TOURISM VALUE CHAIN ANALYSIS FOR THE SIGIRIYA TOURISM DESTINATION IN SRI LANKA

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ISB
INDUSTRIAL SERVICES BUREAU

Final Report

TOURISM VALUE CHAIN ANALYSIS FOR THE SIGIRIYA TOURISM DESTINATION IN SRI LANKA

Submitted to

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and

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Submitted by

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EXECUTIVE SUMMARY

Recognizing the rapid degradation of natural and historically built environment of Sigiriya in conjunction with exponential growth of tourism, and developmental deprivation of local communities in and around Sigiriya led the United Nations Development Programme (UNDP) in Sri Lanka in collaboration with the Sri Lanka Tourism Development Authority (SLTDA) and Department of Trade Commerce and Tourism – Central Province to carry out the Tourism Value Chain (TVC) assessment to refix TVC to align Sigiriya with the newly developed Tourism Roadmap, "Putting People First: Building a More Resilient Tourism Sector in Sri Lanka". The assessment of the tourism value chain was assigned to Industrial Service Bureau of North Western Province. Hence, assessment of TVC is integrated downstream of the National Sustainable Tourism Certification in 2018. As Sigiriya is the mostly visited popular world heritage site, which has been listed by the Blooberg as one of the new Seven Wonders of the world, it is inevitable to shift Sigiriya from exclusive enclave destination to inclusive responsible destination. This intensify the TVC assessment to ensure quality tourism, local and regional development, community empowerment, conservation of natural and historically built environment, preservation of social culture and generating new economic opportunities for local communities. The TVC assessment provides opportunities to go through all the stakeholders including authorities. This enabled the assessment to incorporate the empirical investigation of functional level value creation systems and agencies. The TVC assessment is based on source components of TVC such as tourist, destination, local community and industry. The assessment adopted the TVC model introduced by the UNEP in 2018 that comprises with transportation, accommodation, F&B and other facilities, activities, services and attractions.

The TVC assessment begin with in depth review of historically built environment of Sigiriya, surrounding natural and socio-cultural setting, prevailing context of tourism, tourism value chain development and execution in global setting. This section is extended geographical significance for tourists to visit Sigiriya, overall tourist arrivals to Sri Lanka and influx tourist arrival to Sigiriya. Overview of Sri Lanka tourism considering past, present future has been reviewed in light of positive and negative impact economy, socio-culture, and environment. Further added with market segments and institutional structure while discussion on composition of Sigiriya with natural and cultural attraction, accessibilities, Amenities, Accommodations, Activities, ancillary services. Characteristics of local community and mode of tourism operation along with prevailing policy and procedures have discussed. All these sections were systematically portrayed to elaborate the background and prevailing context of TVC in Sigiriya in comparison with TVCs in global context.

The following section is dealt with methodology which was adapted to conduct the empirical investigation on TVC in Sigiriya. This employed the mix method to combine qualitative and quantitative data collection to elucidate naturalistic interpretation from setting and quantifiable descriptive data to measure the numeric values in TVC assessment to ensure reliability and validity. Data collected though questionnaire, personal interviews, focus group discussion, and field observation, and prevailing artefacts have been triangulated bring forth more interpretive and logical analysis. The empirical and interpretive analysis supported the

TVC assessment to portray the present context with prevailing gaps in the value chain. This led to provide clear strategic recommendation to refix the tourism value to move on with new road map of Sri Lanka to ensure sustainable development.

Under the section value chain analysis, value creation system is analyzed in detail encompassing actors and agencies, functional micro, meso, and macro level value creation system, in addition to first level and second level value chain actors and agencies. Value chain map and major sectors and subsectors have been analyzed. The analysis also included economic performance, market analysis, human and physical resources, socio-cultural impact, gender analysis, organizational structure, environmental analysis. In depth analysis above key areas and components enabled the TVC assessment to derive the prevailing gaps pertaining quality of tourism, institutional structure, marketing and communication, exclusive and inclusive tourism along with socio-culture and gender analysis, finally the section provides gaps environmental sustainability.

The above in-depth analysis and identification gaps directed the TVC assessment of strategic recommendations to ensure inclusive responsible tourism value chain in Sigiriya. This include inclusive tourism value chain for sustainable development, establishing DMO, training and capacity building, smart destination development, integration and collaboration different levels of authorities and institutions, appropriate institutional structure for integration and collaboration, designing and development of responsible tourism products, Fairtrade certification, marketing and communication, capacity of women, youth and PWDs and accreditations and certification. Aligning Sigiriya as responsible tourism destination with new road map Sri Lanka tourism “Putting People First: Building a More Resilient Tourism Sector in Sri Lanka” intensify the sustainable value chain development and execution.

According to the analysis of economic perspectives, the total value creation of the tourism value chain in Sigiriya is calculated as LKR 13 billion. The accommodation sector contributes 51 percent to the total value creation while the attraction sector contributes around 32 percent. Services, transportation, food & beverages, and activities sectors holds 8 percent, 5 percent, 3 percent, and 1 percent of the total value respectively. The value created by the local investors is about 26 percent (LKR 3.3 billion). Local communities are engaged mostly in fruits and vegetable supply chains of the TVC and share of locally born supply chains is around 8 percent of the total supplies. The total value of the supplies of TVC accounts as LKR 2.1 billion. Nearly 50 percent of the supplies are borne outside the region.

The TVC has created around 4,000 employment opportunities from over 2,000 service providers. Nearly 50 percent of the employment opportunities are created by the accommodation sector followed by the transport, food and beverage sector and the activities sub sectors. It is revealed that 82 percent of employment opportunities are occupied by the local people. Women employment in the total value chain is about 12%. Most of employments are created by the service and accommodation sectors which account for around 44 percent. Homestay, saloon, wellness centers, and Ayurveda medicines are sub sectors having of higher women participation.

The environmental analysis was focused on conservation or sustainable use of biodiversity, climate change mitigation and adaptations and improving holistic waste management. Hotspot analysis was undertaken focusing GHG emission, energy use, water use, solid waste generation and waste water generation. Analysis has been spotted hotspots for each environmental criterion for appropriate measures of impact mitigation. Cars and vans sub sectors are hotspots of GHG emission whereas classified hotels sub sector is significant for energy use, waste water & food waste generation and plastic waste generation. Boutique hotels and guesthouse subsector is a hotspot for water use

Analysis exercise has generated several recommendations for policy makers, national level and provincial level authorities, agencies and functional actors to create enabling environment for value chain functioning, fair distribution of economic and social benefits and sustainable use of natural resources. It is inevitable to integrate promotion, regulation and management of destinations in a national tourism policy frame and bring all national, provincial and functional stakeholders to a common management structure which creates opportunities for all stakeholders to participate in the governance and management. Essential quality improvement needs of service providers should be addressed by agencies with certification, capacity building and regulations. The destination requires better physical facilities to meet essential safety, comfort needs of visitors. Also, it is essential to secure the environment which is being degraded by the tourism.

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ABBREVIATIONS

CCF	Central Cultural Fund
DMO	District Management Organization
DS	Divisional Secretariat
ESA	Environmentally Sensitive Area
F&B	Food and Beverages
GHG	Green House Gasses
GN	*Grama Niladari*
ILO	International Labour Organization
LA	Local Authority
SLTDA	Sri Lanka Tourism Development Authority
SME	Small and Medium Size Enterprises
UNEP	United Nations Environment Programme
UNWTO	World Tourism Organization a UN Specialized Agency
VC	Value Chain

SECTION I

INTRODUCTION

1.1 General Background

The tourism sector is vital to the national economy of Sri Lanka as it contributed to nearly 5% of GDP and created nearly 400,000 direct and indirect job opportunities in 2018/19, out of which 2/3 of the employment opportunities had been occupied by women. Experts believe tourism is a sector that can generate quick foreign currency to the national economy with a minimum level of inputs compared to other sectors. Also, Tourism is a sector that generally has an annual growth rate of 5% globally. However, the global COVID-19 pandemic cut this by 50% in 2020. In the local context, during the past 3 years, it was continuously hit by situations such as the Easter Sunday attacks and the global COVID-19 pandemic. These have led to a complete loss of nearly 300,000 income-generation opportunities for local people and the investments of SMEs. However, it is believed that tourism can be re-gained with an extra mile within next 1-2 years as people show extra propensity to travel after being confined to their home countries over the last 2 years. As a great tourism destination, any country should adopt a sound strategy to harness this opportunity by adopting comprehensive strategies.

Sigiriya is a great tourism hotspot where more than 65% of foreign tourist visits had taken place in 2018. It has many archaeologically important ruins of a palace, ancient arts and sophisticated ancient engineering technologies which have collectively determined that Sigiriya is the 8th wonder of the world. Sigiriya itself is not an isolated tourist hotspot. It lies in the midst of more than 20 archaeologically, environmentally and historically important destinations such as the Namal Uyana National Park, Pidurangala temple, Bambaragala, and the ancient cave temple of Dambulla.

To harness the true potential of Sigiriya and its associated sites it should have a comprehensive strategy that is in line with environmental, social and economic aspects. Therefore, this study aims at an in-depth tourism value chain analysis with a special emphasis on community, environment and regional development. Transforming Tourism in Sri Lanka: Emerging from the crisis as a strong, resurgent and rebranded industry implemented by the UNDP with the financial assistance of European Union contracted the Industrial Services Bureau to conduct this Value Chain Analysis for the Sigiriya tourism destination in Sri Lanka.

The researcher will tailor a model that embraces widely recognized models such as the model introduced by UNESCO, World Tourism Organization and United Nations. Based on the model, actors of the value chain will be mapped with respect to existence.

1.2 Objectives

This assignment is meant to support the Central Cultural Fund and the Provincial Council of the Central Province of Sri Lanka to manage their tourism development programs effectively while managing the cultural, natural and historical assets sustainably.

The overall goal of the Value Chain analysis is to increase the economic value addition that occurs within the Central Province of Sri Lanka and specifically within the Sigiriya Tourism Destination optimizing the environmental impacts and improving the socio-cultural impacts of the tourism industry in the selected geographical area.

1.3 Scope of the Study

The scope of this analysis is to identify and analyze the tourism value chain in Sigiriya along with the supply chains involved in it (value creation system). The value chain is analyzed comprehensively enabling the key stakeholders to identify micro level - functions that directly contribute to the tourism value addition process; meso level-support functions that benefit all stakeholders with special attention to stakeholders' contribution towards direct value addition and macro level fundamental elements of the offering and fundamental functions as the prerequisite for tourism development in the region.

1. Mapping the value chain
Identification and mapping out the businesses/services, actors and processes of the present value chain, and possible value chains while assessing competitiveness, challenges and opportunities.

2. Identifying potential opportunities to introduce/develop/strengthen strategic partnerships between actors in the value chain, and other service providers including the relevant government institutions.

This would ensure effective contribution of the destination of Sigiriya and the tourism industry components connected to it, to the national economy and regional development through sustainable, smart and resilient tourism, with wider stakeholder participation and contribution for an agreed vision, basic principles, objectives and actions of the value creation and improvement process.

3. Economic and market aspects, socio cultural aspects, organization and framework aspects and environmental aspects/parameters of the value chain were considered for the analysis and this analysis intends to answer the following questions: (indicators are identified to assess the parameters of value chain and are given in box 1)

Economic and Market Analysis

1. What is the percentage of value addition happening within the region
2. Who benefits from the value addition
3. What is the value of goods and services bought in from outside
4. Local and Regional Development
5. Regulatory Mechanism and Collaborations
6. Market accessibility local actors
7. What are the requirements of the key stakeholder groups including target customers What are the weaknesses of existing product offering
8. How to reach the customers; What are the crucial multipliers, intermediaries and platforms available to reach customers
9. Power structure and benefit sharing
10. Sustainable Investment and Funding
11. Who are the investors in sectors/sub sectors
12. Employment opportunities for local people
13. Who own lands
14. Accessible building and other physical resources by local actors
15. Positive and negative economic impacts
16. What would be the income range of new employment opportunities

Socio Cultural Analysis

1. Socio-cultural positive and negative impacts
2. How many men and women can be employed;
3. What are the opportunities to support more women employment;
4. What are the opportunities to support disabled, elderly and other vulnerable groups;
5. Attraction of youth by sectors/sub sectors
6. What are the key negative impacts of tourism on socio culture of the destination
7. Inclusivity and equity of gender and youth

Organization and Framework Analysis

1. Regulatory Mechanism and Collaborations
2. Institutional Structure and Implication of Tourism Value Chain in Knuckles -Riverston
3. National, Provincial and Local Authority integration and coordination
4. Collaboration of Actors and Agencies
   Social Transformation
5. Public, Private, Community Partnership (PPCP) What are the potentials for synergies and stronger cooperation

Environmental Analysis

1. Is there any potential to promote conservation or sustainable use of biodiversity?
2. Is there any potential to promote climate change mitigation and adaptation?
3. Is there any potential to improve holistic waste management
4. What is the potential for improving other elements of the natural environment?

1.4 Sigiriya as a National Wonder and a World Wonder

Sigiriya, sometimes called Lion Rock or Lion Rock, is an ancient rock citadel located in the Matale district (7.957011112588483, 80.75738107911525). According to historical chronicles, King Kashyapa built his palace on top of this rock between 477 – 495 AD and decorated its walls with beautiful frescos. The capital and the royal palace were abandoned after the king's death. Thereafter, it was used as a Buddhist monastery until the 14th century. Sigiriya, considered to be one of the most valuable historical monuments in Sri Lanka, has long been renowned as an architectural wonder of urban planning and engineering, and a UNESCO world heritage site since 1982. Furthermore, the famous Bloomberg magazine has included Sigiriya into its new seven wonders of the world saying that “Sigiriya is the perfect amalgam of human-made treasure and natural wonder”.

1.5 Sigiriya as Principle Tourist Attraction in Dambulla – Sigiriya tourist zone

Sigiriya has been one of the main tourist attractions in Sri Lanka for decades for both local and foreign tourists. According to the statistics of SLTDA, Sigiriya is the most visited monument in Sri Lanka. Sigiriya is not an isolated tourist attraction but connected with several tourist attractions in the Dambulla ancient city (e.g. Dambulla cave temple) and Matale district, and has become a cornerstone of the Dambulla-Sigiriya tourist zone, which serves more than 1 million local and foreign tourists annually. Also, Sigiriya is one of the main tourist attractions in the cultural triangle of the country that connects the ancient cities of Anuradhapura, Polonnaruwa and Kandy. Therefore, the national and regional tourism development agencies have given a very high priority for Sigiriya in their tourism sector development plans (e.g. SLTDA’s Sri Lanka Tourism Strategic Plan). Sri Lanka has not systematically and proactively engaged in planning destinations. Tourism has mostly grown and is growing opportunistically, which has created many socio-economic and environmental issues – including the poor experience of local and foreign tourists, disparities among regions, exclusion of poor communities from benefiting the tourism industry, creating negative impacts on the environment, etc. Having understood the above issues, the Ministry of Tourism and other national and regional tourism sector development agencies are now moving towards establishing a tourism planning framework and approach that can effectively build sustainable tourism destinations by conserving, developing, and implementing integrated tourism destination plans while facilitating sustainable destination management. Tourism planning is especially important so that resources can be directed where they can provide the greatest benefit for the country.

1.6 Sectors and Sub Sectors

It has been identified six sectors and their sub sectors included in the Sigiriya tourism value chain as given in the following table. (Annex 01 presents definitions of sectors and sub sectors).

Table 1 Sector and sub sectors of the Sigiriya tourism value chain

Sector	Sub sectors
Accommodation	Star hotels, Boutique hotels, Guest House, Home Stay
Activities	Elephant Safari, Traditional Cooking, Village Tours
Food & beverage	Mobile Food Shop, Restaurant, Street Food
Services	Ayurvedic Medicine, Handicrafts, Public Lavatory, Spa, Saloon, Grocery/retail shops, Vehicle Parking facilities
Transport	Jeep Safari, Three-wheelers, Car, Rent a motorbike, Rent bicycle
Attractions	Sigiriya rock fortress, Sigiriya museum, Pidurangala, Mapagala, Ibbankattuwa burial land, Minneriya National Park, Dambulla cave temple, Dambulla art museum, Ritigala, Namal Uyana National Park, Kaludiya pokuna

1.7 Sigiriya as One of Sri Lanka's Sustainable Tourism Attractions

According to experts from the United Nations World Tourism Organization (UNWTO), both local and foreign tourists are now more likely to demand a focus on sustainability, connections with local communities, open-air and nature-based cultural experiences, etc. Therefore, developing the tourism industry based on a sustainable model, or, in other words, the sustainable tourism model is important.

Having understood the new realities of the tourism industry, particularly during the post-pandemic period, the Ministry of Tourism has selected nine tourist attractions in Sri Lanka, including Sigiriya, to be developed as sustainable tourist destinations. The United Nations Development Fund's Biodiversity Financing Initiative has already committed to supporting the development of these sustainable tourist destinations. At the same time the Tourism Ministry has already commenced the promotion of Sigiriya and Yala National Park as the first eco-friendly sustainable tourist destinations free of the use of plastics.

1.8 Tourist Attractions - Sigiriya

Sigiriya is a well-known tourism hotspot in Sri Lanka which provides historical, cultural and recreational values. It is situated within a strategic location by which to reap higher tourism earnings for the national economy since most foreign travelers visit Sri Lanka for the purpose of pleasure or holiday. Other travel purposes of foreigners include business, visiting friends and relatives, conventions and meetings, religious and cultural, health, sport, official and education.

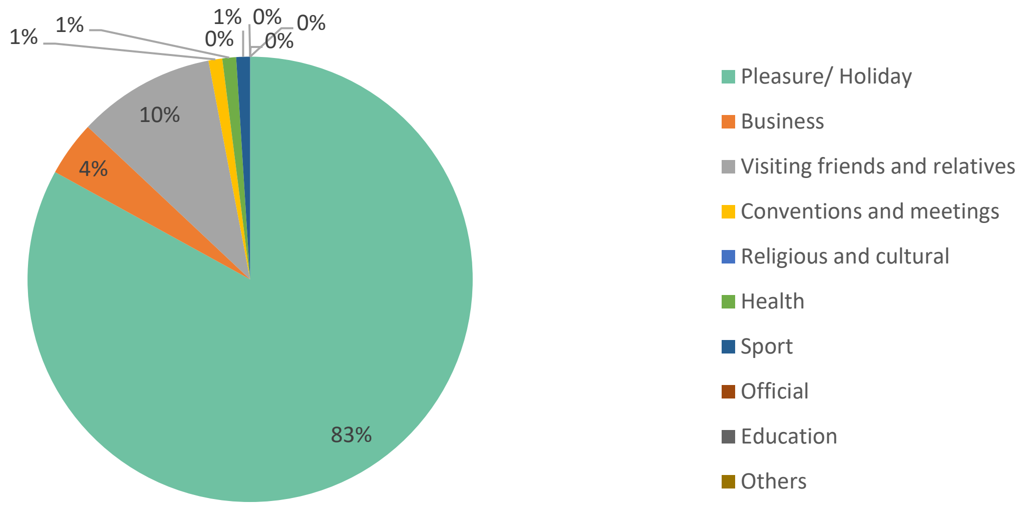


Figure 1 Reasons for tourist arrivals

Source: SLTDA statistics 2019

The Sigiriya tourism destination and its nearby areas which are situated within the radius of 15km are endowed with historically, archeologically, environmentally and culturally important sites and events. However, most of these locations have multiple values in terms of historical, archeological, environmental and cultural importance.

The sites which have such historical, archeological and cultural values include the Sigiriya rock, the Sigiriya museum, Kaludiya pokuna, Dambulla cave temple, Ibbankattuwa burial ground, and Ritigala. According to the SLTDA statistics, the Sigiriya rock and museum have been visited by 414,575 foreign visitors and 611,310 local visitors; which are equal to 57% and 60% of total tourism visits in the year 2019. Other culturally and historically important tourist destinations in Sri Lanka include the Abhayagiriya, Jethawanaramaya, Polonnaruwa Gal Viharaya, Dambulla museum, Ritigala forest monastery, Ibbankattuwa ancient burial ground, Namal Uyana, the Kandy museum, the Galle museum, Ramba Viharaya, Ape gama, the Katharagama museum, Yapahuwa kingdom, Buduruwagala and Lahugala.

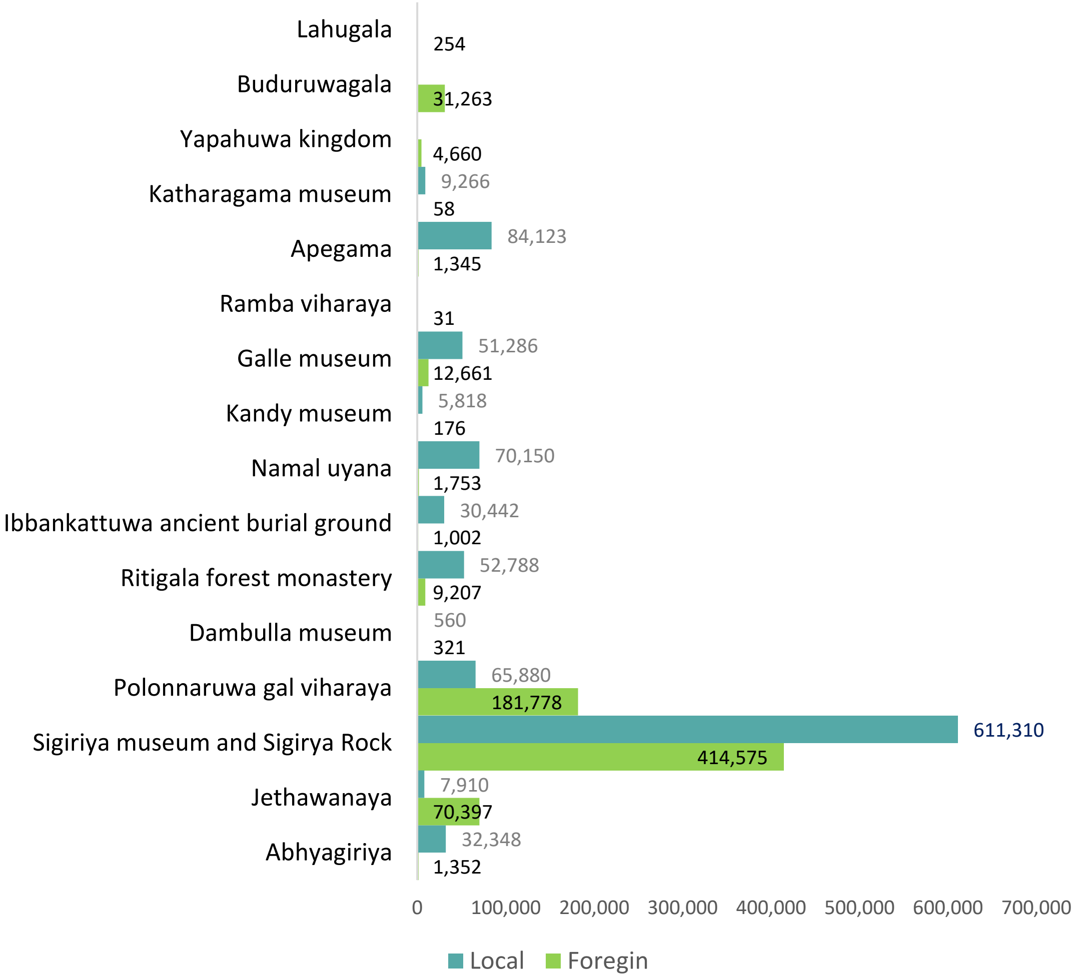


Figure 2 Tourist visits in the culturally important destinations Sri Lanka

Source: SLTDA Statistics 2020

Museums are also important manmade ex-situ conservative establishments. It has other benefits such as attracting visitors who seek to experience and learn more about the artifacts that are under conservation. There are 2 important museums in the study area; the Sigiriya museum and the Dambulla art museum. These are governed by the Central Cultural Fund. The Sigiriya museum adds value to the Sigiriya rock fortress as the ticket permits the visitor to access both. In addition to this, there are several museum establishments that are operated by the CCF, the Department of Archeology and the Department of National Museums across the country.

The Minneriya and Kaudulla National parks are important tourist attractions that give wildlife experiences for visitors. Visitors can traverse the national park in safari jeeps, allowing them to watch large herds of wild elephants. According to the SLTDA tourism statistics 2019, 66,329 of local tourists and 62,961 of foreign tourists had visited these parks. As a percentage, it is 5 – 6%of the total wildlife visits that occurred nationally in 2019. In addition to the managed forest areas, there are declared forest reserves around Sigiriya. These stretch up to the Kandalama Tank. The total extent of the declared but not permitted for access lands are 12,000 Hectares.

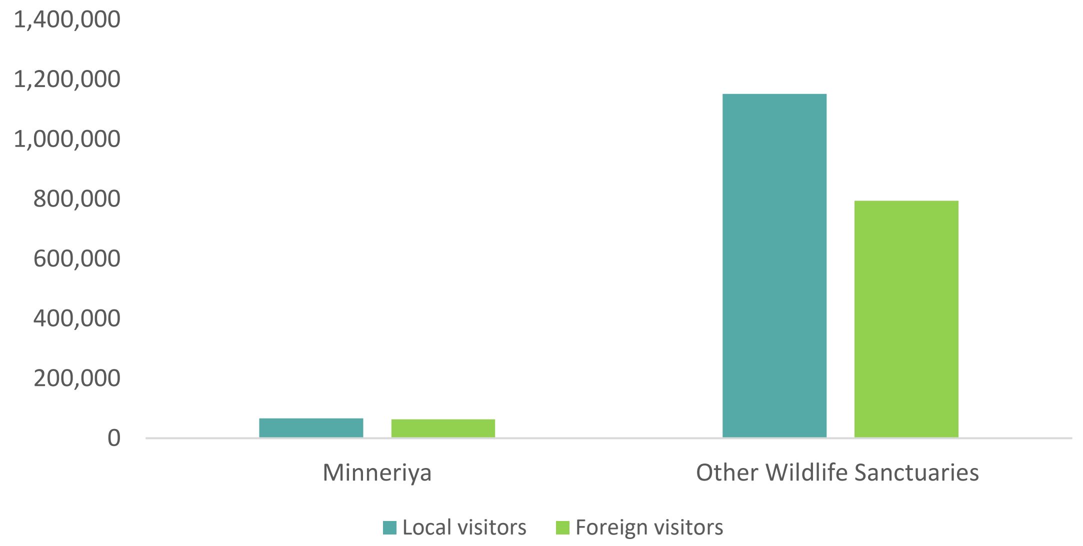


Figure 3 Importance of Minneriya National Park with other national parks Sri Lanka in terms of tourism visits

Source; SLTDA Statistics 2020

It is better to have an idea about the importance of Sigiriya in terms of visitor numbers, compared to other important ancient cities. The following figures show the arrival of tourists in 2019 (SLTDA).

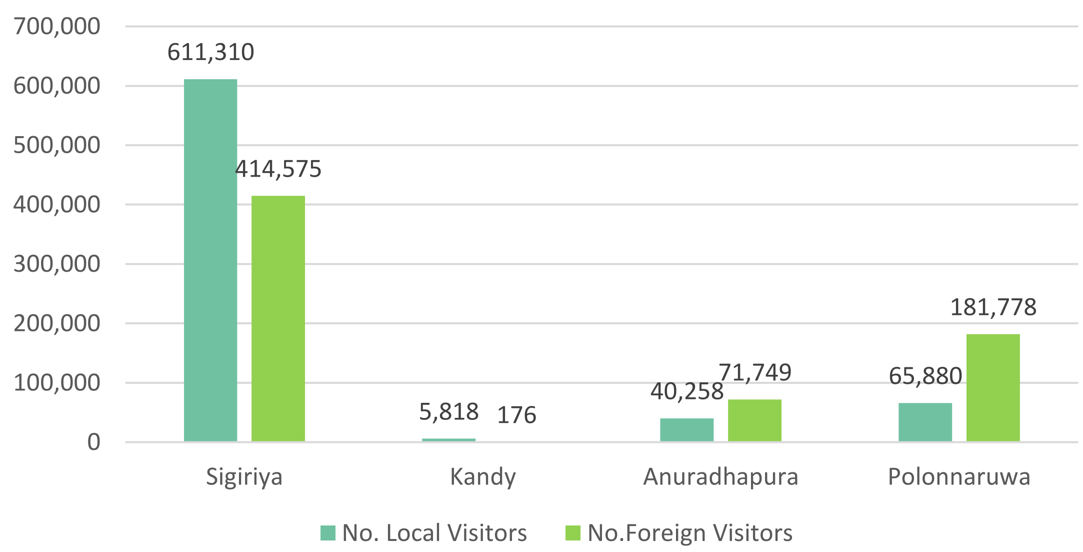


Figure 4 Tourist visits in the ancient cities of Sri Lanka

Source: SLTDA Statistics 2020

However, the above situation changed drastically after the COVID 19 pandemic situation. Nevertheless, adapting to the new normal situation has started to change during the latter part of 2021 and early part of 2022. According to the respondents in Sigiriya area, nearly 400 foreign visitors and 600 local tourists visit Sigiriya daily and it is expected that the situation will gradually improve during the year 2022 and bounce back to the pre-pandemic level.

The most important cultural event in Sigiriya and nearby areas is the Dambulla perahera which is a yearly event organized in May. Nearly 7 elephants and more than 60 groups of artists participate in the event as a whole where more than 2500 individual performers attend. They perform different aesthetic items such as drumming, folk dancing, and others. It is organized by the Rangiri Dambulu temple under a special fund called "the perahera fund". However, it was not organized after 2019 due to consecutive adverse hits by the Easter Sunday attack and the COVID 19 Pandemic.

1.9 Economic, Geographic and Demographic Profile of Communities

This study has selected 10 tourist sites associated with the Sigiriya rock. Those are the Sigiriya rock, Mapagala, Sigiriya tank, Pidurangala, Popham's arboretum, Kaludiya pokuna, Dambulla cave temple, Dambulla art museum, Ibbankattuwa burial site, Ritigala, Habarana, National Namal Uyana, and Minneriya national park. The whole study area is geographically scattered over 3 districts in 2 provinces, mainly in the Matale district of Central province and Anuradhapura and Polonnaruwa Districts of the North-Central province.

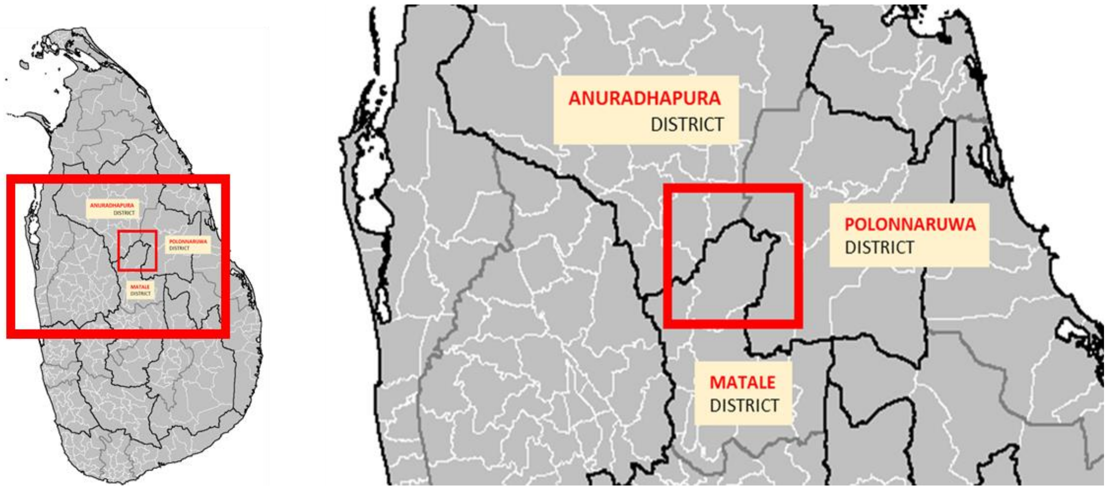


Figure 5 The study areas

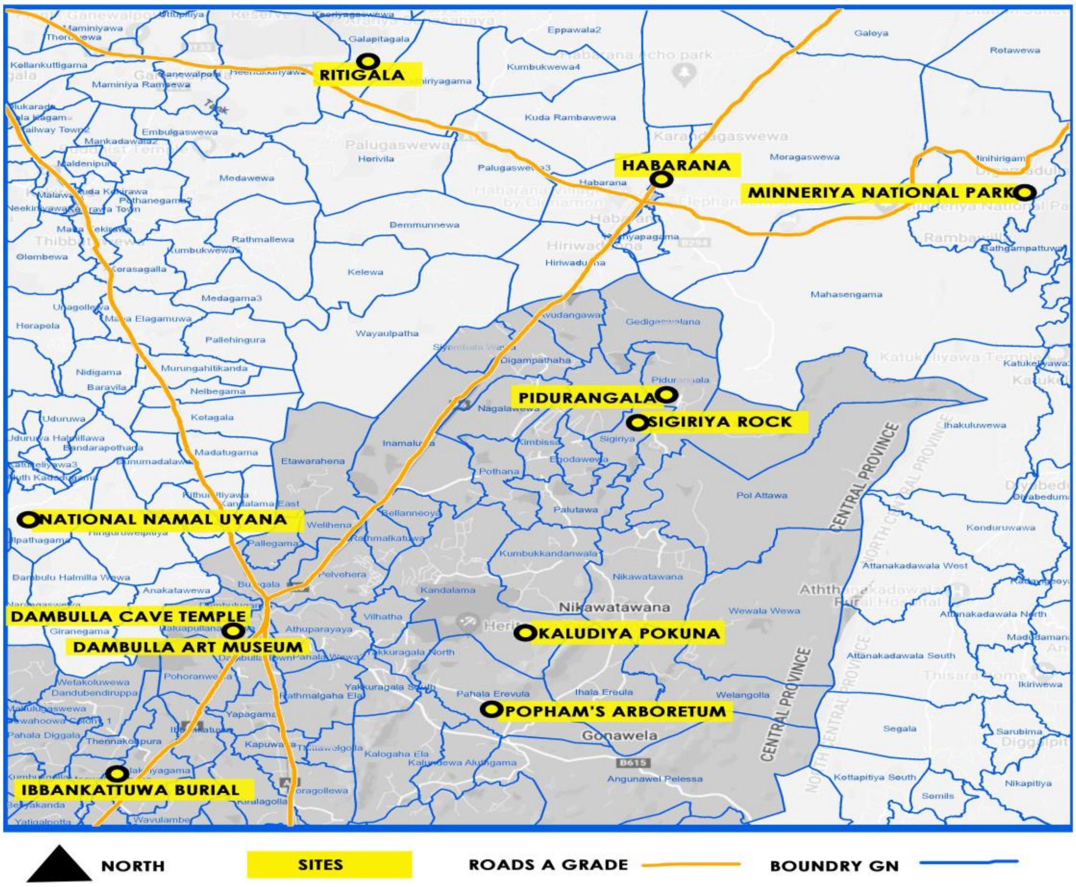


Figure 6 Distribution of the attractions in the study area

These tourist sites are scattered over 8 Grama *Niladari* (GN) Divisions. According to the demographic data, there are nearly 6,300 families living in those GN divisions comprising of more than 18,000 people. The female to male ratio is 52 percent, and the youth population who are aged between 15 to 35 years old is about 6,000; or as a share, this is 32 percent of the total population in the study area. Out of this total population, 46 percent of the families are engaged in the service sector, 34 percent in the agriculture sector, and 20 percent in the industry sector.

18,694	9,665	6,285	6,112
Population	Female population	Number of families	Youth population (15-35 age group)

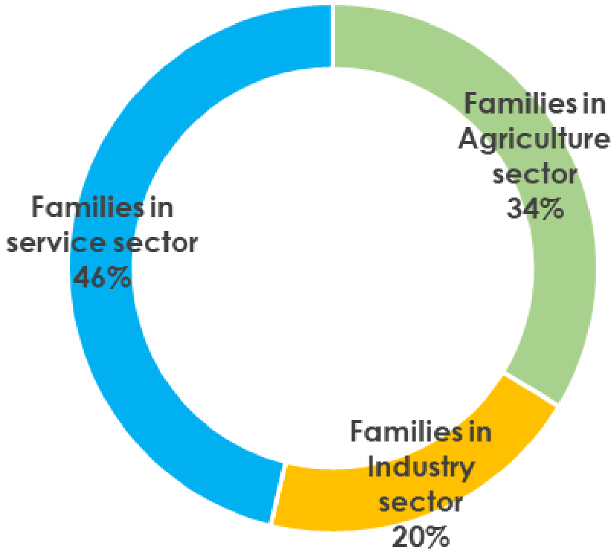


Figure 7 Demographic data: different economic engagements

Source: Matale District resource profile 2021

Table 2 Demographic data of the study area

Destination	Divisional Secretariat Division	GN Division	Population	Female population	Number of families	Youth population (15-35 age group)	Area Ha	Families in different economic sectors		
								Agriculture	Industry	Services
Sigiriya rock Mapagala Sigirya tank	Dambulla	Sigiriya	692	343	168	201	450	81	0	0
Pidurangala		Pidurangala	695	347	235	223	1100	169	5	84
Popham's arboretum		Rathmalgahaela	3426	1873	1956	1087	675	216	500	936
Kaludiya pokuna		Kandalama	2491	1286	684	889	1370	308	15	4
*Dambulla cave temple Dambulla art museum		Dambulla town	5232	2673	1354	1910	600	163	425	1163
Ritigala	Palugaswewa	Galapitagala	542	277	201	144	1416	111	30	60
Habarana	Palugaswewa	Habarana	3573	1808	1050	1051		578	158	315
National Namal uyana	Palagala	Ranawa	2043	1058	637	607	694	319	25	103
Total			18694	9665	6285	6112	6305	1945	1158	2665

Source: Resource profiles of Divisional Secretariats; Dambulla, Palugaswewa, and Palagala

Agro climatic zone of the study area: The study area is fallen under the Low country-Dry Zone-1 (DL1) ago-climatic zone of Sri Lanka which receives less than 30 inches of total rain annually and has an undulated land in nature. This climatic condition coupled with the man-made irrigation systems such as major, minor and seasonal tanks systems allows the farmers to grow grains, vegetables and fruits. Agriculture is a supplementary feature to agro-tourism.

1.10 Structure of the Report

This report is structured into five sections as Introduction, Methodology, Literature Survey, Analysis and Strategic Recommendations. The introductory chapter includes background of the analysis, objectives, scope of the analysis and background of the geographical location/attractions.

The methodology of the analysis is given under section II and It carries conceptual framework, questions of analysis and data and data collection methodologies.

Section III examines the economic and social importance of the tourism industry, along with the policies and organizational setting and environmental value of the destination. Section IV, the core section of the report presents all categories of analysis, findings and gaps. There is an overview for all sectors of the value chain at the beginning of the section which presents data regarding each sector. The analysis section is structured under 4 sub sections as economic analysis, socio cultural analysis, environmental analysis and organization and framework analysis. Economic analysis begins with an overview of sectors and sub sectors. The total value creation, local value creation, employment, resources and economic behavior sectors are discussed separately. Socio cultural analysis highlights both positive and negative impacts of tourism on the socio culture of communities. Environmental analysis is focused on hotspot analysis and structured on indicators of GHG emission, energy use, water use and solid waste. Organization and framework analysis is structured and presented on policies, regulations, organizational coordination and resource allocation. Section IV is concluded with a GAP analysis.

Section V presents recommendations under the following sub sections; quality of tourism, tourism offering, conservation and inclusive growth.

SECTION II
LITERATURE REVIEW

2.1 Overview of Global Tourism System

According to WTO (1994), tourism is the set of activities engaged in by persons temporarily away from their usual environment, for a period not more than one year, and for a broad range of leisure, business, religious, health, and personal reasons, excluding the pursuit of remuneration from within the place visited or long-term change of residence. It is a product amalgamated with various components such as attractions, accessibilities, amenities, accommodation, activities and ancillary services (Muthuraman and Haziazi, 2019). These are owned or management by different institutions and individuals. Yet, the inherent characteristic "inseparability" of tourism products does not allow to act alone to serve the industry. All the businesses need support from other businesses and for this reason they need to work together. In order to create a bond among all the stakeholders of the tourism industry, there is no alternative for Value Chain and Supply Chain Management. Hence, the output of the tourism industry entirely depends on the collaborative and integrated effort and contribution of a wide range of stakeholders. This enables the tourism industry to embrace a long supply chain through backward and forward linkages. On the other hand, expanded supply chain enhances the value chain of tourism to enrich the quality of tourism (Dailyfit, 2019). Participation and collaboration of diverse components in the supply chain leads to the addition of more value for tourism in a destination. This embarks plentiful opportunities for people who reside in urban and rural areas. P. Jafari (1992) summarizes these differences as four ''platforms.'' The first is (in Jafari's terminology) the ''advocacy'' platform, which focuses on tourism's contributions to job creation and economic development. The ''cautionary platform'' takes an opposing view by pointing out the costs of tourism. The ''adaptancy'' platform recognizes both benefits and costs of tourism and argues that proper planning and management can alleviate problems while still achieving the desired benefits of tourism. Finally, the ''scientific'' platform focuses on the objective understanding of tourism as a phenomenon.

The World Travel and Tourism Council is frequently cited as claiming tourism is ‘‘the world’s largest industry’’; a collection of tourism businesses that meet these criteria. Hence, tourism would include the elements of movement (transportation), of remaining temporarily in one place (such as staying-in accommodation), being entertained, and consuming food and drink as aspects of tourism. There is no obvious logic that one can use to meaningfully aggregate these diverse products into a single generic product that would characterize something called “the tourism industry”. Particularly responsible or sustainable tourism value chains may go beyond popular resort regions and reach rural and remote regions. Thus, a responsible or sustainable tourism value chain would allow the country to attain the 17 Sustainable Development Goals through numerous avenues.

2.2 Prevailing and Emerging Markets and Segments

According STDA (2018), it is noteworthy that all regions showed significant growth in the number of tourist arrivals, except the Middle East region (Table III). Asia and the Pacific showed an increase of 3.5 percent compared to the previous year. Europe was the second major source market, recording a 20.8 percent increase compared to 2017. North America recorded a growth of 23 percent while arrivals from the countries in the other category recorded a growth of 26 percent. It should be noted that on average, all regional markets, except the Middle East region, recorded an increase of 10.3 percent compared to that of the previous year. An analysis of the ten major source markets revealed that tourists from India represented the largest number of international arrivals. China was recorded as the second major country of origin for tourists with a share of 11.3 percent during 2018. United Kingdom was the third major source of tourists to the country (10.9%), while Germany (6.7%) and Australia (4.7%) become fourth and fifth in the top five markets. The top ten markets accounted for almost 68.1 percent of the total tourist traffic to the country in 2018.

2.3 Impacts of Tourism on the Environment, Economy, and Socio-culture of Rural Sri Lanka

The tourism industry is always determined by its externalities, which generate significant positive impacts as well as negative impacts on socio-culture, environment, and economy. Accordingly, Sri Lanka also pays significant attention to both positive and negative impacts of tourism. Impacts of tourism have fallen into various criticisms and arguments among the general public since tourism is the third-largest foreign exchange earnings which holds a strong contribution to GDP. Moreover, the impacts of enclaved mass tourism on rural fabric are unpreventable even though rural areas have not been taken into consideration for conventional tourism development. Also, tourism has created over 173,000 direct employments and over 229,000 indirect employments while creating number of income generating opportunities for small and medium sized operators. Conservation of natural, historical and cultural resources are also supported by the tourism for some extent; however, the negative impacts of tourism have been expanded largely compared to the positive impacts. (Annex 02)

2.4 Tourism Value Chain of Sigiriya

Although Sri Lanka has become a very popular destination today, the history of tourism in the country goes back several centuries. Notably, some available records are; ancient civilization of Mohenjo-Daro Harappa, the Chinese traveler Fa-Hien, (411 AD), the European traveler Marko Polo (1292) and the Arab traveler Ibn Battuta (1344) are evidence of international relations among foreigners with Sri Lanka (Nichols and Paranavitana, 1961). Further, Hulugalle (1999) recorded that the arrival of Fa-Hien – 414 AD, Cosmos, a Greek Merchant – 545 AD, Marco Polo 1293 AD, Odoric, an Italian – 1329 AD, Marignolli, a Christian Traveler – 1349 AD, Ibn-Battuta a romantic traveler 1344 AD, Ching Ho, a Chinese Admiral – 1405 – 1410 AD, Varthema a Portuguese Spy – 1505, Spilbergen, a Dutch Merchant – 1602 up to the time of the British arriving in 1796, many people came to the country and even named it in various ways. The Greek astronomer Ptolemy compiled the map of Sri Lanka in the 2nd century labelling the island Taprobane. The Arabs named the island Serendib; while the Portuguese and Dutch named the island Seylan, and the British converted this into Ceylon. Finally with the republican constitution in 1971 the island was renamed Sri Lanka.

Therefore, Sri Lanka is not a new destination in the world's tourism history. In mid 1960s tourism emerged as an industry in Sri Lanka, and the need for the administration and professional operation was identified (Aslam, 2004) and in 1966 a regulatory body or the National Tourism Organization, Ceylon Tourist Board (CTB) was established under the Parliament Act No. 10 of 1966 (Government of Ceylon, 1966a) and the Ceylon Hotels Corporation was established under Parliament Act no. 14 of 1966 (Government of Ceylon, 1966b) Thereafter, the development of the tourist industry in Sri Lanka occurred (Jayawikrama, 2000).

Meanwhile, another strategic mission of the government to induce export revenue is the Foreign Exchange Entitlement Certificates Scheme (FEECS) and Convertible Rupees Account in 1963, which pushed the development of the tourist industry (Central Bank of Sri Lanka, 1998). Tourism was recognized as an indirect export and important foreign exchange earner (Jayawikrama, 2000). This situation enabled many new companies and ventures to penetrate into tourism industry and enjoy the privileges of the FEECS. When those companies were traditionally relying on export and import business, they faced problems due to import restrictions forced by the ruling government (Aslam, 2004, Bandara, 2003). Some of those companies are John Keells, Aitken Spence and George Stuarts. Later, tourism became one of their major businesses and today these companies have major shares of the tourism market in Sri Lanka (SLTDA, 2009). Further, tourism development was strengthened by the Tourism Development Act No. 14 of 1968 (Government of Ceylon, 1968). To this end, the government carried out planned development over the tourism industry. From 1966 to date, Sri Lankan tourism has gone through two 10 year master plans and one interim plan. Hitherto Sri Lanka depends on enclave type (Bandara, 2003) mass tourism highly focused on tropical beaches. The prevailing tourism is large in volume but its motivation benefits only for a limited number of stakeholders such as hotel owners and a few indirect service providers and suppliers. The majority of the local community around the tourist facilities or inner parts of the country seldom enjoy the advantages of the industry. Since tourism facilities are owned and occupied with urban business giants (Liu, 2006), the local communities are prevented from sharing and participating in the existing tourism markets. At present, conflicts among tourist facilities and the environment, tourists and local communities, tourist facility owners and the government, and tourist facility owners and local communities interrupt the smooth growth of the industry.

2.5 Mode of Tourism Operation

Basically, there are four modes of tourism operation. (Annex 03). The “direct route” itinerary or single destination mode has seldom taken place and very often at Sigiriya, Sigiriya has been included as an en-route stopover or tourism site in the larger destination tour. Yet, the recent past with the trend of allocentric perception and alternative tourism practice Sigiriya has been considered for a “Partial Obit” connective with a few natural and cultural attractions along with some community-based activities. The “Fly-Drive” mode of tours were well initiated but could not continue or grow further due to the failure of appropriate tourism value chain developments. However, the geographical location and connected attractions and other value chain components of Sigiriya create opportunities and potential for "Full Orbit", "Base Camp", "Regional Tour" and "Trip-Changing". This has been constrained and underperformed due to the lack of value creation in Sigiriya and the surrounding tourist sites.

2.6 Institutional Structure

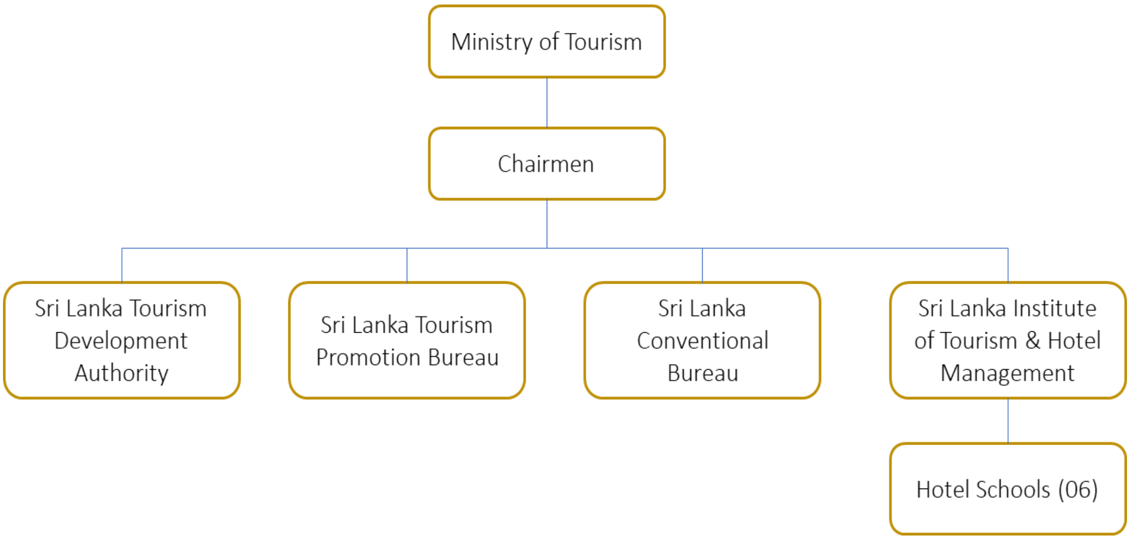


Figure 8 Institutional structure

The above institutional structure has been adapted from the National Tourism Strategic Plan 2017 – 2021 which intensifies the revitalizing of national-level tourism institutions to meet core responsibilities more effectively and efficiently; establish a more whole-government consultative, cooperative, coordinated framework for tourism at the central level and with provincial and local governments; strengthen consultation and cooperation with the private sector institutional structure; and enhance businesses and investment, especially SMEs. In order to improve the institutional structure, they have identified a few strengths such as strong funding and the empowerment of national tourism institutions in some areas (e.g., marketing, strong private sector entrepreneurship and institutional framework and large public landholding and extensively protected natural and cultural heritage areas). Meanwhile, they also have highlighted a number of challenges as follows:

- The multiplicity of government agencies with sole or shared responsibilities for important aspects of tourism
- Further fragmentation between national, provincial and local levels of government
- Silo's approach within tourism institutions, leads to inefficiency and duplication

- Inadequate planning, development, regulation, marketing and HR training in the public sector
- Lack of consultation, cooperation and coordination within and between all levels of government and with the private sector
- Impediments to business and investment
- Many unregulated tourism businesses can contribute to risks to safety and reputation.

According to the prevailing institutional structure of Sri Lanka tourism, it embraces many shortfalls and dilemmas in adapting a holistic, national approach which curtails the value creation of tourism through local and provincial tourism through the integration and collaboration of the stakeholders. Expanding and revitalizing the institutional structure would be essential to improve and establish the tourism value chain at local destinations. Sigiriya is one of the most popular and highly visited destinations that demands well established institutional structure for systematic value creation to ensure sustainable development.

Destination: Natural and Cultural Attractions, Accessibilities, Amenities, Accommodations, Activities and Ancillary Service

Local Community: Traditional and Nontraditional Livelihood, Engagement with Tourism, Inclusivity and Gender Equity and Equality

2.7 Review of Prevailing Policies and Procedures

Since 1967, the tourism industry in Sri Lanka was developed and managed under different policy guidelines and principles provided by development plans, national strategies, and parliamentary acts. This includes the 10-year Ceylon Tourist Plan (1967-1976), Interim National Development Plan (1971-1976), Tourism Master Plan (1992-2001), Tourism Act No 38 of 2005 replacing the Sri Lanka Tourist Board Act No. 10 of 1966, Tourism Development Strategy 2011-2016, and Tourism Strategic Plan 2017-2020.

In addition, the policies and legislation relevant to the tourism sector include

- The Finance Act, No 25 (2003),
- The National Environment Act, No 47 (1980),
- The National Heritage Wilderness Area Act (1988),
- The Civil Aviation Act, No 14 (2010),
- The Greater Colombo Commission Law, No 4 (1978, and amendments in 1980, 1983, 1992),
- A National Cultural Policy (proposed in 2007, but not implemented),
- The Foreign Exchange Act (2017),
- The Labour Code of Sri Lanka (including National Minimum Wage of Workers Act, No. 3 of 2016),
- The Land Development Ordinance 1935 (No. 19 of 1935, amended regularly, including 2010 and 2012),
- The National Civil Aviation Policy for Sri Lanka (2016).

However, contextual deficiencies and implementational impediments compelled the country to seek policy revision and a new policy setting for the tourism industry in Sri Lanka. The prevailing policies and their implementation encountered the following challenges:

1. Weak governance (fragmentation of planning, management, and policy-making related to tourism)
2. Endangered tourism assets (reduced in Travel and Tourism Competitiveness Index rankings of natural resources – produced by the World Economic Forum)
3. Limited access to markets (lack of specific market information, limited access to high-yield markets)
4. Limited investments (lack of clarity on tourism zones, small investment incentives connected with tourism, access to land rights complicated)
5. Unavailable and limited skills (overly centralized tourism education and disparities in curriculum)
6. Insufficient connectivity (lack of direct international flights to most responsible markets, poor road network and internal connectivity, issues of online access to train tickets)

Policy Statements: Considering the above situation, the proposed National Tourism Policy aims to provide an effective framework and the necessary impetus to enhance the structure of tourism's institutional frameworks, reform its regulatory frameworks, upgrade the information management process, and improve the market environment to drive a more sustainable (responsible, inclusive, fair), efficient and effective tourism development in the future. This intensifies to embark on several conditions that include the following aspects:

Participation in Governance: All stakeholders (public and private) must be able to have a voice in tourism development; the public sector must be able to attract top talent; data should be collected and utilized for the sector's development and regulation, including managing the informal sector.

Responsibility towards cultural and natural assets: New tourism products should be designed and developed in a climate-and nature-conscious manner that benefits local communities; Natural resources should be protected from over-exploitation for tourism and from over-visitation.

A resurgent, skilled and resilient private sector: The industry must be better prepared for future crises, including anticipated and unforeseen events; marketing efforts should adopt new tools and adapt to new trends. Training must be made more relevant to the transformed global context and more accessible; world-class destinations and product development The island's connectivity to key tourism markets and internally, to the important sites, products and services, needs to be enhanced; provide improved and enhanced digitalized services through public-private collaboration; building on partnerships with global institutes and as a cross-cutting theme.

SECTION III

METHODOLOGY

3.1 Sectors and Sub Sectors

It was recognized that the tourism value chain is formed basically by six sectors namely Transportation, Accommodation, Food & Beverages (F&B), Tourism Activities, Tourism Attractions and Services. Total value creation is contributed by those sectors. However, several sub sectors are available under each sector (for example the accommodation sector consists of classified hotels, boutique hotels, guesthouses, homestays etc.) to form the major sector. The diversity of sub sectors was recognized in this value chain analysis. Also, identification of sectors and their sub sectors was done to determine what sectors and sub sectors are important for different analysis.

3.2 Analysis Framework

The total analysis process was divided into a few key dimensions to answer the questions of value chain analysis (or reaching the objectives of value chain analysis). These dimensions included Economic Analysis, Socio-Cultural Analysis and Environmental Analysis. Each dimension was analyzed using appropriate indicators which are directly connected with the analysis questions. The following model illustrates the analysis framework.

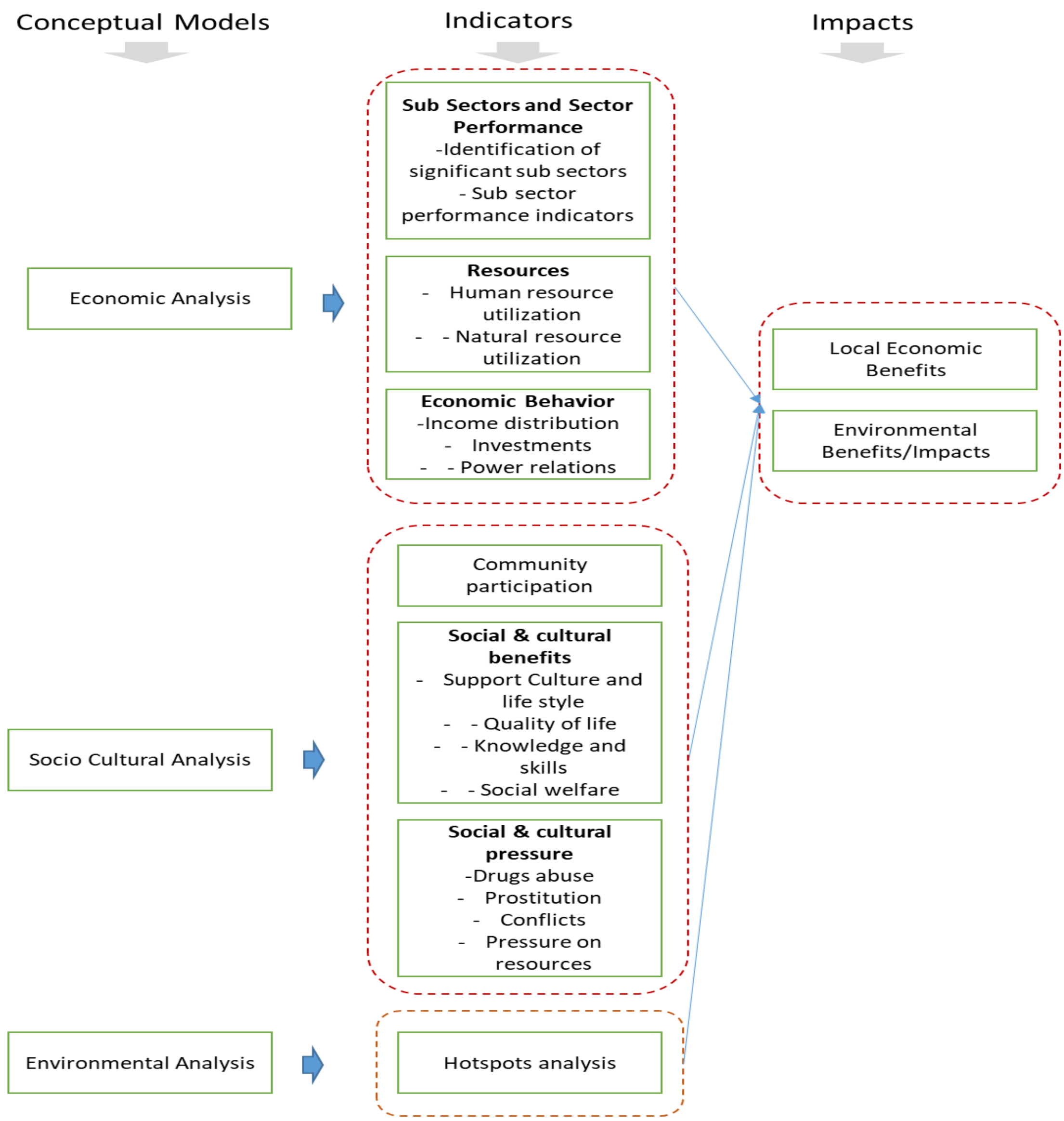


Figure 9 Analysis framework

3.3 Operationalization of Methodology

The following section presents indicators and relevant sub sectors or sectors considered for the analysis. Also, expected outputs of each analysis are given for each indicator.

Analysis type: Economic Analysis

Indicator – 1 Performance of sectors and sub sectors (includes Value creation by sectors & subsectors and market orientation of sub sectors)
Sectors and sub sectors: All six sectors and their sub sectors were considered
Outputs:

- Value addition happening within the region (share of local value addition) - Value addition done by local value chain actors (cost and margin of local value chain actors) - Local value addition taking place in the selected local supply chains - Local people engagement of selected local supply chains - Gap between existing tourism products (offered by local actors) and customers'/visitors' existing & future needs - Percentage of local actors with necessary skills - Established market linkages with leading tour operators/agents - Degree of using marketing and promotion strategies - Percentage of local actors with necessary registrations, certifications, permits, etc. - Degree of relationship with multipliers and intermediaries in the tourism value chain
Indicator -2: Visitor satisfaction and preferences (as a part of the sector performance)
Sectors and sub sectors: All six sectors
Outputs: - Profile of visitors - Behaviour and visiting patterns - Level of visitor satisfaction on sectors (products/services), attractions, facilities, visitor management etc. - Preferences of visitors by sub sectors (products/services/activities) - Products/services that would be purposed if available (currently they are not available)
Indicator 3: Visitor satisfaction
Sectors and sub sectors: Transportation: Three wheelers Accommodation: Homestay, Hotels, Food & beverages: Restaurants Activities: Safari jeep, Village tour Service: Guide service
Outputs: - Behaviour and visiting patterns - Level of visitor satisfaction on sectors (products/services), attractions, facilities, visitor management etc. - Preferences of visitors by sub sectors (products/services/activities)

- Products/services that would be purposed if available (currently they are not available)

Indicator 4: Economic behaviour of sectors (income distribution among actors, local employments, quality and sustainability of employments, power relations)

Sectors and sub sectors:

Transportation: Three wheelers

Accommodation: Homestay, Hotels

Food & beverages: Traditional cuisine

Activities: Safari jeep, Village tours

Service: Guide service, Local products

Outputs:

- Investment patterns, saving patterns, access to finance, power dynamics (e.g. price & quality determination power), etc.

Indicator 5: Attraction management

Sector and sub sectors: Attractions

Outputs:

- Number of visitors by attraction and distribution of visitors among attractions (percentage)
- Total income (entrance fees) by attraction and distribution of income among attractions (percentage)
- Total employments by attractions and distribution of employments (as percentage)
- Income distribution by operating parties
- Types of visitor facilities, condition and capacity compared to the number of visitors
- Safety and security measures available
- Partnerships and communication with other stakeholders for visitor attraction and services

Analysis type: Socio Cultural Analysis

Indicator 1: Women & youth participation

Sector and sub sectors:

Sector: Accommodation

Sub sectors: Hotels, Guest houses, Homestay

Sector: Food & Beverages

Sub sectors: Restaurants

Sector: Transport Sub sectors: Three wheelers Sector: Services Creative industries/guide service
Outputs: - Direct employments (as a percentage to the sub sector employments) - Indirect employments in the supply chains (as a percentage to the total of the considered supply chain) - Livelihood opportunities (as a percentage to the total community connected to the tourism industry)
Indicator 2: Support for preservation of culture, knowledge, skills and lifestyle
Sectors and sub sectors Activities Sub sectors: Village tours Sector: Food & Beverages Sub sector: Traditional foods
Outputs: - Number of families adding values through traditional culture, knowledge and lifestyle - Percentage of value addition to the sub sectors through traditional culture, knowledge and lifestyles
Indicator 3: Support to improve quality of life
Sectors and sub sectors: Sector: Accommodation Sub sector: Homestay Sector: food & beverages Sub sector: Traditional foods Sector: Services Sub sector: guides, local products
Outputs: - Change of income of families - Change of investments/assets of families - Percentage of actors who have decent house conditions (permanent and finished) - Percentage of saving out of total earnings - Percentage income spent on recreational facilities

- Availability (percentage of actors) alternative income sources
Indicator 4: Drug abuse
Sector and sub sectors Accommodation Sub sectors: Homestay
Outputs: - Cases of drug addiction of community people (change/trend of reported cases) - measured through recorded cases - Negative comments (feedback) on drug abuse received by the visitors
Indicator 5: Risk potentials
Sectors and sub sectors: Attractions
Outputs: - Change/trend of recorded accidents
Indicators 6: Conflicts
Sectors and sub sectors: Attractions, Accommodation (homestay)
Outputs: - Trend/how often (increase/decrease) of recorded cases of conflicts among visitors and local communities
Indicator 7: Pressure on resources
Sectors and sub sectors: Attractions
Outputs: - Number of families/villages under inconvenience of natural resource use (bathing, road use)

Analysis type: Environmental Analysis

Indicator 1: GHG emission
Sector: Transportation
Outputs: - Total no. of vehicles by type (Emission of GHGs)
Indicator 2: Energy
Sector: Accommodation and F&B

Outputs: - Total energy use by the tourism sector
Indicator 3: Water
Sectors: Accommodation and F&B
Outputs: - Total volume of water used by the accommodation actors
Indicator 4: Solid waste
Sector: Accommodation and F&B
Outputs: - Volume of solid waste generated by hotels & other accommodation places
Indicator 5: Wastewater
Sector: Accommodation and F&B
Outputs: - Volume of wastewater generated (% of total water used), - Volume of wastewater treated (% of total waste water treated)

3.4 Data Collection

A wider group of stakeholders participated in the data collection to represent all value chain sectors, supply chains, agencies and visitors. A questionnaire survey was administrated separately for data collection from direct actors of value chain sectors and visitors of the destination. Attraction management, agencies (regulatory organizations, associations, facilitators, voluntary groups etc.) and key informants also contributed to the data collection process through KIIs and FGDs.

The following table presents stakeholders contributed for the data collection.

Table 3 Respondents of data collection

	Value Sector	Actor	Sample
	Questionnaire Survey (actors)		
1	Transport	Luxury car	06
		Luxury van	04
		Luxury jeeps	04
		Three-wheeler	17

		Rent a car	06
		Rent a motorbike	04
		Rent bicycles	04
		Safari jeep	08
		Safari jeep repair & maintenance	04
2	Accommodation	Luxury hotels	04
		Medium size hotels	09
		Guest houses	15
		Homestay	08
		Fruits & vegetable suppliers	06
		Fish & meat suppliers	06
		Maintenance services	06
		Laundry services	02
		Other categories	03
		Hoteliers Association – Dambulla	
		Sri Lanka Hotels Association	
		Community people	
		DS Office	
3	Food & Beverages	Restaurant	12
		Mobile food shops	06
		Street food shops	06
		Fruits & vegetable suppliers	06
		Meat/Fish suppliers	06
		Other (grocery)	03
		Local authorities	
4	Tourism Activities	Elephant safari	04
		Village tours	03
		Cycling	03
		Traditional cooking	02
		Three-wheeler safari	06
		Jeep safari	06
		Other	06
		Guide Associations	
5	Services (Including creative industries)	Ayurveda medicine	02
		Spa/salon	06
		Vehicle parks	03
		Public lavatory facilities	02
		Handicraft, photography, Other	04

		Supermarkets/grocery	06
		Material supplier - Ayurveda medicine	02
6	Attractions/Assets	Sigiriya rock	
		Sigiriya water garden	
		Sigiriya museum	
		Dambulu Viharaya	
		Thalkotewewa	
		Egodawewa	
		Mahawewa	
		Pothanewewa	
		Sigiriyawewa	
		Kaludiya Pokuna	
		Ibbankatuwa Wewa	
		Pidurangala	
		Aligala	
		Mapagala	
		Menikdena	
		Ritigala	
		Namal Uyana	
		Minneriya National Park	
	Key informant interviews	Safari Jeep Association, Habarana (Chairman and the secretary)	
		Three-wheeler Association, Sigiriya (Chairmen)	
		Local Authority (Revenue collection officer, The secretary)	
		Central Cultural Fund (The manager of Sigiriya CCF, The Curator of Sigiriya)	
		Department of Archaeology (The assistant director of Sigiriya)	
		Department of Wildlife (Range officer)	
		Department of Forest (Range officer-Sigiriya)	
		Dept. of Tourism (Director-Central province)	
		Guide Association- Sigiriya (The secretory, Ex-president)	
		Department of Tourism Development-CP (Project Officer)	

SECTION IV
VALUE CHAIN ANALYSIS

4.1 Introduction

The tourism value chain in Sigiriya has 6-main sectors, namely the transport sector, accommodation sector, food & beverages sector, services sector, recreational activities sector, and the attractions. Each sector is formed with multiple subsectors which contribute to the total value creation at different levels (direct value chain actors). In addition to that there are second level or the supply side actors and supporting agencies to back the sectors.

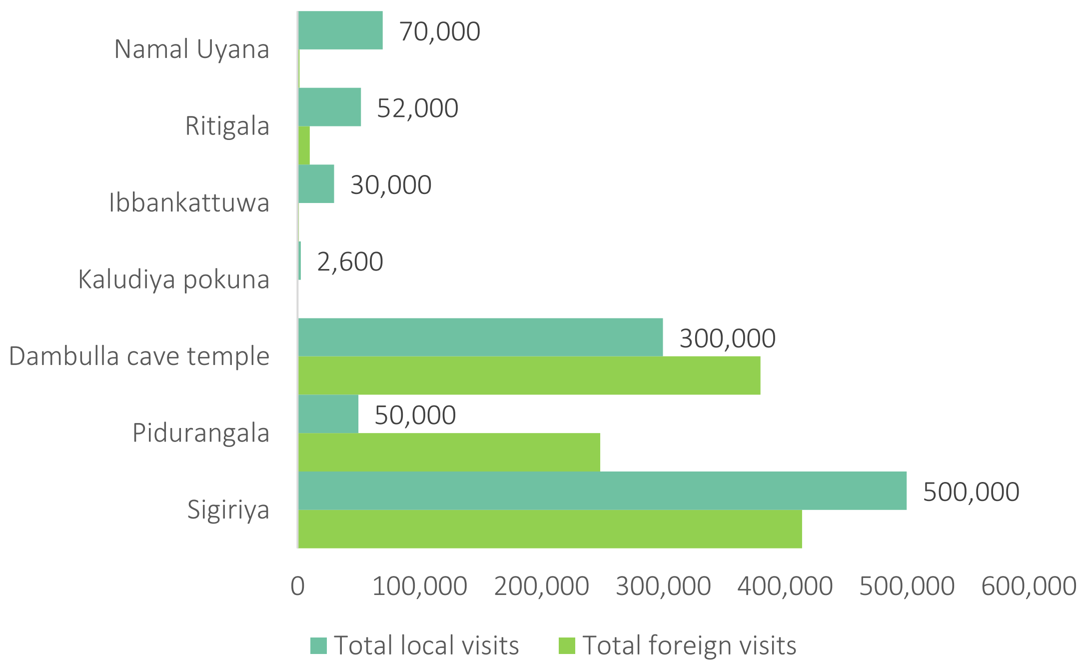


Figure 10 Number of visitors by attraction

Source: SLTDA Statistics 2020

Number of visitors by activity: The most prominent activities in the Sigiriya tourism destination and nearby areas are wildlife safari, village tour, elephant safari, traditional cooking, and hot air ballooning. Among these, the most famous and readily accessible activity is wildlife safari in Minneriya and Kaudulla National parks.

Wildlife safari	130,000	89%
Village tour	8,000	5%
Elephant safari	2,880	2%
Traditional cooking	3,600	2%
Hot air ballooning	2,496	2%
Total	**146,976**	

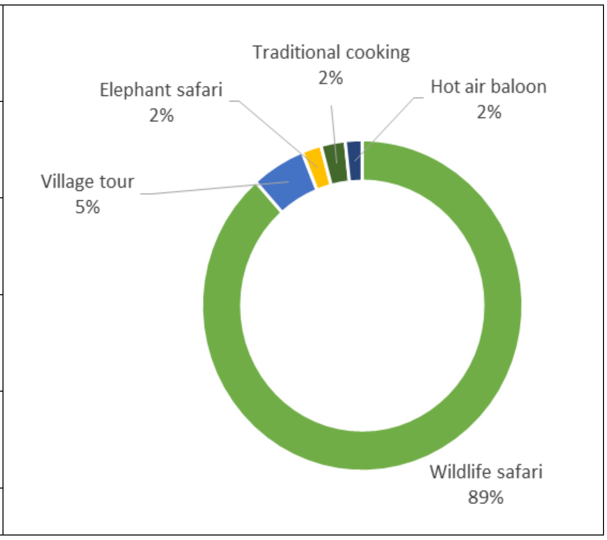


Figure 11 Visitor records by activity wise

Source: Author estimated data

4.2 Value Chain Map

The actual value chain which comprised of 6 key sectors and number of actors can be illustrated in a single diagram, called the value chain map. The illustration below shows the entire value chain with 6 main sectors in dark blue, and the sub-sectors that fall under each sector (in light blue). Supply side actors and the supporting agencies are stacked above the sector illustration (pink and maroon respectively).

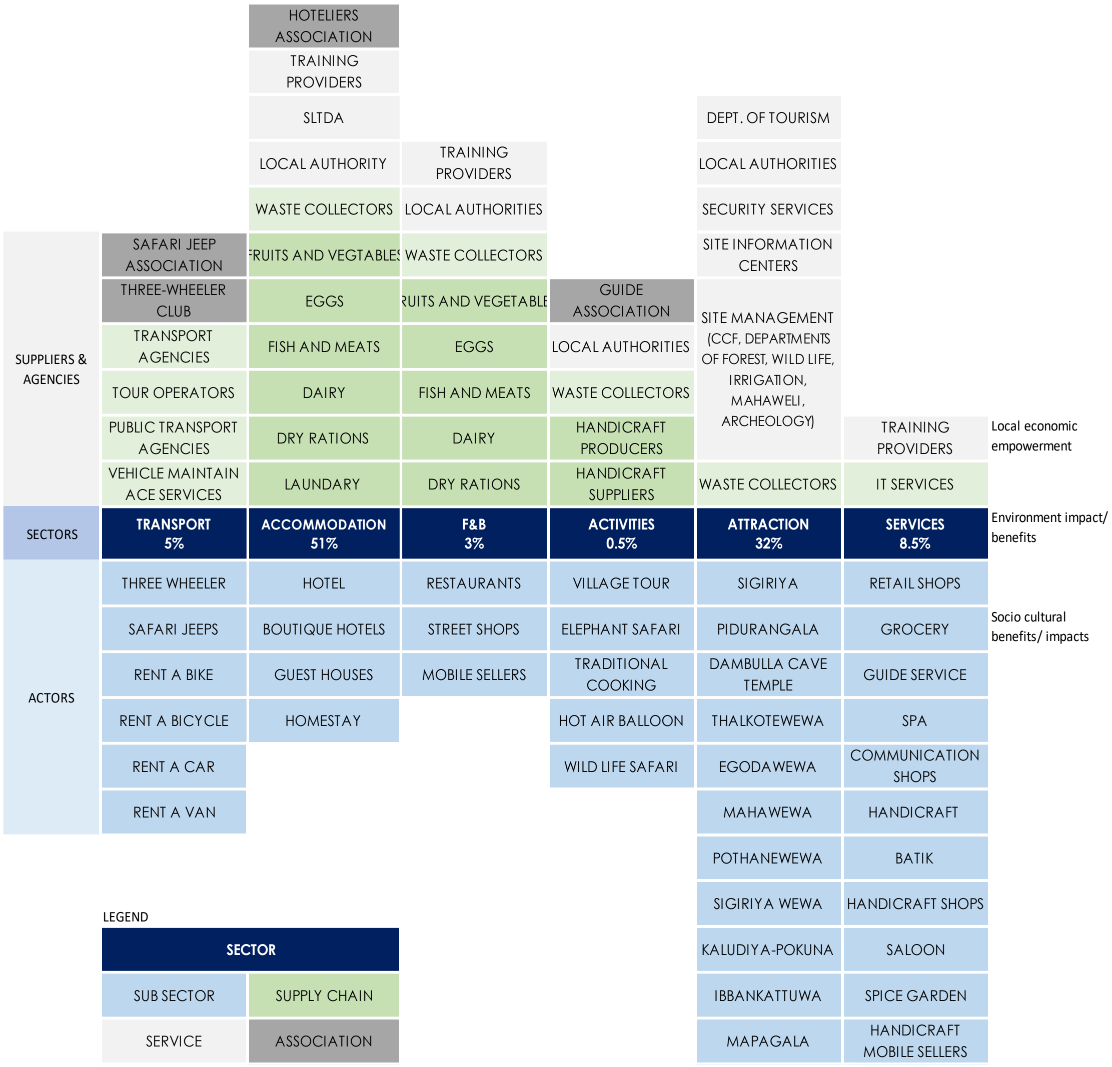


Figure 12 Value chain illustration

4.2.1 Transportation Sector

Transport sector has subsectors of three wheelers, safari jeeps, rent bike services, rent car services, and rent van services. Most of them provide services to both local and foreign visitors, but some are limited to one type. They offer different types of transport packages and price rates. The price rates depend on the type of vehicle hired and the origin of the passenger. Normally foreign travelers are charged 2-3 times higher rates than locals. The total fee of the hire is greatly determined by the number of kilometers traveled. Normally the rate of a three-wheeler is the cheapest and it is around 30 rupees per kilometer, and the price rate of luxury car is the highest which is can be 50 to 70 rupees per kilometer. In addition, motorbikes can be hired on a per day basis at the rate of 3000 to 5000 rupees per day.

Three wheelers are the most readily available mean of transport, they can be found in main cities, small towns and near bus stoppings such as Dambulla town, Habarana, Kimibissa town and Inamaluwa junction. Jeep services are not as readily available as three wheelers but they are present in the Habarana and Sigiriya areas. In addition to that, they can be contacted through the internet or over the phone. Rent car services are only available in Habarana, Sigiriya, and Dambulla areas.

4.2.2 Accommodation Sector

The accommodation sector has sub sectors of hotels, boutique hotels/villas, guest houses, and homestays. The food and beverage (F&B) sector has restaurants, street shops, and mobile food shops. These actors are scattered in the areas such as Sigiriya, Habarana, Innamaluwa, Kimbissa, and Dambulla town areas, and along the A9 road.

Actors of the accommodation sector offer a wide range of services at different rates. The price rate highly depends on the type of accommodation and the package being selected. Accommodating in a hotel is the most extravagant selection which might cost a minimum of 20,000 rupees per night, full board. However, it will offer a decent service, good quality food, a nice environment, and additional services such as wellness treatment and wildlife safari to the client.

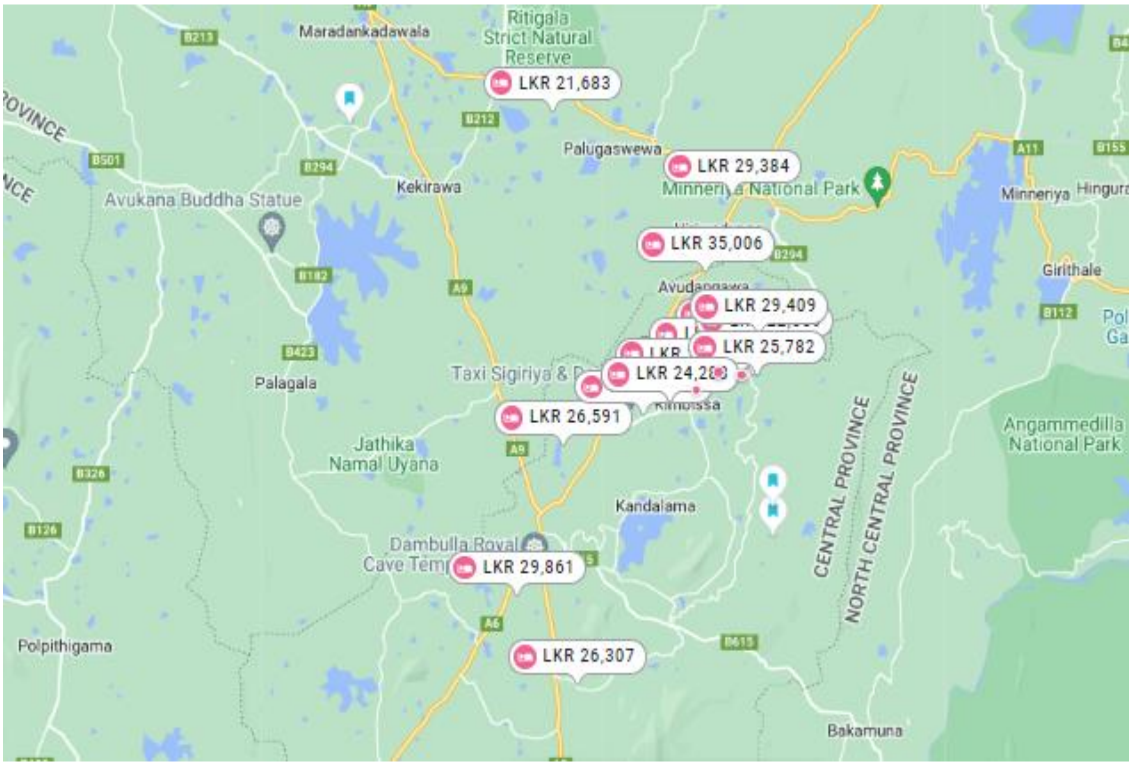


Figure 13 Geographical distribution of the hotels
Source: Google travel

Boutique hotel and boutique villa are the next best choice which is mildly extravagant. they have packages starting from 10,000 rupees per room per night. Normally this kind of accommodation facility has 10 to 20 rooms in a unit. Both local and foreign visitors can access them. Similar to the hotels, these they offer accommodation facility, restaurant facility, and other facilities such as transport.

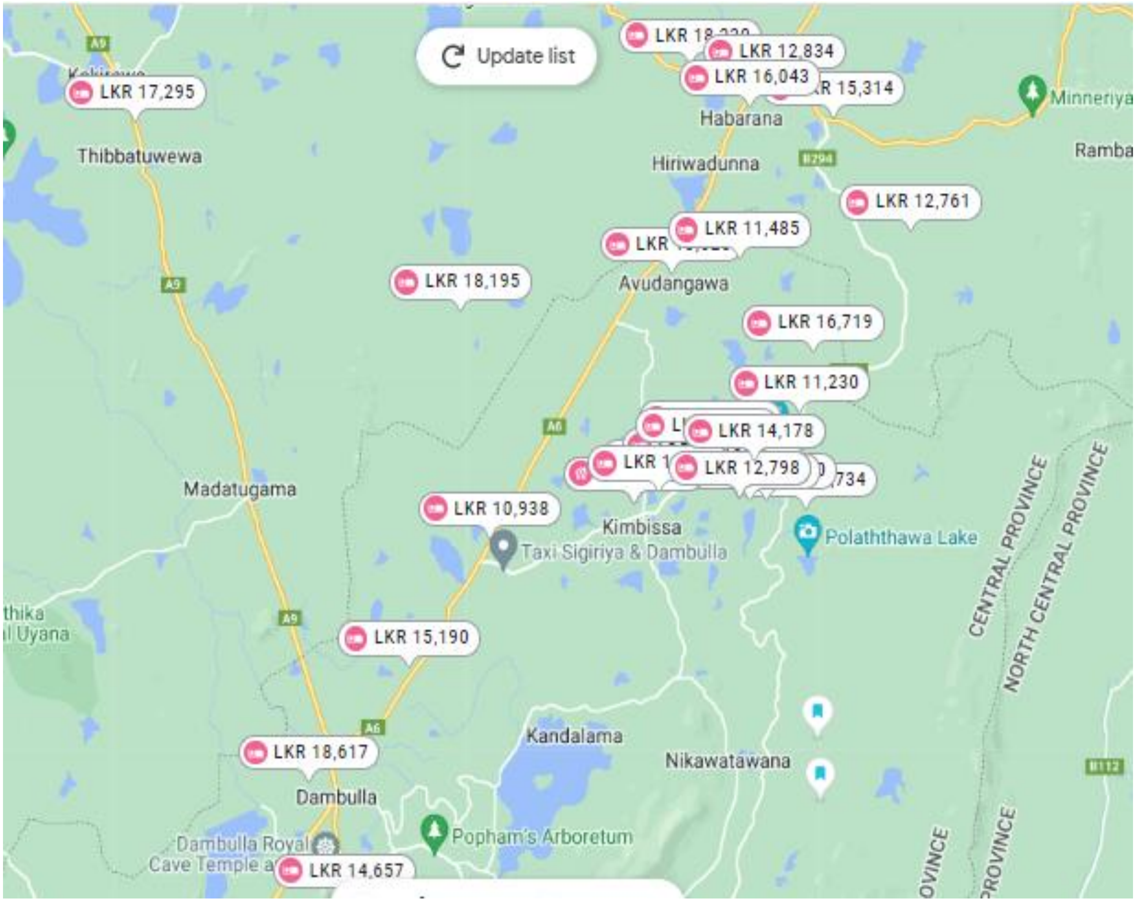


Figure 14 Geographical distribution of boutique hotels

Source: Google travel

Guesthouses are comparatively y cheap means of accommodation that offers staying facility with or without meals. Normally the price rates vary from 3,000 to 8,000 rupees per night per room. A guest house may have 3-10 rooms with different basic facilities such as air conditioning facilities, with TV sets.

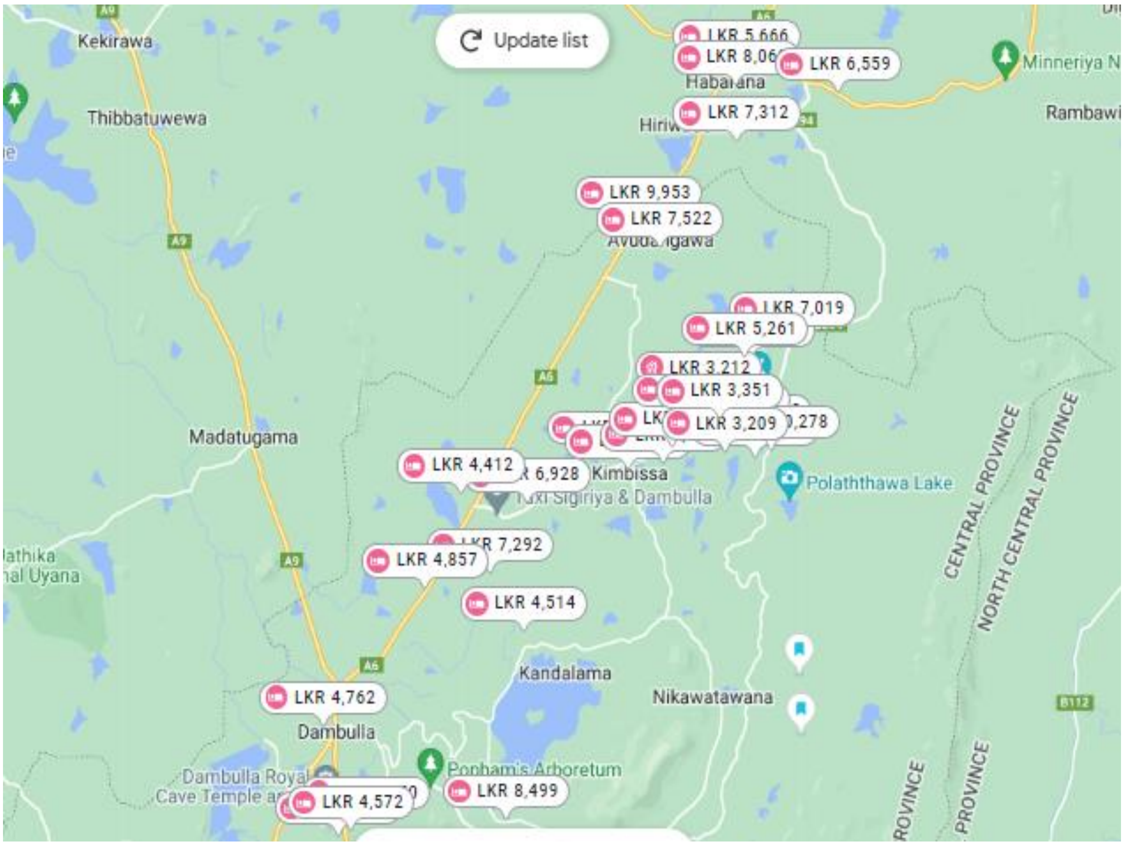


Figure 15 Geographical distribution of guest houses

Source: Google travel

Homestay are the cheapest accommodation facilities and are normally priced around 3,000 rupees per room per night. Since these are family-owned businesses, the owner is flexible on offering additional services, negotiate the price rates, and accommodating a number of individuals in a single room.

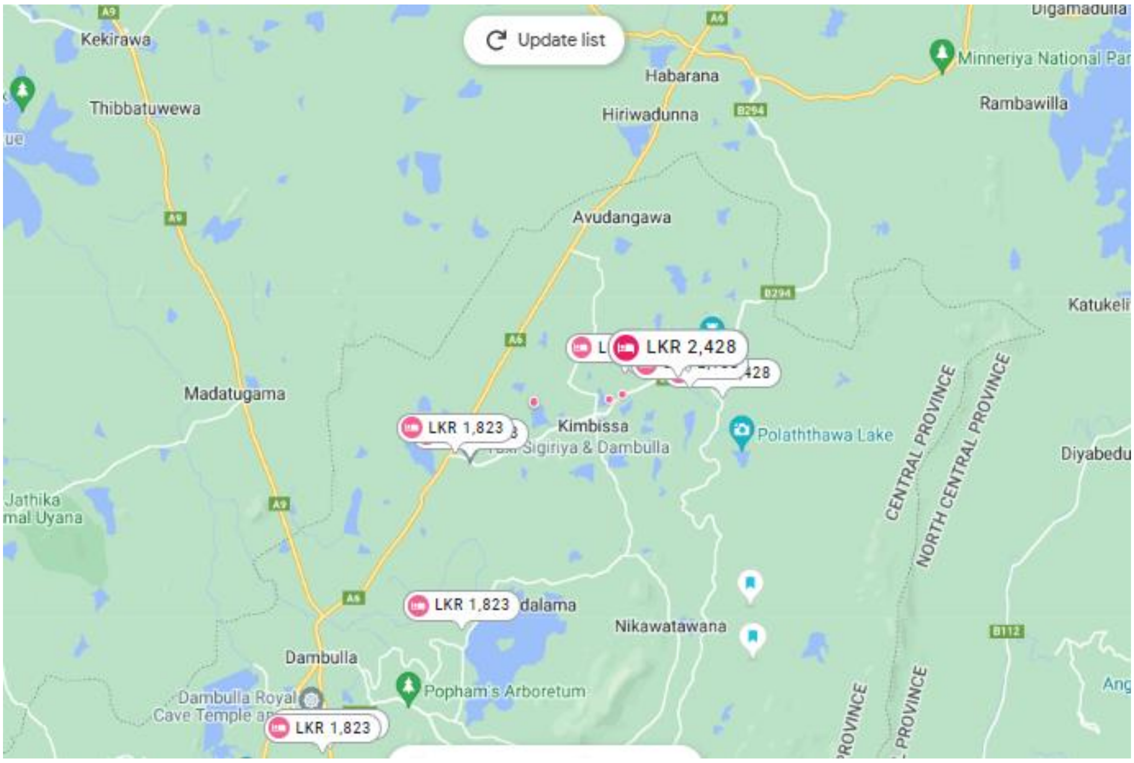


Figure 16 Geographical locations of the homestays
Source: Google travel

4.2.3 Activity Sector

The activity sector is represented mainly by jeep safari, village tours, cycling, traditional cooking, and hot air balloon trips and elephant safaris. Jeep safari is famous in Habarana that give wildlife experiences in the Minneriya and Kaudulla national park. These are the wildlife where large herds of elephants can be seen in one place. Normally a safari jeep can accommodate 9 persons at a time, which costs around 9,000 rupees for both local and foreign visitors. The total safari takes around 3 hours to complete.

A hot air balloon trip is an adventure tour and it is one of the costliest activities available. Normally it charges 25,000 to 40,000 per person. The total package offers half-board facility which includes breakfast, morning snack and travel. This service is not available throughout the year. It is only available during the November to March season in the following year.

Cycling and elephant safaris are miscellaneous activities. Visitors can get a bicycle per day basis which costs around 1500 rupees per day. This service is only available for foreign visitors. Elephant safari is a short distance travel that costs around 3,000 per person. The total travel is about half a kilometer distance and finishes within around 30 minutes.

4.2.4 Services Sector

Tourism related services sector includes, guide services, spa and wellness services, communication shops, handicraft businesses, batik businesses, saloons, tour guide retail businesses, groceries, public lavatory facilities, etc.

Guide services are offered by individuals who obtained license from the Sri Lanka Tourism Development Authority as National guides, Area guides, and site guides. National guides can operate throughout the island. Area guides and site guides are only permitted to offer the guide service in a defined perimeter or site. Foreign visitors can obtain the tour guide service from Sigiriya, Dambulla and Habarana areas.

Spa/ wellness services saloon services are located in Dambulla, Habarana, Inamaluwa, and Sigiriya areas. Some graded hotels offer spa and wellness services as a value-added service. Normally such a service priced from 7000 or more. Retail businesses, supermarkets, and groceries are essential goods providers that are located in city areas, small town areas and roadsides.

Grocery and retail business are essential goods and services that fulfill needs of both local and foreign visitors. They are located in

4.2.5 Attraction Sector

Attraction sector comprised with ancient places, archeological ruins, historically important locations, nature-based locations, and culturally important locations. There are many such locations in the study area but economically important locations are considered for the value chain mapping. Nevertheless, all the sites are important in local value creation. The value chain comprised of sites such as Sigiriya Rock, Sigiriya museum, Pidurangala, Ritigala, Namal Uyana, Ibbankattuwa ancient burial site, Minneriya national park, etc.

4.2.6 Tourism Attractions

Table 4 Summary of the attractions

Attraction	Operating agency	Visitor facilities	Total Employ ments	Local Employ ments	Associated Activities
Sigiriya	CCF	Ticketing counter, Sigiriya museum, Canteen, tour guide services, translation services, souvenir, lavatory facilities, taxi services, vehicle parking	25	25	Safari jeep, elephant rides, village tour, traditional food experience
Pidurangala	Pidurangala temple	Ticketing, taxi services, vehicle parking	5	5	Climb the Pidurangala rock, watch the sun rising, watch the sun set in the evening, trekking
Dambulla cave temple	Other	Ticketing, lavatory facilities, tour guide services, taxi services, vehicle parking facility	20	20	See world famous Dambulla cave temple paintings
Thalkotewew a	Fisheries society	Nothing specifically			
Egodawewa	Agrarian development department	Nothing specifically			
Mahawewa	Agrarian development department	Nothing specifically			
Pothanewew a	Agrarian development department	Nothing specifically			
Sigiriya wewa	CCF	Nothing specifically			

Attraction	Operating agency	Visitor facilities	Total Employ ments	Local Employ ments	Associated Activities
Kaludiya pokuna	Archeology	Nothing specifically	2	2	Watch archeological ruins
Ibbankattuwa burial ground	CCF	Ticketing, lavatory facilities, tour guide services, taxi services, vehicle parking facility	10	10	Watch burial site, buy locally made handicrafts.
Mapagala	Department of Archeology	Nothing specifically			Climb Mapadagala, watch Sigiriya stunning view
Menikdena	Department of Archeology	Nothing specifically			
Ritigala	CCF	Ticketing, lavatory facilities, tour guide services, taxi services	3	3	Experience dense forest, watch wild animals,
Namal Uyana	CCF	Ticketing, lavatory facilities, tour guide services, taxi services, vehicle parks	5	5	Watch tropical forests, watch archeological ruins
Minneriya national park	Wildlife	Ticketing facility			Watch wildlife, wild safari jeep, watch wild elephants
Pophams arb	Private				

Source: Author estimated data

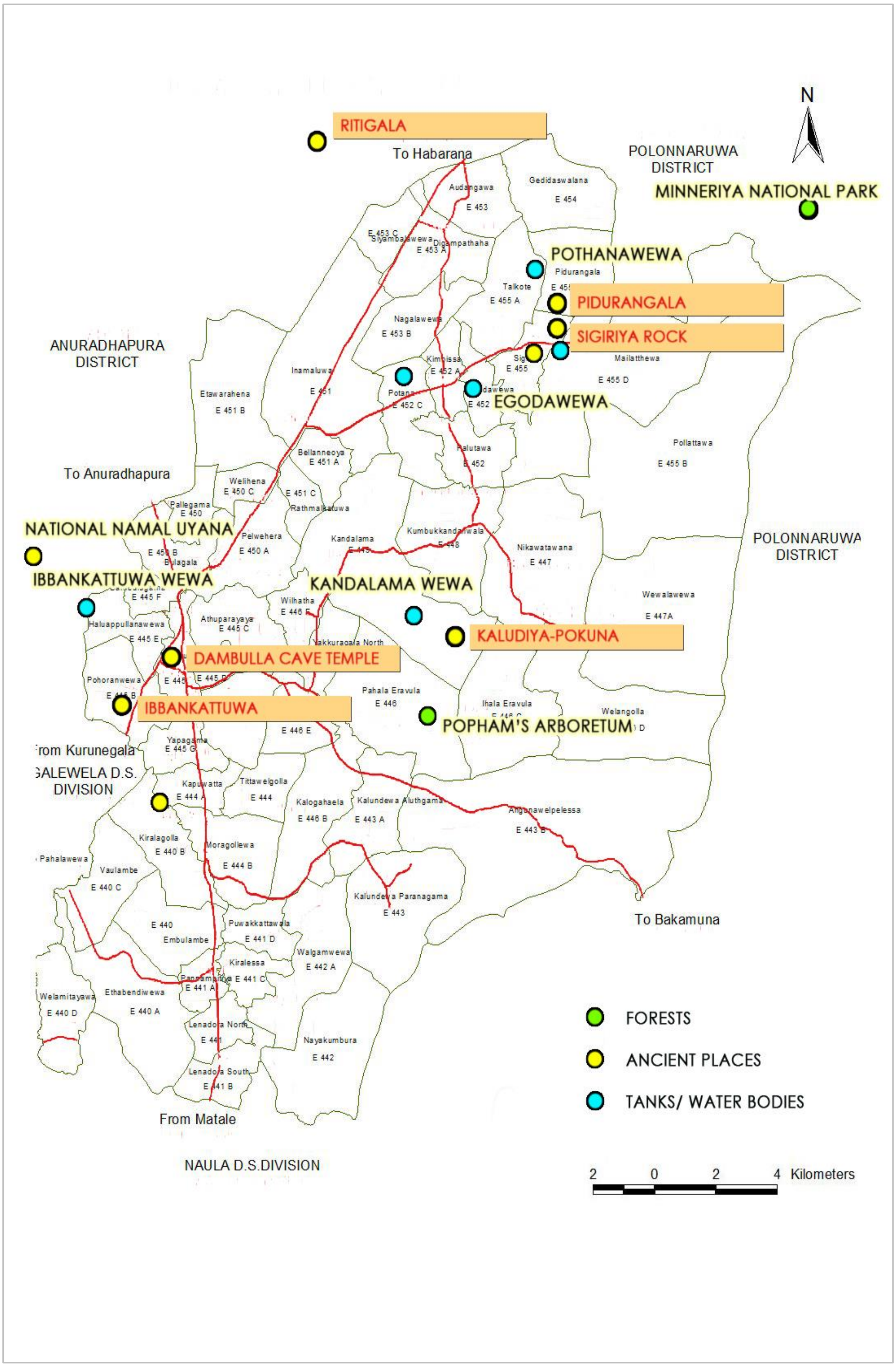


Figure 17 Geographical distribution of the attraction sites

4.3 Major Sectors and Subsectors: Overview

Actors of the main sectors are distributed over 11 Grama Niladari divisions; Sigiriya, Pidurangala, Rathmalgaha ela, Kandalama, Dambulla town, Ibbankattuwa, Galapitagala, Habarana, Ranawa, Bathgampattuwa. There are more than 3,500 tourism related establishments scattered in these Grama Niladari Divisions, and are occupied with nearly 14,000 employees. Employment opportunities are diverse. Total local people's participation, youth participation, and the women participation in tourism are 82 percent, 42 percent, and 12 percent respectively.

2,000+	4,000+	82%	42%	12%
Total tourism establishments	Employment	Local people in employment	Youth employment	Women employment

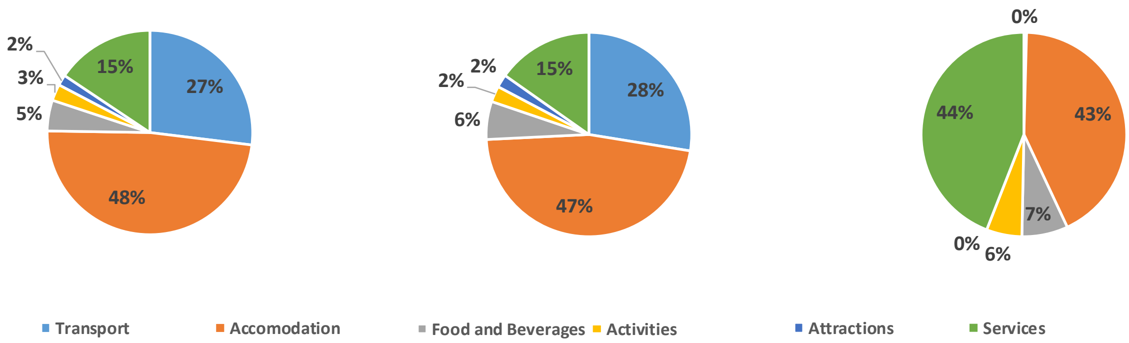


Figure 18 Value chain overview; Total employment (Left), Local employment (middle), Women employment (right)

Source: Author estimated data

Table 5 Summary of demographics of sectors and sub sectors

Sector	Sub sector	Geographical locations	Total Actors	Local Actors	Total Employment	Local Employment	Women Employment	Youth Employment
Transport	Three wheeler	Main cities, small towns	520	520	520	520	0	1150
	Safari jeeps	Habarana, Sigiriya	450	425	587	410	0	587
	Rent a motorbike	Sigiriya, Dambulla	5	5	5	5	1	5
	Rent a bicycle	Sigiriya	3	3	3	3	1	3
	Rent a car	Sigiriya, Habrana, Dambulla	5	5	2	2	0	2
Accommodation	Hotel	Sigiriya, Kandalama lake, Dambulla town and Habarana	23	0	910	564	72	0
	Boutique hotels/villa		14	7	92	87	8	0
	Guest Houses		265	190	770	710	19	0
	Homestay		230	198	230	230	107	0
Food and Beverages	Restaurants	Sigiriya, Kimbissa, Innamluwa, Habarana, Dambulla, Kandalama	56	26	168	160	31	0
	Street shops		23	23	23	32	0	0
	Mobile sellers		11	11	11	13	4	0
Activities	Village tour	Sigiriya, Habarana	5	4	56	50	16	0
	Elephant safari		2	2	18	16	0	0
	Traditional cooking		6	6	18	18	11	0
	Hot air ballooning		2	0	16	2	0	0
Attractions	All		0	0	70	70	0	0
Services	Handicraft	Dambulla, Sigiriya	99	84	135	120	14	0
	Batik		17	15	17	17	12	0
	Spa	Sigiriya, Habarana, Innamaluwa	19	5	95	10	90	0

	Saloon	Dambulla, Sigiriya, Kimbissa, Habarana	24	22	48	40	40	0
	Guide service		181	181	181	175	0	0
	Grocery/ retail shops	Roadside of A grade, B grade and village roads and small towns such as Kimbissa, Inamaluwa.	80	73	115	105	25	0
	Spice garden		3	1	15	11	4	0
	Lavatory	Sigiriya, Dambulla cave temple, Pidurangala	6	6	24	24	18	8
	Vehicle parks	In tourism Attractions	4	4	16	16	10	6
TOTAL			2053	1816	4145	3410	483	1761

Source: Author estimated data

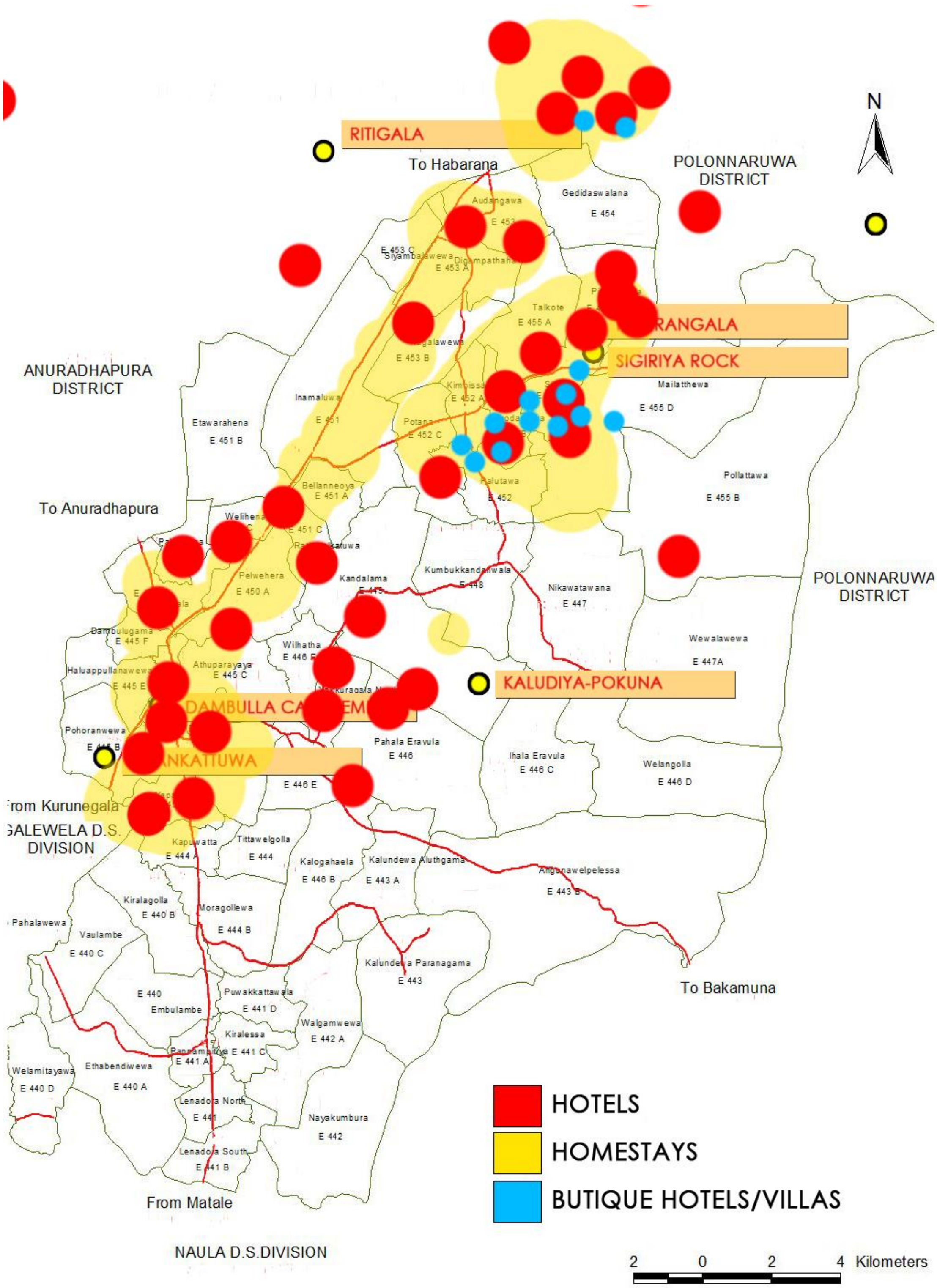


Figure 19 Geographical actor distribution

4.4 Second Level: Backward and Forward Linkages

The supply chain of each sector plays an important role in maintaining the dynamics of the value chain. They are also referred to as the second level value creators or indirect actors. The transport sector has supplies of vehicle maintenance services, public transport coordination agencies and tour operators. The accommodation sector has supply services such as laundry services, dry ration suppliers, dairy product suppliers, fish and meat suppliers, egg and poultry product suppliers, fruit and vegetable suppliers and a variety of other product suppliers. The food and beverage sector has suppliers similar to the accommodation sector except the laundry supply. The service sector has suppliers of materials. The two other sectors are the activities sector and the attraction sector, which also have supplies but are not very prominent in terms of economic value creation. However, those are depicted in the value chain map.

In addition to the direct and indirect sectors of the value chain, there is another important party known as support services. They are not directly involved in the value creation function but are essential in value chain dynamics. These support services can be generally categorized as business associations, government service entities, capacity development bodies, academia, reporters, utility providers, law enforcements, and information technology and technical infrastructure service providers.

Table 6 Supply chain in the value chain

Sector	Supply types (goods or services)
Transport	Vehicle maintenance services These are individual businesses that provide mechanical support for vehicle maintenance and repairing. Individuals with mechanical skills are employed in such businesses. They are located in the main cities as well as in villages. Public transport agencies They are the companies or individuals who manage public transport means such as private bus services. They generally travel between main cities such as Colombo and Jaffna. Visitors to Sigiriya arrive by using these means of transport.

	Tour operators They are special establishments for those who seek travelling advice. They offer packages to the clients based on the budget and the time that they are willing to spend at the destination. Transport agencies They offer means of transport that is exclusive for a particular group of travelers or individuals. Most of them operate from the Colombo and Katunayake areas.
Accommodation	Laundry services This is one of the most essential services for the accommodation sector, especially for the hotels and boutique hotels and villas. There are approximately 5 laundry services around the Sigiriya area. Hotels often outsource the laundry tasks to laundry businesses. Dry ration supply Dairy product supply Fish and meat supply Eggs and poultry supply Fruits and vegetable supply Other item supply It is assumed that these suppliers are existing to supply the raw food requirements of the accommodation sector and the food and beverage sector.
Activities	Handicraft production and supply They supply handicraft and souvenir items to the traders for sale. Handicraft suppliers maintain the characteristics of middlemen who play a buying and selling role between 2 enterprises. In contrast to this, handicraft producers are firms that produce handicrafts or handmade items such as batik garments. Waste collection Important in maintaining the quality and cleanliness of the environment. Local authorities

Food and beverages	Dry ration supply Dairy product supply Fish and meat supply Eggs and poultry supply Fruits and vegetable supply Other item supply It is assumed that these suppliers cater to the raw material requirements of the accommodation sector and the food and beverage sector.

4.5 Analysis of Local Economic Contribution to Sector Performance and Marketing

4.5.1 Total Value Creation

Value creation is the end result of the value chain and it supports the local economic development, positive environmental impact, and the social/cultural impact. For easy understanding, the value chain can be mapped in a single diagram that comprises of key sectors, key sub sectors, and key supply chains, and outputs.

The total value creation is attributed by both local people as well as people coming from outside the region. They can be engaged in the tourism value chain either directly or indirectly. However, the value created by the local people who are born and raised in the study area is an important factor.

TRANSPORT	ACCOMMODATION	FOOD & BEVERAGES	ACTIVITIES	ATTRACTION	SERVICES
	Other 2,663,916 0%	Training providers Local authorities Waste collectors		Local authorities	
Safari jeep association	Fruits and vegtables 124,887,816 2%	Fruits and vegtables 8,064,000 2%		Security services	
Threewheeler Club	Eggs 1,331,958 0%	Eggs 672,000 0%	Guide association	Site information centers	
Transport agencies	Fish and Meats 11,417,346 0%	Fish and meats 4,032,000 1%	Local authorities	Site management (CCF, Departments of Forest, Wild life, irrigation, Mahaweli, Archeology)	
Tour operators	Dairy 1,750,686 0%	Dairy 1,344,000 0%	Waste collectors		
Public transport agencies	Dry rations 7,307,811 0%	Dry rations 2,016,000 1%	Handicraft producers		Training providers
Vehicle maintainace services	Laundry 0 0%	Other 1,344,000 0%	Handicraft suppliers	Waste collectors	IT services

	TRANSPORT	ACCOMMODATION	FOOD & BEVERAGES	ACTIVITIES	ATTRACTION	SERVICES	TOTAL
Local salary componant	Salary 395,692,600	salary 1,146,114,600	salary 77,160,000	salary 9,633,600	salary	salary 1,977,750	salary 217,374,625
Total Direct labour	1117	2002	202	108	70	646	4145
Total local direct labour	1977	4334	194	85		2819	9408
Women Workforce	0	1691	31	22	20	346	2110
Women engagement	0%	84%	15%	20%	29%	54%	51%
Local value creation	0	149,359,533	17,472,000	0	0	0	0
Local value creation %	0%	2%	5%	0%	0%		0%
	707,080,000.00	6,700,524,000.00	380,400,000.00	79,080,000.00	4,276,595,400.00	1,115,200,004.00	13,258,879,404.00
	5.3%	50.5%	2.9%	0.6%	32.3%	8.4%	**100%**

TRANSPORT	ACCOMMODATION	FOOD & BEVERAGES	ACTIVITIES	ATTRACTION	SERVICES
Three wheeler 208,000,000.00 29%	Hotel 5,847,300,000.00 94%	Restautants 336,000,000.00 66%	Village tour 12,000,000.00 81%	Sigiriya 3,155,000,000.00 81%	Grocery/ retail shops 720,000,000.00 65%
Safari jeeps 486,000,000.00 69%	Butique hotels/villa 210,240,000.00 5%	Street shops 34,500,000.00 23%	Elephant safari 2,880,000.00 19%	Pidurangala 377,600,000.00 19%	Guide service 162,900,000.00 15%
Rent a bike 4,500,000.00 1%	Guest Houses 433,620,000.00 0%	Mobile sellers 9,900,000.00 12%	Traditional cooking 1,800,000.00 2%	Dambulla cave 570,000,000.00 13%	Spa 69,350,000.00 6%
Rent a bicycle 1,080,000.00 0%	Homestay 209,364,000.00 1%		Hot air baloon 62,400,000.00 79%	Minneriya national 163,935,400.00 4%	Handycraft 44,550,000.00 4%
Rent a car 7,500,000.00 1%				Ritigala 4,000,000.00 0%	Vehicle parks 32,000,000.00 3%
				Ibbankattuwa 3,300,000.00 0%	Lavotary 30,000,000.00 3%
				Namal Uyana 2,760,000.00 0%	Saloon 28,800,000.00 3%
					Batik 16,800,004.00 2%
					Spice garden 10,800,000.00 0%

Figure 20 Detail value chain

The tourism value chain of the study area creates a revenue of nearly 13 billion rupees per annum. It is the aggregate value created by the transport sector, accommodation sector, food and beverage sector, activities sector, attractions and the service sector. In terms of value creation, the most significant sector is the accommodation sector which creates 51 percent of the total value creation, and followed by the services sector (8%), the food and beverage sector (3%), the transport sector (5%) and activities sector (1%). It is noteworthy that these attractions generate 32 percent of the total value created by issuing tickets.

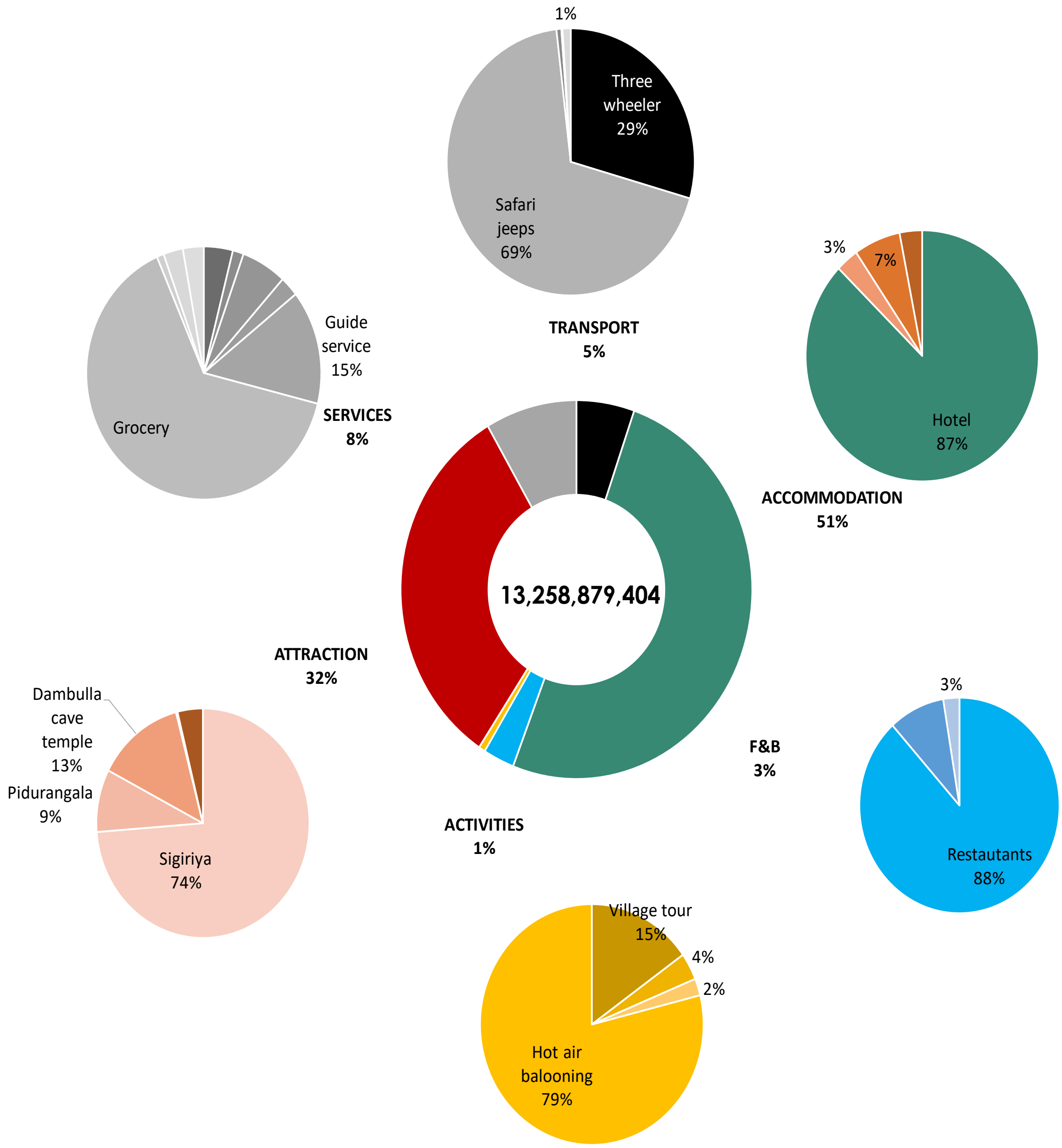


Figure 21 Value creation

Source: Author estimated data

The accommodation sector creates the largest share of value which is 51 percent. Out of that, hotels contribute to the accommodation sector value creation with 87 percent and it serves the total tourism value chain in the study areas with 43 percent value creation. Attractions are the next largest in the value chain, which creates 32 percent of the value. In the attraction sector, the major share of value is generated by the Sigiriya attraction, which amounts to 74 percent. The second and the third highest value creating attraction are Dambulla cave temple and Pidurangala temple, which create 13 percent and 9 percent of the total sector value respectively. The balance attractions belong to categories of internal water bodies, forest patches, historically important places and culturally important places which contribute to the total value creation with only 4 percent. The service sector creates 8 percent of the value, out of which there are 13 sub sectors in the service sector, however 2 are most prominent and enjoy a share of 79 percent out of the total value creation. Those sub sectors are the groceries and travel guide services sub sectors. The transport sector is the 4th largest value creator that generates 4 percent of the total value. The largest value creating sub sector of the transport sector is the safari jeep service, which creates 69 percent of the total sector value. The next highest value creation is made by the three wheelers, which is 29 percent. Rented bicycles, motorbikes and cars create only a small amount of value compared to the other sub sectors. The food and beverage (F&B) sector create 3 percent of value in the total value chain. Restaurants are prominent in the food and beverage sector that creates a value of 88%. The value creation of street food and street shops is 3 percent and 9 percent respectively. The value creation of the activity sector is the smallest, which is less than 1 percent. The total value creation of the activities sector is made up of 79 percent hot air ballooning, 15 percent village tours, 4 percent elephant safari and 2 percent from traditional cooking.

4.5.2 Local Value Creation

Local value creation refers to the value created by the locally owned business units such as hotels, restaurants, safari jeeps, etc. According to the economic estimation considering 30 subsectors in 6 different sectors, 28 sub sectors contribute to the local value creation in different amounts. Most of the small businesses contribute to the local value creation in higher degrees. Local economic value creation is not present in the hotel, and hot air ballooning sub sectors. Nevertheless, local people are engaged in these sub sectors as employees.

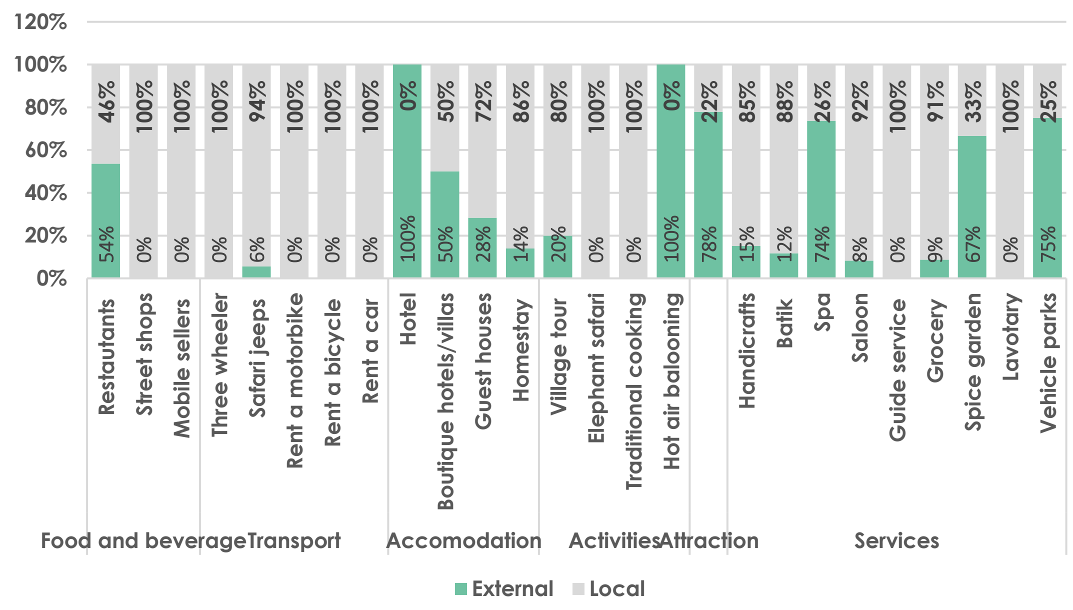


Figure 22 Percentage of values of external and internal supply chains

Source: Author estimated data

Attractions, Retail shops and safari jeeps are the most prominent sub sectors that create local economic values.

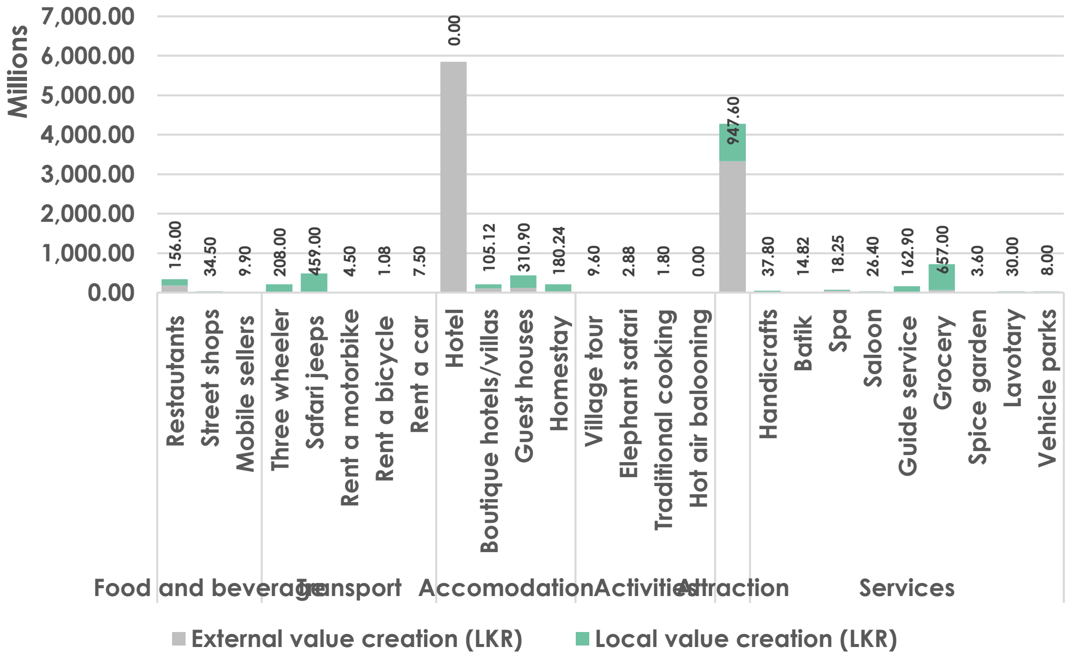


Figure 23 value creations of the local and external supply chains

Source: Author estimated data

Table 7 Total and local value creation

Sector	Sub sector	Total value creation (LKR)	External value creation (LKR)	Local value creation (LKR)	Percentage of local value creation
Food and beverage	Restaurants	336,000,000.00	180,000,000.00	156,000,000.00	46%
	Street shops	34,500,000.00	0.00	34,500,000.00	100%
	Mobile sellers	9,900,000.00	0.00	9,900,000.00	100%
			0.00		
			0.00		
Transport	Three wheeler	208,000,000.00	0.00	208,000,000.00	100%
	Safari jeeps	486,000,000.00	27,000,000.00	459,000,000.00	94%
	Rent a motorbike	4,500,000.00	0.00	4,500,000.00	100%
	Rent a bicycle	1,080,000.00	0.00	1,080,000.00	100%
	Rent a car	7,500,000.00	0.00	7,500,000.00	100%
			0.00		
			0.00		
Accommodation	Hotel	5,847,300,000.00	5,847,300,000.00	0.00	0%
	Boutique hotels/villas	210,240,000.00	105,120,000.00	105,120,000.00	50%
	Guest Houses	433,620,000.00	122,722,641.51	310,897,358.49	72%
	Homestay	209,364,000.00	29,128,904.35	180,235,095.65	86%
Activities	Village tour	12,000,000.00	2,400,000.00	9,600,000.00	80%
	Elephant safari	2,880,000.00	0.00	2,880,000.00	100%
	Traditional cooking	1,800,000.00	0.00	1,800,000.00	100%
	Hot air ballooning	62,400,000.00		0.00	
Attraction		4,276,595,400.00	3,328,995,400.00	947,600,000.00	22%
Services	Handicrafts	44,550,000.00	6,750,000.00	37,800,000.00	85%
	Batik	16,800,004.00	1,976,471.06	14,823,532.94	88%
	Spa	69,350,000.00	51,100,000.00	18,250,000.00	26%
	Saloon	28,800,000.00	2,400,000.00	26,400,000.00	92%
	Guide service	162,900,000.00	0.00	162,900,000.00	100%
	Grocery	720,000,000.00	63,000,000.00	657,000,000.00	91%
	Spice garden	10,800,000.00	7,200,000.00	3,600,000.00	33%
	Lavatory	30,000,000.00	0.00	30,000,000.00	100%
	Vehicle parks	32,000,000.00	24,000,000.00	8,000,000.00	25%
		13,258,879,404	9,861,493,416.92	3,397,385,987.08	26%

Source: Author estimated data

4.5.3 Local Value Creations by the Supply Chains

Local value creation by the supply chain refers to the economic values of supplies such as raw materials and services. The value of local labour is not considered for this calculation. The items considered are fruits and vegetables, eggs, fish & meats, dairy, and dry rations. There are services in the supply chain, including laundry services and other miscellaneous services. Mainly these materials and services cater to the accommodation sector and the food & meals sectors. The economic value of the fruit and vegetable supply chain is the highlighted in the value chain which is 81 percent.

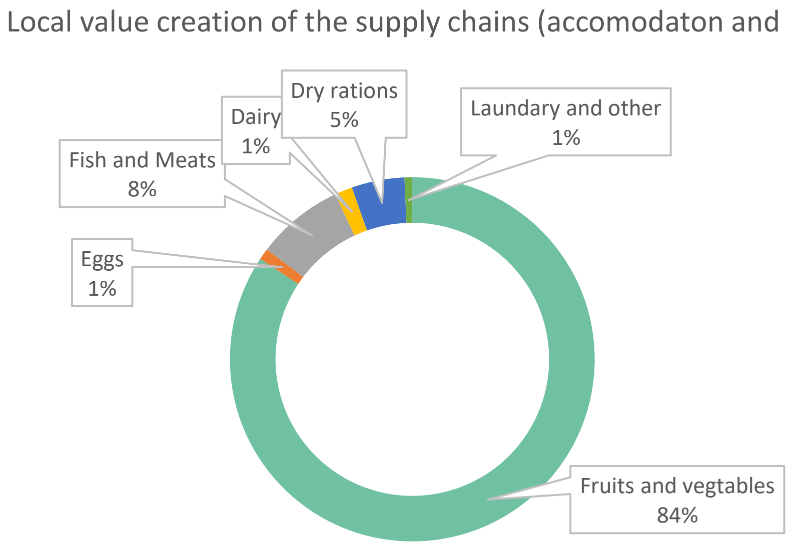


Figure 24 Local value creation of the different supply chains

Source: Author estimated data

		Business associations					
		Hoteliers association					
		Training providers					
		National authorities (SLTDA)					
		Waste collectors					
		Other 2,663,916 0%	Training providers Local authorities Waste collectors		Dept. of tourism		
	Safari jeep association	Fruits and vegtables 124,887,816 2%	Fruits and vegtables 8,064,000 2%		Local authorities		
	Threewheeler Club	Eggs 1,331,958 0%	Eggs 672,000 0%	Guide association	Security services		
	Transport agencies	Fish and Meats 11,417,346 0%	Fish and meats 4,032,000 1%	Local authorities	Site information centers		
	Tour operators	Dairy 1,750,686 0%	Dairy 1,344,000 0%	Waste collectors	Site management (CCF, Departments of Forest, Wild life, irrigation, Mahaweli, Archeology)		
	Public transport agencies	Dry rations 7,307,811 0%	Dry rations 2,016,000 1%	Handicraft producers		Training providers	
	Vehicle maintainace services	Laundary 0 0%	Other 1,344,000 0%	Handicraft suppliers	Waste collectors	IT services	
Local salary componant	Salary 395,692,600	salary 1,146,114,600	salary 77,160,000	salary 9,633,600	salary	salary 1,977,750	salary 217,374,625
Total Direct labour	1117	2002	202	108	70	646	4145
Total local direct labour	1977	4334	194	85		2819	9408
Women Workforce	0	1691	31	22	20	346	2110
Women engagement	0%	84%	15%	20%	29%	54%	51%
Local value creation	0	149,359,533	17,472,000	0	0	0	0
Local value creation %	0%	2%	5%	0%	0%		0%
	TRANSPORT	**ACCOMMODATION**	**FOOD & BEVERAGES**	**ACTIVITIES**	**ATTRACTION**	**SERVICES**	**TOTAL**
	707,080,000.00 5.3%	6,700,524,000.00 50.5%	380,400,000.00 2.9%	79,080,000.00 0.6%	4,276,595,400.00 32.3%	1,115,200,004.00 8.4%	13,258,879,404.00 **100%**

Figure 25 Detail illustration of the supply chains

Source: Author estimated data

4.5.4 Value of the local Supply Chains

The economic value of original goods and services is very small compared to the total value of the supply chain. It is just a 6 percent economic value (approximately 170 million) in a 1-year period. The largest share of is supply is locally grown fruits and vegetables, which is 133 million rupees.

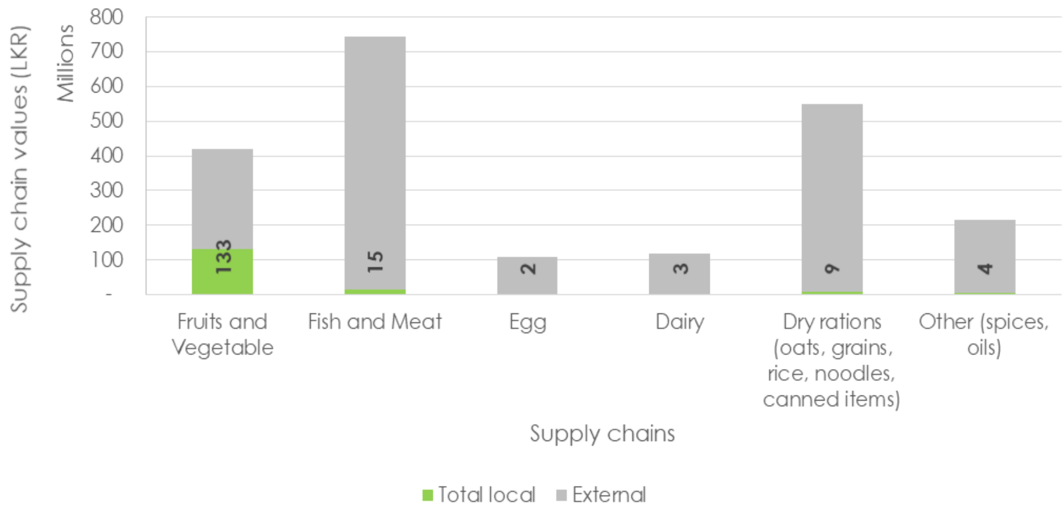


Figure 26 Value of supply chains originated regionally

Source: Author estimated data

The sub sector wise supply chain is also an important indicator that shows the sourcing pattern of value chain actors. The supply chain of the star hotels is the largest among all the sub sectors of accommodation and food and beverages sectors. It is valued at about 4.75 billion rupees in a 1-year period.

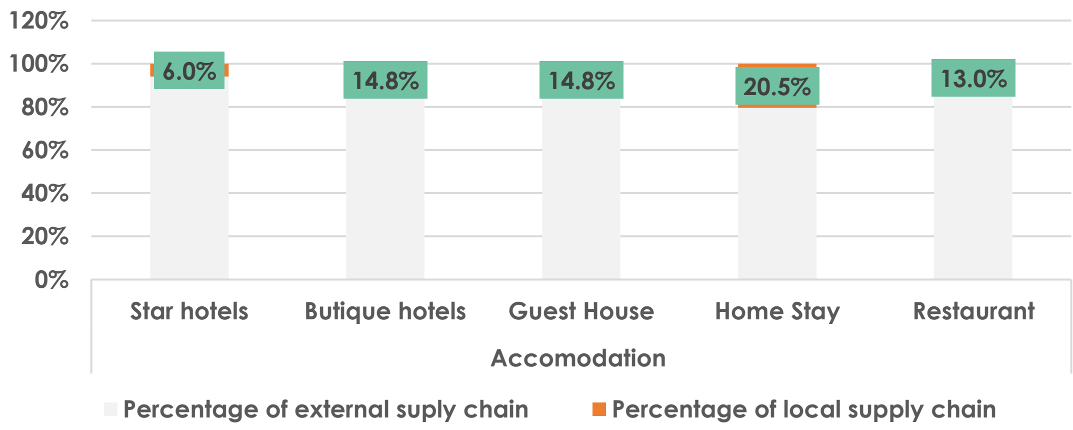


Figure 27 Local values in supply chain by sub sectors

Source: Author estimated data

4.5.5 Summary of External Supply Chains

Table 8 Summary of the local supply chains

Sector	Sub sector	Total value of supply	Total value of the external supply	%
Accommodation	Star hotels	1,754,190,000.00	1,648,938,600.00	94%
	Boutique hotels	52,560,000.00	44,807,400.00	85%
	Guest Houses	130,086,000.00	110,898,315.00	85%
	Home Stay	83,745,600.00	66,577,752.00	80%
Food & beverage	Mobile Food Shop	5,445,000.00	5,445,000.00	100%
	Restaurant	134,400,000.00	116,928,000.00	87%
	Street Food	18,975,000.00	18,975,000.00	100%
Grand Total		**2,179,401,600.00**	**2,012,570,067.00**	**92%**

Source: Author estimated data

4.6 Sector Performance

4.6.1 Market Orientation of Sub Sectors

Market orientation perspective is discussed below under the sections of product standardization and skilled labour. The source of information was based on the findings of visitor survey, stakeholder survey, stakeholder interviews and open discussions. Product standardization, the use of skilled staff and market communication strategies were used as the indicators of assessing sub sector market orientation. Market orientation of accommodation and F&B sectors were the main focus of this analysis.

Product Standardization: This analysis explores product standardization in terms of SLTDA registration. The assumption is that the SLTDA registration ensures a major part of product standardization. The information in this section is based on the findings of the stakeholder/actor survey.

SLTDA Registered Tourist Establishments

Sector	Sub sector	Percentage of SLTDA Registered	Percentage of applied by not registered
Accommodation	Boutique Hotels/villas	30	0
	Guest Houses	30	10
	Home Stay	15	0
Food and Beverage	Restaurants	10	0

Source: Author estimated data

The Sri Lanka Tourism Development Authority (SLTDA) is the official government institution tasked with regularizing the country's tourism industry. It registers accommodation units (hotels, boutique hotels/villas, guest houses and home stay units, etc.) and food and beverage units (restaurants, tourist friendly eating places and food court, etc.) as well as other tourist services and facilities. Furthermore, local government agencies have a registration system in place to register businesses in the area.

It shows that in the accommodation sector, 30 percent of boutique hotels and guest houses (out of the surveyed sample) are registered under SLTDA while only 15 percent of homestay places already have their SLTDA registration.

According to the findings, a majority of accommodation establishments are neither registered nor in the process of being registered. Tourists are more likely to eat local cuisine when they travel, and street food is also an important source of this insight. According to the findings, most of the accommodation services and F&B services are not SLTDA registered services. It assumes with the registration services guarantee a standard service for the customers.

<u>Skill Employees:</u> Tourism is still a highly specialized sector, thus industry knowledge is required. There are, however, basic skill needs for everyone in the workforce. This section analyses the skill labour situation of selected sub sectors.

Hotel schools and vocational training institutions run by the public and private sectors provide standard training possibilities for people in the accommodation and food and beverage sectors in Sri Lanka. These training institutes are located in major cities or key tourist destinations. However, specialized training facilities for service and activity providers to build skills for tourist operations, particularly outside of Colombo, are limited. Other than driving licenses for transport providers, further restricted training possibilities on tourism operations are available.

Skilled employee analysis is carried out for selected sub sectors of tourism services. Results are given in the following table.

Table 9: Skilled Employees in the Tourism Services

Sector	Sub Sector	Percentage of Skilled Labour
Accommodation	Hotels	80%
	Guest Houses	20%
	Home Stay	20%
	Boutique hotels	60%
Overall- Accommodation		65%
Services	Ayurvedic Medicine	60%
	Handicrafts	80%
	Spa/saloon	80%
Food & Beverage	Restaurant	40%
Overall - Food & Beverage		26%
Overall – All Sectors		36%

Source: Author estimated data

The above table describes the sub sectors' skilled labour availability. According to the survey, only around 30 percent of those employed are skilled in all tourism business sectors, including accommodation, food and beverage and services.

It was discovered that a higher percentage (80%) of skilled workers are employed in the hotel sub sector. Furthermore, the number of skilled workers in boutique hotels (60%), guest houses (20%), and home stay units (20%). Overall, 65 percent of employees in the accommodation sector is skilled.

When compared to the food and beverage industry, it employs 26 percent of skilled workers. Restaurants has employed about 40 percent of skilled labour.

Promotion and Market Communication

Sector	Sub sector	Name Board	Website	Advertising	Word of Mouth	Travel Agent/ Intermediaries	Social Media	Personal Sources
Accommodation	Hotels	100%	100%	100%	50%	60%	100%	100%
	Guest Houses	87%	60%	0%	47%	47%	7%	13%
	Home Stay	90%	70%	0%	20%	50%	20%	10%
	Boutique hotels	100%	73%	0%	55%	64%	45%	9%
Total Accommodation		92%	67%	0%	42%	53%	22%	11%
Tourism Activities								
	Cycling	33%	0%	0%	67%	100%	0%	0%
	Elephant Safari	75%	0%	0%	25%	25%	0%	0%
	Jeep Safari	50%	0%	0%	50%	100%	0%	0%
	Traditional Cooking	0%	0%	0%	100%	100%	0%	0%
	Village Tours	67%	0%	0%	33%	100%	67%	0%
	Three-wheeler	0%	0%	0%	50%	100%	0%	0%
Total Tourism Activities		38%	0%	0%	50%	88%	8%	0%
Tourism Services								
	Ayurvedic Medicine	50%	0%	0%	50%	50%	0%	0%
	Handicrafts	100%	0%	25%	50%	100%	0%	0%
	Public Restroom	0%	0%	0%	0%	0%	0%	0%
	Spa/saloon	100%	17%	17%	100%	83%	0%	0%
	Super Market	100%	0%	0%	50%	50%	0%	17%
	Vehicle Park	33%	0%	0%	33%	33%	0%	0%
Total Tourism Services		78%	4%	9%	57%	61%	0%	4%
Transport	Car							
	Jeep Safari	25%	0%	0%	100%	100%	0%	50%
	Rent bicycle	40%	0%	0%	60%	60%	0%	0%
	Rent car	75%	25%	0%	50%	75%	0%	25%
	Three-wheeler	0%	0%	0%	65%	88%	0%	41%

	Rent van	0%	67%	0%	33%	33%	0%	0%
	Rent motorbikes	67%	33%	0%	67%	67%	0%	0%
Total Transport		21%	15%	0%	66%	77%	0%	28%
Food & Beverage								
	Restaurant	90%	40%	0%	70%	60%	20%	30%
	Street Food	0%	0%	0%	17%	0%	0%	0%
Total Food & Beverage		41%	18%	0%	41%	27%	9%	14%
Grand Total		51%	23%	1%	53%	64%	8%	15%

Source: Author estimated data

Stakeholders were asked to identify different marketing platforms for selling their goods or services in the region. They generally utilized Travel Agents/Intermediaries (64%), Word of Mouth (53%), and Name Boards (51%). The Accommodation industry relied heavily on Name Boards (92%), Websites (67%), Travel Agents/Intermediaries (53%), and Word of Mouth (42%). Name boards and word of mouth both are as significant (41%) as the most influential marketing media for Food and Beverage services.

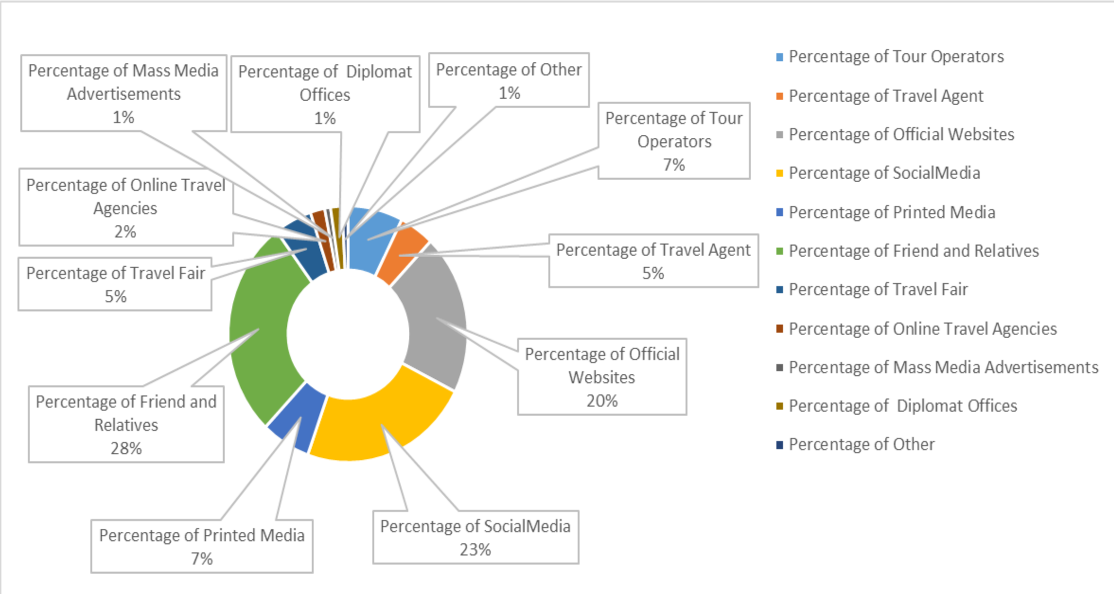
Travel Agents/Intermediaries (88%) and Word of Mouth (50%) were used as marketing channels for tourist activities such as elephant safaris, village cooking classes, and village tours.

Actors involved in tourism services in the region, including Ayurvedic medicine, handicraft, public restrooms, spa/saloon, supermarkets, and vehicle parking, primarily through Name Board (78%), Travel Agent/Intermediaries (61%) and Word of Mouth (61%) (57%) as marketing platforms. The most often used marketing outlets for various modes of transportation were Travel agencies/Intermediaries (77%) and Word of Mouth (66%).

The findings show that there are differences in the usage of marketing platforms by sector. However, it is worth noting that digital channels such as websites (23%) and social media (8%), personal sources (15%), and advertising (1%) are less used in all sectors and contribute far less than other modes.

Visitor Information Sources: Visitors were asked to identify their source of information on tourist facilities or services in the region, and they were permitted to choose multiple options. The majority of visitors (71%) obtained information through Friends and Relatives, followed by social media (59%) and official websites (52%). Other significant sources of information include tour operators (19%), printed media (17%), travel agents (12%) and travel fair (13%).

Figure 28: Source of Visitor Information



Source: Author estimated data

4.6.2 Visitor Satisfaction

Visitor satisfaction was considered as an indicator of the performance of each sub sectors. If sectors have performed well, this means that visitor satisfaction has been ensured as well. Several indicators were used to assess the visitor satisfaction on products or services in the tourism market.

Preferred Attractions: Visitors were asked about the attractions they had visited in the study area, and they were able to provide multiple locations.

The majority of travelers (58%) visited Sigiriya Rock Fortress, followed by Dambulla Cave Temple (52%). Sigiriya Museum (28%), Pidurangala (27%), Ibbankattuwa (23%), Ritigala (21%), Minneriya National Park (18%) and Namal Uyana (16%) were the most popular of the other attractions visited (as given in the table below). It was noteworthy that Popham's Arboretum only had a modest number of visitors (2%) who were foreigners.

Table 9 Percentage visited to attractions

	Sigiriya Rock	sigiriaya museum	Pidurangala	Dambulla cave temple	Ibbankattuwa	Namal Uyana	Ritigala	Minneriya National park	Popham's arboretum
Foreign	69%	21%	38%	60%	4%	2%	19%	21%	4%
Local	51%	32%	21%	47%	35%	25%	22%	16%	0%
Grand Total	58%	28%	27%	52%	23%	16%	21%	18%	2%

Source: Author estimated data

The majority (69%) of visitors to Sigiriya Rock Fortress were foreigners. Furthermore, Dambulla Cave Temple (60%), Pidurangala (38 %), and Minneriya National Park (21%) are more popular with foreign visitors than with locals. Sigiriya Museum (32%), Ibbankattuwa (35%), Namal Uyana (25%), and Ritigala (22%), on the other hand, were predominantly visited by locals.

Visitor Interest: Visitors were asked to name their reason for visiting the attraction, and they had the choice of picking various options.

The bulk of leisure travelers (47%) visited for nature, followed by culture (41%), adventure (38%), and other reasons (8%).

Foreign visitors came mostly for culture (38%), followed by nature (33%) and adventure (25%).

The main reasons for visiting, according to the locals, are nature (56%), adventure (47%), and culture (43%).

Table 10 Visitor proportion by purpose

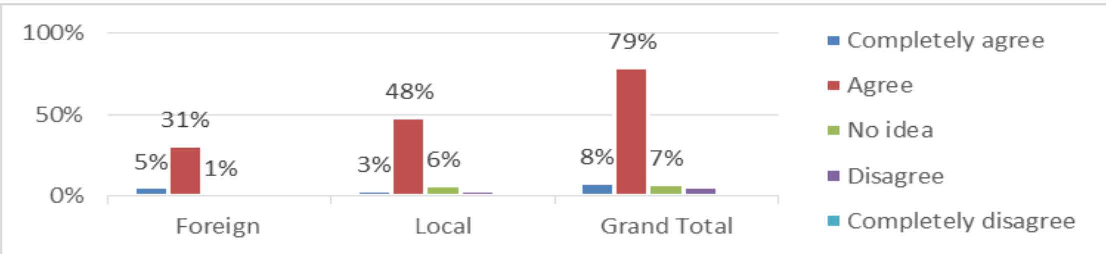
	Percentage of nature travel	Percentage adventure (soft and/or hard)	Percentage of culture	Percentage of other
Foreign	33%	25%	38%	4%
Local	56%	47%	43%	10%
Total	47%	38%	41%	8%

Source: Author estimated data

Visitor Satisfaction: The visitor survey assessed visitor satisfaction with various tourism services and facilities in the area. The information was gathered across 14 main categories, with respondents asked to rate their opinions on a 5-point scale of completely agree, agree, no idea, disagree, and completely disagree.

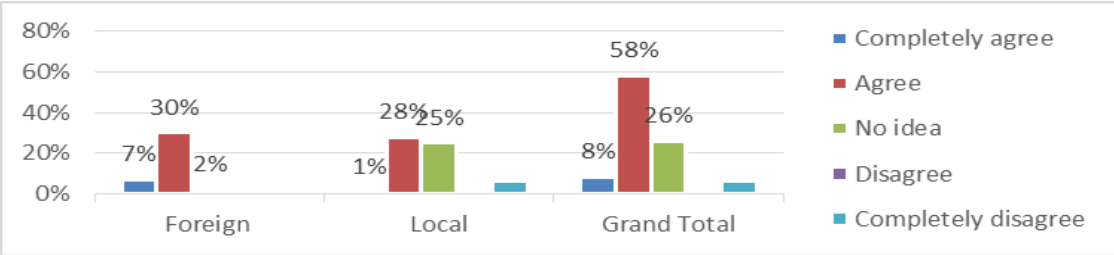
Respondents rated their level of satisfaction with tourist information, accommodation options available, quality of restaurants/eating places, recreational and entertainment opportunities available, accessibility both within and outside of the destination, cleanliness of the environment, promotion of the destination, sanitary and comfort facilities, law and order, biodiversity and environmental protection measures, visitor management, entrance fees, and promotion using social media. They were also asked if they encountered any harassment from beggars or vendors, and if they believe Sigiriya is a must-see destination for all visitors.

Tourist Information



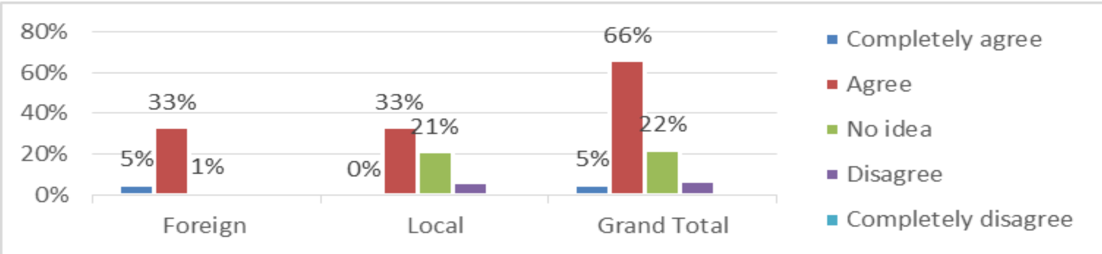
When it concerns to tourist information services, the majority (79%) of all tourists are satisfied. Locals (48%) agreed with foreigners more on the levels of satisfaction with such services (31%).

Accommodation Options



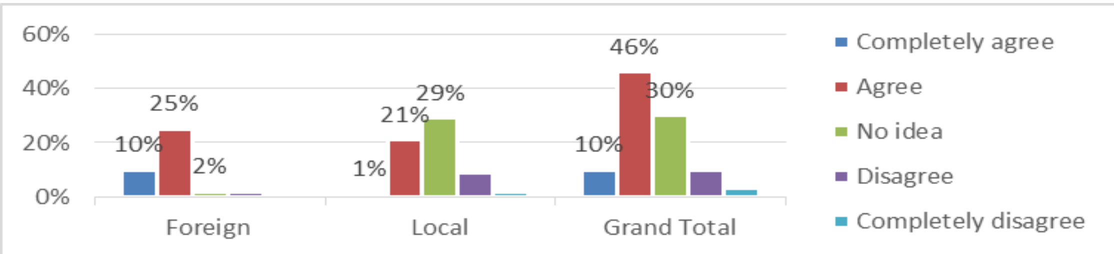
When visitors were asked to rate their level of satisfaction with the availability of accommodation options in the area, the majority (58%) responded positively, with 30 percent being foreigners and the balance being locals (28%).

Quality of Restaurants/ Eating Places



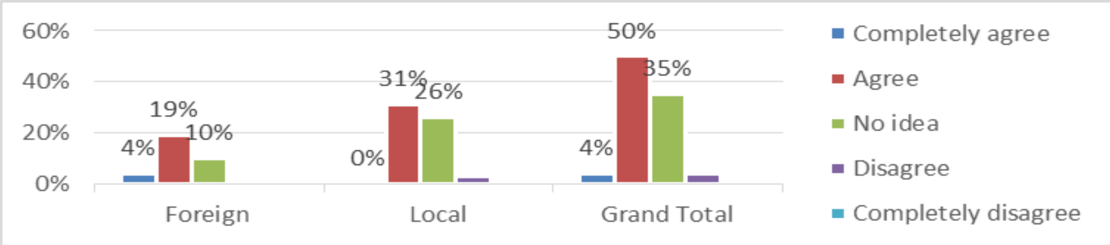
The majority (66%) of visitors were satisfied with the quality of restaurants and eating places in the region, with an equal proportion (33%) satisfied by both locals and foreigners.

Recreational and Entertainment Opportunities Available



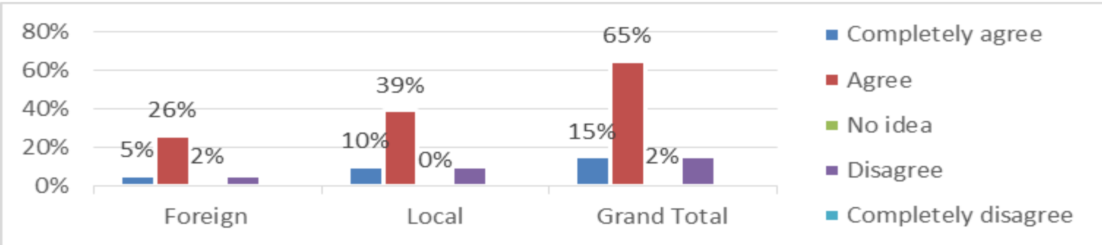
Only 46 per cent of tourists were satisfied with the area's leisure and entertainment options, while 60% opted not to respond. Out of them, 25 percent of foreigners and 21 percent of locals agreed that leisure and entertainment facilities were adequate, whereas 29 percent of locals were unaware of such facilities in the area.

Accessibility both Within and Outside of the Destination



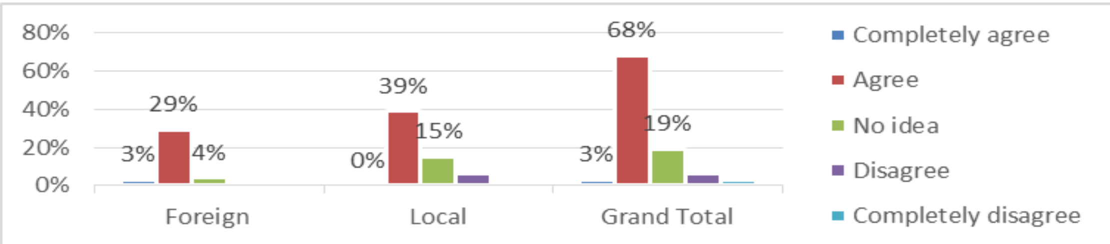
Almost half of the tourists (50%) felt that accessibility both within and outside of the destination is adequate, while the remaining 35 percent had no clue.

Cleanliness of the Environment



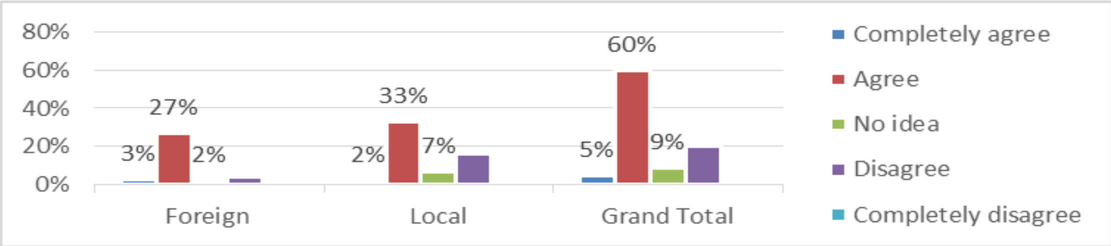
The majority (65%) of all visitors feel that the environment is clean, with 39 percent being locals and 26 percent being foreigners.

Promotion of the Destination



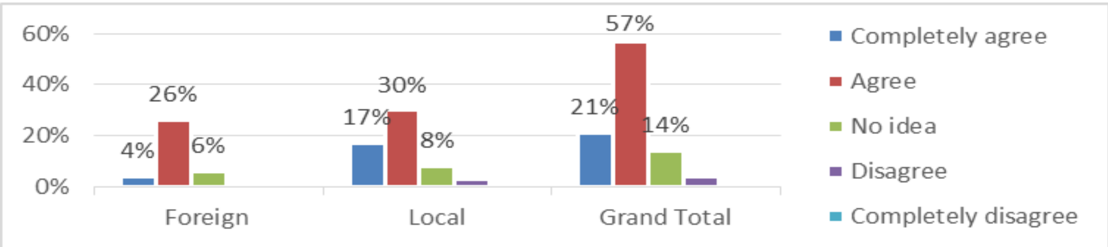
Large number (68%) of all visitors view as Promotion of the Destination is adequate while 19 percent had no idea. On the level of promotions, 39 percent of locals and 29 percent of foreigners agree, while 15 percent have no notion.

Sanitary and Comfort Facilities



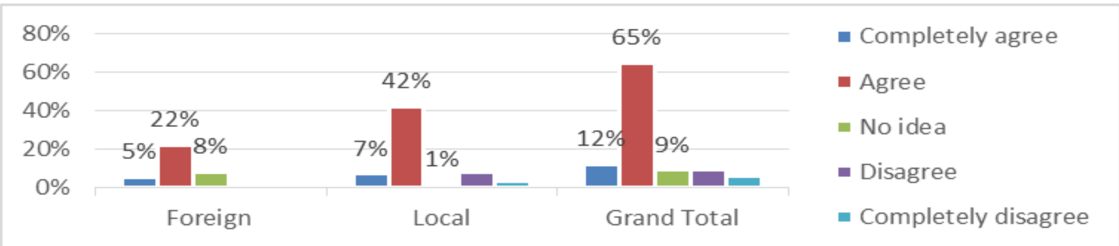
The majority of visitors (60 %) are satisfied with the area's sanitation and comfort facilities, although 20 percent are dissatisfied with such amenities. Thirty-three percent of the satisfied visitors were locals, while 27 percent were foreigners.

Law and Order



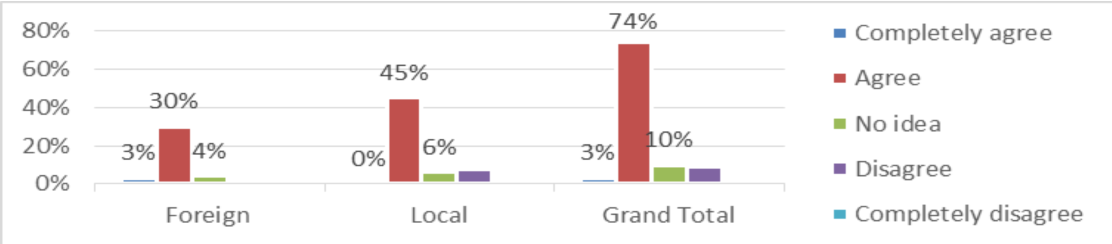
A little more than half (57%) of all visitors were pleased with the area's law and order, with 30 percent being locals and 26 percent being foreigners. It's worth noting that 14 percent had no idea on such provisions.

Biodiversity and Environment Protection Measures



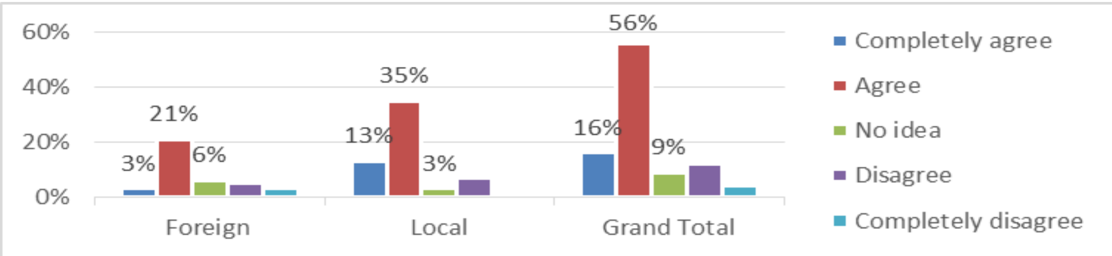
A substantial percentage of visitors (65%) feel that the measures taken to protect biodiversity and the environment in the area are adequate, with 42 percent of locals and 23 percent of foreigners agreeing.

Visitor Management



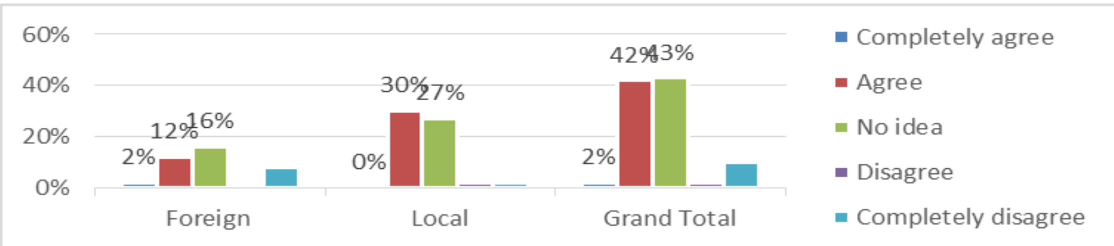
A substantial proportion of all visitors (74%) believe that visitor management in the region is satisfactory, with 45 percent of locals and 30 percent of foreigners agreeing.

Entrance Fees



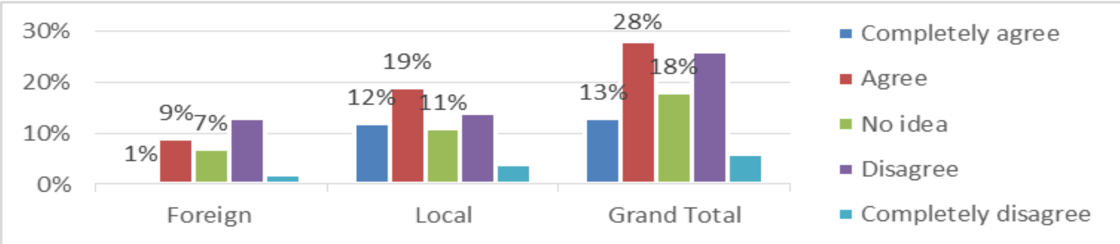
When it relates to entrance fees, the majority (56%) of all visitors are satisfied, with 35 percent of locals and 21 percent of foreigners.

Promotion using Social Media



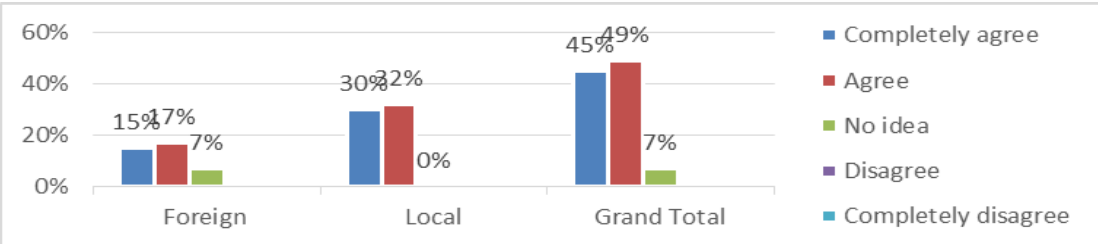
Out of the visitors, 42 percent agree that social media promotion is adequate while 43 percent have no idea on that. Out of the visitors who agreed 30 percent are foreigners and 12 percent are locals.

Any Harassments from Beggars and Vendors



All visitors expressed mixed opinions about harassment by beggars or vendors at the destination, with 28 percent agreeing, 26 percent opposing, and 18 percent having no knowledge. Among the visitors who were harassed, 19 percent were locals and 9 percent were foreigners.

Sigiriya is a Must-See Site for All Travelers



Almost all visitors (99%) agree that Sigiriya is a must-see destination for all travelers, with 45 percent absolutely agreeing. Locals make up 62 percent of the entire agreed ratio, while foreigners make up 32 percent.

4.6.3 Market Accessibility of Sectors

This section presents the perspectives of local actors on market accessibility. Interviews were conducted with a variety of stakeholders, including accommodation providers (hotels, guest houses, and home stays), tourist guides, and souvenir producers. The views are split into two categories: the Sigiriya Rock Fortress and the Sigiriya Tourism Zone.

Sigiriya Rock Fortress: Stakeholder interviews revealed the significance of facility development at the Sigiriya Rock Fortress.

It was discovered that the access road to Sigiriya Rock Fortress is hazardous on rainy days because it is not tarred or made of a solid material to withstand such conditions or carry capacity issues. They suggested making it out of clay tiles or a similar material to avoid such problems while retaining a natural look. Furthermore, they emphasized the significance of properly developing the 'look and feel' of the site's authenticity from the beginning to the end like in other top heritage sites in the world.

Stakeholders also emphasized the visiting facilities at the Sigiriya Rock Fortress. They reported concerns ranging from the entry to the ticketing counters, ticket rates, entrance timings, cafeteria, site illumination, and sanitary facilities.

The appearance of the entrance might be enhanced, and credit card and e-payment alternatives for the CCF's entrance ticket should be included. Given its one-of-a-kind nature, some have recommended raising the entrance ticket and limiting capacity. There was also a recommendation to raise ticket prices to US$ 40 when the average number of visitors exceeds 700,000, and US$ 45 when the number of visitors reaches one million, up from the current rate of US$ 35. Furthermore, others were of the opinion that it should be gradually transformed from the existing budget-upscale mix site to an upmarket heritage site in the long term. Some have recommended that instead of a single ticket, there should be individual tickets ranging from the Information Centre to the Mirror Wall, and from the Lion Paw to the top.

Sigiriya is open to visitors from 7 a.m. to 5 p.m., thus visitors cannot see the sun rise or set. This is a compelling motivation for tourists to visit Pidurangala, which is open throughout the day, and it would be ideal to change the entrance hours to diversify the heritage site's offerings.
The current cafeteria should be developed with good standards and more options for tourists, taking into account budget, middle, and upmarket tourists. In addition to the one over there, it would be ideal to have a coffee/tea shop with high standards.
Tourists face difficulties in the evening due to a lack of lighting in the pathways, and there is a need to establish a better tourist monitoring system after it was revealed that tourists were stranded inside and rescued by area guides.

Another concern addressed was the lack of sanitary facilities inside the rock, which has created substantial inconvenience for tourists and has resulted in contamination in tiny habitats inside as a result of this aspect. Furthermore, there is a shortage of proper health and safety measures (including fire, ambulance, and so on) that must be developed in order to fulfil international standard criteria.

In addition to the foregoing, the location of the Sigiriya Museum has been heavily criticized by many. Furthermore, there are no high-quality souvenirs in the Sigiriya Heritage Site, and the site's many souvenir options are limited (since miniature of the site is mostly limited to wood carving souvenirs).

The site lacks a strong Elephant fence system, and as a result, tourists face a significant danger.

According to the stakeholders, the eighth wonder lacks basic amenities and comfort, as well as suitable marketing and promotion. They believed that more innovative and creative mechanisms for product development and marketing are essential. According to them, marketing by an international company that focuses more on social media is better than advertising in print and electronic media.

<u>Sigiriya Tourism Zone</u>: This section presents the perspectives of local stakeholders on the Sigiriya Tourism Zone. The research zone included both the Sigiriya and Dambulla regions and included two UNESCO World Heritage Sites, the Sigiriya Rock Fortress and the Dambulla Cave Temple.

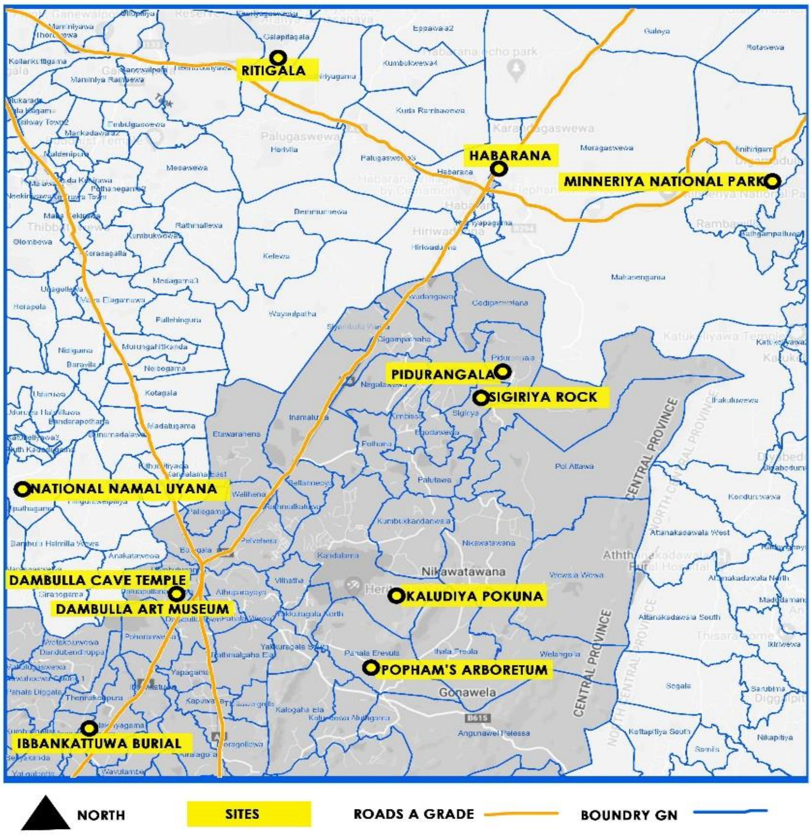


Figure 28 Map of the attractions in the study area

Stakeholders noted that there is currently no integrated map in the selected region exhibiting all attractions, facilities, and services where all service providers may communicate with a single voice. They stressed the significance of developing a master plan for integrated tourist development, incorporating the boundaries of Sigiriya and Dambulla, as a starting step. The plan must encompass development, conservation, as well as marketing and promotion. They, too, stressed effective branding as part of marketing strategies, emphasizing the necessity to showcase the authenticity of the 'Sigiriya heritage' character everywhere with a ‘look and feel’ from architectural and infrastructure development.

4.6.4 Sigiriya Destination: Some Existing Experiences and Potential Attractions

Current Experiences	Potential Attractions
Pidurangala Hiking	Sunrise and sunset view from Sigiriya Heritage Site
Elephant Safaris & Bullock Carts	Cultural Entertainment (Sound & Light)
Hot Air Ballooning	White Water Rafting, Kite Surfing
Village Tours	Renovate and water based develop activities in Sigiriya lake

Another issue raised by the study is a lack of adequate tourism experience in the area. Off the beaten path, there are several more potential experiences to be discovered. They emphasized the need of conducting extensive research to find all potential tourism activities in the area, using white water rafting at Dambulla Lake as an example. Sigiriya is a dull city that needs to add more activities, such as cultural events depicting the Sigiriya narrative and theme evenings. They also highlighted how the sound and light show idea was abandoned owing to public uproar, but that building one similar to other major tourist sites across the world is vital in light of cultural and environmental concerns.

Some suggested that Dambulla be labelled as a "Gateway to the Dry Zone" resort, similar to how Nuwara Eliya was planned to be branded as a "Gateway to the Wet Zone" resort.

Because of the aforementioned reason, visitor stays are limited to 1-2 days. As a response, the attraction limits must be expanded to include Kurunegala, Anuradhapura, Polonnaruwa, and Matale, transforming the area into a hub that will increase the average stay to four days. Furthermore, once the highway is completed the accessibility to Matale will be very convenient through a scenic route.

Some Well-Known and Lesser-Known Attractions Within Identified Boundaries

Kurunegala	Anuradhapura	Polonnaruwa	Matale
Ridi Viharaya	Eight Venerated Places	Wasgamuwa	Knuckles
	Mihintale	Kawdulla	Spice & Herbal Gardens
		Minneriya	Nalanda Gedige
			Veil Festival (Potential)

The majority of guest homes and home stays are not registered. They confront a land title as a main impediment to registration, despite the fact that several attempts have been made to settle this issue, which has yet to be resolved. Furthermore, some stakeholders believe that the home stay idea should be redefined in order to be more sustainable in terms of cultural and environmental issues, as well with an appropriate regulatory framework.

Particularly in the area in question, there is a severe shortage of manpower. Recruiting from the neighbouring areas within a 20-kilometer radius is around 69 percent.

Youth in the region are experiencing cultural issues such as inferiority, discourtesy, and so on, particularly among stakeholders in the lodging industry, and they must be motivated via adequate capacity building. Less female participation has been observed, and there is a need to improve safety, security, and social recognition in the hospitality industry to absorb them. It was also recommended to construct motivational programs for school students starting with Grade 9 to cultivate a passion of tourism.

Some argue that regional tourism legislators and administrative officials should be more aware of tourism. To prevent tourist harassment, the majority say that three-wheeler drivers require training, licensing, metering, and more regulation through enforcement mechanisms, and that they should be trained as tourism ambassadors.
When the supply chain of essentials for lodging is studied, 70 percent of fruits (some hotels buy just local fruits), 40 percent of vegetables, beef and eggs are supplied within the areas (20 km radius) where fish and chicken come from other locations (Within 75-100 km radius). There is potential to remedy the non-availability of suppliers within the area with SME participation.

When it comes to Tour Guides, there is an issue with unskilled and unlicensed employees. They access the Sigiriya premises with a local entrance ticket and proceed to guide tourists; necessitating enforcement.

The souvenir industry is struggling with low sales owing to a lack of demand. In addition, Sigirya has a limited number of retail outlets. The monthly income of producers ranges from Rs. 30,000 to Rs.50,000, which is considered low. Shop owners arbitrarily set the prices, and the producer's bargaining leverage is severely limited.

'Laksala' is a strong market, and some producers provide goods to them. However, payment often get delayed.

To obtain wood for the carvings, a license from the Forest Department is required, which is extremely difficult to obtain. They also mentioned the high cost of timber, the limited number of logs allowed to be kept (75 square feet), and the restrictions on lumber activities even on their own land.

There are no innovative tour experiences developed for guests to come and see how souvenirs are made. The one based on this concept, "Craft Village," formed in the 2000s under the National Craft Council, has 32 stalls, 5 of which are reserved for locals. The rest, according to the stakeholders, is occupied by vendors from neighboring districts owing to political influence. They noted that stronger collaboration with the National Craft Council is essential to further develop this industry.

Because of the COVID 19 pandemic, most individuals quit working in the sector, while others engaged in big onion cultivation as their primary source of income. It is worth noting that female engagement in this industry is minimal, and there is a need to enhance their participation as a cottage industry and source of income for women through capacity development and the necessary assistance.

4.6.5 Summary of Key Issues and Recommendations

Key Issues	Recommendations	Remarks
Absence of a Master Plan	Develop an integrated Master Plan	- To list all experiences - Cover product development, conservation, marketing & promotion
Manpower Shortages	- Increase training opportunities - Increase participation of local youth & women	- Address cultural concerns such as inferiority and discourtesy attitudes, as well as safety and security and social recognition) - Create motivational programmes for school children in grades 9 and above to foster a passion of tourism.
Lack of Experiences	Develop experiences (within 20 km radius)	Develop with innovation and creativity
No Proper Management	Establish a legal body	An integrated system with authority must be established with the cooperation of appropriate public and private sector entities.
Increase Number of Stay	Establish a hub	Covering Kurunegala, Anuradhapura, Polonnaruwa, and Matale and developing connectivity and attractions
Stakeholder Engagement	- Capacity Development for all actors - Enhance registrations	- Develop brand, professionalism and a single message. - Resolve concerns with registration requirements, such as land title.
Supply Chain Issues	Develop shortage products within the area	Build an efficient and effective supply chain system to source all of the area's products and services.

4.7 Human Resources

This analysis mainly focused on opportunities created by different sectors and sub sectors for local people. All six sectors and their key sub sectors were considered in this analysis. For most of the sectors, estimation of total employments and local employments was carried out based on the sample survey. Statistics for employments at the attractions were collected from attraction operators.

Total employments: The value chain creates more than 2,000 direct job opportunities. Out of which, the accommodation sector hosts most of the employees, at 48 percent, Attractions sector is the second largest in terms of creating job opportunities at 27 percent. The Service sector, Transport sector, food and beverages sector and the activities sector create 19 percent, 2 percent and 1 percent of total job opportunities respectively. In addition to these direct job opportunities, the supply chains create indirect job opportunities in agriculture, delivery services, ICT infrastructure, marketing and consultancy.

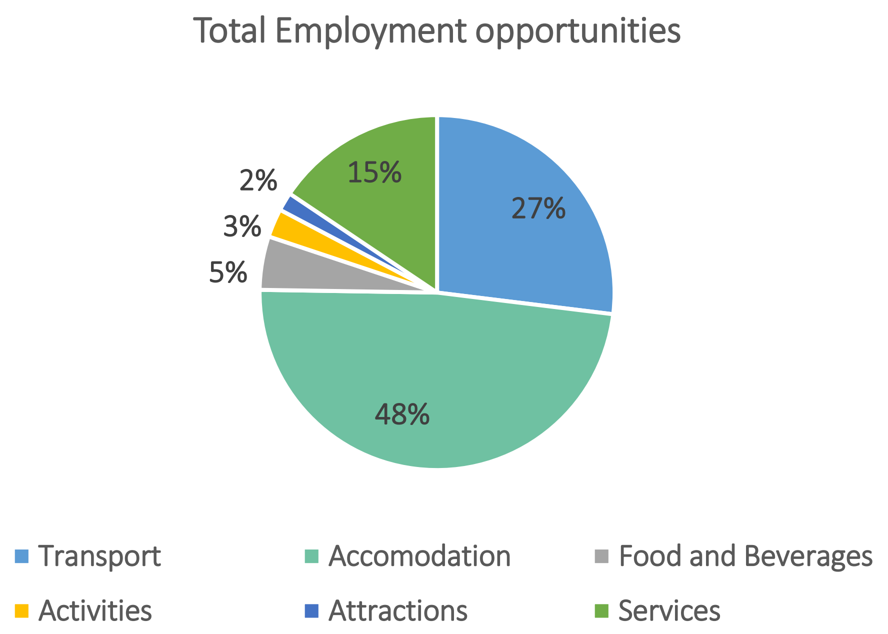


Figure 29 Employment created by the sectors
Source: Author estimated data

Local people employments: Local employment refers to the employment opportunities provided to the people in the region. Overall, the composition of the local people employment is similar to the total employment in key sectors.

4.8 Physical Resources

The absence of a meso-level functional value creation system curtails the physical planning development to provide sufficient facilities and comforts to tourists in Sigiriya. This has even been reported several times in social media and mass media. Confirming this, the tourist guide association of the central province stated that sanitary facilities, cafeteria and parking are not at all developed nor maintained properly for tourists, even though they have been charged a huge amount as entrance fees. Although the historically built physical environment of Sigiriya attracts tourists globally, the negligence of development and maintenance at present led to ruining the quality of the experience for tourists. The direct observation at Sigiriya and its surroundings also confirmed the lack of development and maintenance of physical facilities. When responding to the question, the project manager of Sigiriya stated that the CCF is not given authority and mandate to do any physical development and maintenance on behalf of tourism, even though certain things have been carried out by him in his personal capacity. Insufficient intervention of meso-level functional value creation systems lead to negligence in macro-level value creation systems. When macro-level functional value creation is not carried out properly, micro-level functional value creation system fails to provide appropriate value-added tourism to ensure the quality of tourism while supporting to local development, preservation and conservation of environment and socio-culture. This also interrupt the business generation and community empowerment through economic opportunities.

Table 11 Physical facilities of attractions

Attraction	Managing agency/ authority	Condition of Physical Facilities
Sigiriya	CCF	Access roads: Main access road is well developed. However, interior roads are not maintained well. Footpaths are not available for pedestrians. Foreign visitors enjoy walking, especially during the evening and early morning. There are no proper street lights to facilitate walking.

Attraction	Managing agency/ authority	Condition of Physical Facilities
		Parking: two parking areas are available separately for foreign visitors and local visitors. The condition of the local visitor parking is poor. Facilities – waiting, sanitary, shopping etc. available for visitors at the parking areas are also very poor. Stalls available for local vendors are not developed well with attractive interface
Pidurangala	Pidurangala Viharaya	Access roads: access roads are available, but their condition is poor. It is not convenient for visitors to walk along these roads when it is raining. There are no street lights to facilitate night time travelers/pedestrians. Parking facilities: parking spaces are available, but they are not organized well. Sanitary facilities are not available. This is also an attraction where a large number of visitors arrive daily. Lavatories are essential.
Dambulla cave temple	Dambulla cave temple	Access roads: fairly developed Parking and sanitary facilities: available. Improvements are required to maintain standards.
Ibbankatuwa megalithic cemetery	CCF	Access roads: Access Road is well developed. Parking facilities are available Lavatory facilities are available but in very poor condition.
Ibbankatuwa lake	Mahaweli Authority	Road access is fair. However, there are no lavatory facilities available. This is also a popular attraction for local visitors where facilities should be available. The attraction is an open place and not managed properly.
Ritigala	Dept. of Wild life and Dept. of Forest	Access road is fair. There is no organized parking facilities but parking spaces are available. Sanitary facilities are available
Namal Uyana	CCF	Access road is fair. There is no organized parking facilities, but parking spaces are available. Sanitary facilities are available

Investors and Investment: The subsector with the highest aggregate investment is in the guest house sub sector, which is about 3.1 billion rupees and it accounts for 39% of the aggregate investment. It is estimated that there are more than 250 units under this sub sector. The second largest aggregate investment is in the retail chain, which is 19% of the total. However, the investments of the hotels are not considered in this study, because the investments of hotels is massive and unique when comparing with other basic businesses.

Table 12 Investments in sectors and sub sectors

Sector	Sub sector	Total investment	Aggregate investment of the sector	%
Accommodation	Boutique Hotel	280,000,000.00	0.00	3%
	Guest House	3,180,000,000.00	0.00	39%
	Home Stay	460,000,000.00	3,920,000,000.00	6%
		0.00	0.00	0%
Activities	Village Tours	5,000,000.00	0.00	0%
	Elephant Safari	0.00	0.00	0%
	Traditional Cooking	1,200,000.00	0.00	0%
	Hot air ballooning	8,000,000.00	14,200,000.00	0%
Food and Beverages	Restaurant	420,000,000.00	0.00	5%
	Street Food	3,450,000.00	0.00	0%
	Mobile Food Shop	330,000.00	423,780,000.00	0%
Services	Handicrafts	34,650,000.00	0.00	0%
	Spa/saloon	13,300,000.00	0.00	0%
	Grocery/retail shops	1,448,000,000.00	0.00	18%
	Vehicle Park	0.00	1,495,950,000.00	0%
Transport	Three-wheeler	520,000,000.00	0.00	6%
	Jeep	1,665,000,000.00	0.00	21%
	Rent a bike	5,000,000.00	0.00	0%
	Cycling	600,000.00	0.00	0%
	Rent car	50,000,000.00	2,240,600,000.00	1%
Grand Total		8,094,530,000.00	8,094,530,000.00	100%

Source: Author estimated data

4.9 Analysis of Economic Behaviour

Power Relations

Sector/sub sector	Findings
Transport: Three wheelers	There are several spice gardens in Sigiriya targeting at foreign visitors. They offer spice processing demonstrations, awareness of spices, ayurvedic massages and sale of spice products. Taxi or tuktuk drivers take visitors to these spice gardens during their travels. In most cases taxi/tuktuk drivers or guides recommend/promote visiting the spice gardens with a financial motive. The service provider has a scheme to ensure that this intermediary benefits financially. The negative side of this deal is sometimes the recommended place is substandard, there are indirect influences to purchase spices or herbal products at unreasonably high prices. Ultimately the visitor is unhappy with the service of both service providers. It was found from 'Reviews' that most of these visitors are unhappy with the experience of spice gardens due to several reasons; Indirect claims to purchase herbal products Overpriced products Products are not exclusively herbal or Ayurveda Gardens are too small and have very little variety It is not an exciting experience Tourists are well aware of the average price of spices and availability of the same products at general stores/supermarkets. They are not willing to pay an extremely high price without a reason for it. Also, the visitor is very unhappy if the service provider misleads him/her with wrong information, fake products etc. however, it happens in some places. Online reviews are available if the service provider has listed/promoted his/her business in online platforms. Especially foreign visitors are keen on reviews of the location where he/she is supposed to get the service from.

	Overall, there is a huge mistrust among visitors regarding the informal sector service providers due to several reasons: Price is not consistent among service providers Price for visitor is always higher than the normal rates The lack of correct information There is no guarantee of the service quality Safety is not guaranteed This situation is a bigger barrier for promoting informal sector stakeholders in the tourism industry. In numbers, the informal sector is a larger component of overall tourism services. It would require integrated and multi aspect interventions such as product standardization, visitor information, regulation of stakeholders, attitude development of service providers, sustainable planning etc. to correct this unsustainable market behaviour.
	Three wheelers or other transport providers are required to register with hotels for visitors' transport service. However, for most of the time a commission is charged from transport provider for each visitor handled. The overall cost of the service increases due to commissions because for most of the cases the transport provider adds commission charges on the visitor. This is not a healthy relationship among stakeholders in coordinating services.
Activities: Village tour	Only a few tourism activities are available for visitors to the Sigiriya destination. The village tour is one such activity which has unsustainable market relationships among stakeholders, tour guides and village tour operators. Upon the requirement of the tour guides, village tour operators issue a dollar ticket (approximately USD 25) for the service. However, the actual charge of the service is around Rs. 1,500 per person. The guide dealing with the visitor keeps an excessively high commission (more than 250 percent of the price of service provider). There is no direct access of market for service provider other than channeling through the tour guide. The negative aspects of this dealing are; Visitors are not happy with the price and tour value

	Service providers could keep only a reasonable margin resulting in every stakeholder of this village tour (cart operator, boat rider, villagers in demonstration etc.) also benefitting from the tourists Service providers have no motivation to improve the service quality due to the high marginal fee Eventually the activity becomes unsustainable The guide decide the price of the service which is always too high for the client. The service provider has no control over the price that could be considered fair for the value of the given service.
Art and craft	There are handicraft makers around Sigiriya producing handicrafts for a limited market, such as mobile sellers or small souvenir shops. They don't have access to large shops where a higher volume of businesses occurs. The main reason for this is that small producers are not able to bear longer periods of credit purchases as demanded by large shops. Also, prices are then not attractive to them. Handicraft producers have to face the challenge of sourcing timber for their production. Permission is required from the Department of Forest and Department of Wildlife Conservation to collect and store raw timber. There is no favourable organizational support to promote rural producers. The authorities are seldom flexible enough to work with producers in a balanced situation of protecting both the environment and livelihoods.
Attractions and activities	Tour operators make itineraries for most foreign visitors including only popular sites and stop at souvenir shops/activity experiences. They decide these 'stops' mainly based on commission rates for operators and tour guides. A larger part of the tourism sphere has been under this tour operator/agent control resulting unfavourable sharing of economic benefits for stakeholders. Also, this can be considered a manner of harassment of visitors through indirect influences and unfair prices.

4.10 Socio Cultural Impact

Socio Cultural Benefits: Tourism may have many different effects on the social and cultural aspects of the lives of the people who are living in a particular area or region. Sigiriya being a cultural and heritage tourist destination, attracts a significant number of foreign visitors throughout the year. Along with the economic benefits, there are many social and cultural impacts that tourism brings into the particular society.

The locals get the opportunity to expose themselves to a variety of people from different backgrounds, cultures and experiences. Through such encounters "demonstration effects" can occur and, it encourages the hosting communities to develop and improves lifestyles and practices from the tourist experiences. The improvement of infrastructure with which to sustain tourism indirectly leads to an improvement of local lives through access to better local facilities which results in better opportunities in education, healthcare and employment. The heritage sites are under conservation protection and monitoring by the authorities, which result in safeguarding local cultural as well as traditional and architectural heritage.

Cultural and heritage tourist destinations like Sigiriya, build stronger and closer communities. It improves the sense of identity in the community by showcasing the cultural aspects that people share. It creates better awareness within the community about the local/regional history and practices. This creates a force of protection towards the existing traditions and cultural norms, by creating economic benefits for the people.

Negative Socio-Cultural Impacts: Tourism can bring a dark social and cultural side to a community which can impact negatively towards the hosting community. Looking at Sigiriya, the main issue lays with the abusive use of drugs and alcohol. Due to the higher demand of the visiting community, drugs and alcohol are often available in the community and underage drinking and drug use is at its peak at the moment. Drunkenness resulting in domestic violence has increased and it puts significant pressure upon households.

Illegal activities such as prostitution and sex work is increasing the risk of social and cultural damage as well as exploitation, while putting the locals as well as visitor's health in danger through sexually transmitted diseases.

Lifestyle changes from clothing to behavior to language are creating ripple effects on socio cultural norms and it's creating significant damage towards traditional social and cultural values. The unfair distribution of profit and wealth is creating marginalized communities, while making women and children at risk of exploitation. Over-density in instructors in the heritage sites is alarmingly pushing the local residents out from their residences which cause disputes related to land and occupation.

<u>Gender and Tourism</u>: As highlighted by the world tourism organization for the UN (2011, 2019), the combination of tourism and gender is an area that requires a deeper understanding of the relationship between the participation of a wide range of social actors (Pritchard 2018). One of the key concepts to understand the tourism and gender binomial is the difference between the concepts of sex and gender and their consequences at a level of roles and stereotype (Segovia-Perez and Figueroa-Domecq 2018). This distinction, and its implications, has been the subject of debate and multiple theories in the social sciences. However, this distinction is the basis of different life trajectories and an important set of inequalities between men and women.

Sex refers to the biological and anatomical characteristics of the human body and allows us to divide the world into men and women and even a combination of both. In contrast, gender is used to define a social construct that divides what is considered feminine and masculine (Segovia-Perez and Figueroa-Domecq 2018). Therefore, gender is a socially established construct that refers to a "way of being" in society, which includes a type of character or personality, beliefs, values, behavior and the different attitudes of men and women. Through this construct, people learn to behave according to their gender, creating and recreating it in day today life. Therefore, gender is made up of its own individual self-definition, which has been socially learned through the expectations of others and, the cultural expectations that imply what our behavior should be in a context of interaction (West and Zimmerman 1987).

Gender roles and gender stereotypes emerge from cultural representations of what is expected of a woman and a man (Colas Bravo and Villanciervos Moreno 2007). These stereotypes mark the division of society, as it assigns a different function/role depending on gender. According to Eagly et al. (2004) there is a correspondence between the assigned roles and the characteristics that are considered typical of people. In this way, the allocation of family roles (domestic and family) to women is related to their alleged greater capacity for care, kindness and sensitivity; while men are assigned the role of family provider because of its characteristics associated with autonomy, domination and power. Therefore, stereotypes and gender roles definitely mark the personal, family and professional trajectory throughout women and men's lives (Machin-Rincone 2020) Nor can it be forgotten, as Moreno (2018) point out, that gender tends to become a category used to measure the number of women and men, without considering qualitative differences in terms of presence, participation and the exercise of rights.

When focusing on gender, it's difficult to move away from the concept of gender equality as that the concept which allows us to see how men and women are treated in their own roles.

"Despite progress over the years, many challenges remain unachieved in a fundamental human right: Gender equality. Without gender equality and empowerment of women, the achievement of progress and sustainable development is not possible, because rights and opportunities would be denied to half of humanity. That is precisely why it is one of the Sustainable Development Goals (SDGs) on the 2030 Agenda: Goal 5. Achieve gender equality and empower all women and girls. Gender equality must also be considered in the achievement of other goals and, especially, in Goal 8: Promote sustained, inclusive, and sustainable economic growth, full and productive employment and decent work for all. "– United Nations- Transforming Our World: The 2030 Agenda for Sustainable Development.

Tourism has an important role in achieving the commitments of the 2030 Agenda, since tourism has been widely accepted as an essential tool to promote gender equality (Zang 2021), but many changes are still needed to achieve that equality in the tourism sector. Sustainability in tourism cannot be achieved without decent work, gender equality and empowerment of all women. It must transgress the situations of discrimination and inequality existing for reasons of gender (Canada.E 2018) reflected in organizations, in the family and in the society (Carvalho. I 2018).

World Tourism Organization (UNWTO) defines gender equality as: The equal rights, responsibilities and opportunities of women and men and girls and boys. Equality does not mean that women and men will become the same but that women's and men's rights, responsibilities and opportunities will not depend on whether they are born male or female. Gender equality implies that the interests, needs and priorities of both women and men are taken into consideration, recognizing the diversity of different groups of women and men. Gender equality is not a women's issue but should concern and fully engage men as well as women. Equality between women and men is seen both as a human rights issue and as a precondition for, and indicator of, sustainable people-centered development.

This social construction of gender has consequences at three levels in tourism, namely, individual level, interactional and institutional (Segnovia-Perez and Figueroa-Domecq 2018). According to Rishman (1998) these three levels are interrelated, and one cannot be understood without the other.

At the *individual level*, the personal conception of the self as belonging to one gender or another is considered. It is the way in which we are configured and developed as women or men: it shapes our personality, our individual feminine or masculine self, based on how we assume different behaviors, values, beliefs and preferences and make decisions.

At the *interactional level*, men and women must behave as expected in relation to others depending on their gender, even when they occupy identical structural positions (Rishman 1998). This is what Eagly et al. (2004) described as "gender role expectation. Finally, the *institutional level* explains how the social, cultural and organizational structures reproduce gender differences (division of labor, hierarchies and power) dividing institutions and society according to it. The components of the institutional level are related to the maintenance of power and resources mainly by men. The thin red line between each level and how the three are related should not be ignored.

<u>Value Chain Analysis – Gender Lens:</u> Sigiriya focused tourism value chain analysis contains six major sections, namely, Transportation, Accommodation, F&B, Activities, Services and Attractions. The data analyzed shows there are only 5 percent of female business owners in all five sections and the ownership mainly shows in the sub sector of home stays, traditional cooking and spa and salons. At a glance, it's almost impossible

to see the female ownership in the tourism value chain when the 95% of the sector is either owned or represented by males. Another significant fact discovered through the data analysis is the difference in wages between men and women. While the average wage for a man (all included) per day runs from Rs 1000.00 - 1500.00, for women it remains between Rs 800.00 – 1200.00, which is an around 20% less.

Moving into the analysis of the main sectors of the value chain analysis, male and female employment in the Sigiriya destination can be shown as follows;

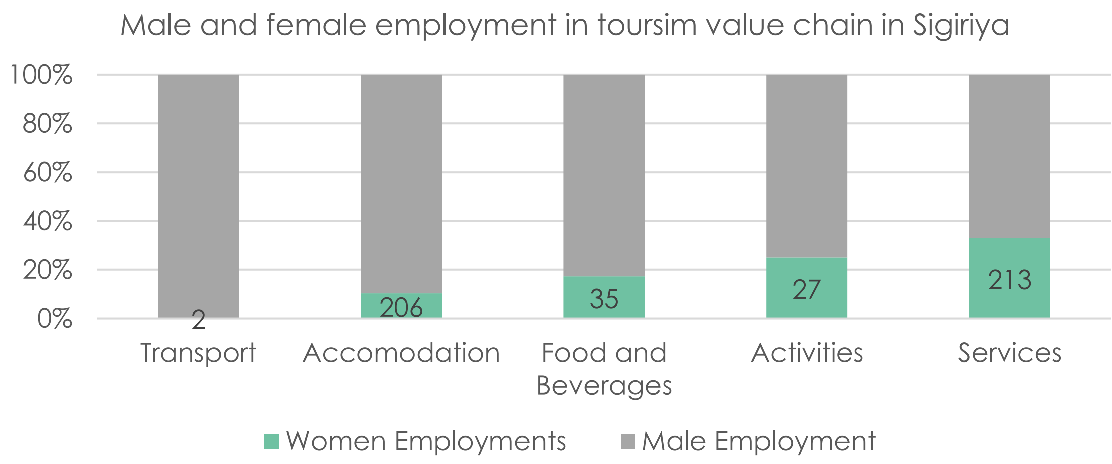


Figure 30 Male and female employment in tourism value chain in Sigiriya

Source: Author estimated data

Accommodation: Accommodation is one of the most significant sections in the tourism value chain, including star hotels, boutique hotels, guest houses and home stays. During the survey, 35 of such establishments were approached (25 guest houses and 10 homestays) and due to the reluctance of sharing information, the data on star hotels and boutique hotels were taken through the chairman of Sri Lanka hotel/tourist board. According to the findings of the sample survey, the employment of men and women in the subsections of the accommodation sector shows significant differences.

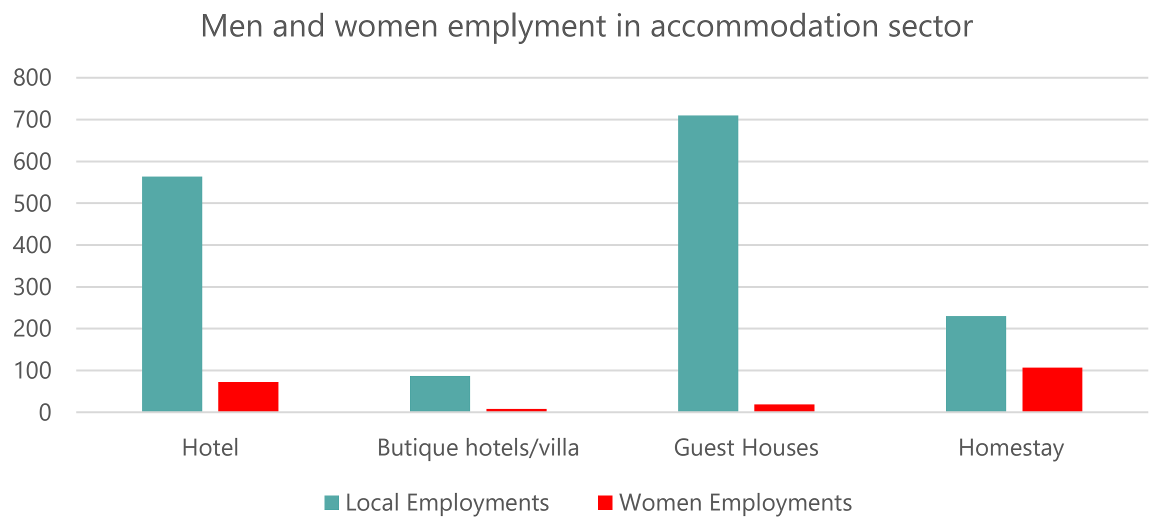


Figure 31 Employment in accommodation sector

Source: Author estimated data

In star hotel sector, while men occupy 92 percent, women only occupy 8 percent followed by 9 percent in boutique hotels, 2 percent in guest houses and 47 percent in home strays. Overall, in the accommodation sector, while men secure 90 percent of employment, women are only represented by 10 percent. These figures clearly show the underrepresentation of female employment in the sector. The cross examination of roles taken by women shows that their roles are mostly either in labour intense sections like cooking, cleaning and waitressing with none in the formal skill section like front desk, receptionist or cashier. There were hardly any women in decision making roles except for home stays where women are running their own businesses.

Discussions with business owners show a certain level of reluctance to hire women presenting culturally influenced thinking like “It’s not a very good field for women, it’s difficult for them to work because they can’t work the long shifts (Especially night shifts), and it is difficult to retain women after marriage or after having children”. National figures on female student enrollment to Sri Lankan hotel schools in 2017 show that it remains between 12 percent -15 percent and this is a clear indication as to why there are very few trained female participants in the field. These national figures can clearly affect attractions such as Sigiriya and the entire tourism sector that is formed around it. Even though the demand is high for skilled labour, it is difficult to find women with such skills and capacities from around the area.

Deeper analysis on the jobs that women undertake in the section clearly indicates the influence of stereotypical gender norms that are inbuilt in the society and peoples' thinking. Women are still in the roles which were traditionally given to them in households, i.e. cooking, cleaning and caring for people. COVID19 still remains a significant blow to the entire section and it was indicated by the business owners that more women left the industry during the pandemic than men. These facts indicate a significant need of awareness, advocacy and training towards gender mainstreaming, skill building and capacity building.

Activity: Elephant safari, traditional cooking and village tours were the three main sections focused on during the survey. Similar to the accommodation section, the data shows a significant division of labour between men (75%) and women (25%). While there is no female representation in the Elephant safari section, the village tour section had 29% and traditional cooking section consistent of 60 percent of female employees. While the adventurous and outgoing sections are dominated by men, the traditional, non-adventures and "safe" jobs sections are highly represented by women. While some of the businesses are owned by women, it still largely remains in the traditional cooking sector. Discussions with employees as well as business owners greatly indicate the reluctance to break gender stereotypes which were created by the society, stating that "A sector like traditional cooking is more suitable for women, That is what they are best at", which brings a significant question mark towards our labour force. If the activity sector is to meet the demand of the skilled workers, bringing in women and creating better opportunities for women is a serious need.

Food and Beverage: This section consists of restaurants, mobile food shops and street food and holds a significant importance in the tourism value chain. This section is one of the liveliest sections in the industry where there is a significant amount of communication that takes place and a separate culture is born. Significantly similar to the previous two sub sections, the only female employment within the survey sample can be seen in the restaurant subsection (18%) while mobile food shops and street food sections show no female representation at all. Being doubtful towards the female's capacity, finding it difficult to hire women with social and life skills, unavailability of proper training and guidance are among the reasons given by business owners as reasons for lack of female participation in this particular section.

Services: The services section in the survey contains of Ayurveda medicine, handicrafts, public levorotary, spa and salon, supermarkets or grocery and vehicle parking. Of these four sub-sections, female representation is found at the following rates;

- Ayurveda medicine - 36%
- Spa and salon - 48%
- Handicraft section 7% and
- Supermarkets 6%.

The remaining two sections stay shut to any female representation.

One of the most significant findings of this section shows that the only time female representation manages to stand almost equal to male representation is in the spa and salon section (48%), but the employment record shows that from that only 30 percent are locally hired women and other 70 percent are female workers from other areas. The statements show that the social stigma towards women being employed in sectors similar to spas, salons or any fields of treatment for an e.g.: massagers, have a significant push towards women not working in their own areas. These social factors have pushed women to get employment in other areas, which are not close to their hometowns which gives them a sense of relief of knowing they will not be judged by the people whom they are close to. Services around spas and salons are highly sexualized due to fact that these services are mostly provided to tourists and there is a significant tendency towards "Sex Tourism".

Transportation: The transportation section is 100 percent dominated by males and within the survey sample there was not a single female employee in any of the sub sections, from rental bicycles to safari jeeps. Transport jobs can be well paid, rewarding and can offer long term career opportunities. Unfortunately, and unacceptably few women are employed in these jobs and the data in this survey shows it clearly. The gender stereotypes, gender discrimination in hiring and screening, company/work culture or personal safety and exposure to violent behavior can be stated as a few reasons for the high gender imbalance in employee representation in the transportation sector.

Constraints – Where are the women in the tourism sector: The definition provided by UNWTO of women empowerment is their gaining power and control over their own lives. Looking at this particular survey it shows women are both horizontal and vertical segregated. Earning lower wages than their peers, even doing the same work and one main reason to increase this gender pay gap is the level of education. Host enabling factors like less emphasis on formal education, training, skill building, language fluency (mainly English) and capacity building to sustain female employees. While women are relegated to lower-level positions, often associated with an extension of working household chores such as cleaning of spaces, kitchen, housekeepers etc. Women have fewer opportunities to be promoted due to gender stereotyping and discrimination and an exclusion of women from informal networks that contribute to gender segregation. Jobs in the industry are considered socially unsuitable for women, which is powered by gender stereotypes, on how women should behave, what jobs are better suited for them and that certain jobs need better capacity and capability and because they are women they are not capable of doing such jobs. These socially constructed ideas are keeping women from reaching their full potential while it works as a barrier for an industry of this nature of welcoming women.

Women are underrepresented as social entrepreneurs, and there are a smaller number of female start-ups. Even when they own businesses, they find it harder to have access to credit, there are no female-oriented loan programmes or financial aid services directed towards women specifically.

Women look for flexibility because tourism requires long working hours, work in shifts, at night, on Saturdays and Sundays. These conditions complicate work-life balance. The search for flexibility is another factor that leads to inequality. Workplace violence remains a barrier for women to enter the tourism sector, especially sub sectors such as transportation. The ILO has addressed the issue of violence in the workplace and for decade it has advised policies and programmes to eliminate sex discrimination at work. The ILO policy framework on gender-based violence is guided by the Declaration of Fundamental Rights and Principals at Work (1998) as well as by the Declaration on Social Justice for a Fair Globalization (2008). Even though the policy framework remains large in the bigger picture, the practice of such policies can hardly be found at the ground level. Despite the general law there are no significant laws which can be applied for the protection of women. According to the tourist police there haven’t been any reports on workplace violence or discrimination for the last 5 years. The lack of awareness on such policies as well as insufficient encouragement from the authorities to bring women into the industry contribute heavily towards this gender imbalance.

Social attitudes towards women in the industry as well as women's attitude towards the opportunities in the tourism industry still remain heavily within the negative spectrum. Jobs in the industry are still associated with criminal activities (Drug use, Alcohol use, prostitution), are are thought to be not safe (working with foreign people, sexual harassment, violent behavior, working in a male dominant sector) by many. Families choose not to send the female member to jobs in the tourism industry due to such negative attitudes and women themselves due to lack of understanding and information available find it difficult to navigate through.

4.11 Analysis of Organization and Framework

Value adding business models should be embraced with the basic conditions needed to put in place for developing tourism in a given region. This includes creating efficient organizational structures and designing efficient processes and interfaces between actors and agencies. The better stakeholders cooperate within the value creation system, the more efficiently they coordinate their activities, and the more effective the system will be as a whole.

The following description is given for the analysis of organizational framework at the micro level-operation of sectors and sub sectors.

4.11.1 Micro and Meso-level Analysis

Indicator	Impediments or enablers	Impacts
Mandate of the attraction management agency	Sigiriya: CCF is one of the principal heritage management institutions in the country. It manages a number of heritage projects in the country. According to the Sigiriya Project Manager, they have taken the responsibility of development and site management beyond their defined tasks and responsibilities. However, their role is confined basically into site management but not the stakeholder coordination for tourism development. Even for other stakeholders (Department of Tourism and	No required investments were done in a timely manner for better tourism development

Indicator	Impediments or enablers	Impacts
	Central Province Guide Association) confirm the gap of stakeholder coordination which is beyond the CCF as per their mandate. The absence of a stakeholder coordination system is a key issue of organizational framework.	
	Minneriya national park:	
	Water management of Minneriya tank is not integrated with the wildlife and wildlife tourism (during the period of time in which the tank is used to store irrigation water excessively). The Irrigation authorities are concerned only with paddy cultivation, but not the existence of tourism and the livelihoods of tourism communities.	Wildlife safari is blocked during the peak season to curb overcrowding.
	Pidurangala viewpoint: Pidurangala is managed by the Pidurangala Temple in isolation of other attractions. However, there is no sizable contribution for visitor facility development.	Visitor arrival is discouraged Visitor safety is not assured
	Dambulla cave temple: The management of the attraction is done by the temple. However, they have developed reasonable facilities for visitors. Also, the temple contributes to the CCF financially for conservation of cave paintings and other heritages.	Visitor arrival is encouraged and conservation is supported due to healthy collaboration.
Registrations, permissions and certification	Registration of tourism service providers is a mechanism to regulate services and service standards. However, a large part of small-scale operators – guesthouses, homestays and restaurants are not	Overall standards of homestay, guesthouse and villas – operated by local operators have not improved

Indicator	Impediments or enablers	Impacts
	registered under SLTDA standards due to several reasons. Registration procedure is long and discouraging Actors perceive that registration is only an additional cost which doesn't make benefits for the operations. Small scale operators could not meet the registration requirements easily. Once service is registered, service provider has official commitment to pay 1% tax. The effort of the SLTDA is not strong enough to encourage service providers to go for registration and promote visitors to rely more on certified service providers. Also, visitors are not aware of certified services. In a situation where both certified and uncertified services are recognized equally by visitors, the certified service provider is discouraged from renew the registration for the next period. This has happened for tuktuk drivers and guides. Tourism service registration thus has not been able to enhance the service quality to a larger extend.	Customer satisfaction is not achieved. This, value creation of local operating sub sectors remains low.
Sector Associations	Sector associations are available for guesthouses and homestays, larger hotels, site guides, provincial guides and safari jeeps operators and tuktuk drivers and they are active in coordination with agencies and other decision-making authorities/positions. Some associations maintain contact with other stakeholders for business advantages. For example, the safari jeep association closely collaborates with hotels to cater to hotel guests with	Sustainable tourism is encouraged Act as coordinating bodies among service providers and stakeholders

Indicator	Impediments or enablers	Impacts
	safari services. They also have collectively agreed upon a consistent fee structure. Once service providers are organized into associations, they are motivated into thinking of their sustainability. In contrast, individual operates don't have a bigger commitment on sustainability.	Support overall quality improvement
Presence of provincial actors at national tourism management	Revision of the national tourism act is commenced which aims structural changes of the tourism regulation. This revision would be an opportunity to strengthen the participation of provincial level stakeholders and roles in tourism development. Provincial authorities of tourism are not recognized properly assigning duties of regulation, capacity building of stakeholders and implementation of development programs. The human resource strength of national tourism stakeholders would not be adequate to operate ground level activities. However, important services required by the actors at regional level are not delivered effectively. It is required to create an opportunity for provincial level private sector stakeholders in national tourism management forums.	Lesser-known attractions are not promoted well. Actors of tourism sub sectors are less benefited
Policies, regulations or procedures	Opening time of Sigiriya fortress does not fit in with the visitors' preference such as experiencing the sunrise and sunset from the viewpoint of Sigiriya Site guides and assistants: service of site guides and assistants is not regulated properly. Visitor is not aware of charges until the walk is finished. Visitors (foreign)	

Indicator	Impediments or enablers	Impacts
	interpret this is as desperation. It is the duty of the site management to share correct information and terms of services with visitors at the point of ticketing. Signages are important for all visitors to understand the site and map different locations, access roads, entrance and exit etc. However, available signages are not sufficient to meet visitor requirements and comfort. Regulating and standardization of conduct of vendors: According to some visitor reviews, the actions of some souvenir vendors is a harassment. Vendors may have better marketing strategies than what they now follow – insisting that visitors buy souvenirs. Agencies need to support vendors with trainings and counselling to carry out their marketing and sales in a more attractive and meaningful way. Online payments: An online payment option is much more convenient for visitors, but it is not available now.	
Resource allocation for conservation and tourism development	Enough budgetary allocations are not available with CCF or the Provincial Department of Tourism for tourism development projects. A sizable fraction of the attraction's income needs to be allocated for the development of the attraction, visitors' facilities and environmental conservations.	Physical facilities are poor Required conservations would be delayed
Security and safety of visitors/actors/attractions	There is a high-risk potential of wildlife interactions for visitors who walk along unsafe roads.	Position as unsafe destination

Indicator	Impediments or enablers	Impacts
	Some resettlements of residents living within the buffer zone of Sigiriya are remaining. Uncontrolled human actions – living, commercial activities and agriculture are threat for the attraction.	Life and safety of visitors is under threat Attractions are under threat
	Some of the informal accommodation services are unsafe for visitors in terms of sexual harassments. There is no strong mechanism to control such bad conduct of service providers or staff. The tourism police may need to have a tracking system of service providers and an effective communication system between tourism police and visitors in case of threat of mis conduct.	

4.11.2 Macro Level Analysis

Collaboration and Coordination: Almost all the respondent stakeholders highlighted the shortcomings and inadequacy in collaboration and coordination at national, provincial, and local levels for tourism development and operation. The absence of an appropriate and responsible organizational structure for the development and management of tourism led to ignoring the value creation system at micro, meso and macro levels. This also has disrupted the participating actors and agencies at the first level and second level of tourism value.

The ambiguous participation of actors and agencies in the tourism value chain prevents a clear understanding of sectors and subsectors to identify their roles and responsibilities in the tourism value chain. Unclear identification of sectors and subsectors causes confusion and conflicts in the functioning of macro-level basic elements and micro-level ground practitioners and operators. Eventually, the functioning of micro-level value creation causes overwhelming negative impacts on macro-level basic elements that consist of environment, economy and socio-culture.

Registration, Permission and Certification: Functional failure and unclear identification of actors and agencies in different levels of the value creation system restrains the formal registration process. Actors and agencies continue the participation and make businesses without any formal registration. They have not felt the need to seek permission to carry on their business activities and offering of various services. Figure 13, shows the level of satisfaction in different aspects related to their businesses. The majority of the actors responded as neither happy nor unhappy on dissatisfied. The unhappiness of business operators on key business functions given in Figure 13, cornered them to ignore the registration, permission and certification of their business. This made a majority of the micro-level functional value creation system to remain in an informal state without any formal registration, permission or accreditation.

Policies and Regulations: When the role of meso-level and macrolevel functional value creation systems are missing, micro level value creation system does not bother about policies and regulations. Recalling the incidents of resettling the community and regulating activities of service providers, the project manager of Sigiriya stated that "since the community resettlement, maintaining the quality-of-service providers had become a critical challenge for tourism development with proper policies and regulation. Although tourism is not part of my main duties and responsibilities, I intervened and supported the community resettlement and that too, at a necessary measure to regulate and monitor the service providers at Sigiriya". The absence of clear policies and regulation curtail appropriate functioning value creation systems at micro, meso and macro level. The Director, Department of Tourism Central Province also explained the challenges and barriers in the intervention over tourism development due to the lack of clear-cut policies and regulations to carry on development process.

Hence, the delay or absence in setting and executing of appropriate policies and regulations, led to 96 respondents to term these inappropriate policies and regulations. 121 respondents stated unfair treatment due to the failure of policies and regulations. Further, another 30 respondents intensified not effective policies and regulations and 22 respondents stated staff at meso-level policy making organization are inefficient. Another set of 22 respondents state the very time-consuming issues in problem solving processes while the rest of the 6 respondents stated that role is not played by the meso-level policy making organizations. Here, many respondents pointed out the unavailability of active participation from SLTDA as national tourist organization implements the policies and regulates the tourism operations in Sigiriya. Subsequently the absence or failure in timely intervention of meso-level value creation system crippled down the value creation systems to develop the tourism value chain in Sigiriya.

Inter organizational coordination: Usually tourism is an industry that amalgamates multi sectors and institutions to provide tourist products and services. Hence, inter-organizational coordination is essential to ensure the holistic experience and value of tourism products. Particularly Sigiriya, as it is a site that embraces a large number of sectors, institutions and entities in the execution of tourism. However, according to the project manager, one of the most acute challenges is coordination among the different institutions and sectors to reach a common standard to implement certain proposals and activities. He also could present an example of an ongoing French adventure tour group in and around Sigiriya in collaboration with SLTDA and Aliya Resort. Difficulties of inter organizational coordination was addressed by many respondents from different entities such as hoteliers' association, tourist guides associations, small guest houses and homestay association etc. The absence of first and second levels in the value chain through micro, meso and macro levels value creations system has infringed upon the inter-organizational coordination in Sigiriya. Eventually existing disorganized and irregular functioning of tourism value chain Sigiriya disintegrated and fragmented tourism operations.

4.12 Environmental Analysis

Environmental analysis for Sigiriya was conducted by using the process and guidance contained in the 2017 Life Cycle Initiative overarching methodological framework for hotspots analysis. Hotspot analysis is a process which accounts for a significant proportion of the negative environmental impact in the value chain. The value chain includes the entire sequence of activities or parties that provide or receive value in the form of products or services (e.g., suppliers, outsourced workers, contractors).
Environmental impacts analysis aimed to address the following aspects;

- Is there any potential to promote conservation or sustainable use of biodiversity?
- Is there any potential to promote climate change mitigation and adaptation?
- Is there any potential to improve holistic waste management?
- What is the potential for improving other elements of the natural environment?

Eventually stakeholders of the tourism sector are required to respond to the effect of;

- Climate change
- Natural and man- made disasters
- Unsustainable biodiversity
- Natural resource management by promoting alternative resource use that will improve the efficiency in production and consumption while supporting reform and modernization of the environmental management systems and protecting our biodiversity based on the findings of this analysis.

4.12.1 Hotspot Analysis

The rapid assimilation and analysis of a range of information sources, including lifecycle-based studies, market, and scientific research, expert opinion and stakeholder concerns was carried out. The outputs from this analysis can then be used to identify and prioritize potential actions around the most significant economic, environmental and social sustainability impacts or benefits associated with a specific country, city, industry sector, organization, product portfolio, product category or individual product or service. Hotspots analysis is often used as a pre-cursor to developing more detailed or granular sustainability information. It is being used to filter and distill often large volumes of information to identify and prioritize hotspots for further investigation or action by industry, governments and other stakeholders. This may include piloting or implementing actions on the basis of the findings from the hotspots analysis.

Summary of Environmental Indicators and Findings

Environmental pressure/ Impact	Value chain stage	Key Environmental Indicator	Baseline Data/ Benchmark	Findings
GHG	Transportation	Total no. of vehicles by type (Emission of GHGs)	Ambient Air quality standards (CEA/NBRO) GHG emission from a typical passenger vehicle is 4.6MT of CO2 per year	Total of 159,800 trips in the transport sector (10,325 motor coaches, 25,575 three wheelers 24,300 vans and 33,375 bikes) Total CO2 emission is 7,301 MT. GHG emission from a typical passenger

				vehicle (coaches & vans) used in tourism (Sigiriya) is about 0.097mt (96.73 tones) of CO2 per year
Energy	Accommodation F&B	Total energy used by the tourism sector	Energy Consumption standards/ SLSEA	Total annual energy consumption is 9,802,730.10 kwh (9,803 MWh) Sri Lanka's per capita electricity consumption was 626 kWh/person in 2017
Water	Accommodation F&B	Total volume of water used by the accommodation actors	Water footprint (ISO 14046)	Annual water usage of accommodation and F&B sectors is 1,011,438 m3
Solid waste	Accommodation F&B	Volume of solid waste generated by hotels & other accommodation places	National standards of waste generation and disposals	Annual food waste generated by accommodation sector of destination is 302,483kg Annual food waste generation of hotel sector in Sigiriya is 72,000 MT. This is nearly 0.02% of the total hotel sector food waste. Total volume of plastic waste generated is 242,853 kg/year
Wastewater	Accommodation F&B	- Volume of wastewater generated (% of	Wastewater effluent	Total annual wastewater

	total water used), - Volume of wastewater treated (% of total wastewater generated) - Discharge to the environment – treated water/untreated water	national standards	generation 708,007 m3

4.12.2 GHG Emission

As per the proposed methodology, the transportation sector was selected as a significant sub sector in GHG emission. The number of vehicles and trips were estimated for different categories of vehicles which are being used in the transportation sector based on some assumptions and primary data collected.

About 26 percent of the total energy use accounts for the transportation sector (2016). In 2000, the transport sector share was 23 percent. The per capita transport energy consumption was 128 kilotons of oil equivalent (ktoe)/person in 2016. It was 91 ktoe/person in 2000. Out of all fossil fuels used in the country, 39% was used for transport in 2016, when it was 45% in 2000.

Sri Lanka possessed 6.3 million vehicles by end of 2015, distributed as 3.3 million (52%) of motorcycles, 01 million (16%) three-wheelers, 672,000 motor cars (11%) and other vehicles (21%). The category of 'private vehicles (cars, motorcycles, and three-wheelers) has doubled from 2008 to 2015 indicating a higher affordability of private transport and a clear shift from public transport to private transport. This transformation contributes significantly to the increase of GHG emission to the environment. (Sri Lanka Energy Sector Assessment, Strategy, and Road Map)

As per the estimation, the Sigiriya tourism destination accommodates a total of 159,800 vehicles (trips) from four main categories – coaches, vans, three wheelers and bikes.

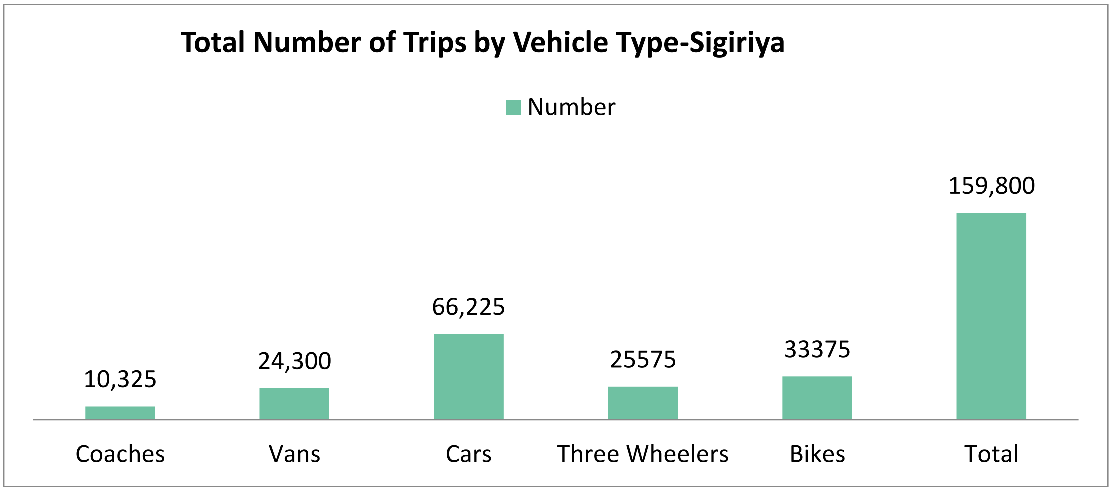


Figure 32 Total number of trips by vehicle types

Source: Author estimated data

Table 13 Calculation of Green House Gas (GHG) Emission

	Coach	Van	Car	Three-wheeler	Bike	Jeep	Total
Estimated %	7	15	41	16	21		100
Estimated number of trips	10,325	24,300	66,225	25,575	33,375		159.800
Passenger per trip	30	10	4	3	2		
Average mileage per trip	300	300	300	120	120		0
Total millage (km)	3097500	7290000	19867500	3069000	4005000	972,000	38,854,846
Fuel consumption (km/l)	6	10	15	20	50	10	
Petrol usage (l)	0	0	1324500	153450	80100	97,200	1,682,923
Diesel usage (l)	516250	729000	0	0	0		1,245,250
CO_2 in MTs	1,388.49	1,960.69	3,109.86	360.29	188.07	228.22	7,300.60
Percentage (%)	19.22	26.96	42.80	4.94	2.78	3.30	100.0
CO_2 emission per visitor (kg)	4.48	13.14	15.08	7.24	3.61		

CO_2 emission per trip (kg)	134.47	131.38	60.30	21.72	7.23

Source: Author estimated data

Note: CO_2 Emissions from a gallon of gasoline: 8,887 grams CO_2/ gallon
CO_2 Emissions from a gallon of diesel: 10,180 grams CO_2/ gallon
(https://www.epa.gov/greenvehicles/greenhouse-gas-emissions-typical-passenger-vehicle)
1 gallon=3.785 liter

The total annual CO_2 emission is 7,300 metric tons due to petroleum fuel powered 5 types of vehicles used for transportation of tourists to the Sigiriya destination. The highest percentage of CO_2 emission records from the cars and its contribution is 44.8% while vans contribute 26.96% to the total CO_2 emission. The highest amount CO_2 emission per trip accounts from coaches (134.47kg) while recording the least per visitor CO_2 emission (except bikes).

It indicates that the use of coaches for transportation of tourists with a higher number of visitors will reduce GHG emission to the lowest among all types of vehicles.

A typical passenger vehicle emits about 4.6 metric tons of carbon dioxide per year. This number can vary based on a vehicle's fuel, fuel economy and the number of miles driven per year. GHG emission from a typical passenger vehicle (coaches & vans) in this study area is about **0.097MT (96.73 tones) of CO_2** per year and the amount is significantly less compared to the benchmark value (GHG emission from a typical passenger vehicle is **4.6MT of CO_2** per year).

As per the real time assessment of the most polluting cities ranking, Kandy city in the Central province is at the 3rd place (US AQI 63) reflecting the level of air pollution. The closest main town of Sigiriya destination is Dambulla and it is at the 8th place (US AQI 12) in the city ranking in Sri Lanka.

On a global scale, Sri Lanka was ranked as the 25th dirtiest country out of a total of 98.

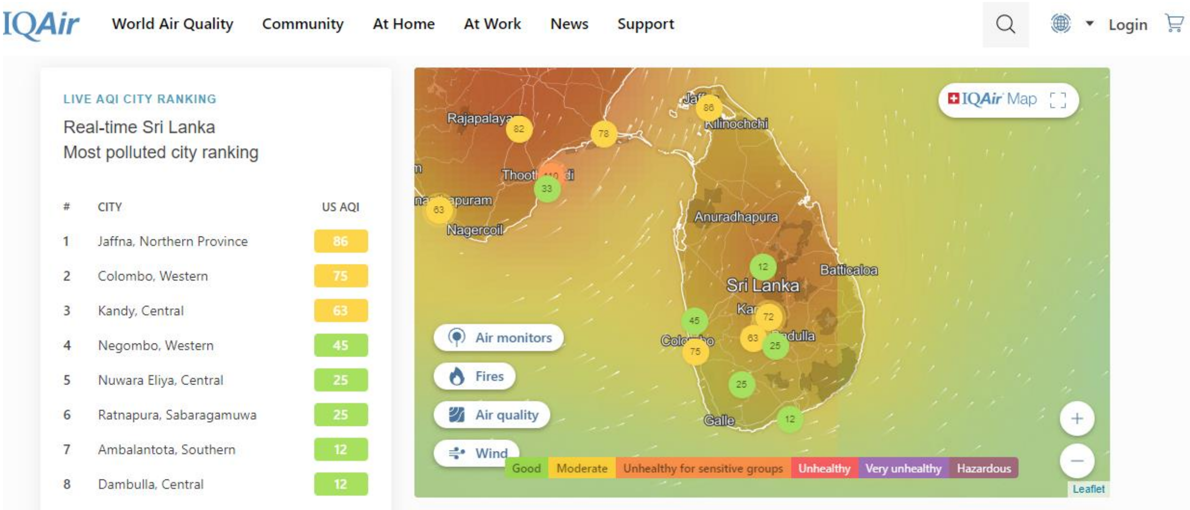


Figure 33 Real-Time Sri Lanka’s most polluted cities ranking
Source: https://www.iqair.com

Climate Change and GHG Emission: Tourism Climate change is one of the most serious threats to society, the economy, and the environment has been an issue of international concern for decades. The Inter-Governmental Panel on Climate Change (IPCC) has reported that warming of the global climate system is “unequivocal” and that it is “very likely” that anthropogenic (human-made) greenhouse gases (GHG) have caused most of the observed global temperature rise since the middle of the 20th Century. Ambitious emissions reduction targets for developed countries and an effective framework that addresses the needs of developing countries are required.

As climate defines the length and quality of tourism seasons, affects tourism operations, and influences environmental conditions that both attract and deter visitors, the sector is considered to be highly climate sensitive. The effects of a changing climate will have considerable impacts on tourism and travel businesses.

Tourism and travel also contribute to climate change through the emission of GHG. Tourism and travel accounts approximately for 5 percent of global carbon dioxide emission. The transport of tourists to and within destinations accounts for 75 percent of all carbon dioxide emissions by the tourism sector, with air travel making up about 40 percent of the total. It has also been predicted that, under a business-as-usual scenario, carbon dioxide emissions from the global tourism sector will increase by 130 percent by 2035. Most of this growth was attributed to air travel. This projected growth in emissions from tourism is inconsistent with the deep emission reductions needed to address climate change (UNWTO, 2009, pp. 5–6).

Reducing emissions is important for the long-term, however the tourism and travel sector also needs to adapt to the impacts of climate change in the short and medium-term. Across destinations and locations, the quality, quantity, and accuracy of climate projection data varies. This could limit or affect how nations, especially developing countries, adapt to climate change. The WMO, in collaboration with UNWTO, established an Expert Team on Climate and Tourism. Their role was to improve the application of information in the tourism sector. In 2007, UNWTO launched a Climate and Tourism Information Exchange Service to enable tourism stakeholder's access to research and data. The organization has developed and disseminated technical publications addressing climate change impacts and adaptation responses. The most important of these are "Climate Change and Tourism Responding to Global Challenges" in support of the Davos Declaration, and "Climate Change Adaptation and Mitigation in the Tourism Sector: Frameworks, Tools and Practices" in coordination with the University of Oxford, the WMO, and UNEP released in 2008 (UNWTO, 2008, p. 3)

4.12.3 Energy Use

In general electricity use accommodates around 85% of the total energy use in the hotel sector. The balance energy requirement is provided by LP gas and furnace oil. Only electricity use has been taken for this analysis based on its higher contribution to the total energy usage. However, it was adjusted for total energy use when it is compared with the benchmarks.

Total electricity use was calculated based on the monthly electricity bill of each sub sector. The analysis aimed at calculating the per night per room energy consumption of each subcategory to compare averages with benchmark energy consumptions of the hotel sector.

Table 14 Calculation of electricity consumption in accommodation sector

Items	Hotels	Boutique Hotels & Guest Houses	Homestay	Restaurants	Total
Establishments		187	220	56	

No. of room nights					
Total annual usage Kwh (Units)		1,054,250	1,397,000	289,000	
Sub-sector's share -%	58.5	34.2	4.3	3.0	100
Per room electricity consumption Kwh/room/night	74.0	22.58	20.55	-	-
Benchmark	90.7	137.6	59.8	-	-

Source: Author estimated data

Benchmarks have been established by SEA for different industry sectors including hotels as given below.

Table 15 Electricity consumption benchmarks in accommodation sector

Category	Benchmark (Kwh/room night) at 62% occupancy	Destination average
Five Star	162.6	
Four Star	107.4	
Three Star	96.5	74.0
Two Star	65.2	
One Star	69.1	
Boutique	160.4	22.58
Unclassified	71.1	
Supplementary	71.1	Guesthouses - Homestay - 20.55

Source: Author estimated data

Compared to the national benchmarks, destination averages stand at satisfactory level. Destination average for homestay sub sector is reasonably low compared to the benchmark. Homestay sub sector is characterized by minimum facilities (air conditioning, refrigerator, hot water etc.) which would lead low consumption of electricity.

Over 50% of the total electricity consumption accounts for large hotel sector in the destination. It is important to encourage large hotel sector for renewable energy options and use of efficient designs, equipment and best practices to reduce electricity usage.

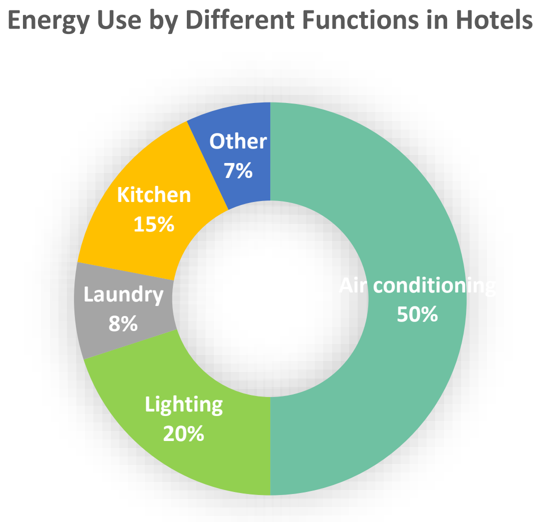


Figure 34 Energy use in hotel by different functions

Source: Ensuring sustainability in Sri Lanka's hotel industry 2013

It was observed that only one entity out of 16 samples (only in unclassified accommodation sector) uses solar energy coupled with grid electricity. However, the hotel segment has initiated the use of solar power as an alternative energy source. They are keen on alternative, low-cost energy sources to minimize their high electricity costs. Small scale operators have no cost driven motivation to move towards the use of renewable energy compared to the larger entities. Further, reducing the total energy consumption using renewable energy sources such as solar power will be helpful to go for green concept/certification and also to include in the classified hotel categories.

4.12.4 Water Consumption

The tourism industry is heavily dependent on the natural environment and its resources, and growth of the industry creates additional pressure on the environment – specifically on natural water resources. It has found that water consumption, per guest, in a hotel can be around three times that of the average consumption of a person staying at home. In this scenario, the relationship between the tourism industry and water resources becomes a key area of concern for sustainable tourism development. Sri Lanka has witnessed a significant growth in the arrival of tourists from all around the world, with more investments taking place in the hotel sector to cater to this demand. Consequently, the demand for water resources has also increased in this process. It is, therefore, imperative that the hotel sector pays adequate attention to the importance of water conservation.

Analysis of water consumption was done for accommodation and F&B sectors.

Estimation of annual water consumption by different sub sectors was done based on monthly water bills of users who receive their water supply from the National Water Supply and Drainage Board (NWSDB). The majority of entities – about 92% use ground water from their own sources mainly bore wells. The following table presents water consumption, distribution of water consumption among actors and per room water use.

Table 16 Water consumption in accommodation sector

Sub sector	Average water usage per month	No of entities	Annual Water usage	Share of annual water usage	Water usage per night per room	Bench Mark
Hotels			31,937.50	6%	1.26	1.26
Boutique hotels and Guest houses	242	115	334,105.26	65%	1.01	1.05
Home Stay	128	52	79,560.00	16%	1.06	0.28
Restaurant	169	33	66,825.00	13%		
Total			512,427.76	100%		

Source: Author estimated data

65% of the total water consumption accounts for boutique hotels and guest houses. The lowest consumer is classified hotels. Homestay and restaurant sub sectors consumes 16% and 13% respectively. There is no bigger variation among per room water consumptions by sub sectors.

Except homestay, the other two sectors stand equal or below the benchmark level of water consumption. For homestays actual consumption level is quite high compared to the benchmark level. This would happen because the number of persons per room in homestay is higher for some cases.

Studies have revealed the distribution of water consumption among different functions of a hotel. Guest room is the largest consumer of water followed by kitchen, public toilets and laundry. Understanding of the distribution is also important for operators to find out solutions of water conservation.

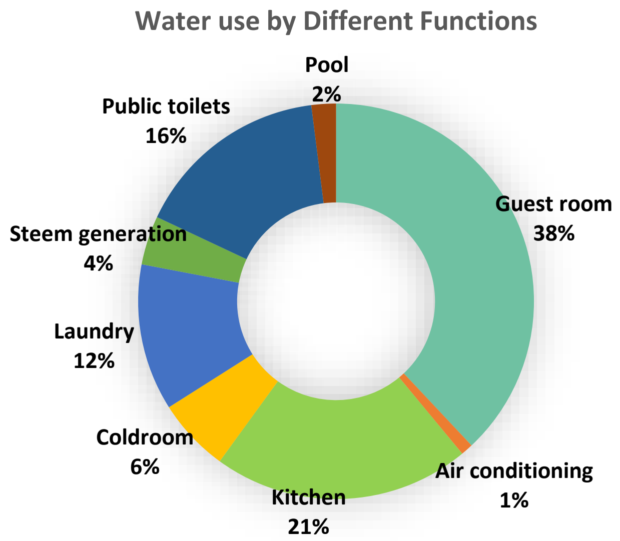


Figure 35 Use by different functions

Source: Ensuring sustainability in Sri Lanka's hotel industry 2013

Water Footprint: Water footprint can refer to an individual person or consumer, a commodity, a business or a nation. It is an indicator that considers both direct and indirect water use. For example, the water footprint of a commodity is the total volume of freshwater used to produce the commodity throughout various steps of the production chain. Similarly, the water footprint of a consumer is defined as the total volume of freshwater that is used to produce goods and services consumed by a person over a period of time.

The water footprint is a multi-dimensional indicator of water use: it includes

1. Geographical dimension.
2. Time dimension.
3. Both the direct and indirect water use of producing a commodity, or by a consumer or a producer.
4. Another dimension of water footprint is its "colour":

'Green water footprint' refers to the use of rainwater in the production of a commodity; 'Blue water footprint' refers to the use of fresh water from rivers or groundwater aquifers; and 'Grey water footprint' refers to the volume of water needed to assimilate the pollutants that enter rivers or groundwater as a result of the production of a commodity. Water footprint differs from the traditional measure of 'water withdrawal'. First, it reflects the blue water use, and the green and grey water uses. **Therefore, the concept of water footprint offers a more comprehensive look at how production of a commodity affects water resources than what we often measure as water use.**

To calculate the WF, it aggregates the water used in each stage of the production process. To do this calculation it needs to take into account the volume of inputs used in each process and calculate how much water is used to produce these inputs.

This analysis has not included calculation of water footprint value due to some limitations, but it is important to consider it and further studies would need this indicator for a comprehensive analysis.

4.12.5 Solid Waste Generation

Solid waste, especially municipal solid waste, is a growing problem in urban Sri Lanka due to the absence of proper solid waste management systems. The rate of generation of solid waste is increasing with the growth of the population, technological development, and changing lifestyles. Currently, the total municipal solid waste generation is around 6400 metric tons per day for all of Sri Lanka, of which only 3770 metric tons per day is effectively collected.

Solid waste from a typical hotel consists of restaurant food waste, office paper, bottles, plastic, aluminum beverage containers, and cardboard boxes. Although this waste is diverse, hotels typically generate a consistent type of waste. The majority is paper and food waste, with lesser amounts metal, plastic, and glass. This profile is similar to the standard municipal solid waste from residential communities.

In a typical hotel, the breakup of solid waste generation by type is food and non-recyclables, (46.2 percent), followed by paper (25.3 percent), cardboard (11.7 percent), plastic (6.7 percent), glass (5.6 percent), and metal (4.5 percent). Variations in waste composition from one hotel to another can be attributed to differences in scope of operations and target markets.

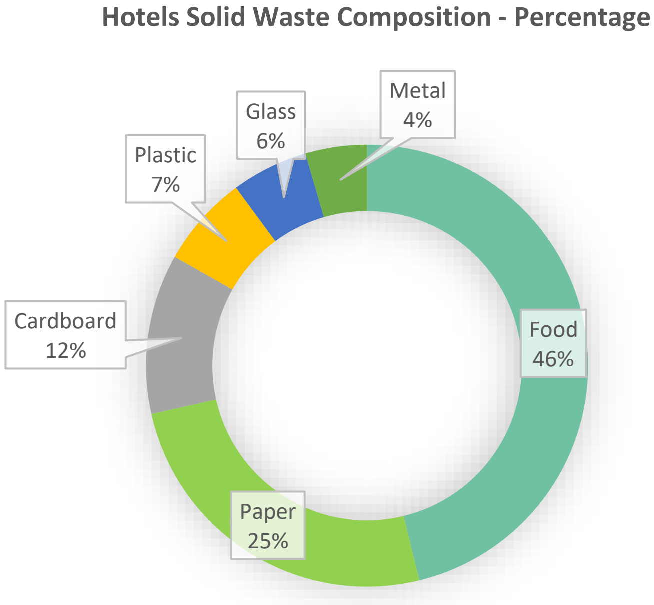


Figure 36 Hotel solid waste composition (%)

Source: Ensuring sustainability in Sri Lanka's hotel industry 2013

4.12.6 Food Waste

It was observed that food waste generation does not have a bigger variation among sub sectors. But sub sectors that accommodate larger number of visitors are important to reduce total food waste in the destination. Hotels, Guesthouses and Restaurant are three sub sectors generating higher quantities of food waste.

Table 17 generation in accommodation sector

Sub sector	Visitor Arrivals	Daily food waste per head	Annual food waste (kg)	Waste per unit per annum kg	Percentage of sub sector
Hotels	383,250	0.3	114,975	16,663	38%
Boutique hotels	42,705	0.3	12,812	3,050	4%
Guest houses	138,700	0.3	41,610	523	14%
Homestay	68,620	0.3	20,586	298	7%
Restaurant	375,000	0.3	112,500	6,696	37%
Total	**1,008,275**		**302,483**		

Source: Author estimated data

Annual national hotel sector food waste	72,000 (MT)
As a fraction of the national Food Waste	0.42%

Food waste has a direct link with water footprint. It reflects an idea about the water footprint in tourism sector by using the following facts.

In developing countries,

- Average calorie intake per person is around 2,700 Kcal/day
- Producing food for one day for one person requires 2050l of water
- Hence, if someone disposes 2,700 Kcal/day of equal foods as waste, it is equal to 2050l of water
- Therefore, it is important to minimize food waste generation to save water resources.

4.12.7 Plastic Waste

Plastic waste generation by sub sectors is calculated as follows. Hotel is the largest sub-sector accounting about 79% of total annual plastic waste generation. All the other sub-sectors contribute only to 20% of the total annual plastic waste.

Table 18 Plastic waste generation in the core value chain

Sector	Sub Sector	Total annual plastic waste	Percentage to the total plastic
Accommodation	Hotel	191,625	79%
	Guest house	23,850	10%
	Homestay	20,700	9%
	Boutique hotel	630	0%
Accommodation sector - Total		236,805	
Food and beverages	Restaurant	6,048	2%
Food and beverages Total		6,048	
Grand Total		**242,853**	

Source: Author estimated data

4.12.8 Wastewater

The responsible management of wastewater is also an important factor in sustainable water use. However, entities poorly maintain records of water use and wastewater generation in their different functions. The following estimation is done based on KII information. Assumption is that 70% of the total water use in hotels accounts as wastewater while part of the wastewater is collected in septic tanks with toilet waste. Treatable wastewater quantity is calculated as follows.

Table 19 Wastewater generation in the core value chain

Sub sector	Average water usage per month	No of entities	Annual Water usage	Total wastewater	Black wastewater	Treatable wastewater	Percentage
Hotels	39,690		476,280	333,396	4,855	266,717	47%
Boutique hotel and Guest houses	23,383	115	280,590	196,413	50,784	157,131	28%
Home Stay	11,750	52	141,000	98,700	12,093	78,960	14%
Restaurant	9,464	33	113,568	79,498	10,157	63,598	11%
	84,287		1,011,438	708,007	77,889	346,923	100%

Source: Author estimated data

Almost all classified hotels use wastewater treatment methods. Again, the threat of wastewater is serious in the guesthouses and boutique hotel sub sectors for two reasons; they contribute to nearly 42 percent of the total wastewater generation and no or very a small number of entities use treatment methods. A majority of them use open or septic tanks for wastewater disposal. The ere-use of wastewater is not practiced which creates a bigger impact on natural water resources other than the environmental damage done by wastewater.

4.12.9 Best Environmental Management Practices

Aspects	Best Practice measures
Wastewater treatment	-Ensure WWTP of sufficient capacity to cope with peak loads during the tourist season (e.g., modular design) -Install sufficient treatment technology (secondary or tertiary level) to avoid water pollution incidents
Water provision	-Resource protection and sustainable abstraction plans Demand reduction measures (variable tariffs, incentives for water-efficient fittings, taxes etc.) Measures to increase infiltration and percolation to ground water (reducing impermeable surfaces, green roofs, etc.
Waste management	-Avoid landfills -Implement a user-friendly collection and recycling service -Implement anaerobic digestion for organic waste
Transport	-Ensure that the public transport system has the capacity to cope with peak tourist numbers (e.g., increase busses etc., during tourist season -Ensure public transport routing provides a convenient service to all major tourist locations -Promote daily and weekly integrated (tourist) tickets to encourage use of public transport -Provide green infrastructure and encourage mobility by foot, and bike (car free zones, bicycle lanes, public bike schemes

4.13 Gap Analysis

4.13.1 Quality tourism: gap between present and expected diversified experience

The Tourism Value Chain model embraces a value-adding process to enhance the quality of tourism through competitive advantages. This comprises innovation, service quality and guarantees to ensure the overall quality of tourism through the tourism value chain. This shows how several sources of competitive advantage can be derived from the ability to create and effectively manage local networks able to guarantee the local governance, to push the attractiveness of the area and to differentiate it from competitors (Mottironi & Corigliano: 2012). The competitiveness of products and services depend on their innovation and quality levels on their capacity. This determines destination attractiveness through tourism products and services.

In new economies driven by creativity, knowledge and technological development, innovation is considered to be the key to achieving successful competitiveness. Nurturing the unique quality of a tourist destination is determined by diverse stakeholders' integration in TVC to enhance the satisfaction of tourists. Innovative tourism products are often associated with authenticity. In this spectrum, innovation means circumscribing the focus on what is unique and authentic in the local culture, as well as on the means to present these experiences to visitors (Bohlin et al., 2016; Sanz-Ibáñez & Clavé, 2016). Creating and co-creating promotes knowledge transfer between local stakeholders and communities, thus increasing mutual skills to deal with competition, access to new niche markets and therefore leading to tourists' loyalty (Booyens & Rogerson, 2015). Hence, the success of each tourism service provider in meeting customer demand determines the customer satisfaction and customer loyalty that leads to a competitive advantage (Hennig-Thurau & Hansen: 2013; Oh & Kim: 2017; Sheth: 2001; Wathigo: 2016; Yuksel: 2004). There is no competitiveness without quality, meaning that tourists may feel attracted and motivated to go to certain destinations, but territories' ability to consolidate a rentable search volume, from an economic point of view, also depends on the quality of products and services provided to the costumer.

In this context, there are some important topics to consider regarding the quality of tourism at Sigiriya, namely:

1. The sustainability of the Sigiriya brand in the long term depends on the quality of client service, products, suppliers and productive capacity.
2. (Nilsson, Eskilsson & Ek, 2010; Kiráľová, 2015)
3. the quality environment is a basic element to transform the historical landmark Sigiriya into a heritage tourism destination
4. The qualified and competent human capital is compulsory to ensure that Sigiriya will be a high-quality tourism destination
5. The level of innovation should be integrated with social values to ensure the product quality of tourism in Sigiriya

The above basic assumptions on high quality tourism in Sigiriya enables empirical investigation to categorize the findings under key quality criteria, present status, level of functional value creation and the prevailing gap in the value creation as given in Table 3 below.

Table 20 Gaps for quality tourism

	Key Quality Criteria	Present Status	Level of Functional Value Creation	Prevailing Gap in Value Creation
1	Rich in natural resources	Not over urbanized and contains biodiversity and a rich ecosystem	Macro	Poor sustainable capitalization through conservational tourism
2	Rich in heritage resources	Unique and devoid of destruction	Macro	Lack of value creation through sustainable capitalization of tangible and intangible heritage resources
3	Rich in cultural resources	Authentic and local, but being degraded	Macro	Absence of appropriate incorporation in tourism value chain through cultural tourism
4	The local transportation service is efficient	Considerably good	Micro	Absence of formally managed and appropriately skilled services
5	It has a good climate	Good but being changed	Macro	Inadequate intervention to control climate change
6	It is a clean place	Unclean and uncared for	Meso	Absence of DMO in maintaining the physical environment
7	Our traditional festivities are unique	Not well explored and recognized	Meso	Lack of exploration on events and festival to exhibit for tourists by DMO
8	Welcoming people	Traditional hospitality	Macro	Absence of public awareness and community capacity building

	Key Quality Criteria	Present Status	Level of Functional Value Creation	Prevailing Gap in Value Creation
9	There are designated places for recreation activities	Many but well explored and established	Meso	Poor identification of potential site and unplanned integration of local resources
10	They have attractive aesthetic and anthropologic resources	Many but well explored and incorporated	Macro	Ignorance and inappropriate commodification of aesthetic and anthropologic values
11	Sigiriya is an exclusive tourist destination to the county	Mostly visited and popular	Macro	Inadequate value creation and dissatisfaction of the visitors
12	It is a good shopping place	Admirable craftsmanship and local products but spoiled and devalued	Micro	Non local intervention and inauthentic products merchandizing ruin the market for local products
13	Diversity and good quality accommodation services	Poorly defined and demarcated	Micro	Lack of competency and capacity service providers and operators
14	The tourist sites are well signalized	Good signaling can be seen inside Sigiriya, but signboards are not available all over the destination	Meso	CCF carries out their duties well but the presence of the DMO is insufficient for signaling/signage
15	Distinct models and designing of tours	More enroute visitors and partial orbit	Meso/Micro	Absence of full orbit, regional, multi-loop, fly drive tours to make it a tourist hub
16	The quality of dining, cuisine, food, diverse gastronomy makes it a distinct destination	Below average on the wayside	Micro	Lack of competency and capacity on F&B while the absence proper business coaching to guide the operators and service providers

	Key Quality Criteria	Present Status	Level of Functional Value Creation	Prevailing Gap in Value Creation
17	Good in health and well-being tourism	Only two or three places good quality locations	Micro/Meso	Duplication and deterioration of genuine health and ayurvedic tourism
19	Local livelihoods and other agricultural goods are found as tourist attractions	Introduced, but not well explored and exhibited	Meso/Micro	Poor merging and integration between tourism and traditional sectors
20	Good connection routes to and from the airports	Satisfactory level	Meso/Macro	No directly connected roadway, railway and airway with airport
21	A diverse array of entertainment options	Unmatched and misguided	Micro	Lack of exploration and identification of local and sustainable or environment and culture friendly entertainment
22	Sufficient, critically necessary infrastructure to enable the practice of tourism	Inadequate and unplanned	Meso	Absence of suitable and sustainably planned infrastructure development to cover entire destination region
23	There are various viewpoints and fascinating landscapes	Explored few but need to explore and exhibit	Macro	Absence of mapping and include in the travel map with navigation
24	There are good networks and data bases of tourism agents in the country	Conventional marketing and communication	Meso	Absence of vibrant network and marketing campaign to promote lesser-known places and new alternative tourism products
25	Safe and secure locations for holidaying	Ensured by police	Meso	Absence of social safety net and guaranteed security through mutual understanding of guest and host

4.13.2 Institutional Framework: the gap between institutional structure and the transformation process of the tourism value chain

Prolonged, persistent industrial and institutional barriers were also brought forward by the respondents to scrutinize the challenges of actors and agencies to get into the TVC. The traditional impression of people over the employment and economic opportunity in tourism is unstable and often dominated by non-local tour operators and tourist guides. This has created a fear psychosis among the youth and vulnerable local community and other stakeholders when they are supposed to select their careers on economic opportunities in Tourism. This happens due to the absence of an appropriate institutional structure and irregular power distribution among the stakeholders. The Project Manager of Sigiriya pointed out many gaps in understanding between the private sector and public sector while mutual understanding should be created at every level instead. “Here, I am only involved in managing the site. All the decisions are made at the archaeological department”.

As local stakeholders are disintegrated and fragmented, they find it very difficult to enter into a formal system and structure, since they are in a more informal structure. When explaining the institutional disintegration Community Eco-Cultural Foundation, Diyakapilla stated “When we approach Laksala they do not purchase locally made handicrafts; instead, they purchase only from their registered suppliers”. This is further worsened with remuneration and wages. One of the hoteliers stated “I think the salaries on offer are not attractive enough. They have other opportunities to earn a higher income”. The formal tourism value chain has led to building a contradictory image among the local stakeholders. This intensifies the need of establishing an appropriate institutional framework and network to enlighten the actors and agencies to create value at functional micro, meso and macro-level through formal channels to join the tourism value chain. This inevitably demands the role of DMO to bridge all three levels of the functional value creation system. In light of the transformation process, the DMO is responsible for promoting the tourism destination’s identity of Sigiriya. They also play a major role in

I. planning of local tourism;
II. supporting business initiatives;
III. promoting the tourism destination and enhance networking;
IV. coordinating between public and private sectors;

V. attracting funds, business, target markets, and specialized knowledge in the region under their supervision.

For these reasons, it is important to understand the significance of the institutional structure when developing a tourism value chain and how this will be reflected in the sustainability of Sigiriya which has a broad vision of sustainable development through natural and cultural capital.

However, the prevailing disintegrated and fragmented tourism operation resulted in many outgrowths that infringed the execution of a sustainable tourism value chain. As per the above analysis, the tourism value chain in Sigiriya struggles with many gaps due to the absence of an appropriate organizational structure as shown in the following table.

Table 21 Gaps in the institutional structure

	Key Quality Criteria	Present Status	Level of Functional Value Creation	Prevailing Gap in Value Creation
1	Common goal of sustainable development	Individual performance of an operational organization	Macro	Absence of proper coordination and absence of moral obligation
2	Conservation and preservation of the historically built environment	Prevalent role of CCF in the site of Sigiriya	Macro	Committed by CCF but other stakeholders are not integrated
3	Conservation of biodiversity and ecosystem	Not a significant component of prevailing tourism	Macro	Biodiversity and ecosystem are integrated with existing tourism
4	Preservation of Socio-Culture	Informally attracted a small number of tourists	Macro	Socio-culture is not integrated formally
5	Community empowerment	Inconsistent and informal benefit sharing	Meso	Absence of community-based tourism
6	Local economic development	Least contribution. This is an informal sector of tourism	Meso	Absence of capitalization process of local human and physical capital

	Key Quality Criteria	Present Status	Level of Functional Value Creation	Prevailing Gap in Value Creation
7	Women empowerment	More participation informally. Very low skilled participation is seen formally	Meso/Micro	Absence of inclusive growth approach
8	Youth empowerment	Least skilled formal participation and more unskilled informal participation	Meso/Micro	Absence of inclusive growth
9	Generation of business opportunities	Less innovation and over depending on conventional businesses	Meso/Micro	Lack of micro level value creation and absence of capacity building
10	Role of public sector	Visible participation of CCF. Participation of other public sector organizations is invisible	Macro/Meso	Absence of policy revision and delegation of authority
11	Role of private sector	Incompetent and non-local participation	Meso	Poor incentives and motivation for local community
12	Role of CBTO/Civil Organizations	Inadequate and invisible in formal structure	Meso	Poor recognition and community integration
13	Networking and communication	Depend on conventional communication methods and searching for network	Micro	Lack of capacity building and absence of bridging programs
14	Formalizing of industry and suppliers	Very weak formalization process	Meso	Absence of business coaching
15	Synergy in physical infrastructure development and environmental quality management	Lack of participation of community and local operators	Meso	Absence of DMO to collaborate and perform

	Key Quality Criteria	Present Status	Level of Functional Value Creation	Prevailing Gap in Value Creation
16	Synergy in human capacity building	Irregular and insufficient effort	Meso	Absence of Hotel School or any formal training center
17	Merging traditional sector with tourism	Informally explored and incepted but formally established	Micro/Meso	Absence of alternative tourism programs to integrate traditional sectors
19	Backward and forward linkages	Informally sound very good but formally not recognized well	Meso/Micro	Absence of formal participation of indirect suppliers/service providers
20	Public Private Partnership (PPP) or Public, Private Community Partnership (PPCP)	Invisible but informally connected with CCF	Meso/Micro	Absence of DMO to collaborate and integrate the public and private sectors with the community

4.13.3 Existing Gaps in Marketing and Communication

Based on the study findings, this section provides a marketing gap analysis on servicing the existing traditional segment and anticipating emerging global trend. The table explains the gaps in the various 8Ps of marketing.

Table 22 Gaps in the marketing

Category	Description	Gaps
Product	Tourism experiences, facilities and services, souvenirs	Overall lack of experience A failure to diversify the heritage site's offerings, such as ticket, scheduling, experience, storytelling, and so on. Issues with the Sigiriya heritage site's quality and standards, including as entrance, ticketing counters, ticket pricing, entrance timings, cafeteria, site illumination, sanitary facilities, storytelling safety and security. Lack of recreational and entertainment opportunities

		Harassments A lack of quality and variety in souvenirs
Price	Willingness to pay	There is potential for expansion once the quality improves with a larger number of guests (However, in the long run, it is necessary to focus on transmitting to a more upscale tourist destination with capacity management.)
Promotion	Advertisements, Social Media, Events and partnerships	No effective branding Inadequate use of social media Fewer events organized (international events specifically minimal)
Place	Travel Agents & Intermediaries, Booking Engines, supply chain	There is no market mechanism for souvenir producers. No mechanism in place to produce and distribute many local products to hospitality establishments.
People	Employees in tourism establishments, tour guides, three-wheeler drivers	Lack of manpower Low youth motivation to enter the field Lack of training facilities (hotel schools, vocational training centers etc.) Problems with three-wheeler drivers Lower female involvement (hospitality, souvenir production etc) Less usage of digital media by the stakeholders
Processes	Itinerates, bookings	Absence of an integrated tourist map. No coordinated effort by intermediatory personnel/institutions. There is no integration of neighboring experiences to boost staying in the region and making it a hub.
Positioning		Many people do not know the Sigiriya Heritage Site as must-see place. Several unregistered tourist enterprises (home stays, eating places and street food vendors) There is no effective branding.
Physical Evidence	Look and feel	There are not very many opportunities. Everywhere, the "Sigiriya Heritage" character is not portrayed.

4.13.4 Exclusivity and inclusivity: gap in exclusive tourism practices and inclusive tourism value chain

When tourism is planned and developed to anticipate the holistic desires and expectations of tourists, the destinations and resorts are planned and developed exclusively. These destinations and tourism environments are usually termed "tourism enclaves", which are driven by non-local entities and governed by a neo-liberal market economy. Tourism in Sigiriya also has undergone a similar enclave and exclusive tourism to cater needs and wants of conventional tourism majority services and facilities are owned and operated by external forces. However, while being externally driven they are strongly based on certain kinds of local planning and governance modes of the tourism industry to support local and regional development. As tourism enclaves contain all or a vast majority of the available facilities, operations, and services needed for tourists and their enjoyment, local development, environment conservation, socio-cultural preservation, community empowerment and economic opportunities for locals are prevalently neglected. Consequently, local access to enclaves may be controlled or even prevented and can be limited to working purposes only.

In Sigiriya, such enclaves separate tourism and tourists from local realities. **Especially tourism planning and development are dominated by these external forces and actors**. This deprives the local community and other stakeholders through benefit sharing and power distribution within tourism industry. This has **increased the power inequalities and unsustainable practices** that can have serious negative impacts and trade-offs for local social and economic processes. These negative impacts and trade-offs can hinder the possibilities of using the tourism industry as a vehicle for development and a contributor to poverty alleviation. This crippled the attainment of the United Nations Sustainable Development Goals (SDGs) of the 2030 Agenda for Sustainable Development. These exclusive tourism spaces are created and transformed in a way that has resulted in a disconnect with local realities and inherent features of Sigiriya.

Sigiriya is a popular destination located in a rural landscape of Sri Lanka with a high percentage of socio-economically deprive local communities, along with a sensitive natural and cultural environment. The negative impacts of exclusive tourism such as inequal power and benefit distribution, socio-cultural and environmental degradation, devastate the prospects of sustainability in the region. Unimaginable marginalization of neoliberal exclusive tourism is to be replaced with inclusive tourism as a valuable addition to the family of terms (e.g., responsible tourism, social tourism, peace through tourism, pro-poor tourism, accessible tourism) which constitute this field of scholarship. Inclusive tourism means the 'transformative tourism in which marginalized groups are engaged in ethical production or consumption of tourism and the sharing of its benefits'. Sustainable development seeks to balance the conservation of environment, the promotion of economic growth, and the maintenance of social and cultural integrity, both in the present and in the future. Inclusive tourism is focused on marginalized or vulnerable communities that are deprived of a good economy and social justice due to their vulnerability. In Sigiriya too, the inequal distribution of economic benefits, unlawful power structure of the industry, and contextual barrier for disabled and unskilled people to enter into the industry has led to marginalize the people.

Impediments	Impacts
Dominant groups and power structure Functional levels of community engagements are controlled by the tour guides and travel agents or inbound tour operators. Most of the scenarios confirm the passive participation of the marginalized community, even though they embrace the socio-cultural capital, which is misused by the exclusive tourism operators. The vulnerability of the people is capitalized on by the non-locally driven tourism forces. Although the local communities are owners and custodians of the tourism products, they are not given authority or power to fix the price or do the business as they wish. Often prices are fixed by the tourist guide or tour operators and they direct local operators as well.	Local value creation is low
Informal participation of local people As the tourism in Sigiriya is still dominated by the conventional enclave resorts, rural women and youth are not considered as competent or capable manpower to enter in to the enclave tourism resorts, which consider only the holistic satisfaction of the tourists. This lead the majority of the rural women and youth to join the industry informally through direct and indirect channels.	Poor participation of rural women and youth in formal tourism. Local value creation is low
Tourism opportunities There is increasing demand and a growing trend for a rural and rustic community lifestyle, livelihood and grass root level culture of the community, creating various tourism opportunities such as local cultural tours, livelihood exploration and cuisine in and around Sigiriya. Yet, emerging community-based tourism activities are not formally absorbed into the tourism value chain.	Local communities are not included in the formal tourism value.

Negative perception of stakeholders and society Access to the exclusive tourism disqualify disabled people since disability is considered a disqualification to join the industry to cater the enclave tourism. This led to further marginalizing the people with disabilities. It is important to consider where disability and tourism fit within the broader sustainability agenda, as well as the need for accessibility and inclusion in tourism. In Sigiriya, people with disabilities are a historically excluded and socially marginalized group that lack power and voice. They have faced, and continue to face, barriers to their full and effective participation and inclusion in the community and in cultural life, whether that be the arts, sports or recreation. While tourism is considered an integral part of modern life, for people with disabilities, accessible or inclusive tourism encourage and intensify the participation of such people.	Tourism benefits are not distributed fairly among stakeholders and owners of the culture and heritage

The following analysis is given for identification of present status and impact on the value creation.

Table 23 Impact of key quality criterion

	Key Quality Criteria	Present Status	Level of Functional Value Creation	Prevailing Gap in Value Creation
1	Locals access to tourism	Enclave tourism driven by nonlocals	Micro/Meso	Absence of integration and incorporation of local stakeholders
2	Benefit sharing of tourism	Least benefits shared by nonlocal operators	Micro/meso	Passive participation and benefits decided by nonlocals
3	Ownership of tourism products/service	Majority of the large businesses are by nonlocals	Micro/Meso	Vulnerability and disabilities prevent ownership
4	Local identity and representation in tourism	Tourist focused supplies and services don’t require local identity	Macro/Meso	Socio-culture is not integrated formally
5	Community empowerment	Inconsistent and informal benefit sharing	Meso/micro	Absence of community-based tourism
6	Power distribution in operation	Dominated and decisions are made by non-locals	Micro/Meso	Absence of capitalization process of local human and physical capital

7	Women empowerment	More participation informally and least unskilled participation formally	Meso/Micro	Absence of inclusive tourism
8	Youth empowerment	Least skilled formal participation and more unskilled informal participation	Meso/Micro	Absence of inclusive tourism
9	Participation of people with disabilities	Exclusive tourism more focused on quality and productivity not inclusivity	Meso/Micro	Absence of inclusive tourism
10	Competency and capability of rural women, youth and PWDs.	Social stigma in recognizing rural people	Micro/Meso	Absence of formal awareness and capacity building programmes

4.13.5 Gaps in Women Participation: Where are the women in the tourism sector

The definition provided by UNWTO of women empowerment is their gaining power and control over their own lives. Looking at this particular survey shows women are both horizontally and vertically segregated. They earn lower wages than their peers, even while doing the same work. One main reason to increase this gender pay gap is the level of education. Host enabling factors such as low emphasis on formal education, training, skill-building, language fluency (mainly English) and capacity building to sustain female employees. While women are relegated to lower-level positions, often associated with an extension of work household chores such as cleaning of spaces, kitchen, housekeepers etc. Women have fewer opportunities to be promoted due to gender stereotyping and discrimination and the exclusion of women from informal networks that contribute to gender segregation.

Women are underrepresented as social entrepreneurs, and there are a smaller number of female start-ups. Even when they own businesses, they find it harder to access to credit, there are no female-oriented loan programs or financial aid services directed to women specifically.

Impediments	Impact
Industry nature	
Women look for flexibility because tourism requires long working hours, working in shifts, at night, on Saturdays and Sundays. These conditions complicate work-life balance. Search for flexibility is another factor that leads to inequality	Female participation is low in the tourism workforce
Social acceptance and attitude	
Jobs in the industry are considered socially unsuitable for women, which is powered by gender stereotypes, on how women should behave, what jobs are better suited for women and that certain jobs need better capacity and capability and because they are women, they are not capable of doing such jobs. These socially constructed ideas are keeping women from reaching their full potential while working as a barrier for the industry to welcoming women into its workforce. Social attitude towards women in the industry as well as women's attitude towards the opportunities in the tourism industry still remain heavily negative. Jobs in the industry are still considered, associated with criminal activities (drug use, alcohol use, prostitution), and are considered not safe (working with foreign people, sexual harassment, violent behaviour, working in a male dominant sector) by many. Families choose not to send female members to jobs in the tourism industry due to these negative attitudes. Meanwhile, women themselves, due to lack of understanding and information available, find it difficult to navigate through.	Female participation is low in tourism workforce
Workplace violence	
Workplace violence remains a barrier for women to enter the tourism sector, especially sub-sectors such as transportation, accommodation. ILO has addressed the issue of violence of the workplace and for decades it has advised policies and programmes to eliminate sex discrimination in work. The ILO policy framework on gender-based violence is guided by the Declaration of Fundamental Rights and Principals at Work (1998) as well as by the Declaration on Social Justice for a Fair Globalization (2008). Even though the policy	Discouraged female in joining the tourism services.

framework remains large in the bigger picture, the practice of such policies can hardly be found at the ground level. Despite the general law there are no **significant laws which can be applied for the protection of women**. Though such violence is not reported to the tourist police, there could be unreported cases in the tourism of Sigiriya.

Lack of awareness on such policies as well as insufficient encouragement from the authorities to bring women into the industry contribute heavily towards the gender imbalance.

SECTION V

STRATEGIC RECOMMENDATIONS

	Recommendation/intervention	Issue addressed	Responsible organization
1	Policies and planning		
1.1	Formulate and implement national tourism policy setting for inclusive and sustainable TVC	No common goal for the subsectors, agencies, communities and vulnerable groups on conservation of natural, cultural and historically built environment. Lack of integrated program/s to offer high quality tourism experience by available utilizing resources	Ministry of Tourism SLTDA
1.1	Establish a Destination Management Organization (DMO) / Responsible Tourism Councils for Sigiriya	Poor coordination among national level, provincial level and local authorities to offer high quality tourism experience Poor coordination, management and regulation of subsectors towards quality of tourism	Department of Tourism - CP
1.3	Implement an integrated mid-term development plan for the destination with consultation and participation of all key stakeholders	Poor participation of sectors and sub sectors in the policy planning process which results in many disagreements, implementation hardships, poor participation of sub sectors in the implementation stage and poor goal achievements.	Tourism Department - CP
1.4	Training and Capacity Building of functional level value chain actors including supply chain actors - Enhancing health and wellbeing tourism, - Entertainment and local amusement activities,	Poor quality of services offered by local actors and lack of service packages to expand local actors' market Safety and security of both visitors and service providers	Department of Tourism - CP

	Recommendation/intervention	Issue addressed	Responsible organization
	- Gastronomic experience of dining and cuisine, - Safety and security, - Quality improvement of the souvenir industry, - ICT capacity of actors, - Customer care, - Language trainings and - tour guide services (including licensing)		
1.5	Implement proper regulations to ensure the quality of tourism. Increase the number of SLTDA registered service providers through a collaborative program with the Provincial Tourism Department	Lack of regulation of related business. Poor tendency for SLTDA registration	SLTDA
1.6	Map all the sites with tourism potential in Dambulla (Ibbankattuwa, Kaludiyapokuna, Namal Uyana, Phopham's arboretum, museums) for - A better tourism experience package for the visitor including entertainment. - Better and safer infrastructure at the sites	Poor integration of sites that are potent to be developed as tourism sites.	CCF
1.7	Make Sigiriya a part of the national tourism strategy	Poor integration of Sigiriya in the national tourism strategy	SLTDA

	Recommendation/intervention	Issue addressed	Responsible organization
1.5	Promote smart destination and digitalization process aiming lesser-known destinations (Ibbankattuwa, Kaludiyapokuna, Nalmal Uyana, Phopham's arboretum, museums)	Lack of competitiveness in the global market due to the absence of smart destination initiatives and virtual products.	SLTDA
2	**Institutional development**		
2.1	Establish a Tourism Consultative Committee for the Department of Tourism with members of - Department of forests - Department of Wildlife - CCF - Department of Archaeology - Local authorities - Divisional Secretariat and the private sector stakeholders (actors & associations)	Poor regional level participation at the national level policy making and planning of capacity building, designing and development of infrastructure, incentives, marketing and promotion, quality management, and research and development Poor coordination between the national and functional level Poor management of value chain actors	Department of Tourism - CP
2.2	Strengthen the technical capacity of provincial tourism department Include a technical director position in the carder of the provincial tourism department for oversight the tourism	Better authority is required to govern the regional tourism industry as it is significant at a national tourism level	Provincial council
2.3	Change the composition of the national tourism consultative committee to bring the representation of provincial tourism governance, the private sector and academic institutions	Poor integration of the sectors, sub sectors, supporting NGOs, government authorities	Ministry of Tourism
3	**Capacity building**		
3.1	Capacity development of the staff of the Provincial Tourism Department and destination management	Lack of knowledge and capacity of firms who are supporting the industry in the areas of ICT, registration and certification, control and regulations, environmental impacts and conservation, customer care etc.	Tourism Department – CP

	Recommendation/intervention	Issue addressed	Responsible organization
	agencies (Department of Forests, Department of Wildlife, CCF, Department of Archaeology Local authorities, Divisional Secretariat) in the areas of - ICT - Registration and certification - Control and regulations - Environmental impact and Conservation - Customer care - Exposure visits and experience sharing - Resource Efficiency Measures		
3.2	Technical capacity building of tourism training institutes	Lack of specialized vocational training institutes, vocational training modules, qualified trainers.	SLTDA
3.3	Develop supply chains of tourism through - Encouraging local maintenance service providers in the transport and accommodation sectors. Promoting skills development on maintenance service and start-ups. - Promoting local supply of dairy and meat products by establishing local sales outlets and by linking with activities such as village tours	Poor supply of local dairy, poultry products to the accommodation, food and beverages sectors	Tourism Department - CP
4	**Environmental impacts**		
4.1	Establish sustainable public transport systems to reduce GHG emission in tourism	Currently the per capita GHG emission in the transport sector is significantly high. One key reason behind this is that absence of high-	Ministry of Environment

	Recommendation/intervention	Issue addressed	Responsible organization
		quality public transportation system connecting main cities and the destination	
4.2	Promote environmentally friendly best practices among visitors and actors	Poor awareness of visitors on negative environmental impact by GHG, water use, energy use and waste generation	Tourism Department - CP
4.3	Launch incentive and technical assistance schemes for service providers to change their traditional systems into eco-friendly systems	Lack of initiatives in the sub sectors, authorities and communities on greening the destination	Ministry of Tourism
5	**Women and youth participation**		
5.1	Increase women and youth enrollment for vocational trainings of - Hotel housekeeping - Food and beverages - Front office - Bakery - Language trainings Conduct career guidance and attitudinal changing programs for secondary education systems	Poor participation of women in the TVEC sector	Tourism Department - CP
5.2	Develop training infrastructure	Poor vocational training facilities in the area	SLTDA
5.3	Promote business start-ups for women and youth in the sub sectors of rent a motorbike, rent a bicycle, homestay, handicrafts, ayurveda medicines, saloon, spice garden, village tours, travel consultations, and batik manufacturing. conducting technical trainings, providing business finance support and business management trainings	Lack of an entrepreneurship empowerment environment for women and youth.	Tourism Department – CP

	Recommendation/intervention	Issue addressed	Responsible organization
5.4	Encourage employers to increase women participation in tourism through - Incentive schemes - Awareness creation - Equal pay for women - Work setting better for women - Gender mainstreaming work throughout the organization, and pay attention to gender representation, gender budgeting and equal opportunities - Encouraging female applicants by introducing a representation cap for the jobs, creating flexible working hours, part time work and making jobs more secured. - Designing and implementing re-skilled programs for the staff employees in tourist establishments to encourage them in career development. - Better recognition for the products made by women's enterprises	Poor mind set of employers towards hiring women employees. Therefore, the participation of women remains at low level	Tourism Department - CP

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ANNEXURE

Annex 01
Definitions of Sectors and Subsectors of Tourism

As given under the Section 48 (4) of the Tourism Act No 38 of 2005 the following sub sector definitions are used to identify sectors and sub sectors of the tourism value chain.

Hotels:
Hotel facilities usually include en-suite bathrooms, air conditioning or climate control, telephone facilities, an alarm clock, a television, and internet connectivity (free, or to be purchased.) The rooms may be equipped with a mini-bar, a kettle, and tea and coffee making facilities. Larger hotels may provide a number of additional guest facilities such as a restaurant, a swimming pool, and childcare services. Many hotels also offer conference and social function services.

Boutique hotels/villas:
Boutique hotels and villas are usually luxurious, personalized, or quirky hotels environments. They differentiate themselves from the larger chain and branded hotels and motels by providing personalized accommodation, with superior services, focusing on ambiance and privacy. They are also known as "design hotels" or "lifestyle hotels."

Guest houses:
Guest Houses are small establishments with 05 or more letting bedrooms. They often cater to Free Independent Travelers (FITs) and offer only basic amenities and facilities compared to hotels.

Home stay units/Bungalow/rented homes and apartments:
Home stays are becoming popular providers of tourist accommodation. This is the practice of renting out a room or residence of a local resident. The terms of home stays may vary and are usually agreed upon in advance between the host and the guest.

Service apartments:
Service apartments offer similar services to hotels, but they provide mini-apartment style units, rather than stand-alone rooms. They utilize a booking system similar to a hotel and offer amenities including a kitchenette.

Ayurveda hotels:

Ayurveda is a type of indigenous traditional herbal medicine practiced in Sri Lanka. These establishments offer treatments that may include massages, steam baths, acupuncture, meditation, and yoga, under the guidance of an Ayurvedic Physician.

Hostel accommodations:
A Hostel accommodation is a budget-oriented, shared-room or "dormitory" accommodation for individual travellers (commonly backpackers) or groups for short-term stays with common areas and facilities.

Themed accommodations & value-added activities:
A Tourist Accommodation facility developed according to a “theme” based on environmental and/or cultural features capitalized with design, fixtures and materials, highlighting the “rheme” enabling the guest to see, feel and experience the “theme.”

Camping sites:
A camping and/or caravanning site is defined as a demarcated area of land specifically developed to provide sleeping accommodation either in tents or in caravans and also common amenities for living, in an environment bordering or encircling outstanding natural or cultural attractions. These can be located either in a restricted area (e.g. wildlife, nature and forest reserves or buffer zones or sacred areas) or in a non-restricted area.

Eco lodge:
Eco lodges is a visitor accommodation facility meeting minimum standards, designed and custom built in pristine natural locations, often of significant ecological importance, having strong programs of conservation protecting the environment from pollution and degradation, using technologies to reduce energy consumption and waste, having ethical employment practices and strong measures to pass on tangible socio-economic benefits to the neighbouring local communities. Commonly used best practices by eco lodges “leave nothing but foot prints and take nothing but memories”.

Heritage tourist hotels Intangible culture is the principal motivation for travel, with tourists seeking to engage in new cultures and to experience the global variety of performing arts, handicrafts, rituals, and cuisines, a niche high-end market of tourists would prefer to stay in heritage enriched accommodation facilities during their travel.

As defined, A Heritage Tourist Hotel shall be located in a building declared under the Antiquities Ordinance No. 09 of 1940 or shall be in an ancient construction with Historical and Archaeological value which has been constructed prior to 1920 (not less than 100 years of age) which can be declared under the Antiquities (Amendment) Act No. 24 of 1988. The exterior of the building shall not be interfered with or modified from the original appearance. Any additions carried out shall be done in such a manner that the external appearance maintains the original architectural features as far as practically possible. After expansion and alterations, the newly built-up area shall not be more than 50% of the combined total built-up area (excluding swimming pools) of the new and old. The services provided to the guests shall reflect the type of service which prevailed during the era of the building.

Restaurants:
A restaurant prepares and serves food and drink to customers. Meals are generally served and consumed in-house, although a takeaway and delivery service could also be available. Restaurants vary in appearance and offerings. A wide variety of cuisines and service models are offered.

Guests could be served by waiters or obtain their food from the counter or serve in buffet style.

Spa and wellness centres:
An aura of tranquillity embraces you as you enter the precincts of an Ayurveda Health Centre. You are also advised on how to maintain your health and beauty. You are cleansed, exfoliated, massaged and wrapped in a rich herbal paste of flowers, bark, and leaves and rested, for juices to seep into your body and enrich your soul.

Almost all prescriptions used in curing are produced by raw materials found naturally and no artificial substances are used. These would come from the roots, stems, barks, leaves, flowers, seeds, fruits & nuts of many a plant. From the animals: milk, honey, pearls, musk, shells and from the earth: iron, gold, silver & copper are used.

A tourist is initiated to this great form of medication through Ayurvedic Health Centres, Health Spas and Wellness Centres they frequent while on tour on the island. Most of the treatments practiced in these centres are based on Ayurveda and in some centres Japanese, Chinese & Thai methods of therapy, as well as Aromatherapy.

Treatment is always administered under the guidance of an Ayurvedic medical practitioner or expert in spa method treatment. Combining the Ayurvedic form of medicine gives you not only relaxation of the mind and body, but will also treat the organs of the body to function properly through the administration of drugs using natural ingredients in relieving deep seated diseases as well as maintaining your good health.

Spice gardens:

Today spices are grown in spice gardens of Sri Lanka for export purposes and to be used medicinally and in Sri Lankan cuisine and also as agro-tourism projects.

Cinnamon that is grown in spice gardens of Sri Lanka has been a favourite spice since ancient times. The plant is native to spice gardens of Sri Lanka. The smell of cinnamon in spice gardens of Sri Lanka is the sweetest and most delicious.

Cardamom is popular in the Middle East and is one of the most valuable spice crops of spice gardens of Sri Lanka. Cardamom plants require a shaded environment.

The real secret of the spice gardens of Sri Lanka is the curry leaf tree. The aroma of the freshly picked leaves can spice up an entire curry dish. It is a scent that can be smelled all over Sri Lanka and India.

Tour guides (chauffeur/national guide/area guide/site guide):
SLTDA offers tourist guides, chauffeur tourist guides and travel agents a variety of training programmes to ascertain their competence at the job, and to maintain industry standards. The Sri Lankan Institute of Tourism and Hotel Management has been set up to equip young men and women in the multifaceted field of hospitality and travel.

Tourist friendly eating places:
An establishment with a minimum of 8 covers and a maximum of 39 covers that prepares and/or serves food, drink, and dessert to customers on the commercial operation.

The “eating places” which are taken into consideration here are the places that do not comply with gazetted registration guidelines for restaurants by SLTDA but similar places that cater to the domestic and foreign travellers mainly in touristic areas.

Grade A – For those places who got more than 75% at the final inspection

Grade B- For those places who got between 50% and 74% at the final

It is intended to implement the same Certification scheme in all tourism zones in the country and to give publicity to the logo of “Tourism Friendly Eating Places” in Local print and electronic media and in international magazines and websites.

Tourist shops:

Shops that are set up for tourism purposes are permitted to sell merchandise from a fixed location, such as a department store, small stores and via the postal system. Retailing may include subordinated services, such as delivery. Purchasers may be individuals or businesses

Travel agents (destination management companies):
Travel Agencies are retail business that sell travel-related products and services, particularly package tours to customers, on behalf of suppliers, such as airlines, car rentals, cruise lines, hotels, railways, sightseeing tours, and tour operators

In addition to dealing with ordinary tourists, most travel agencies have a separate department focused on arranging travel itineraries for business travellers. Certain travel agencies specialize in commercial and business travel. There are also travel agencies that serve as general sales agents for foreign travel companies, allowing them to have offices in countries other than where their headquarters are located. The staff at the SLTDA are always on hand to assist potential investors.

Water sports centre:
With endless white sandy beaches, Sri Lanka offers a wide range of adventure sports in Sri Lanka. Azure waters with a colourful variety of marine species and unceasing spotless beaches offer ample opportunities for adventure sports in Sri Lanka. The colourful corals invite you to take the plunge into the deep waters.

You can also see several ancient shipwrecks, caves & fascinating reef formations while engaging in scuba diving, one of the major Sri Lanka adventure sports.

Sheltering over 90 species of freshwater fish & 21 species of crabs, Sri Lanka offers a fascinating experience of fishing, one of the major adventure sports in Sri Lanka. Several quiet bays lined up with a variety of private villas along the south coast offer you an exciting & wonderful experience with a variety of opportunities for adventure sports in Sri Lanka.

Food court:
Food court, as a special catering service place, has its own unique attractive character where a very wide variety of cuisine is available in one location. The unique ambience, very different from a conventional restaurant, created in a food court will provide an experience where the gustatory and optic nerves simultaneously will allure you to linger on, even if one is not really hungry or too tired to sit through a full meal. That is the charm of a food court.

A food court is generally an indoor or outdoor plaza or common area within a facility that is contiguous with the counters of multiple food vendors and provides a common area for self-serve dining.

Destination event management companies (DEMC):

1.DESTINATION EVENTS are defined as planning, marketing, coordinating & executing the events by "Local Event Management Companies in Sri Lanka", whose participants can be both foreign & local visitors. The purpose of Destination Events is to enhance the attractiveness & competitiveness of Sri Lanka as a destination.

2. A VIRTUAL EVENT is one where individuals experience the event & its content online rather than gathering in-person.

3. HYBRID EVENTS are the events that take place in both a physical and virtual setting. This is achieved by broadcasting a conventional event online through techniques like live streaming, webinar broadcasting, or setting up a virtual space that mirrors the ongoing physical event. The ability of these events to cater to physical and remote audiences in a live event.

4. PHYSICAL EVENTS are the events take place in a physical setting where people meet at a physical location.

5. DESTINATION EVENT MANAGEMENT COMPANIES (DEMC) are the organizations that coordinate the entire process of a large, medium or small-scale event (physical, virtual or hybrid events) including planning, organizing, directing and managing people and other resources to execute a successful event in Sri Lanka.

Annex 02
Environmental Impacts of Tourism

Tourism causes a number of positive and negative economic, social, cultural and environmental impacts in Sri Lanka (Dowling, 2000) and they are well recorded and addressed by many authors (SLTDA, 2018; Handaragama, 2011; Mackee et al., 2007; Tisdell and Bandara, 2004; Aslam, 2004; Bandara 2003; Bruin and Nithiyanandam, 2000; Dowling, 2000; Gnanapala and Aslam, 2000; Samaranayake, 1998; Tantirigama, 1994; UNDP/ International Labour Organization - ILO, 1992). Usually, the decisions of tourism development and acceptance stands between negative and positive impacts. The existing negative image in conventional tourist sites tend to push the tourism into the hinterlands in the country. However, there are specific positive and negative impacts which critically affect the rural environment, economy and socio-culture of Sri Lanka.

Positive Environmental Impacts: The quality of natural landscapes and countryside determines the future tourism (Engles and Job.Hoben, 2005) despite being redesigned and modified. Since tourism raises the value for preserved and conserved natural attractions, in 1830 most of the sanctuaries were converted to National Parks (Buultjens et al., 2005) and opened for tourists. On one hand, tourism has raised awareness about environmental pollution, while on the other hand, stakeholders try to prevent and control environmental pollution in order to accommodate more tourism. For example, the 'Clean City and Green City' Campaign in Colombo focused on tourism development which enabled the city to upgrade (Obeysekera, 2011). These positive environmental impacts would be ignored by the rural communities, when they cannot overcome survival challenges through tourism.

Positive Economic Impacts: As tourism is recognized as an indirect export, earning foreign exchange is the primary objective of the tourism industry in Sri Lanka (Jayawikrama, 2000). In 2018 the tourism industry was able to generate Rs. Rs.711,961 million (US$ 4,380.6million) worth of foreign exchange and surpass a revenue of Rs. 598,143 million (US$ 3,924.9 million) in the previous year 2017 with 62.3% increase (SLTDA, 2018). The hike in foreign exchange earnings enabled the industry to reach the fifth rank and contribute 2.1% of total foreign exchange earnings (SLTDA, 2018). However, the prevailing conventional mass tourism prevents local product consumption and pushes back upon the major percentage of foreign exchange earning out of the country.

The tourism industry in Sri Lanka generates revenue for the government in many ways: selling entrance tickets at museums, the cultural triangle, botanical gardens, wildlife parks, zoological gardens; revenue from conferences and events at BMICH; the tourism development levy; earning of the tourism development authority and embarkation tax (SLTDA, 2018). In 2018, the revenue collected from the listed sources amounted to Rs.12,873.2 million, compared to Rs.11,767.6 million collected in the previous year. Out of the total revenue collected in 2018, the top three contributors were; Cultural Triangle Entrance Fees – Rs.4,200.1 million, Embarkation Taxes – Rs.2,824.9 million and the Wildlife Parks – Rs.2,138.4. The revenue earned from the Tourism Development Levy was 1,482.1 million while the Zoological Gardens, Botanical Gardens and BMICH also contributed considerable amounts, recording Rs.698.8 million, Rs.673.4 million & Rs. 464.8 million, respectively. The Government earns a substantial amount of income in addition to the above revenue as indirect taxes such as taxes from electricity, water, mail services and telecommunication, lease rentals etc.

Although revenue is collected through centralized systems and added to the national income, the prevailing system doesn't provide any revenue for local socio-economic development directly. In Sri Lanka a widely expected and accepted economic impact of tourism is the contribution to employment generation (Bruin and Nithiyanandam, 2000). In addition to direct employment, it provides a large number of indirect employment opportunities (Bandara, 2003) through its forward and backward linkages (Aslam, 2004). The total number of establishments covered in the 2018 survey was 3,926. The total number of employees in these establishments amounted to 169,003 as compared to 156,369 in 2017. This was an increase of 12,364 (8.07). Substantial increases were recorded in all categories of establishments. (SLTDA, 2018). However, poorly developed tourism value chains along with a lack of accessibility and inadequate capacity are the crucial barriers for the rural masses to find good jobs in the tourism industry. The Tourism Master Plan 1992 – 2001 was expected to develop and promote sustainable tourism in other parts of the country away from the coast (UNDP/WTO, 1993), but it is difficult to understand the impacts on regional development easily (Bruin and Nithiyanandam, 2000). Still, in locations such as Sigiriya, the rural sustainable development has not been integrated with the tourism industry sufficiently (Aslam, 2011).

Positive Socio-cultural Impacts: Tourism is the major source of intercultural contact (Dogan, 1989). Interacting and meeting of different people is supposed to improve the understanding of plurality and diversity of the world. However, as the enclaved tourism development discourages the participation and integration of local communities, the tourism industry has failed to improve the social harmony among the rural community in Sri Lanka (Handaragama, 2010). "An important item in the portmanteau of ideas and expectations carried by tourists to faraway places, is that one learns something about the host society" (Simpson, 1993:166). Experiencing the local socio-culture is a value addition to the foreigners to enrich their contended holidays in Sri Lanka. Conservation and preservation of archaeological and cultural monuments in Sri Lanka are supported by the tourism industry (Bandara, 2003). The socio-culture, customs, tradition and other anthropologic aspect etc. stand a crucial status in broadening the tourist holiday experience while helping the community to conserve and preserve the traditions and culture in addition to sustaining livelihoods. Yet, enclaved mass tourism has led to the imitation of native rural socio-culture (McCannel, 1973).

Negative Environmental Impacts: As coastal and urban based enclaved and conventional mass tourism resulted in land zoning and deforestation. Very large and useful lands have been divided into small potions which have deteriorated the land utility in Sri Lanka (Bandara 2003). The absence of planning and overcrowding claims severe environmental destruction (Buultjenns et al., 2005; Sullivan, 1995). In addition, Michael (2000) and Saleem, (1996) argue that the delay in planning, implementation and carrying out capacity management causes serious destruction of places such as Horton plains and Negombo. As the indirect and induced activities often increase the population and demand, a higher consumption of environment (Michael, 2000; Sullivan, 1995) is occurred. This encourages the urbanization of rural areas indirectly and leads to the deterioration of the countryside.

Negative Economic Impacts: As the tourism industry depends on the conventional mass tourism (Aslam, 2004; Bandara, 2003), it requires massive tourism amenities and accessibilities to cater to a large volume of tourists. In addition, the industry has to undergo many constraints and return a portion of its income as the remittance of foreign investment (Bruin and Nithiyanandam, 2000). Seasonality and fluctuation in tourism creates an unstable condition, which leads to job losses and inconsistent income for the host community in Sri Lanka (Bandara, 2003). Relying on unstable livelihoods has led the community to face survival problems and, increase the already prevalent dependency syndrome (Bruin and Nithiyanandam, 2000) over tourism. Agricultural and other native livelihoods have shifted to tourism centered livelihoods (Aslam 2004; Bandara 2003) due to the dependency on mass tourism (Tsung-Wei Lai, 2002).

Negative Socio-Cultural Impacts: As noted by Bruin and Nithiyanandam (2000:243) "Unfortunately, as long as the twin forces of the demonstration effect leading to imitation and even romanticization of the lifestyle and the 'culture' of the tourist". Over-depending and expanding of mass tourism overturned into a situation worse than that of the colonial period.

These demonstrations and imitations have affected the traditions, customs, social values, spiritual values, simplistic and authentic native lifestyles, peace and harmony in the society and law and order of the country (Dogan, 1989, Michael, 2000). Gradually, parental poverty, demonstration and imitation (Bruin and Nithiyanandam, 2000) impacts have misguided the youth (Handaragama, 2010) towards various corruptions and criminal offences. Aslam (2007) criticises the commodification of Kandyan dance (Figure: 3.18) while Simpson (1993:167) speaks of staging Low country dances (Mask dance) as “Anyone can respond at some level to dance, irrespective of its intended meaning; dances which heal become dances which entertain”. Enclaved tourist sites and packaged round tours are expected to satisfy tourists as their wish, at times and places convenient to them.

Annex 03
Modes of Tourism

Mings and McHugh (1992) identified four types of touring routes: The ‘‘direct route’’ itinerary took the most direct path to and from the destination; the ‘‘partial orbit’’ itinerary consisted of taking the most direct route to a large destination area on a touring loop in the area followed exactly the same route in both directions; the ‘‘full orbit’’ tour itinerary involves visiting a number of destinations with no overlap in the tour route; The ‘‘fly-drive’’ itinerary is similar to the partial orbit itinerary except that the mode of transport used to reach the touring area is different. Instead of driving to the regional destination, tourists fly, and then embark on an orbit tour. Further Lue, Crompton, and Fesenmaier (1993) focused their research on multi-destination trips that lead the tourists to embark on single-destination, direct-route trips. Four types of multi-destination itineraries were described; The ‘‘en-route’’ itinerary recognizes that individuals may make a number of short stops on their way to or from a main destination with possible detours to nearby destinations; The ‘‘base camp’’ model represents a further elaboration of the single-destination model that resembles a hub and spoke. Tourists base themselves in one main destination and then venture out from that destination in a series of short-day tours to nearby attractions and destinations: The ‘‘regional tour,’’ tourists travel to a destination region, but rather than basing themselves in one locale, they stop overnight in a number of places in a sequential pattern before returning home; The ‘‘trip-changing’’ pattern involves a multi-focus touring trip visiting a number of destinations without overlapping any leg of the trip.

Annex 04
Resource Efficiency Potentials

Implementation of resource efficiency initiatives in the Sri Lankan hotel industry is urgently needed to reduce dependency on fossil fuels and meet future demand for resources like energy, electricity and water. Various studies and initiatives indicate that there is potential to save around 20 percent of energy and 20 percent of water consumption and waste generation

Resource Efficiency Measures Taken by some Sri Lankan Hotels

Energy Conservation Measures

High and Medium Investment Measures

- Variable frequency drives to reduce electricity consumption water pumping
- Air curtains to maintain proper cooling and reduce electricity consumption of air-conditioners
- Gasifiers to generate energy for laundry
- Solar water heating systems for hot water
- Incandescent lights and halogen lights replaced by energy efficient lamps Card-key systems to switch off lights in absence of guests in rooms
- Dimmer switches to reduce energy consumption in lighting
- Sensors for lights in car parking areas

Low and No Investment Measures

- AC temperatures set to optimum level (24-25°C)
- Colour code system to switch lights on and off according to a schedule
- Lights in corridors switched on and off on a section-by-section basis
- Freezer curtains to reduce energy loss in cold rooms
- Preventive maintenance as per planned schedules

Water Conservation Measures

- High and Medium Investment Measures
- Separate meters to monitor water consumption in different departments
- Water saving cisterns with dual flushes
- Press-top faucets in staff canteens to reduce water wastage
- Low and No Investment Measures
- Daily checks for leaks in water storage tanks and taps
- Preventive maintenance as per planned schedules

Wastewater Management

- High and Medium Investment Measures

- Sewage treatment plants for wastewater treatment
- Low and No Investment Measures
- Technicians to check sewage treatment plants every day
- Treated water from sewage treatment plant used to water gardens
- Water quality checked every six months by external agency to ensure discharged water meets standards set by the Central Environmental Authority
- Kitchen water sent through grease traps and solid grease treated with effective micro-organism solutions and completely digested

Solid Waste Management
Low and No Investment Measures

- Plastic replaced by environmentally friendly materials. For example, laundry bags are made of cloth (for soiled linen) and cane (to deliver laundered clothes); shampoo dispensed in ceramic bottles and newspaper bags are made of paper
- Plastic water bottles provided with packed lunches.
- Plastic cutlery not used Use of plastic straws with cocktails or drinks reduced
- Plastic shopping bags discontinued and suppliers educated to use reusable plastic crates or cardboards boxes
- Garbage bags used only for wet garbage to meet Hazard Analysis Critical Control Point (HACCP) standards
- Office stationery and paper reused Complete computerization and networking to make offices paper-free
- Garbage and trash separated at sources of origin in all departments - such as the kitchen, restaurant and bar, housekeeping, laundry, and maintenance
- Garbage bins colour coded for glass and plastic, paper and cardboard, polythene and plastic, and wet garbage
- Guests requested to bring back picnic boxes and plastic water bottles so they can be disposed of properly
- Information Dissemination or Awareness Measures
- Monetary value of wasteful use of major equipment demonstrated
- Notices to create awareness about energy conservation displayed in rooms
- Staff trained routinely on energy conservation
- Housekeeping staff made aware of the need to be vigilant against leaking taps
- All staff trained and monitored on separation of garbage

Energy Management and Electrical Load

- Use of card key enabled switches in rooms
- Building management systems Use equipment that matches loads Use variable frequency drives for motors, chillers, and pumps Install automatic power factor correction capacitor banks
- Use energy efficient lighting systems (LEDs and CFLs)
- Use natural lighting as much as possible Use occupancy sensors and timers to control lighting
- Maintain required light levels and use efficient luminaries

Heating, Ventilation, and Air Conditioning Load

- Use proper thermal insulation for walls and roofs to reduce AC loads
- Consider orientation of building at time of design
- Double glass windows and sun control films for windows to reduce heat penetration into buildings
- Minimize leaks by using door closers for air-conditioned spaces
- Use of natural ventilation/tree cover
- Use of efficient room air conditioning units (Inverter ACs Solar ACs Hybrid ACs)
- Central type air conditioners with multi compressors and variable frequency drive
- Biomass steam boilers, solar hot water panels, heat pumps, and waste heat recovery for heating water

Water Conservation

- Install water sub meters to measure water consumption in each section
- Rainwater harvesting
- Use low flow taps and showers in toilets

Environmental Management

- Use optimum sized wastewater treatment plants and sewage treatment plants
- Reuse sewage treatment plant treated water for gardening/toilet flushing, etc.
- Solid waste management
- Separating and sorting waste at source by using colour coded bins
- Biogas production from waste generated in the hotel