

Effect of Environmental and Socio-Cultural Impacts Caused by Tourism on Residents' Lives Ancient City of Anuradhapura

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Abstract

Tourism is one of the biggest and fastest-growing sectors in the global economy and has significant environmental, cultural, social, and economic effects, both positive and negative. Yet, relatively few studies have addressed the effect of tourism on residents' lives in Anuradhapura as a major touristic destination in Sri Lanka. Anuradhapura ancient city is one of the UNESCO World Heritage Sites and the first kingdom of Sri Lanka, well known for its ruins depicting early Sri Lankan civilization. The main objective of this study is to investigate whether the impact of tourism makes changes on residents' lives in the ancient city of Anuradhapura. The survey design was quantitative and based on an empirical study. A self-administered questionnaire was used to collect data from the residents of Anuradhapura Ancient city area. A sample of 120 respondents was selected to collect data from the residents. The data was analyzed using SPSS 21 statistical software. Descriptive statistics and Inferential statistics were applied to examine the effect of environmental and socio-cultural impacts caused by tourism on residents' lives. According to the research findings, environmental pollution, social problems, and congestion & crowding out caused by tourism make significant environmental and socio-cultural changes on residents' lives in Anuradhapura ancient city area. The results showed that tourism creates significant environmental and socio-cultural changes in residents' lives in Anuradhapura's ancient city area. Further, this study provides elements for long term benchmark monitoring and observation relating to the resources of the tourism sector.

Keywords – Ancient City of Anuradhapura, residents' lives, tourism impacts

Introduction

Tourism is one of the biggest and fastest-growing sectors in the global economy and has significant environmental, cultural, social, and economic positive and negative impacts. Although tourism has an advantage as a contributor to economic development that has a negative impact on the environment and society (Malra, 2012). Those negative impacts can result in declining of tourist destinations (Pratiwi, 2017). According to C. M. Hall and A. A. Lew (2009) tourism brings a substantial amount of social, environmental, economic, and political impacts as the world's largest industries. Tourism creates various impacts on the environment at a number of different scales. (C. M. Hall & A. A. Lew, 2009). Tourism is considered a high-risk economic activity for the environment. Tourism is seen by its operators as an economic phenomenon and not a social one. The spatial and temporal concentration of tourist demand, which is the cause of many of the environmental damages (Romita, 2007). Tourism is a cultural phenomenon and tourism characteristic by social and cultural elements. Also, tourism influences cultures and society. It is often challenging to differentiate cause and effect in the relationship between tourism and society (C. M. Hall & A. A. Lew, 2009).

Anuradhapura is one of the ancient cities in Sri Lanka, well known for its ruins depicting early Sri Lankan civilization. It is very famous among Buddhist pilgrims. Anuradhapura was earlier the capital of the Island (in ancient times) and most of the Kings who ruled Sri Lanka resided in this vast city. The city is now named as a world heritage site by UNESCO. Anuradhapura is well known for pilgrimage tourism worldwide, which is practiced in the forms of visiting The Eight Great Places, organizing religious programmes on Poya days, and performing rituals. It is a centuries-old practice that has become a way of life, as it provides livelihoods to the local people.

Also, thousands of tourists reach Anuradhapura ancient city to visit for its historic value, architecture, river civilization, religious rituals in song, dance forms, literature, ancient lifestyle, traditional foods, restaurants and accommodation facilities, transport facilities, attractive places provide great value for the tourism industry in

Anuradhapura area. Especially most of the people reach Anuradhapura during the May, June and July months because of the Poya days with activities like Sil campaigns, Bodhi Poojas, Dansalas, Poson devotional songs, Poson pandols lanterns. Therefore, the Anuradhapura area has faced economic, environmental and socio-cultural changes because of the touristic activities.

Problem Statement

As observed during the primary survey Anuradhapura ancient city faces the following environmental problems of pilgrims and tourists. Pollution of rivers/lakes or other water bodies, disposal of untreated sewage and absence of sanitation facilities, discriminate disposal of solid waste, contamination of drinking water systems, the risk of spreading water-borne diseases due to the absence of health and sanitation facilities and other problems such as noise pollution, dust pollution, etc. Use of polythene is unavoidable in the present situation, where everything, especially food items, comes in package form in either plastic, polythene or other similar substances. Sometimes pilgrims seem to have forgotten the value of preserving the highly green and bio-diversely rich environment as mounds of polythene and plastics pile up at the end of their travel.

Due to tourism activities, most of the residents in the Anuradhapura area engage with the tourism sector and they give up the agriculture industry. Also, they have to find different occupations from time to time due to the seasonality of tourism. While tourists travel within Anuradhapura area they create a huge demand for local products and services and increase the cost of the goods and services. Currently, demand for land has increased around the Anuradhapura ancient city and this may cause the inflation of land value.

Likewise, socio-cultural changes created by tourism in Anuradhapura ancient city area like, changes in habits, clothing, and lifestyle, school drop off, child labor, crime, prostitution, illegal business, etc. Abandonment of traditional activities, overcrowding of local attractions and amenity, and over-commercialization of the cultural and heritage features increased the socio-cultural changes in the

Anuradhapura area. Tourists' colonization in the area may cause the breakdown of host community values.

Therefore, this study is going to focus on the environmental changes and socio-cultural changes caused by tourism activities in Anuradhapura ancient city area. Even though few studies addressed the tourism impact, very few studies have examined tourism impact cause to make the change on the residents' life in Anuradhapura. So, this study hopes to identify the environmental & socio-cultural changes due to tourism sector development.

Research Objectives

General Objective

- The aim of the study is to investigate whether the environmental & socio-cultural impacts of tourism make changes on the resident's life in Anuradhapura ancient city.

Specific Objectives

- To identify the factors which create hindrance in the sustainable development of tourism in the study area.
- To identify the factors that affect on environmental and socio-cultural changes on the resident's life in Anuradhapura ancient city.
- To suggest recommendations which develop tourism in Anuradhapura ancient city in a more sustainable way.

Literature Review

WTO (1991) defined tourism as the activities of a person travelling outside his or her usual environment for less than a specified period of time whose main purpose of travel is other than for exercise of an activity remunerated from the place visited. Primarily tourism seen as a leisure activity involving travel away from a person's normal place of residence, but tourism is an industry, including a wide range of individual and collective human activity. Also, leisure and tourism are seen as activities engaged in by individual and groups, but also as service industries which involve the public sector, non-profit and commercial organizations. Leisure and

tourism overlap in activities such as attending cultural or sporting events and in visiting natural and cultural heritage sites. Furthermore, as an industry, tourism encompasses non-leisure activities, such as business travel or attending conventions (Veal, 2017).

In present Tourism industry is globally spread and involving millions of people in international as well as domestic travel every year. Millions of dollars are spent every year on marketing and promoting holidays and tourism products. Millions of people globally work directly in the industry and many more are employed indirectly. Hundreds of millions of people are on the getting end of tourism activity as they live in what are termed destination areas, in supposed 'host' populations (Mason, 2015)

Tourism is an industry with enormous economic impacts. It is also an industry that has many environmental and social consequences. A thorough understanding of each component of the tourism phenomenon is essential so that those involved with planning, management, and policy determination have a basis for decision-making (Kim, 2002; Kim , Uysal , & Sirgy 2012). Tourism impacts are multi-faceted and therefore are challenging to plan for and manage. Therefore tourists, host communities and industry members must consider a number of approaches and procedures for managing tourism impacts successfully (Mason, 2015)

Deforestation and effects to wildlife

Destruction and alteration of an ecosystem is a major issue due to the tourism activities including hunting, fishing and collecting activities, the land is cleared or modified to the infrastructure needed for tourism activities and disturb feeding & breeding patterns of animals (Green & Giese, 2004; Rath & Gupta, 2017). The improvement of tourist activities and the intensive land exploitation caused a rapidly declining and reduction of the environmental, cultural and social resources (Pratiwi, 2017).

Solid waste issues

Sewage disposal is a serious problem in areas such as scenic areas, roadsides and near to water bodies. Construction of recreation and other facilities, sewage from hotels

and other accommodation facilities and sewage carried by visitors leads to increased sewage pollution. Sewage causes serious damage to the health of humans and animals, the physical appearance of the tourist attraction, water resources and biodiversity (Aljohani, 2018; Rath & Gupta, 2017).

Environmental pollution

Tourism is regarded as a high-risk economic activity for the environment and tourism generate numerous effects on the environment at a number of different scales (C. Hall & A. Lew, 2009; Romita, 2007). Because of various tourism activities, hidden tourism, high usage of the automobiles and unsuitable development of infrastructure and utilities such as hotels, resorts, and restaurants create a negative impact on the environment.

Social problems

Social problems raised due to transformation and deterioration of values in religion, social and moral. Tourism cause a rise in the use of drugs, illegal business, prostitution, child abuse, child labor and human trafficking. Also increased gambling, drunkenness, prostitution, vice and drugs, theft and petty crimes and other illegal practices and conflict among the tourist and the local people (Nayomi & Gnanapala, 2015; Pratheep, 2017).

Cultural problems

Damages to cultural resources more serious than those to natural resources. Cultural impact base on protecting and preserving the cultural heritage and certain associated issues. Because of expanding tourism industry there can be a severe cultural and ecological damages (Pratheep, 2017). Construction of buildings that clash with the surrounding environment caused to architectural damage and reduce the aesthetic appeal of a destination (Rabbany et al., 2013).

Congestion & crowding out

Traffic congestion occurred when destinations receive a high number of tourists than its carrying capacity. Therefore large areas of agricultural and forest lands have been replaced by infrastructure and buildings including restaurants, hotels, shopping

complexes, recreation areas and access roads for the reduction in traffic congestion (Keson et al., 2017; Prueksakorn et al., 2018).

Materials & Methodology

Population of the Study

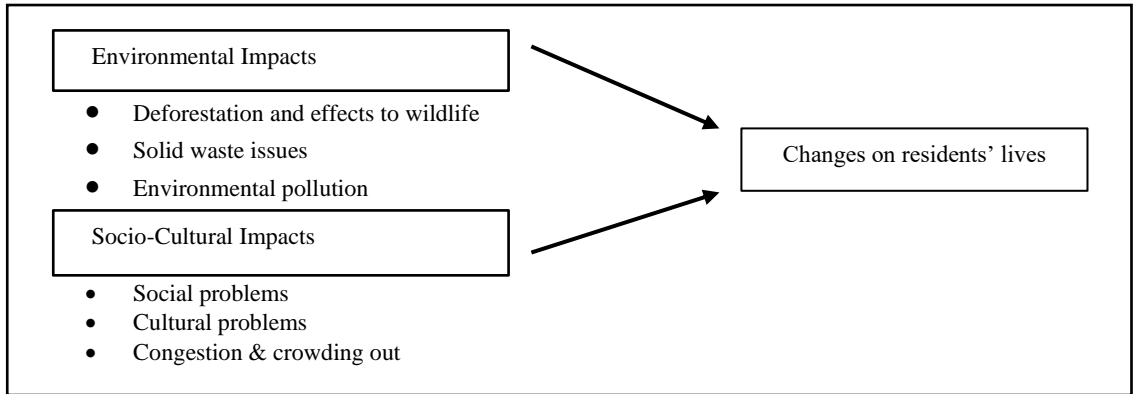
The overall research is conducted by considering all the residents which belong to Anuradhapura ancient city area. According to records of Nuwaragam Palatha Central Divisional Secretariat, currently, 18433 residents are living in Anuradhapura ancient city area.

Sample of the Study

In this study, the researcher selected a sample using non-probability, convenience sampling by considering the time limitation, cost limitation, and convenience of the research requirements. Thereby sample was selected as 120 residents from total population.

The Sources of Data and Data Collection Methods

Preliminary questions are based on demographic questions and others are based on Likert scale questions with five indicating Strongly Agree and one indicating Strongly Disagree. The aim of seeking both responses is to gather a mixture of data from the residents for the ultimate result. Primary data collected by providing a standard questionnaire with the language of English and it translated to Sinhala for distributing among residents in Anuradhapura ancient city. Before conducting the questionnaire survey the researcher had to conduct Pilot Testing to collect feedback about the questionnaire. Accordingly, the questionnaire developed in this study was administered after pre-testing among 20 residents in Anuradhapura ancient city area. The pretesting aimed to clarify the wording of both the questionnaire instructions and questions. No significant issues were raised.



Conceptual Framework

Figure 1: conceptual framework of the study Developed by the researcher (2019)

Operationalization of the Variables

Variable	Dimension	Indicator
Independent Variable	Deforestation and effects to the wildlife (Likert Scale)	Damage to the fragile natural environment
		Destroy forests and wildlife by illegal activities
		Wildlife loss their natural habitat
		Plants, animals, rocks, and natural pieces collect
		Forest and agriculture areas use for tourism
	Solid waste issues (Likert Scale)	Garbage build-up in public areas
		People not properly discharge wastes
		No proper awareness for waste management
		Discharging, re-using, or recycling the wastes
		Various health issues due to garbage
	Environment pollution (Likert Scale)	The environment has destroyed by the tourism
		Less environmental interest among tourist
		Increase visual and land pollution
		Increase air and noise pollution
		Not use water sources and water bodies properly.
	Social problem	Weaker regulation for protecting the environment
		People tend to do tourism-related jobs

	(Likert Scale)	Encourages drugs and alcohol consumption
		Encourages crime activities
		Tourism benefits reach only a small group
		Tourists over-use basic facilities
		Misunderstanding and conflicts arise between residents and tourists
	Cultural problem (Likert Scale)	Damage the cultural properties and values
		Changes of historic settlements
		People abandon traditional activities
		Behavioral changes of young people
		Commercialize the cultural artifacts
		Neglect the cultural, religious, historical building and spaces
	Congestion & crowding out (Likert Scale)	Tourism creates crowded public places
		Overloaded infrastructure during peak months
		Level public open spaces for resident use
		Traffic, congestion and parking problems
Sanitary & health issues		
Dependent variable	Environmental and socio-cultural issues on residents	Tourism creates a significant environmental issue on resident life
		Tourism creates a significant socio-cultural issue on resident life
		Invites moral degradation
		Tourist colonization and breakdown of host community values
		Environmental hazards and land use conflicts
		Loss of natural beauty, biodiversity, wildlife, and impacts on environmental balance

Table 1: Operationalization of independent and dependent variables (Source: Developed by Researcher using relevant literature, 2019)

Data Analysis Techniques.

The five-point Likert scale was used in questionnaires. The degree of agreement or disagreement of the respondents for each variable ranged from strongly disagree to strongly agree with the assigned value from 1 to 5 respectively from negative statements. Data analyzed by using multiple linear regressions and descriptive statistical techniques, graphs, charts, and tables were used for the graphical representation part of the study.

Result and Discussion

Descriptive Analysis

According to Descriptive Statistics, solid waste issues toward the changes on residents' lives are relatively high ($M=4.08$, $SD=0.70$). But considering the Skewness, it is -0.542 which means it is negatively skewed. The congestion and crowding out toward the changes on residents' lives is also relatively high ($M=3.74$, $SD=0.696$). It also negatively skewed (-0.662). Deforestation and effects to wildlife toward changes on residents' lives is also relatively high ($M=3.72$, $SD=0.72$). When considering the Skewness, it is -0.368 which means it is also negatively skewed.

Variable	Mean	Std. Deviation	Skewness
Deforestation and Effects to Wildlife	3.7267	.72503	-.368
Solid Waste Issues	4.0819	.70875	-.542
Environment Pollution	3.4431	.70363	-.976
Social Problem	3.5000	.65144	.089
Cultural Problem	3.4319	.68412	-.109
Congestion and Crowding out	3.7400	.69650	-.662
Changes on Residents' lives	3.5375	.63048	-.469
Valid N (list wise)			

Table 2: Descriptive Statistics Source: Survey Data (2019)

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.775 ^a	.601	.580	.40852	2.098

a. Predictors: (Constant), Congestion and crowding out, Socio problems, Solid waste, Cultural problems, Environmental pollution, Deforestation and wildlife

Table 3: Regression Analysis (Model Summary Table) Source: Survey Data (2019)

According to table 4.8, the “R” value shows the simple correlation and it was 0.775. The adjusted R square value indicates how much of the total variation in the dependent variable can be explained by the independent variables. According to the above result, 58 % of changes on residents’ lives were described by the independent variables taken under model 1, and the remaining 42 % of changes on residents’ lives are described by other factors that are beyond in the study. Durbin-Watson is 2.098 and it demonstrates that there is a strong positive relationship between independent and dependent variables.

ANOVA ^a						
	Model	Sum of Squares	df	Mean Square	F	Sig.
1	Regression	28.445	6	4.741	28.408	.000 ^b
	Residual	18.858	113	.167		
	Total	47.303	119			
a. Dependent Variable: Changes on residents’ lives						
b. Predictors: (Constant), Congestion and Crowding Out, Socio Problems, Solid Waste, Cultural Problems, Environmental Pollution, Deforestation and Wildlife.						

Table 4: Regression Analysis (ANOVA Table) Source: Survey Data (2019)

According to the above ANOVA table, F value is 28.408 and the significant value is 0.000 (P<0.001). It is represented that the significant relationship between independent variables and the dependent variables.

Model		Unstandardized Coefficients		Standardized Coefficients Beta	t	Sig.
		B	Std. Error			
1	(Constant)	.366	.316		1.157	.250
	Deforestation & effect to wildlife	.025	.060	.029	.422	.674
	Solid Waste	.025	.057	.028	.441	.660
	Environment Pollution	.144	.071	.160	2.010	.047
	Social Problem	.183	.082	.189	2.231	.028
	Cultural Problem	.054	.072	.059	.750	.455
	Congestion Crowding out	.442	.073	.488	6.070	.000
a. Dependent Variable: Changes on residents’ lives						

Table 5: Regression Analysis (Coefficient Table) Source: Survey Data (2019)

Model		Collinearity Statistics	
		Tolerance	VIF
1	Deforestation effect to wildlife	.749	1.336
	Solid waste	.846	1.182
	Environment pollution	.556	1.799
	Social problem	.490	2.040
	Cultural problem	.575	1.739
	Congestion Crowding out	.545	1.834
a. Dependent Variable: Environmental and sociocultural issues			

Table 6: Results of Multicollinearity Source: Survey Data (2019)

Hypothesis		Regression
H1	Deforestation & effects to wildlife due to tourism significantly influence changes in residents’ lives in Anuradhapura ancient city	Rejected
H2	Solid waste issues caused by tourism significantly influence changes in residents’ lives in Anuradhapura ancient city	Rejected
H3	Environmental pollution caused by tourism significantly influence changes in residents’ lives in Anuradhapura ancient city	Supported
H4	Socio problems caused by tourism significantly influence on the changes in residents’ lives in Anuradhapura ancient city	Supported
H5	Cultural problems caused by tourism significantly influence changes in residents’ lives in Anuradhapura ancient city	Rejected
H6	Congestion & crowding caused by tourism significantly influence changes in residents’ lives in Anuradhapura ancient city	Supported

Table 7: Summary of hypothesis testing Source: Developed by researcher base on survey data (2019)

Conclusion

The general objective of this research is to identify the environmental and socio-cultural issues caused by tourism on residents’ life in Anuradhapura ancient city. Based on the extensive literature survey conducted by the researcher selected six factors as independent variables of the study. Based on the research findings, the

researcher conveys that social problems, environmental pollution, and congestion & crowding out due to the tourism development in Anuradhapura ancient city make significant environmental and socio-cultural issues on residents' life. Also, deforestation and effects to wildlife, solid waste issues and cultural problems may affect the environmental and social-cultural issues on residents' life in Anuradhapura ancient city but according to analysis results, deforestation and effects to wildlife, solid waste issues, and cultural problems are not much strongly affecting the environmental and socio-cultural issues on residents' life in Anuradhapura ancient city.

Recommendations

Tourism activities, especially pilgrimage tourism in ancient cities, cultural & religious places have multiple impacts on the socio-cultural conditions and on the environment. Further, institutional supports and proper policy measures are lagging. Thus, these negative drivers altogether impede the strengthening of tourism activities. Providing proper infrastructural facilities lodging, boarding, transportation, and institutional services, keeping landscape fragility/vulnerability, and carrying capacity of pilgrimage centres in mind, will enhance the socio-cultural development and reduce environmental pollution. Exclusive policy measures should be adopted that should be socially and environmentally sound.

The government should pay attention to area development and infrastructure facilities not only for the tourism but also every land use in a sustainable manner when it is socially and environmentally desired by society, provide the proper planning and management programs for the tourism development activities, should introduce the laws and regulations regarding proper land use planning and tourism policies to avoid the social and environmental problems, provide the manual and guideline about the tourism to the local authorities and people, maintain the quality of the tourism destination.

References

- Aljohani, M. (2018). *A Study of the Impact of Tourism on the Environment and Jeddah Citizen's Perceptions toward Tourism in Jeddah, Saudi Arabia*. Electronic Theses & Dissertations Collection for Atlanta University & Clark Atlanta University,
- Buckley, R. (2011). Understanding and Managing Tourism Impacts: an Integrated Approach. *Journal of Ecotourism*, 10(2), 177- 178. doi:10.1080/14724049.2011.568754
- Bulankulama, S. W. G. K. (2014). Potential of Tourism Industry in Anuradhapura, Sri Lanka. *Journal of Social Science*, 1(1), 58-73
- Chandralal, K. P. L. (2010). Impacts of tourism and community attitude towards tourism: a case study in Sri Lanka. *South Asian Journal of Tourism and Heritage*, 3(2). 41-49
- Cordero, J. C. M. (2008). Residents' perception of tourism: a critical theoretical and methodological review. *CIENCIA ergo-sum*, 15(1), 35-44.
- Dokulil, M. T. (2014). Environmental impacts of tourism on lakes. In *Eutrophication: causes, consequences and control* (pp. 81-88): Springer.
- García, F. A., Vázquez, A. B., & Macías, R. C. (2015). Resident's attitudes towards the impacts of tourism. *Tourism Management Perspectives*, 13, 33-40.
- Hall, C., & Lew, A. (2009). *Understanding and Managing Tourism Impacts: An Integrated Approach*.
- Imon, S. S. (2017). Cultural heritage management under tourism pressure. *Worldwide Hospitality and Tourism Themes*, 9(3), 335-348. doi:10.1108/WHATT-02-2017-0007
- Kim , K., Uysal , M., & Sirgy , M. J. (2012). How does tourism in a community impact the quality of life of community residents? *Journal of Tourism Management*, 1-14.
- Malra, R. (2012). *Environment Impacts of Tourism.: Case study of selected destinations of Uttarakhand (India)* (9783845472607 ed.): LAP LAMBERT Academic Publishing.
- Mason, P. (2015). *Tourism impacts, planning and management*: Routledge.
- Mathur, A. (2011). Social Change and the Impacts of Tourism on the Modern Society. *International Journal of Research in Management, Economics and Commerce*, 1(2), 285-290.
- Nayomi, G., & Gnanapala, W. K. A. (2015). Socio-Economic Impacts on Local Community through Tourism Development with Special Reference to Heritance Kandalama. *Tourism, Leisure and Global Change*, 2, 57-73.

Pratheep, P. S. (2017). The Impact of Tourism on Indian Culture. *The 4th International Conference on Language, Society and Culture in Asian Contexts, KnE Social Sciences*, 429-437. doi:10.18502/kss.v1i3.765

Rabbany, M. G., Afrin, S., Rahman, A., Islam, F., & Hoque, F. (2013). Environmental Effects of Tourism. *American Journal of Environment, Energy and Power Research*, 1(7), 117-130.

Rath, N., & Gupta, R. (2017). Environmental Impact of Tourism. 2(3), 50-53.

Reid, D. G. (2002). Development of cultural tourism in Africa: A community based approach. *Cultural tourism in Africa: Strategies for the new millennium*, 25-44.

Romita, T. (2007). Sustainable Tourism: The Environmental Impact of "Undetected" Tourism. *An International Multidisciplinary Journal of Tourism*, 2(1), 47-62.

Salazar, N. B. (2012). Community-based cultural tourism: Issues, threats and opportunities. *Journal of Sustainable Tourism*, 20(1), 9-22.

Semenova, O. (2013). *Environmental Impacts of Tourism. Case: Pyynikki Outdoor Recreation Area*. (Degree Programme in Tourism Bachelor's thesis), Tampere University of Applied Sciences.

Shahzalal, M. (2016). Positive and Negative Impacts of Tourism on Culture: A Critical Review of Examples from the Contemporary Literature. *Journal of Tourism, Hospitality and Sports*, 20, 30-34.

Sharma, B., & Dyer, P. (2009). Residents' involvement in tourism and their perceptions of tourism impacts. *Benchmarking: An International Journal*, 16(3), 351–371. <https://doi.org/10.1108/14635770910961371>

Simão, J., & Mósso, A. (2013). Residents' perceptions towards tourism development: the case of Sal Island. *International Journal of Development Issues*, 12(2), 140-157.

Simkova, E., & Kasal, J. (2012). Impact of Tourism on the Environment of a Destination. *Recent Advances in Energy, Environment and Economic Development*, 23, 439-444.

Stefănică, M., & Butnaru, G. I. (2015). Research on tourists' perception of the relationship between tourism and environment. *Procedia Economics and Finance*, 20, 595-600.

Wimalaratana, W. (2013). Cultural tourism potential in the north Central Province of Sri Lanka. *Journal of Economic Development*, 217(15-40). <https://doi.org/10.24311/jed/2013.217.01>