and not damaging to the environment. Due to the continued rise in the number of tourists, governments and planners are looking for substitutes to protect the environment and conserve natural resources while improving the economy. Moreover, tourism is the fastest-growing sector globally and needs to be adequately handled so that the environmental and cultural damage is reduced and economic benefit is enhanced (Morgera et al., 2017). This is where the need for ecotourism comes into play because ecotourism attempts to protect the environment and bring socio-cultural and economic stability to the destination at the same time (Lerdsuchatavanich et al., 2016). Ecotourism is also in line with sustainable tourism principles, making it an even strong candidate for achieving sustainable tourism. Ecotourism promotes responsible tourism actions in the region and encourages the minimum use of the resources (Hossain Bhuiyan et al., 2012). Carefully planning and managing the ecotourism sites provide direct benefits such as awareness, resource conservation, protection, and monetary benefits to the local community and the entire country as a whole (Brokaj, 2014). The benefits generated from the

ecotourism sites can offset the issues generated because of the less sustainable mass tourism activities such as environmental damages, resource utilization, and cultural destruction (Morgera et al., 2017). Therefore, this study aims to understand and analyze the past literature and explain how ecotourism can help achieve sustainable tourism.

Methodology

This part of the research describes the methods and materials used to do the analysis. It includes study design, eligibility criteria, search strategies, and the analysis of the data.

Study Design

For the study design, a 'thematic synthesis' of the studies was done following Thomas and Harden's (2008) guidelines. Thematic analysis guides a researcher to identify and analyze themes occurring in the data. Thomas and Harden (2008) provided four-step guidelines to conduct thematic analysis, i.e., searching, selecting, extracting, and thematically synthesizing.

Search for the articles

The search for the articles was done through google scholar, Web of Science, and Scopus. Since the study focused on analyzing the role of ecotourism in sustainable development, so different keywords were combined, such as "Ecotourism," "role of ecotourism in sustainable tourism," "ecotourism impact," and "sustainable tourism." Since these databases work differently, so different combinations of the results were combined. The results generated 137 articles from which further shortlisting was required.

Finalizing & Extracting the information

Carefully screening was done in this phase of the research. The timeline of the articles reviewed was 2005-2018, which was considered enough to understand the importance and the role of ecotourism towards sustainable development (Shaffril et al., 2018). Furthermore, the finalizing technique also made sure that the selected articles were consistent with the topic and the research objectives, which was to understand the role of ecotourism in

sustainable tourism. Out of these 137 articles, 68 articles were further reviewed, and 22 articles were finalized for the analysis, and the rest of the articles were used as supportive references. This inclusion and exclusion process was done by reviewing and following the guidelines of Thomas and Harden (2008).

Analysis & identification of themes

After extraction, a careful analysis of the 22 finalized articles specifically focused on ecotourism roles in sustainable tourism (see table 1). These articles were analyzed thoroughly, and the role of ecotourism in sustainable tourism was categorized into three main themes: environment, socio-cultural, and economic.

Table 1: Main themes observed for ecotourism role in sustainable development

No	Authors	Economic	Environmental	Socio-cultural
1	Chen, Yang, & Xie (2005)	✓		✓
2	Kelkit, Ozel, & Demirel (2005)	✓	✓	✓
3	Courvisanos & Jain (2006)	✓	✓	✓
4	Fung & Wong (2007)		✓	
5	Bin, Suocheng, & Mei (2008)	✓	✓	
6	Zambrano, Broadbent, & Durham (2010)	✓	✓	✓
7	Ștefănică & Vlavian-Gurmeza (2010)	✓	✓	✓
8	Walter (2013)		✓	
9	Vishwanatha & Chandrashekara (2014)	✓		✓
10	Agricol (2014)	✓	✓	
11	Cao, Tang, Deng, & Dong (2014)		✓	
12	Picard (2015)	✓	✓	
13	Hunt, Durham, & Driscoll (2015)	✓	✓	✓
14	Taylor, Anup, Rijal, & Sapkota (2015)	✓	✓	
15	Lerdsuchatavanich, Pradatsundarasar, Pattanakiat, & Utarasakul (2016)		✓	✓
16	Lyon, Hunter-jones, & Warnaby (2017)	✓	✓	✓
17	Emmanuel Acquah, Nsor, & Arthur (2017)		✓	✓
18	Ashok, Tewari, Behera, & Majumdar (2017)	✓	✓	✓

19	Nigar (2017)		✓	
20	Qiu, Fan, Lyu, Lin, & Jenkins (2018)		✓	✓
21	Mammadova (2018)		✓	✓
22	Li et al. (2018)	✓		✓

Results

Three main themes emerged from the analysis of the articles regarding the role of ecotourism in sustainable development are shown in Table 1. The themes are: economic, environmental, and socio-culture. Findings of the study reveal that 90% of the articles reviewed for this study indicated that ecotourism helps protect the environment.

Environmental protection is one of the central pillars of sustainable development. About 64% of the studies viewed that ecotourism helps to gain economic advantage and protects the destination's culture, which can help strengthen the economy, make the lives of the community better, and preserve the local culture of the area. To achieve sustainable tourism at a destination, ecotourism supports the main five pillars of sustainability, as described by UNESCO (2013). The studies analyzed show that ecotourism has a strong role and positive relationship towards sustainable tourism development.

Ecotourism role in sustainable tourism

Sustainable tourism development principles, such as conservation of biodiversity, reduction of poverty, and environmental protection, are also fulfilled through ecotourism (Hawkins, 2004). Because of ecotourism and its robust principles, the local people of the area recognize the significance of protecting and conserving the resources. They try to maintain a lifestyle that follows the principles of ecotourism, which generates positive results for the region in the long run. Many countries prefer ecotourism as the desired technique to conserve resources, protect culture, gain economic benefits, and develop the community by providing them jobs. With the main focus on conservation, ecotourism acts as a facilitator for ecologically sustainable development.

The economic role of Ecotourism in developing sustainable tourism

Ecotourism has been observed as a force that positively impacts the area's economic and regional development (Picard, 2015; Qiu et al., 2018; Hunt, Durham, & Driscoll, 2015). Ecotourism is the fastest-growing tourism sector, and it brings many advantages to it, such as offering jobs, increasing employment rate in the area, developing investment opportunities, and supplementing the foreign exchange (Hunt et al., 2015; Lerdsuchatavanich et al., 2016).

Studies in Costa Rica and South African countries depict a few of the best model cases of the ecotourism economic impact. In Costa Rica, it was found that ecotourism helped in generating 42% more revenue as compared to a very famous and popular tourist destination France (Hunt et al., 2015; Planning, Courvisanos, & Jain, 2006). In South Africa, it was observed that ecotourism has helped to increase the income of the local households and significantly decreased the poverty level in that area specifically (Snyman, 2014; Planning et al., 2006; Lyon, Hunter-jones, & Warnaby, 2017).

Another recent case study performed in China by Li et al. (2018) in two different provinces of China indicates that ecotourism does provide value-added, output, income, and employment generation opportunities to the region contribution towards economic stability of the region vary. This difference in result could be because of ecotourism's implementation methodology (Li et al., 2018).

The empirical evidence presented in the ecotourism literature indicates that ecotourism can generate some substantial income that can support households of the region. For the local people, ecotourism has become the primary source of income and has also replaced the past activities like hunting, farming, and livestock (Mbaiwa and Stronza, 2010). These case studies mentioned above indicate that ecotourism can successfully contribute to the country's economic generation and help create jobs.

Socio-Cultural role of Ecotourism on sustainable tourism

Another essential feature of sustainable tourism is the socio-cultural feature of the region. Ecotourism impacts the socio-cultural feature of the area positively. Hall (1992) stated the positive socio-cultural benefits of ecotourism and indicated that it has a constructive and robust impact on the region's values and traditions. Neth (2008) enhanced Hall's statement by adding that ecotourism positively adds to better community service, more local community participation, and improved regional bonding. Acquah (2013) also stated that the successful implementation of ecotourism helps maintain the area's cultural identity. Vishwanatha & Chandrashekara (2014) also accepted that ecotourism's socio-cultural impact was positive for protecting the values of the area and helping them get financial benefits. Numerous other scholars have also agreed on this fact that the ecotourism socio-cultural impact on the region is positive, and ecotourism helps to promote education, better health services, increased support for the area, respect for the local culture, improve gender equity in the area, increases infrastructure and promotes cultural appreciation (Acquah, Nsor, & Arthur, 2017; Mammadova, 2018; Acquah, 2013; Vishwanatha & Chandrashekara, 2014).

Because of the increased awareness of ecotourism generated in the local community, there can be many other benefits seen in the area. It is because of the benefits of understanding ecotourism, many activities that result in un-sustainability such as hunting, fishing, and deforestation have been decreased significantly (Walter, 2013; Diamantis, 1999; Kiper, 2013; Agricol, 2014). This indicates a constructive association between the local community activities for the conservation and protection of the area (Chen, Yang, & Xie, 2005).

Environmental role of Ecotourism in sustainable tourism

Protection of the environment and its resources is one of the fundamental sustainable tourism principles. Numerous researchers have pointed out that ecotourism is a major player

in environmental protection and natural resource conservation in the region (Kelkit, Ozel, & Demirel, 2005; Bin, Suocheng, & Mei, 2008; Cao, Tang, Deng, & Dong, 2014). Ecotourism helps to save from deforestation, conserve flora and fauna, increase greenery, and promote alternative energy sources (Zambrano et al., 2010). Researchers have also pointed out that ecotourism's income also helps in environmental conservation (Picard, 2015; Taylor, Anup, Rijal, & Sapkota, 2015). Researchers have also stated that ecotourism helps to protect the natural spaces and, therefore, supports preserving biodiversity in the region (P. A. Lindsey, Alexander, Du Toit, & Mills, 2005; Fung & Wong, 2007).

Ecotourism is very closely related to the principles of environmental conservation (Butarbutar and Soemarnao, 2013). Ecotourism implementation in the area minimizes the negative environmental impacts. Ecotourism tries to promote a green sustainable development strategy by using the minimum amount of natural resources so that the area and the people living in the area both can benefit from it for the long term (Ashok, Tewari, Behera, & Majumdar, 2017; Agricol, 2014; Ștefănică & Vlavian-Gurmeza, 2010; Nigar, 2017).

Relationship between Ecotourism and Sustainable tourism development

Ecotourism helps to protect the natural areas by providing environmental education to the locals, involving the locals and generating revenues for the area sustainably in conservation and development, thus making it ideal for including as a tool for sustainable tourism development. Ecotourism helps to preserve resources for future development and generations. The association between conservation and ecotourism is substantial to understand because it is also drastically related to UNESCO's biodiversity targets to achieve sustainability in the area (Pan et al., 2018; Sachs et al., 2009; Boley & Green, 2016). Places that have the potential for ecotourism also have biodiversity hotspots, so the right knowledge of ecotourism along with proper management can help to protect biodiversity and as a result

can bring in strong economic incentives for conservation (Vaidianu, Adamescu, Wildenberg, & Tetelea, 2014; Boley & Green, 2016).

Sustainable tourism's main principles of environmental protection, socio-culture promotion, and economic growth are positively impacted by ecotourism (Nigar, 2017; Lozano-oyola, Javier, González, & Caballero, 2012; Lerdsuchatavanich et al., 2016; Pasape, Anderson, & Lindi, 2013). Bhuiyan et al. (2012) stated that many countries have successfully implemented sustainable development by focusing on these three characteristics. UNESCO also understood the importance of ecotourism, and because of the communal, monetary, and environmental features of ecotourism, it can be promoted to focus specifically on preservation, learning, and community engagement (UNESCO, 2002). By introducing ecotourism in the region, the unsustainable aspects of mass tourism, transportation, and exploitation could be countered by applying place-specific approaches to ecotourism (Kiper, 2013; Chan & Bhatta, 2013).

Different place-specific conditions have to be carefully considered to use ecotourism to make a transition that is more sustainable and supports ecotourism (Mondino & Beery, 2018; Hoppstadius & Dahlström, 2015; Ahmad et al., 2013). The countries which have implemented ecotourism successfully, such as Kodagu district India (Vishwantha & Chandrashekhara, 2014), Taroko National Park, Taiwan (Yi-fong, 2012), and Galapagos Islands (Powell & Ham, 2008), have seen great success over the past years.

Ecotourism includes visiting the areas full of natural resources to acquire knowledge, carrying out environment-friendly activities, providing nature-based experience, and helping the area grow economically and socio-culturally. This is mainly focused on places where the tourists come for recreation, attraction, and adventure. Nature, habitats, flora and fauna, landscapes, and cultural heritage learning are also focused on ecotourism (Kiper, 2013; Sarhan et al., 2016). Many researchers such as Sarhan et al. (2016); Natalia, Yosef, & Halog

(2019); Hoppstadius & Dahlström (2015); Lerdsuchatavanich et al. (2016); Eshun, Tagoe-darko, Eshun, & Tagoe-darko (2017) have also pointed out that the ecotourism helps to attain an equilibrium between economic, social and ecological aspects of the area, making it an ideal tool to be used to attain tourism sustainability.

Discussion

It is evident from the above-provided analysis that the role of ecotourism is significant in sustainable tourism development. Since ecotourism focuses on environment-friendly activities, learning of nature, protects flora, fauna and their habitats, landscapes, and promotes a positive image of the location, it is considered an excellent tool for sustainable tourism development. Countries all over the world are trying to inject ecotourism to achieve sustainable tourism.

Ecotourism helps as a tactic to create sustainable development plans in the region through conservation objectives. If implemented correctly, it helps to achieve this sustainable development balance between biodiversity conservation and economic goals. Successful implementation has brought many success stories over the past years, such as Kodagu district India and the Galapagos Islands. With the help of ecotourism livelihood of people improve, environmental damages reduce, awareness increases, research knowledge becomes stronger, and aids in developing tools for sustainable tourism development.

In the past, the implementation of ecotourism was done without a proper understanding of its principles, and as a result, inefficient results were achieved. However, in order for ecotourism inclusion approaches to be successful and effective for sustainable development in a region, this review identifies that all of the ecotourism principles should be followed to lead to sustainable tourism development in the region.

Ecotourism encourages people to think about natural resource conservation, indicating that the area's natural habitat is protected and the development in the area is being done using

sustainable sources. Most importantly, other than following sustainable tourism principles, ecotourism also contributes actively towards conservation and the protection of cultural and natural heritage. Ecotourism acts as a strategic ally for environmental conservation, brings innovation and new skills to the tourism sector, and connects with nature to generate a positive impact, due to which there is a vital need to use ecotourism for sustainable tourism development.

Implications & future recommendations

This paper contributes towards the literature on ecotourism's role and importance as apart of its theoretical and generic relevance. A detailed review was conducted about the importance of the role of ecotourism in sustainable tourism development. Understanding and the implementation of ecotourism is an issue in a major part of the world. There have been many unsuccessful cases regarding ecotourism implementation in a tourism destination. This paper attempts to help people understand ecotourism and its role in achieving sustainable tourism, guiding policymakers in understanding how ecotourism could lead to sustainable tourism.

As this paper attempts to understand the importance of ecotourism towards achieving sustainable tourism only, future researches should consider adding more ecotourism implementation factors like stakeholders and then analyzing the studies. This will enhance the generalizability of the study findings.

Conclusion

Worldwide, ecotourism is now considered to be a useful tool to achieve sustainability. Because of the strong environmental, social, and economic development principles of ecotourism, countries worldwide have started to embrace ecotourism development while constructing conservation and tourism strategies. Ecotourism has an environmental, social, and economic impact not only on the community and a single nation but on the whole world.

Ecotourism contributes economically, socially, and environmentally towards achieving sustainable tourism in the area. With the help of more eco-friendly tourists coming to the area, ecotourism can help generate economic sustainability. Moreover, socio-cultural and environmental aspects are also guarded with the help of ecotourism. Ecotourism helps to protect the local culture by promoting local goods and products in the region, and at the same time, it helps to protect the environment and thus help generate activities that help achieve sustainability in the area.

Ecotourism's primary purpose is to protect the natural environment, promote cultural reserves, and sustainably improve economic activities. An alternate source of livelihood is provided by implementing ecotourism, which is more sustainable than mass tourism economic activities. Ecotourism exposes visitors to nature and thus improves the appreciation of nature and thus plays a substantial role in the development of sustainable tourism. The ecotourism development process is a bit lengthy, but it offers robust benefits and directly relates to the preservation, safeguarding of the ecosystem, and sustainability of the area.

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