



CARRYING CAPACITY ASSESSMENT FOR KNUCKLES RIVERSTEN TOURISM DESTINATION IN SRI LANKA

FINAL REPORT

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Abbreviations

AGS	Average group size
AVD	Average visit duration
DFO	Divisional Forest Officer
DPSIR	Driver-Pressure, State, Impact, Response
DSD	Divisional Secretariat Division
ECC	Effective carrying capacity
ESCAMP	Ecosystem Conservation & Management Project
FD	Forest Department
GCE A/L	General Certificate of Education Advanced Level
GCE O/L	General Certificate of Education Ordinary Level
GND	Grama Niladari Division
KCF	Knuckles Conservation Forest
MC	management capacity
NGO	Non-governmental Organization
PCC	physical carrying capacity
PESTEL	Political, Economic, socio-cultural, Technological, Environmental and Legal
RCC	Real carrying capacity
RFO	Regional Forest Officer
RFP	Request for Proposal
SLTDA	Sri Lanka Tourism Development Authority
TOR	Terms of Reference
UNDP	United Nations Development Program
UNESCO	United Nations Educational, Scientific and Cultural Organization
EPL	Environmental Protection License

Executive Summary

Tourism is based on the attractions provided by natural resources and tourists normally look for places that are not yet densely populated with clean, peaceful and beautiful natural environment. Carrying capacity, as a measure of sustainability, is a practical tool to maintain the balance between development and conservation of tourism resources. The Knuckles Conservation Forest which is the area of concern in the present study is a biodiversity hotspot located in the districts of Kandy and Matale in the Central Province of Sri Lanka. The region covers 210 km² and gets its name from five peaks that form the shape of the knuckles in a clenched fist. The area situated above 1500 m was declared a climatic reserve in 1873 and a conservation forest in 2000, later a UNESCO Man & Biosphere Reserve and a World Heritage Site in 2009. The overall goal of the Carrying Capacity Assessment is to design a sustainable destination management plan through optimizing the number of tourists assuring the quality of services and tourist satisfaction without compromising environmental and socio-cultural significances. In this context, the present and manageable environmental, physical, social, economic, technological, and political (policies and plans) capacities, and the factors, forces, and mechanisms that could influence the capacities in Knuckles Riversten destination (and 10 km radius) which will determine the number of visitors that can be allowed without compromising the quality of visiting the destination in short- and long-term time horizons.

Pitawala Patana was identified as the nucleus and an area with about 10 km radius from it will be studied. The main divisional secretariats including the study area are Laggala and Rattota but except for one attraction (Banbarakiella) all the attractions are located in Laggala DS Division. The attractions which falls within the 10 km radius include Riversten, Pitawala Pathana, Sera Ella which are the most frequently visited attractions and then Manigala, Duvili Ella, Banbarakiriella, Thelgamu Oya (used for bathing by the visitors), Attanwala (a village in the neighborhood of Pitawala Pathana and have access to Duvili Ella and Manigala), Waddapani Ella, Rambukoluwa (the campsite of the Forest Department is located) and Medawatte Tea Estate where camping facilities are already available and green sports are being developed). The study team conducted in depth surveys on the following attractions; Riversten, Pitawala Pathana, Sera Ella, Telgamu Oya, Bambarakiriella while other attractions were also studied. This secondary information was supplemented by the primary information procured using both quantitative and qualitative methods. With regards to the qualitative methods, stakeholder consultations, key informant interviews, focal group discussions and observations were carried out. Quantitative methods such as questionnaire surveys were conducted in the major attractions in the study area such as Riversten, Pitawala Patana, Thelgamu Oya and Sera Ella. These surveys were targeted at the following; Local and foreign visitors, Villagers in surrounding villages which is located at very close proximity to the Pitawala Patana, Tour guides and Tour operators.

Using PESTEL analysis (Political, Economic, socio-cultural, Technological, Environmental and Legal) the prevailing status in the perspectives of political, economic, social, technological, environmental and legal was assessed in the attractions studied. Using DPSIR Framework (Driver-Pressure, State, Impact, Response) a comprehensive environmental risk assessment was conducted in the study area. Based on these results, Destination Profiles were prepared for all the attractions which included the physical, biological, socio-cultural, economic perspectives as well as gaps and recommendations for improvement.

In-depth carrying capacity assessments were conducted for the attractions which are frequently visited by the tourists; Pitawala Patana, Riversten, Sera Ella, Telgamu Oya using Cifuentes's method (Cifuentes, 1992). The data obtained from the published records from FD, SLTDA as well as those from the surveys collected by the study team were used in the assessment. As per the method, firstly the Physical Carrying Capacity was assessed is defined as the maximum number of visitors that can

physically fit into a defined space, over a particular period of time. Then the Real Carrying Capacity was assessed by factoring in the corrective factors such as bio-physical, environmental, ecological, social variables. Finally, the Effective Carrying Capacity was arrived at by factoring in the management factors too.

The results revealed that on average about 45474 tourists visit the Knuckles Forest Area which includes the popular attractions namely Riversten, Pitawala Pathana, Sera Ella, Manigala, Thalgamu Oya, Banbarakiriella, Rambukoluwa, Atanwala, Duwili ella, Walpolmulla, Kosgasmulla. However, majority of these tourists are visit Riversten, Pitawala Pathana, Sera Ella and to a lesser extent Bambarakiriella and Manigala. Since good bathing opportunities are offered in Thalgamu Oya this is also a popular site. Majority of these tourists are local tourists (average 99%) while the foreign tourists are less than 1%. Almost all the tourists to this area visit it because of its pristine and unique landscapes and being a UNESCO World Heritage Site attenuates the selection. Most of the foreign tourists visit the site to enjoy the nature and participate in activities like trekking which is very abundant in the area. The visitation of the local tourists is seasonal the peak observed in April and August-September period which coincides with the school vacations. the average tourist visitation to the main attractions ie Riversten and Pitawala Pathana areas which is 129.36 visitors/day is a still much lower than the maximum limit of the carrying capacity which is 292.5 visitors/day. Therefore, there is much room to accommodate more tourists to the destinations.

Of the tourists who visit the Knuckles Forest Area, more than 99% are local tourists and the category of foreign tourists represents less than 1%. Despite the fact that all would love to experience the pristine natural landscapes in the area, many local tourists who come in groups ranging from 10-65 come to the site with the motivation of having family time, relaxation and sometimes celebration while the motivations of the foreign tourists are mostly experiencing natura and also participate in walking, trekking etc. The local tourists rarely spend the night and their influx have peaks coinciding with school vacation in April and August. However, their arrivals had shown a decline during the recent past due to restrictions caused by COVID 19 and it will be further reduced with the current socio economic downfall especially with the restrictions imposed on fuel. For the local tourists, the crowding experienced during weekends and public holidays, lack of parking facilities and also non availability of adequate toilet facilities impose impediments. The lack of places to buy food or eat out poses impediments to both local and foreign tourists while inadequate standard lodgings with clean toilets and wifi etc. poses impediments to foreign tourists who stays more than one day in the area. Inadequate signposting to attractions and substandard access roads to the attractions are some other difficulties faced by both types of tourists.

It was also revealed that the participation of the surrounding community to the tourism activity is very minimal. This may be due to the fact that they are engaged in farming and also there is no systematized manner in engaging them in the tourism too. The guides trained by the FD are utilized suboptimal as there is no system to engage all in the provision of their services.

The socio economic status of the neighboring communities could be enhanced if they could be better engaged in tourism. This could be in the form of guides, establishment of community based organizations in ecotourism with the partnership of FD and SLTDA and the specialized serv9idces they can provide include providing traditional food, guidance in trekking, display the traditional cultural practices of food preparation, rituals etc. providing home stays etc. This is need to be explored further.

By way of recommendations for improvement, stepping up the promotion of the site among both local and foreign personnel through preparing promotional material and posting via internets, social media etc. improving sign posting and proper directions within the site, improve accessibility to the site especially access roads, establishing traditional villages to display the traditional cultural practices,

improving home stays and places to buy food/enjoy food, improve the accommodation and monitor the existing ones for provision of standard facilities to tourists, systematize the function of guides and further institutionalize and strengthen the Knuckles Tourism Support Group comprising of all the relevant stakeholders had been mentioned.



SECTION I

INTRODUCTION

Section 1 : Introduction

1.1 The Background

The UNDP, by a public notice on behalf of Department of Trade, Commerce & Tourism, Central Provincial Council, Sri Lanka dated 28th November 2021 Request for Proposal (RFP) from suitably qualified parties to provide Consultancy Services to conduct Tourism Carrying Capacity Assessment for Knuckles Riversten Tourism Destination in Sri Lanka. The EML Consultants PLC (hereinafter referred as the EML), submitted technical and financial proposals, on 14th December 2021. Having evaluated the bids, the UNDP offered the EML the contract for the said consultancy. The EML accepted the offer and entered into a formal agreement with the UNDP on 22nd December 2021. The project duration mentioned therein was four months from the date of commencement, which was supposed to be started by 22nd December 2021, and was to be completed by 28th April 2022. However, the primary data collection was delayed because it couldn't cover a sufficient data sample due to fuel issues and lower tourist arrivals during the time of the survey being done. Therefore, the effective date of completion was shifted to 30th May 2022.

To mark the commencement, the EML had an initial discussion with the UNDP on a virtual platform on 6th January 2022. At the meeting, both parties the UNDP and EML got clarified the project scope, study boundaries, proposed methods, available data and project administration/focal communication and other arrangements.

First deliverable, the Inception report has been submitted on 13th January 2022 which included the details of finalized methodology, data availability from the assessments already conducted, refined methodology, proposed data collection and analyzing methods, refined timeline and the format of the final assessment report. During the middle phase of the task, the UNDP requested the EML to make a presentation on the progress of work. The EML made the requested presentation on a virtual platform on 30th March 2022 and explained the progress of the project, limitations and challenges and expected dates of completion.

1.2 The Project Team

The service provider's (EML) Project Team is as follows:

Name of the Expert/ Team	Involvement / Area of Specialty
Snr. Prof. Hemanthi Ranasinghe	Team Leader/Carrying Capacity Assessment Specialist
Dr. Ranil Nanayakkara	Biodiversity Expert
Dr. F. Marikkar	Economist
Dr. Kala Peiris De Costa	Gender Expert
Mr. A. Rajaratnam	Advisor and Reviewer
Ms. Malsha Dodawatta	Program/Team Coordinator

1.3 Rationale for the study

Protected areas are becoming increasingly important in modern societies since they preserve natural and cultural resources and enhance the quality of life by providing opportunities for recreation to an expanding population. There is obviously a widespread appreciation of the natural areas and considerable support for the development of these ecosystems. Natural resources and natural attractiveness which is rich in Knuckles are still the main motivating factor for the arrival and stay of

tourists. Knuckles Range is home to a unique variety of flora, fauna and culture. This spectacularly scenic region, known traditionally as the 'misty mountains', is rarely seen by tourists. This Region attracts about 60,000 tourists annually, including about 700 foreign tourists. The vast majority of visitation to Knuckles Conservation Forest is from local visitors, with foreign visitors making up only 1% of total visitors. However, foreign visitors represent a market segment that is high-value and low-volume, and value the type of nature-based and authentic cultural experiences that the Knuckles region has to offer.

Basically two aspects of recreational use are integral to the definitions of carrying capacity: protection of resources and the quality of recreation experience. In its most generic form, carrying capacity refers to the amount and type of use that can be accommodated in parks and related areas without unacceptable impacts to resources of the ecosystem and/or the quality of the visitor experience.

The Knuckles Conservation Forest is a biodiversity hotspot located in the districts of Kandy and Matale in the Central Province of Sri Lanka. The region covers 210 km² and gets its name from five peaks that form the shape of the knuckles in a clenched fist. The area situated above 1500 m was declared a climatic reserve in 1873 and a conservation forest in 2000, later a UNESCO Man & Biosphere Reserve and a World Heritage Site in 2009. Hence this study was undertaken to assess the carrying capacity of attractions which are frequently visited by both local and foreign tourists with a view to provide a high quality visitor experience while conserving the ecosystems.

1.4 Objectives of the Project

The overall goal of the Carrying Capacity Assessment is to design a sustainable destination management plan through optimizing the number of tourists assuring the quality of services and tourist satisfaction without compromising environmental and socio-cultural significances. In this context, the present and manageable environmental, physical, social, economic, technological, and political (policies and plans) capacities, and the factors, forces, and mechanisms that could influence the capacities in Knuckles Riversten destination (and 10 m radius) which will determine the number of visitors that can be allowed without compromising the quality of visiting the destination in short- and long-term time horizons. The Terms of Reference is attached in Annexure 4.

1.5 Layout of the Report

This report presents the results of the survey conducted with the objective of measuring the tourism carrying capacity in the Knuckles Riversten tourism destination. The report consists of five sections;

Section 1: Introduction (Background, Project Team, Rationale and Objective)

Section 2: Review of Literature

Section 3: Approach and Methodology

Section 4: Results

Section 5: Conclusions and Recommendations



SECTION II

REVIEW OF LITERATURE

Section 2 : Review of the Literature

The Knuckles Conservation Forest is a biodiversity hotspot located in the districts of Kandy and Matale in the Central Province of Sri Lanka. The region covers 210 km² and gets its name from five peaks that form the shape of the knuckles in a clenched fist. The area situated above 1500 m was declared a climatic reserve in 1873 and a conservation forest in 2000, later a UNESCO Man & Biosphere Reserve and a World Heritage Site in 2009.

Knuckles received its name from British surveyors due to its peaks resembling a clenched fist when viewed from certain points and is currently governed by Sri Lanka's Department of Forest Conservation.

The range consists many peaks such as Gombaniya (The highest peak), Five Peaks, Knuckles-Kirigalpotta, Aliyawetunaela, Dumbanagala, Yakungegala, Dothalugala, Wamarapugala, Koboneelagala, Kalupahana, Rilagala, Nawangala, Telambugala, Lakegala, Maratuwegala, and Balagiriya to name a few.

Knuckles can be viewed using a variety of natural trails, such as Riverston trail (a peak), Pitawala pathana trail, Sera Ella waterfall trail and Manigala peak trail. Each trail spans about 3-8 kilometers in length and offer breathtaking views of the jungles, waterfalls and peaks of the Ranges ecosystem.

Apart from its aesthetically pleasing views and its importance as both a local and foreign tourist destination, the Knuckles Mountain Range is also extremely important for Sri Lanka's biodiversity, which has made it a location of great scientific interest.

Despite covering a mere 0.03% of Sri Lanka's total land area, Knuckles is home to more than 34% of Sri Lanka's endemic trees, shrubs and herbs. This makes the conservation of Knuckles and its ecosystems extremely important in order to maintain Sri Lanka's reputation of being extremely rich in its biodiversity. And for this reason, the Knuckles Mountain Range was named in the UNESCO natural world heritage list in 2010 as part of the Central Highlands of Sri Lanka.

The biggest threat to this fragile ecosystem is the cultivation of cardamom at an industrial level. Spread of invasive plant species such as Mist Flower which destroy the unique flora of Knuckles is the main reason for this.

Finding counter measures for this and the implementation of other conservation strategies is of paramount importance for both Sri Lanka's tourism industry as well as its significance as a hotspot for biodiversity.

▪ **Bio-diversity of the Knuckles mountain range**

There are two types of natural vegetation in this region: Tropical montane forests characterized by a Calophyllum zone and tropical sub-montane forests characterized by a Myristica, Cullenia, Aglaia, and Litsea community.

In addition to these categories, there are anthropogenic vegetation types such as patana grasslands, which are dominated by Cymbopogon spp. derived from abandoned coffee and tea plantations, scrublands, and agricultural lands.

Three main forest types are found in the Knuckles area:

- (a) Lowland tropical wet semi-evergreen forest;
- (b) Sub-montane, wet semi-ever-green forest; and
- (c) montane, topical wet-evergreen forest.

Unique to the area is a dense, stunted vegetation type known as “pygmy” forest. Although the Knuckles Forest covers only about 0.3 percent of Sri Lanka’s land area, it harbours over a third of its flowering plants. Of the 288 recorded woody plant species in the area, 85 are endemic, 11 are nationally threatened and 26 are globally threatened. Knuckles Mountain range covers less than 0.5% of Sri Lankan vegetation but it gives life to almost one-third of Sri Lankan flowering plant species. Approximately 1033 flowering plant species belonging to 141 families were recorded within the Knuckles Mountain range.

The Knuckles Forest is an essential reservoir for biodiversity, providing habitats for nationally and globally important species of fauna such as the Sri Lanka leopard (*Panthera pardus kotiya*). In all some 31 mammal species, 128 birds, 53 reptiles, 20 amphibians, and 25 freshwater fish have been recorded in the area. Due to diverse natural vegetation including the lowland semi-evergreen forests and montane forests, the entire Knuckles area records very high and distinct biodiversity, possessing some charismatic species such as the Knuckles Pigmy Lizard, the Knuckles Rock Frog, the leopard, and the elephant. Vertebrates, over a quarter of them, are endemic to Sri Lanka with a similar proportion identified as threatened.

“Knuckles possess a unique ecosystem with an abundance of endemic flora and fauna” (Kariyawasam 1991). The variety of habitats and forest communities in the Knuckles shelter a diverse community of herpetofauna, but a large extent of the mountain range remains unexplored. In an effort to identify and study the distribution of amphibians and reptiles,

Some special discoveries were made. The great amphibian diversity in the Knuckles Mountain Range was yet again proven worthy.

Pseudophilautus is a genus of shrub frogs in the family Rhacophoridae endemic to the Western Ghats of South-western India and to Sri Lanka. Every *Pseudophilautus* species in the genus are endemic to Sri Lanka. Some of those species such as *Pseudophilautus stuarti*, *Pseudophilautus hankeni*, *Pseudophilautus fulvus* and many others are restricted to the Knuckles Mountain range. *Lankanectes pera* was recently discovered from the Knuckles Mountain Range. It is endemic to Sri Lanka. Also, *Nannophrys marmorata* is a critically endangered species of frog known only from a few locations in the Knuckles Conservation Forest (KCF) in the Knuckles mountain range of Sri Lanka. Considering reptiles, *Cophotis dumbara*, *Chalcidoseps thwaitesi* are enlisted as critically endangered Herpetofauna in the Knuckles Mountain Range.. *Ceratophora tennentii* is an endemic species to Sri Lanka and is restricted to the Knuckles Mountain Range, and also is listed as an endangered species. *Aspidura desilvai* is a rough-side snake that was recently recorded from the Knuckles and is also restricted to the area.

▪ **Products of commerce**

Export-oriented agricultural crops such as cardamom and tea are largely grown on these natural grounds after clearing forests. Official reports claim that about 3000ha of forests have been cultivated with cardamom in the Knuckles conservation forest. A majority of plantations have been established in lower montane and montane forests though cardamom cultivations are carried on in all types of forests in the Knuckles Forest Reserve. It is estimated that the cardamom cultivation in the Knuckles forest contributes to 32% of the national cardamom production in 2002, and 55% of the total cardamom cultivating areas. Most of these plantations began in the 1960s, although some areas are cultivated for more than a century.

▪ **Tourism in the Knuckles Conservation Area**

The area under study in Knuckles have a range of scenic viewpoints approached by trails i.e. Riversten, Pitawala Patana and Mini World's End. Community destinations within Knuckles such as Etanwela and Meemure offer visitors cultural experiences such as village tours, traditional agricultural practices, local foods and crafts as well. Although currently limited to daytime use, a network of hiking trails ranging from short (i.e. MiniWorld's End - .75 km) to longer (Rambukoluwa to Doowili Ella – 8 km) offer hiking opportunities in the forest. A small number of primitive campsites are available for use in Knuckles and Forest Department operates one called 'Wana Nivahana' in Rambokoluwa.

This Region attracts about 60,000 tourists annually, including about 700 foreign tourists. The vast majority of visitation to Knuckles Conservation Forest is from local visitors, with foreign visitors making up only 1% of total visitors. However, foreign visitors represent a market segment that is high-value and low-volume, and value the type of nature-based and authentic cultural experiences that the Knuckles region has to offer. The local visitors come primarily from Colombo, Kandy, Trincomalee and South Western areas and they come as families and groups especially during the weekends, public holidays and school vacations. The foreign visitors come from primarily Europe, Russia, Australia, Asia and are mostly between 30-65 years of age and they often travel as couples or small groups. Their main motivation for the visit is appreciation of nature and other activities including trekking, hiking and backpacking and camping.

These visitor numbers increased from about 50,000 in 2016 to 58,000 in 2018, and have declined since then to about 42,000 in 2021. The number of foreign tourists has also declined from a high of 770 tourists in 2018 to about 50 in 2021. The numbers have increased to 200 in 2022 (Jan. to Apr.). Thus tourism has declined mainly due to the current economic catastrophe experienced in the country but is expected to increase in the future once the socio economic situation becomes more favorable.

A Management Plan for the Knuckles Conservation Area was prepared by the Forest Department for the time period 2010-2014. This followed the previous management plan done in 1994. The latest National Forest Policy (1995) is aims to conserve Knuckles forest for posterity, with regard to biodiversity, soil, water. Historical, cultural, religious, scientific and aesthetic values are contributing to the national economy as well as to the welfare of nearby communities. It also emphasized the need to harness the recreational capacity of the Knuckles Conservation Forest (KCF) sustainably. As directed by the Policy, Forest Department with able support of the World Bank funded ESCAMP prepared a Tourism Marking Plan in 2018 which aimed at positioning the KCF to both local and foreign visitors. Subsequent to this, a Nature Based Tourism Plan was also prepared by Forest Department with the funding from ESCAMP in 2018 itself. It assessed a number of existing tourism conditions in Knuckles, including: market demand, attractions inventory, infrastructure and services, supply and competitiveness, human and institutional capacity, socio economic considerations and environmental considerations. A main outcome of this was the development of a Destination Development Strategy and an action plan to include the following;

- Improved destination image
- Improved visitor experience
- Increased jobs for local residents
- Improved economy at the destination
- Improved support of biodiversity conservation efforts at the destination
- Improved destination products

While the visitation to Knuckles Conservation Area is a beneficial factor, there is a danger that overuse of may disturb fragile soils, vegetation, and wildlife, and may cause unacceptable crowding and visitor

conflicts. There are numerous examples world over on these lines. The capability of the resource base and the recreation setting to provide for recreational use raises the concept of carrying capacity (Pigram and Jenkins 1999).

The World Tourism Organization defined the carrying capacity as: "The maximum number of people that may visit a tourist destination at the same time, without causing destruction of the physical, economic and socio-cultural environment and an unacceptable decrease in the quality of visitors' satisfaction" (Anonymous 1997). Carrying capacity considerations revolve around the following basic components: physical ecological, economic, socio-political and institutional (Coccosis and Mexa 2004). They are elaborated as follows;

- **Physical (or ecological)** carrying capacity is the threshold limit beyond which natural and cultural heritage of a destination are damaged by tourism. For example, water resources quality and terrestrial ecosystem damage caused by tourism activities. As well as by assessing saturation limits for existing facilities (for example, sewage treatment plants, waste treatment plants).
- **Economic** carrying capacity is the threshold limit beyond which tourism growth becomes economically unacceptable; this situation may rise from two conditions: a) when tourism interferes with other economic activities obstructing their development, b) when the presence of a great number of tourists makes the destination no more comfortable and attractive and causes a contraction in tourism demand.
- **Social and political** carrying capacity is the threshold beyond which social aspects of the host community are badly influenced and damaged by tourism activities and life's quality of residents is no more guaranteed; this situation can also lead to conflicts between tourists and resident population, generating social tensions.
- **Institutional** Carrying capacity: The institutions that are supposed to manage the resources in a particular location may have statutory limitations imposed by laws as well as other circumstantial limitations due to weak and poor institutional arrangements. Expecting too much or more than what the institutions can practically deliver at any given time could also breach the carrying capacities of a system.

These components were investigated in several publications (Shelby and Heberlein 1986, Anonymous 1997, Manning 1999, Symmonds et al. 2000, Lankford et al. 2006, Castellani et al 2007, Silva et al. 2007). The physical-ecological carrying capacity is the maximum level or threshold limit of recreational use, that can be accommodated by an area or an ecosystem before an unacceptable or irreversible decline in natural and cultural values occurs (Pigram and Jenkins 1999, Castellani et al. 2007, Dobrica and Aleksandra 2008). The socio cultural carrying capacity is the most tangible aspect of recreation carrying capacity and the most difficult to measure (Anonymous 1997, Pigram and Jenkins 1999). It may be defined as the maximum level of recreational use, above which there is a decline in the quality of the recreation experience (Anonymous 1970). The political-economic carrying capacity refers to the impacts of tourism and recreation on the local economic structure, activities, etc. including competition with other sectors (Coccosis and Mexa 2004). Today the size of the global park tourism industry is very large and growing. Most parks and protected areas need visitor management to enhance values, such as when tourism has become an integral component of the park (Eagles and McCool 2002). Therefore, a sound park planning and management approach should define the optimum capacity for visitors to provide the desired biophysical and social conditions. The capacity of a park varies depending upon the place, season, time, user behavior, facility design, patterns and levels of management, and the dynamic character of the environmental elements (Ceballos-Lascuráin 1996). Many studies have been carried out concerning different aspects of the carrying capacity for National

Parks and protected areas (Cifuentes et al. 1990, Papageorgiou and Brotherton 1999, Lawson et al. 2003, Nghi et al. 2007, Yüksek et al. 2008), marine National Parks (Davis and Tisdell 1995, Leujak and Ormond 2007), tourist resorts and beaches (Sowman 1987, Saveriades 2000, Silva 2002, Silva et al. 2007), and recreational activities such as mountain biking (Symmonds et al. 2000), boating (Tarrant and English 1996, Kopke et al. 2008, Diedrich et al. 2009), and canoeing (Sterl et al. 2004). Some studies are aimed at guiding



SECTION III

APPROACH AND METHODOLOGY

Section 3 : Approach and Methodology

Based on the TOR and the subsequent discussions held with the UNDP representative for the Project, Pitawala Patana was identified as the nucleus and an area with about 10 km radius from it will be studied. This is shown in Figures 01 and 02. Geographically it will include the 58 GN divisions, majority of GN Divisions from the Laggala, Rattota DS divisions while some GNDs in the Abanganga and Naula DS Divisions. Selected GND, DSD details are shown in Annexure 2.

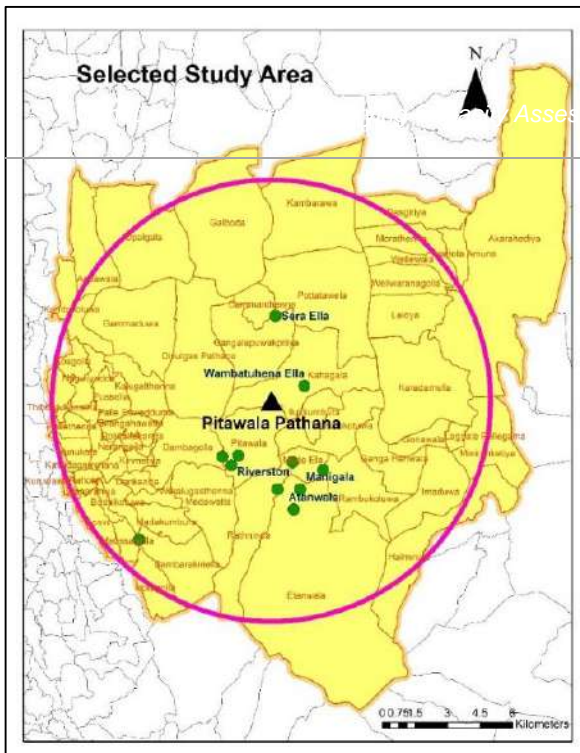


Figure 3-2 : Selected study area for the study

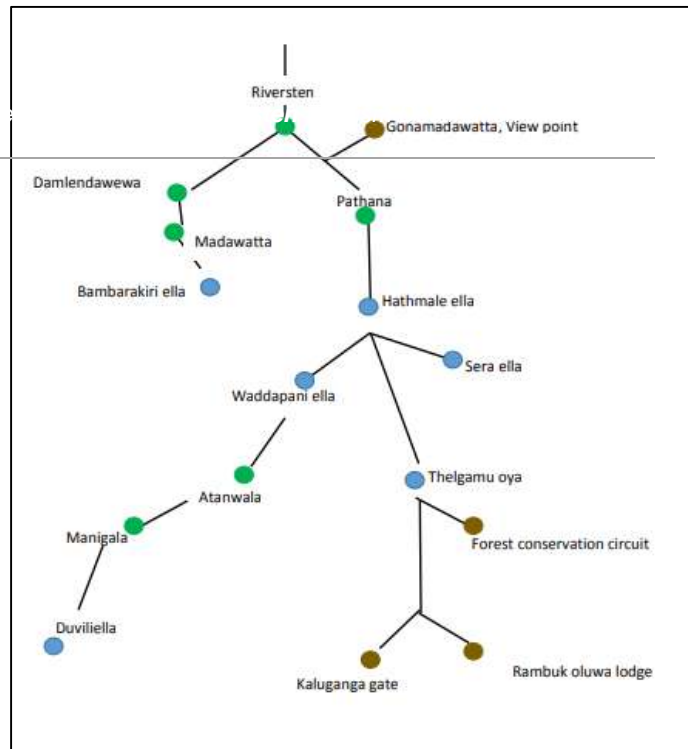


Figure 3-1: The tourist attractions found in the study site

3.1 Primary and Secondary Data Collection

Procurement of secondary information on the study area was procured by way of browsing existing relevant literature and some of the documents thus browsed were;

- Management Plan for the Knuckles Conservation Area (2010-2014) prepared by the Forest Department
- Nature Based Tourism Plan of the Knuckles Conservation Forest, Ecosystem Conservation and Management Project (ESCAMP) of the Ministry of Mahaweli Development and Environment, 2018
- Tourism Marketing Plan of the Knuckles Conservation Forest, Ecosystem Conservation and Management Project (ESCAMP) of the Ministry of Mahaweli Development and Environment, 2018
- UNDP GEF granted project information on the Knuckles Range
- Sri Lanka Tourism Strategic Plan 2017-2020
- Draft National Policy on Tourism for Sri Lanka (subject to the approval of the Cabinet)
- Annual Statistical Reports of the Sri Lanka Tourism Development Authority
- Information from the Central Cultural Fund
- Information from the UNESCO World Heritage Sites

- The information collected by the Forest Department on the number of daily visitors to the Pitawala Patana between 2019 – 2022 as well as results of the status of accommodation in the Knuckles area

This secondary information was supplemented by the primary information procured using both quantitative and qualitative methods. With regards to the qualitative methods, stakeholder consultations, key informant interviews, focal group discussions and observations were carried out. Discussions were held with Forest Department (officials in the Head Office, Battaramulla, the DFO/Matale, RFO/Knuckles and RFO/Laggala, Forester/Knuckles, Central Province Tourism Department, Divisional Secretaries of Laggala and Rathtota, Pradeshiya Sabha, Laggala. In addition to these government organisations, tour guides both trained by the Forest Department and others, tour operators, GNs in the divisions which fall into the study area, NGOs operating in the area including Dumbara Surakinno, communities in the surrounding villages, vendors inhabiting the attractions etc. were also interviewed. The details of the personnel communicated with are shown in Annexure 05. In addition to these, interviews were held with a wide range of accommodation providers including high end hotels such as Riversten Grand, Sir John Bungalow and Alki Bungalow, medium hotels, guest houses and camp sites and those who provided home stays prior to COVID pandemic. Meetings were also held with the Midland Estate which is located in the proximity and have already embarked on providing camp sites and have plans to establish green sports for tourists in their premises.



Figure 3-3: Conducting FGDs and KIIs

Quantitative methods such as questionnaire surveys were conducted in the major attractions in the study area such as Riversten, Pitawala Patana, Thelgamu Oya and Sera Ella. These surveys were targeted at the following;

- Local and foreign visitors
- Villagers in surrounding villages which is located at very close proximity to the Pitawala Patana.
- Tour guides and Tour operators

The formats of the questionnaire surveys are attached to the Annexure 8-11



Figure 3-4: Data collection at the selected locations in tourism destination

In addition to this, the daily visitation data from 2016-todate was procured with the assistance of the Forest Department for the Pitawal Pathana Trail. The procured data were analyzed using descriptive statistics with MS Excel software.

Based on the information collected using secondary and primary data collection means, destination profiles were prepared on each of the attractions within the 10 km radius of the Pitawala Patana to show the current conditions and trends using PESTEL analysis (Political, Economic, socio-cultural, Technological, Environmental and Legal). Using the DPSIR Framework (Driver-Pressure, State, Impact, Response) a comprehensive environmental risk assessment was conducted in the study area

3.2 Carrying Capacity Assessment - Cifuentes's method

Trail data were collected by collating the existing data from the Forest Department and thought field visits and surveys conducted by the team. The number of visitors using each trail was counted during the permitted visiting hours 7:30hrs to 17:30hrs, and also by using available past data from the Forest Department. Four trails were identified based on the level of visitation.

- **Trail 1:** Pitawala Pathana – The Pitawala pathana trail leads to the mini worlds end and to Pitawala ella. This trail has several paths to and from mini worlds end and pitawala ella.
- **Trail 2:** Riversten Trail – This trail leads to the top of Riversten and to the telecommunication tower. This trail only has one path, that has to be used by visitor for the trek up to the tower and back down to the ticket counter.
- **Trail 3:** Sera Ella – this trail lead to sera ella, there is concrete road that leads to Puwakpitiya, the entrance to sera ella is approximate 8.5km on this road. From here you have to limb down approximately 200 meters to reach the viewing platform of sera ella. There is no alternative route to sera ella.
- **Trail 4:** Telgamu Oya – Telgamu Oya is on the main Illukkumbura – Pitawala Pathana road. This body of water is heavily patronized by local tourist who comes there to bath, eat and spend the day, especially during the weekends and on holidays.

Carrying capacities in the following attractions in the destinations were arrived at for current and projected to the future (2030) using Cifuentes's method (Cifuentes, 1992);

As shown below;

Access the physical carrying capacity (PCC) of the site

The PCC is defined as the maximum number of visitors that can physically fit into a defined space, over a particular period of time, it is formulated as follows:

$$PCC = A \times V/a \times Rf$$

Where A is the available area for public use, V/a is one visitor per m², and Rf is the rotation factor (number of permissible visits per day) which is formulated as:

Rf = opening period / average time of one visit. Real carrying capacity (RCC) is defined as "the maximum permissible number of visits to a site, once the corrective (i.e. reductive) factors derived from the particular characteristic of the site have been applied to the PCC" and expressed by the following general formula where Cf is a corrective factor:

$$RCC = PCC - Cf1 - Cf2 - Cf3 - Cfn.$$

The following formula better explains the RCC with corrective factors in percentage:

$$RCC = PCC \times (100 - Cf1) / 100 \times (100 - Cf2) / 100 \times Cf3 \times (100 - Cfn) / 100.$$

Corrective factors are closely linked to the specific conditions and characteristics of each site and obtained by bio-physical, environmental, ecological, and social and management variables. They are expressed in percentages as:

Cf = MI / Mt x 100 where, Cf is the corrective factor, MI is the limiting magnitude of the variable, and Mt is the total magnitude of the variable.

Effective carrying capacity (ECC) is defined as “the maximum number of visits that a site can sustain, considering the management capacity (MC)” and formulated as:

ECC = RCC x MC

The level of use, length of trails sections, and total length of each trail is given in the below table.

Table 3-1: The erosion risks of different types of soil based on slope range

Trail	Name of trail	Use Level (1-5)	Length of trail	Width of trail	Comments
1	Riversten	5	2.5 km	15 ft to 10 ft	The trail gradually narrows, as you reach to the peak.
2	Pitawala Pathana	5	3 km	20ft	At the start the trail is approximately 20ft wide, but it narrows as you enter the forested area, at certain places the trail is only 3ft wide. Here visitors don't really stick to the demarcated trail and wonder all around the open area.
3	Sera Ella	3	7 km	15ft	The trail is through forested areas
4	Telugam Oya	5	-	-	No trail, it's by the side of the main road.
5	Manigala	2	8 km	6-10ft	There are several trails used by trekkers. The legit trail is through forested areas.



SECTION IV

RESULTS

Section 4 : Results

4.1 Visitor Arrivals

The region attracts about 60,000 tourists annually, including about 700 foreign tourists. These numbers increased from about 50,000 in 2016 to 58,000 in 2018, and have declined since then to about 42,000 in 2021. The number of foreign tourists has also declined from a high of 770 tourists in 2018 to about 50 in 2021. The numbers have increased to 200 in 2022 (Jan. to Apr.). Thus tourism has declined mainly due to the current economic catastrophe experienced in the country.

Table 4-1: Visitor arrivals details to the Knuckles Range

Year	Local (Charged)			Foreign (Charged)		Local (Free)			Total (All Visitors)	
	Students	Local Elders	Local Children	Foreign Adults	Foreign Children	Students	Teachers	Total	Total	% Charged
2016	1,038	50,436	0	500	22	140	14	154	52,150	99.7
2017	1,395	56,161	0	621	14	153	4	157	58,348	99.7
2018	2,418	54,034	876	762	3	0	0	0	58,093	100.0
2019	1,574	40,732	3,037	702	24	36	0	36	46,105	99.9
2020	75	35,094	4,012	229	6	0	0	0	39,416	100.0
2021	0	40,959	1,797	53	0	0	0	0	42,809	100.0
2022	99	21,087	37	172	3	0	0	0	21,398	100.0
Average	943	42,643	1,394	434	10	47	3	50	45,474	99.9

Source: Divisional Forest Office, Matale

The total number of visitors (both local and foreign) increased from about 52,000 in 2016 to about 58,000 by 2018. Thereafter, it declined to around 46,000 by 2019 and increased slightly in 2021.

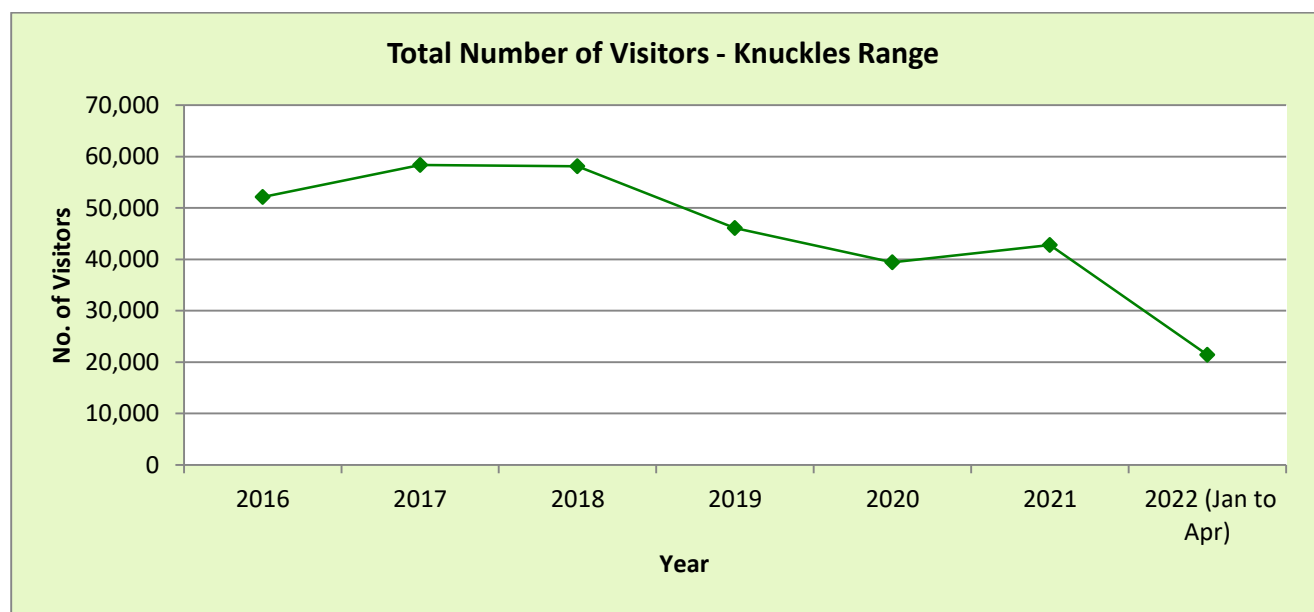


Figure 4-1: Visitor Arrivals to Knuckles range 2016-2022

Source: Divisional Forest Office, Matale

In the case of foreign visitors, the number of visitors increased from about 500 to over 700 by 2018, declined slightly in 2019 and further declined drastically to around 200 in 2020 and to its lowest level of around 50 tourists in 2021. However, the number visitors have shown an increase in the first quarter of 2022, beyond the annual level in 2021. This suggests that tourism is showing signs of improvement.

In the local visitors to the region, the number of visitors increased from about 50,000 in 2016 to nearly 60,000 in 2017/18 and has declined since then to around 40,000 by 2021 and will probably increase in 2022 to around or more than level reached in 2021.

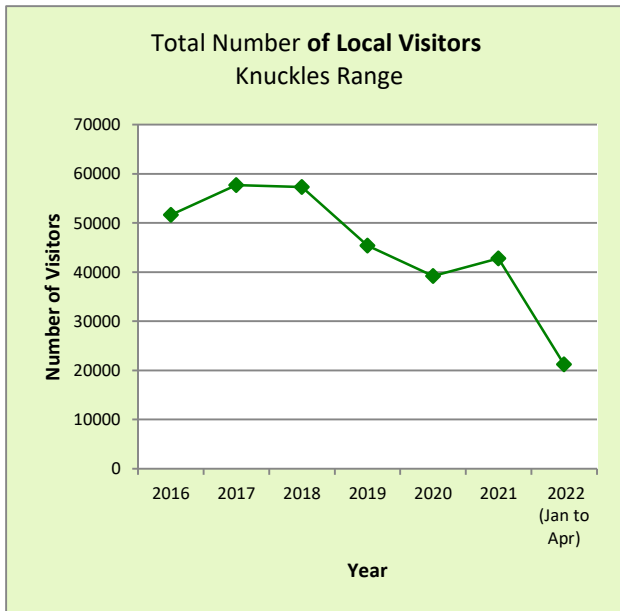


Figure 4-2: Local Visitors in Knuckles Range

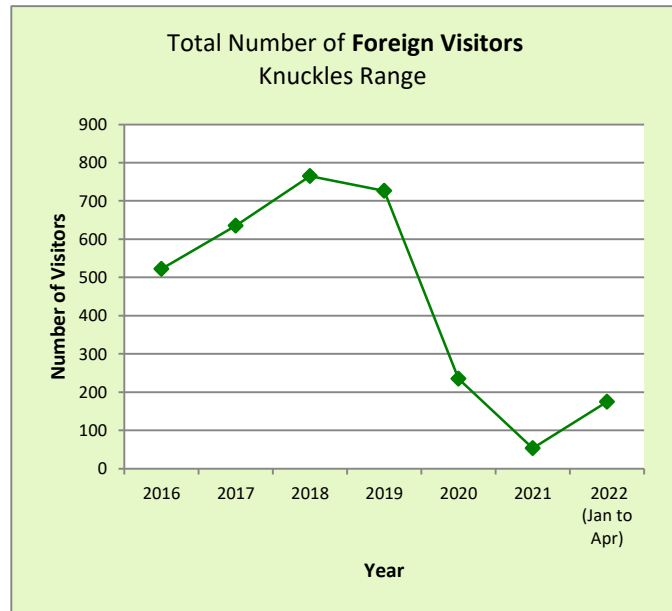


Figure 4-3: Foreign Visitors in Knuckles Range

Source: Divisional Forest Office, Matale

The vast majority of visitation to Knuckles Conservation Forest is from local visitors, with foreign visitors making up only 1% of total visitors. However, foreign visitors represent a market segment that is high-value and low-volume, and value the type of nature-based and authentic cultural experiences that the Knuckles region has to offer. The visitor profiles of both local and foreign tourists to the Knuckles Conservation Forest area is shown in table 4-2 .

Table 4-2: Local Visitor profile in Knuckles Conservation Forest area

Demographics	Motivation	Interests	Notes
<ul style="list-style-type: none"> ▪ Primarily from Colombo, Kandy, Trincomalee and SW Provinces ▪ Family groups of 4-8 people ▪ School breaks: April/August/December 	<ul style="list-style-type: none"> ▪ Family Time ▪ Relaxation ▪ Celebration 	<ul style="list-style-type: none"> ▪ Recreation(Swimming) ▪ Family Celebrations (Food/drink) 	<ul style="list-style-type: none"> ▪ Often Arrive in own vehicles (small groups) or buses (large groups) ▪ Usually bring their own food, limited economic benefits to park and/or surrounding communities

Source: Tourism Marketing Plan on Knuckles – ESCAMP, 2018

Table 4-3: Foreign Visitor profile in Knuckles Conservation Forest area

Demographics	Motivation	Interests	Notes
<ul style="list-style-type: none"> Primarily Europe, Russia, Australia, Asia 30-65 years often couples or small groups Professionals 	<ul style="list-style-type: none"> Nature Discovery Activity 	<ul style="list-style-type: none"> Guided & self-guided hiking Photography Village Visits Birding Scenic Landscapes 	<ul style="list-style-type: none"> Most arrive via Colombo-based tour operators 1-2 days Average stay at Knuckles Oct-Mar high season

Source: Tourism Marketing Plan on Knuckles – ESCAMP, 2018

The product market match for local and foreign tourists is shown in Figure 4-4.

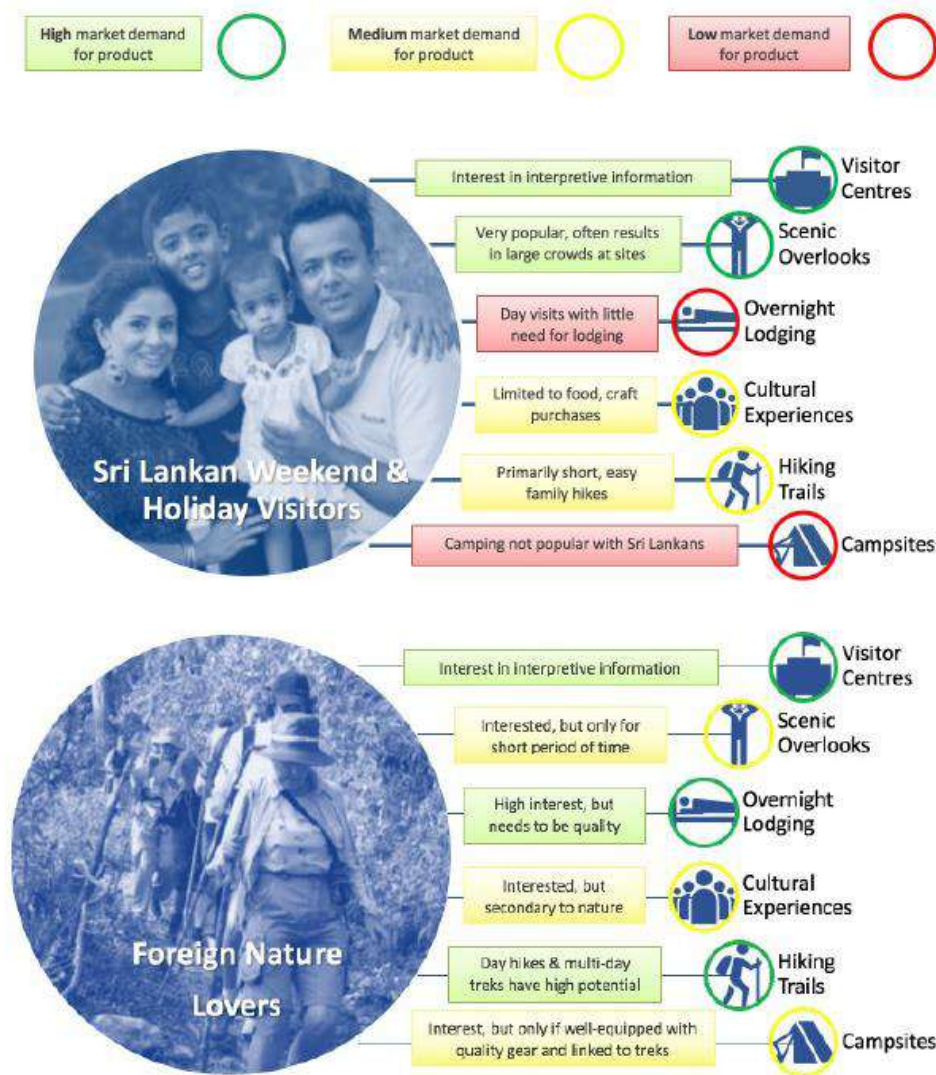


Figure 4-4: The product market match for local and foreign tourists

Source: Tourism Marketing Plan on Knuckles – ESCAMP, 2018

The reasons for tourists to select Knuckles can be categorized as follows;

Table 4-4: reasons for tourists to select Knuckles

Reason	Description
UNESCO World Heritage Site Designation	<p>The UNESCO World Heritage Site designation is one that is well-recognized by many travellers and represents destinations that hold special physical and cultural resources of global significance.</p> <p>Integrating the UNESCO World Heritage Site designation into promotional materials and marketing messages will help to easily convey the quality of Knuckles' natural landscapes.</p>
Pristine and Unique Landscapes	<p>Due to its remoteness, the Knuckle Conservation Forest is considered one of the last "untouched" regions of Sri Lanka. This undiscovered and isolated quality of the region should be considered a strength rather than a weakness. And as Sri Lanka's most popular protected areas increasingly become inundated with local and foreign visitors, Knuckles' pristine and unique nature will become more and more valuable and attractive.</p>
Trekking Opportunities	<p>According to a report by the Adventure Travel Trade Association, the top three most popular adventure travel activities with international visitors are now 1. Hiking, 2. Backpacking and 3. Trekking (Travel and Leisure, 2016).</p> <ul style="list-style-type: none"> • Knuckles offers excellent opportunities to do all three, with a variety of day hiking options to places like Mini World's End as well as multi-day trekking and backpacking routes to the iconic Manigala, Lakegala and other nearby peaks. • Developing and promoting hiking, backpacking and trekking routes – and complementary services such as guides, ecolodges and transportation services – is a Unique Selling Proposition for Knuckles Conservation Forest and should be a focus of future tourism development activities.

4.2 Local and foreign visitation assessment of the Knuckles Riversten, Pitawala Pathana Tourism Destination

4.2.1 Characteristics of the Local visitation

Information which supplements these observations was collected from the surveys conducted by the study team earlier 2022.

Local visitors were interviewed regarding their trip to the Riversten, Pitawala Pathana tourism destination. About 50% came by motor bike, 28% came by car, about 10% by van and 6% by either three-wheeler or bus. Most of the visitors (83%) came to experience the beauty of the nature. From total visitation, 47% were in the age group 18-35 years, 18% was above 35 years while 6% was below 10 years and 22% between 11 - 18 years of age. Thus the majorities (65%) of the visitors were the youth and the rest (25%) were older persons. The equal number of visitors were visiting the site for the first time (51%), while 49% had visited this site more than once (2-3 times). About 33% of the visitors were visiting only one site (Riversten/Pitawala Pathana/Sera Ella/Thelgamu Oya), while the rest would be visiting or more attractions.

Visitation by an Age Catogery

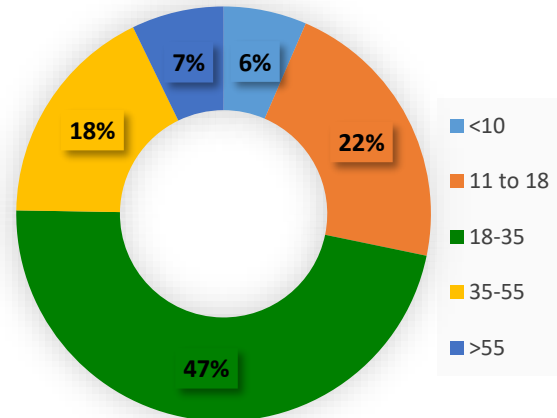


Figure 4-5: Visitation by an age category

two

4.2.2 Visitation Plans of the Local Visitors

It has been studied the local visitors' awareness about the surrounding attractions of the tourism destination. Riversten and Pitawala Pathana are the most popular attractions of the cluster. Thelgamu oya, Sera Ella, Manigala, Bambarakiriella are the other well-known locations respectively. Rich biodiversity, unique landscape and the breathtaking views of the Pitawala pathana have been reasons for many visitors to select this place and more than 70% of interviewed explained that instant climate change of the Riversten is worth of experiencing. Even though the visitors still haven't a very thorough idea about the importance of these sites as an UNESCO natural heritage Nonexistence of the information center and inadequate directions to the attractions could be some of the reasons to enhance visitors' unawareness about the nearby attractions. Forest department has established the small museum in the Pitawala Pathana information center but it is in the opposite direction from the main entrance and people not encouraged visiting the museum.

Visitors' Awareness of the surrounding attractions

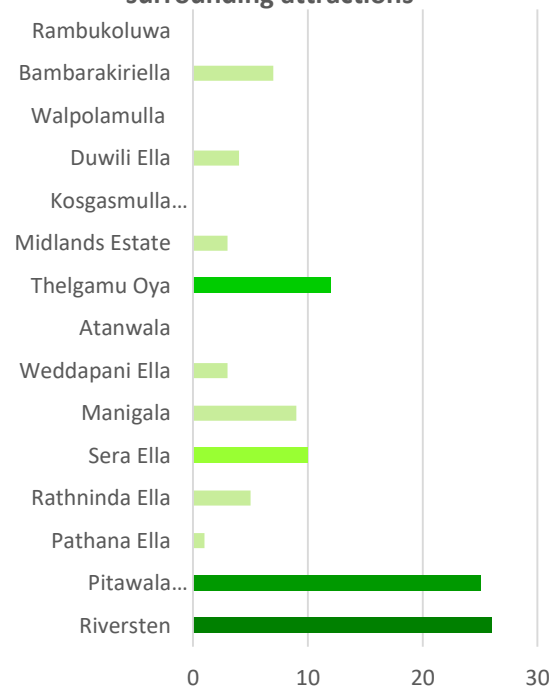


Figure 4-6: Visitors' awareness of the surrounding attractions



Figure 4-7: Museum at the Pitawala Pathana Information Center

As per the studies carried out in the field, most visited attractions of the destination are Pitawala Pathana then the Riversten and third visited place is Sera Ella, Thelgamu Oya in the fourth place of the list. Bambarakiri Ella attracts some visitors as the first attraction when entering to the Rivesten tourism destination from Matale side.

According to the studies, the average days spending in Knuckles Riversten tourism destination is less than a day. Therefore, most of the trips have been organized to visit few nearby sites. It could identify that most commonly visited per day attractions package of the Knuckles Riversten tourism destination is Pitawala Pathana, Riversten, Sera Ella and Thelgamu Oya. Majority of the visitors mentioned that the insufficient time and the unfavorable climate condition (during the time of study conducted) are the common causes to not to visit the other attractions during the particular trip.

Most visited attractions per trip

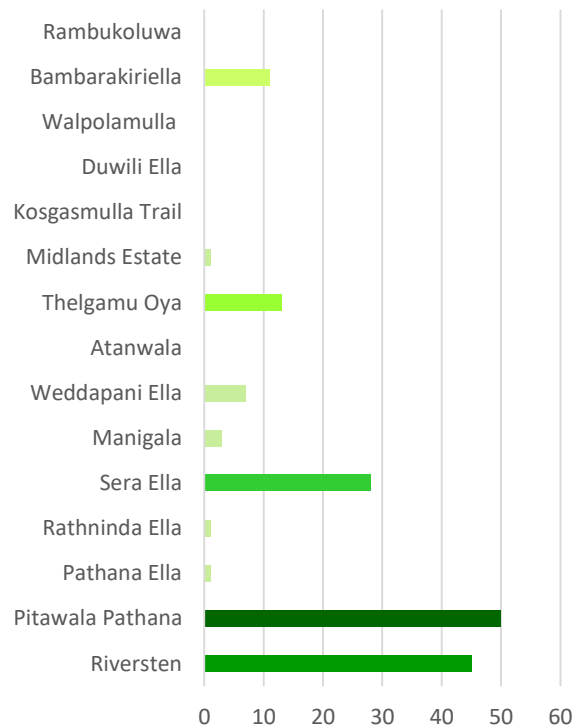


Figure 4-8: Most visited attractions per trip

4.2.3 Cost of Trip to Knuckles Riversten Pitawala Pathana Tourism Destination (Local Tourists)

Table 4-5: Average cost of the Knuckles Riversten Pitawala Pathana Tourism Destination – Local Visitors

Description	Transport	Accommodation	Meals	Entrance Tickets	other	Total
Total Cost	32,000	3,500	19,800	600	3,000	58,900
Average Cost of Trip	3,556	1,167	2,200	200	1,500	8,622

Description	Transport	Accommodation	Meals	Entrance Tickets	other	Total
% of Total	41.2	13.5	25.5	2.3	17.4	100.0

It has been identified that average cost of experiencing the particular tourism destination is around Rs 8,622 per visitor (This could be varying on the travel distances, places of visiting, accommodation types etc.). Studies reveals that the 41% of the total cost of the visit was spent on transport, 26% on meals, 17% on other expenses, 14% on accommodation and 2% on entrance tickets. Thus the largest expenditure was for transport followed by, accommodation and other costs and meals. Dilapidated access road condition, inadequate public transportation to the destination and fuel price increments are some of the reasons to accelerate the transport cost of the site.

4.2.4 Visitor satisfaction on available Infrastructure and Other Facilities

The results of the primary survey revealed that 77% of the visitors were unsatisfied about the condition of the accessibility roads to the sites. Visitors have shown their disappointment towards the other facilities of the site respectively, unavailability of information center (62%), unavailability of places to buy food/beverages (61%), toilet facilities (58%). 51% of interviewed visitors were moderately satisfied with the available parking facilities at the sites. The condition of the trails is considered moderately satisfied by nearly 47% of the tourists. Considering to the satisfied facilities of the Knuckles Riversten Tourism destination, 43% were satisfied about the availability of drinking water facilities. Accommodations are reported as good/ satisfied for 62% of the visitors who stayed overnight in small hotels. The majority (80%) of the visitors come on day trips and do not spend the night in the area. It is possible that these tourists are

SATISFACTORY LEVEL ON AVAILABLE INFRASTRUCTURE AT THE TOURISM DESTINATION

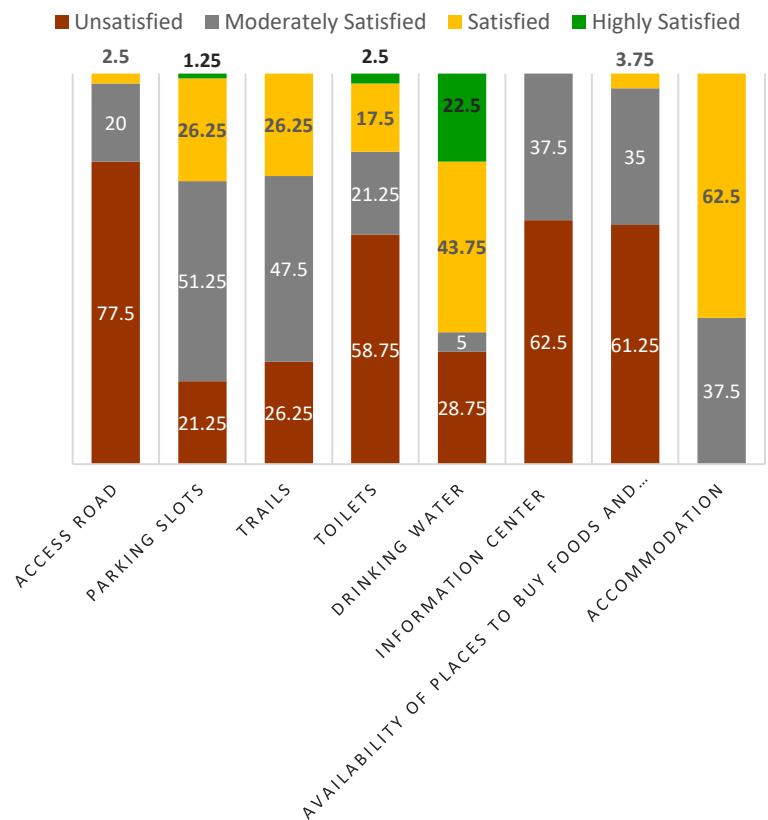


Figure 4-9: Satisfactory level on available infrastructure facilities at the destination

passing through on the way to other destinations or are staying in hotels in major adjacent cities such as Matale or Kandy, where there is adequate accommodation. Thus apart from accommodation which to some extent was considered good, most other infrastructure and other facilities were considered to be unsatisfactory, particularly the access, toilets, and places for purchasing meals.

4.2.5 Foreign Visitation assessment to the Knuckles Riversten, Pitawala Pathana Tourism Destination

There were very few number of foreign tourists could be interviewed in the destination due to fewer arrivals. Most of them are visiting to the site for the first time and main reasons for selecting the site are to enjoy the diversity and unique landscape and mountain spaces. They are interested in hiking, enjoying and experiencing the nature. Majority of the tourists got to know of this site from the internet and the foreign tourists appear to be spending more time in the area compared to the local tourists. In addition to the Knuckles region, the tourists were also visiting, Sigiriya, Dambulla, Habarana. Minneriya, Anuradhapura, Kalpitiya, Kandy, Nuwara Eliya, Ella, Yala and Udawalawe.



Figure 4-10: Foreign Tourists Assessment at Pitawala Pathana

All interviewed foreign tourists had an awareness about the Riversten, Pitawala Pathana, Sera Ela and Duwili Ella. and they were hoping to visit these places in the future. Regarding infrastructure facilities in the area, majority of the visitors answered that access to the sites was unsatisfied. Parking facilities were considered to be good by all interviewed tourists. And condition of the trails and toilets were moderately considered by the foreign tourists in the sample.

Regarding the cost of the trip was reported as ranging from Euro 7000 - Euro 7100. The cost of transport ranged from Euro 1400-1700, accommodation from Euro 800-900, meals from Euro 750-900, entrance tickets from Euro 50-100 and other expenses from Euro 3500-4000. The main issues faced by the tourists were the lack of places to buy food and to some extent poor access to the sites and to a smaller extent, poor toilets and inadequate name boards and information about the sites. Camping sites and trails also need to be improved.

4.2.6 Accommodation and Tour Guides' assessment of the Knuckles Riversten, Pitawala Pathana Tourism Destination

▪ Status of the existing accommodation in the study area

Total of 22 hotels / guest houses were surveyed. There were a total of 73 rooms available for renting out with about 2-4 beds per room or about 200 beds. Room charges varied from about Rs. 2000 to Rs. 4000 per room per night. Charges were levied according to the number of individuals occupying a room, with higher charges levied for rooms with 3 or more occupants. About 20% of the hotels were only for locals while the rest catered to both locals and foreigners. Almost all hotels (90%) provided food as well. About 60% of the hotels provided both local as well foreign cuisine; the rest provided only local food. Average prices charged by the hotels for food ranged from Rs, 400 for local foods to over Rs 1000 per person for exotic food.

There were a total of about 40 persons employed by all the hotels or an average of about two employees per hotel. About 50% of the employees were from the vicinity while about 20% were family members and the rest were from outside of the area. About 45% of the employees had been trained while others had some experience in working in hotels. About 55% of the hotels were registered as a business with the Local Authority, Registrar of Business and or the Provincial Council.

The occupancy rate of the hotels was currently quite low. It ranged from 10%-20% for 40% of the hotels and 20%-40% for a further 40% of the hotels and 40%-60% for 20% of the hotels. Thus the

occupancy rate was 40% or less for the majority (80%) of the hotels. The highest occupancy was in the months of April, May, August and December and the lowest occupancy in the months of January, February and March. In the other months' occupancy was moderate. Currently, due to the economic unrest and shortages of essential goods, there has been a drastic reduction in the number of tourists arriving in the country and consequently the occupancy rates are much lower than normal. The majority of those seeking accommodation are foreign tourists, local tourists come mostly on day trips to the area.

▪ **Current status of providing guidance to tourists**

The study team conducted interviews with the tour guides operators in the study area. Among the tour guides majority of them were males (75%). About 88% were officially certified while all 100% had received training for working as a tourist guide in the Knuckles Range. All the guides speak Sinhala, while 75% can speak English and one guide could speak Tamil in addition to Sinhala and English. About 25% of the guides work with only local tourists while the rest work with both local and foreign tourists. Most visited places according to the guides were in order of frequency Pitawela Pathana, Riverston, Thelgamuwa and Sera Ela. Moderately visited place was Manigala and the least visited places were, Dulwila Ella, Weddapani, Dumbara Ela, and Lakegala. About 54% of the guides worked with Groups of Tourists, about 38% of the guides worked with Single or Two Persons and only 8% worked with or was hired by a Tour Company.

The tour guides charged on an average of Rs 3000 per visit for small and large tour groups or for a tour company and Rs 2500 for a single or a few tourists. Average income per month of tour guides was Rs 28,000 during the peak season, Rs 14,400 during non-peak season and Rs 7600 during other times. All tour guides indicated that their incomes had declined in the years 2020 and 2021 compared to the previous years. According to the survey the main issues faced by the tourist guides were lack of adequate language skills (100%), low income due to small number of tourists (75%), no proper facilities for tourist guides (63%), high competition among the guides (63%) and lack of adequate training and knowledge to work as a tourist guide (25%).

The major shortcomings and actions needed to improve this site as indicated by the tourist guides were the following:

- Develop a program to develop language skills and improve knowledge sharing about the importance of the knuckles mountain range as a UNESCO site.
- Provide training on first aid, book keeping and communication development which will be an added advantage for the tour guides.
- Other facilities needed as stated by tour guides were uniforms, shoes, bags, first aid kits, identity cards and raincoats for it rains often in the area.
- The access roads are dilapidated, there is an urgent need to repair and maintain the access roads as poor access roads discourage visitors from revisiting the sites.
- This destination should be promoted to the world and the public should be informed about the laws and regulations of a forest/UNESCO site before entering to the place.
- Trails should be developed in an ecological safe manner with the proper facilities, sanitary facilities are inadequate and of poor quality and should be improved and increased, rest areas should be developed and drinking water and other facilities for the tourists should be improved.

Currently tour guiding is not a permanent income source. There is no encouragement to progress in this sector. If it is possible to conduct a proper training program and continuously monitor the system as well as improve the facilities for the tourist guides, then it would encourage the development of careers of the tour guides.

4.2.7 Visitor opinions on the attractions in the study area

Most (100%) would recommend these sites to others and would like to visit this place again. Two third would like to visit the place again next year. The experience could be improved with the provision of good facilities and better access to the sites. The sites should be maintained properly including a better waste management system as the place is currently strewn with bottles, paper and other waste matter. However, if the sites are made more accessible, maintained properly with improved waste management, installation of adequate name and direction boards, then the full beauty and the breath taking views can be fully appreciated by the visitors.

4.3 Carrying capacity Assessment - Cifuentes' method

The level of use, length of trails sections, and total length of each trail is given in the Table 4-6.

Table 4-6: The level of use, length of trails sections, and total length of each trail

Trail	Name of trail	Use Level (1-5)	Length of trail	Width of trail	Comments
1	Riversten	5	2.5 km	15 ft to 10 ft	The trail gradually narrows, as you reach to the peak.
2	Pitawala Pathana	5	3 km	20ft	At the start the trail is approximately 20ft wide, but it narrows as you enter the forested area, at certain places the trail is only 3ft wide. Here visitors don't really stick to the demarcated trail and wonder all around the open area.
3	Sera Ella	3	7 km	15ft	The trail is through forested areas
4	Telugam Oya	5	-	-	No trail, it's by the side of the main road.
5	Manigala	2	8 km	6-10ft	There are several trails used by trekkers. The legit trail is through forested areas.

The total area and the type of activity in each trail are shown in Table 4-7. The area was calculated based only on the length and width of each trail.

Table 4-7: Area of the selected trails

No	Name of trail	Type of activity	Area (sqm)
1	Riversten	Trekking / Hiking	11,125
2	Pitawala Pathana	Trekking / Hiking	17,790
3	Sera Ella	Trekking / Hiking	31,150
4	Telugam Oya	Bathing	75,000
5	Manigala	Trekking / Hiking	23,680

Table 4-8 : The soil types and erosion risks of the trails/attractions studied

Trail	Name of trail	Soil types	Erosion Risk
1	Riversten	Rendzina soil (Sandy, Gravel and Lime)	Medium
2	Pitawala Pathana	Rendzina soil (Sandy and Lime)	Medium
3	Sera Ella	Rendzina soil (Sandy and Lime)	Low
4	Telugam Oya	Rendzina soil (Sandy and Lime)	Low
5	Manigala	Rendzina soil (Sandy and Lime)	Low

Average and maximum group size and average visit duration data were calculated prior to analysing carrying capacities with the data collected from the Forest department and the subsequent questionnaire surveys that were carried out. The Average and maximum group size: 30% of the respondents visited the area in large groups (10 – 65 individuals). Average group size (AGS) calculation formula is given below:

AGS = (group size₁ x number of groups) + (group size₂ x number of groups) + (group size₃ x number of groups) + + (group size x number of groups) / total number of respondents = 290 / 30 = 9.6 = 10 people. Based on the survey, the maximum size group consisted on 65 individual visitors.

Average visit duration (AVD): 36.6% of the visitors stayed 1-2 hours; 43.3% stayed for 2-3 hours; 16.6 % stayed for over 3 hours. Each category is considered as a single value; such as the 1-2 hours' category is taken as 1.5 hours and, the AVD was calculated as 2 hours is as follows:

$$AVD = (1.5 \times 123) + (2.5 \times 100) + (3.5 \times 67) / 290 = \mathbf{2.15 \text{ hours}}$$

PCC: The characteristics of the park related to PCC are: the two-way visitor flow on the trails; linear length per visitor is 1.0 m; total length of the trails is 2,500 m; average visitation time is 2.15 hours; park is open 10 hours a day; maximum group size is 65 people; and minimum evaluative distance between the groups is 50 m.

A person could theoretically visit more than one time during the 10 hours of visitation period a day since the average visit duration is 2.15 hours. So, the rotation factor is calculated as:

$$Rf = 10 / 2.15 = \mathbf{4.5 \text{ visits}}$$

Thirty-one groups each consisting of 50 visitors can fit into the park's 2,500m total trail length with 50 m distance between them [(31x65) +(30x65) = 3,965 m]. Theoretically 31 groups are assumed to be visiting the site simultaneously. Therefore, the available area for the visitors is 2015m (31x65=2015 m) and the PCC is calculated as:

$$PCC = 2015 \times 1 \times 3 = \mathbf{9,068 \text{ visitors/day}}$$

This means that 9.068 visitors physically (and theoretically) can visit the park per day. However, it is practically impossible to admit this number of visitors in one day. The PCC only provides a base level to calculate the following levels of recreation carrying capacity.

RCC: The influential factors for the RCC are mainly taken from the 14 year (2008-2022) period climatic data for Antalya (Anonymous 2004). Characteristics related to the RCC are: number of days in which the temperature is $>25^{\circ}\text{C}$ is 228.3 (annual average), daily sunny period is 12 hours (06:30-18:30), excessive sunlight period is 7.5 hours (09:30-16:30), number of days in which rainfall is 3000 mm is 190 (annual average), average rainfall period is 6.0 hours, average number of stormy days is 150 (wind speed $7,2 \text{ kmh}^{-1}$), and the effective period of wind is 7 hours (10:00-17:00). Excessive sunshine, rainfall, storm, erosion, accessibility, and disturbance to wildlife are identified as the corrective factors (C_f) which limit visitation to the Riverton complex.

Excessive heat: Particularly during the dry season, excessive heat affects hiking. The number of days in which the temperature is 25°C is 228.3 days. Limiting magnitude (Ml) and total magnitude (Mt) of excessive heat were calculated as 1712.25 hours/year (228.3 excessive sunny days \times 7.5 excessive sunny hours/day) and 2,739.6 hours/year (228.3 excessive sunny days \times 12 total sunny hours/day) respectively. The excessive heat corrective factor (C_{feh}) is calculated as:

$$C_{feh} = 1712.25 / 2739.6 \times 100 = \mathbf{62.5\%}$$

Rainfall: The eroded stones and gravel on trails can be very slippery particularly during rainy weather. Also mist in the air decreases the quality of photographs or videos to be taken. Limiting magnitude is calculated as 1140 hours/year (74.8 rainy days \times 3 rainy hours/day) and total magnitude as 3,650 hours/year (10 visiting hours \times 365 days). The rainfall correction factor (C_{fr}) is calculated as:

$$C_{fr} = 1140 / 3,650 \times 100 = \mathbf{31\%}$$

Storm: Storms could be dangerous for outdoor recreation. Limiting magnitude was calculated as 1050 hours (150 stormy days \times 7 stormy hours/day) and total magnitude is 3,285 hours/year. The storm corrective factor (C_{fs}) is calculated as:

$$C_{fs} = 1050 / 3,650 \times 100 = \mathbf{28.7\%}$$

Erosion: Because the main recreation activity around the Riversten complex is hiking/trekking, the erosion of trails is considered as a corrective factor. In particular, steep trail sections have been subjected to erosion due to recreational use. Table. indicates the erodibility of any place by visitor use according to the slope range and soil types. Trails in the area (2,500m) have sections with medium (565 m), high erosion risk (917 m), and soil type is generally Gravel to sand. Limiting magnitude is 1,482 m (565 + 917) and total magnitude is 2,500m. The erosion corrective factor (C_{fe}) is calculated as:

$$C_{fe} = 1,482 / 3,136 \times 100 = \mathbf{47.2\%}$$

Accessibility: Accessibility is related with the degree of difficulty of the longitudinal trail slope for hiking or trekking. According to Harris and Dines 1998, slopes more than 5.0% decrease the average walking rate and increase the difficulty in the urban context. Since the area has a very rough topographic setting, almost two-thirds of the trails have slopes over 10%. The first and second trail slope categories (slopes 10% and 10-20%) in Table. form the majority (58%) of the total trail length. The trail sections that have less than 20% slope were considered reasonable terrain that's is still comfortable for hiking. Thus, slopes over 20% were used as the limiting magnitude (917 m). The accessibility corrective factor (C_{fa}) is calculated as:

$$C_{fa} = 917 / 2,500 \times 100 = \mathbf{36.6\%}$$

Disturbance to wildlife: The Sri Lanka leopard, Sambhur, Barking Deer has particular importance for the area while 11 endemic species of birds. Overuse of the area and uncontrolled behaviour of visitors cause problems particularly during the nesting season of the animals. Thus disturbance to wildlife is

considered as a limiting factor. The mating season for the bird species April-July (4 months); so the limiting magnitude is a total of 4 months and total magnitude is 12 months. The disturbance to wildlife corrective factor (C_{fw}) was calculated as:

$$C_{fw} = 4 / 12 \times 100 = \mathbf{33\%}$$

RCC is calculated as 375 visitors per day by converting six corrective factors into coefficients as follows: $RCC = PCC \times (100 - C_{feh}) / 100 \times (100 - C_{fr}) / 100 \times (100 - C_{fs}) / 100 \times (100 - C_{fe}) / 100 \times (100 - C_{fa}) / 100 \times (100 - C_{fw}) / 100$

$$RCC = 9068 \times (100 - 62.5) / 100 \times (100 - 31) / 100 \times (100 - 28.7) / 100 \times (100 - 47.2) / 100 \times (100 - 36.6) / 100 \times (100 - 33) / 100 = \mathbf{375 \text{ visitors/day}}$$

ECC (Effective carrying capacity)

Finally, we can calculate the Effective Carrying Capacity. Effective carrying capacity (ECC) is defined as ‘the maximum number of visits that a site can sustain, considering the management capacity (MC)’ and formulated as:

$$ECC = RCC \times MC$$

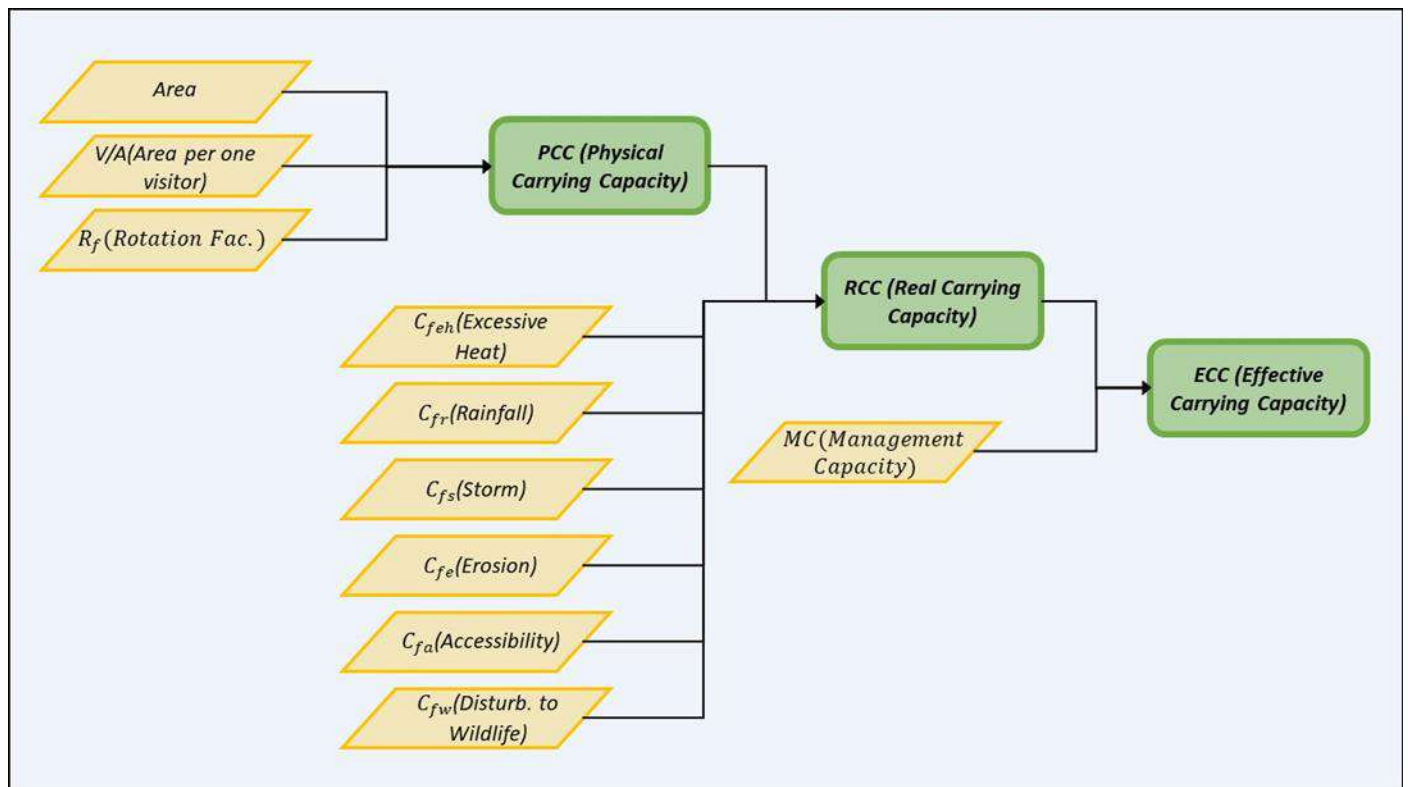


Figure 4-11: Process of calculating Carrying Capacity (ECC) using the Cifuentes' method.

Facility conditions (litter bins, toilets, benches, etc) need further improvement in the park. The management plan suggests 9 staff including park ranger and guides for proper management. However, only 7 staff are in charge. So, the management capacity (MC) is calculated as:

77.7% (8 / 9 × 100) and ECC as:

$$ECC = 375 \times 0.78 = \mathbf{292.5 \text{ visitors/day}}$$

Future projection of carrying capacity

According to the one of main objectives of the study we have to predict the increasing of carrying capacity from 2022 to 2030. Therefore, we assume all the external factors will increase in the considering time period. Then we use the year 2022 as the benchmark and hypothetically calculated the increasing of carrying capacity in 5% and 10% in every 2 years and projected until 2030. R software package was used for the calculation of the projected increasing.

The study area lies under the area of 10 $[(km)]^2$ in 'Knuckles Range'. Therefore, the difference of climate factors might be ignored and we consider controlling factors and management capacity are same. Figure 2 shows the variation of carrying capacity of each location. According to the figure 'Thelgamu Oya' has the largest carrying capacity while 'Riversten' has the smallest.

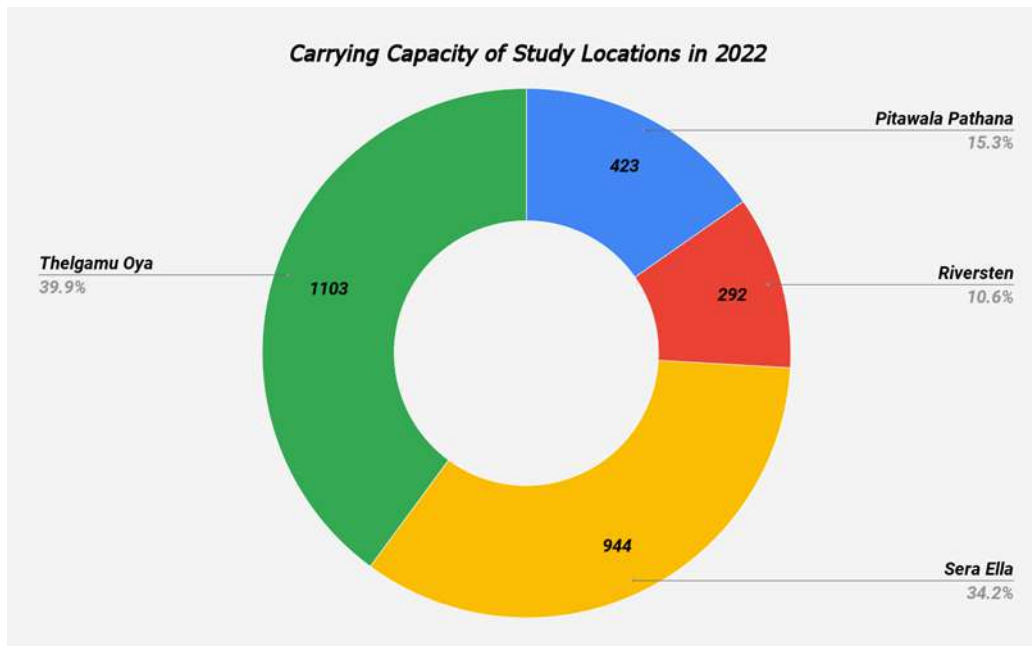


Figure 4-12: Carrying capacity of each 4 locations

One of the main objectives of this study is to project the increasing of the carrying capacity until 2030. It is very important to understand how factors will be varying in the near future. Therefore we consider that carrying capacity might be increase in near future by analysing prior data of visitors to the study area. According to the data there is a linear increasing of annual number of visitors. But with the COVID pandemic and economic crisis of Sri Lanka, number of visitors have decreased from 2019 to 2021, but in the first quarter of 2022 we can see a significant increasing of the number of visitors and this trend will last in the future.

Further, the present carrying capacities of the destinations in the study area is influenced by the climatic factors such as heat, rainfall, storm conditions which cannot be rectified as they are external factors. However, the erosion of the trails, accessibility to the destinations and disturbance to the wildlife can be improved by the facility management. Further the management capacities of the facilities such as availability of toilets, waste disposal mechanisms, adequate trained staff to function as guides, quality accommodation in the neighbourhood can also be improved by the facility management.

Therefore, based on the premise that the aforesaid improvements will be done to the destinations, projections of the carrying capacities up to 2030 were projected in two scenarios; 5% and 10% level

increase from the present as shown in Figures 2 and 3. According to the both projection levels 'Thelgamu Oya' has the largest carrying capacity while 'Riversten' has the smallest.

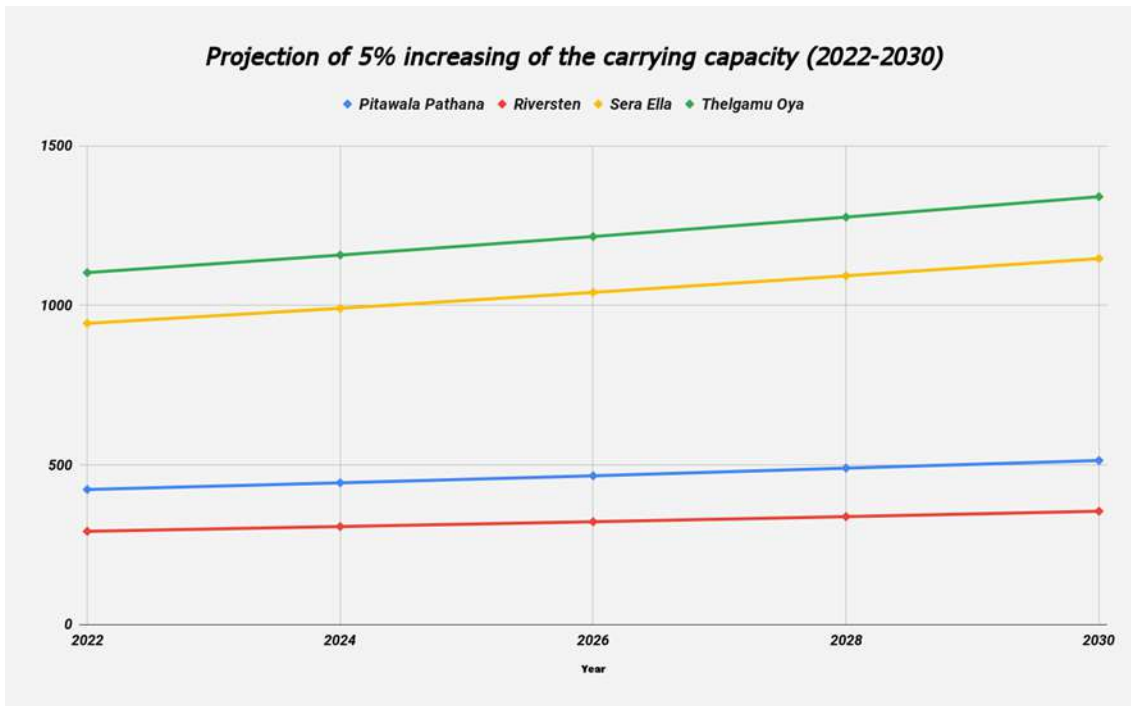


Figure 4-13: Carrying capacity increasing at the level of 5%.

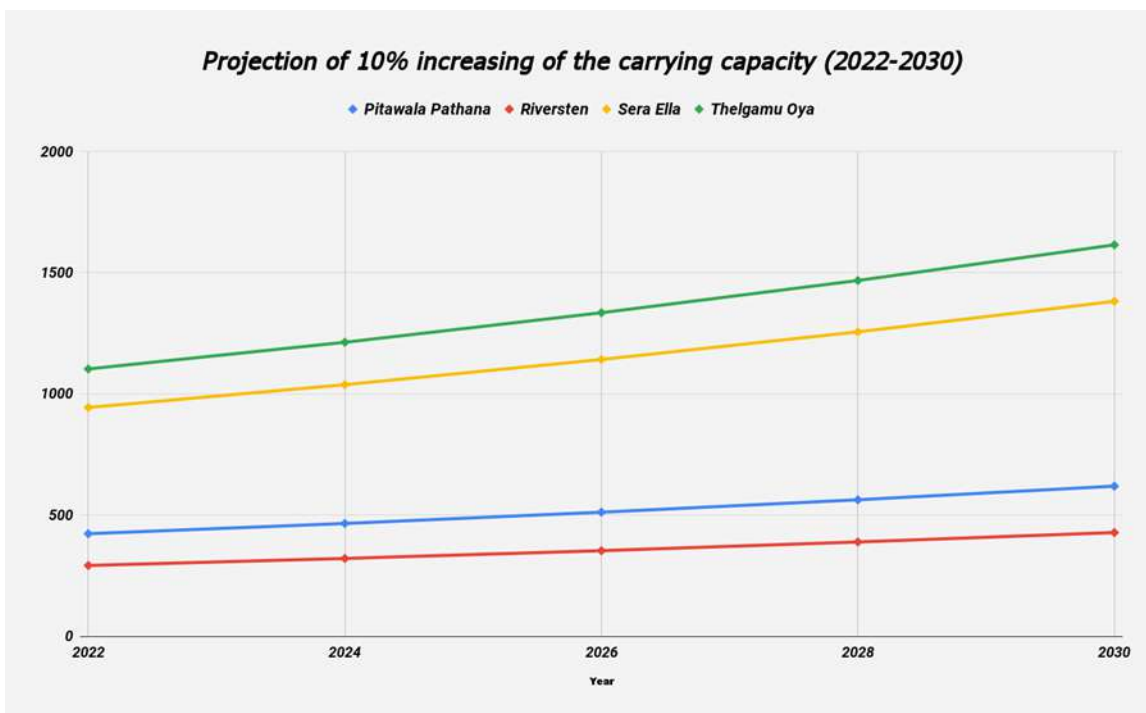


Figure 4-14: Carrying capacity increasing at the level of 10%.

4.4 Socio Economic and Gender Assessment

▪ Demographic Status

The selected study area for the particular study is considered as the 10km radius from the Pitawala Pathana main destination. Primarily it has included 58 GN Divisions in Laggala, Rattota, Abanganga and Naula DS Divisions. The study area has been further refined considering to the destinations distribution among the GNDs. Afterward Atanwala, Ilukkumbura Mahalaketuwa Meda Ela Pitawala and Rathninda GNDs have been identified as the absolute/effective areas/GNDs of the project. The demography and socio economic background of the study area are shown below;

Table 4-9: The demography of the GN Divisions which falls into the study area

DSD Name	GND Name	Total Population	Gender		No. of families	No. of houses	Female Headed Families	Age		
			Male	Female				0-14	15-59	Over 60
Laggala-Pallegama	Atanwala	134	70	64	51	47	13	18	94	22
	Ilukkumbura	177	83	94	70	70	-	45	98	34
	Mahalaketuwa	197	108	89	64	64	14	39	125	33
	Meda Ela	139	68	71	57	57	6	34	87	18
	Pitawala	213	113	100	80	64	-	37	138	38
	Rathninda	166	89	77	61	56	7	38	96	32

Source: Resource Profile, Laggala DSD, 2020

According to the statistics, all the GN Divisions records relatively low population. In many instances, development of the human settlements of the area have been discouraged due to inadequate facilities such as transportation, health, employment, education, geographical barriers and by the specific laws and regulations.

Referring to the demographic data of the GN divisions in 2020, male population in the selected area is higher than the female population, respectively it records 52% and 48%. Regarding the female headed families in the study area, Atanwala and Mahalaketuwa represents highest 25% and 21% out of total families in the GND areas. GND wise dependent population and gender ratio has been shown in Table 4-10.

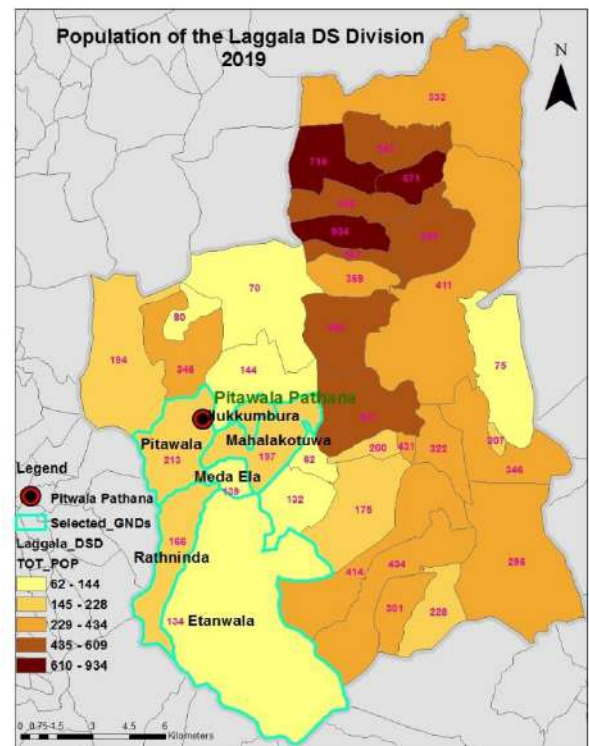


Figure 4-15: Population distribution of the selected GNDs

Table 4-10: The gender distribution in the GN Divisions in the Study area

Selected GNDs of Laggala DSD	Male%	Female %	Dependent Population %
Pitawala	53	47	33
Atanwala	49	51	41
Rathninda	52	48	46
Mahalakotuwa	54	46	37
Madaela	47	53	43
Illukkumbura	51	49	50
Rambukoluwa	55	45	32

Source: Resource Profile of the Laggala DS 2020

▪ **Education**

Mahalakotuwa Sri Sumangala Maha vidyalaya (total students: 148) is the main education institute in the selected area and it has grades up to ALs. But the school has not enough facilities to provide education in biology and mathematics streams for the ALs and those students are moving Matale or other distance schools. Pitawala (total students: 19) and Rambukoluwa primary schools (total students: 28) are the other two schools in the area. Overall unschooled population is very low in the area. Same as having qualifications up to Degree or Postgraduate Degree is also minimum. Overall there is a good coverage of education up to A/L in all the GN Divisions although there are significant differences among the divisions in this context. However, the difficulties faced by the villagers in sending the children to schools need to be stated.

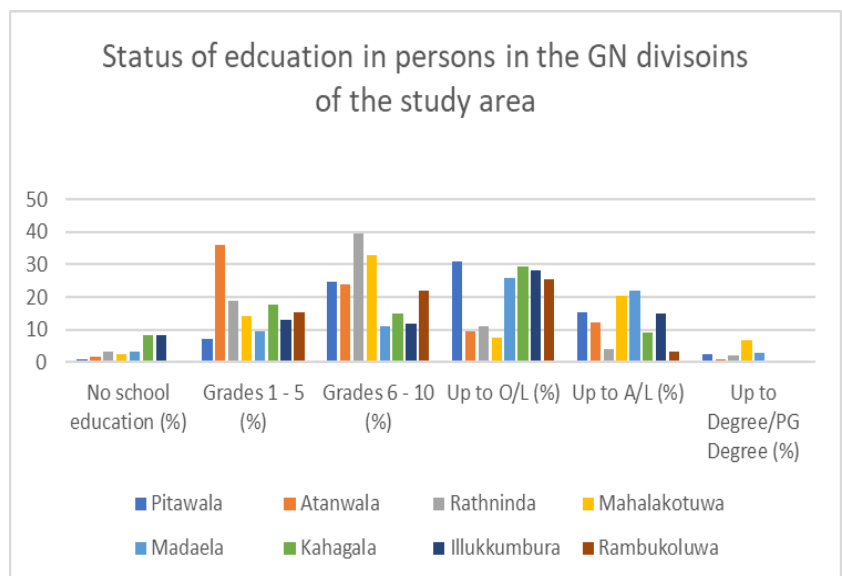


Figure 4-16: Level of educational qualifications in the GN divisions in the study area

With regards to the gender status, there was disparity between GN divisions in almost all the instances. Further, in general disparity between genders was shown in all the GN divisions among the personnel who could not attend school at all and also those who proceeded to university. In both these instances females fell behind the males. In other instances, there was no significant difference between gender. Figures 4.13, shows the trend in these contexts.

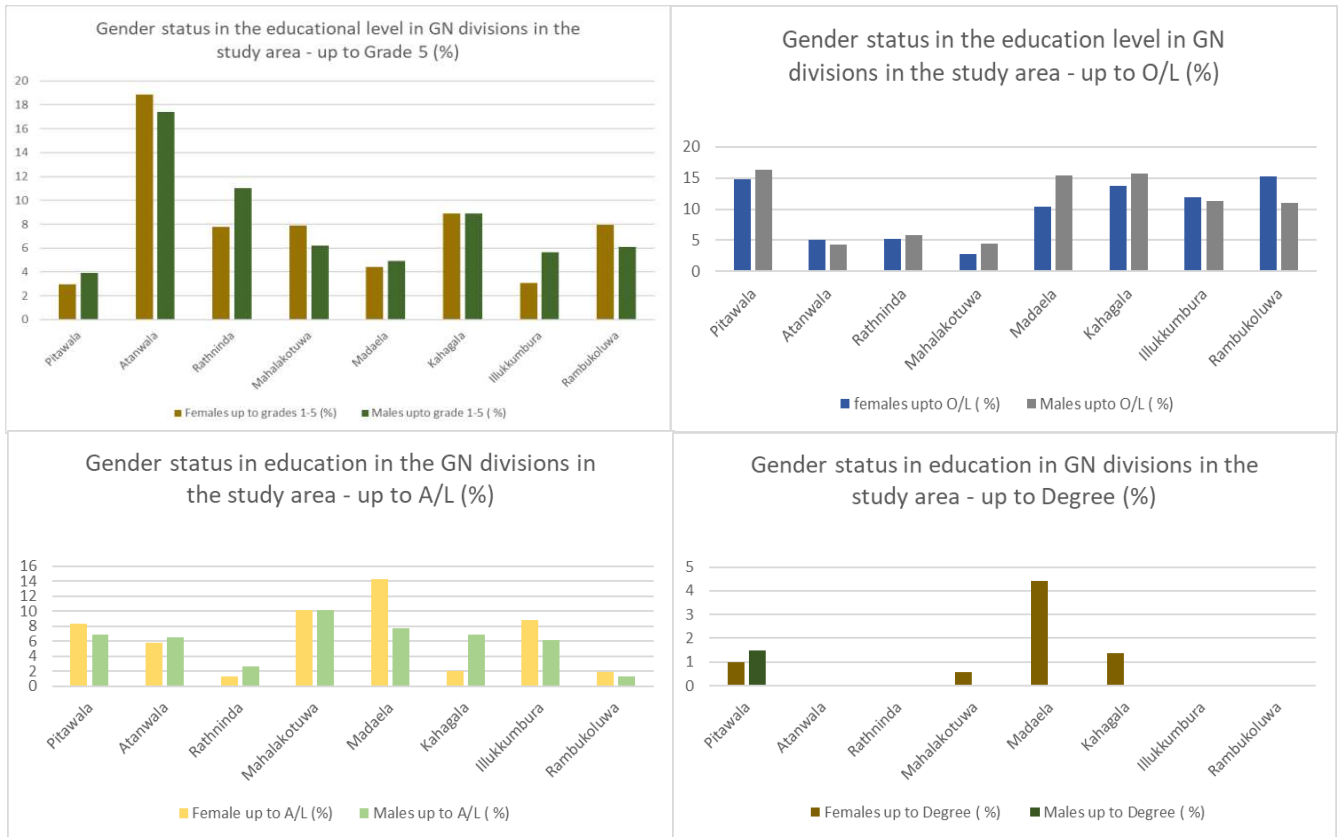


Figure 4-17: Gender and educational status in the selected GN Divisions

▪ **Landuse Distribution and Livelihood**

Undeniably, forest cover has the highest land distribution of the area. Forest cover together with grasslands and scrub lands cover more than 70% of the study area. Kalu Ganga and Thelgamu oya are the main water bodies flow through the region. Paddy lands and some home gardens are the other considerable distributions of the selected GNDs in Laggala DS division. Rattota and Abanganaga DS divisions have tea, rubber, paddy and other plantations agglomeration towards Matale town. Favorable climatic condition and easy geographic setting are reasons to spread human settlements and cultivations in the lower elevated areas. Narangolla, Hunukete, Kavudagammana GNDs of Abanganga DS division are primarily cultivating the rubber, while the GNDs such as Medawatta, Dambagolla, Bambarakiriella in Rattota DSD are predominant for the tea plantations.

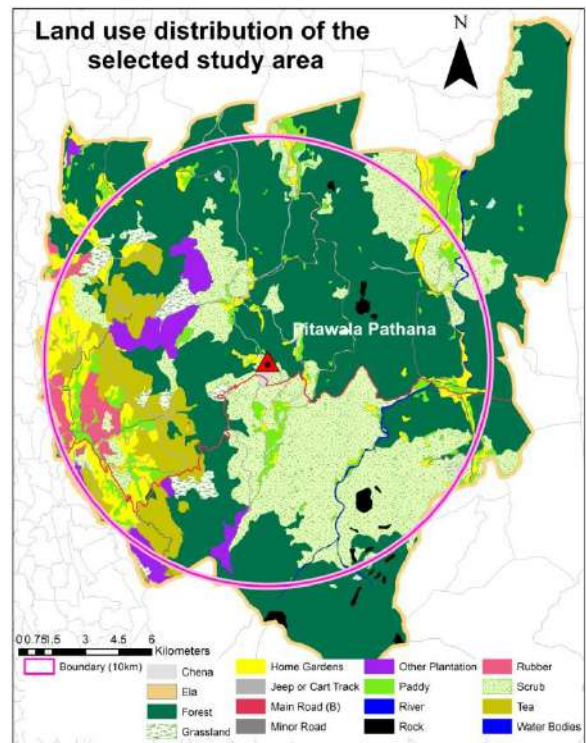


Figure 4-18: Land use Distribution of the area

Considering the livelihoods of the area, the main crops cultivated in the surrounding areas are paddy, vegetables and spices such as cardamom, ginger and pepper and fruit trees. Table 4-11 shows the distribution of agricultural land in the selected GN Divisions of the Study area.

Table 4-11: Distribution of agricultural land in the selected GN Divisions of the Study area

Selected GNDs of Laggala DSD	Land Extent (Acres)	Govt Land Extent (Acres)	Private	Paddy	Pepper	Mix
Pitawala	2503.02	1059	144	148		
Atanwala	11186.16	2	179.1	156		2
Rathninda	2130	2	188	118	2	5
Mahalakotuwa	2080.57	24.2	180	73		
MadaEla	585.07	6	103	73		
Ilukkumbura		15	142	73		5
Rambukoluwa	45.5		105.84			
Kahagala	142	2218				

Source: Resource Profile of the Laggala DS 2020

Table explains, the main agricultural crops farmed are paddy. In addition to this, cultivation of cardamom/harvesting of the naturally grown cardamom are practiced by the villagers in these areas. Since this is a practice having adverse implications on the sustenance of the natural environment, the FD had taken steps to zone the lands so that it is prohibited for the villagers to indulge in this practice in the core area designated by the FD.

As shown in the Table 4-12 the major occupation of the householders of the GN Divisions is agriculture while those engaged in the service sector also represented a small portion. The personnel engaged in industrial sector are almost nominal. However, it is significant to note that in the GN Divisions Illukkumbura and Rambukoluwa no one is engaged in agriculture and industrial sector but a small number engaged in service sector. This makes these GN divisions saddled with unemployment.

Table 4-12: The status of employment in the GN Divisions of the study area

Selected GNDs of Laggala DSD	Agriculture	Industrial	Service	Total Employment
Pitawala	74	3	15	92
Atanwala	92		12	104
Rathninda	66	3	13	82

Selected GNDs of Laggala DSD	Agriculture	Industrial	Service	Total Employment
Mahalakotuwa	42	4	3	49
Mdaela	73	2	26	101
Kahagala	100	-	-	100
Illukkumbura	-	-	3	3
Rambukoluwa	-	3	3	6

Source: Resource Profile of the Laggala DS 2020

It is apparent that in almost all the GN Divisions in the study area, the percentage of male employment is higher than that of the females. However, in Rathninda there is a reversal to this pattern and in Rambukoluwa the difference was minimal. With regards to the employment by sector, except in Madaela, Illukkumbura and to a lesser extent in Pitawala, the personnel engaged in government employment is much less than other sectors. The highest percentage of personnel employed in private sector is seen in Rambukoluwa and Rathninda and to a lesser extent in Kahagala while more personnel are shown to be self-employed in all the GN Divisions in the study area. With regards to the personnel unemployed, the highest number is recorded in Madaela.

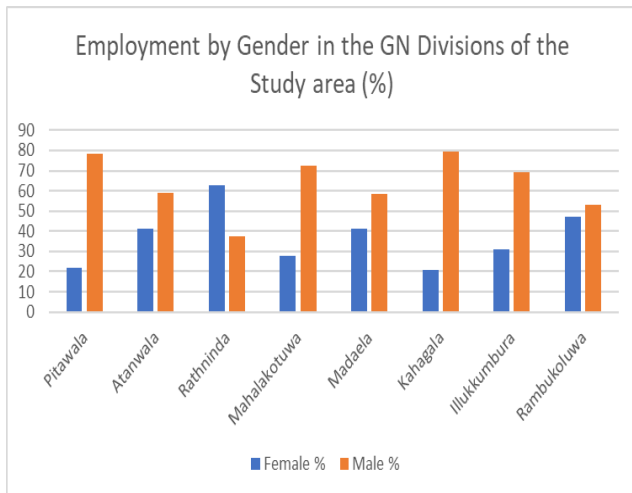


Figure 4-20: Employment status by gender in the GN Divisions of the study area

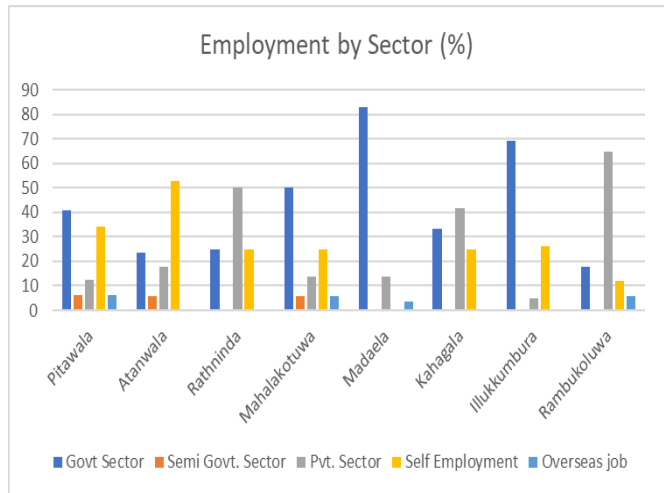


Figure 4-19: Employment by sector in the GN Divisions in the study area

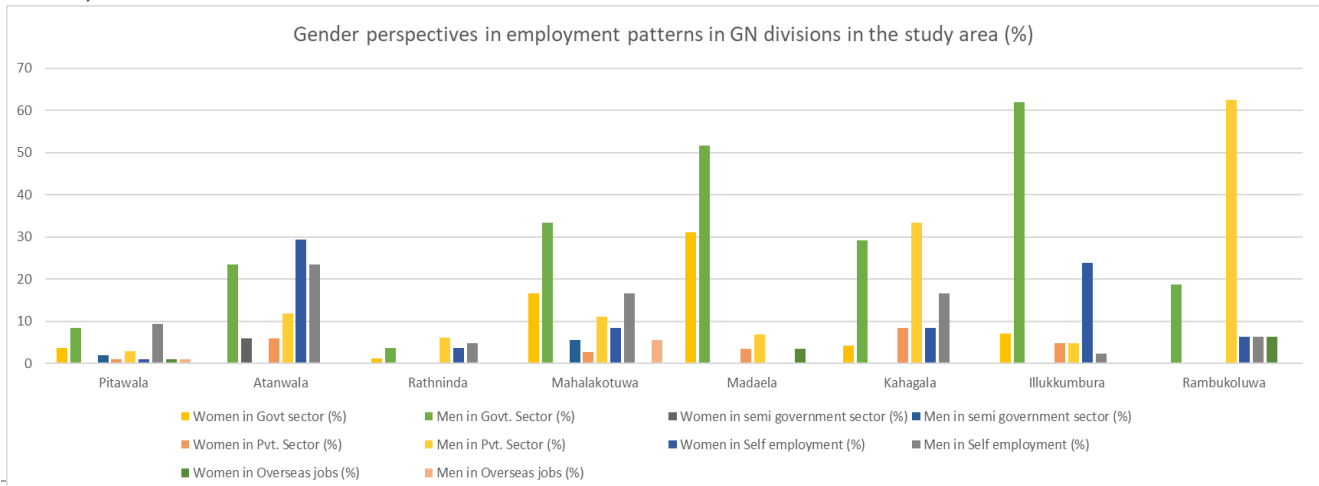


Figure 4-21: Gender perspectives in the employment pattern in the GN divisions of the study area

There is a marked variation between GN divisions in the status of employment, there is a sufficient difference in the employment of any type between men and women where man had been more successful than women. However, in Atanwala, more women were self-employed compared to men.

Most of the women in the area are involved in different agricultural activities. Home gardening is a significant part of their domestic activities which may not have any economic value in terms of generating income by making sales outside the home consumption. Yet women were proud to show their small gardens with a few vegetables and fruits. Atanwala village is considered to be a traditional village with houses close to each other in a cluster with the paddy lands forming one boundary and the Manigala mountain range forming another on the other side. Elderly men and women spoke of their experiences and involvement with forest areas for collecting different items with economic value such as cardomon which have been restricted by the forest department in the present context. The tendency of young men to move out of the village to find work in the cities was considered a common factor while the same experience was not relevant to young females. Many women stay at home looking after the children and the elderly while men are occupied in other areas for income generation purposes

There are many women-run small and micro-level businesses such as small boutiques, sweets-making, production of honey-based products, and horticulture. During the discussions, it was revealed that women who are over 60 years of age show greater involvement in income generation now than they did in the past. Most of the elderly women work on farmland, especially in paddy cultivation. The use of new technology and up-to-date knowledge was not evident in these interventions and the income generated for the effort was not satisfactory. Land ownership is predominantly with males and economic activities are considered to be the responsibility of the males.

The percentage of families receiving Samurdhi aids is shown in table 4-13

Table 4-13: The percentage of families receiving Samurdhi aid

Name of the GND	No.of Families	Samurdhi Aided Families	%
Pitawala	80	58	72.50
Atanwala	51	47	92.16
Rathninda	61	38	62.30
Mahalakotuwa	64	38	51.35
MadaEla	57	31	54.39
Ilukkumbura	72	39	54.17
Rambukoluwa	51	45	88.24
Kahagala	59	47	80

Source: Resource Profile of the Laggala DS 2020

From the above figure it is apparent that in all the GN Divisions, more than 50% of the families are receiving Samurdhi Aid. This number is highest in Atanwala and then in Rambukoluwa , Pitawala and Rathninda.

The status of the supply of basic amenities - Electricity and Water

As shown in the below figure 4-24, majority of the houses are connected to the national grid for electricity supply. Water supply of the study area has been figured in the figure 4-25. Except for Mahalakotuwa and Rambukoluwa, all the GN Divisions have access to pipe borne water to different levels, the highest being Rathninda and then Kahagala, Illukkumbura and then Atanwala. In Pitawala and Madaela there are community water supply schemes in operation.

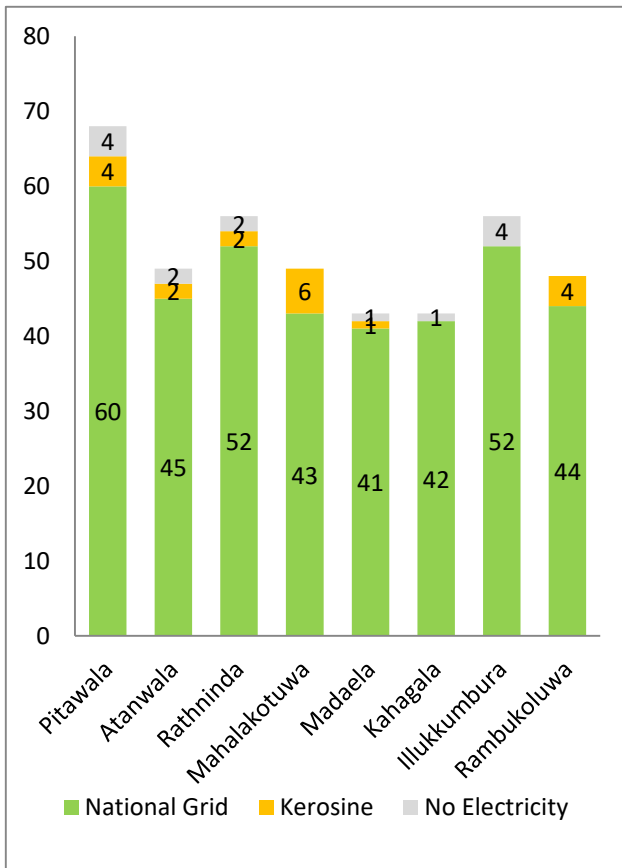


Figure 4-22: supply of electricity to the GN Divisions in the study area

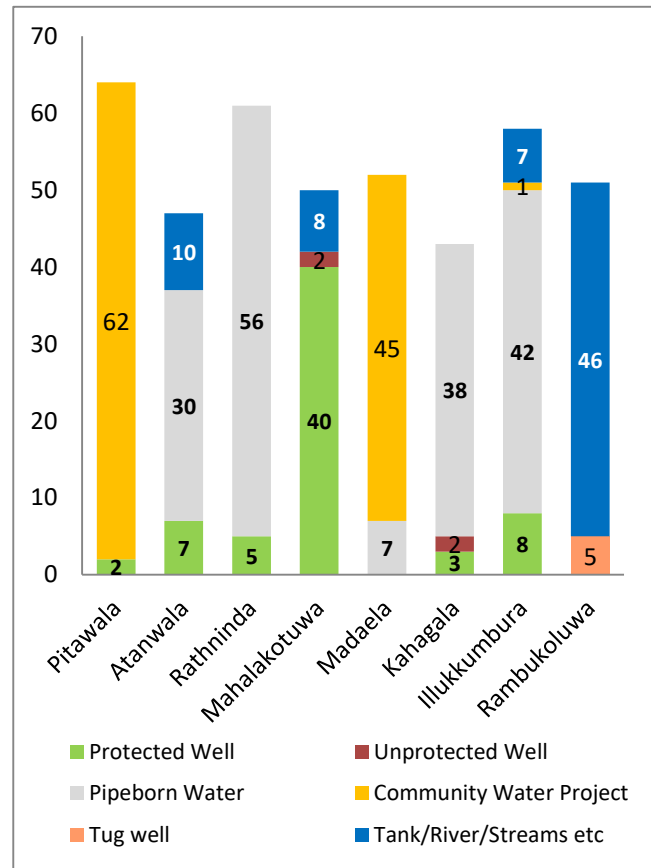


Figure 4-23: Status of the water supply in the GN Divisions in the study area

Results of the primary studies

Benefits from the forests: Results from the household survey conducted by the study team revealed that about 88% of the households obtained some benefits from the adjoining forests. This includes,

- Cutting of trees and branches for firewood (68%)
- Collecting medicinal plants (65%)
 - Picking cardamoms (3%)
 - Grazing their cattle in the forests (27%)

Income: About 13% - 18% also obtained an additional income from renting out rooms to tourists and/or by providing meals. These households obtained an additional income of Rs 14,000 per month from renting out rooms. Further, they also benefited by selling agricultural produce (12%), selling honey (6%) and providing other services (12%).

The Tourism Marketing Plan prepared on Knuckles Forest Area by the ESCAMP Project for the Forest Department in 2018 had identified the need for community participation in the tourism management. Stemming from this initiative, an Environmental NGO of the area, Dumbara Mithuro had been entrusted

with the management of ticket counters on fund sharing basis. However, this initiative is no more and the FD is now in full charge of the management.

Involvement of women and vulnerable groups in tourism-related activities: The local communities at the destinations selected for this study have experienced an increase in tourism in the Knuckles region except during the Covid-19 period. They also feel that the interest of locals has grown with time as many visit the area for hiking and nature adventures. The understanding of tourism among the local communities has somewhat changed as the local tourists themselves have contributed to the local economy.

Women and vulnerable groups in tourism still remain to be a distant idea unless the concepts are unpacked and analyzed to understand the kind of opportunities available for women. In the field research conducted any extended value chain with clear involvement of women could not be observed.

Homestay owners and Traditional village: In the traditional village, there are a few houses that are run as homestays with the original structure allowing the guest to feel the spirit of a traditional village. The home gardens are maintained by women where the guest can pick whatever vegetables and fruits that are available and taste the local cuisine. In the same vicinity apart from the houses owned by the villagers who are originally from the location itself, a house owned by an outsider is being run professionally by a caretaker. Apart from managing the coordination, most other tasks involved with running homestays are done by women. However, the biggest challenge faced by women for inclusion in the tourism sector is to overcome the negative community attitudes. Women themselves are concerned about their 'reputation' and reluctant to work in hotels, especially in smaller hotels and guest houses. Their understanding of the hospitality industry is limited and was equated with the hotel work. While Sinhalese women were less reluctant, women of Tamil and Muslim ethnicity rejected hotel employment. There are many opportunities for women in the hospitality industry. Women have no restrictions in providing transport, acting as guides, such as in information provision, engage in destination promotion, organise cultural tours and entertainment.

Opportunities for women and vulnerable groups in the tourism supply chain: The participants in the field discussions identified interventions to integrate women and vulnerable groups in the tourism supply chain. These are given in the following diagram

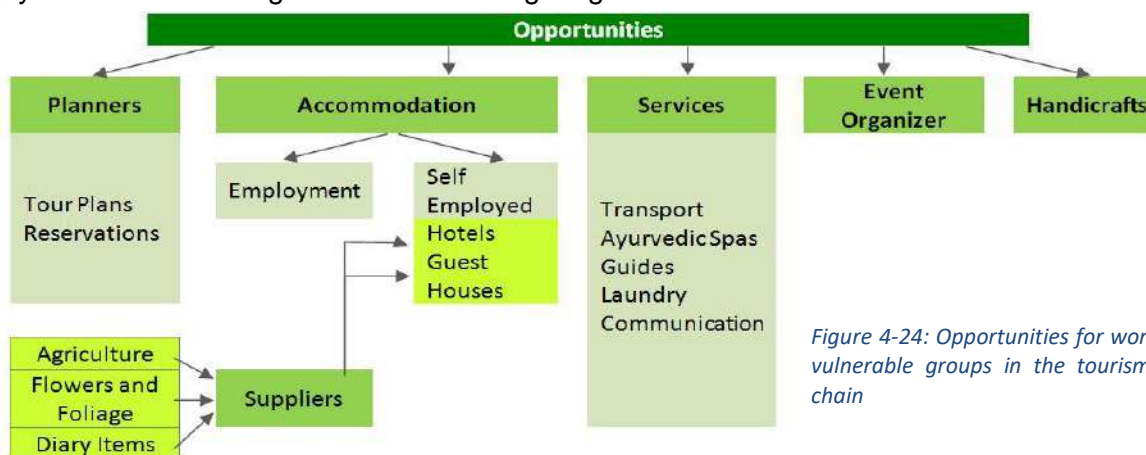


Figure 4-24: Opportunities for women and vulnerable groups in the tourism supply chain

- Social media materials to be developed should focus on women's participation in the tourism sector and the opportunities created for the vulnerable groups
- Social media should raise the interests of the visitors to contribute to and to make them feel that they attend to their social responsibility in supporting local industries and people who

would not get a chance to improve their social states unless strong partnerships are developed

- Interventions at the village level to highlight the lifestyle in the traditional setup should be planned in a way to express the cultural values, which can be done with organized demonstrations as well as by developing a documentary video
- An effective plan for Gender Mainstreaming in the tourism sector should be developed for Knuckles Riversten region based on the evidence gathered from different sources as this report .

4.5 PESTAL Analysis

The results of the PESTLE analysis (Political, Economic, Sociological, Technological, Legal and Environmental) done on the status of tourism in the KCA with special to the study area is shown below;

- **Political factors**

The National Policy Framework Vistas of Prosperity and Splendor (2020-2025) recognizes tourism as an important sector to the country's economic growth and sustainable development. Among the objectives of the National Policy Framework are the need for a) people-centric economic development, b) development of physical resources, c) sustainable environmental management, and d) productive citizenry and vibrant human resources. These policy objectives strongly resonate with the tourism industry.

Sri Lanka Tourism Development Authority (SLTDA) is the government authority tasked with planning, development, regulation, and policy implementation of tourism and related industries. SLTDA is the official government institution tasked with regularizing the tourism industry in the country, while establishing, positioning, and developing Sri Lanka as a leading destination for international visitors. SLTDA is responsible for tapping into Sri Lanka's natural potential to expand and enhance its tourism offering while benefiting investors and supporting communities, in a sustainable manner.

From the year of 1996 Sri Lanka is having an organized tourism sector. But from 2007 the internal war with the LTTE discourage the growth of tourism (Richardson, 2005). But again from 2009 the situation got better and the growth of tourism was rising. However, with the onset of COVID 19 followed by the more recent economic downfall in the country coupled with political instability, the tourism was hard hit again as tourists want to have a guarantee on their safety before visiting a destination.

In terms of the Part 1 of the Finance Act No 25 of 2003, there shall be levied from every institution licensed under the Tourism Development Act, No. 14 of 1968, a levy of one per centum on the turnover of such institution in any year, to be called the Tourism Development Levy. About 50% of the accommodation providers in the Study area have not got registered with the SLTDA and perhaps due to this factor.

The links between private and public sector in the marketing of services, marketing and business development of tourism is somewhat satisfactory. It is noteworthy to mention that in the contexts of Knuckles, the Forest Department is engaging in promoting the destination for sustainable tourism as much as the SLTDA and this joint effort goes a long way and provides assistance to many.

Visa system for foreign tourists is not very complicated which makes easy entry to the country.

- **Economic factors**

Tourism plays a vital role in the growth of Sri Lankan economy. The tourism sector contributes 12 per cent to the GDP of Sri Lanka and is the fifth largest source of foreign revenue in the country. Tourism has traditionally been the third largest foreign exchange earner in the country. Sri Lanka recorded

over 1.9 million tourist arrivals in 2019, a 21 percent drop from the previous year owing to the aftermath of the April 2019 Easter Terror Attacks. It is estimated that the sector earned around \$3.5 billion in 2019. Approximately 570,000 tourists arrived in 2020. The effects of the global COVID-19 pandemic crippled the sector in 2020, which is currently catering almost exclusively to local tourists and international arrivals under strict “travel bubble” restrictions. When the adverse impact from the COVID 19 was easing the downfall of the economy of the country had adversely affected the growth of all sectors including tourism.

Often said that tourism is a labor comprehensive sector, but a huge number of unskilled and uneducated labors have a great opportunity of employment through this sector.

With regards to the Knuckles Region, it attracts about 60,000 tourists annually, including about 700 foreign tourists. These numbers increased from about 50,000 in 2016 to 58,000 in 2018, and have declined since then to about 42,000 in 2021. The number of foreign tourists has also declined from a high of 770 tourists in 2018 to about 50 in 2021. The numbers have increased to 200 in 2022 (Jan. to Apr.). Thus tourism has declined mainly due to the current economic catastrophe experienced in the country.

Riversten and the other attractions within 10 km radius belong to the Matale District and Laggala and Rattota Divisions. 23 GN divisions belongs to Laggala Division while 5 GN divisions belong to Rattota Division. Among the communities living within this area, farming is the major occupation. The majority of (90%) of the households grow paddy, vegetables and fruits, while about 20% grow spices such as cardamom, pepper and ginger. Monthly average household incomes ranged from about Rs 20,000 to Rs. 60,000 with an average income of about Rs 26,000 per month. Average monthly expenditure was about 10% more at Rs 29,000. Thus most household are unable to meet all their needs, particularly, food, medicines, transport, electricity and water bills. Most of the villagers are moderately educated with about half of the population having GCE (OL) qualifications, while about 20% having studied up to the GCE (AL). Those who had received a tertiary education is very sparse. Despite the fact that some village youth were trained by the Forest Department as guides and there are guides trained by other means also in the village/working in the village, still the participation of the surrounding communities in the tourism activities is very small and need to be improved. Engaging the communities in the hospitality business is being encouraged by the Forest Department along with the Central Province Tourism Department and Pradeshiya Sabhas by providing training, equipment especially for camping and food. However, there is a large gap between providing easy access to food and lodging for tourists and provision of same by the villagers and need to be improved.

- **Socio-cultural factors**

Knuckles is a destination rich in natural attractions and cultural heritage. It is one of the most pristine locations in the country. It is a treasure trove of biodiversity, situated in a sparsely populated region in central Sri Lanka. It is home to a unique variety of flora, fauna and culture. This spectacularly scenic region, known traditionally as the 'misty mountains', is rarely seen by tourists.

Rising to heights of more than 1,800 meters, this conservation area's spectacular scenery is wonderful for walking and hiking, with an extensive network of forest trails, rivers and waterfalls. The 155 sq.km region contains five major forest types, a wide variety of rare and endemic wildlife and plant species and some breathtaking mountain scenery. gives visitors a very different perspective of traditional Sri Lankan agriculture and an old way of life. Living amongst the people indigenous to the forest, you are given a fascinating insight into the challenges they face from a dwindling population increasingly drawn away to an urban existence.

Despite this vast potential, it is very clear that the length and depth of it had not been tapped. The main factors tourists expect during their stay to make it a pleasurable one i.e. easy access to destination/s, easy access to food, acceptable and comfortable lodgings, effective signage to find locations is sub optimal in the study area. Most of the access roads are in very bad shape and had not been renovated although there had been some efforts at it in the past. While there is lot of potential to provide a traditional experience in food and other rituals especially in Atanwala, this had not been materialized and need to improve significantly. Further, with regards to accommodation, most of the local visitors which are the majority stay maximum of one to two nights in the area while the foreign students may spend even 7 nights. The accommodation in the area is mediocre with the exception of few hotels which are offering higher prices and higher quality services. Due to the location being in a valley, the signals for communication are poor and most of the hotels/lodges do not provide wifi which is considered a must for anyone in today's context. The cleanliness in the rooms, toilets had been reported as sub optimal too which is also a decisive factor in the tourist satisfaction. The homestays are almost nonexistent now especially after the COVID 19 pandemic and need to be brought back but with proper guidelines to provide an acceptable satisfaction to the tourists.

Majority of the tourists visiting the area are local and seasonal (during holidays, school vacations etc.) and among them a significant proportion are young personnel, their expectations from the visit is to have fun mostly and appreciating the natural beauty and culture of the area is somewhat low. Further due to the heavy tourist traffic during the holidays the narrow roads are blocked and this poses difficulties to the natives. The few foreign tourists visit the location out of interest in nature and appreciate the culture too especially the variety of foods etc. The latter had not been fulfilled and there is potential for the neighboring communities to engage in tourism actively by providing homestays and cultural foods and demonstration of rituals.

- **Environmental factors**

Natural resources and natural attractiveness which is rich in Knuckles are still the main motivating factor for the arrival and stay of tourists. Knuckles Range is home to a unique variety of flora, fauna and culture. This spectacularly scenic region, known traditionally as the 'misty mountains', is rarely seen by tourists.

Rising to heights of more than 1,800 meters, this conservation area's spectacular scenery is wonderful for walking and hiking, with an extensive network of forest trails, rivers and waterfalls. The 155 sq km region contains five major forest types, a wide variety of rare and endemic wildlife and plant species and some breathtaking mountain scenery.

There are at least 1,033 species of flower and plants and approximately 255 species of trees. The Knuckles region is rich in fauna such as sambur, barking deer, mouse deer, wild boar, giant squirrel and the slender loris. Two endemic primates can be found - the toque monkey and the purple-faced leaf monkey, as well as several species of endemic fish, amphibians and reptiles. There are 17 out of 23 endemic species of Sri Lankan birds flying residing in the area too.

Pollution especially air pollution from transport from visitors especially the local visitors who come as flocks during the holidays and congestion poses adverse consequences. Due to the noise of the holidaymakers especially the local tourists, the fauna may be adversely affected. Due to the heavy use of some trails, some of the rare vegetation had been dwindling due to soil compaction, exposure and erosion.

▪ Technological factors

Despite the fact that Sri Lanka is occupying a higher place in terms of technological advances, the technological use in the study area needs to be enhanced. Due to poor communication signals the use of telecommunication devices is very difficult and this needs to be enhanced. However, due to the relatively small number of inhabitants in the area the communication service providers do not wish to invest on more towers. Thus the communication required in connection with the tours /travels is very suboptimal.

▪ Legal factors

Tourism development is currently governed by guidelines, frameworks, and codes of the Tourism Act No 38 of 2005 which came into effect in October 2007, replacing the Sri Lanka Tourist Board Act No. 10 of 1966. A Tourism Strategic Plan 2017-2020 was developed as a framework to help move the destination towards Sri Lanka's Tourism Vision 2025, but ultimately this was not fully implemented.

The 2005 Tourism Act remains to this day as the only legal reference for a sector that has profoundly transformed on both demand and supply sides. Other 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).

A National Tourism Policy was drafted in 2021 to function as an overarching national policy in Sri Lanka on Tourism, which is coherent, integrated and aligned with the relevant sectoral policies while also recognizing tourism's trans-sectoral nature, is needed to achieve sustainable growth and a more inclusive sector for all stakeholders. This is still in the draft stage as Cabinet approval is pending on this.

Analyzed Results

Based on the PESTEL analysis it is very clear that Knuckles Range with special reference to the study location which is Riversten and 10 km radius has lot of potential to be a very high tourism destination due to its pristine scenic beauty with high ecological value set in a relatively remote and untarnished location. The traditional cultural attributes still practiced in the area accentuates it. However, it is clear that this is still being used by predominantly local tourists and also majority of the younger generation who visit the site for recreation and not so much for appreciating beauty and culture of the place. The influx of foreign tourists is minimal and need to be improved. The main requirements of the tourists such as easy access to transportation – to reach a site and move from one attraction to another, easy access to food, clean lodging and toilets, facilitation to have acceptable communication including wifi is not provided to the satisfaction and need to improve it. Further homestays and traditional food festivals and cultural festivals etc. need to be promoted especially in villages like Atanwala. Camping sites need to be constructed more with the proper facilities. With regards to minimizing the damage to the environment, efforts need to be taken to spread out the tourists to locations other than the most visited ones ie Riversten, Pitawala Patana, Thelgamu Oya and Sera Ella. Carrying capacity assessments to be conducted on most popular attractions to limit the tourists trekking on them. The access roads and vehicle parks need to be much improved. The village community need to be better integrated to the tourism activities and the guiding services need to be more streamlined to provide opportunities to all equally.

4.6 DPSIR Framework

A broader perspective of the impacts of tourism on the environment was assessed using the DSPIR approach which takes into account the driving forces (trends and actions), the pressures, the state, the impacts, and the responses. Drivers (trends),

- Natural and cultural attractiveness of the area
- Recreational /cultural demand of the area by tourists
- Growing affordability of travel/accommodation to a larger part of the population both local and foreign and also due to an internet based economy and communication
- Demographic changes
- Seasonality of tourism
- Climate Change

Natural resources and natural attractiveness which is rich in Knuckles are still the main motivating factor for the arrival and stay of tourists. Knuckles Range is home to a unique variety of flora, fauna and culture. This spectacularly scenic region, known traditionally as the 'misty mountains', is rarely seen by tourists. This Region attracts about 60,000 tourists annually, including about 700 foreign tourists. The vast majority of visitation to Knuckles Conservation Forest is from local visitors, with foreign visitors making up only 1% of total visitors. However, foreign visitors represent a market segment that is high-value and low-volume, and value the type of nature-based and authentic cultural experiences that the Knuckles region has to offer. The local visitors come primarily from Colombo, Kandy, Trincomalee and South Western areas and they come as families and groups especially during the weekends, public holidays and school vacations. The foreign visitors come from primarily Europe, Russia, Australia, Asia and are mostly between 30-65 years of age and they often travel as couples or small groups. Their main motivation for the visit is appreciation of nature and other activities including trekking, hiking and backpacking and camping.

These visitor numbers increased from about 50,000 in 2016 to 58,000 in 2018, and have declined since then to about 42,000 in 2021. The number of foreign tourists has also declined from a high of 770 tourists in 2018 to about 50 in 2021. The numbers have increased to 200 in 2022 (Jan. to Apr.). Thus tourism has declined mainly due to the current economic catastrophe experienced in the country.

Drivers (actions)

- Transportation modes and infrastructure
- Food supply
- Energy supply
- Water supply
- Accommodation structures
- Access to sensitive natural areas/ecosystems

The local visitors often arrive in their own vehicles (small groups) or buses (large groups) and usually bring their own food. Therefore, they incur limited economic benefits to surrounding communities. The foreign visitors mostly arrive via Colombo-based tour operators. They spend 1-2 days' average at Knuckles. The high tourist season ranges from October to March. They get guided tours or self-guided hiking tours. Taking photos, visits to the traditional villages, birding and viewing scenic landscapes interest them.

The area under study in Knuckles have a range of scenic viewpoints approached by trails ie. Riversten, Pitawala Patana and Small Worlds End. Community destinations within Knuckles such as Etanwela and Meemure offer visitors cultural experiences such as village tours, traditional agricultural practices,

local foods and crafts as well. Although currently limited to daytime use, a network of hiking trails ranging from short (i.e. Mini World's End - .75 km) to longer (Rambukoluwa to Doowili Ella – 8 km) offer hiking opportunities in the forest. A small number of primitive campsites are available for use in Knuckles and Forest Department operates one called 'Wana Nivahana' in Rambokoluwa.

Pressures

- Land is taken for tourism infrastructure
- Air emissions
- Noise production by different means of transport and human activities
- Natural resource use
- Solid waste production
- Waste water generation
- Water consumption
- Interferences with ecosystem functionality

State of the environment

- Natural habitats fragmentation
- Biodiversity loss
- Landscape changes
- Changes in soil characteristics
- Quality reduction of air, water and soil
- Decreasing quality of bathing water

Impacts

Depletion of natural resources

- Water resources
- Local resources
- Land degradation and conversion

Pollution

- Air pollution and noise
- Solid waste and littering
- Sewage
- Aesthetic pollution and cultural impacts

Physical Impacts

- Physical impacts of tourism development
- Physical impacts of tourism activities

Environmental Impacts

- Loss of biodiversity
- Climate change and GHG emissions

Positive impacts

- Positive environmental and socio economic impacts from tourism
- Positive psycho-sociological impacts

Response

- Policy and regulatory environment
- A draft Tourism Policy had been formulated (subject to Cabinet approval) to promote a sustainable, climate resilient and inclusive tourism product to achieve SDGs and economic growth. This is endorsed by the National Policy of the Government – the Vistas for Prosperity and Splendor
- Actions to enhance the to enhance contribution of nature based tourism to the national economy as well as to the welfare of nearby communities

The National Forest Policy aims to conserve Knuckles forest for posterity, with regard to biodiversity, soil, water. Historical, cultural, religious, scientific and aesthetic values are contributing for the national economy as well as to the welfare of nearby communities. In line with this Forest Department had prepared the Management Plan for the Knuckles Conservation Area (2010-2014) which also address the improvement of the recreational capacity of the Knuckles Conservation forest. Forest Department with the able assistance of the World Bank funded ESCAMP Project had prepared a Tourism Marketing Plan for the area and later on another on Nature Based Tourism promotion in the area. Some of the proposed activities had already been carried out.

Based on the above results, destination profiles of the attractions were formulated and current and future scenarios (projected to 2030) were developed where appropriate and feasible

4.7 Destination Profiles

4.7.1 Knuckles Riversten Tourism Destination

As per the project TOR issued by the UNDP, Knuckles Riversten tourism destination is not limiting to the Riversten but extends to the nearby attractions as well. Pitawala Pathana has been selected as the main attraction of the destination and the team has also investigated the all surrounding attraction sites. It could visit the following order of the attractions when a visitor reaching to the main attraction from Matale town.

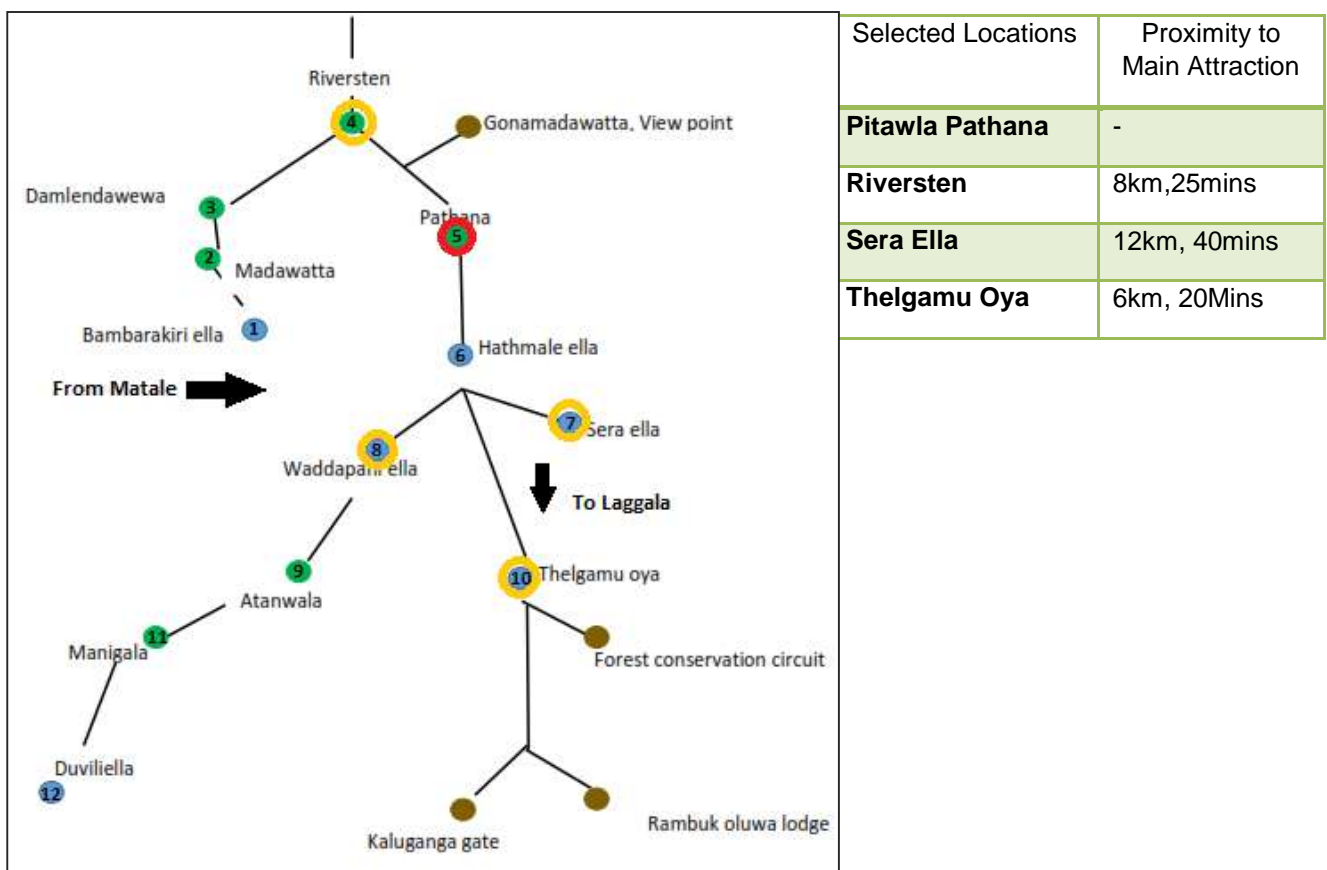
From Matale>Bambarakiriella>Madawatta>Riversten>Pitawala Pathana>Hathmale Ella>

If it is Waddapani Ella> Atanwala>Manigala>Duvili Ella

If it is Sera Ella>Thelgamu Oya>Rambuk Oluwa

Visitors are spending their time differently, according to their purpose of traveling at the locations. Therefore, undeniably, it is taking few days to cover up all attractions in the destination. But the studies show that the current average nights in the destination is less than one and most of the visitors are planning a day trip and visiting only few locations of the destination. Therefore, the team has selected few of one day reachable attractions in the Knuckles Riversten destination for the particular study and, mainly considered the proximity between sites for the selections.

Following figure shows the all attractions belong to Knuckles Riversten destination,



4.7.2 Riversten

- Location (7.52351, 80.73726)

- The Riversten is located margin to Rattota and Laggala Pallegama Divisional Secretariat Divisions (DS Divisions) in Matale District. The Riversten is merged with the Knuckles range. The region of Knuckles represents Highland complex according to the geological classification and the height of the area about 1500 m to 1863 m from the main sea level and rainfall is between 2500 - 3000 ml annually and 18⁰ C to 28⁰ C temperature recording in the Riversten area.



- Physical Characteristics

The Riversten Peak can be reached by traveling, about 30 km away from the Matale town, along the Matale – Hettipola Road via Illukkumbura. The hike in Riversten peak begins at the Matale hettipole road after 27KM from matale. From the base, there is an uphill road towards the left till it reaches the Riversten Towers. There are two routes to visit the Riversten, from the Thangappuwa side and Matale side.

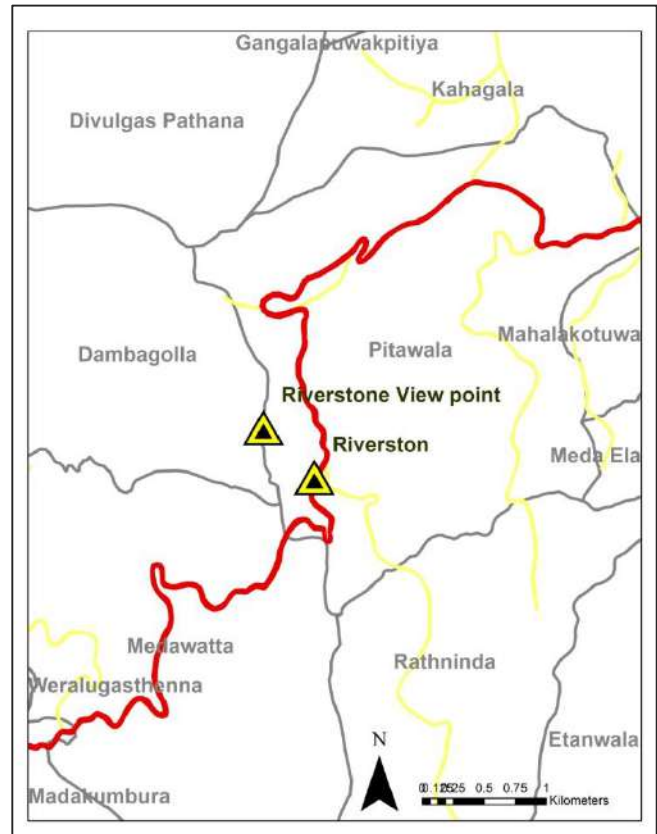
Compared to other mountain peaks in the Knuckles Mountain Range, the weather conditions of Riversten is very unpredictable as the climate is usually not very cool as this mountain is much closer to the dry zone of Knuckles. But in the rainy season & cold months, the wind speed and mist will cover the whole area and suddenly turn into a very cold place. Especially in the Riversten gap, in particular, is an area with lots of gusty wind.

- Biological Characteristics

It is a climatic microcosm of the rest of Sri Lanka. The Riversten area represents in the wet zone of Sri Lanka and it's beautiful mountain rain forest rich with the bio diversity contained in lower rain forests and sub montane forests. It has very unique landscape setting and "Keena" is one of the major flora species in the area.

- Socio –economic Background

The Riversten area belongs to the Pitawala GND of Laggala DS division and the total population of Pitawala GND is 213 that represent 100 females and 113 males. Majority of the people do agricultural activities and few of them are engaged with secondary occupations.

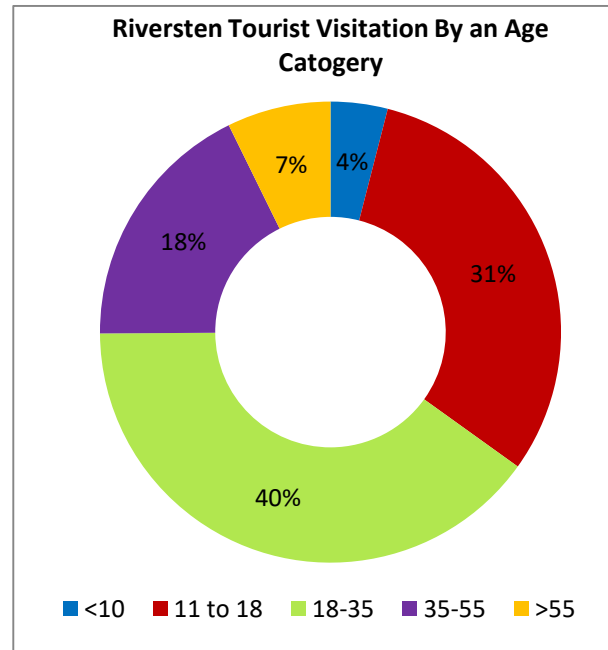


When analyzing employment activities of the study area it can be identified that many people don't have a regular income avenue. Most of them are engaged in the informal or agricultural sector employments, records display the unemployment is a considerable issue in the area.

▪ **Tourist Visitation**

There is a seasonal pattern in the process of tourist arrival to the Riversten. These seasons are very important to people who directly engage in tourism related small scale economic activities. About 45% of local and foreign tourists were recorded in April to June in every year.

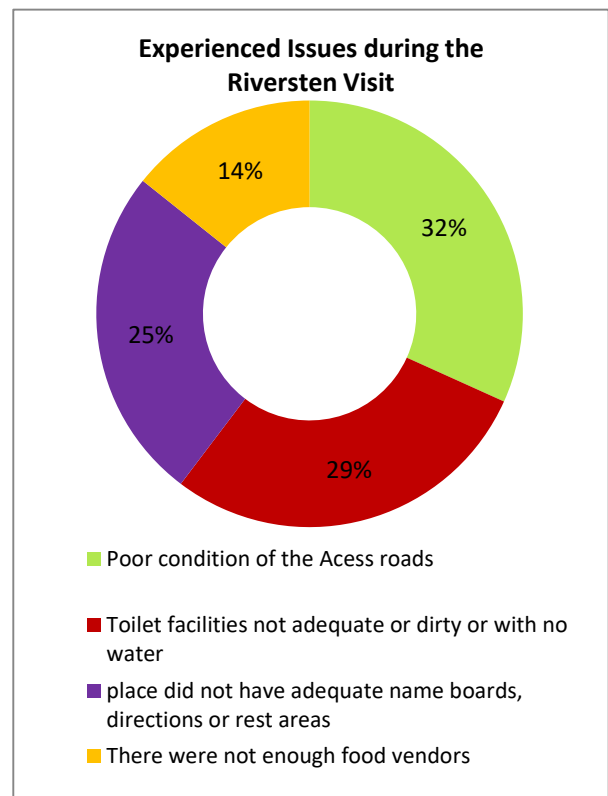
According to the primary survey conducted in the area most of the local visitors had come to experience the beauty of the nature, the biodiversity of the area and also for the enjoyment purposes. About half of the local tourists came by motor bikes while more than a third used cars or vans. Most of the visitors were youths between the ages of 18 and 35 years. About 66 % of the local tourists were visiting the sites for the first time and half of them were visiting the Riversten only because, the insufficient time and unfavorable rainy condition of the day. Other 50% would be visiting the other attractions as well in the Knuckles Riversten Destination. Most of them are plan to visit Pitawala Patana (57%) after the Riversten visit followed by Sera Ela (28%), Thelgamu Oya (20%).



▪ **Visitor Satisfaction and Issues**

Most (100%) would recommend these sites to others and would like to visit this place again. Two third would like to visit the place again next year. About 17% would like to visit in 1-3 months and a further 17% would like to visit in 3- 6 months. Visitors are grateful for the unique experience, climate, and vibrant nature in Riversten. But the most of the visitors are unsatisfied about infrastructure availability at the site. Poor access roads, Dirty or inadequate toilets, lack of name boards or directions, not enough places to buy food or meals were the main and considerable issued faced by the surveyed visitors at the Riversten.

Thus more attention must be paid to improve access roads, toilets, provide drinking water facilities and add name boards and information as well as proper directions for visitors to the sites and providing information regarding suitable places for accommodation. Then the full beauty and the breath taking views can be fully appreciated by the visitors.



■ **Field Observations and identified Issues**

- Parking is not sufficient and the toilet facilities are operating at very basic condition
- The natural vegetation with cardamom in the understory
- Die back in Keena trees in the overstorey
- Congested entrance with two large tents with shop keepers from Matale (who had been therefore more than 10 years)
- FD has a ticket counter at the entrance but sometimes the operations are delaying due to lack of resources in the department to report the duty in time
- Most of the vendors are from Matale or Raththota and not from the surroundings
- There are no proper waste disposal facilities



Congested Entrance to Riversten



Very basic toilet facilities



Inadequate Parking Facilities



Poor condition of the access roads



The natural vegetation with cardamom in the understory



Die back in Keena trees in the overstore



Bamboo has invaded the landscape

4.7.3 Pitawala Pathana

- **Location (7.54937, 80.75419)**

Pitawala 'Pathana' is unique landscape found in the Knuckles Conservation Forest, Sri Lanka. It has been considered as the main attraction of the tourism destination for the particular study. Pathana is a great ecological value of the country. The grassland is situated by the side of the Rattota - Illukkumbura road in the Matale district.

- **Accessibility**

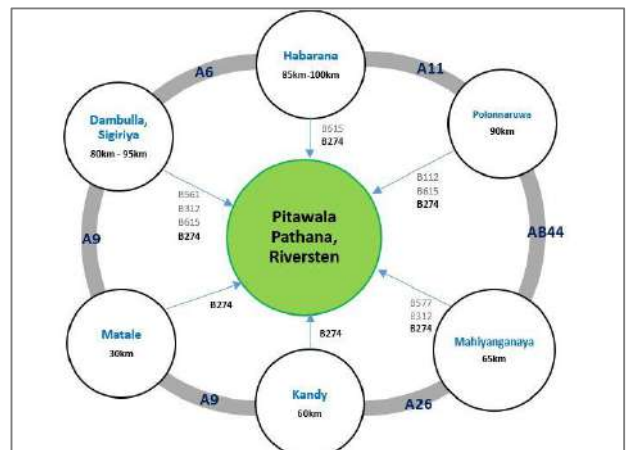
The site could be accessible from Matale via B274 road, distance is around 33km. From Kandy it is around 60km to reach the site. B274, Matale - Illukkumbura-Pallegama road is the only main road available to visit the attractions in the Knuckles Riversten cluster. Most parts of the road are dilapidated and it is inconvenience for the visitors and residents of the area.

- **Biological (Ecosystems)**

Pitawala Fall is a rare type of grassland and a unique ecosystem found nowhere else in the world. This fact was confirmed by the International Union for Conservation of Nature (IUCN). The Pitawala Falls area is spread over an area of about 1000 acres and is a soft sloping stone slab covered with a thin layer of soil. The grass, about 10 inches [10 cm] high, gives the sloping grass a velvety appearance. It has an adventurous view of the depths similar to the end of the Horton Plains. There are two endemic species to this place, one is the Dumbara reef media frog and the other is the grassy tuber. Isolated and scattered trees and shrubs are visible. Many endemic plant and animal species are found. A 0.75 km long natural trail takes visitors to Mini Worlds End. There are also many carnivorous plants that trap unwary insects. Kadulessa, one such carnivorous plant species, has a sticky serum that traps unwary insects.

- **Socio –economic Background**

The Pitawala Pathana area belongs to the Pitawala GND of Laggala DS division and the total population of Pitawala GND is 213 that represent 100 females and 113 male. Majority of the people do agricultural

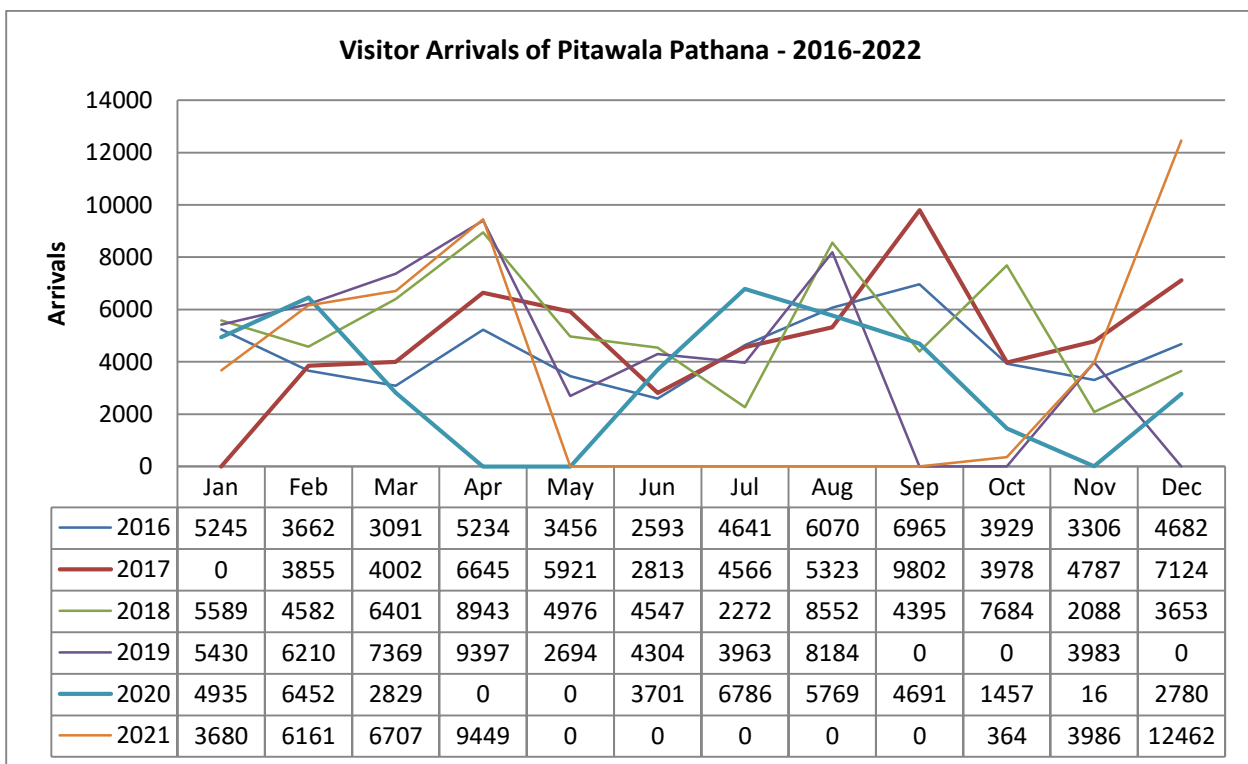


activities and few of them are engaged with secondary occupations.

When analyzing employment activities of the study area it can be seen that many people don't have a regular income avenue. Most of them are engaged in the informal or agricultural sector employments, combined together it is about 44.49 percentages. The records show that the unemployment is a considerable issue in the area.

▪ **Tourist Visitation**

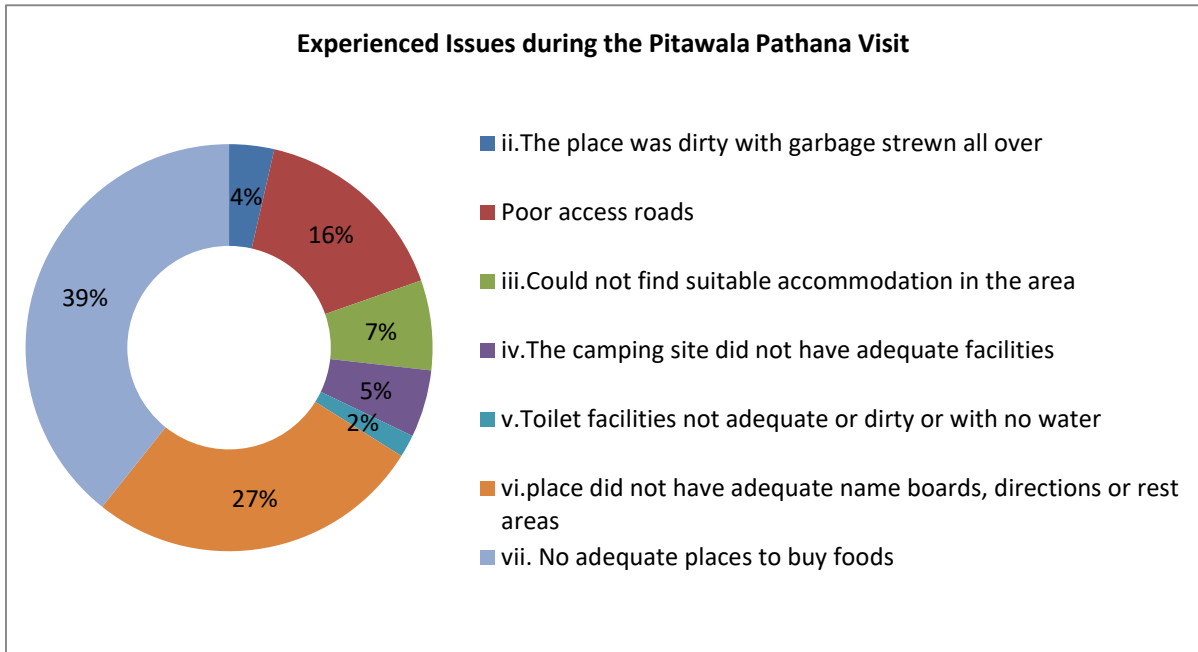
According to the visitor arrivals graph shown in below could identify that April, August and September months record the peak visitor arrivals to the Pitawala Pathana. 2016 – 2018 years have the higher arrivals compares to the recent years. Easter attack in 2019 and Covid 19 pandemic situation in 2020, 2021 and current instabilities of the country could have been reasons to decrease the visitor population in the attraction. And considering the age category of visiting the place shows that the 47% of the visitors are representing the young age category of 18-35.



▪ **Visitor Satisfaction and Issues**

Results of the primary study reveals that majority of the visitors have faced a big difficulty to find foods at the attraction or nearby places. During the field visits the study team also experienced the situation. When attraction is developing as a tourism destination it should meet the tourists' demands on the basic necessities. The other issue raised by the visitors is the insufficient information and directions of the site. 16% of the respondents are complaining about the poor condition of the access road.







SECTION V

CONCLUSION AND RECOMMENDATIONS

Section 5 : Conclusion and Recommendations

On average about 45,474 tourists visit the Knuckles Forest Area which includes the popular attractions namely Riversten, Pitawala Pathana, Sera Ella, Manigala, Thalgamu Oya, Banbarakiriella, Rambukoluwa, Atanwala, Duwili ella, Walpolmulla, Kosgasmulla. However, majority of these tourists are visit Riversten, Pitawala Pathana, Sera Ella and to a lesser extent Bambarakiriella and Manigala. Since good bathing opportunities are offered in Thalgamu Oya this is also a popular site.

Majority of these tourists are local tourists (average 99%) while the foreign tourists are less than 1%. Almost all the tourists to this area visit it because of its pristine and unique landscapes and being a UNESCO World Heritage Site attenuates the selection. Most of the foreign tourists visit the site to enjoy the nature and participate in activities like trekking which is very abundant in the area. The visitation of the local tourists is seasonal the peak observed in April and August-September period which coincides with the school vacations.

The average tourist visitation to the Riversten and Pitawala Pathana areas is 129.36 visitors /day. From the current study it was revealed that the effective carrying capacity of the attractions are as follows for the present and for 2030 (with the assumed 5% increase and 10% increase) respectively.

Destination	Carrying Capacity in 2022	Carrying Capacity in 2030	
		With a 5% projected increase	With a 10% projected increase
Riversten	292	292	400
Pitawala Pathana	423	500	510
Sera Ella	944	1175	1400
Thelgamu Oya	1103	1300	1600

Despite the fact that on an average the daily visitors to the Riversten and the destinations within 10 km is only 129.6 it is much influenced by several factors especially the time of the year and days of the week/holidays. There is a high influx of mostly local visitors to the destinations especially Riversten and Pitawala Pathana during the school holiday times as well as on weekends and public holidays while the visitors on weekdays are very few. With regards to the foreign visitors who are still a very small number there is no difference between weekdays and weekends/public holidays but show an increase during the tourist season which coincides with winter time in their countries.

The participation of the neighboring communities in the tourism activities is significantly small in all the attractions despite the fact that their socio economic status is not largely satisfactory either. In all the GN divisions in the study area, the education level is somewhat satisfactory as most of them had a school education even up to A/L. The persons having no schooling or up to University Degree were little.

The major occupation of the surrounding communities was farming and to a lesser extent engaged in service sector. However, there were people engaged in government sector, private sector but those engaged in self-employment were generally higher There were some even engaged in overseas occupations.

Despite the fact that there was no disparity among men and women in securing education when it comes to employment the men showed higher values to women in all sectors of employment.

Recommendations

Developing Sustainable destinations has been given top priority by SLTDA. Sustainable tourism is a long-term goal for Sri Lanka, and the importance of sustainable tourism cannot be underestimated for Sri Lanka to work towards a positive overall balance in environmental, socio-cultural, economic and experiential impacts for tourists and locals. Based on the ultimate objective of becoming a sustainable destination, the following recommendations are provided to the destinations in the study area;

General Recommendations:

- It is clear from the study that the potential carrying capacities in the destinations (Riversten and within 10 km radius) are higher than the ones experienced currently. Therefore, there is much room for improvement, within the norms of sustainable destinations guide.
- It is very clear that there is much room to increase the carrying capacity in all the destinations studied in detail. However, in order to do it, it is required to carefully follow the guidelines of the Global Sustainable Tourism Council for Sustainable Destinations which includes sustainable management, socio-economic sustainability, cultural sustainability and environmental sustainability which will ensure provision of a high quality tourism experience within the carrying capacities of the natural heritage and the socio economic benefits thus accrued will be shared equitably.
- Since accessibility to destinations had been identified as a prime debacle to facilitate tourism both local and foreign, this needs to be much improved very soon. While some efforts are already underway much needs to be done in this aspect.
- Promote alternative/less popular destinations in the vicinity so that overcrowding in attractions like Riversten and Pitawala Pathana which has a relatively small carrying capacity will be conserved.
- All the existing accommodation needs to be registered with the SLTDA and the conditions of essential amenities need to be improved where appropriate. This includes toilets, available wi-fi and clean environment. SLTDA needs to monitor these places on a regular basis and make sure the facility is within the expected level. SLTDA needs to ensure that they possess current license for operation and also a valid EPL (environmental protection license) from the CEA. While registering the accommodations with the SLTDA and conducting sustainable practices can be done as a self-motivated effort by the accommodation providers, the SLTDA through its Sustainable Certification Scheme (National Sustainable Tourism Certification Guidelines for Accommodation sector which is shown in Annexure 14) can encourage them to obtain certification by adhering to the scheme which will be of long term benefit to them.
- Improve the destinations according to the Criteria of the Global Sustainable Tourism Council (GSTC) based on Sustainable Management, Socio economic Sustainability, Cultural Sustainability and Environmental Sustainability.
- Ensure the tour operators follow the performance indicators for tour operators in the Global Sustainable Tourism Council (the document is shown in the Annexure 15).

- The recommendations for each destination studies on this basis is shown in Table 5-1.

Table 5-1: The recommendations for each destination

Criteria	Indicators	Destination / Current status	Specific Recommendations and Implementation
Sustainable Management	<p>Documentary evidence showing relevant make-up and responsibilities of the management of the facility</p> <p>Evidence of links and engagements with other bodies</p> <p>Records of permanent staff and contracted personnel, indicating relevant experience</p> <p>Management guidelines and processes, which demonstrate awareness and adherences to sustainability principles and transparency in operations and letting of contracts</p>	Riversten	<p>The attractions in the Knuckles Conservation Area including Riversten, Pitawala Pathana, Sera Ella has the unique arrangement of being managed both by the Forest Department and the Department of Trade, Commerce & Tourism, Central Provincial Council. However, this liaison and the division of responsibilities is not visible.</p> <p>Further, the engagement of the environmental NGO, like Dumbara Surakinno in the management of the facilities (Riversten and Pitawala Pathana) had not been documented and after some years of implementation had been abruptly cancelled.</p> <p>The documentary evidence of links with other bodies such as Tourist Guide's Association, other private sector destination providers in the area need to be stated with their management responsibilities in the destination management/promotion.</p>
Destination Management Strategy and Action Plan	<p>a. A published document setting out the current destination strategy and action.</p> <p>b. The strategy/plan clearly visible and available on-line.</p>	Since the destination in question are in the Knuckles Conservation Area which is under the Forest Department, tourism aspects were also included in the Knuckles Conservation Plan which expired in 2014. Further, Knuckles	Since the Knuckles Tourism Management Plan (2018) prepared by the ESCAMP is valid, need to follow the recommendations of the same and based on the recommendations

Criteria	Indicators	Destination / Current status	Specific Recommendations and Implementation
	<p>c. Evidence of stakeholder consultation, meetings etc. in developing the plan.</p> <p>d. Reference to sustainability principles and an assessment of assets, issues and risks, contained in the strategy and action plan.</p> <p>e. Specific references in the strategy/action plan to wider sustainable development policy (including pursuit of the SDGs), and vice versa.</p>	<p>Tourism Management Plan was prepared by the ESCAMP Project of the Ministry of Mahaweli Development and Environment in 2018 which had given a detailed action plan to promote the destination. However, apart from some recommendations, the other recommendations had not been pursued still and the reason given was dearth of funding allocated.</p>	<p>need to prepare a phased action plan with targets and implementation responsibilities</p> <p>SLTDA, Forest Department and the Department of Trade, Commerce & Tourism, Central Provincial Council</p>
<p>Monitoring and reporting</p>	<p>Specific quantifiable socio-economic, cultural and environmental indicators and targets identified.</p> <p>b. Measurement against these indicators, with results recorded and publicised at least annually.</p> <p>c. Written evidence of monitoring and reporting of actions and outcomes.</p> <p>d. Previous reviews of monitoring system and schedule for future reviews.</p>	<p>Overall there is very little effort in monitoring of the socio economic, environmental and cultural benefits from tourism in these destinations. Despite the fact that ticket counters had been set up in Riverstone and Pitawala Pathana only the latter is working regularly while the former is working sporadically – due to dearth of FD staff. The ticket counter set up at Sera Ella is not operational yet.</p> <p>With regards to the natural environment, there are evidence of damage to the natural ecosystems due to trampling ie. It was observed from our work that that many species such as <i>Ceratophora tennetti</i>, <i>Cophotis dumbara</i>, <i>Drosera</i> sp. In Pitawala Pathana have declined with time. There was no records on these in the destination.</p>	<p>Prepare a monitoring plan of the socio economic, environmental and cultural status in the destination for 5 years with indicators and time lines to suit them.</p> <p>This plan will be prepared by the SLTDA with FD with the participation of other stakeholders including tour operators, accommodation providers, environmental conservation organisations operating in the area (Dumbara Mithuro and Dumbara Surakinno), neighboring communities and private sector interest groups.</p> <p>This will be monitored and acted upon by the SLTDA</p>

Criteria	Indicators	Destination / Current status	Specific Recommendations and Implementation
		<p>Further, our observations also showed an invasion of bamboo species in the natural ecosystem in Riversten and there was no published record on this although FD had made some attempts to cutback the bamboo in certain locations.</p> <p>The participation of the neighboring community in tourism activities in and around the destinations is very limited; only as guides and provision of food prior to COVID 19. However, even the guide service is not streamlined and therefore the opportunities are not spread equally to all the trained guides.</p> <p>The food stalls etc. which are largely informal are being run by personnel who are not from the neighboring community to the destinations.</p>	
<p>Enterprise engagement and sustainability standards</p>	<p>Evidence of regular communication of sustainability issues to tourism-related businesses (Media, meetings, direct contact etc.).</p> <p>b. Sustainability support and advice to tourism-related business – available and promoted.</p> <p>c. Number and percentage of businesses certified against tourism sustainability standards (and whether GSTC</p>	<p>Despite the fact that primarily the FD, SLTDA in its representation through the Central Province Tourism Dept. as well as more informally some private sector entities who wish to promote tourism in the area ie. Midlands Estate and other accommodation providers and guides have shown interest at various extents in the tourism activities in the destination, there is no formal arrangement for the same.</p>	<p>It is mandatory to Institutionalize the Knuckles Tourism Support Group comprising of personnel from Forest Department, Sri Lanka, Department of Trade, Commerce & Tourism, Central Provincial Council, Central Provincial Council, Private sector personnel who are providing different tourism services</p>

Criteria	Indicators	Destination / Current status	Specific Recommendations and Implementation
	<p>recognised/accredited), with targets for wider outreach.</p> <p>d. Evidence of promotion of certification schemes.</p> <p>e. List of tourism-related certified enterprises, kept up to date.</p>		
Resident engagement and feedback	<p>Evidence of the promotion and facilitation of public participation in destination planning/management.</p> <p>b. Information on the type and level of such participation.</p> <p>c. Surveys of residents and other systematic feedback mechanisms, covering tourism issues.</p> <p>d. Evidence of action taken in response to residents' feedback.</p> <p>e. Programme of information, education and training on tourism provided for residents.</p>	<p>In all the destinations, it is not shown that engagement of the communities and the other tour operators, accommodation providers had been taken on board in collective decision making in a more formal setting. Trainings provided to guides are of more formal nature in Pitawala Pathana but their services were not procured in such manner.</p>	<p>It is required to engage the neighboring communities and the other relevant stakeholders in decision making and also need to get their feedback for continuous improvement</p> <p>Local Authority, Department of Trade, Commerce & Tourism, Central Provincial Council, Central Provincial Council and CBOs</p>
Visitor engagement and feedback	<p>Visitor surveys (and other feedback mechanisms) – carried out and reported.</p> <p>b. Surveys and feedback includes visitor reaction to sustainability issues.</p> <p>c. Evidence of actions taken in response to visitor survey/feedback findings.</p>	<p>Visitor surveys had not been conducted in a formal manner in these destinations. In the Pitawala Pathana Information Centre there is provision to make comments on a book but in other destinations this is absent.</p>	<p>It is mandatory to get the feedback from visitors either book keeping a visitor book in each destination and constantly reviewing same by the management, or to provide the facility to comment on the various aspects of sustainability on line. The manager of the</p>

Criteria	Indicators	Destination / Current status	Specific Recommendations and Implementation
	d. Examples of visitor information that covers sustainability issues and how to respond to them		facility need to review these entries on a regular basis and make improvements Department of Trade, Commerce & Tourism, Central Provincial Council, Sri Lanka
Promotion and information	<p>Current information and promotional material with appropriate content.</p> <p>b. A process exists for checking the accuracy and appropriateness of destination promotion and information.</p> <p>c. Evidence of consultation with local communities and environmental and cultural bodies on communications content and delivery.</p>	<p>The available promotion material as hard copies in the destinations is rather scanty. The ones that are available were only in Pitawala Pathana Visitor Centre. However, the website on the Knuckles Conservation Area attractions need to be enhanced further as most of the foreign visitors get information through on line sources. Recommendations had already been provided on same in the Marketing Plan on Knuckles Conservation Area done by ESCAMP Project in 2018 and need to follow them closely.</p>	<p>Promotions: SLTDA and Department of Trade, Commerce & Tourism, Central Provincial Council, Sri Lanka</p>
Managing visitor volumes and activities	<p>The destination management strategy and action plan addresses seasonality and spread of visitation.</p> <p>b. Variation in visitor volumes throughout the year is monitored, including in the most visited locations.</p> <p>c. Impacts of visitor volumes and activities are identified through observation and community and stakeholder feedback.</p>	<p>This had not been effected so far but the results of the study on carrying capacity of the destinations in Knuckles came up with important observations and thus recommendations for improvement</p>	<p>In all the attractions, the present visitation/day in all the months of the year including the peak ones (April. August and September) is much less than the optimal carrying capacity. Therefore, it is possible to enhance the number of visitors to the attractions. Based on the present and future projections for carrying capacity and within the framework of sustain able destination including environmental, managerial and socio-cultural paradigms the carrying capacity limits need to be maintained</p>

Criteria	Indicators	Destination / Current status	Specific Recommendations and Implementation
	<p>d. Actions taken to manage visitor flows and impacts.</p> <p>e. Marketing strategy and selection of target markets takes account of visit patterns, the impact of activities and destination needs.</p>		<p>in each attraction. This can be done by having relevant signposts for visitors. Further, since other attractions have also been highlighted in this study, they can also be promoted so that the time spent on the attractions like riversten and pitawala patana which has less carrying capacity can better conserved.</p> <p>Department of Trade, Commerce & Tourism, Central Provincial Council, Sri Lanka with the support of FD</p>
<p>Planning regulations and development control</p>	<p>Specific policies/regulations/ guidelines which control development – documented and identified by title and date.</p> <p>Impact assessment requirements are set out, covering environmental, economic, and socio-cultural impacts, at sufficient scale to address long term issues for the destination.</p> <p>c. Specific regulations on property rental and operation for tourism, with evidence of their application and enforcement.</p> <p>d. Evidence of public participation in the development of policies/regulations/guidelines.</p> <p>e. Evidence of consultation with, and consent from indigenous people or minority ethnic groups when tourism</p>		<p>All the facility constructions and renovations etc. need to follow the environmental laws ie NEA</p> <p>Authority: FD</p>

Criteria	Indicators	Destination / Current status	Specific Recommendations and Implementation
	<p>development has been proposed or has occurred in their territories.</p> <p>f. Evidence of communication and enforcement of the policies/regulations/guidance, at planning, development and implementation stages.</p>		
Climate change adaptation	<p>The destination management strategy and action plan identifies and addresses climate issues.</p> <p>b. Regulations, guidelines and zoning for tourism development and activities accommodate the consequences of climate change.</p> <p>c. A climate risk assessment, covering current and future risks – undertaken and made publicly available.</p> <p>d. Evidence of consideration of impact on, and contribution of, local ecosystems to climate change adaptation.</p> <p>e. Information on climate change that has been made publicly available</p>	<p>Since the location of these attractions is in the hill country and is vulnerable to climate change impacts. Therefore, it is required to maintain the trails on a regular basis as peak rainfall can erode the soil significantly thus causing damage to the trails and cause accidents to the tourists.</p>	FD
Risk and crisis management	<p>A documented risk reduction, crisis management and emergency response plan for tourism in the destination.</p>	<p>This is not available in any of the destinations</p>	<p>Prepare a risk management plan with the participation of all stakeholders and conduct</p>

Criteria	Indicators	Destination / Current status	Specific Recommendations and Implementation
	<p>b. The plan recognizes a wide range of risks, including natural disasters, terrorism, health, resource depletion, and others appropriate to the location.</p> <p>c. Communication procedures identified for use during and after an emergency.</p> <p>d. Programme for local delivery of information and training on risk and crisis management.</p>		<p>training as periodical drills to respond effectively to same. - SLTDA</p>
<p>Measuring the economic contribution of tourism</p>	<p>Programme of economic data gathering.</p> <p>b. Annual reports on the direct and indirect economic contribution of tourism in the destination.</p> <p>c. Data covering a range of measures of economic impact (e.g. volume, expenditure, employment, investment and spread of economic benefit in the destination).</p>	<p>Since the participation of the neighboring communities in the tourism activities in the destinations is rather insignificant, the benefits from the tourism is also much less. Apart from training some guides by the FD and provision of permanent marketing stalls for 4 ladies who had inhabited the Sera Ella for a very long time there are no other community benefits from the tourism enterprise to the village. The PS of Laggala had made some attempts to provide cooking equipment and camping gear to selected villagers to engage in tourism.</p>	<p>While streamlining the support to the neighboring communities so that they will engage more in tourism related activities, it is a good idea to Develop a community based eco-tourism association which will closely with the FD and SLTDA so that they will be able to provide authentic, traditional foods, nature walks, function as guides to the tourists and also provide mobile camping facilities. A suitable revenue sharing mechanism needs to be agreed upon with the FD. It is suggested that the SLTDA provide the initial funds to establish the CBO and a funding mechanism such as a percentage of the profits earned by the accommodation providers and other beneficiaries of tourism to be contributed on regular basis for the fund. This could also include a % of the profits of those who sell</p>

Criteria	Indicators	Destination / Current status	Specific Recommendations and Implementation
			goods to the tourists or benefit from providing services to tourists.
Decent work and career opportunities	<p>Provision of relevant skills training programs/courses, available locally.</p> <p>b. Statements of commitment by tourism enterprises to the provision of decent work/ career opportunities.</p> <p>c. Training and employment opportunities promoted to and taken up by local people, including women, young people, minorities and people with disabilities.</p> <p>d. Channels for checking working conditions and receiving/handling grievances (e.g. involvement of labor unions).</p>	<p>In the attractions studied, there were issues with regards to deploying adequate officials to the management of the destination i.e. specially to work in the ticket counters, to provide guide services etc. and this posed constraints in the optimal functioning of the destination.</p> <p>There was no mechanism to monitor their performance too and there was no mechanism to address their grievances if any.</p> <p>Regular training programs were not available for employees. Despite the fact that there was not much interest from the local communities in taking up tourism related opportunities/tasks in destinations there was no effort to promote them either.</p>	<p>Establish a mechanism to monitor the performance of the services of the officials in the destinations and have a grievance redress mechanism to address the issues and find solutions then and there.</p> <p>Place special attention to include the neighboring communities including women and vulnerable groups as service providers and provide necessary facilitation to them. Some areas where they can contribute positively are homestays, food stalls selling traditional foods, cultural items and cultural tours on request etc.</p> <p>Department of Trade, Commerce & Tourism, Central Provincial Council and SLTDA with Private Partnerships</p>
Supporting local entrepreneurs and fair trade	<p>Advice, finance or other support – available in the destination for tourism-related SMEs.</p> <p>b. Assistance with market access for local tourism-related SMEs.</p>	<p>In none of the destinations, there is no significant systematic and organized effort to promote local entrepreneurs. There had been some sporadic effort from the PS to provide camping equipment and cooking equipment to villagers but there were complaints that the distribution of supplies were not done in a proper manner. In Sera Ella, FD had</p>	<p>Introduce cultural tourism too – for examples have a demonstration village done in the Atanwala which is a traditional village adjoining to Pitawala Pathana. This would be similar to the ‘Ape Gama’ concept....</p> <p>Further in the preparation of promotional material certain cultural aspects of the village and life in the village are emphasized and</p>

Criteria	Indicators	Destination / Current status	Specific Recommendations and Implementation
	<p>c. Action to encourage and assist local tourism enterprises to purchase goods and services locally</p> <p>Initiatives to help local farmers, artisans and food producers to engage in the tourism value chain.</p> <p>e. Local produce and crafts identified, promoted and available for sale to visitors in the destination.</p>	<p>constructed four shops for the ladies who had been inhabiting the area for a long time.</p> <p>When the homestays were in operation before COVID 19, the marketing of visitation was predominately done privately and not through the destination management.</p> <p>There is little emphasis on the cultural aspects of the location including local produce, crafts, rituals etc. when promoting tourism in the destinations.</p>	<p>enhanced to promote the appreciation of the tourists to the cultural aspects of the surrounding villages.</p> <p>Department of Trade, Commerce & Tourism, Central Provincial Council and SLTDA with Private Partnerships</p>
Support for community	<p>Support for local community and sustainability initiatives by local tourism enterprises is encouraged and facilitated.</p> <p>b. Schemes exist, and are promoted, for visitors to support local community and sustainability initiatives.</p> <p>c. Volunteering and engagement with the community does not involve intrusion or exploitation.</p>	<p>There are sporadic efforts in promoting tourism among the local community and is not formerly supported by the destination management.</p>	<p>Develop a community based eco-tourism association which will closely with the FD and SLTDA so that they will be able to provide authentic, traditional foods, nature walks, function as guides to the tourists and also provide mobile camping facilities. A suitable revenue sharing mechanism needs to be agreed upon with the FD.</p>
Preventing exploitation and discrimination	<p>Reference (title, date) to specific laws that pertain in the destination regarding human rights, exploitation, discrimination and harassment.</p> <p>b. Evidence of communication and enforcement of above laws and related</p>		<p>Local Authority and NGOs</p>

Criteria	Indicators	Destination / Current status	Specific Recommendations and Implementation
	<p>good practice (including to tourism enterprises and visitors).</p> <p>c. Risk and impact analysis regarding human rights, including human trafficking, modern slavery and child labor – conducted regularly.</p> <p>d. Destination and key tourism players are signatories to the Code of Conduct for the Protection of Children from Sexual Exploitation in Travel and Tourism.</p>		
Property and user rights	<p>Reference (title, date) to specific laws that pertain in the destination regarding property rights and acquisitions and user and access rights to resources.</p> <p>b. Reference in the above laws to communal and indigenous rights, public consultation and resettlement.</p> <p>c. Evidence of enforcement of the above laws in the context of tourism development and activity.</p>	<p>There are tourist accommodation of various levels coming up in the vicinity of the destination. Since the area is a protected area (Knuckles Conservation Area) this may pose issues on environmental sustainability.</p>	<p>Since the destinations are located in a protected area (Knuckles Conservation Area) it is important to ensure that the accommodations are constructed legally. Once the land title is clear appropriate environmental examinations are conducted to ensure the conservation of the natural resources and environment in the endeavor.</p> <p>FD and Local Authority</p>
Safety and security	<p>Security and health services are well established and active in the destination.</p> <p>b. The needs of visitors are identified and addressed in the delivery of security and health services.</p>	<p>The security of the facilities need to be upgraded in certain attractions ie. the small worlds end in Pitawala Pathana which is a unprotected ledge and needs to be protected in a aesthetic way.</p>	<p>The trails need to be made more secure ie Small worlds end in Pitawala Pathana</p> <p>Better signage need to be erected so that the tourists can explore by themselves and will not get lost.</p>

Criteria	Indicators	Destination / Current status	Specific Recommendations and Implementation
	<p>c. Tourism facilities are inspected for compliance with safety and hygiene standards.</p>	<p>The trails do not have proper signposting and therefore visitors could easily lose their way. Further it also prevents the visitors from self-exploring which many like.</p> <p>The toilet facilities in most of the destinations are not adequate and not very clean. For example in Riversten there is only one public toilet and used by many. In Pitawala Pathana good toilets are available in the visitor center. In Sera Ella the toilets which were constructed recently are not functional.</p> <p>The vehicle parking facilities are also not adequate in all the destinations (ie Riversten, Pitawala Pathana).</p> <p>The access roads to the destinations and also to accommodations in the area are not in a good condition and therefore tourists need to spend lot of time in accessing the sites which discourage them from visiting same. .</p>	<p>The facilities such as parking, toilets, food stalls need to be upgraded in all the facilities</p> <p>The condition of the access roads to the facilities need to be much improved to reduce the time taken to reach the destination.</p> <p>Department of Trade, Commerce & Tourism, Central Provincial Council, Sri Lanka, SLTDA</p>
Access for all	<p>Where practical, sites, facilities and services, including those of natural and cultural importance, are accessible to all, including persons with disabilities and others who have specific access requirements or other special needs.</p>	<p>Since the destinations are in the wilderness areas and specialized for trekking, walking etc. access for disabled had not been installed.</p>	<p>It would be good to provide alternate access to differentially abled in all the destinations</p> <p>Local Authority, RDA/PRDA and FD</p>

Criteria	Indicators	Destination / Current status	Specific Recommendations and Implementation
	<p>The existence of any regulations and standards regarding the accessibility of visitor sites, facilities and services.</p> <p>b. Consistent application of accessibility standards in public facilities.</p> <p>c. Data on the extent/proportion of visitor sites and facilities that are accessible.</p> <p>d. Evidence of programmes to improve access for people with a range of access needs.</p> <p>e. Information on accessibility included in communications about the destination as a whole.</p> <p>f. Details of accessibility included in visitor information about key sites.</p>		
Protection of cultural assets	<p>Lists of cultural assets, including evaluation and indication of vulnerability.</p> <p>b. Program of rehabilitation and conservation of assets.</p> <p>c. Mechanisms for using income from tourism to support conservation of cultural assets.</p>	<p>In the visitor center in Pitawala Pathana there is a demonstration of the traditional culture in the villages. Further certain items like Walpolagama Village had been included in the promotional material as the Asia's smallest village etc.</p> <p>However, the emphasis on the cultural aspects of the villages surrounding these destinations can further be enhanced in tourism promotion and which will in turn be beneficial to the neighboring communities too.</p>	<p>Atanwila can have a demonstration of a traditional village which follows the pattern of Ape Gama..</p> <p>Cultural tours can be organized by the communities facilitated by the destination management which will benefit the communities in the neighborhood. This will also make the tourists aware of the rich culture and heritage in these natural sites.</p>

Criteria	Indicators	Destination / Current status	Specific Recommendations and Implementation
Cultural artefacts	The destination has laws governing the proper sale, trade, display, or gifting of historical and archaeological artefacts. The laws are enforced and publicly communicated, including to tourism enterprises and visitors		Department of Trade, Commerce & Tourism, Central Provincial Council, Sri Lanka, SLTDA
Intangible heritage	<p>Identification and listing of intangible cultural heritage.</p> <p>b. Examples of celebration and visitor experiences of intangible cultural heritage (events, distinctive products etc.).</p> <p>c. Evidence of involvement of local and indigenous communities in developing and delivering visitor experiences based on intangible cultural heritage.</p> <p>d. Feedback from visitors and local communities on delivery of intangible heritage experiences</p>		
Traditional access	<p>Monitoring of accessibility to natural and cultural sites for the local community.</p> <p>b. Evidence of engagement with the local community regarding traditional access.</p> <p>c. Specific action to protect and/or rehabilitate local community access.</p>	<p>Evidence was not seen in this context in the destinations. For example a high end accommodation provider Alki Hotel had taken custody of a natural water fall which is illegal but no action had been taken against this.</p> <p>The access to the Thelgam Oya for the local communities gets restricted when high influx</p>	<p>The access of the village communities to the natural assets in the area need to be ensured and monitored on a regular basis by destination management.</p> <p>Local Authority and CBOs</p>

Criteria	Indicators	Destination / Current status	Specific Recommendations and Implementation
		of local visitors inhabit the area during peak periods and holidays.	
Visitor management at cultural sites	<p>Monitoring of visitor flows and impact on cultural sites, with results shared across the destination.</p> <p>b. Evidence of action to manage tourism-related impacts in or around cultural sites.</p> <p>c. Existence and distribution of published guidelines on visitor behavior at sensitive sites and cultural events and periodic monitoring of compliance.</p> <p>d. A code of practice for tour operators and tour guides and/or other engagement with them on visitor management at cultural sites.</p> <p>e. Provision of training for guides.</p>	<p>The present study had come up with the carrying capacities of different attractions in the area. It is required to maintain this strictly and when it is exceeded divert the tourist traffic to other neighboring destinations as shown in the present study.</p> <p>Once the tourists are inside the destination, a code of practice for the visitors need to be made aware and this can be done as short videos/leaflet and small notices in the area.</p> <p>The tour operators and tour guides too need to be made aware on these aspects</p>	Department of Trade, Commerce & Tourism, Central Provincial Council, Sri Lanka, SLTDA with the support of FD
Site interpretation	<p>Provision of informative interpretative material on site and in formats that are accessible pre-arrival.</p> <p>b. Evidence that interpretative material has been well researched and is accurate.</p> <p>c. Interpretation material that identifies the significance and sensitivity/fragility of sites.</p>	Interpretative material need to be prepared and publicized more as per the recommendations given in the Knuckles Marketing Plan (2018)	Department of Trade, Commerce & Tourism, Central Provincial Council, Sri Lanka, SLTDA and relevant academics

Criteria	Indicators	Destination / Current status	Specific Recommendations and Implementation
	<p>d. Evidence of host community collaboration in preparation of relevant interpretative material.</p> <p>e. Interpretative material available in relevant languages.</p>		
<p>Protection of sensitive environments</p>	<p>List of natural heritage sites and assets, indicating type, conservation status and vulnerability.</p> <p>b. Programs to conserve biodiversity and natural heritage.</p> <p>c. Programs to eradicate and control invasive species.</p> <p>d. Action to identify, monitor and mitigate tourism impacts on biodiversity and natural heritage.</p> <p>e. Mechanisms for using income from tourism to support conservation of natural assets.</p> <p>f. Communications with visitors and enterprises on reducing spread of alien species</p>	<p>With the view to conserve the natural assets in the destinations, the carrying capacity assessment was conducted and it provided figures for now and for the future (2030) too based on the tourism trends. This needs to be adhered to in all the relevant destinations and monitored regularly so that the carrying capacities will not surpass.</p> <p>The adverse impacts from tourism on the natural ecosystem need to be regularly monitored and mitigations taken to conserve them. One example is the <i>Ceratophora tennetti</i>, <i>Cophotis dumbara</i>, <i>Drosera</i> sp. Have declined drastically due to constant trampling from visitors and also animals in Pitawala Pathana trail.</p> <p>Further, there is a profuse invasion from bamboos in Riversten and this need to be monitored and eradicated adequately to allow the natural vegetation to come up.</p>	<p>FD, Department of Trade, Commerce & Tourism, Central Provincial Council, Sri Lanka, SLTDA</p>

Criteria	Indicators	Destination / Current status	Specific Recommendations and Implementation
Visitor management at natural sites	<p>Monitoring of visitor flows and impact on natural sites, with results shared across the destination.</p> <p>b. Evidence of action to manage and mitigate tourism-related impacts in or around natural sites.</p> <p>c. Existence and distribution of published guidelines on visitor behaviour at sensitive sites, and periodic monitoring of compliance.</p> <p>d. A code of practice for tour operators and tour guides and/or other engagement with them on visitor management at natural sites.</p> <p>e. Cooperation with local conservation bodies to identify environmental risks associated with tourism and measures to reduce them.</p> <p>f. Provision of training for guides.</p>		<p>Department of Trade, Commerce & Tourism, Central Provincial Council, Sri Lanka, SLTDA and with the support of FD</p>
Wildlife interaction	<p>Reference (title, date) to international, national and local laws that apply in the destination regarding interaction with wildlife.</p> <p>b. Endorsement of international standards for wildlife viewing for both marine and terrestrial species.</p>	<p>Need to come up with the guidelines on wildlife viewing and this need to be made aware to visitors, tour guides and tour operators.</p>	<p>FD and DWC</p>

Criteria	Indicators	Destination / Current status	Specific Recommendations and Implementation
	<p>Distribution of a code of practice for wildlife interaction, including viewing, which reflects international standards.</p> <p>d. System for checking compliance with regulations, and code of practice amongst tourism operations.</p> <p>e. Actions to monitor wildlife wellbeing and minimize disturbance, in locations where interactions occur.</p> <p>f. Provision of information to visitors on harmful wildlife interaction, such as touching and feeding.</p>		
<p>Species exploitation and animal welfare</p>	<p>Reference (title, date) to specific international, national and local laws, standards and guidelines that apply in the destination regarding animal welfare and conservation of species.</p> <p>b. Notification of laws, standards and guidelines to tourism enterprises and guides.</p> <p>c. A system for inspection of the conditions of captive wildlife and domestic animals, including their housing and handling.</p>		<p>FD and DWC</p>

Criteria	Indicators	Destination / Current status	Specific Recommendations and Implementation
	<p>d. Licensing and checking of qualifications of personnel responsible for captive wildlife.</p> <p>e. Action to promote the Convention on International Trade in Endangered Species (CITES) in the tourism sector and to ensure compliance with it.</p> <p>f. Provision of information to visitors on avoiding trade in endangered species, e.g. in purchase of souvenirs derived from threatened species of wildlife notified by IUCN or CITES.</p> <p>g. Enforcement of legislation to ensure that any hunting activity is part of a scientifically based, properly managed and strictly enforced approach to conservation.</p>		
wastewater	<p>The destination has clear and enforced guidelines in place for the siting, maintenance and testing of discharge from septic tanks and wastewater treatment systems. The destination ensures that wastes are properly treated and reused or released safely without adverse impacts on the local population and the environment..</p>	<p>The destination has clear and enforced guidelines in place for the siting, maintenance and testing of discharge from septic tanks and wastewater treatment systems. The destination ensures that wastes are properly treated and reused or released safely without adverse impacts on the local population and the environment..</p>	Local Authority

Criteria	Indicators	Destination / Current status	Specific Recommendations and Implementation
Solid waste	<p>Waste monitoring programme, with results and targets published.</p> <p>b. Coordinated campaign/advice/support with tourism enterprises on waste management, including food waste.</p> <p>c. Campaign to reduce/eliminate single use items, especially plastics.</p> <p>d. Waste management programme for public offices and facilities.</p> <p>e. Provision of a collection and recycling system, with at least four streams (i.e. organic, paper, metal, glass and plastic).</p> <p>f. Provision of sustainable system for disposal of residual waste.</p> <p>g. Campaign to eliminate dropping of litter, including by visitors, and to keep public spaces clean.</p> <p>h. Adequate bins for separated waste disposal.</p>	Coordinated campaign/advice/support with tourism enterprises need to be in place on waste management, including food waste	Local Authority
GHG emissions and climate	The destination has targets to reduce greenhouse gas emissions, and implements and reports on mitigation policies and actions. Enterprises are		FD

Criteria	Indicators	Destination / Current status	Specific Recommendations and Implementation
change mitigation	encouraged to measure, monitor, reduce or minimise, publicly report and mitigate greenhouse gas emissions from all aspects of their operation (including from suppliers and service providers). Offsetting of any remaining emissions is encouraged		
Low-impact transportation	The destination has targets to reduce transport emissions from travel to and within the destination. An increase in the use of sustainable, low-emissions vehicles and public transport and active travel (e.g., walking and cycling) is sought in order to reduce the contribution of tourism to air pollution, congestion and climate change.		
Light and noise pollution	The destination has guidelines and regulations to minimize light and noise pollution. The destination encourages enterprises to follow these guidelines and regulations.		

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Annex 1

: Terms of Reference

TERMS OF REFERENCE

Conducting a Tourism Carrying Capacity Assessment for Knuckles Riversten tourism destination in Sri Lanka

Tender Title:	Conducting a Tourism Carrying Capacity Assessment for Knuckles Riversten tourism destination in Sri Lanka
Reports to:	National Project Coordinator- CET of UNDP Sri Lanka
Travel:	Travel to identified locations in Sri Lanka as required
Type of Contract:	Procurement Contract
Languages required:	English with proficiency in local languages
Expected Duration:	20th December 2021 to 20th April 2022
Expected Start Date:	20th December 2021

A. Background

Tourism is a key economic sector in Sri Lanka. The sector is the second highest foreign exchange earner of the country and accounted for more than 5 percent of its Gross Domestic Product (GDP). Over 40 auxiliary industries are dependent on the tourism sector. Covid pandemic is the biggest challenge Sri Lankan tourism sector has encountered. The UNWTO Panel of Experts survey shows that 64 percent of the experts believe that tourism in the Asia-Pacific region will significantly rebound in 2022, and many expect the region to reach pre-pandemic levels only in 2024 or after. Further, its expected that there will be significant changes to the demands of the tourists. Even with these changes, the tourism industry is considered as one of the industries to create new jobs worldwide. Overall, given the tourism sector's capacity to create jobs, revival of the sector is vital for boosting jobs and multiplying post-pandemic recovery across all economic sectors. Experiences from previous disasters show that the tourism sector can bounce back quickly and generate returns across the whole economy.

UNDP with the financial assistance of European Union, supported a rapid assessment of the impact of COVID-19 on the tourism sector in Sri Lanka, which showed that daily wage earners and workers on the lower-end of the value chain were the worst affected. In addition, women working in the tourism sector were disproportionately affected by the pandemic. Of the people who lost jobs in the tourism sector, 67 percent were women. Traditional attitudes towards women and their perceived role as caregivers was one of the reasons cited for women to be asked to stay at home. The rapid assessment also showed that losses were particularly detrimental to Micro, Small, and Medium Enterprises (MSMEs) in the sector, as they lacked adequate safety nets.

As Sri Lankan tourism is heavily dependent on the nature and cultural assets of the country, its important to assess the sustainability of promoting tourism industry in such sensitive areas. As an example, some of the ecosystems are highly sensitive to external disturbances and they might get destroyed with very high number of tourists visitations. At the same time opportunities available for the tourism industry to bounce back from the covid pandemic related issues must not be compromised.

UNDP has been assisting the Government of Sri Lanka (GoSL) since 1967 to achieve sustainable human development on economic, social and environmental fronts. Working closely with the GoSL at national, regional and local levels, the Climate and Environment Team (CET) of UNDP is building institutional, legal and individual capacities to respond to the effects of climate change, natural and manmade disasters and unsustainable biodiversity and natural resources management, by promoting alterernative 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.

Under this background, Transforming Tourism in Sri Lanka: Emerging from crisis as a strong, resurgent and rebranded industry project implemented by the UNDP with the financial assistance of European Union is seeking the services of a consultancy firm to conduct a carrying capacity assessment for the Knuckles Riversten tourism destination. Knuckles Riversten tourism destination not only limited to Riversten but extends to around 15 attractions located close to the Riversten area. For the map of all attractions belongs to the Knuckles Riversten destination, please refer to the Annexure 1: Map of tourism attractions belongs to the Knuckles Riversten tourism destination (<https://drive.google.com/file/d/1VBixBbQ1f18japKVCsgvryvfG5dC9SAX/view?usp=sharing>) . The assessment should be conducted for all the attractions belongs to the Knuckles Riversten destination.

This assignment is meant to support the Forest Department and the Provincial Council of Central Province of Sri Lanka to manage their tourism development programmes effectively while managing the cultural, natural and historical assets in a sustainable way. The overall goal of the Carrying Capacity Assessment is to design a sustainable destination management plan through optimizing the number of tourists assuring the quality of services and tourist satisfaction without compromising environmental and socio-cultural significances.

B. SCOPE & METHODOLOGY OF THE ASSIGNMENT

The scope of the assessment is to assess the present and manageable environmental, physical, social, economic, technological, and political (policies and plans) capacities, and the factors, forces, and mechanisms that could influence the capacities in Knuckles Riversten destination which will determine the number of visitors that can be allowed without compromising the quality of visiting the destination in short- and long-term time horizons.

UNDP will provide required institutional support to carry out the proposed programme. The Project Coordinator- BIOFIN will closely work with the Consultancy Firm to ensure that relevant agencies work collaboratively. UNDP will also call progress review meetings with respective stakeholders to ensure timely delivery of the outputs of the assignment. The Consultancy Firm is expected to develop and implement a field program to deliver the following outputs through their proposal.

Output 1 – A report on the background details of the destination

In consultation with the Central Cultural Fund, Provincial Council of Central Province and other relevant key stakeholders for managing the Knuckles Riversten destination fine tune the methodology and provide details of the timeline to conduct a comprehensive carrying capacity assessment.

Activity 1.1: Assess already collected data by different organizations and provide details of the assessment framework

Many stakeholders have collected different sets of data related to managing Knuckles Riversten as a sustainable tourism destination. Assess the reliability and necessity of the data available for this purpose and agree with the relevant government agencies on the scope of the assessment.

Activity 1.2: Identify additional data collection requirements and methods for collecting additional data in collaboration with the Forest Department and other key stakeholders.

In line with the limited resources available for the assignment, suggest alternative data collection and analysing methods if required within the scope of the study.

Output 2 – Conduct the Carrying Capacity assessment

Collecting and analysing relevant data and developing the final Carrying Capacity Assessment report which should include following areas.

2.1.1 A brief analysis of the destination profile which will include environmental, archaeological, sociocultural, economic, technological significance, and current condition of the destination.

2.1.2 Evaluation of visitors and their satisfaction, infrastructural and administrative changes that occurred, and factors that affect the tourism industry at the destination. Key Informant Interviews should held with all relevant public and private stakeholder institutions. SWOT analysis, PESTAL analysis, DPSIR analysis, and / or life cycle model analysis should be used as appropriate to understand the effects.

2.1.3 Identify potential connectivity with neighbouring destinations located within 20km radius of the main destination, connected services, and actors.

2.1.4 Considering external and internal factors as well as possible superstructure and infrastructure changes, assess the projected tourism population projections till year 2030.

2.1.5 Conduct comprehensive risk assessment in the perspective of archaeological, ecological, environmental, economic, social, and also considering the natural and human-induced disasters/threats to the destination.

2.1.6. Propose interventions to minimize the threats to which the destination has exposed to after assessing all possible tourism scenarios

C. DUTIES & RESPONSIBILITIES

1. Liaise with relevant government and non-government agencies, experts on Knuckles Riversten and UNDP in conducting the Carrying Capacity Assessment
2. Adhere to the international best practices of conducting Carrying Capacity Assessment in all the stages
3. Ensure that the team of experts mentioned in the proposal will be always available for the delivery of relevant outputs
4. Deliver the project deliverables on time

D. UNDP RESPONSIBILITY

UNDP will oversee the assignment, institutional support and facilitate clearances required. National Project Coordinator-BIOFIN will closely work with the institution to design and plan the work. UNDP will also call monthly progress review meetings with the institution during the working committee meetings to ensure timely delivery of the outputs of the assignment.

E. DELIVERABLES/OUTPUTS

Deliverable 01: Inception Report within 10 days of signing the contract with details of finalized methodology, data available from the assessments already conducted, detailed proposed methodology, proposed data collection and analysing methods, refined timeline and the format of the final assessment report.

Deliverable 02: Draft Carrying Capacity Assessment Report

- a) Including the draft executive summary, findings and recommendations with the reference materials.
- b) Present the findings contained in the draft report to the key stakeholders.

Deliverable 03: Final Carrying Capacity Assessment Report

- a) After addressing all the comments made by relevant stakeholders, the final report should be submitted in three formats
 - 1. Hard copy of the report with all the annexures
 - 2. Final report after formatting it to suit immediate distribution through online platforms
 - 3. Final report with high quality pictures, graphs, charts etc and ready for printing.

F. TIMEFRAME

The envisaged time period of the consultancy is 4 months and shall commence on 20th December 2021, shall expire on satisfactory completion of the consultancy, but not later than 20th April 2022.

G. EXPECTED DELIVERABLES & PAYMENT SCHEDULE

Deliverable	Time Frame
Deliverable 01: Inception Report within 10 days of signing the contract with details of finalized methodology, data available from the assessments already conducted, refined methodology, proposed data collection and analysing methods, refined timeline and the format of the final assessment report.	30 th December 2021
Deliverable 02: Draft Carrying Capacity Assessment Report <ul style="list-style-type: none">a) Including the draft executive summary, findings and recommendations with the reference materialsb) Present the findings contained in the draft report to the key stakeholders	20 th March 2022
Deliverable 03: Final Carrying Capacity Assessment Report <ul style="list-style-type: none">a) After addressing all the comments made by relevant stakeholders, the final report should be submitted in three formats;<ul style="list-style-type: none">1. Hard copy of the report with all the annexures;2. Final report after formatting it to suit immediate distribution through online platforms;3. Final report with high quality pictures, graphs, charts etc and ready for printing)	10 th April 2022

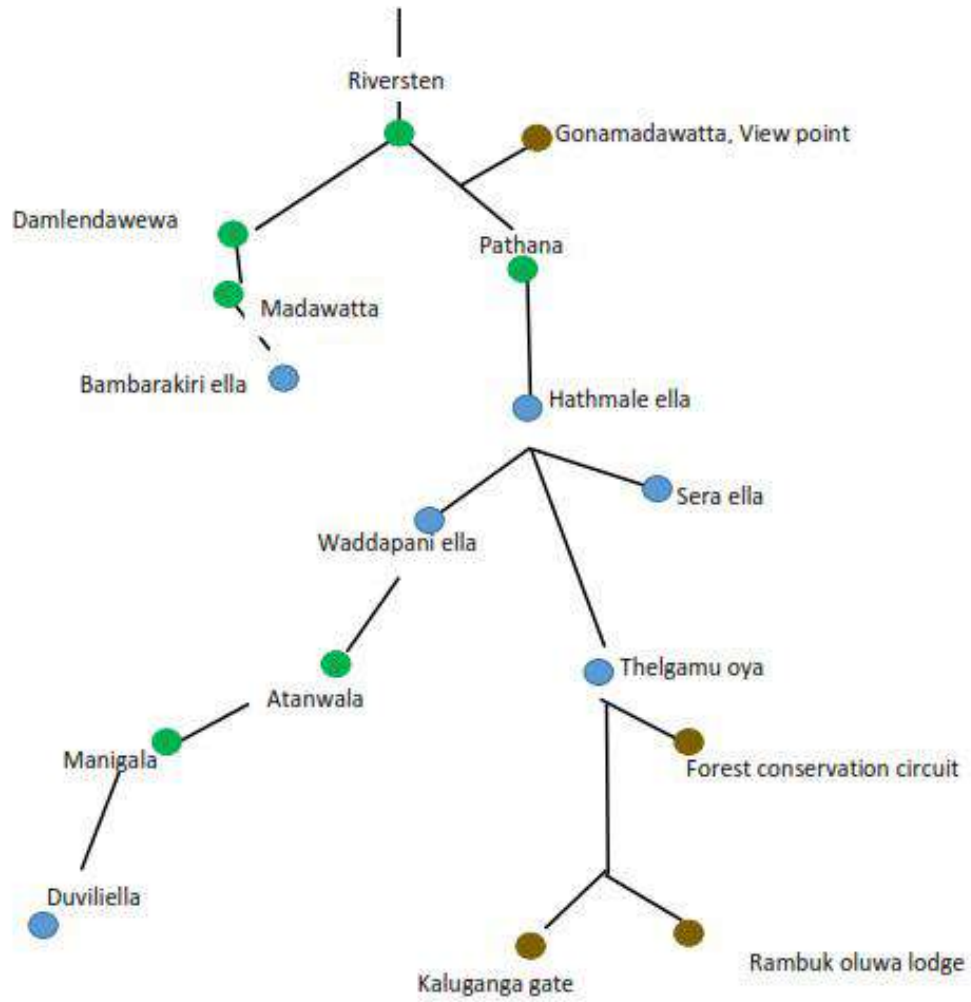
H. INSTITUTE & TEAM COMPETENCIES & QUALIFICATIONS

a) Expected profile of the Service Provider:

- Should be either an institution or a company with relevant experience in conducting Carrying Capacity Assessments; previous experience in conducting Carrying Capacity Assessments in tourism sector will be an added advantage

Annex 2

Knuckles Riversten Tourism Destination Map



Annex 3

Tourism Marketing Plan - Knuckles

Tourism Marketing Plan

Knuckles Conservation Forest



**Submitted to: Ecosystem Conservation and Management Project,
Ministry of Mahaweli Development and Environment**

Submitted by: Matthew Humke, Sustainable Tourism Consultant

September 2018

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Acronyms

CBO	Community-based organisation
CBT	Community-based tourism
FD	Forest Department
SLTDA	Sri Lanka Tourism Development Authority
UNESCO	United Nations Educational, Scientific and Cultural Organisation

Introduction

The Knuckles Conservation Forest is a biodiversity hotspot located in the districts of Kandy and Matale in the Central Province of Sri Lanka. Local visitation has been consistently growing in Knuckles over the past five years, with local visitors arriving to the Illukkumbura/Pitawala Panthana entry point exceeding 70,000 people in 2017 (a 253% increase from 2013). Weekend visitation in popular destinations like Riverston has led to visitor management challenges like congested roadways and overflowing parking areas.

Foreigners represent an exponentially smaller number of visitors to Knuckles Conservation Forest, accounting for just 1% of all visitors in 2017. Some of the main reasons for the small number of foreign visitors includes a lack of adequate tourism lodging in the region and a lack of awareness in regards to the natural and cultural attractions Knuckles Conservation Forest has to offer – both issues that will need to be addressed in order to promote foreign visitation.

Products & Services

The following is a summary of the tourism products and services offered by Knuckles Conservation Forest.

Visitor Centres

Visitor Centres in locations such as Pitwala Panthana and Deenston are visited by both local and foreign visitors alike, and help to orient visitors to the attractions and value of the Knuckles Conservation Forest.

Scenic Viewpoints

Located throughout Knuckles are a number of scenic viewpoints accessible by vehicles, in places such as Riverston, that are particularly popular with local visitors on weekends and holidays.

Overnight Lodging

Limited but attractive are a small number of overnight lodging facilities that include both dormitory-style options for larger groups or 2-3 room bungalows with shared bathrooms.

Cultural Experiences

Community destinations within Knuckles such as Etanwela and Meemure offer visitors cultural experiences such as village tours, traditional agricultural practices, local foods and crafts as well.

Hiking Trails

Although currently limited to daytime use, a network of hiking trails ranging from short (i.e. Mini World's End - .75 km) to longer (Rambukoluwa to Doowili Ella – 8 km) offer hiking opportunities in the forest.

Campsites

A small number of primitive campsites are available for use in Knuckles.



Target Market Segments



As mentioned earlier, the vast majority of visitation to Knuckles Conservation Forest is from local visitors, with foreign visitors making up only 1% of total visitors. However, foreign visitors represent a market segment that is high-value and low-volume, and value the type of nature-based and authentic cultural experiences that the Knuckles region has to offer.

The following market segment profiles represent those that should be targeted by marketing and sales activities in Knuckles Conservation Forest.

Sri Lankan Weekend/Holiday Travelers



Demographics	Motivations	Interests	Notes
<ul style="list-style-type: none"> Primarily from Colombo, Kandy, Trinco & SW provinces Family groups of 4-8 people School breaks: Apr/Aug/Dec 	<ul style="list-style-type: none"> Family time Relaxation Celebration 	<ul style="list-style-type: none"> Recreation (swimming) Family celebrations (food/drink) 	<ul style="list-style-type: none"> Often arrive in own vehicles (small groups) or buses (large groups) Usually bring their own food, limited economic benefits to park and/or surrounding communities

Foreign Nature Lovers

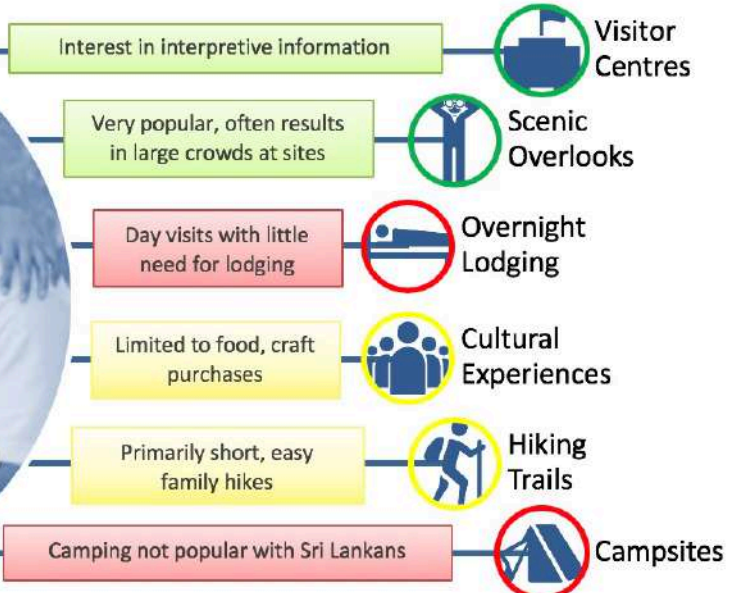
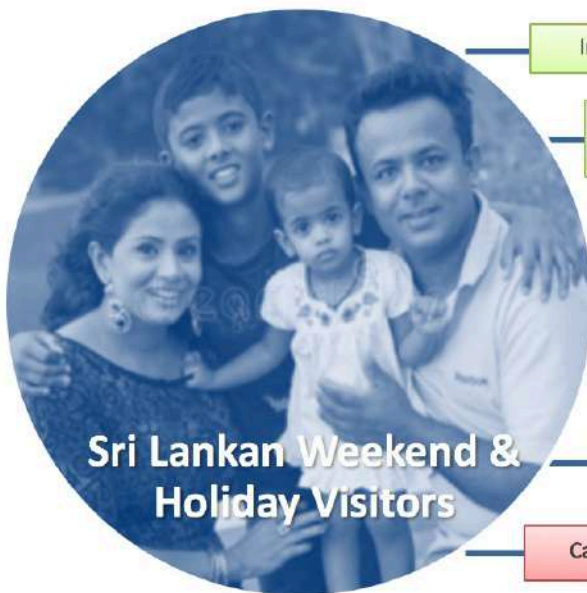


Demographics	Motivations	Interests	Notes
<ul style="list-style-type: none"> Primarily Europe, Russia, Australia, Asia 30-65 years Often couples or small groups Professionals 	<ul style="list-style-type: none"> Nature Discovery Activity 	<ul style="list-style-type: none"> Guided & self-guided hiking Photography Village visits Birding Scenic landscapes 	<ul style="list-style-type: none"> Most arrive via Colombo-based tour operators 1-2 days average stay at Knuckles Oct-Mar high season

Product | Market Match



The following section compares the tourism products offered by Knuckles Conservation Forest with the target market segments that visit the protected area. Green linkage represents a high level of demand by the market for the product, yellow linkage represents medium level of demand, which red linkage represents little or no demand by the target market segment for the product.



Positioning



In order to promote visitation to the Knuckles Conservation Forest, one must identify what makes the protected area *unique* when compared to other potential nature-based tourism destinations in Sri Lanka. The following section focuses on these strengths as a part of their unique selling propositions. The unique selling propositions then can be incorporated into a marketing strategy for the protected area by focusing on these special characteristics through promotional descriptions, images and overall marketing messages.

Unique Selling Propositions

UNESCO World Heritage Site Designation

- The UNESCO World Heritage Site designation is one that is well-recognized by many travellers and represents destinations that hold special physical and cultural resources of global significance. Integrating the UNESCO World Heritage Site designation into promotional materials and marketing messages will help to easily convey the quality of Knuckles' natural landscapes.

Pristine and Unique Landscapes

- Due to its remoteness, the Knuckle Conservation Forest is considered one of the last “untouched” regions of Sri Lanka. This undiscovered and isolated quality of the region should be considered a strength rather than a weakness. And as Sri Lanka’s most popular protected areas increasingly become inundated with local and foreign visitors, Knuckles’ pristine and unique nature will become more and more valuable and attractive.

Trekking Opportunities

- According to a report by the Adventure Travel Trade Association, the top three most popular adventure travel activities with international visitors are now 1. Hiking, 2. Backpacking and 3. Trekking (Travel and Leisure, 2016).
- Knuckles offers excellent opportunities to do all three, with a variety of day hiking options to places like Mini World’s End as well as multi-day trekking and backpacking routes to the iconic Manigala, Lakegala and other nearby peaks.
- Developing and promoting hiking, backpacking and trekking routes – and complementary services such as guides, ecolodges and transportation services – is a Unique Selling Proposition for Knuckles Conservation Forest and should be a focus of future tourism development activities.

Pricing



Two primary approaches to determining tourism product and service pricing include *cost-based pricing* and *value-based pricing*. Cost-based pricing simply takes into account all of the direct costs associated with providing a product or service and adds on a profit margin to determine the price. For example, if a product costs \$100 to deliver and a carries a 20% profit margin, the price would be \$120. Value-based pricing takes into account how much the customer values the product...or in other words how much the customer is *willing-to-pay for the product*. This requires a keen understanding of market demand, but is often the most profitable approach to pricing because it doesn't limit itself to minimum profit margins.

The following pricing strategy for Knuckles Conservation Forest products and services is *value-based*, and takes into consideration comparable and competing similar products in the region. Visitor centres and scenic viewpoints are not considered because they are included in the cost of the overall entrance fee.

Overnight Lodging

On the low end, local homestays in the region price a double room occupancy with private bathroom at an average of \$25-50 per night. Bungalows and villas range from \$50-\$150 per night, while high-end tea estate properties and resorts can exceed \$200+ per night.



The key to success for overnight lodging within Knuckles, such as the Rambukoluwa Wana Niwahana facility, is “package” the lodging with exclusive and unique visitor experiences within the forest...such as multi-day trekking. With this approach in mind, the price point for Knuckles Conservation Forest lodging should be around \$50/night per double room occupancy.

Cultural Experiences

Cultural experiences are a bit difficult to price since the variety of activities is varied, but in general a one to two-hour cultural tour should be priced in the \$20-\$30 per person range.



Hiking Trails

Comparable hiking and trekking tours are offered in the Kandy District through a variety of private trekking operators such as Sri Lanka Trekking (knucklesrange.com) and Nipuna Basnayaka. They offer single-day treks for approximately \$60-\$75 per person, two-day overnight treks with camping for approximately \$125-\$150 per person.



Campsites

The overnight trekking experiences with camping listed above are the best comparable products to Knuckles campsites.



Partnerships & Placement



Collaborating with marketing and sales partners to help “place” the Knuckles’ tourism products and services in the market will be a vital step to success. The following table summarizes a few of those important partners, and the benefits that could result.

Partner	Role/Benefits to Knuckles
Colombo-Based Tour Operators/DMCs	<ul style="list-style-type: none"> • Feedback on product opportunities/development • Leading sales partners, particularly with foreign visitors
Sri Lanka Tourism Development Authority	<ul style="list-style-type: none"> • National-level marketing support • Training and technical assistance in tourism development
Kandy-Based Tour Operators/DMCs	<ul style="list-style-type: none"> • Potential sales partner for trekking routes, trekking lodging (bungalows and campsites)

Promotion



Print Promotional Materials



A promotional catalog or “sell sheet” should be developed that highlights the new and improved tourism products and services in Knuckles. Designed primarily for Sri Lankan tour operator partners, the print catalog should include the following elements:

- Descriptions of the new tour products and services
- High-quality color photos
- Pricing information
- What’s included / what’s not included
- Maps of tour locations
- Contact information

Website

It is recommended that the Forest Department develop either tourism-specific information under their main umbrella website, or develop an individual “destination” website for visitors to Knuckles that includes the following information (which is highly sought after by both visitors and sales partners like tour operators):



- An introduction/description of Knuckles, its ecosystems and signature species (including high-quality photos)
- An overview of the tourism services offered by Knuckles, including visitor centres, lodging options, food services, hiking paths, wildlife viewing areas, etc.
- Maps of Knuckles (ideally as downloadable/printable PDFs)
- Codes of conduct that guide visitors on how to reduce their negative impacts while in Knuckles (i.e. proper wildlife viewing practices, trash management, etc.)
- Frequently Asked Questions (FAQs) about Knuckles (i.e. when’s the best time of year to visit, temperature and precipitation averages, etc.)
- Local, recommended tourism service providers such as tour operators, nearby hotels and homestays, restaurants, etc. – ideally those are supporting Knuckles’ conservation objectives in one form or another.
- A reservation system or contact information for forest department overnight lodging.

Tour Operator Outreach/Digital Promotional Content

Following up the distribution of print promotion to tour operators should be individual presentations that can provide a deeper and more tailored introduction of the new Knuckles tourism products and services to these valuable sales partners. A PowerPoint presentation of the same kind of information presented in the print promotion is ideal, with opportunity for the tour operators to ask questions as well.



The tour operators should also be provided digital copies of all of the promotional materials presented, including editable product descriptions and high-quality photos and videos.

Familiarization Trips



The next step for promoting new tourism products and services with tour operators in Knuckles is to conduct familiarization or “FAM” trips in which the private sector representatives actually visit Knuckles to experience first-hand the products and services. Every effort should be made to treat the tour operators exactly as one would an actual visitor, thus giving them a real taste of the experience. The FAM trips should be free of charge or deeply discounted for the visiting tour operators.

Press/Publicity Tours



Although secondary to the tour operator FAM trips, tours for press and publicity representatives should also be considered. However, one must keep in mind that most promotional activity should target foreign visitors (considering the growing number of local visitors already coming to Knuckles), therefore international online and offline publications are better than national news outlets. Travel bloggers (and vloggers) are part of a growing number of “influencers” that help to

Knuckles Tourism Working Group



Improved collaboration between the Forest Department, private tourism sector representatives such as tour operators, regional and national tourism organizations such as the SLTDA, provincial councils and others would benefit tourism development efforts in Knuckles. Establishing a Tourism Working Group that could meet a few times a year to discuss tourism development and management issues in Knuckles would greatly improve communications and collaboration.

Social Media Marketing



In addition to a website (which is somewhat “static” and whose information doesn’t change frequently) establishing Knuckles Conservation Forest social media pages on websites like Facebook and Instagram allow Knuckles managers to share up-to-date information, projects, photos, videos, special events and other dynamic content that would allow the forest reserve to build a large audience that could follow current news in Knuckles.

Annex 4

Selected GNDs

Selected GNDs

No	DSD_N	GND_NAME_C	GND_NO
1	AMBANGANGA	Pallethenna	384 F
2	AMBANGANGA	Kavudagammana	384 D
3	AMBANGANGA	Hunukete	384 B
4	AMBANGANGA	Narangolla	384 A
5	AMBANGANGA	Sirangahawatta	384 E
6	AMBANGANGA	Thibbatukanatha	380 C
7	AMBANGANGA	Pussella	384
8	AMBANGANGA	Kalugalthenna	381 A
9	AMBANGANGA	Naguliyadda	384 C
10	AMBANGANGA	Kosgolla	381 D
11	AMBANGANGA	Gammaduwa	381 C
12	AMBANGANGA	Kumbaloluwa	381
13	AMBANGANGA	Palle Eswedduma	384 G
14	LAGGALA	Rambukoluwa	389
15	LAGGALA	Meda Ela	387 A
16	LAGGALA	Imaduwa	390
17	LAGGALA	Etanwala	386
18	LAGGALA	Rathninda	386 A
19	LAGGALA	Halminiya	392
20	LAGGALA	Dammanthenna	399 A
21	LAGGALA	Laggala Pallegama	397
22	LAGGALA	Gonawala	397 B
23	LAGGALA	Ganga Henwala	389 A
24	LAGGALA	Divulgas Pathana	400 A
25	LAGGALA	Pitawala	385
26	LAGGALA	Miniranketiya	397 D
27	LAGGALA	Ilukkumbura	388 A
28	LAGGALA	Weliwaranagolla	402 C
29	LAGGALA	Mahalakotuwa	387
30	LAGGALA	Karadamulla	397 C
31	LAGGALA	Kahagala	388
32	LAGGALA	Gangalapuwakpitiya	400
33	LAGGALA	Leloya	396
34	LAGGALA	Pottatawela	399
35	LAGGALA	Wellewala	402 D
36	LAGGALA	Morathenna	402 E
37	LAGGALA	Hattota Amuna	402
38	LAGGALA	Dasgiriya	402 A
39	LAGGALA	Akarahediya	396 B
40	NAULA	Opalgala	383
41	NAULA	Andawala	382
42	NAULA	Galboda	408

No	DSD_N	GND_NAME_C	GND_NO
43	NAULA	Kambarawa	401
44	RATTOTA	Wanaraniya	375 C
45	RATTOTA	Lonvil	373 C
46	RATTOTA	Bodhikotuwa	375 A
47	RATTOTA	Bambarakiriella	375 D
48	RATTOTA	Maussagolla	375
49	RATTOTA	Madakumbura	375 F
50	RATTOTA	Horagolla	376 C
51	RATTOTA	Dankanda	378
52	RATTOTA	Rattota	376
53	RATTOTA	Kuruwawa	376 B
54	RATTOTA	Weralugasthenna	375 B
55	RATTOTA	Medawatta	375 E
56	RATTOTA	Kirimetiya	378 B
57	RATTOTA	Polwattakanda	378 A
58	RATTOTA	Dambagolla	378 C

Annex 5

**Meeting Minutes of the consultation
workshop**

**CONSULTATION WORKSHOP - CARRYING CAPACITY ASSESSMENT OF THE KNUCKLES
RIVERSTEN TOURISM DESTINATION**

Date: 25.02.2022

At Pitawala Pathana Information Center

**Mr.
Illukkumbura
Forest
Department**

- Riverstone is a World Heritage Site in Sri Lanka.
- Tickets for Riverstone have been issued to tourists since 2008, and the Forest Department has that tourism statistical data since that year.
 - Ex: Number of Tourists per year
 - Tourist arrivals mode and number of arrivals
- So far, no action has been taken to control tourist arrivals and it is important to have the necessary infrastructure in place in the area.
- Due to the high number of local tourists visiting this area, attention should be paid to the measures taken to control the influx of tourists.
- Relevant Institutions that are the main contributors to this project should implement awareness programs.
- The road from Rattota to Riverstone is congested during the holidays and measures should be taken to control this tourist arrival.
- This tourism industry which was started in association with the circuit bungalow of the Forest Department has now spread all over the area.
- The forest department has taken the initiative to promote Riverston as a tourist destination to uplift the livelihood of the people instead of the traditional chena farming system. But at present, it is hampered by large scale entrepreneurs coming from outside and it is important to take action.
- Planning to benefit about 1800 villagers living in the area through this project.
- It is important to properly regulate and monitor such a large-scale project.
- Support for Promotion of Organic Farming Zones, traditional Foods, Indigenous Medicine (ex: Laggala area) and Organic Fertilizers through the project.
- Giving priority to the promotion of tourism activities related to rural life in the Riverstone area.
- Introducing a set of specific guidelines for buildings and various constructions that are detrimental to Riverstone’s ecological beauty.
- Protect and maintain important environmental trails (ex: lakegala, duwili Ella etc.) located in Riverstone.
- Preparation of necessary plans for waste management.
- Provide adequate sanitation facilities
- Plans need to be organized to minimize external influences on development activities and environmental conservation in the area. (E.g., political interference, the influence of private institutions, etc.)
- Provide essential facilities for people visiting the Riverstone area. (E.g., accommodation, Food Court area, parking facilities, etc.)

	<ul style="list-style-type: none"> - Taking steps to promote places that are important for tourism but not popular among tourists. Through it will be possible to distribute the pressure centered on only one place to several places. - Develop plans to promote Riverstone based green sport. (Ex: Zipping line, hiking, cycling etc.) - A survey is being conducted by Forest Department to collect data on existing accommodation and facilities for foreigners. <ul style="list-style-type: none"> Existing accommodation facilities available in the area <ul style="list-style-type: none"> ▪ Apart from the homestay, there are about 40-50 rooms that can be accommodated. ▪ 4 campsites belonging to the Forest Department. ▪ dormitory facilities for 44 persons being constructed by the Forest Department ▪ Circuit bungalow that can accommodate 44 people ▪ 15 Homestay Facilities - Earn 4 million revenues through 56km trails in the last 3 years. - There is a risk of exceeding carrying capacity in Riverstone, Pathana and the village.
<p>P2 Grama Niladhari</p>	<ul style="list-style-type: none"> - Take necessary steps to protect the Riverstone area from tourists. - Roads leading to Riverstone need to be repaired. - Development of an alternative road from Moragahakanda to Sera Ella - Improving the facilities for communication facilities in the area. - Plans to set up regular and clean food stalls. - Conduct public awareness programme. - Implementing programs to involve the residents of the area to earn income through the tourism industry. - Introduce tourism related innovative income generation approaches to young generation and use it as a solution to stop migration to Matale and nearby towns
<p>P3 Tour Guide 1</p>	<ul style="list-style-type: none"> - Introduce an appropriate methodology to build coordination between tour guides. (Number of current tour guides in Riverstone - 54) - Provide a suitable mechanism to obtain the opportunity for tour guides living in the Knuckles area. - A tour guide charges Rs. 758 fares from foreign tourists and from a local tourist Rs. 32.40 will be charged. (Including VAT)
<p>P4 Tour Guide 2</p>	<ul style="list-style-type: none"> - Working to maximize locally available economic benefits through the environmental and economic value of Knuckles. - Establish a set of procedures for setting a specific fare that a tour guide may charge for each Knuckles trip. - Introducing a fixed fee for trail wise tour guidance. - Establishment of a series of training programs for travel guides who are currently in short supply for the tourism industry.

Mr. Jayatissa
GAFEC

- Take action to promote the 6 locations currently identified as major tourist landscapes in Knuckles as tourism packages (or tourist destinations).
- Preparation of solution plans to prevent soil erosion from taking place in the Pathana area due to dairy cattle living in the area.
- Preparation of a program to promote various food products from “Pathan Ala” just like sweet potato, a plantation crop in the knuckles area.
 - Utilization to enhance the tourist attraction by expanding the local fishing industry across the reservoirs in the Knuckles area.
 - Development of routes to travel within the Knuckles range and taking steps to engage in various tourism activities.
 - The past village roads in Knuckles should be upgraded as a trail.
 - Ex: Rabukoluwa Laggala Road
 - Randenikubura Meemure Road, Sulumune
 - Kabalgala road through Hatton Sudugala
- It should be analyzed how dilapidated bungalows like Gonamana Estate and Sudugala Estate can be used for tourism.
- Take steps to minimize damage to Knuckles' biodiversity through wildfire.
 - Ex: Introduction of undergrowth crops (cane, cardamom) for the spread of Phineas, a fire-sensitive plant species prevalent in Knuckles.
- Development of various activities that support the tourism industry in the 4 estates (Medawatta, Nikaloya, Opavila, Nagala) within a radius of 10km within the Knuckles range.
- Utilization of various tanks associated with the Knuckles range to promote various activities in the tourism industry.
- Practical promotion of organic farming.
- Development of the tea industry in the area and its contribution to the tourism industry.
- Use of Walpolagamuwa and Rabukkotuwa as model villages and use for thawing.
- Promotion of food unique to the area.
 - Ex: Katuala, Pathan Ala
- Archaeological sites should be developed as tourist attractions.
 - Ex: The temple called aluthdewiyo, Maligathanna, and
- Endemic species of Sri Lanka living in the Knuckles Ranges should be conserved.
- Take steps to promote Knuckles ranges tourism attractions places through various websites.
- Introduction of green jobs.
- Implementation of motivation programs to direct the locals for tourism related income generating projects.
- The technical facilities in the area need to be improved.
- There is no specific water supply system in the area.

	<ul style="list-style-type: none">- Disadvantages of the tourism industry<ul style="list-style-type: none">▪ Noise disturbance to people living in the village.▪ Undermining the local food system
Mr. Illukkumbura Forest Department	<ul style="list-style-type: none">- Creating job opportunities- Providing necessary provisions for field officers.- Take action to increase the value of the Knuckles range as a World Heritage Site.- Taking action to remove the rock trapped by the landslide near Babarakiri Falls.- Inadequate money allocations for maintenance and resources provisions E.g. During past 4 years, only 3mn has been received

Annex 6

List of accommodations in the Laggala DSD

Details about tourist hotels

No.	Name of the Hotel	No. of Rooms	Name of the owner	Address	Contact information
1.	Lakegala Resort	-	M.M. Anura Herath	Ma oya, Haththotaamuna	-
2.	Sir John Bungalow	08	Fire Protects Pvt Ltd	Pitawala, Illukkubura	077 3936105
3.	Green View Riverstone Lodge	02	S.M.P.K Samarakoon	Pitawala, Illukkubura	071 4496283
4.	Mountain Villa	03	Shiromi Kulathunga	Pitawala, Illukkubura	077 8174470
5.	Horizon River Lodge	08	-	Mada ela, Illukkubura	-
6.	Prasad Hotel	07	P.G.Prasad Rohana	No 28, Wellewala, Haththotaamuna	071 7732739
7.	Sanjeewa Restaurant	11	K.M.M.S.L. Karunarathna	Kalugaga, Haththotaamuna	071 3605489
8.	K.M.P. Restaurant	03	Wasantha Konara	Kalugaga, Haththotaamuna	071 8890199
9.	Stone Bungalow	-	Tennakoon	Mahalakotuwa, Illukkubura	077 8114319
10.	Pawana	03	M.A.G.C.Malwaththa	Mahalakotuwa, Illukkubura	076 8114319
11.	Gampathi Niwasa	03	R.M.D.G.S.B. Ekanayake	Mahalakotuwa, Illukkubura	071 8291096
12.	Riverstone Hide way	03	Lahiru Withanage	Mahalakotuwa, Illukkubura	071 7449883
13.	Riverstone Nochar River Cottage	04	Sisira henkenda	Mahalakotuwa, Illukkubura	076 9293284
14.	Riverstone Lodge		Lesli nanayakkara	Mahalakotuwa, Illukkubura	-
15.	Dumbara Sisila Homestay	03	E.M.U.G.G. Bimantha	Mahalakotuwa, Illukkubura	077 9281960
16.	Manigala View Point	03	K.G.S.Ekanayake	Mahalakotuwa, Illukkubura	077 0044126
17.	Thelgamuwa Forest House	04	Knuckles Conservation Home	Mahalakotuwa, Illukkubura	066 3682454

18.	Gangula Guest	05	Sarath Priyantha	Illukkubura	-
19.	Ranketha Villa	04	Rajawickramasinghe	Illukkubura	066 3004303
20.	Knuckles Forest Lodge	01	Chandika Wijerathna	Illukkubura	071 8889998
21.	K.M.P. Restaurant and Bar	03	K.M.P. Piyadasa	Illukkubura	071 4581839
22.	Thelgamuwa Green Resort	05	Prasad Rohana Bandara	Illukkubura	0714581839
23.	Sanjeewa Circuit Bungalow	04	K.M. Sanjeewa Karunaratne	Illukkubura	-
24.	Knuckles Hideout	02	L.A. Dissanayake	Illukkubura	-
25.	Manigala Inn	Camping Site	B.G. Seneviratne	Atanwala, Matale	076 2841772
26.	Kethyaya	Camping Site & 2 Rooms	P.G. Jayantha	Atanwala, Matale	077 2873500
27.	Thun Mansala	03	W.D. Nishantha	Atanwala, Matale	076 6254585
28.	Atanwala Village House	Camping Site & 2 Clay Rooms	M.M.U.G. Indika Prabhath	Atanwala, Matale	076 7634237
29.	Koswaththa	1 Room & Attic	I.G. Prasanna Kumara	Atanwala, Matale	071 5379096
30.	Minister's Bungalow	08	Nalin Fernando	Rathninda, Atanwala, Matale	076 4721282
31.	Haritha	02	K.G.G. Kirimanika	Rathninda, Atanwala, Matale	070 2562308
32.	Shantha Holiday	04	P.G. Shantha Ekanayake	Rathninda, Atanwala, Matale	071 9609257
33.	Daya Rest	02	P.G. Dayawathi	Rathninda, Atanwala, Matale	066 3668159

Annex 7

**List of accommodations in the Knuckles
Riversten Tourism Destination**

Name of the Accomodation	
	Naturee Riverstone River Cottage
Riverston Du Eco Cottage, Rattota	Resort Riverston
Holiday Home	Riverston Hideway
DJ Village Stay	Gal Bangalawa, Riverston
Gamwasama Estate	Crysatal Land
SP Gunarathne	Manigala View Resort
Meezan Nagalla Tea Estate Bugalow	Spring Mount
Nagala Estate	Kaluganga Wana Niwahama
Coutry Road Cottage	The Riverston Grand
Greens Home Stay	Riverstone lake side camp
Gammaduwa Bungalow	Bala Guest House
Nagala Bungalow	Nature Life Eco Resort
SR Hotel Gammaduwa	Riverston Holiday Village
Hideout by Spice Fortress Estate	Sanasuma Holiday Resort
Opalgall State	GreatLion
Opalgalla State	Eco vibe lodge
Kudaoya Villa	subas ge kema kade
Riverston Family House	Bambarakiri ella holiday home
The Longville Cozy Bungalow	Riverstan Hub
Doranagala Holiday Home	Riverston Mankada
Riverston Sera Ella Eco Lodge	Trekkers' Hut Knuckles
Serandib Signature Resort	Alawatta Estates
Hotel Prasad	Laggala farm house
Hotel Sappayama	Aelagala shade
Kaluganga Reservoir Circuit Bungalow	Riverston holiday home Rattota
Mountain View Riverstone	Riverston edge holiday home
Manigala View Homestay	Mahoorra Tented safari camp - Knuckles
Manigala Holiday Resort	Mountain villa riverston
Haritha Homestay	Grand stargate resort
Shantha Holiday House	The village Atanwala, Riverston, Matale
Riverston Backpackers	Genderless Jungle
Alki Bungalows Riverston	Riverstone view point
Riverston Hide View	Green view, Riverston
Villa by Kingstar	Naturee Riverstone River Cottage
Sir John's Bungalow	Resort Riverston
Green Nest Bungalow	Riverston Hideway
Redbaana Farm House	Gal Bangalawa, Riverston
Knuckles Hideout	Crysatal Land
Riverston Holiday Inn	Manigala View Resort
Ranketha Villa	Spring Mount
Knuckles Forest Lodge & Camp Site	Kaluganga Wana Niwahama
KMP Laggala Rest	The Riverston Grand
Dumbara Vana Nivahana	Riverstone lake side camp
Thelgamuoya vana Niwahana	Bala Guest House
Haritha Sevana Riverston	Nature Life Eco Resort
Maha Gedara Homestay	Riverston Holiday Village
Katupollanda Homestay	Sanasuma Holiday Resort
Liyagamuwa Lodging Riverstone	GreatLion
Horizon River Lodge	Eco vibe lodge
Nature Palace Riverston	subas ge kema kade
Riverston Sisila Homestay	Bambarakiri ella holiday home

Annex 8

**List of restaurants in the Knuckles
Riversten Tourism Destination**

Name of the Restaurant
Noty Asanka Ice Cream
Dankanda tea factory
Siya rasa Hotel
Fish & Chips
Mahaweli Hela bojun hala - Laggala
Tea shop
Samadhi Hotel
Hotel Pabasara
Dehikumbura Hotel
Vijaya Hotel
Amila Food corner
Raththota Wine Stores
Theju Food Corner
Restaurant Mahagedara Rattota
Chineseese Food Takeaway
Italian Relax
Udara mangala
IDNC Kithula hotel
Wasana hotel
Hettiarachchi Wine stores
Cafe 98
Masha Bake house
Highland Food by ceilao Gosto
Riverston Hela bojun
KC
Gangula Resort
Sanjeewa Circuit
River Rainbow Resort
Pawana Guest

Annex 9

Sample Form – Visitor Count

TOURISM CARRYING CAPACITY ASSESSMENT – PITAWLA PATHANA, RIVERSTEN

Tourist Count 2022

UNDP, Sri Lanka, and EML Consultants PLC

Name of the Enumerator	:
Date	:
Place	:

Guidance:

Duration: 7.30 AM-5.30 PM

Days: 3 days

Date: Saturday, Sunday, and a weekday

Codes:

Local Male: **M**, Local Female: **F**, Local Children (below 18): **C**,

Foreign Male: **(FM)**, Foreign Female: **(FF)**, Foreign Child: **(FC)**

E.g. 7.30 AM- 8.30AM	F,F,F,F,M,M,M,C,C,M,M,M,M,(FM), (FM), (FM),(FF),(FC),M,M,M,C,F	F=5	M=10	C=3
		(FF)=1	(FM)=3	(FC)=1
		Sub Total	Local:18 Foreign:5	23
7.30 AM- 8.30AM		F=	M=	C=
		(FF)=	(FM)=	(FC)=
		Sub Total	Local: Foreign:	
8.30AM – 9.30AM		F=	M=	C=
		(FF)=	(FM)=	(FC)=
		Sub Total	Local: Foreign:	
9.30AM – 10.30AM		F=	M=	C=
		(FF)=	(FM)=	(FC)=
		Sub Total	Local: Foreign:	
10.30AM – 11.30AM		F=	M=	C=
		(FF)=	(FM)=	(FC)=
		Sub Total	Local: Foreign:	
11.30AM – 12.30PM		F=	M=	C=
		(FF)=	(FM)=	(FC)=
		Sub Total	Local: Foreign:	
12.30PM – 1.30PM		F=	M=	C=
		(FF)=	(FM)=	(FC)=
		Sub Total	Local: Foreign:	

1.30PM – 2.30PM		F=	M=	C=
		(FF)=	(FM)=	(FC)=
		Sub Total	Local: Foreign:	
2.30PM – 3.30PM		F=	M=	C=
		(FF)=	(FM)=	(FC)=
		Sub Total	Local: Foreign:	
3.30PM – 4.30PM		F=	M=	C=
		(FF)=	(FM)=	(FC)=
		Sub Total	Local: Foreign:	
4.30PM – 5.30PM		F=	M=	C=
		(FF)=	(FM)=	(FC)=
		Sub Total	Local: Foreign:	

Time Periods	Total F	Total M	Total C	Total Local Visitors	Total (FF)	Total (FF)	Total (FF)	Total Foreign Visitors	Sub Total
7.30am – 8.30am									
8.30am – 9.30am									
9.30am – 10.30am									
10.30am – 11.30am									
11.30am – 12.30pm									
12.30pm – 1.30pm									
1.30pm – 2.30pm									
2.30pm – 3.30pm									
3.30pm – 4.30pm									
4.30am – 5.30pm									
	Total Local Visitors				Total Foreign Visitors				

Date:

Name of the enumerator:

Signature:

Annex 10

Sample Form - Time Study

Riverston		
1	Enumerator Name	
2	Date	
3	Place	
4	Vehicle Type	
5	Vehicle No.	
6	No. of Visitors	
7	Arrival Time	
8	Ticketing Time	
9	Time – Riverston Top	
10	Time – View Point	
	Return	
11	Time at ticketing point	
12	Vehicle departure time	

Riverston		
1	Enumerator Name	
2	Date	
3	Place	
4	Vehicle Type	
5	Vehicle No.	
6	No. of Visitors	
7	Arrival Time	
8	Ticketing Time	
9	Time – Riverston Top	
10	Time – View Point	
	Return	
11	Time at ticketing point	
12	Vehicle departure time	

Pitawala Pathana		
1	Enumerator Name	
2	Date	
3	Place	
4	Vehicle Type	
5	Vehicle No.	
6	No. of Visitors	
7	Arrival Time	
8	Ticketing Time	
9	Time at the Entrance Point	
	Return	
10	Time at Entrance Point	
11	Vehicle departure time	

Pitawala Pathana		
1	Enumerator Name	
2	Date	
3	Place	
4	Vehicle Type	
5	Vehicle No.	
6	No. of Visitors	
7	Arrival Time	
8	Ticketing Time	
9	Time at the Entrance Point	
	Return	
10	Time at Entrance Point	
11	Vehicle departure time	

Thelgamu Oya		
1	Enumerator Name	
2	Date	
3	Place	
4	Vehicle Type	
5	Vehicle No.	
6	No. of Visitors	
7	Arrival Time	
Return		
8	Vehicle departure time	

Thelgamu Oya		
1	Enumerator Name	
2	Date	
3	Place	
4	Vehicle Type	
5	Vehicle No.	
6	No. of Visitors	
7	Arrival Time	
Return		
8	Vehicle departure time	

Sera Ella		
1	Enumerator Name	
2	Date	
3	Place	
4	Vehicle Type	
5	Vehicle No.	
6	No. of Visitors	
7	Arrival Time	
Return		
8	Vehicle departure time	

Sera Ella		
1	Enumerator Name	
2	Date	
3	Place	
4	Vehicle Type	
5	Vehicle No.	
6	No. of Visitors	
7	Arrival Time	
Return		
8	Vehicle departure time	

Annex 11

Questionnaire Form 1: Local Visitors



ශ්‍රී ලංකාවේ නිකල්ස් රිවර්ස්ටන් සංචාරක ගමනාන්තය
සඳහා ධාරිතා තක්සේරුව
2022



තොරතුරු එක්රැස් කරන්නාගේ නම	
දිනය	
ස්ථානය	

1 පැමිණි ප්‍රදේශය

දිස්ත්‍රික්කය	
නගරය / ගම	

2 මෙම ස්ථානයට පැමිණි වාහනයේ වර්ගය

i	කාර්	
ii	වෑන්/කැබ්	
iii	බස්	
iv	ලොරි	
v	පොදු ප්‍රවාහනය බස්/දුම්රිය	
vi	යතුරු පැදි	
vii	වෙනත්	

3 සංචාරයේ ආකාරය:

	ගණන	පුරුම	ස්ත්‍රී	අවුරුදු 10 දක්වා කුඩා ළමුන්	අවුරුදු 11 සිට 18 දක්වා	අවුරුදු 18 සිට 35 දක්වා	අවුරුදු 35 සිට 55 දක්වා	අවුරුදු 55 න් ඉහල
i	තනිව							
ii	දෙදෙනෙක්							
iii	පවුලක් වශයෙන්							
iv	යහළුවන් පිරිසක්							
v	රාජකාරි කටයුත්තක් සඳහා							
vi	වෙනත්							

4 සංචාරයේ අරමුණ:

i	විනෝද විමට	
ii	පරිසරය නැරඹීමට	
iii	භයිකින්නේ	
iv	කැම්පින්ග්	
v	රාජකාරි කටයුත්තක් සඳහා	
vi	වෙනත්	

5 ඒ සඳහා මෙම ස්ථානයම තෝරාගැනීමට විශේෂ හේතුවක් තිබේද?

6 තිබෙනම් එම හේතුව කුමක්ද?

7 ඔබගේ පළමු පැමිණීම මෙයද?

ඔව්	
නැත	

8 එසේ නොවේ නම් ඔබ මෙම ස්ථානයට කී වතාවක් පැමිණ තිබේද?

9 ඔබ මෙම සංචාරයේදී මෙම ස්ථානයට පමණක් පිවිසෙන්නේද?

ඔව්	
නැත	

10 9 හි පිළිතුර ඔව් නම් පහත දක්වා ඇති ස්ථාන පිළිබඳ ඔබ දැනුවත්ද?

		ඔව්	නැත
i	රිවර්ස්ටන්		
ii	පුංචි ලෝකාන්තය (පිටවල පහන)		
iii	පහන ඇල්ල		
iv	රත්තින්ද ඇල්ල		
v	සේර ඇල්ල		
vi	මානිගල		
vii	වැද්ද පැනි ඇල්ල		

		ඔව්	නැත
viii	ඇටන්වල ගම්මානය		
ix	තෙල්ගමු ඔය		
x	මැදවත්ත - මිඩලන්ඩිස් වතුයාය		
xi	කොස්ගස්මුල්ල මංපෙන		
xii	දුවිලි ඇල්ල		
xiii	වල්පොලමුල්ල ගම්මානය		
xiv	රඹුක් ඔළුව		

11 9 හි හා 10 හි පිළිතුරු ඔව් නම් මෙම සංචාරයේදී එම ස්ථාන නැරඹීමට නොයෑමට විශේෂ හේතුවක් තිබේද?)

12 9හි පිළිතුර නැත නම් ඔබ මෙම සංචාරය තුළ යාමට අදහස් කරන හෝ දැනටමත් සංචාරය කරන ලද ස්ථාන මොනවාද? පහතින් තෝරන්න

		ඔව්	නැත
i	රිවර්ස්ටන්		
ii	පුංචි ලෝකාන්තය (පිටවල පහන)		
iii	පහන ඇල්ල		
iv	රත්තින්ද ඇල්ල		
v	සේර ඇල්ල		
vi	මානිගල		
vii	වැද්ද පැනි ඇල්ල		

		ඔව්	නැත
viii	ඇටන්වල ගම්මානය		
ix	තෙල්ගමු ඔය		
x	මැදවත්ත - මිඩලන්ඩිස් වතුයාය		
xi	කොස්ගස්මුල්ල මංපෙන		
xii	දුවිලි ඇල්ල		
xiii	වල්පොලමුල්ල ගම්මානය		
xiv	රඹුක් ඔළුව		

13 මෙම ස්ථානයේ යටිතල පහසුකම්වල තත්වය කෙසේද?

	ඉතා හොඳයි	හොඳයි	මධ්‍යස්තයි	සැහිමකට පත් නොවේ
i	ප්‍රවේශ මාර්ගය			
ii	රථ ගාල්			
iii	මංපෙත් (Trails)			
iv	වැසිකිළි පහසුකම්			
v	බීමට ගන්නා වතුර			
vi	තොරතුරු මධ්‍යස්ථාන			
vii	අහාර ලබාගැනීමේ ස්ථාන			
viii	නවාතැන් පහසුකම්			
ix	රථ ගාල්			
x	බීමට ගන්නා වතුර			

14 ගමනේ ආසන්න වියදම රුපියල් වලින් ඔබට කිව හැකිද? (තනි පුද්ගල හෝ දෙදෙනෙකු)

i	ප්‍රවාහනය,	
ii	නවාතැන්	
iii	ප්‍රවේශ පත්‍ර	
iv	ආහාර,	
v	වෙනත්	
vi	මුළු වියදම	

15 පැකේජ වාරිකාවක් නම්, පැකේජයේ පිරිවැය කොපමණද? (කණ්ඩායම් සඳහා)

i	කණ්ඩායමේ ගණන	
ii	පැකේජයේ පිරිවැය	

16 පැකේජ වාරිකාවක් නම්, මෙම ස්ථානයට පැමිණීමේදී ඔබ දැරූ අමතර වියදම් මොනවාද?

17 මෙම ස්ථානය නැරඹීමට ඔබ ගෙවීමට කැමති උපරිම මුදල කොපමණද?

18 ඔබ රිච්ටන්, පිටවල පහත ප්‍රදේශයේ දින කීයක් ගත කරනවාද?

19 රිච්ටන්, පිටවල පහතෙහි නවාතැන් ගන්නේ නම් ඒ කොහෙද?

20 නවාතැන් වර්ගය

i	විශාල සුබෝපහෝගී හෝටලයක්	
ii	සාමාන්‍ය ප්රමාණයේ හෝටලයක	
iii	කුඩා හෝටලයක්	
iv	අමුත්තන්ගේ නිවසක්	
v	නිවසේ නවාතැන් ගැනීමක් (Homestay)	
vi	වෙනත් (සඳහන් කරන්න)	

21 නවතැනෙහි තත්වය

ඉතා හොඳයි	
හොඳයි	
මධ්‍යස්ථයි	
සැහිමකට පත් නොවේ	

22 මෙම සංචාරක ගමනාන්තයට පිවිසීමේදී ඔබ මුහුණ දුන් ගැටළු/ගැටළු ඇත්නම් ඒවා මොනවාද?

i	ජනාකීර්ණයි	
ii	කුණු කසළ වලින් අපිරිසිදු වී ඇත	
iii	ප්‍රදේශයේ සුදුසු නවතැන් සොයා ගැනීමට නොහැකි විය	
iv	කඳවුරු බැඳීමට ප්‍රමාණවත් පහසුකම් නොතිබුණි	
v	වැසිකිළි පහසුකම් ප්‍රමාණවත් නොවීම හෝ අපිරිසිදු වීම/ ජලය නොමැතිකම	
vi	එම ස්ථානයේ ප්‍රමාණවත් නාම පුවරු, මග පෙන්වීම් හෝ විවේක ස්ථාන නොතිබීම	
vii	ආහාර ලබා ගැනීමට තැනක් නොමැත	
viii	ඇතුළුවීමේ ප්‍රවේශපත්‍ර වල මිල ඉතා ඉහළ ය	
ix	වෙනත් (සඳහන් කරන්න)	

23 ඔබ මෙම ස්ථානය අන් අයට නිර්දේශ කරනවාද?

24 එසේ නොවේ නම් ඇයි?

25 මෙම සංචාරක ගමනාන්තය ගැන ඔබ සිතන්නේ කුමක්ද?

26 අනාගතයේදී නැවත මෙම ස්ථානයට පැමිණීමට කැමතිද?

27 කැමති නම් කොතරම් කාලයකින්ද ?

Annex 12

Questionnaire Form 2: Foreign Visitors

CARRYING CAPACITY ASSESSMENT FOR KNUCKLES RIVERSTEN TOURISM DESTINATION IN SRI LANKA



2022



Foreign: Form I

Name of the Enumerator	:
Date	:
Place	:

1. From which country are you from?

2. Is this your first visit to Sri Lanka?

<input type="checkbox"/>	Yes
<input type="checkbox"/>	No

3. If not, how many times have you visited Sri Lanka?

4. Are you visiting only Sri Lanka in this trip?

<input type="checkbox"/>	Yes
<input type="checkbox"/>	No

5. If not, what other countries are you planning to visit or have already visited so far (During this particular visit)?

6. What are the other places you are planning to visit in Sri Lanka (During this particular visit)?

7. How you got to know about this site?

8. Is this your first visit to this site?

<input type="checkbox"/>	Yes
<input type="checkbox"/>	No

9. If not, how many times have you visited this site?

--

10. What is the purpose of visiting this site?

A	Enjoyment	
B	Experience the nature	
C	Hiking	
D	Camping	
E	Business Purpose	
F	Other (Specify)	

11. Is there any special reason to select particularly this site for the mentioned purpose?

--

12. Do you have any idea about the other attractions around the site to visit?

	Yes
	No

13. If yes, what are those places

		Yes	No
i	Riverston		
ii	Mini World's End (Pitawla Pathana)		
iii	Pathana Ella		
iv	Raththinda Ella		
v	Sera Ella		
vi	Manigala		
vii	Waddapeni Ella		

		Yes	No
viii	Atanwala Village		
ix	Thelgamu Oya		
x	Kosgasmulla Trail		
xi	Medawatte – Midlands Estate		
xii	Duwili Ella		
xiii	Walpolamulla Village		
xiv	Rambuk Oluwa Camping		

14. If you have time, do you like to visit these places during this visit?

15. Do you satisfy with the visitor infrastructure facilities?

		Very Good	Good	Moderate	Unsatisfied
i	Access Road				
ii	Parking Slots				
iii	Trails				
iv	Toilets				
v	Drinking Water				
vi	Information Center				
vii	Availability of places to buy foods and beverages (Restaurants)				
viii	Accommodation				

16. Can you tell us the approximate cost of the trip in US\$ or other currency?

Description	Cost
Travel	
transport	
accommodation	
meals	
entrance tickets	
other	
Total	

17. If it is a package trip. What is the package cost?

18. If it is a package trip, what are the additional costs did you incur in visiting this place?

19. What is the maximum amount you are willing to pay to visit this place?

20. How many days will you be spending in Pitawala Pathana, Riverston area?

21. Where are you staying at present?

Name:

22. Type of accommodation

	A. Big luxury hotel
	B. Average size hotel
	C. Small hotel
	D. Guest house
	E. Home stay
	F. Camping site
	G. Other (specify)

23. Was the accommodation satisfactory and adequate?

--

24. If not, why?

--

25. What are the problems/issues you faced during this visit to this site, if any?

	It was too crowded
	The place was dirty with garbage strewn all over
	Could not find suitable accommodation in the area
	The camping site did not have adequate facilities
	Toilet facilities not adequate or dirty or with no water
	The place did not have adequate name boards, directions or rest areas
	There were not enough food vendors
	Cost of entrance tickets too high
	Other (Specify)

26. Would you recommend this place to others?

<input type="checkbox"/>	Yes
<input type="checkbox"/>	No

27. If not, why?

--

28. Would you like to visit this place again in the future?

<input type="checkbox"/>	Yes
<input type="checkbox"/>	No

29. If yes, when?

--

Annex 13

Socio – Economic details of the selected sites

Socio-economic Status of selected GNDs

Source: Resource Profile of Laggala DSD, 2020

Demography

Selected GNDs of Laggala DSD	Total Population	No. of families	Female Headed Families	No. of houses
Pitawala	203	80		64
Atanwala	138	51	13	47
Rathninda	154	61	7	56
Mahalakotuwa	177	64	14	55
Madaela	182	57	6	52
Kahagala	146	59	9	43
Illukkumbura	194	70		56
Rambukoluwa	164	63		51

Selected GNDs of Laggala DSD	Dependent Population %
Pitawala	33
Atanwala	41
Rathninda	46
Mahalakotuwa	37
Madaela	43
Kahagala	56
Illukkumbura	50
Rambukoluwa	32

Selected GNDs of Laggala DSD	Male%	Female %
Pitawala	53	47
Atanwala	49	51
Rathninda	52	48
Mahalakotuwa	54	46
Madaela	47	53
Kahagala	54	46
Illukkumbura	51	49
Rambukoluwa	55	45

Education

Selected GNDs of Laggala DSD	Total Population	No School Education	Grade 1-5	Grade 6-10	O/L	A/L	Degree/Post Graduate
Pitawala	203	2	14	50	63	31	5
Atanwala	138	2	50	33	13	17	1
Rathninda	154	5	29	61	17	6	3
Mahalakotuwa	177	4	25	58	13	36	12
Madaela	182	6	17	20	47	40	5
Kahagala	146	12	26	22	43	13	
Illukkumbura	194	16	25	23	55	29	1
Rambukoluwa	164	1	25	36	42	5	1

GND	Name of the School	Total Students
Mahalakotuwa	Sri Sumangala Maha Vidyalaya	148
Pitawla	Pitawla Primary School	19
Rambukoluwa	Rambukoluwa Primary School	28

Agricultural Land Distribution

Agricultural Land Distribution						
Selected GNDs of Laggala DSD	Land Extent (Acres)	Govt Land Extent (Acres)	Private	Paddy	Pepper	Mix
Pitawala	2503.02	1059	144	148		
Atanwala	11186.16	2	179.1	156		2
Rathninda	2130	2	188	118	2	5
Mahalakotuwa	2080.57	24.2	180	73		
MadaEla	585.07	6	103	73		
Ilukkumbura		15	142	73		5
Rambukoluwa	45.5		105.84			
Kahagala	142	2218				

Employment & Unemployment

Employment

Selected GNDs of Laggala DSD	Agriculture	Industrial	Service	Total Employment
Pitawala	74	3	15	92
Atanwala	92		12	104
Rathninda	66	3	13	82
Mahalakotuwa	42	4	3	49
Mdaela	73	2	26	101
Kahagala	100			100
Illukkumbura			3	3
Rambukoluwa		3	3	6

	Total Employment		Government		Semi Govt		Private		Self-Employment		Overseas Job		Unemployment	
	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male
Pitawala	46	61	4	9		2	1	3	1	10	1	1	11	6
Atanwala	7	10		4	1		1	2	5	4			10	12
Rathninda	27	55	1	3			5	3	4					
Mahalakotuwa	10	26	6	12		2	1	4	3	6		2		
Madaela	12	17	9	15			2	2			1		52	19
Kahagala	5	19	1	7			2	8	2	4				
Illukkumbura			3	26				2	10	1				
Rambukoluwa	4	12		3			6	5	1	1	1		7	9

Name of the GND	No.of Families	Samurdhi Aided Families	%
Pitawala	80	58	72.50
Atanwala	51	47	92.16
Rathninda	61	38	62.30
Mahalakotuwa	64	38	51.35
MadaEla	57	31	54.39
Ilukkumbura	72	39	54.17
Rambukoluwa	51	45	88.24
Kahagala	59	47	80

Electricity Supply

	No.of Houses	National Grid	Kerosine	No Electricity
Pitawala	64	60	4	4
Atanwala	47	45	2	2
Rathninda	56	52	2	2
Mahalakotuwa	55	43	6	
Madaela	52	41	1	1
Kahagala	43	42		1
Illukkumbura	56	52		4
Rambukoluwa	51	44	4	

Water Supply

	No. of Houses	Protected Well	Unprotected Well	Pipe born Water	Community Water Project	Tug well	Tank/River/Streams etc
Pitawala	64	2			62		
Atanwala	47	7		30			10
Rathninda	56	5		56			
Mahalakotuwa	55	40	2				8
Madaela	52			7	45		
Kahagala	43	3	2	38			
Illukkumbura	56	8		42	1		7
Rambukoluwa	51					5	46

Annex 14

NSTC guidelines for accommodation sector



NSTC GUIDELINES FOR ACCOMMODATION SECTOR

SECTION A: Demonstrate effective sustainable management	
INDUSTRY CRITERIA	INDICATORS FOR HOTELS
<p>A1 Sustainability management system The organization has implemented a long-term sustainability management system that is suitable to its size and scope, addresses environmental, social, cultural, economic, quality, human rights, health, safety, risk and crisis management issues and drives continuous improvement.</p>	<ol style="list-style-type: none">1. The Sustainability Management System is clearly documented.2. The SM System covers environmental, social, cultural, economic, quality, human rights, health and safety issues.3. The SM System includes consideration of risk and crisis management.4. Documentary evidence shows implementation of the SM system.5. The SM System includes a process for monitoring continuous improvement in sustainability performance.
<p>A2 Legal compliance The organization is in compliance with all applicable local, national and international legislation and regulations including, among others, health, safety, labour and environmental aspects.</p>	<ol style="list-style-type: none">1. An up to date list of all applicable legal requirements is maintained.2. Certificates or other documentary evidence show compliance with all applicable legal requirements.
<p>A3 Reporting and communication The organization communicates its sustainability policy, actions and performance to stakeholders, including customers, and seeks to engage their support.</p>	<ol style="list-style-type: none">1. Regular reports are made available on sustainability performance.2. Sustainability policies and actions are reported in external and internal communication material.3. Communications contain messages inviting consumer and stakeholder support.
<p>A4 Staff engagement Staff are engaged with development and implementation of the sustainability management system and receive periodic guidance and training regarding their roles and responsibilities in its delivery.</p>	<ol style="list-style-type: none">1. Evidence is available of staff involvement with the SM System.2. Records of courses and on-the-job training, with attendance levels, are available.3. Staff training and guidance materials are available in accessible format (including use of minority languages where needed).

	<ol style="list-style-type: none"> Staff hold certificates and qualifications in relevant disciplines/skills.
<p>A5 Customer experience Customer satisfaction, including aspects of sustainability, is monitored and corrective action taken.</p>	<ol style="list-style-type: none"> A customer feedback system is in place, together with analysis of the results. Negative feedback and responses made to this are recorded. There is evidence of corrective actions taken.
<p>A6 Accurate promotion Promotional materials and marketing communications are accurate and transparent with regard to the organization and its products and services, including sustainability claims. They do not promise more than is being delivered.</p>	<ol style="list-style-type: none"> Images used in promotion are of actual experiences offered and facilities provided. Sustainability claims are based on records of past performance.
<p>A7 Buildings and infrastructure Planning, siting, design, construction, renovation, operation and demolition of buildings and infrastructure...</p>	<p>Indicators for A7 criteria relate to the buildings and infrastructure associated with the accommodation being certified</p>
<p>A7.1 Compliance ...comply with zoning requirements and laws related to protected and sensitive areas and to heritage considerations.</p>	<ol style="list-style-type: none"> Awareness of, and compliance with, laws relating to land use and activities in the local area is demonstrated. All required licences and permits are up to date. Awareness of, and compliance with, non-statutory area management plans and guidance (e.g. for particular zones, design, etc.), is demonstrated.
<p>A7.2 Impact and integrity ...take account of the capacity and integrity of the natural and cultural surroundings.</p>	<ol style="list-style-type: none"> Site selection, design and access have taken account of visual amenity, landscape, cultural and natural heritage. Site selection, design and access have taken account of the protection of biologically sensitive areas and the assimilative capacity of ecosystems. The integrity of archaeological, cultural heritage, and sacred sites has been preserved. The integrity and connectivity of natural sites and protected areas has been preserved. Threatened or protected species have not been displaced and impact on all wildlife habitats has been minimized and mitigated.

	<ol style="list-style-type: none"> 6. Water courses/catchments/wetlands have not been altered and run-off is reduced where possible and any residue is captured or channeled and filtered. 7. Risk factors (including climate change, natural phenomena, and visitor safety) have been assessed and addressed. 8. Impact assessment (including cumulative impacts) has been undertaken and documented as appropriate.
<p>A7.3 Sustainable practices and materials ...use locally appropriate and sustainable practices and materials.</p>	<ol style="list-style-type: none"> 1. Local materials, practices and crafts have been used in buildings and design where practicable and appropriate. 2. Native and endemic plants obtained from sustainable sources have been used in landscaping and decoration, avoiding exotic and invasive species. 3. Plants have been selected for their ability to tolerate prevailing or anticipated conditions eg drought tolerant plants 4. Sustainable design, materials and construction practices have been used in buildings, with appropriate certification where possible. 5. Waste from construction is sorted and disposed of in an environmentally sound manner.
<p>A7.4 Access for all ...provide access and information for persons with special needs, where appropriate.</p>	<ol style="list-style-type: none"> 1. Sites, buildings and activities are accessible to persons with physical disabilities and other special needs, as appropriate to the nature of the operation. 2. Clear and accurate information is provided on the level of accessibility. 3. Accessibility is certified or checked with relevant experts/user bodies.
<p>A8 Land water and property rights Acquisition by the organization of land and water rights and of property is legal, complies with local communal and indigenous rights, including their free, prior and informed consent, and does not require involuntary resettlement.</p>	<ol style="list-style-type: none"> 1. Land ownership and tenure rights are documented. 2. User and access rights for key resources, including land and water, are documented where applicable. 3. There is documentary evidence of communication, consultation and engagement with local and indigenous communities. 4. Evidence of free, prior and informed consent of local communities is documented, where relevant (showing no involuntary resettlement or land acquisition).

<p>A9 Information and interpretation The organization provides information about and interpretation of the natural surroundings, local culture, and cultural heritage, as well as an explanation of appropriate behaviour while visiting natural areas, living cultures, and cultural heritage sites.</p>	<ol style="list-style-type: none"> 1. Information/interpretation material about the natural and cultural heritage of the local area is available and provided to customers. 2. Staff are informed and trained about the natural and cultural heritage of the local area. 3. Information is provided to customers about appropriate behaviour in the local area.
<p>A10 Destination engagement The organization is involved with sustainable tourism planning and management in the destination, where such opportunities exist.</p>	<ol style="list-style-type: none"> 1. The organization is a member of the local Destination Management Organization or equivalent body, where such an organization exists. 2. The organization participates in partnerships between local communities, NGOs and other local bodies where these exist. 3. The organization participates in planning and management meetings and activities concerning sustainable tourism in the destination.

SECTION B: Maximize social and economic benefits to the local community and minimize negative impacts

INDUSTRY CRITERIA	INDICATORS FOR HOTELS
<p>B1 Community support The organization actively supports initiatives for local infrastructure and social community development. Examples of initiatives include education, training, health and sanitation and projects which address the impacts of climate change.</p>	<ol style="list-style-type: none"> 1. The organization engages with the local community in identifying needs and opportunities for support and evaluating their potential benefit/impact. 2. The level and nature of contributions made to schemes in the local community is recorded. 3. The local community is offered the opportunity to access the tourism facilities and services provided.
<p>B2 Local employment Local residents are given equal opportunities for employment and advancement, including in management positions.</p>	<ol style="list-style-type: none"> 1. The proportion of total employment from persons already residing in the local community is measured and managed. 2. The proportion of employment in management positions from persons already residing in the local community is measured and managed. 3. Training is offered to local residents to enhance their employment opportunities.
<p>B3 Local purchasing</p>	<ol style="list-style-type: none"> 1. The organization regularly audits its sources of supply of goods and services.

<p>When purchasing and offering goods and services, the organization gives priority to local and fair trade suppliers whenever these are available and of sufficient quality.</p>	<ol style="list-style-type: none"> 2. The proportion of goods and services purchased from locally owned and operated businesses is measured and managed. 3. The proportion of non-locally owned or operated suppliers that are fair trade is measured and managed.
<p>B4 Local entrepreneurs The organization supports local entrepreneurs in the development and sale of sustainable products and services that are based on the area's nature, history and culture.</p>	<ol style="list-style-type: none"> 1. Locally owned businesses are given access to premises and customers for commercial activity. 2. Where appropriate, the organization provides advice and support to local service providers with whom it engages, on the quality and sustainability of their service. 3. Opportunities for joint ventures and partnerships with local entrepreneurs are considered and pursued where appropriate.
<p>B5 Exploitation and harassment The organization has implemented a policy against commercial, sexual or any other form of exploitation or harassment, particularly of children, adolescents, women, minorities and other vulnerable groups.</p>	<ol style="list-style-type: none"> 1. The organization has a documented policy against exploitation and harassment of vulnerable groups. 2. Action is taken to communicate and implement the policy. 3. The organization engages with the local community in working against exploitation and harassment. 4. Records of employee ages are kept and show absence of any form of child labour (as defined by ILO). 5. The organization supports action against child sex tourism.
<p>B6 Equal opportunity The organization offers employment opportunities, including in management positions, without discrimination by gender, race, religion, disability or in other ways.</p>	<ol style="list-style-type: none"> 1. The organization has identified groups at risk of discrimination, including women and local minorities. 2. The proportion of employees drawn from each of these groups is monitored and is commensurate with local demographics. 3. Internal promotion includes members of these groups.
<p>B7 Decent work Labour rights are respected, a safe and secure working environment is provided and employees are paid at least a living wage. Employees are offered regular training, experience and opportunities for advancement.</p>	<ol style="list-style-type: none"> 1. The organization demonstrates awareness of, and compliance with, international labour standards and regulations. 2. Wage levels are monitored and regularly reviewed against national norms for a living wage. 3. Training records are kept for all staff, showing the level and frequency of training received. 4. Employee contracts show support for health care and social security.

C3 Presenting culture and heritage
The organization values and incorporates authentic elements of traditional and contemporary local culture in its operations, design, decoration, cuisine, or shops, while respecting the intellectual property rights of local communities.

1. Local art/craft is reflected in design and furnishings.
2. Living cultural heritage and traditions are evident in cuisine, retail, events and other services offered.
3. Copyright and intellectual property rights have been observed and necessary permissions obtained.
4. The views of the local community have been sought on the presentation of local cultural heritage.

C4 Artefacts
Historical and archaeological artefacts are not sold, traded or displayed, except as permitted by local and international law.

1. Any use of artefacts is transparent and/or documented and reported.
2. Where artefacts are used, laws and bylaws have been identified that permit such use.
3. Visitors are prevented from removing or damaging artefacts.

Section D: Maximize benefits to the environment and minimize negative impacts

D1 Conserving resources

INDUSTRY CRITERIA

INDICATORS FOR HOTELS

D1.1 Environmentally preferable purchasing
Purchasing policies favour environmentally sustainable suppliers and products, including capital goods, food, beverages, building materials and consumables.

1. A documented environmental purchasing policy is in place.
2. Preference is given to products and suppliers with environmental certification – notably with respect to wood, paper, fish, other foods, and products from the wild.
3. Where certified products and suppliers are not available, consideration is given to origin and methods of growing or production.
4. Threatened species are not used or sold.

D1.2 Efficient purchasing
The organization carefully manages the purchasing of consumable and disposable goods, including food, in order to minimize waste.

1. Purchasing favours reusable, returnable and recycled goods.
2. Purchasing and use of consumable and disposable goods are monitored and managed.
3. Unnecessary packaging (especially from plastic) is avoided, with buying in bulk as appropriate.

D1.3 Energy conservation
Energy consumption is measured by type and steps are taken to minimize overall consumption. The

1. Total energy used is monitored and managed.
2. Energy used per tourist/night for each type of energy is monitored and managed.
3. Renewable sources are favoured and the share of renewable energy in total energy supply is monitored and managed.

organization makes efforts to increase its use of renewable energy.

4. Equipment and practices are used that minimize energy use.
5. Goals for reducing energy consumption are in place.
6. Staff and guests are given guidance on minimizing energy use.

D1.4 Water conservation

Water risk is assessed, water consumption is measured by type, and steps are taken to minimize overall consumption. Water sourcing is sustainable and does not adversely affect environmental flows. In areas of high water risk, context-based water stewardship goals are identified and pursued.

1. Water risk has been assessed and documented.
2. Where water risk has been assessed as high, water stewardship goals have been determined.
3. Water used per tourist/night per source is monitored and managed.
4. Equipment and practices are used that minimize water consumption.
5. Water originates from a legal and sustainable source which has not previously affected, and is unlikely in future to affect, environmental flows.
6. Consideration is given to cumulative impacts of tourism in the locality on water sources.
7. Goals for reducing water consumption are in place.
8. Staff and guests are given guidance on minimizing water use.

D2 Reducing pollution	
INDUSTRY CRITERIA	INDICATORS FOR HOTELS
D2.1 Greenhouse gas emissions Significant greenhouse gas emissions from all sources controlled by the organization are identified, calculated where possible and procedures implemented to avoid or to minimize them. Offsetting of the organization’s remaining emissions is encouraged.	<ol style="list-style-type: none"> 1. Total direct and indirect greenhouse gas emissions are monitored and managed. 2. Carbon Footprint per tourist/night is monitored and managed. 3. Actions are taken to avoid and reduce significant annual emissions from all sources controlled by the organization. 4. Carbon offset mechanisms are used where practical.
D2.2 Transport The organization seeks to reduce transportation requirements and actively encourages the use of cleaner and more resource efficient alternatives by customers, employees, suppliers and in its own operations.	<ol style="list-style-type: none"> 1. Information is provided and promoted to customers on alternative (climate friendly) transport options, for arrival, departure and during their visit. 2. Alternative transport options (e.g. bike rental, car sharing, pick-ups) for guests and staff are provided or facilitated. 3. Markets accessible by short and more sustainable transport options are favoured.

	<ol style="list-style-type: none"> Local suppliers are favoured and daily operations seek to minimize transport use.
<p>D2.3 Wastewater Wastewater, including grey water, is effectively treated and is only reused or released safely, with no adverse effects to the local population or the environment.</p>	<ol style="list-style-type: none"> Wastewater is disposed of to a municipal or government approved treatment system, if available. If suitable municipal wastewater treatment is not available, there is a system in place on site to treat wastewater (that meets international wastewater quality requirements) and ensures no adverse effects on the local population and the environment.
<p>D2.4 Solid waste Waste, including food waste, is measured, mechanisms are in place to reduce waste and, where reduction is not feasible, to reuse or recycle it. Any residual waste disposal has no adverse effect on the local population or the environment.</p>	<ol style="list-style-type: none"> The amount of solid waste disposed per tourist/night is monitored and managed. A solid waste management plan is in place. The solid waste management plan includes actions to reduce, separate and reuse or recycle food waste. Waste disposal is to a government run or approved facility and there is evidence that the facility has no negative impact on the environment or local population. Solid waste disposed is measured by type and goals are in place to minimize non-diverted solid waste. Guidance is given to customers and staff on minimizing waste.
<p>D3 Conserving biodiversity, ecosystems and landscapes</p>	
<p>INDUSTRY CRITERIA</p>	<p>INDICATORS FOR HOTELS</p>
<p>D3.1 Biodiversity conservation The organization supports and contributes to biodiversity conservation, including through appropriate management of its own property. Particular attention is paid to natural protected areas and areas of high biodiversity value. Any disturbance of natural ecosystems is minimized, rehabilitated and there is a compensatory contribution to conservation management.</p>	<ol style="list-style-type: none"> The organization demonstrates awareness of natural protected areas and areas of high biodiversity value. The organization provides and records monetary support for biodiversity conservation in the local area. The organization provides and records in-kind or other support for biodiversity conservation in the local area. The property is actively managed to support biodiversity conservation. The organization is aware of, and mitigates, activity with potential to disturb wildlife and habitats.

	<ol style="list-style-type: none"> 6. Compensation is made where any disturbance has occurred. 7. Action is taken to encourage visitors to support biodiversity conservation. 8. The organization engages with local conservation NGOs.
<p>D3.2 Invasive species The organization takes measures to avoid the introduction of invasive species. Native species are used for landscaping and restoration wherever feasible, particularly in natural landscapes.</p>	<ol style="list-style-type: none"> 1. Sites are monitored for presence of any invasive species. 2. Action is taken to ensure invasive species are not introduced or spread. 3. A programme is in place to eradicate and control invasive species. 4. Landscaping of sites is reviewed to consider use of native species.
<p>D3.3 Visits to natural sites The organization follows appropriate guidelines for the management and promotion of visits to natural sites in order to minimize adverse impacts and maximize visitor fulfilment.</p>	<ol style="list-style-type: none"> 1. The organization is aware of, and complies with, existing guidelines for tourist visits to natural sites. 2. Guidelines are used when conducting visits and informing guests. 3. The organization engages with local conservation bodies to establish/identify issues concerning visits to particular sites.
<p>D3.4 Wildlife interactions Interactions with free roaming wildlife, taking into account cumulative impacts, are non-invasive and responsibly managed to avoid adverse effects on the animals concerned and on the viability and behaviour of populations in the wild.</p>	<ol style="list-style-type: none"> 1. The organization is aware of, and complies with, existing local, national and international regulations and guidelines concerning wildlife interactions, including wildlife viewing. 2. The organization engages with the development and implementation of local codes and guidelines for wildlife interactions, including wildlife viewing, as required, based on advice of wildlife experts. 3. Direct interactions, in particular feeding, should not be permitted, unless specifically sanctioned by internationally accepted standards or, where standards are not available, guided by independent wildlife expert advice. 4. Measures are taken to minimize disturbance to wildlife. 5. Impacts on wildlife wellbeing are regularly monitored and addressed.
<p>D3.5 Animal welfare No species of wild animal is acquired, bred or held captive, except</p>	<ol style="list-style-type: none"> 1. The organization is aware of, and complies with, relevant laws and regulations concerning captive wildlife.

<p>by authorized and suitably equipped persons and for properly regulated activities in compliance with local and international law. Housing, care and handling of all wild and domestic animals meets the highest standards of animal welfare.</p>	<ol style="list-style-type: none"> 2. Existing guidelines for specific tourism activities involving captive wildlife are implemented. 3. Personnel responsible for captive wildlife have appropriate qualifications and experience and are fully licensed. 4. The organization is aware of, and complies with, relevant laws and regulations concerning animal welfare. 5. There is regular inspection of conditions of captive wildlife and their housing. 6. There is regular inspection of conditions of domestic animals and their housing and handling.
<p>D3.6 Wildlife harvesting and trade Wildlife species are not harvested, consumed, displayed, sold, or traded, except as part of a regulated activity that ensures that their utilization is sustainable, and in compliance with local and international laws.</p>	<ol style="list-style-type: none"> 1. The organization is aware of, and complies with, relevant laws and regulations concerning wildlife harvesting and trade. 2. Visitors are informed of regulations concerning wildlife harvesting, consumption and trade and of the need to avoid buying illegal products/souvenirs derived from threatened species of wildlife. notified by IUCN or CITES. 3. Where hunting activity is legal, it forms part of a scientifically based, properly managed and strictly enforced approach to conservation.

Annex 15

Performance indicators for tour operators - Global Sustainable Tourism



GSTC Industry Criteria

VERSION 3, 21 DECEMBER 2016

WITH

Suggested Performance Indicators for Tour Operators

Preamble

The Global Sustainable Tourism Council (GSTC) Criteria were created to provide a common understanding throughout the world of “sustainable tourism”, and are the minimum that any tourism business should aspire to reach. They are organized around four main themes: effective sustainability planning, maximizing social and economic benefits for the local community, enhancing cultural heritage, and reducing negative impacts to the environment. They have applicability to the entire tourism industry.

The Criteria have been developed and revised while striving to adhere to the Standard-Setting Code of the ISEAL Alliance, the body recognized to provide guidance on international norms for developing sustainability standards in all sectors. The Criteria are revised every 3 to 5 years. Plans for revisions plus advance sign-up for public input into future revisions are available on www.gstccouncil.org. The website also provides information on the process and history of the Criteria development.

Some of the uses of the criteria include the following:

- Serve as the basis for certification for sustainability
- Serve as basic guidelines for businesses of all sizes to become more sustainable, and help businesses choose sustainable tourism programmes that fulfill these global criteria
- Provide greater market access in the growing market for sustainable products, serving as guidance both for travellers and for travel agencies in choosing suppliers and sustainable tourism programmes
- Help consumers identify sound sustainable tourism programmes and businesses
- Serve as a common denominator for information media to recognize sustainable tourism providers
- Help certification and other voluntary programmes ensure that their standards meet a broadly-accepted baseline

- Offer governmental, non-governmental, and private sector programmes a starting point for developing sustainable tourism requirements
- Serve as basic guidelines for education and training bodies, such as hotel schools and universities
- Demonstrate leadership that inspires others to act

The Criteria indicate *what* should be done, *not how* to do it or whether the goal has been achieved. This role is fulfilled by performance indicators, associated educational materials, and access to tools for implementation, all of which are an indispensable complement to the GSTC Criteria.

Criteria Application

It is recommended that all criteria be applied to the greatest extent practical, unless for a specific situation the criterion is not applicable and this is justified. There may be circumstances in which a criterion is not applicable to a specific tourism product, given the local regulatory, environmental, social, economic or cultural conditions. In the case of micro and community-owned tourism businesses which have a small social, economic and environmental footprint, it is recognized that limited resources may prevent comprehensive application of all criteria. Further guidance on these criteria may be found from the supporting indicators and glossary, published by the GSTC.

Performance Indicators

The performance indicators presented here are designed to provide guidance in measuring compliance with the GSTC Criteria for Hotels.

This draft set of indicators will be updated periodically, as new information is developed. If you would like to suggest new indicators or other improvements, please send your suggestions to accreditation@gstccouncil.org.

Combined Indicators and Criteria

This document contains the Criteria and the Performance Indicators.

GSTC INDUSTRY CRITERIA	INDICATORS FOR HOTELS
SECTION A: Demonstrate effective sustainable management	
A1 Sustainability management system The organization has implemented a long-term sustainability management system that is suitable to its size and scope, addresses environmental, social, cultural, economic, quality, human rights, health, safety, risk and crisis management issues and drives continuous improvement.	<ul style="list-style-type: none"> a. The Sustainability Management System is clearly documented. b. The SM System covers environmental, social, cultural, economic, quality, human rights, health and safety issues. c. The SM System includes consideration of risk and crisis management. d. Documentary evidence shows implementation of the SM system. e. The SM System includes a process for monitoring continuous improvement in sustainability performance.
A2 Legal compliance The organization is in compliance with all applicable local, national and international legislation and regulations including, among others, health, safety, labour and environmental aspects.	<ul style="list-style-type: none"> a. An up to date list of all applicable legal requirements is maintained. b. Certificates or other documentary evidence show compliance with all applicable legal requirements. c. Legal requirements in all countries of operation are understood and met.
A3 Reporting and communication The organization communicates its sustainability policy, actions and performance to stakeholders, including customers, and seeks to engage their support.	<ul style="list-style-type: none"> a. Regular reports are made available on sustainability performance. b. Sustainability policies and actions are reported in external and internal communication material. c. Communications contain messages inviting consumer and stakeholder support.
A4 Staff engagement Staff are engaged with development and implementation of the sustainability management system and receive periodic guidance and training regarding their roles and responsibilities in its delivery.	<ul style="list-style-type: none"> a. Evidence is available of staff involvement with the SM System. b. Records of courses and on-the-job training, with attendance levels, are available. c. Staff training and guidance materials are available in accessible format (including use of minority languages where needed). d. Staff hold certificates and qualifications in relevant disciplines/skills.
A5 Customer experience Customer satisfaction, including aspects of sustainability, is monitored and corrective action taken.	<ul style="list-style-type: none"> a. A customer feedback system is in place, together with analysis of the results. b. Negative feedback and responses made to this are recorded. c. There is evidence of corrective actions taken. d. Feedback from customers is provided to tourism businesses and destinations contracted/visited.
A6 Accurate promotion Promotional materials and marketing communications are accurate and transparent with regard to the organization and its products and services, including sustainability claims. They do not promise more than is being delivered.	<ul style="list-style-type: none"> a. Images used in promotion are of actual experiences offered and places visited by customers. b. Marketing about wildlife or cultural events does not promise sightings which cannot be guaranteed. c. Sustainability claims are based on records of past performance.

<p>A7 Buildings and infrastructure</p> <p>Planning, siting, design, construction, renovation, operation and demolition of buildings and infrastructure...</p>	<p>Indicators for A7 criteria relate to the buildings and infrastructure owned and operated by the organization or over which they have direct influence/control.</p>
<p>A7.1 Compliance</p> <p>...comply with zoning requirements and laws related to protected and sensitive areas and to heritage considerations.</p>	<ul style="list-style-type: none"> a. Awareness of, and compliance with, laws relating to land use and activities in the local area is demonstrated. b. All required licences and permits are up to date. c. Awareness of, and compliance with, non-statutory area management plans and guidance (e.g. for particular zones, design, etc.), is demonstrated.
<p>A7.2 Impact and integrity</p> <p>...take account of the capacity and integrity of the natural and cultural surroundings.</p>	<ul style="list-style-type: none"> a. Site selection, design and access have taken account of visual amenity, landscape, cultural and natural heritage. b. Site selection, design and access have taken account of the protection of biologically sensitive areas and the assimilative capacity of ecosystems. c. The integrity of archaeological, cultural heritage, and sacred sites has been preserved. d. The integrity and connectivity of natural sites and protected areas has been preserved. e. Threatened or protected species have not been displaced and impact on all wildlife habitats has been minimized and mitigated. f. Water courses/catchments/wetlands have not been altered and run-off is reduced where possible and any residue is captured or channeled and filtered. g. Risk factors (including climate change, natural phenomena, and visitor safety) have been assessed and addressed. h. Impact assessment (including cumulative impacts) has been undertaken and documented as appropriate.
<p>A7.3 Sustainable practices and materials</p> <p>...use locally appropriate and sustainable practices and materials.</p>	<ul style="list-style-type: none"> a. Local materials, practices and crafts have been used in buildings and design where practicable and appropriate. b. Native and endemic plants obtained from sustainable sources have been used in landscaping and decoration, avoiding exotic and invasive species. c. Plants have been selected for their ability to tolerate prevailing or anticipated conditions eg drought tolerant plants d. Sustainable design, materials and construction practices have been used in buildings, with appropriate certification where possible. e. Waste from construction is sorted and disposed of in an environmentally sound manner.
<p>A7.4 Access for all</p> <p>...provide access and information for persons with special needs, where appropriate.</p>	<ul style="list-style-type: none"> a. Sites, buildings and activities are accessible to persons with physical disabilities and other special needs, as appropriate to the nature of the operation. b. Clear and accurate information is provided on the level of accessibility. c. Accessibility is certified or checked with relevant experts/user bodies.

<p>A8 Land water and property rights</p> <p>Acquisition by the organization of land and water rights and of property is legal, complies with local communal and indigenous rights, including their free, prior and informed consent, and does not require involuntary resettlement.</p>	<ul style="list-style-type: none"> a. On sites owned and operated by the organization or over which they have direct influence/control, land ownership and tenure rights are documented. b. User and access rights for key resources, including land and water, are documented where applicable. c. There is documentary evidence of communication, consultation and engagement with local and indigenous communities. d. Evidence of free, prior and informed consent of local communities is documented, where relevant (showing no involuntary resettlement or land acquisition).
<p>A9 Information and interpretation</p> <p>The organization provides information about and interpretation of the natural surroundings, local culture, and cultural heritage, as well as an explanation of appropriate behaviour while visiting natural areas, living cultures, and cultural heritage sites.</p>	<ul style="list-style-type: none"> a. Information/interpretation material about the natural and cultural heritage of areas visited is available and provided to customers. b. Staff are informed and trained about the natural and cultural heritage of the areas visited. c. Information is provided to customers about appropriate behaviour in the areas visited.
<p>A10 Destination engagement</p> <p>The organization is involved with sustainable tourism planning and management in the destination, where such opportunities exist.</p>	<ul style="list-style-type: none"> a. The organization is in contact with the local Destination Management Organization or equivalent body in those locations where it is most active. b. The organization engages in the planning and management of sustainable tourism in those destinations where it is most active.

SECTION B: Maximize social and economic benefits to the local community and minimize negative impacts

<p>B1 Community support</p> <p>The organization actively supports initiatives for local infrastructure and social community development. Examples of initiatives include education, training, health and sanitation and projects which address the impacts of climate change.</p>	<ul style="list-style-type: none"> a. The organization supports initiatives with local communities in areas where it is particularly active. b. The level and nature of contributions made to schemes in the local communities is recorded. c. In selecting service providers and products/experiences to feature in programmes, the organization favours those that engage with and support local communities.
<p>B2 Local employment</p> <p>Local residents are given equal opportunities for employment and advancement, including in management positions.</p>	<ul style="list-style-type: none"> a. The organization seeks to provide employment opportunities for local residents in its operations and activities. b. The organization monitors the level and proportion of employment it provides for local residents. c. Training is offered to local residents to enhance their employment opportunities.

	<p>d. In selecting service providers and products/experiences to feature in programmes, the organization favours those that provide local employment.</p>
<p>B3 Local purchasing</p> <p>When purchasing and offering goods and services, the organization gives priority to local and fair trade suppliers whenever these are available and of sufficient quality.</p>	<p>a. The organization regularly audits its sources of supply of goods and services.</p> <p>b. In selecting service providers and products/experiences to feature in programmes, the organization favours those that are locally owned and operated.</p>
<p>B4 Local entrepreneurs</p> <p>The organization supports local entrepreneurs in the development and sale of sustainable products and services that are based on the area’s nature, history and culture.</p>	<p>a. Where appropriate, the organization provides advice and support to local service providers with whom it engages, on the quality and sustainability of their service.</p> <p>b. Opportunities for joint ventures and partnerships with local entrepreneurs are considered and pursued where appropriate.</p>
<p>B5 Exploitation and harassment</p> <p>The organization has implemented a policy against commercial, sexual or any other form of exploitation or harassment, particularly of children, adolescents, women, minorities and other vulnerable groups.</p>	<p>a. The organization has a documented policy against exploitation and harassment of vulnerable groups.</p> <p>b. Action is taken to communicate and implement the policy.</p> <p>c. The organization engages with the local community, in destinations where it is particularly active, in working against exploitation and harassment.</p> <p>d. Records of employee ages are kept and show absence of any form of child labour (as defined by ILO).</p> <p>e. The organization supports action against child sex tourism.</p> <p>f. Services providers and premises where there is any evidence of possible exploitation are not contracted or visited.</p>
<p>B6 Equal opportunity</p> <p>The organization offers employment opportunities, including in management positions, without discrimination by gender, race, religion, disability or in other ways.</p>	<p>a. The organization has identified groups at risk of discrimination, including women and local minorities.</p> <p>b. The proportion of employees drawn from each of these groups is monitored.</p> <p>c. Internal promotion includes members of these groups.</p>
<p>B7 Decent work</p> <p>Labour rights are respected, a safe and secure working environment is provided and employees are paid at least a living wage. Employees are offered regular training, experience and opportunities for advancement.</p>	<p>a. The organization demonstrates awareness of, and compliance with, international labour standards and regulations.</p> <p>b. Wage levels are monitored and regularly reviewed against norms for a living wage in the countries of employment,</p> <p>c. Training records are kept for all staff, showing the level and frequency of training received.</p> <p>d. Employee contracts show support for health care and social security.</p> <p>e. Water, sanitation and hygiene facilities are provided for all onsite workers.</p> <p>f. Employee satisfaction is monitored.</p> <p>g. An employee grievance mechanism is in place.</p>
<p>B8 Community services</p> <p>The activities of the organization do not jeopardize the provision of basic services, such as</p>	<p>a. The organization monitors its impact on the availability of local services in the main areas of operation/visited.</p>

<p>food, water, energy, healthcare or sanitation, to neighbouring communities.</p>	<ul style="list-style-type: none"> b. A communication/feedback/grievance mechanism is in place for communities in the main areas of operation/visited. c. Any reduction in availability of basic services to local communities, identified as the result of the organization’s activities, is addressed.
<p>B9 Local livelihoods The activities of the organization do not adversely affect local access to livelihoods, including land and aquatic resource use, rights-of-way, transport and housing.</p>	<ul style="list-style-type: none"> a. Local access to livelihoods is considered in decisions about development and operations. b. A communication mechanism is in place for local communities to report any instance of reduced access to local livelihoods in the main areas of operation/visited.

SECTION C: Maximize benefits to cultural heritage and minimize negative impacts

<p>C1 Cultural interactions The organization follows international and national good practice and locally agreed guidance for the management and promotion of visits to indigenous communities and culturally or historically sensitive sites in order to minimize adverse impacts and maximize local benefits and visitor fulfilment.</p>	<ul style="list-style-type: none"> a. The organization demonstrates awareness of, and compliance with, existing international, national and local good practice and guidance for tourist visits to cultural sites and indigenous communities. b. The organization engages with communities/sites in reviewing guidance and creating and agreeing additional guidelines as necessary. c. Guidelines are effectively used and communicated. d. Particular measures are in place to avoid inappropriate interaction with children. e. The organization participates in/supports training and use of local guides. f. Consideration is given to the capacity and fragility of sites and communities, and to the levels of pressure on them, in determining the size, frequency and timing of group visits. g. Feedback from local communities and from visitors is encouraged and acted upon.
<p>C2 Protecting cultural heritage The organization contributes to the protection, preservation and enhancement of local properties, sites and traditions of historical, archaeological, cultural and spiritual significance and does not impede access to them by local residents.</p>	<ul style="list-style-type: none"> a. The organization makes and records monetary contributions to the protection of cultural heritage in its main areas of operation/visited. b. The organization provides in-kind or other support for cultural heritage in its main areas of operation/visited. c. The organization ensures that its activities do not impede local access to sites.
<p>C3 Presenting culture and heritage The organization values and incorporates authentic elements of traditional and contemporary local culture in its operations, design, decoration, cuisine, or shops, while respecting the intellectual property rights of local communities.</p>	<ul style="list-style-type: none"> a. Sites visited and experiences offered provide an authentic experience of local culture and heritage. b. Living cultural heritage and traditions are evident in cuisine, retail, events and other services offered. c. Copyright and intellectual property rights have been observed and necessary permissions obtained. d. The views of the local community have been sought on the presentation of local cultural heritage.

<p>C4 Artefacts</p> <p>Historical and archaeological artefacts are not sold, traded or displayed, except as permitted by local and international law.</p>	<ul style="list-style-type: none"> a. Any use of artefacts is transparent and/or documented and reported. b. Where artefacts are used, laws and bylaws have been identified that permit such use. c. Visitors are prevented from removing or damaging artefacts.
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Section D: Maximize benefits to the environment and minimize negative impacts

D1 Conserving resources

<p>D1.1 Environmentally preferable purchasing</p> <p>Purchasing policies favour environmentally sustainable suppliers and products, including capital goods, food, beverages, building materials and consumables.</p>	<ul style="list-style-type: none"> a. A documented environmental purchasing policy is in place. b. Preference is given to products and suppliers with environmental certification – notably with respect to wood, paper, fish, other foods, and products from the wild. c. Where certified products are not available, consideration is given to origin and methods of growing or production. d. Threatened species are not used or sold. e. Service providers and other operators selected and featured in tours have environmental/sustainability certification where possible. f. Where certified businesses are not available, the sustainability performance of service providers is considered and required improvements are communicated and implemented.
<p>D1.2 Efficient purchasing</p> <p>The organization carefully manages the purchasing of consumable and disposable goods, including food, in order to minimize waste.</p>	<ul style="list-style-type: none"> a. Purchasing favours reusable, returnable and recycled goods. b. Purchasing and use of consumable and disposable goods are monitored and managed. c. Unnecessary packaging (especially from plastic) is avoided, with buying in bulk as appropriate.
<p>D1.3 Energy conservation</p> <p>Energy consumption is measured by type and steps are taken to minimize overall consumption. The organization makes efforts to increase its use of renewable energy.</p>	<ul style="list-style-type: none"> a. Energy used in the organization’s operations and those over which it has direct influence/control is monitored and managed. b. Renewable sources are favoured and the share of renewable energy in total energy supply is monitored and managed. c. Equipment and practices are used that minimize energy use. d. Goals for reducing energy consumption are in place. e. Staff and guests are given guidance on minimizing energy use.
<p>D1.4 Water conservation</p> <p>Water risk is assessed, water consumption is measured by type, and steps are taken to minimize overall consumption. Water sourcing is sustainable and does not adversely affect environmental flows. In areas of high water risk,</p>	<ul style="list-style-type: none"> a. Water risk in the main destinations visited has been assessed and documented. b. In destinations visited where water risk has been assessed as high, water stewardship goals have been determined. c. Water used in the organization’s operations and those over which it has direct influence/control is monitored and managed. d. Equipment and practices are used that minimize water consumption.

<p>context-based water stewardship goals are identified and pursued.</p>	<ul style="list-style-type: none"> e. Water originates from a legal and sustainable source which has not previously affected, and is unlikely in future to affect, environmental flows. f. Consideration is given to cumulative impacts of tourism in the locality on water sources. g. Goals for reducing water consumption are in place. h. Staff and guests are given guidance on minimizing water use.
<p>D2 Reducing pollution</p>	
<p>D2.1 Greenhouse gas emissions</p> <p>Significant greenhouse gas emissions from all sources controlled by the organization are identified, calculated where possible and procedures implemented to avoid or to minimize them. Offsetting of the organization's remaining emissions is encouraged.</p>	<ul style="list-style-type: none"> a. Total direct and indirect greenhouse gas emissions from the organization's operations and those over which it has direct influence/control are monitored and managed. b. Carbon Footprint per tourist/night is monitored and managed. c. Actions are taken to avoid and reduce significant annual emissions from all sources controlled by the organization. d. Actions are taken to encourage suppliers of products and services to avoid and reduce significant annual emissions. e. Carbon offset mechanisms are used where practical.
<p>D2.2 Transport</p> <p>The organization seeks to reduce transportation requirements and actively encourages the use of cleaner and more resource efficient alternatives by customers, employees, suppliers and in its own operations.</p>	<ul style="list-style-type: none"> a. Where practical and feasible, the cleanest and most resource efficient transport options are used in the provision of tour programmes and excursions. b. Information is provided and promoted to customers on alternative (climate friendly) transport options, where available. c. Alternative transport options (e.g. bike rental, car sharing, pick-ups) for guests and staff are provided or facilitated. d. Markets accessible by short and more sustainable transport options are favoured. e. Local suppliers are favoured and daily operations seek to minimize transport use.
<p>D2.3 Wastewater</p> <p>Wastewater, including grey water, is effectively treated and is only reused or released safely, with no adverse effects to the local population or the environment.</p>	<ul style="list-style-type: none"> a. The organization is aware of wastewater treatment arrangements in the main destinations visited, and seeks to influence their improvement where necessary and practicable. b. Wastewater resulting from organization's operations and those over which it has direct influence/control is disposed of to a municipal or government approved treatment system, if available. c. If suitable municipal wastewater treatment is not available, there is a system in place on site to treat wastewater (that meets international wastewater quality requirements) and ensures no adverse effects on the local population and the environment.
<p>D2.4 Solid waste</p> <p>Waste, including food waste, is measured, mechanisms are in place to reduce waste and, where reduction is not feasible, to reuse or recycle</p>	<ul style="list-style-type: none"> a. The organization is aware of waste management arrangements in the main destinations visited, and seeks to influence their improvement where necessary and practicable. b. A solid waste management plan is in place for the organization's operations and those over which it has direct influence/control. c. The solid waste management plan includes actions to reduce, separate and reuse or recycle food waste where applicable.

<p>it. Any residual waste disposal has no adverse effect on the local population or the environment.</p>	<ul style="list-style-type: none"> d. Waste disposal is to a government run or approved facility and there is evidence that the facility has no negative impact on the environment or local population. e. Solid waste disposed is measured by type and goals are in place to minimize non-diverted solid waste. f. Guidance is given to customers, staff and suppliers of products and services on minimizing waste.
<p>D2.5 Harmful substances</p> <p>The use of harmful substances, including pesticides, paints, swimming pool disinfectants, and cleaning materials, is minimized, and substituted when available by innocuous products or processes. All storage, use, handling, and disposal of chemicals are properly managed.</p>	<ul style="list-style-type: none"> a. An inventory of harmful substances has been made and material safety data sheets (MSDS) are held. b. Action has been taken to source more environmentally friendly alternatives. c. Chemicals, especially those in bulk amounts, are stored and handled in accordance with appropriate standards. d. Visitors are informed in advance to avoid use of personal toiletries and other substances which may be considered harmful to the local environment.
<p>D2.6 Minimize pollution</p> <p>The organization implements practices to minimize pollution from noise, light, runoff, erosion, ozone-depleting substances, and air, water and soil contaminants.</p>	<ul style="list-style-type: none"> a. The potential sources of pollution covered in the criterion have been reviewed and identified. b. The potential sources of pollution covered in the criterion are monitored. c. Action is taken to minimize and where possible eliminate pollution from the sources covered in the criterion.
<p>D3 Conserving biodiversity, ecosystems and landscapes</p>	
<p>D3.1 Biodiversity conservation</p> <p>The organization supports and contributes to biodiversity conservation, including through appropriate management of its own property. Particular attention is paid to natural protected areas and areas of high biodiversity value. Any disturbance of natural ecosystems is minimized, rehabilitated and there is a compensatory contribution to conservation management.</p>	<ul style="list-style-type: none"> a. The organization demonstrates awareness of natural protected areas and areas of high biodiversity value in the areas visited. b. The organization provides and records monetary support for biodiversity conservation in its main areas of operation/visited. c. The organization provides and records in-kind or other support for biodiversity conservation in its main areas of operation/visited. d. Properties owned or operated by the organization and those over which it has direct influence/control are actively managed to support biodiversity conservation. e. The organization is aware of, and mitigates, activity with potential to disturb wildlife and habitats. f. Compensation is made where any disturbance has occurred. g. Action is taken to encourage visitors to support biodiversity conservation. h. The organization engages with local conservation NGOs in its main areas of operation/visited.
<p>D3.2 Invasive species</p> <p>The organization takes measures to avoid the introduction of invasive species. Native species are used for landscaping and restoration wherever feasible, particularly in natural landscapes.</p>	<ul style="list-style-type: none"> a. Properties owned or operated by the organization and those over which it has direct influence/control are monitored for presence of any invasive species. b. Action is taken to ensure invasive species are not introduced or spread. c. A programme is in place to eradicate and control invasive species. d. Landscaping of sites is reviewed to consider use of native species.

<p>D3.3 Visits to natural sites</p> <p>The organization follows appropriate guidelines for the management and promotion of visits to natural sites in order to minimize adverse impacts and maximize visitor fulfilment.</p>	<ul style="list-style-type: none"> a. The organization is aware of, and complies with, existing guidelines for tourist visits to natural sites. b. Guidelines are used when conducting visits and informing guests. c. The organization engages with local conservation bodies to establish/identify issues concerning visits to particular sites. d. The organization participates in/supports training and use of local guides in natural sites. e. Consideration is given to the capacity and fragility of natural sites, and to the levels of pressure on them, in determining the size, frequency and timing of group visits. f. Feedback from local communities and from visitors is encouraged and acted upon.
<p>D3.4 Wildlife interactions</p> <p>Interactions with free roaming wildlife, taking into account cumulative impacts, are non-invasive and responsibly managed to avoid adverse effects on the animals concerned and on the viability and behaviour of populations in the wild.</p>	<ul style="list-style-type: none"> a. The organization is aware of, and complies with, existing local, national and international regulations and guidelines concerning wildlife interactions, including wildlife viewing. b. The organization engages with the development and implementation of local codes and guidelines for wildlife interactions, including wildlife viewing, as required, based on advice of wildlife experts. c. The organization ensures that all service providers and sites visited comply with existing local, national and international regulations and guidelines concerning wildlife interactions, including wildlife viewing. d. Direct interactions, in particular feeding, should not be permitted, unless specifically sanctioned by internationally accepted standards or, where standards are not available, guided by independent wildlife expert advice. e. Measures are taken to minimize disturbance to wildlife. f. Impacts on wildlife wellbeing are regularly monitored and addressed.
<p>D3.5 Animal welfare</p> <p>No species of wild animal is acquired, bred or held captive, except by authorized and suitably equipped persons and for properly regulated activities in compliance with local and international law. Housing, care and handling of all wild and domestic animals meets the highest standards of animal welfare.</p>	<ul style="list-style-type: none"> a. The organization is aware of, and complies with, relevant laws and regulations concerning captive wildlife. b. Existing guidelines for specific tourism activities involving captive wildlife are implemented. c. Personnel responsible for captive wildlife have appropriate qualifications and experience and are fully licensed. d. The organization is aware of, and complies with, relevant laws and regulations concerning animal welfare. e. The organization ensures that all service providers and sites visited comply with relevant laws, regulations and guidelines concerning captive wildlife and animal welfare. f. There is regular inspection of conditions of captive wildlife and their housing. g. There is regular inspection of conditions of domestic animals and their housing and handling.
<p>D3.6 Wildlife harvesting and trade</p> <p>Wildlife species are not harvested, consumed, displayed, sold, or traded, except as part of a regulated activity that ensures that their</p>	<ul style="list-style-type: none"> a. The organization is aware of, and complies with, relevant laws and regulations concerning wildlife harvesting and trade. b. The organization ensures that all service providers and sites visited comply with relevant laws and regulations concerning wildlife harvesting and trade. c. Visitors and guides are informed of regulations concerning wildlife harvesting, consumption and trade and of the need to avoid buying illegal

<p>utilization is sustainable, and in compliance with local and international laws.</p>	<p>products/souvenirs derived from threatened species of wildlife notified by IUCN or CITES.</p> <p>d. Where hunting activity is legal, it forms part of a scientifically based, properly managed and strictly enforced approach to conservation.</p>
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