



Wetland ecotourism in Sri Lanka: Issues and challenges

Sudusingha Liyanage Jothirathna Fernando¹, Noresah Mohd Shariff¹

¹Geography Programme, School of Distance Education, Universiti Sains Malaysia, 11800, USM, Pulau Pinang, Malaysia

Correspondence: Sudusingha Liyanage Jothirathna Fernando (email: jagathferna@gmail.com)

Abstract

Ecotourism industry is growing and changing at a fast pace to be an increasingly important source of income and employment in many countries. According to the World Tourism Organization, ecotourism is recorded as the highest growing market in the tourism industry with an annual growth rate of 5 per cent worldwide and representing six per cent of the world's GDP and 11.4 per cent of all consumers spending. Sri Lanka has tremendous ecotourism resources with great potential for further development in Southern Asia. At present tourism industry with ecotourism sector is a major foreign exchange generating industry in Sri Lanka. Since 2005, the sector of ecotourism has been developed under the policy decisions and legal coverage of tourism act No. 38 of 2005 which came into effect in October 2007. Despite the positive trends Sri Lanka's ecotourism has negative environmental feedbacks in the forms of land degradation, land clearance, erosion, disturbances and loss of biodiversity, air and water pollution. This paper examines these issues with the help of extensive and comprehensive literature reviews on ecotourism. Ecotourism trends delineated in this article are based on the ancillary statistical data from 1990 to date and issues and challenges are discussed within the three categories of culture, economy and environment.

Keywords: biodiversity, ecotourism, environmental issues and challenges, heritage sites, tourism industry, wetland

Introduction

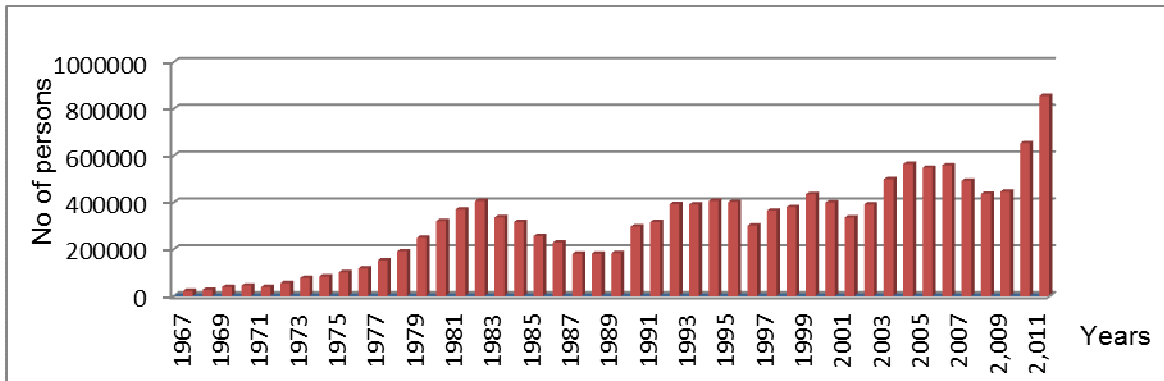
Ecotourism is a subset of broad nature based on tourism that includes several components like community benefits, education, sustainability and ethics (Brandon 1996; Buckley 2004; Fennell 1999; Goodwin 1996; Honey, 1999).

“Ecotourism involves visiting natural areas with the objectives of learning, studying or participating in activities that do not bring negative effects to the environment; whilst protecting and empowering the local community socially and economically”(Cristina, 2004). Between 1990 and 1995, world eco-tourism had grown by 30% while conventional tourism has grown only by 8% during the same period. The WWF estimates that eco-tourism industry accounts for nearly a quarter of total tourism earnings in the developing countries (Anon, 2003).

Tourism industry in Sri Lanka dates back to 1960's and has grown steadily over the years. At present it is one of the major foreign exchange generating industries in Sri Lanka and nearly 150,000 people directly or indirectly depend on the industry for their livelihood. Tourism in Sri Lanka initially focused on beach tourism. However, later on tourism sector managed to diversify its products and services to be capitalized on Sri Lanka's rich nature and culture.

Tourist arrivals to Sri Lanka during the year 2009 amounted to 447,890 recording an increase of 2.1%, when compared to the previous year. However during the first half of the year tourist arrivals decreased by 16.3% mainly due to the security uncertainty which prevailed in the country and resultant travel advisories issued by main tourist generating markets. The liberalization of Northern and Eastern provinces in May 2009 has opened up a new vista for Sri

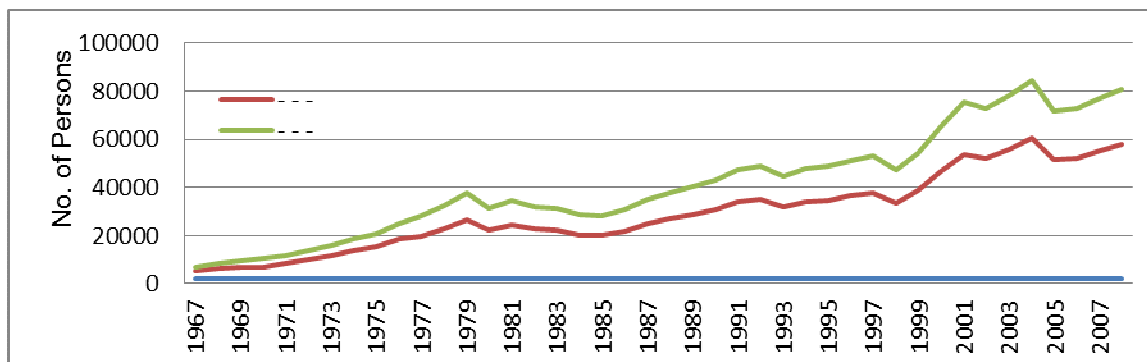
Lanka to march in path of renaissance in tourism. As a consequence of this favourable condition, tourist arrivals recorded a remarkable growth as 21.5 per cent in the second half of 2009. Indeed Sri Lanka is currently experiencing an unprecedented tourism boom. Even though, there has been some fluctuation in tourist arrival from 1967 to 2011, the recent trend has been positively increased (See Figure1). The foreign exchange (FE) earnings increased marginally by 1.1 per cent, from 2008 to 2009. Foreign Exchange receipts per tourist per day recorded an increase of USD5.1, from USD76.7 in 2008 to USD 81.8 in 2009 (Sri Lanka Tourist Development Authority, 2009).



Source: SLTDA, Annual Statistical Report, 2011

Figure1. Recent trends of tourist arrivals by year 1967 to 2011

Tourism has moved up its position as the sixth largest foreign exchange earner in the year 2009. Sri Lanka is now promoting tourism under the tourism branding slogan “Sri Lanka: the wonder of Asia”. The economy of the country managed to achieve an impressive rate of growth at around 8 per cent in 2010. According to the Economist Intelligence Unit as noted in the government treasury report “Sri Lanka has been ranked as eighth among the top ten fastest economic development countries in the world (Sri Lanka Treasury,2011). Employment opportunities in sectors of the tourism have increased during the last fifty years. Figure 2 illustrates the trends of employment opportunities in tourism sector from 1999 to 2007.



Source: SLTDA, Annual Statistical Report, 2011

Figure 2. Direct and indirect employment in tourism sector from 1967 to 2011

The post-war figures demonstrate that the Sri Lankan tourism sector achieved the highest number of tourist arrivals and is expected to rise further on as a result of the removal of travel restrictions imposed by various countries due to the past civil war. This favourable condition has been further boosted by the improvement of international tourism ratings where Sri Lanka was given a

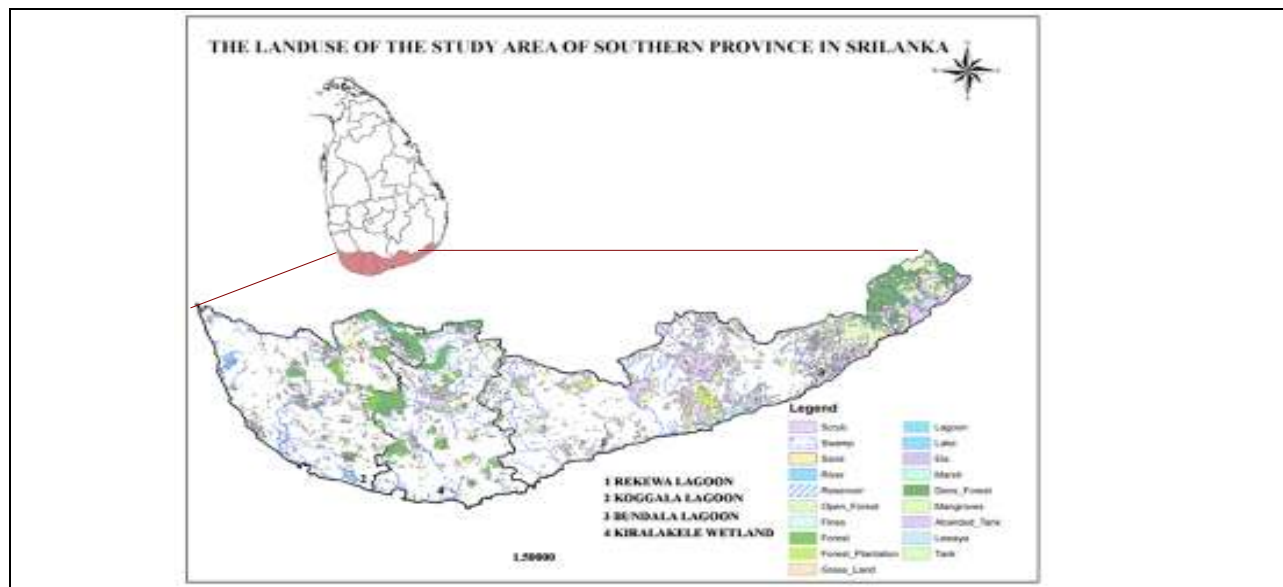
splendid outlook by a number of key originating countries. For example, the New York Times had published “The 31 Places to Go in 2010” and ranked Sri Lanka as a first destination to visit in 2010 (New York Times, 2010). A National Ecotourism Policy Plan is being formulated to promote Sri Lanka as a unique ecotourism destination. In addition, the Institute of Policy Studies (IPS) of Sri Lanka, the research agency, had presented a comprehensive plan to promote and manage nature tourism in Sri Lanka (Mathews, 2000). To lift the profile of ecotourism, the Ministry of Tourism declared year 2000 as the “Year of Ecotourism”.

Objectives of the study

The main objectives of this study are twofold, namely, to identify and examine the potentiality of ecotourism development in the coastal wetlands in the southern coastal belt of Sri Lanka, and to identify the issues and challenges of the ecotourism development in coastal wetlands of Sri Lanka.

Study area

The island Republic of Sri Lanka is located in the Indian Ocean, southeast of India, between 5° 55' and 9° 51' N latitude, and 79° 41' and 81° 41' E longitude. Its area is approximately 65,610 square km, with a coastline of about 1,620 km. (Wikipedia, 2010, Figure 3). The central and south central regions are highland and mountainous, while the rest of the island is mainly flat. The climate in Sri Lanka is tropical and monsoonal, but varies from warm in the coastal plains and lowlands to temperate in the hills and mountain regions (Wikipedia online, 2010).



Source: Survey Department, Sri Lanka, 2012

Figure 3. Southern Regional Province in Sri Lanka

Sri Lanka has a vast potential resources for the development of tourism which has diverse attraction to appeal the interest of tourists. The country boasts of seven UNESCO World Heritage sites, 13 National Parks, a biodiversity park and 93 other protected natural areas, adding value to an eco-tourism resource based on immense abundance. The coast-based eco asset tourism of the

country includes the 24 protected areas bordering the coastal zone (Coastal Zone Management Plan, 2003), associated with coastal habitats such as lagoons/estuaries, mangroves, salt marshes, etc.

In addition, its hard coral reefs are rich in biodiversity; nearly 1000 species of fish and many other invertebrate species offer unique opportunities for the undersea nature lovers. Oceanic waters around Sri Lanka support populations of whales and dolphins, including the Blue whale and the Sperm whale. offering opportunities for establishing whale watching as a commercial tourist activity. Migrant birds and marine turtles, which come ashore for nesting lend further support to the enhancement of ecotourism initiatives, particularly in the south. In addition to ecotourism, the Sri Lankan tourism industry is keen to promote other special interest tourism, such as the local Ayurveda health packages.

Issues associated with ecotourism

The impact of ecotourism can be identified under three major categories, namely, environment, economy and socio-culture (Wall, 2001). Some of the key environmental issues in the tourism sector identified by the Tourism Development Project in Sri Lanka include pollution due to poor or inadequate facilities to dispose solid waste, waste water and sewerage, generation of large quantities of solid waste, beach pollution caused by disposable material and release of sewage and storm water into oceans, illegal construction of tourist amenities along the beach, unplanned construction of tourist facilities, over development process in coastal excessive demands on power due to unplanned use of electricity, solid waste accumulation at tourism sites and environmental disorder in the various cultural heritage sites (Tourism Development Project, 2005).

Wetland is a remarkable biodiversity hot spot with the direct economic and environmental importance in the ecosystem and can be used in a sustainable way to contribute to the development of ecotourism in Sri Lanka. Large portions of the coastal wetlands have been lost due to landfill for housing, commercial and industrial development, prawn farming and aquaculture activities. A case in point is the Muthuraja wela marshes and lagoon wetland areas in Negombo along the western coast in Sri Lanka. Here, the International Water Management Institute (IWMI) has identified and estimated the quantity of sedimentation within the entire area by using satellite data and GIS techniques in 2007. Multi spectral Land Sat satellite imageries were used to spatially capture changes in and around the wetland area. They highlighted that between the period 1992 and 2002 wetland had been subjected to change with the loss of clean water area for 30 per cent, mangrove for 49 per cent and marshes for 40 per cent which caused by the sedimentation, infilling, clearing of vegetation and the expansion of human settlements (Rebilo, et. al., 2007).

The encroachment of exotic species and degradation of indigenous species caused by the human interference in the development of the lowland area in Sri Lanka poses a threat to the pristine habitats there. Furthermore, tourists and tourist guides make their ways through the original integrated forest profile to get access to their target destinations. As a result, the original forest became fragmented into several artificial segments and degraded the biological behaviour of the natural ecosystems. A recent study by Thurston and Reader (2001) showed that 500 people had passed over one meter wide lanes substantially and reduced the density of the stem of vegetation and the richness of the species and increased thereby the range of soil exposure. Consequently small tracks would be expanded and the threat of soil erosion increased. Yala National Park, the most popular ecotourism destination in southeast coast of Sri Lanka is a vivid example of vegetation degradation caused by unmanaged safari strips and transport services.

Sri Lanka has been ranked as the highest among Asian countries for having the greatest percentage of threatened amphibians. It has lost some 20 per cent of its amphibian species during the last century, and over 50 per cent of the remaining species are prone to extinction (IUCN, 2009) Reduction in the water bird population of the wetlands is the result of the biodiversity destruction in the coastal belt. Bundala National Park is the most popular nature habitat for water birds and

the first Ramsar site wetland in Sri Lanka. The IWMI (2007) and the local partners conducted a study survey in the seasonal variations of water quality of the Bundala, Embilikala and Malala lagoons throughout the three agricultural seasons. They found some changes in the water quality in that the PH value of the three lagoons ranged between 7.1 and 8.2 from 1999 to 2000. This was due to the agricultural expansion and development activities causing significant drops in the salinity level of the wetlands which led to further reductions in the fish and shrimp population (Graziabellio & IWMI, 2004) of the wetlands.

Encroachment of infrastructure construction and interference by tourists may further aggravate the quality of the wetlands natural environments. Problems tend to be caused by the high demand for watching coral species by using fibre glass boats as is experienced by the renowned Hikkaduwa coral sanctuary in southwest coast of Sri Lanka. The coral habitats and their species have been gradually degraded due to excessive visitation by thrill crafts and fibre glass boats and harvesting of coral debris. Construction of tourism infrastructures such as extra accommodation facilities, harbours, parking areas, and roads have been affecting the aesthetic values of the wetlands natural ecosystems. The Coast Conservation Department (CCD) in Sri Lanka has to build some revetments and groins along the affected coastal sites to counter the rapid coastal erosion in south Sri Lanka.

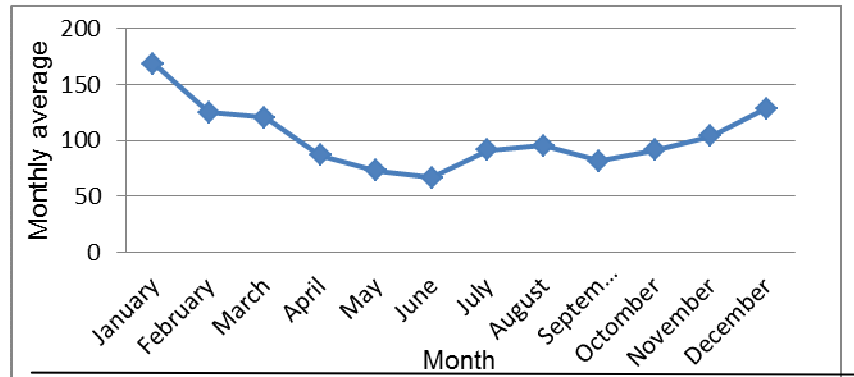
Financial and human resources issue

The lack of financial and human resources directly affects implementation of the capital investment and infrastructural facilities in the development of ecotourism. Due to the privatisation of well-trained managers and labours in the field of tourism in Sri Lanka, the government faces certain challenges to maintain the sustainability in ecotourism with proper management and conservation strategies. As highlighted in an industry report, the tourism sector needs five times the current work force to cater for 2.5 million tourists by 2016 (Clearer Skies, 2011).

So far, ecotourism field is not so vast; some ecotourism projects have already failed to overcome its efficiency targets due to poor skilful management. For example, The Kirala Kele wetland has failed due to poor implementation and management (Jayathunga, 2009). Poor leadership and lack of vision are also contributing factors. Good leadership is the driving force behind the success of ecotourism project (Iraj Ratnayake & AzilaKasim, 2004).

Off season issues

The peak months for arrivals fall during November/December and the mini peak is in July/August. Most ecotourism destinations are crowded during the main tourism season from November to April in Sri Lanka. The highest number of arrivals was recorded in December, with the seasonal index moving up to 168, recording a 52.3 per cent increase above the monthly average (see Figure 4). Huge numbers of hotel owners manage and foster their small restaurant and hotels under the financial facilities from bank loans with high rate of interest. Since they have had an adverse effect on the off season they struggle to cover operating cost and even have to lay off staffs in between the seasons.



Source: SLTDA, Annual Statistical Report, 2011.

Figure 4. Monthly average of seasonal variation in traffic flow 1967 – 2011

During these seasons small businesses such as handy craft productions, local food preparations, transport service sectors and related services would experience a down turn and their employers would have to use their savings or live on borrowed money.

Poor basic infrastructural facilities and institutional capabilities are also at the heart of Sri Lanka's ecotourism challenges. There is a lack of basic tourist service infrastructure for visitors at many destinations ranging from information and communication centres, accommodation facilities, drinking water, foods stalls and health care centres and toilet facilities. Most effective coastal wetlands are situated near to the remote areas where there is lack of clean water supply to the alkalinity of soil. Tourist resorts require effective transport links and also need extensive vehicles parking facilities. Moving tourists from one location to another location within the nation is still time consuming due to poor transport infrastructure. Recently a ferry service between India and Sri Lanka was introduced. The port infrastructure in the North and the East was severely damaged by the war and rebuilding is necessary in order for tourism potential to be fully realised.

Challenges in the development of ecotourism industry

To foster a sustainable tourism industry, Sri Lanka is faced with numerous challenges. Natural disasters such as tsunamis, tropical cyclones, and biological hazards could bring devastating impact. As forecasted by geologists, the southern and eastern coast in Sri Lanka is situated in the tsunami risk zones.

Tourism as an economic activity and the natural environment can form a symbiotic relationship (Dowling, 2000) in fostering sustainable ecotourism. However, most operators tend to emphasise the economic to the detriment of the ecological imperatives. There is always a strong case for promoting responsible ecotourism where there is balance and harmony between people and nature. While indigenous species and wild animals are important ecotourism attractions in Sri Lanka a most urgent and vital need is to protect the animals' habitats. Political interference has offered little help in any effort to formulate comprehensive policies for tourism development in the coastal heritage sites, ecologically sensitive areas and national parks.

Conclusion

Sri Lanka is currently experiencing an unprecedented tourism boom and promoting tourism under the tourism branding slogan of "Sri Lanka the wonder of Asia". In 2005, the development of ecotourism was spearheaded under the tourism act No. 38 of 2005. Even though Sri Lanka's ecotourism has many prospects it is confronted with several issues and challenges that threaten its sustainable and responsible

growth. Undoubtedly, environmental issues are the most crucial of these challenges given the peculiarity of Sri Lanka's geographical location in a tsunami risk zone. There are, nevertheless, a host of other non-environmental challenges – such as global economic crises impacting on financial resources - that the country must grapple with in order to foster development of its ecotourism sector.

References

- Anon V (2003, Saturday 27th September) Eco-tourism promises the most rewarding returns. *The Island*, pp. 7-8.
- Bandara R (2009) The practice of ecotourism in Sri Lanka: An assessment of operator compliance towards international ecotourism guidelines. *South Asia economic Journal* **10** (2), 471-492.
- Buckley RC (2003) Ecological indicators of tourist impact in parks. *Journal of Ecotourism* **2**, 15-34.
- Cristina (2004) Definition of ecotourism. *Journal of Sustainable Ecotourism Management* **45**, 123-128.
- CZMP (2003) Revised Coastal Zone Management Plan (Draft) Sri Lanka (Coast Conservation Department, Sri Lanka, Trans.) (pp. 24-28). Colombo, Sri Lanka.
- Dowling RK (1991) Ecotourism in Thailand. *Annals of Tourism Research* **23** (2), 488-490.
- Fennell DA (1999) *Ecotourism: An introduction*. Routledge, New York.
- Gill M (2010) The recent trends. *The New York Times*, pp. 6-7.
- Honey M (2008) *Ecotourism and sustainable development who owns paradise? (Second)*. Island Press, Washington DC.
- IUCN (2009) Forestry and protected areas. [cited 23 May 2012].
- IWMI M G a (2004) Why development drainage can compromise water quality. *Water Matters*, pp.5-6.
- IWMI W V a (1998) Why development drainage can compromise water quality. *Water Matters*, pp.4.
- Jayathunga RD (2009) *Investigation of relations between ecotourism and nature conservation in Sri Lanka*. University Salzburg, Austria.
- Lanka T D P i S (2005) *Tourism policies* (Sri Lanka Tourism Act No.38 of 2005.). Colombo Sri Lanka.
- Mathews N (2000) Travel and tourism intelligence. pp. 79-105.
- Online M (2010) Climate in Sri Lanka. [cited 14 June 2012].
- Rebilo LMFCM, Nagabhatla N (2007) Remote Sensing and GIS for wetland inventory: Mapping and change analysis. *Journal of Environmental Management* **90**, 2144-2153.
- SLTDA (2009) *Statistical data - Annual statistical report 2009*. pp. 5-46. Sri Lanka Tourism Development Authority, Colombo, Sri Lanka.
- The New York Times (2010) The recent trends. The New York Times Company (NYSE:NYT) News Paper Companies of the United State.
- Thurston ERRJ (2001) Impacts of experimentally applied mountain biking and hiking on vegetation and soil of a deciduous forest. *Environmental Management* **27** (3), 397-409.
- Treasury SL (2011) *Tourism trends - Statistical Report 2011*. pp. 23-31. Treasury of Sri Lanka, Colombo, Sri Lanka.
- Wall (ed) (2011) *Consequences of tourism*. Department of Geography, University of Waterloo.
- Wikipedia (2010) Physical back ground. [cited September 2012].