UN Tourism
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WORLD TOURISM ORGANIZATION

Development of Visitor Experience Model
and Best Practices for Visitor Management
at Select Tourism Sites in Sri Lanka

Final Report

Vol. 1:
Site-specific Recommendations

December 2025

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Acronyms

ADB	Asian Development Bank
CC	Carrying Capacity
CDJ	Consumer Decision Journey
CFF	Central Cultural Fund
COC	Code of Conduct
DFC	Department of Forest Conservation
DMP	Destination Management Plan
DOA	Department of Archaeology
DoNM	Department of National Museums
DWC	Department of Wildlife Conservation
F&B	Food and beverages
FEO	Federation of Environmental Organizations
IR	Inception Report
MOE	Ministry of Environment
NIP	Nature Interpretation Program
NSTC	National Sustainable Tourism Certification
OTA	Online Travel Agency
PA	Protected area
PEO	Pinawalla Elephant Orphanage
SAARC	South Asian Association for Regional Cooperation
SLTDA	Sri Lanka Tourism Development Authority
TO	Tour operator
UDA	Urban Development Agency
UN Tourism	World Tourism Organization
UX	User Experience
WHS	World Heritage Site (UNESCO)

1   Introduction

The present project focuses on visitor experience and visitor management at select tourism sites (attractions and/or destinations) in Sri Lanka. The main objective of the project is *to design an effective and sustainable visitor experience and management model for selected cultural, natural, and man-made sites in Sri Lanka with a view to helping improve the visitor experience, considering the carrying capacity of the sites.*

Specific project objectives include:

- *Examine the factors that influence the visitors' experience at the natural, cultural(heritage) and man-made attractions.*
- *Identify how the above factors affect the experience of the visitors.*
- *Develop visitor experience models for natural, cultural. and man-made attractions in Sri Lanka.*
- *Explore current and future demand for specified locations and recognize seasonal peaks.*
- *Identify influential factors and current issues in visitor management of specified locations.*
- *Make recommendations to develop both environmental and social carrying capacity plans and approach for specified locations, including technology integration and the use of digital tools for real-time visitor management.*

This final report includes the findings of the three field missions to Sri Lanka, visiting ten selected tourist attractions and destinations (pilot sites). An introduction to the context (context overview and project rationale) is followed by the following three main parts:

- **Vol. 1:** Site-specific recommendations for the ten selected pilot sites;
- **Vol. 2:** International Best Practice examples for visitor and tourism management;
- **Vol. 3:** Conceptual model and guidelines for visitor management at tourism sites (destinations and/or attractions) in Sri Lanka.

This is Volume 1 (Site-specific recommendations) of the final report.

2   Conceptual model for visitor management at tourism sites in Sri Lanka

Within the framework of this project, a conceptual model for visitor management at tourism sites in Sri Lanka has been developed based on insights gained from the field visits and global best practices. The structure of this report follows the logic of this conceptual model, which is presented in detail in Volume 3 and included below for ease of reference. It is pertinent to mention that not all components, or steps, of this model will apply to all sites. For many sites, certain activities will have to be carried out first, so as to introduce an effective visitor management and visitor experience model at these sites.
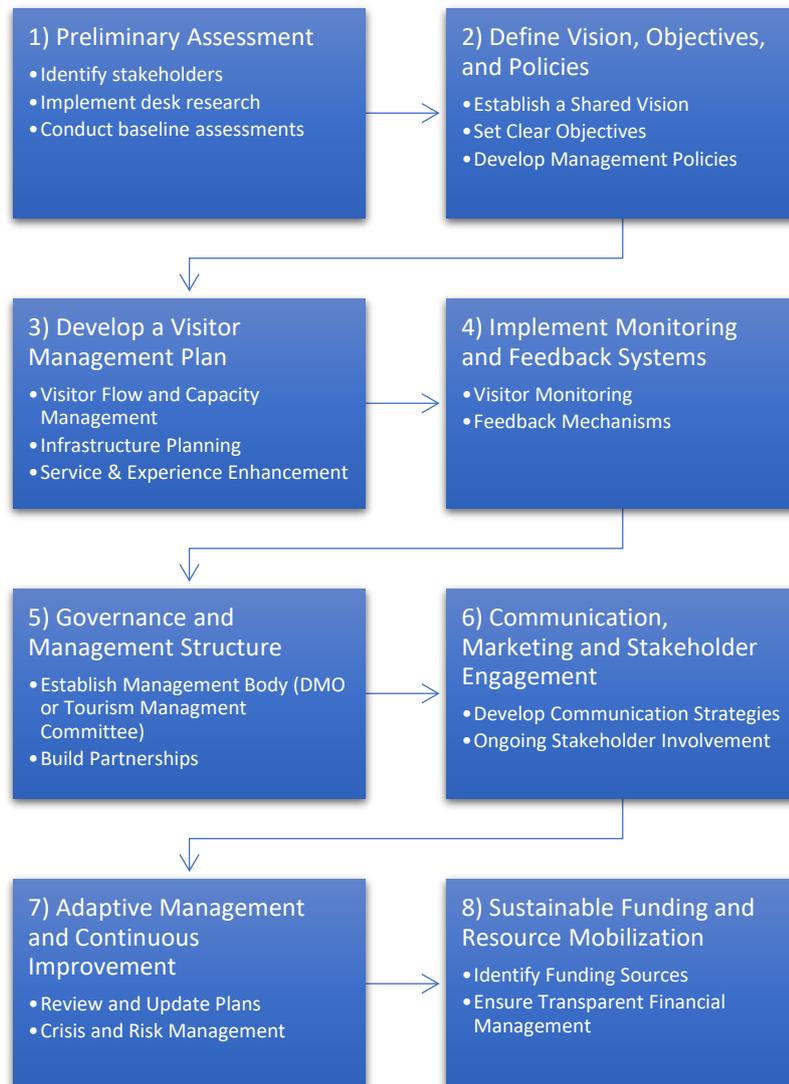
Figure 1: Conceptual framework for visitor management at tourism sites in Sri Lanka. Source: own elaboration.

For every site included in this report, a chart at the beginning of the chapter highlights the components of the conceptual model that are described in more detail (see example in Figure 2):

Figure 2: Example of icon highlighting specific steps in the conceptual model.

3   Sites included in the assessment

The selected sites in this project are described in brief in Table 1. Findings and recommendations resulting from the assessments of the sites are presented in paragraphs 4 to 13.

Table 1: Overview of selected sites

Site Name	Location	Type of Site	Area Extension	Total Visitor Numbers (2024 or latest)[1]	Main Target Groups	Main Challenges for Visitor Management	Important aspects
Pinnawala Elephant Orphanage	Pinnawala, Kegalle, Sabaragamuwa Province	Wildlife conservation facility	10 ha	650,077 (172,940 foreigners, 477,137 domestic tourists)[2]	Families, wildlife tourists	Overcrowding, visitor safety, animal welfare, inadequate facilities, parking issues	Largest captive elephant herd globally
Temple of the Tooth	Kandy, central Sri Lanka, in Royal Palace Complex	Cultural heritage, Buddhist temple	Not specified	Not specified (estimated 450,000 in a single day in April 2025 during a public exposition of the tooth relic)[3]	Pilgrims, cultural tourists	Overcrowding during rituals, balancing religious and tourist needs, artifact protection	UNESCO World Heritage Site; annual *Esala Perahera* ("Festival of the Tooth") draws large crowds
Sigiriya	Matale District, near Dambulla, central Sri Lanka	Ancient fortress, UNESCO site	300 ha	1,121,892 (613,239 foreigners, 508,653 domestic tourists)	Cultural tourists	Long queues, inadequate facilities, crowd management, site preservation	UNESCO World Heritage Site; iconic rock fortress
Polonnaruwa Ancient City	Polonnaruwa, North Central Province	Ancient city, UNESCO site	~35 ha est.	237.363	Cultural tourists, school groups	Artifact protection, visitor education, managing group travel, site maintenance	Extensive ruins; UNESCO World Heritage Site

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[1] Source: SLTDA (2025) unless otherwise noted
[2] Internal visitor data, Pinnawala Elephant Orphanage (2024)
[3] https://www.france24.com/en/live-news/20250424-sri-lanka-buddhists-overwhelm-city-in-bid-to-see-sacred-tooth

Site Name	Location	Type of Site	Area Extension	Total Visitor Numbers (2024 or latest)[1]	Main Target Groups	Main Challenges for Visitor Management	Important aspects
Hurulu Eco Park	Habarana, near Sigiriya, North Central Province	Protected area (forest reserve, biosphere reserve)	255,000 ha[4]	244.827	Nature tourists, wildlife tourists	Seasonal overcrowding, wildlife disturbance, balancing conservation and tourism	Known for elephant safaris; biodiversity hotspot
Galle Fort	Galle, southern coast	Colonial fortified city, UNESCO site	52 ha[5]	Not specified (142,166 at Galle Museum, Galle National Museum & Galle Maritime Museum)	Cultural tourists, cruise visitors	Overcrowding, commercialization, conservation of old structures, traffic congestion[6]	Active urban area; mix of local life and tourism
Mirissa	Southern coast, Matara District	Beach town, marine tourism	Not specified	Not specified	Backpackers, surfers, families	Overdevelopment, waste management, marine ecosystem protection	Popular for whale watching and nightlife
Yala National Park	Southeast Sri Lanka, bordering Southern and Uva Provinces	National park, wildlife sanctuary	181,000 ha[6]	646.704	Wildlife tourists, nature-based tourists	Human-wildlife conflict, overcrowding on safari routes, habitat degradation	Highest leopard density in the world
Nuwara Eliya	Central highlands, Nuwara Eliya District	Town, colonial-era hill station	Not specified	Not specified	Families, honeymooners, nature tourists, cultural tourists	Seasonal overcrowding, infrastructure pressure, environmental impact	Tea plantations, cool climate, colonial architecture
Ella	Hill country, Badulla District	Town, scenic area	560 ha[7]	Not specified	Backpackers, hikers, nature tourists	Infrastructure strain, waste management, preserving scenic beauty	Known for hiking trails and Nine Arches Bridge

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[4] www.protectedplanet.net
[5] https://www.archaeology.lk/galle-fort-sri-lanka-unesco-world-heritage-site/
[6] www.protectedplanet.net
[7] https://www.uda.gov.lk/attachments/dev-plans-2021-2030/Ella%20Development%20Plan%20-%20English.pdf

4 Pinnawala Elephant Orphanage

4.1 Preliminary assessment

4.1.1 Context

Pinnawala Elephant Orphanage (PEO) was established in 1975 by the Sri Lankan Department of Wildlife Conservation. Its initial purpose was to provide care and protection for orphaned, injured, or abandoned wild elephants (*Elephas maximus maximus*). Over the years, it has also become a significant captive breeding center for elephants – and an important tourist attraction. The economy of the town of Kegalle is now highly dependent on tourism, and PEO is the main attraction.

Over the years, several private facilities opened in the area, which also have captive elephants which they show to tourists. Most of them are purely commercial operations.

4.1.2 Visitation patterns

In 2024, PEO counted 650,077 **visitors**, of which 172,940 were foreign tourists, and 477,137 domestic visitors. Tourism has stagnated recently, as indicated by Figure 3. Remarkably, visitor numbers even decreased during the years of the tourism boom in the late 2010s. The share of foreign visitors dropped from 33.0% in 2015, to 26.6% in 2024. This is relevant, since foreigners pay higher entrance fees, and thus generate higher revenues.
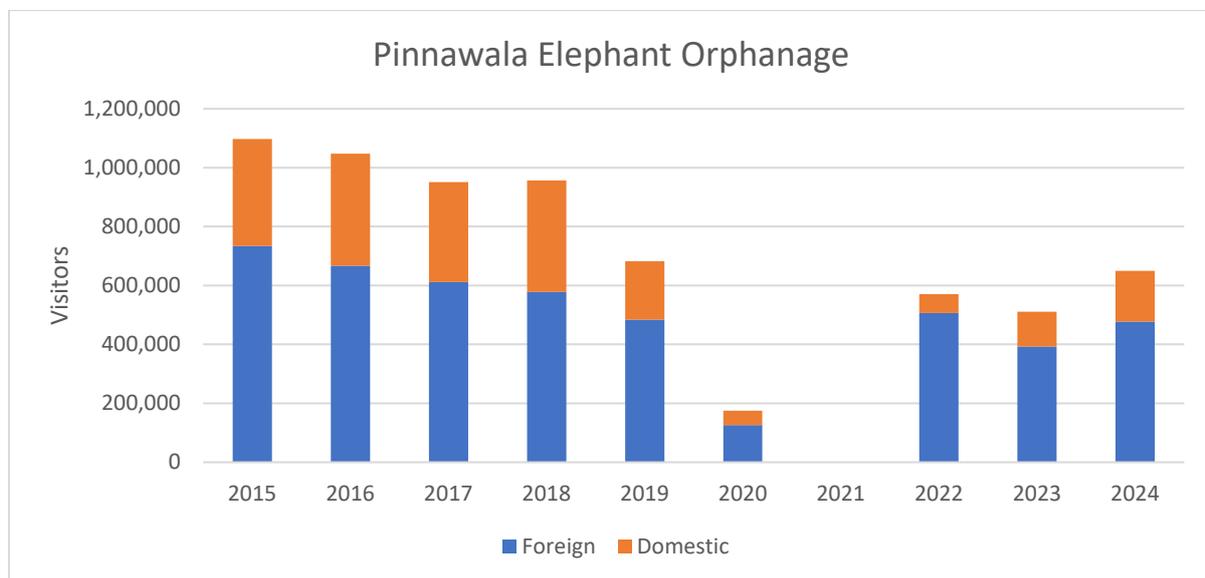
Figure 3: visitation to Pinnawala Elephant Orphanage, 2015-2024. Sources: SLTDA statistical reports (various years), PEO (2025, personal communication). No data for 2021.

There has been an **increasingly controversial debate about wildlife "sanctuaries" in Asia** in recent years, and specifically about facilities with elephants, many of which are clearly practicing animal abuse. This has not gone unnoticed, and may have affected visitation, specifically from Western countries. Practices such as elephant riding (which PEO does not offer), or elephant bathing (which it

5

does), are specifically being criticized[8]. Concerned travelers are thus often advised by **animal rights** groups, or via guidebooks, to visit only no-touch, observation only sanctuaries. The PEO management claims that some private competitors are also to blame for negative word of mouth, as they allegedly tell tourists that PEO has lower standards in terms of animal welfare. These arguments are reinforced by some tour guides, who prefer to take tourists to private, commercial "sanctuaries", where they can gain a commission, rather than to PEO.

4.1.3   Management and stakeholders

There is a lack of **stakeholder collaboration** in Pinnawala. With PEO being the most important attraction at the destination, private sector stakeholders complain that PEO's management shows little interest in cooperation. In fact, PEO appears to be seen by its management as purely a sanctuary, breeding and research facility – not as a tourist attraction, despite the fact, that over half a million tourists visit the place each year, its revenues are vital for the Department of Wildlife, and they also cross-fund other facilities that generate much less, or no, income.

The hotel association claims that several attempts were made to regularly meet and discuss challenges with the PEO management, but there has been little progress in terms of cooperation. There is no formally established stakeholder forum.

On **TripAdvisor**, one of the most important review platforms in tourism, PEO has only a rating of 3.5, which is comparatively low for such an important attraction. In fact, TripAdvisor prominently displays the note that PEO "does not meet animal welfare guidelines" – given that TripAdvisor is one of the most important sources of information for millions of travelers, this can only be described as disastrous from a marketing point of view.

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[8] Elephant bathing is not as universally criticized as other practices, such as riding, or elephants performing tricks. However, according to animal rights activists, it is a practice "wide open to abuse" (https://www.responsibletravel.com/holidays/elephant-conservation/travel-guide/elephant-bathing).

Pinnawala Elephant Orphanage

3.5 ⬤⬤⬤◑◯ (4,225 reviews)   #1 of 2 things to do in Pinnawala

↑ Share   ✎ Review   ♡ Save

About

⏱ Duration: More than 3 hours

🐾 Does not meet animal welfare guidelines ⓘ

Hours ⌄

Closed now

Friday   8:30 AM - 6:00 PM

Figure 4: TripAdvisor page for PEO, with indication on animal welfare guidelines not being met. Source:
https://www.tripadvisor.com/Attraction_Review-g304139-d647515-Reviews-Pinnawala_Elephant_Orphanage-
Pinnawala_Sabaragamuwa_Province.html(15 Aug 2025).

A content analysis[9] of **TripAdvisor reviews** reveals that most negative reviews address ethical and animal welfare concerns. Some positive reviews are also based on practices that are, in fact, being criticized by animal rights activists, such as interactions with elephants during bathing and feeding. While some tourists may see this as an exciting experience, it is one of the main issues for many negative blog articles on PEO.

Table 2: Content analysis of common themes in TripAdvisor reviews for PEO.

Theme	Estimated Frequency	Sentiment	Insight
Bathing & Feeding (interactive)	High	Positive	Widely praised—visitors love watching elephants bathe and feeding interactions
Visitor Facilities & Organization	Moderate	Mixed–Positive	Cleanliness, signage, scheduling commended; some reservations about space or logistics
Animal Welfare (chaining, cages)	High	Negative	Numerous strong concerns over chaining, confinement, animal stress

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[9] This content analysis was conducted with the help of AI (ChatGPT).

Ethical Concerns / Tourism Type	High	Negative	Many label it exploitative or "not a true sanctuary"; ethical discomfort common
Alternative Suggestions (e.g. Udawalawe, Elephant Freedom Project)	Moderate	Positive (for alternatives)	Frequently recommended instead due to perceived better welfare standards

This issue is further discussed in chapter 4.3, and suggestions are presented to address the abovementioned challenges.

4.2   Vision development

Currently, there appears to be no clear **vision** for the "Destination Pinnawala", nor for the PEO (speaking from a tourism perspective) as its main attraction. This should be established in a multi-stakeholder workshop, which could also serve as starting point for a more institutionalized **Tourism Management Committee** and, eventually, a DMO.

Fundamentally, there is a lot of confusion about the main **mission** of PEO, beginning with its name. It is, in praxis, not primarily an orphanage (since it has not taken in elephants from the wild for several decades), but rather a breeding and research facility that can be visited. As such, it has relatively high standards in terms of animal welfare, but visitors are confused by the name that does not match the reality (anymore).

> **Call to Action:**
>
> - Organize visioning workshops with relevant stakeholders
> - Address confusion over name and mission of PEO
> - Consider re-branding as *Elephant Conservation & Research Center*, placing a much stronger focus on interpretation and environmental learning

4.3   Visitor management and infrastructure

Currently, there is no strategic management of tourism at PEO. A specific management plan related to tourism should be developed after a tourism-related vision is agreed (see chapter 4.2).

It is recommended, that **infrastructure and experiences** should focus much more on environmental learning. As stated above, PEO's current name is confusing, and may lead to expectations that are not being fulfilled.

There are **explanation boards** at various places in the PEO. While the standard of information is generally good, the **wording and selection of topics** could be improved. Most importantly, information should, as specified above, be much more clearly in line with **environmental learning**. While information is provided about elephants and their characteristics in general, as well as about specific members of the herd at PEO, there is much less emphasis on topics related to elephant conservation.

Some signs try to convince visitors that animals are treated ethically, but wording is not always adequate. E.g., a sign about the ankush (elephant hook) presents this as a "tool for guiding", but also mentions it is used for "behavior modification of elephants", and "reinforcement". The use of the ankush has a long tradition in Asia, but is being criticized by animal rights advocates.

Although some tourists enjoy it, **interaction between tourists and elephants should be limited**, animals should be given more room for natural behavior, and the benefits of this approach should be clearly communicated to tourists in positive messages. Bathing should ideally be abolished in the current form, or at least reduced, and tourists should not be allowed to get close to elephants during bathing.

Figure 5: Board explaining the use of the ankush at PEO. Photo: Arnegger (2025).

The following measures are proposed to improve infrastructure and services that provide more authentic experiences.

Call to Action:

1. **Enhance Interpretive Experiences**
   - **Interactive Exhibits**: Develop educational displays about elephant biology, behavior, conservation challenges, and cultural significance. Specific interactive boards and other exhibition items should be designed for children.
   - **Guided Tours with Experts**: Offer tours led by wildlife biologists or conservationists to deepen visitor understanding.
   - **Storytelling Stations**: Share individual stories of elephants at the orphanage to build emotional connections.
2. **Develop Environmental Education Programs**
   - **School & University Partnerships**: Create curriculum-linked programs for students with hands-on learning.
   - **Workshops & Seminars**: Host regular events on wildlife conservation, habitat protection, and ethical tourism.
3. **Improve Ethical Standards & Transparency**
   - **Clear Animal Welfare Guidelines**: Publicly share policies on elephant treatment
   - **Limit elephant interaction with tourists**
   - **Third-Party Audits**: Invite independent animal welfare organizations to assess and certify practices.
   - **Visitor Code of Conduct**: Educate tourists on respectful behavior around elephants.
4. **Promote Conservation Messaging**
   - **Thematic Campaigns**: Align with global conservation days (e.g., World Elephant Day) to raise awareness.
   - **Eco-Certification**: Pursue recognition from sustainable tourism bodies to build credibility.
   - **Merchandise with Purpose**: Sell eco-friendly products that support

4.4 Governance and management

There is currently no established forum for stakeholders to meet and take strategic decisions for tourism development. While PEO as attraction is under the management of the Department of National Zoological Gardens, there should be an institutionalized **Tourism Management Committee**, open to relevant actors from the private sector and the civil society.

Call to Action:

- Establish Tourism Managment Committee with regular (proposal: quarterly) meetings; Objectives: stakeholder engagement and collaboration, destination promotion and product development in line with destination vision
- At PEO: create positions for staff dedicated fully to tourism management, provide training and capacity building as required

4.5   Communication, marketing and stakeholder engagement

Currently, negative word of mouth is not adequately managed. While the PEO management does reply to negative reviews on TripAdvisor.com, feedback often takes several weeks, since all external communication must be approved by the senior management.

PEO does not actively manage its **online presence**. There is no official **website**, and the website of the Department of Zoological Gardens is often not working. The most highly-ranked online search results include only commercial TO websites, review platforms, and several critical blog articles about animal rights concerns at PEO. PEO does have official Facebook and Instagram accounts, but they are not active (the last post on the Facebook account is from March 2024, and the Instagram account appears to be hacked, displaying spam advertisement for crypto currencies).

At least some pictures on **social media** (see Figure 6) associated by users with PEO, show interactions between tourists and elephants that would be criticized by animal rights activists (Figure 6).

PEO does address some of these concerns on-site, e.g., via signs at the entrance. However, those can only be read by tourists who have already decided to visit the site, rather than by potential visitors searching for information online. To improve its online presence and references, PEO may appoint a **content curator** who continually finds, groups, organizes and shares the best and most relevant content online and provides feedback on any critical posts and comments when necessary.

The organization urgently must develop and continuously implement a **communication and marketing strategy**, so as to regain control over its public image. This should be done in collaboration with other relevant stakeholders, notably the private sector, which often has a good overview of tourists' attitudes and opinions, due to their daily interaction with customers.

Figure 6: Instagram screenshot with the hashtag #pinnawalaelephantorphanage. Source: Instagram (15 Aug 2025).

Call to Action:

- Allocate adequate staff resources for tourism marketing, implement staff trainings if required, appoint a content curator.
- Reduce approval requirements for external communication to speed up communication on social media, e.g., reactions to customer reviews
- Set up and regularly update own website for PEO, implement Search Engine Optimization tools so as to reach high rankings in online searches.
- Continuously post on social media (at least Facebook and Instagram), with content that supports PEO's vision and mission (see above)

5 Temple of the Tooth – Kandy

5.1 Preliminary assessment

5.1.1 Context

The **Temple of the Tooth**, also known as **Sri Dalada Maligawa**, is a Buddhist temple located in Kandy, Sri Lanka, and is **one of the most important religious sites for Buddhists** around the world. It enshrines the sacred left upper canine tooth of the Buddha, believed to have been brought to Sri Lanka from India in the 4th century. According to tradition, possession of the Tooth Relic was seen as a symbol of rightful rule over the island, and so successive Sri Lankan kings built special shrines to house it wherever they established their capitals. The temple's present form dates back to the 18th century, after enduring cycles of destruction and reconstruction due to colonial invasions and conflicts.

Sri Dalada Maligawa stands within the **royal palace complex**, renowned not only for its religious significance but also its exquisite Kandyan architecture and intricate carvings using gold, silver, bronze, and ivory. Declared a UNESCO World Heritage site, the temple attracts thousands of devotees and tourists daily for worship and pilgrimage. The sacred Tooth is housed inside a series of nested jeweled caskets on a golden lotus throne and is only occasionally displayed to the public. The temple also hosts an annual grand festival, the Esala Perahera, celebrating the relic with vibrant processions and traditional ceremonies, cementing its place as a focal point of Sri Lanka's spiritual and cultural identity.

5.1.2 Visitation patterns

Besides being a religious site for Buddhists, the Temple of the Tooth is also an important **tourist attraction**, and the most significant tourist site in Kandy. The site is included in virtually all organized classic tourist itineraries. Exact visitor numbers are not made public, but it can be estimated that the number is several hundreds of thousands, with the highest draw during the annual *Esala Perahera* festival, and specifically during the rare public exposition of the sacred Tooth Relic, such as the one held in April 2025. Daily visitor numbers during these occasions have been reported at over 450,000, leading to serious security issues, including four dead.

The **entrance** to Sri Dalada Maligawa is free for Sri Lankan nationals. Visitors from SAARC countries pay LKR 1,500, and other foreigners pay LKR 2,000. Thus, while tourism is not a main mission of this religious site, international tourism actually provides significant funds for the temple, and the destination of Kandy at large.

A content analysis[10] of **visitor reviews** on TripAdvisor reveals that the average sentiment of visitors toward Sri Dalada Maligawa is positive, with an overall score of 4.2, and particular appreciation for cultural significance, architecture, and spiritual ambiance. Negative points involve the crowds, cost concerns, and occasional lack of direction; these often temper the overall experience, especially when

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[10] This content analysis was conducted with the help of AI (ChatGPT).

expectations are unmet. Overall, ~78–85% of reviews from the past five years have positive ratings. A more detailed breakdown of topics and assessments is presented in Table 3.

Table 3: Content analysis of TripAdvisor reviews for Sri Dalada Maligawa. Source: TripAdvisor

Theme	Approximate Frequency	Sentiment	Insights
Architecture & Cultural Significance	High	Positive	Reviews praise the ornate design, historical depth, and UNESCO World Heritage status.
Religious Ceremonies / Puja	High	Positive	Many highlight the emotional impact of witnessing rituals such as evening offerings or drum processions.
Crowds & Overcrowding	Moderate to High	Negative	Frequent remarks about dense crowds—especially during ceremonies, making navigation difficult.
Entry Fees & Additional Costs	Moderate	Mixed to Negative	Noted as high; some frustration over additional "donation" for shoe storage.
Guidance & Direction	Moderate	Mixed	Visitors appreciate guidance but found the experience confusing without a guide.
Museum / Grounds	Moderate	Positive	The museum and temple grounds are seen as enriching extensions of the visit.
Atmosphere & Spiritual Feel	Moderate	Positive	Many describe the site as peaceful, culturally enriching, and spiritually uplifting.

5.1.3   Management and stakeholders

Sri Dalada Maligawa is managed by an **administrative body** led by a chief lay custodian known as the Diyawadana Nilame. This position is of immense historical and cultural significance. The Diyawadana Nilame is responsible for overseeing the temple's daily rituals, managing its properties, and organizing the annual Kandy Esala Perahera festival. The person holding this role is elected for a 10-year term and is considered the chief guardian of the Sacred Tooth Relic.

The management and rituals of the temple are also supervised by the two chief prelates (Mahanayake Theros) of the Malwathu and Asgiri chapters of the Buddhist clergy. This three-part structure – the Diyawadana Nilame and the two chief monks – ensures the preservation of the temple's sacred traditions and cultural heritage.

The **temple management** as a religious organization does not put a special focus on tourism or visitor management.

Inside the temple complex, there are several **museums**, which are managed by **various organizations**, including the Department of National Museums (DoNM), Department of Archaeology (DoA), and Dalada Maligawa temple authorities.

Table 4: Overview of museums in the temple complex.

Site/Museum	Description	Managing Organization	Assessment
International Buddhist Museum	World Buddhist heritage	Jointly by Temple authorities, Sri Lanka Department of Archaeology, and partnerships with foreign countries (17 including India, Japan, etc.)	• Interesting approach (various exhibitions about buddhism in different parts of the world, installed by different countries) • No coherent theme, sub-exhibitions vary vastly in quality • Available tour guides are not well-trained in storytelling, merely repeat what is written on the explanation boards
Old Royal Palace	Historic royal residence; now a museum, recently renovated and updated	Department of Archaeology	• Interesting museum, well-designed exhibition (recently upgraded) • Difficult to find for visitors, as there are few signposts inside the temple complex
Temple Museum	Small museum with historic artefacts on the first and second floor of the main temple building	Dalada Maligawa (Temple) authorities	• The entrance for foreigners is included in their ticket price, locals pay approximately 60 LKR • High-quality historic artefacts, but outdated exhibition design (cluttered display cabinets, lighting is quite dark) • The entrance is hidden and there are few

			signposts, meaning that few visitors find it
Raja Museum	Memorial for "Raja" the temple elephant; adjacent to the main palace	Dalada Maligawa (Temple) authorities	• Very small but interesting museum with the stuffed tusker who played an important role in the recent temple history • Historic photographs and other information
National Museum of Kandy	Located in the Palle Vahala (Lower Palace); exhibits Kandyan royal artifacts	Department of National Museums	Not assessed
Queen's Palace (Meda Wasala)	Former dwelling of queens, showcases Kandy architecture	Department of Archaeology	Not assessed

The **museums vary greatly in terms of quality**. What they all have in common is that they are **inadequately signposted** and therefore only visited by a fraction of visitors.

While the stakeholder landscape inside the temple complex is already complex (see above), this complexity is further enhanced by the fact that the Sri Dalada Maligawa complex is embedded in the **wider environment of Kandy as a tourist destination**. Sri Dalada Maligawa is, by far, the most important attraction, and virtually every tourist to Kandy also visits the temple. This means, that other businesses and stakeholders benefit, including the hospitality sector, tour guides, or local transport providers (tuk tuk or taxi drivers), as well as the municipality at large (through increased tax revenues, job creation, and generation of economic opportunities). There is a strong need for **better stakeholder collaboration**, as the quality of the destination experience depends on services provided by all of them.

5.2   Visitor management and infrastructure

While the temple is a religious site, a **more visitor-centered approach** would be desirable, not only, to increase safety and security of all visitors during key events, but also to enhance the quality of the visitor experience, not only for leisure tourists (be they national or international visitors), but also for devotees visiting the temple for purely religious reasons.

Visitor management: The overall visitor experience in the temple complex is generally described as positive (see chapter 5.1), but still leaves room for improvement by addressing the following factors:

- **Lack of signposts** to key sites, such as museums, and explanation/interpretation boards for visitors who come without a guide;
- **Crowding** in the main temple (despite certain visitor flow management measures), specifically during services;

- **Unofficial (and unskilled) tour guides** (a common problem also in other tourist areas in Sri Lanka) damage visitor experience and image of official guides.

It was noted that many private tour operators allow little time for their guests to explore the temple complex, partly, because some of them try to also direct tourists to other, commercial sites in the area, from which they obtain commissions. E.g., there are a number of privately run "spice gardens" of varying interest, that are often included by guides and/or local Tuk-Tuk drivers into tourist itineraries in Kandy.

The following measures are proposed as **quick wins** for visitor experience enhancement on-site:

Call to Action:

- **Improve signage** in the temple complex:
  - More signposts to key sites, such as museums or other religious sites, such as Sri Vishnu Devala or Sri Natha Devalaya)
  - Install large overview maps at entrances, as well as at strategic locations within the complex;
  - Install information/interpretation boards at key attractions.
- Create three different **interpretative trails** for tourists around the site. Suggestion:
  - Trail 1: man temple, Magul Maduwa Audience Hall
  - Trail 2: sites included in Trail 1 + Temple Museum
  - Trail 3: sites included in Trail 2 + Old Royal Palace, temples west of the complex, Museum of World Buddhism, Kandy National Museum
  - Trails should be marked with **different colors** on signposts, maps and information boards, discreet metal signs embedded in the ground.
- Introduce an **online reservation system**:
  - Hourly **quota system** for tickets only available via online reservation (other tickets may still be reserved for on-site purchase on first-come-first-served basis)
  - Online reservation tickets may be categorized according to existing ticketing schemes (including free tickets for domestic visitors).
  - Online tickets need to rely on a **time slot system**. Reservation period in the future should be limited (e.g., max. two months in advance).
  - Consider a special entrance and/or specific quotas for devotees coming to attend service.

In addition, the situation regarding unofficial tour guides should be addressed with measures agreed in coordination with relevant stakeholders (temple authorities, municipal and regional authorities, tourism police, tour guide association, etc. – see above).

5.3 Governance and management

There is currently no established forum for stakeholders to meet and take tourism-related strategic decisions. However, this is needed, not only for Kandy as a destination at large, but also for the temple complex, which includes attractions managed by a variety of stakeholders. While Sri Dalada Maligawa as attraction is under the management of the temple authorities, there should be an institutionalized **Tourism Management Committee** that includes the other key actors present in and around the complex, such as the Department of Archaeology, or the Department of National Museums.

Furthermore, the Committee should be extended by including actors that play important roles for the destination development and experience in Kandy at large. Issues, such as problems related to fake tour guides, cannot be solved by the temple authorities, or museum managers, but require inclusion of municipal authorities, the tourism police, SLTDA, and others.

> **Call to Action:**
>
> - Establish **Tourism Management Committee** with regular (proposal: quarterly) meetings; Objectives: stakeholder engagement and collaboration (temple complex and Destination Kandy), visitor experience enhancement

5.4 Adaptive management and continuous improvement

While adaptive management and continuous improvement is of high importance for all destinations and attractions, **crisis and risk management** is even more relevant for Sri Dalada Maligawa and Kandy as destination, specifically, during large-scale events, such as the *Esala Perahera* festival, or the rare public expositions of the Sacred Tooth relic. Optimal risk management requires close collaboration of numerous stakeholders, including the ones mentioned in chapter 5.3, but also, additionally, relevant security forces, such as the municipal Fire and Disaster Management Services Department.

Call to Action:

1. **Data-Driven Planning**
   - **Post-event audits**: Analyze crowd behavior, incident reports, and feedback to refine future risk strategies. Use digital geolocation data where possible.
   - **Weather contingency**: Use historical data and forecasts to prepare for monsoon-related disruptions.

2. **Crowd Control and Flow Optimization:**
   - **Assess historic data** to develop visitor flow concepts (e.g., smartphone-based geolocation data)
   - **Smart barriers and signage:** Use modular fencing and clear multilingual signs, including QR codes, to guide pedestrian movement and prevent bottlenecks.
   - **Real-time crowd monitoring:** by trained staff with technology support (e.g., drones).

3. **Emergency Response Infrastructure**
   - **Mobile medical units**: Station first-aid tents and ambulances at strategic points, especially near the Temple and along parade routes.
   - **Fire safety**: Given the use of torches and fire dances, enforce strict fire safety protocols and have extinguishers readily available.
   - **Rapid evacuation plans**: Map out and rehearse evacuation routes with local authorities and volunteers, including signage for tourists.

4. **Technology Integration**
   - **Festival app**: Offer a mobile app with live updates, maps, emergency contacts, and push alerts for weather or security changes.
   - **Wearable tech for staff**: Equip event personnel with GPS-enabled devices for coordination and quick response.

5. **Cultural Sensitivity and Training**
   - **Volunteer training**: Educate volunteers on both safety protocols and cultural etiquette to ensure respectful and effective crowd engagement.
   - **Language support**: Provide translation services or multilingual guides for international visitors.

6 Sigiriya

6.1 Preliminary assessment

6.1.1 Context

Sigiriya stands as one of Sri Lanka's most visited cultural landmarks, drawing **over 1 million tourists annually**. Its designation as a **UNESCO World Heritage Site** in 1982 has elevated its global profile. The site contributes significantly to the local economy through a robust tourism value chain, as outlined in a 2022 UNDP-backed analysis, which emphasized the need for sustainable practices amid rising footfalls. Sigiriya's infrastructure includes over 70 hectares of preserved archaeological zones, and its summit palace, accessible via a climb of approximately 1,200 steps, offers panoramic views that are a major draw for international visitors.

6.1.2 Visitation patterns

In 2024, Sigiriya was visited by over 1.1 million tourists, 45.3% of which were foreigners (Figure 7). The site is featured in virtually all guidebooks on Sri Lanka, often on the title page, and the most significant tourist attraction in the country. While visitor numbers have not yet reached pre-pandemic heights, the figures are increasing rapidly again.
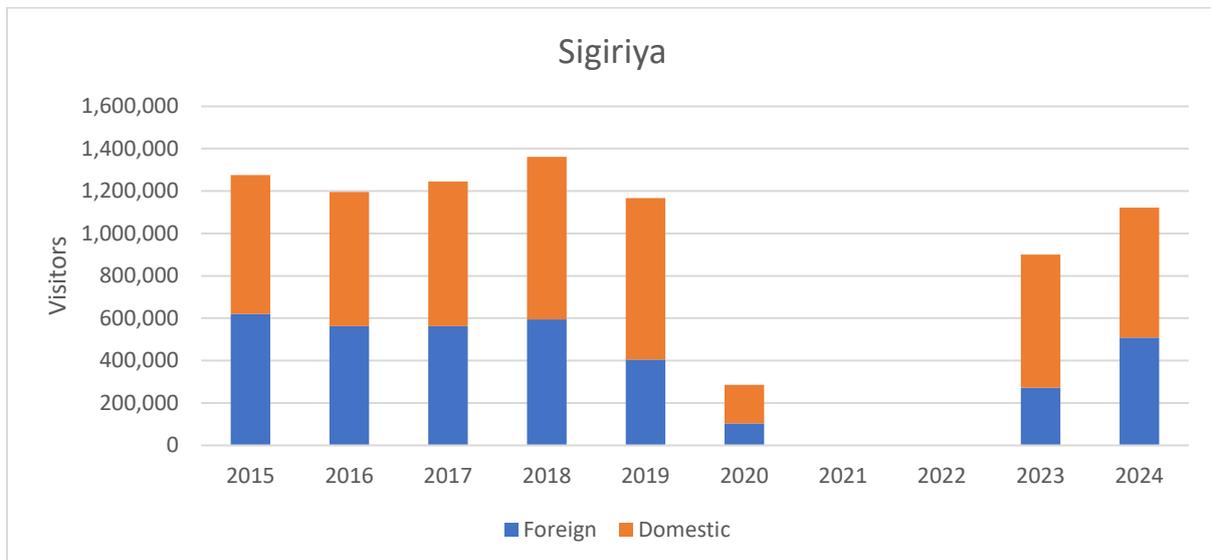
Figure 7: Visitor numbers at Sigiriya WHS. Sources: SLTDA annual reports (various years). No figures for 2021 and 2022.

Visitation varies across the year and according to the origin of visitors (foreign vs. domestic). The months with the highest share of foreign visitors are Nov, Feb, Mar and Apr, whereas during May, Jun and Sep, the site is much more popular with domestic visitors. The most popular months overall are Jan, Feb, Aug and Dec, with close to, or over, 100,000 visitors – an average of over 3,300 per day (Figure 8).

Furthermore, visitor numbers differ vastly throughout the day, with peak hours in the early morning as well as during sunset, specifically among foreigners seeking good, "instagramable" photo

opportunities. Nowadays, the nearby viewpoint of Pidurangala Rock also receives substantial numbers of visitors, since it provides a scenic panorama of Sigiriya, notably the Lion Rock.
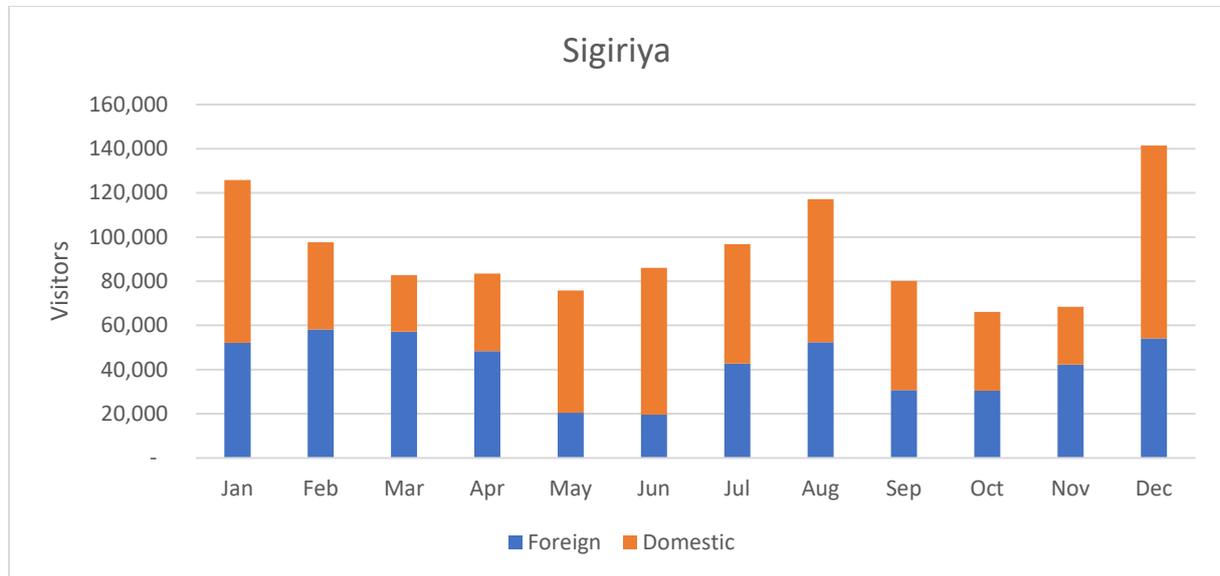
Figure 8: Sigiriya WHS - monthly visitor numbers. Source: SLTDA.

Besides high overall numbers, and high fluctuation across seasons and times of day, Sigiriya faces the additional challenge of **high spatial concentration of visitors** in a few key areas and trajectories. Most visitors attempt to climb the 1,200 steps to reach the top of the Lion Rock.

An analysis of smartphone app-based **geolocation data** shows that the highest concentration of visitors in the area is between 9 and 10 am. It also shows that some areas within the Sigiriya WHS are not much visited at all, specifically in the early hours of the day, when visitors rush directly to the Lion Rock to see the sunset (see chapter 6.3). This implies challenges for visitor management, including safety and security risks, as described below.

The **final part of the access** to the Lion Rock is a steep, **metal staircase** of approximately 300 steps. This section is considered the most difficult part of the climb, with steep, exposed metal stairways and handrails, and no shade. The final climb from Lion's Paw Terrace to the top of Sigiriya typically takes 10 to 20 minutes for most visitors. This estimate accounts for the steepness, narrowness, and exposure of the metal staircase, as well as brief pauses for photos or rest. The timing can increase if there are

crowds, as visitors often need to wait at narrower sections. At certain times, the site management temporarily closes access, due to overcrowding, or external hazards. Frequently, wasps nesting in the rock face close to the stairway attack the visitors, which has led to serious injuries in the past.

This final stairway section is the key **bottleneck** to **carrying capacity** (CC) calculations at Sigiriya. There is a 2022 report on CC at Sigiriya; however, it calculates CC as a static phenomenon and largely ignores visitor movements in time and space. Hence, the numbers proposed by this study are too high, e.g., 8,500 persons for the area on top of the Lion Rock at any given time. This is unrealistic, since this number of people would not be able to pass through the stairway as key bottleneck in a reasonable amount of time.

Realistically calculating the **bottleneck's (stairway) capacity** is specifically relevant for times of crises, and/or, when evacuations are required.

A simple calculation is presented in the Annex to this volume, which suggests that the **maximum number of people** that can (safely) pass the staircase within one hour is around 450 to 900 persons.

Figure 9: Upper stairway at Sigiriya between Lion's Paw Terrace and top of the Lion Rock during non-peak hours on an off-season day. Photo: Arnegger (2025).

A content analysis of TripAdvisor reviews shows that, overall, visitors are very satisfied with the experience at Sigiriya WHS. However, there are mixed-to-negative assessments about the physical requirements of climbing the stairs to the Lion Rock, crowding (including queuing), and ticketing/price value. An overview is depicted in Table 5[11].

Table 5: Content analysis of TripAdvisor reviews for Sigiriya WHS. Source: TripAdvisor

Theme	Approximate frequency	Sentiment	Insights
Views / scenery from the summit	Very High	**Positive**	"Spectacular, must-see, iconic." Strong payoff at the top drives high satisfaction.
Climb & steps (effort, fitness)	Very High	**Mixed → Positive**	Many call the ascent "manageable but strenuous"; praise the achievement but note exertion. FAQs repeatedly ask about difficulty and step counts (~1,200–1,270).

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[11] This content analysis was conducted with the help of AI (ChatGPT).

Theme	Approximate frequency	Sentiment	Insights
Heat / timing (go early or late)	High	**Mixed → Positive**	Clear advice: start early to avoid heat & crowds; heat can diminish enjoyment if mistimed.
Crowds / queues	Medium–High	**Mixed / Negative**	Peak-time congestion slows the ascent and detracts from the experience for some.
Ticketing / price–value	Medium	**Mixed**	World-class site; some feel pricing is steep relative to facilities/time on site. *(Synthesizing attraction list & museum threads.)*
Frescoes / Mirror Wall / history	Medium	**Positive**	Heritage & archaeology are highlights, especially with context (guide/museum).
Safety & handrails / vertigo	Low–Medium	**Mixed**	Handrails help on the final stairs; some note exposure/wind; not a common deal-breaker.
Guides (added context)	Low–Medium	**Positive**	Guided visits raise appreciation of history & layout; independent visitors manage fine.
Museum (quality/utility)	Low–Medium	**Mixed**	Useful for context; quality perception varies (some find it dated / underwhelming).
Alternative hike: Pidurangala Rock	Medium	**Positive**	Frequently mentioned as a cheaper/sunset alternative or complement to Sigiriya.

6.1.3   Management and stakeholders

Sigiriya WHS is managed by the **Central Cultural Fund (CCF)**. CCF is the main authority overseeing the preservation, research, and maintenance of Sigiriya. The organization is responsible for the archaeological site itself, including the rock fortress, gardens, and artifacts.

SLTDA's Sustainable Tourism Unit is also actively involved in the management and development of Sigiriya, through several projects funded by international donors. Notably, the **UNDP**-funded BIOFIN project, which started in 2018, supported the introduction of the national Sustainable Tourism Certification Concept, a precursor to the National Sustainable Tourism Certification (NSTC) system for hotels, and the Sustainable Destination Certification initiative. In June 2025, Sigiriya became the first destination in Sri Lanka to be **officially recognized as Sustainable Destination** following Cabinet approval.

In addition, the **Asian Development Bank (ADB)** prepared a **Destination Management Plan** for Sigiriya, which also envisages improvement of, and diversion of visitor flows to, other attractions in the area. A planned future ADB-funded project shall focus on infrastructure improvement around Sigiriya WHS, e.g., improvement of car parks, sanitary facilities, and recreational infrastructure (including a bicycle path around the site, rehabilitation of Sigiri Lake, and other measures). In addition, the **Korea**

International Cooperation Agency (KOICA) has pledged to support development of the main access road, as well as an alternative access road, to Sigiriya Rock, and for the improvement of the Sigiriya Museum, cafeteria, and ticket counter.

These initiatives and existing strategies shall provide a **solid basis for future development and improvement of Sigiriya and its surroundings as tourist attraction and destination**. A focus should be on implementation and coordination between the various stakeholders involved, not on elaboration of new, potentially competing strategies in areas where such documents already exist. However, some existing baseline studies may have to be re-assessed, e.g., the abovementioned carrying capacity study, which appears to have some methodological issues.

Other governmental stakeholders include other government departments, such as the **Department of Wildlife Conservation (DWC)** and **the Department of Archaeology**, which are involved in protecting the site's natural and historical integrity.

The **DWC** specifically plays a crucial role, since the Sigiriya WHS lies within Sigiriya Sanctuary, an IUCN category IV protected area. It is part of a larger, significant **habitat for elephants** (*Elephas maximus maximus*) and other endangered wildlife, such as the Grey Slender Loris (*Loris lydekkerianus*), in north-central Sri Lanka. The eastern border of Sigiriya Sanctuary is adjacent to Minneriya National Park, where over 400 elephants gather during the dry season. On the western side, it is in close proximity to the Digampatana Forest Reserve. The Sigiriya Sanctuary is of great significance in the conservation of Asian elephants due to its function as a foraging ground, refuge and linkage in a landscape that supports elephants.

The presence of elephants in the area leads to **human-wildlife conflicts** at different levels. In terms of visitor safety, elephants represent a potential danger, specifically for visitors that walk through the site and adjacent areas (e.g., to climb Pidurangala Rock) early in the morning, when elephants are most active.

On the other hand, a significant area of conflict arises from development projects, such as hotel construction, that encroach on the Sigiriya buffer zone, which includes lands managed by both the DWC and the Central Cultural Fund (CCF). Environmentalists have expressed concerns that such projects, undertaken in the name of tourism, lead to the destruction of natural wildlife corridors and habitats, archaeological values, and water resources, and can exacerbate human-wildlife conflict.

6.2   Visitor management and infrastructure

Visitor management and crowding: As stated above, there is currently a problem with overcrowding around the Lion Rock and its access staircase. Access is sometimes temporarily restricted when staff decides that crowds are too large, or when security situations arise (e.g., wasp attacks or thunderstorms). However, these measures are reactive and are taken when critical situations are already happening. It is necessary to develop an appropriate crisis and risk management scheme, based on sound data, and providing clear guidance for potential risk situations (see chapter 6.5).

There are three main approaches in visitor management: (1) visitation caps, (2) redistribution and (3) education[12]. While all three play a role, and should be leveraged, at Sigiriya, there is a **clear need for visitation quotas** (the most direct form of visitation caps) at least for the Lion Rock area.

Sigiriya WHS site has introduced an **online ticket system**[13], but it is almost not used by visitors for the following reasons:

- There is **no visible benefit of purchasing tickets online**. The text on the website mentions that online tickets may "avoid inconveniences caused at the ticket counter", but this is vague and suggests there are no major advantages of online tickets as compared to tickets bought on-site.
- The website is not user-friendly: it can only be accessed with a Google account, meaning that potential visitors who do not have such an account, cannot use the website. This is an unnecessary restriction (many people refuse to use Google accounts due to privacy concerns, and others may simply find it inconvenient).
- Sensitive data, including passport number, has to be entered before ticket options are shown.
- There is **no reservation system** that guarantees access at a certain date and time slot. Without such measures, an online ticket system does not provide significant advantages, even if it may help to avoid queues at the counter.

The online ticket system should be improved by introducing **time slots** (with visitation caps) and separate access gates for online ticket holders. Visitors should be able to easily print out tickets, but also to carry them as QR codes in their smartphones or digital wallets (e.g., Apple wallet or Google wallet), so that there is no need to obtain additional tickets at a counter.

Once time slots are introduced, it should be clearly communicated that online tickets (if available) provide guaranteed access to the site at the indicated time, whereas purchasing tickets on-site carries the risk that certain dates and/or times may be sold out.

> **Call to Action:**
>
> Improve **online ticket system**:
>
> - Improve User Experience (UX), e.g., by removing unnecessary barriers such as mandatory Google account;
> - Introduce time slots with visitation caps for both online tickets and on-site purchases.
> - Clearly communicate benefits of online tickets on the website.

Infrastructure and facilities: Bathrooms, drinking water fountains, medical facilities and a café are available on-site, but these facilities could be improved. Notably, the medical facilities are only

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[12] Fore more details, see Volume 3.
[13] Accessible at https://eservices.ccf.gov.lk/eticketing/landing

available in the mornings, a major issue given the climatic conditions (and physical efforts needed to climb the stairway), and frequent health risks from wasp attacks.

Figure 10: Advertisement of "Sigiriya Caféteria". Photo: Arnegger (2025)

Available F&B offers (there is only one small **restaurant/cafeteria** inside the Sigiriya WHS, located near the main entrance just off the main access path) are of low quality, and hygienic standards are questionable. This is reflected by the visitor reviews on TripAdvisor, which only give the cafeteria 3.3 stars – a comparatively low rating. There is a signpost on the main path to the restaurant, but it looks unprofessional (probably designed by the restaurant itself in the style of a typical street food stall), and not adequate for the premium market position that Sigiriya as a World Heritage Site represents.

The restaurant is inside a small compound of several buildings that are meant for visitor-relevant facilities such as the abovementioned restaurant, a bank with ATM, or the tourism police. However, at the moment, the whole area appears to need renovation, and, besides the restaurant, there are few services offered that are relevant for visitors (there is a local bank branch, but its ATM was out of service at the time of research, making it relatively useless for most visitors).

There is a **museum** in the main entrance building. The main exhibition is very good, and includes, besides historic artefacts, a miniature model of the site and a replication of the frescoes (accessible for wheelchair users, who cannot access the original frescoes on the Lion Rock).

However, the museum is **inadequately signposted**. More importantly, the main exhibition is somewhat hidden, and the entrance area is not attractive (there is no aesthetic element at the entrance door, and the existing neon sign is unappealing), meaning that visitors may decide to turn back. The museum is on the upper floor and can be reached via a staircase from the area where ticket counters and information desk are located. However, there is also a direct exit to the site from this area, and most visitors thus decide to go directly to the site, and skip the museum.
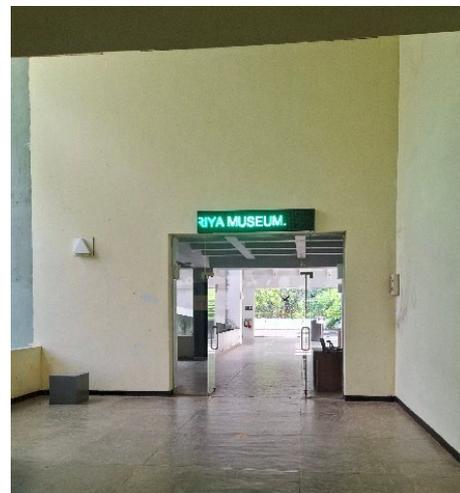
Figure 11: Entrance to Sigiriya Museum. Photo: Arnegger (2025).

Figure 12: Closed souvenir shops at Sigiriya WHS. Photo: Arnegger (2025).

At the exit of the museum, there is an area where interesting **activities for children** are being offered. This is a laudable initiative that can introduce the youngest visitors to the marvels of Sigiriya WHS in a playful way. However, since most visitors do not enter the museum due to the reasons described above, this offer is probably not used as much as it could (and should) be. The same holds true for the **souvenir shops** at the museum exit – several shops are currently not rented out due to lack of business, and the existing ones only offer a small, and quite generic, range of souvenirs.

One problem is that the **gift shops are only accessible via the museum**. Ideally, the gift shops should be situated at the exit (so that every visitor passes through them after the visit), while the museum should be mandatorily visited before entering the main site.

Call to Action:

- Ensure that **medical services** are available all day;
- Improve **F&B options** and general service infrastructure:
    - Re-consider concession models – potentially start a new concessionary process to attract business partners that are committed to provide high-quality services and experiences (consider collaboration with high-quality hotels/restaurants from the start of the process);
    - Establish clear quality standards as pre-requisites for concessionaries;
    - Support concessionaries by directing visitors to the restaurants with better signposts that are in line with Sigiriya WHS's corporate design.
    - Renovate service compound area, consider including more visitor-relevant services (working ATMs, additional restaurants, etc.).
- Enhance visibility of the **museum**:
    - Make visit mandatory after ticket purchase (for both international and national visitors), i.e., close the direct exit to the site from the ticket counter;
    - Install better, more attractive **signposts**;
    - Make **entrance area** more attractive.
- Enhance official **souvenir shop** area:
    - Improve signage and, if possible, visitor flow management, to souvenir shops. Ideally, visitors should pass the shops after the visit to the archaeological site (the second-best option is to make the museum visit mandatory, which means visitors will pass the shops when exiting the museum).
    - Cooperate with shop owners to create high-quality product range that differentiates official Sigiriya WHS souvenirs from generic products available elsewhere;
    - Consider cooperation with Laksala;
    - Consider installing a special **pop-up store** with changing collections in collaboration with local artists (and market it adequately).

Visitor experience enhancement in temple area: Currently, signage and trail markings are good at Sigiriya, but education and interpretation could be improved. Near the ticket counter, a "mobile app" for ticket purchases and information is advertised, but the provided link to the app store (at least on Android) does not work.

There are signs with QR codes at several places, but the weblinks do not work (anymore). Interpretation boards, as well as interactive interpretation features (QR codes) should cater to

different audiences, including children, and include more aspects of **storytelling**, rather than only scientific facts.

While **trails** are marked, it would be advisable to create loop trails (marked by different colors) based on themes and required walking times.

> **Call to Action:**
>
> - Improve **interpretation boards**: make sure QR codes work, include information for specific target groups, especially children, focus on storytelling rather than scientific facts only;
> - Create various **loop trails** of different lengths, marked by colors and following different main themes.

6.3   Monitoring and feedback systems

Sound **data on visitor flows and trajectories** is indispensable for every large-scale attraction or destination, but it is of specific importance in Sigiriya, due to the described challenges related to crowding during certain times and in certain locations. So far, data is available on ticket sales per day, but not on movements of visitors within the site. The abovementioned carrying capacity study did assess visitor density in some areas, but only during a very limited number of survey days. It is required to establish a regular visitor monitoring system to derive appropriate visitor management approaches.

A preliminary assessment of **geolocation data for Sigiriya** reveals some general visitation patterns that need to be taken into consideration for future visitor management strategies. Figure 14 shows an example of such analyses, depicting PINs in Sigiriya for one-hour time periods between 5:00 am and 10:00 am, as well as 1:00 pm and 2:00 pm. These

Figure 13: Sign with header "your comments" at Sigiriya. Photo: Arnegger (2025).

data should be used to develop adequate visitor management systems, that divert visitor flows from peak locations and times.
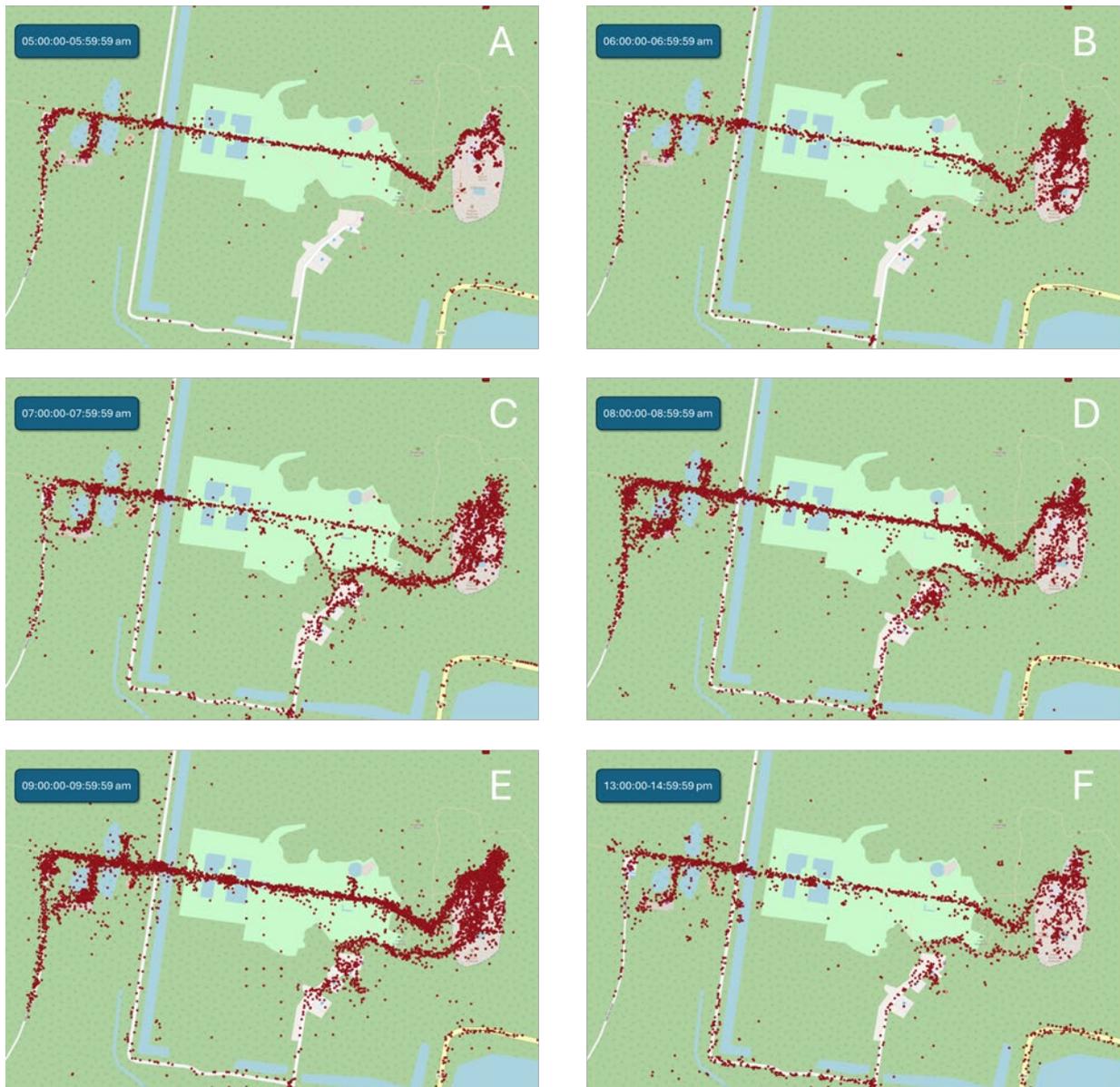
Figure 14: PIN locations in Sigiriya, Sep 2024 - Sep 2025 for different time periods (A: 5-6 am, B: 6-7 am, C: 7-8 am, D: 8-9 am, E: 9-10 am, F: 1-2 pm), Sep 2024 – Sep 2025. Source: own elaboration with data from GapMaps / Azira

In addition to visitor flow management, visitors should be provided the opportunity to give **feedback** on their visit. At the time of research, there was a sign that suggests visitors to leave feedback, but no opportunity to do so (see Figure 13). In addition to feedback options on-site, visitors should be given the opportunity to leave feedback online (e.g., via QR codes). Regular visitor surveys should be conducted as well.

> **Call to Action:**
>
> - Establish visitor flow monitoring, e.g., through geolocation data;
> - Monitor visitor feedback (including with regular visitor surveys);
> - Ensure consideration of visitor feedback in future management decisions.

6.4   Governance and management

There is currently **no established forum for stakeholders to meet and take strategic decisions** for tourism development at Sigiriya WHS; that said, there are plans to establish a **Destination Management Organization (DMO)** under the abovementioned ADB project. It is strongly recommended to implement this plan, and to keep the DMO open for interested stakeholders.

Within the site management, there should be at least 2-3 dedicated and knowledgeable staff working on tourism. Currently, tourism is only seen as a "by-product", although the site draws over 1 million visitors per year and generates significant revenues for CCF, the region, and Sri Lanka at large.

> **Call to Action:**
>
> - Establish Tourism Management Committee with regular (proposal: quarterly) meetings; Objectives: stakeholder engagement and collaboration, destination promotion and product development in line with destination vision
> - At Sigiriya management: create positions for staff dedicated fully to tourism management

6.5   Adaptive management and continuous improvement

Crisis and risk management: As stated above, there are medical services available on-site, but not throughout the whole day. This is specifically relevant since there are severe health risks present at the site, notably:

- **Frequent wasp attacks** on the Lion Rock, specifically on the Lion's Paw terrace and the upper stairway. When this occurs, traffic on the stairway is usually blocked, which may lead to other security issues (e.g., during these times, it may not be possible to evacuate people encountering other health-related issues);
- Potentially dangerous encounters with **elephants**, specifically in the early mornings and in the evenings – times that are very popular to visit the site (see above).

- Health risks due to **overexertion** (visitors frequently underestimate the climb up the Lion Rock) and **heat** (heat strokes).

There are some **risk mitigation measures** in place, e.g., a shelter for visitors when wasp attacks occur (Figure 15). However, it is small and not sufficient for the number of visitors that are usually gathered at the site during peak times. Furthermore, signage is inadequate, and many visitors do not seem to understand the purpose of this structure. In general, information on possible wasp attacks, and appropriate behavior, is relatively scarce.

Figure 15: wasp attack shelter on the Lion's Paw terrace. Photo: Arnegger (2025)

Call to Action:

- Enhance **medical services** (especially service hours);
- Consider removing or re-locating wasp nests that are very close to the stairway (if possible under environmental laws);
- Improve **visitor information on health risks**, and provide clear guidance on appropriate behavior if a situation occurs (on information boards at the ticket counter and on-site);
- Increase **shelter capacity**;
- Install more **water fountains** (if possible, including on the top of the Lion Rock where many visitors arrive exhausted).

A key measure to increase security is to better channel visitor flows, and introduce visitation caps and a time-slot-based reservation system (see chapter 6.2). This will not only improve the visitor experience due to reduced crowding, but also significantly lower security risks.

7   Polonnaruwa

7.1   Preliminary assessment

7.1.1   Context

Polonnaruwa, a UNESCO World Heritage Site, served as the second capital of Sri Lanka from the 11th to the 13th centuries, following the decline of the Anuradhapura Kingdom. The Polonnaruwa Archaeological Park encompasses a significant collection of well-preserved ruins, including royal palaces, various religious edifices such as the Gal Vihara with its massive rock-carved Buddha statues, and sophisticated hydraulic engineering works.

The site is a key component of the nation's cultural heritage and a major tourist destination, offering a comprehensive glimpse into the political, artistic, and architectural advancements of a pivotal era in Sri Lankan history.

7.1.2   Visitation patterns

In 2024, Polonnaruwa Ancient City was visited by 237,363 visitors. Almost nine out of ten visitors were foreigners (86.3%). Polonnaruwa, despite having as well the status of a WHS, thus receives **only a fraction of the visitor numbers at Sigiriya**. While the latter is included in virtually every tourist itinerary in Sri Lanka, Polonnaruwa is much less popular. Visitor numbers at Polonnaruwa have not yet regained the pre-pandemic levels (Figure 16).
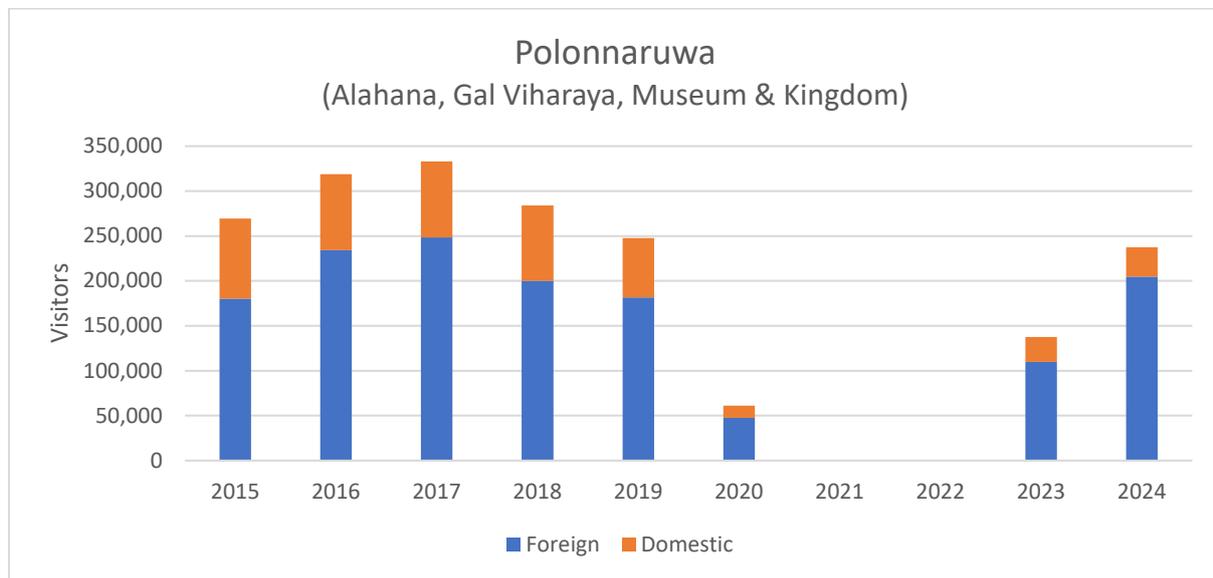
Figure 16: Visitor numbers at Polonnaruwa Ancient City WHS. Sources: SLTDA annual reports (various years). No data for 2021 and 2022.

December to March are the most popular months, with over 20,000 visitors respectively. By contrast, the site draws only about 10,000 visitors in May and June (Figure 17).
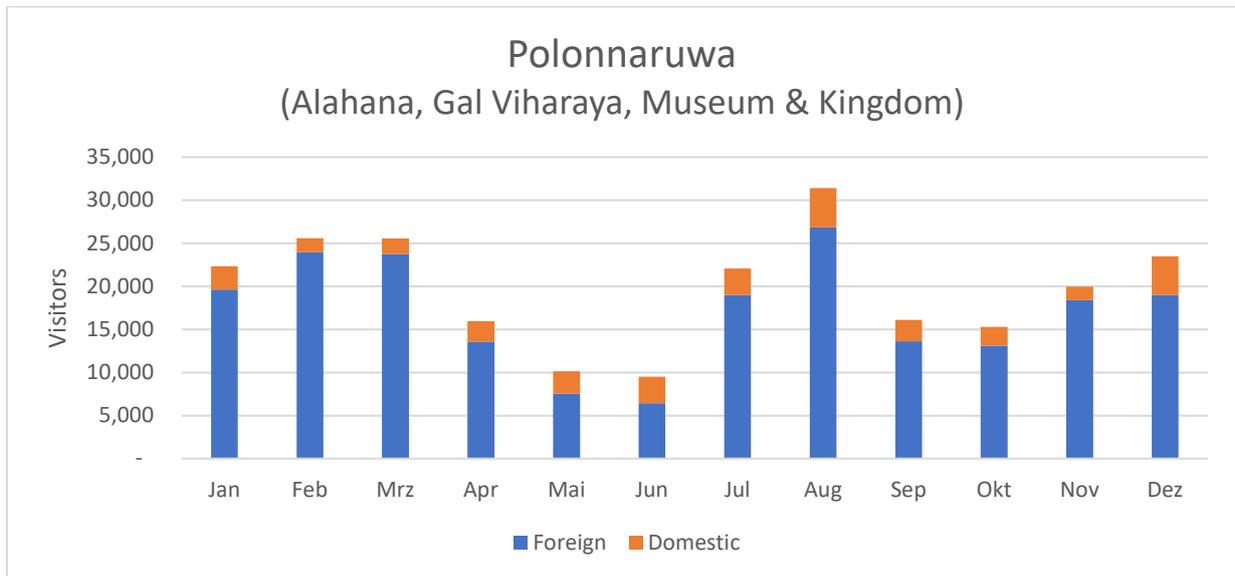
Figure 17: Polonnaruwa Ancient City - monthly visitor numbers. Source: SLTDA.

While visitation numbers vary according to the season, overtourism and crowding is not a specifically strong issue. In addition, the relatively large and flat terrain allows crowds of visitors to spread out easily.

Visiting Polonnaruwa is generally rated as a **very positive experience** by visitors. A TripAdvisor content analysis[14] reveals mostly positive sentiments. Mixed-to-negative aspects mostly concern the heat (in combination with tips on how to be prepared, e.g., bring enough water), and possibility of annoyances by monkeys around the ruins.

Table 6: Content analysis of TripAdvisor reviews for Polonnaruwa Ancient City. Source: TripAdvisor

Theme	Frequency	Sentiment	Insight Summary
Scale & architectural richness	Very High	Positive	Reviewers are in awe of the expansive ruins and well-preserved monuments like Gal Vihara, royal palaces, stupas, and quadrangles.
Heat, terrain & practical tips	High	Mixed/Negative	Many emphasize the need to bring hat, water, sunblock, socks—stone floors get scorching and walking barefoot can be painful.
Monkeys around ruins	Medium	Mixed	Tourists warn about curious or bold monkeys, advising not to leave belongings unattended.

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[14] This content analysis was conducted with the help of AI (ChatGPT).

Theme	Frequency	Sentiment	Insight Summary
Guides, transport & access	Medium	Positive overall, with caution	Visitors recommend hiring guides or using bicycles or tuk-tuks; walking the entire site is time-consuming. One review warns of overcharging guides.
Dress Code & cultural respect	Medium	Neutral/Helpful	Reminders to dress modestly (knees/shoulders), use wraps/sarongs for temple interiors.
Biking as a helpful option	Medium	Positive	Renting bicycles is praised for covering more ground comfortably.

While these online reviews provide a positive picture overall, it has to be stated that **reviews** written in a guest book at the **Polonnaruwa Museum** (which has to be visited mandatorily after the ticket purchase) are somewhat **less favorable**. Here, many visitors complain about the **quality of services** provided, especially given the high entrance fees. Complaints frequently mention a lack of air conditioning in the museum, the quality of the bathrooms, and the lack of a cafeteria, rather than the site itself. Given that the online reviews of the site at large are more positive, it may well be that statements in the guest book represent first impressions, rather than overall assessments after the visit to the whole compound. However, having their visitors start with a bad impression is something that all tourist attractions should avoid at all costs.

7.1.3   Management and stakeholders

The key institutions managing the actual site of Polonnaruwa Ancient City are the Sri Lankan Department of Archaeology (DOA) and the **Central Cultural Fund (CFF)**. Traditional site activities within the ancient city are also supported by relevant Buddhist institutions, reflecting the spiritual significance of many site monuments. International bodies such as UNESCO provide additional guidance and periodic monitoring as part of the site's World Heritage status.

As in other destinations in Sri Lanka, there are **private sector associations** of hotels, tour guides and jeep drivers (the latter mostly offer safari visits to the protected areas in the region, notably Minneriya and Kaudulla National Parks, and Hurulu Eco Park - see chapter 8). All claim that there is virtually no relationship or exchange with the responsible institutions from the public sector, which is also a common theme encountered in all ten pilot sites assessed under this project. Compared to other places, problems with illegal guides or jeep drivers appear to be less frequent.

7.2   Visitor management and infrastructure

As stated above, there appear to be fewer pressing issues in terms of visitor management than at other, more crowded sites, such as Sigiriya. However, visitor management can be improved, notably interpretation and service infrastructure.

Infrastructure: Currently, there is a lack of adequate service facilities on-site. Bathrooms should be improved, and water fountains installed.

Available **F&B and shopping** options inside the complex are relatively limited. They consist of simple stalls (see Figure 18), and the offered product ranges is limited. This observation includes the available **souvenir** options: at least in the low season, several stalls are not functioning at all, and the options available at others are limited and rather generic (see Figure 19).

Private operators are responsible for running these stores, but the site management, i.e., CFF, should have an interest in providing better quality options to visitors. While the current situation is partly related to the relatively low turnover provided by current visitor numbers, specifically in the off-season, stakeholders should start a

Figure 18: Food stalls inside Polonnaruwa Ancient City (near Polonnaruwa Quadrangle). Photo: Arnegger (2025).

Figure 19: Souvenir stalls at Polonnaruwa Ancient City (near Gal Vihara). Photo: Arnegger (2025).

dialogue and work together to improve this important component of visitor experience, i.e., by providing better infrastructure (such as more attractive food courts) and licensing or concession models. This requires tourism know-how and dedicated staff on the side of CFF.

Locations for dedicated service compounds, such as food and souvenir courts, should be based on clear assessments of visitor flow patterns (identification of key sites).

Call to Action:

- Install/upgrade "service compounds" with restaurants/cafés, food and souvenir shops at key locations. Develop licensing/concession models for public-private partnerships with the private sector;
- Install water fountains;
- Improve bathroom facilities.

Visitors to Polonnaruwa are required to purchase tickets at the official counter located at the entrance of the **Polonnaruwa Museum**, located outside the main archaeological compound. This is a good way to provide visitors with background information about the site, other than in, for instance, Sigiriya, where the museum is of a relatively high quality, but hidden on the first floor and visited by relatively few tourists.

In Polonnaruwa, the museum exhibition is generally of a good standard, but could be upgraded by providing more **background information on the archaeological and historic heritage**, including digital information via QR codes, free audio guides, or similar tools. Furthermore, services such as bathrooms, F&B (there is currently no cafeteria or restaurant on the museum should be provided/improved, as well as air conditioning or fans. All these points are frequently risen by visitors in written statements in the "guest book" provided in the museum.

There is a small **shop** at the exit of the museum, which has some interesting items (including books). However, the way the items on sale are currently displayed, is rather unattractive (old shelfs, dust, some items on display are wrapped in plastic, etc.).

It has to be stated, that these visitor expectations have to be considered also against the **relatively high entrance fees** for foreign visitors (approximately USD30), which are higher than many world-famous heritage attractions in other countries. Travel-experienced visitors may thus be dissatisfied with the current level of services provided.

> **Call to Action:**
>
> **Polonnaruwa Museum**
>
> - Improve/enhance information/interpretation provided in the museum exhibition (including via digital tools, such as QR codes, audio guides, etc.);
> - Install air conditioning (or fans);
> - Improve bathrooms;
> - Upgrade museum shop.

Visitor experience enhancement: While the vast area of Polonnaruwa Ancient City is generally well-maintained, the actual visitor experience could be enhanced by providing better, and more, education and interpretation, both at the museum (see above) and within the actual archaeological site.

There are some explanation boards on the site, but only at a few key points, and some of them are not clearly readable anymore (Figure 20). There are also QR codes provided, but they were not working at the time of research. Against the relatively high ticket price, there is room for improvement in this area.

To move beyond static information boards toward **immersive and interactive elements**, the management could also:

Figure 20: faded-out interpretation board at Polonnaruwa Ancient City. Photo: Arnegger (2025)

- Implement an official **mobile app** with GPS-guided tours, audio narrations in Sinhala and Tamil, and **augmented reality features** that overlay digital reconstructions of the ruins.

- Create a **"Before and After" experience** using **visual boards or QR codes** at key locations, showing what the structures looked like in their prime.

- Include **gamification** elements in digital interpretation tools, such as a **"treasure hunt"**, where kids can collect virtual items at different locations throughout the site.

Instead of a single, sprawling site, Polonnaruwa could be promoted as a collection of **themed zones**, which provide bases for specific tours and itineraries. For example, a **"Royal Capital" tour** focused on the palace and council chambers, a **"Spiritual Journey"** centered on the temples and sacred sites like *Gal Vihara*, or an **"Ancient Engineering Marvels" tour** highlighting the *Parakrama Samudra* reservoir and hydraulic systems. This breaks down the scale and allows visitors to choose an experience that aligns with their interests and time constraints. It should be able to combine tours, and to adjust them to individual interests. Tours (itineraries) should be clearly marked on maps (see below) and on signposts with different colors.

Given the large extension of the area, it can be challenging for visitors to find their way around the site. Handing out **maps** with tickets (and/or, installing more **orientation boards**, as well as more signposts within the site) would help. Finally, itineraries of different lengths and themes should be developed and marked with signposts and on maps (with different colors), for visitors on foot or on bikes.

> **Call to Action:**
>
> - Improve (quantity/quality) **information/interpretation boards** within the archaeological site;
> - Provide special information boards for **kids**;
> - Install working QR codes;
> - Create themed zones and itineraries (and mark and communicate them clearly);
> - Create immersive and interactive elements and digital tools (app, VR elements, games);
> - Upgrade **maps** (quantity/quality), provide map leaflets with tickets, install more orientation boards and signposts in the archaeological site
> - Develop and communicate **different itineraries** for visitors (of different lengths and/or themes, for visitors on bikes as well as on foot), clearly marked with different colors on maps and signposts.

7.3   Monitoring and feedback systems

As stated in Volume 1 of this report, a sound **visitor monitoring system** is indispensable for every attraction and destination, especially larger attractions such as Polonnaruwa. Sound data on visitor flows and trajectories allows for better planning, including for infrastructure that is relevant for enhancing tourist experiences.

Although overall satisfaction with the site is good, there is room for improvement, as exemplified above by critical comments on TripAdvisor and in the museum's feedback book. These comments should be monitored by dedicated staff, and addressed by an adaptive management to continuously improve the visitor experience.

It is advisable to also conduct regular visitor surveys, in addition to the feedback options already provided on-site, or on websites.

Call to Action:

- Establish visitor flow monitoring, e.g., through geolocation data;
- Monitor visitor feedback (including with regular visitor surveys);
- Ensure consideration of visitor feedback in future management decisions.

7.4   Governance and management

There is currently no established forum for stakeholders to meet and take strategic decisions for visitor management and general tourism development. While Polonnaruwa as attraction is under the management of the CFF, there should be an institutionalized **Tourism Management Committee**, open to relevant actors from the private sector and the civil society.

Call to Action:

- Establish**Tourism Management Committee** with regular (proposal: quarterly) meetings; Objectives: stakeholder engagement and collaboration, visitor experience enhancement;
- At **CFF**: create positions for **staff dedicated fully to tourism** management, provide training and capacity building as required.

8   Hurulu Eco Park

8.1   Preliminary assessment

8.1.1   Context

The Hurulu Eco Park, situated within the North Central Province of Sri Lanka proximate to the town of Habarana, is an integral component of the Hurulu Forest Reserve, which was designated a UNESCO Biosphere Reserve in 1977. Hurulu Eco Park itself was established in 2006 with the primary objective to provide opportunities for **wildlife tourism** and generate revenues for conservation management. This protected area (PA) is a prominent location for wildlife observation, notably due to its function in facilitating the seasonal migratory movements of the **Sri Lankan elephant** (*Elephas maximus maximus*).

Functioning as a critical **wildlife corridor**, the park enables the **transit of elephant herds** between the adjacent Minneriya and Kaudulla National Parks. This migratory pattern presents a significant opportunity for research and observation of these proboscideans in their natural habitat. Depending on the season, elephants tend to gather in different areas:

- **Minneriya National Park:** during the dry season (July to October);
- **Kaudulla National Park:** as the water levels in Minneriya rise with the rainy season, elephants begin to move to Kaudulla National Park (September to December);
- **Hurulu Eco Park:** After the rainy season has filled the tanks in Minneriya and Kaudulla, the elephants continue their migration. The best time for elephant sightings in Hurulu Eco Park is from November to June, when the herds move to this area in search of fresh grazing.
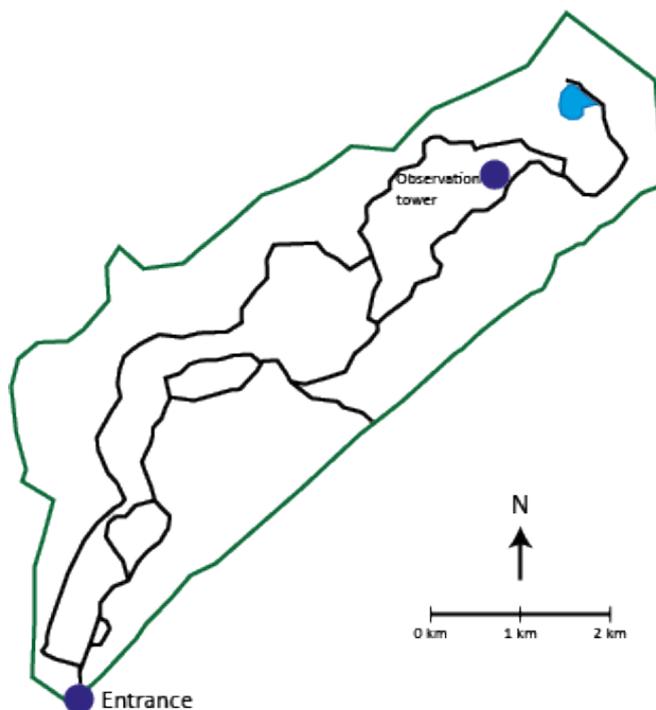
Figure 21: Overview map of Hurulu Eco Park with depiction of main roads. Drawing and design: Arnegger (2025).

In addition to this main attraction, the park's diverse ecosystem, characterized by dry-zone evergreen forests and extensive grasslands, supports a variety of indigenous fauna, including Sri Lankan leopards (*Panthera pardus kotiya*), Sri Lankan sloth bear (*Melursus ursinus inornatus*), different species of deer, wild boar (*Sus scrofa*) and the endemic Sri Lankan junglefowl (*Gallus lafayettii*), as well as a rich variety of other birds. The park's ecological significance and easy accessibility (it is a short drive from Habarana) make it a popular location for ecotourism and conservation studies.

As part of the Hurulu Conserved Forest, Hurulu Eco Park is under the administration of the **Department of Forest Conservation (DFC)** – other than national parks, which are under the Department of Wildlife. Thus, the three main PAs in the region for elephant watching are administered by different governmental institutions, which makes cooperation more challenging.

Hurulu Eco Park can only be visited with an organized tour and with a driver. It is estimated that there are currently about 700 jeep drivers operating in the area – not only in Hurulu Eco Park, but also in the adjacent two national parks mentioned above, depending on the season. There is a relatively dense **network of dirt roads** in the park that are being used for safaris (see Figure 21). However, in addition to official roads, drivers sometimes use smaller, unofficial tracks to get closer to the animals. Although it is prohibited to leave the official roads, this practice has led to the emergence of a network of unofficial tracks. It hampers the wellbeing of elephants and negatively affects other flora and fauna through disturbances and destruction of habitats (see Figure 22).

Figure 22: Visible network of unofficial tracks between two official roads in Hurulu Eco Park. Source: GoogleEarth (2025).

8.1.2 Visitation patterns

Hurulu Eco Park was visited by approximately 245,000 visitors in 2024, 72.0% of which were foreign tourists (see Figure 24).Visitor numbers have increased substantially since the pandemic, and are now at record heights – about twice as high as in 2019, the previous record year. These numbers carry challenges and risks for wildlife and biodiversity, if not adequately managed.

Potential **overtourism-related challenges** are aggravated by the fact that visitor numbers are spread unevenly across seasons, mostly related to the abovementioned seasonal elephant migration patterns. Following elephant migration, visitor numbers are highest in the months of December to May, and much lower June to October (see Figure 25). In the most visited month, December, an average number of over 1,250 people visits the park, whereas in

Figure 23: Overtourism at Hurulu Eco Park. Source: TripAdvisor (https://tinyurl.com/4xjrr89s)

September, the least-frequented month, this number drops to about 80.

Finally, visitors are also **unevenly distributed throughout the day**. Usually, tourists visit Hurulu Eco Park either early in the morning, or in the late afternoon, when elephants and other animals are most active. This leads to congestion in some areas during the peak season, and to serious disturbances of the animals in some instances. This has also been described and documented by some travelers on review platforms such as TripAdvisor (see Figure 23).
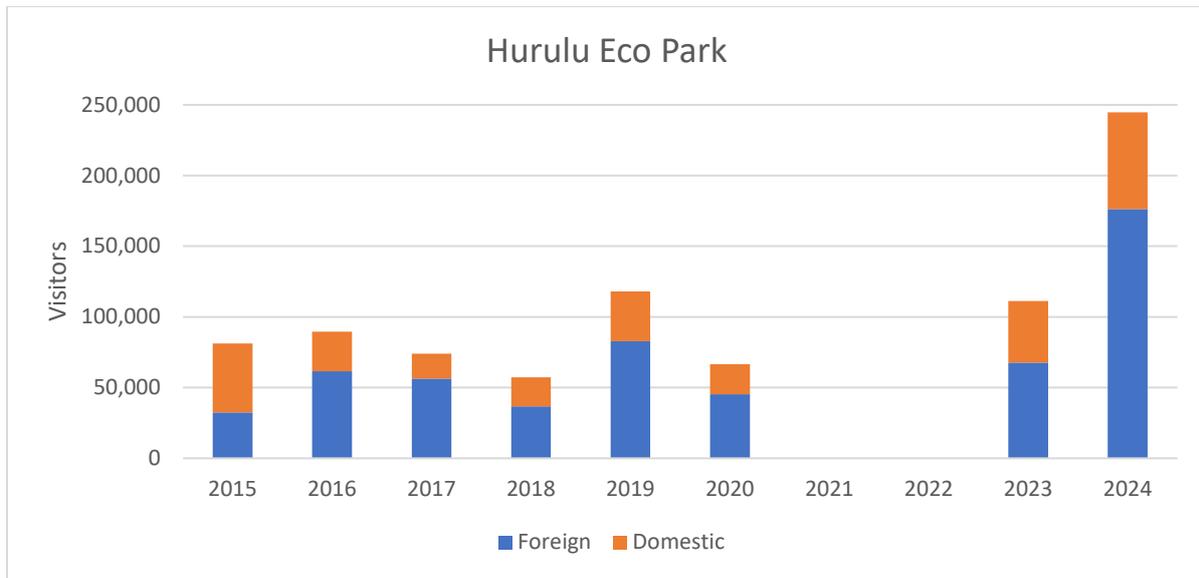
Figure 24: Visitor numbers for Hurulu Eco Park, 2015-2024. Sources: DFC (2015-2016), SLTDA (various years); no data for 2021-2022.
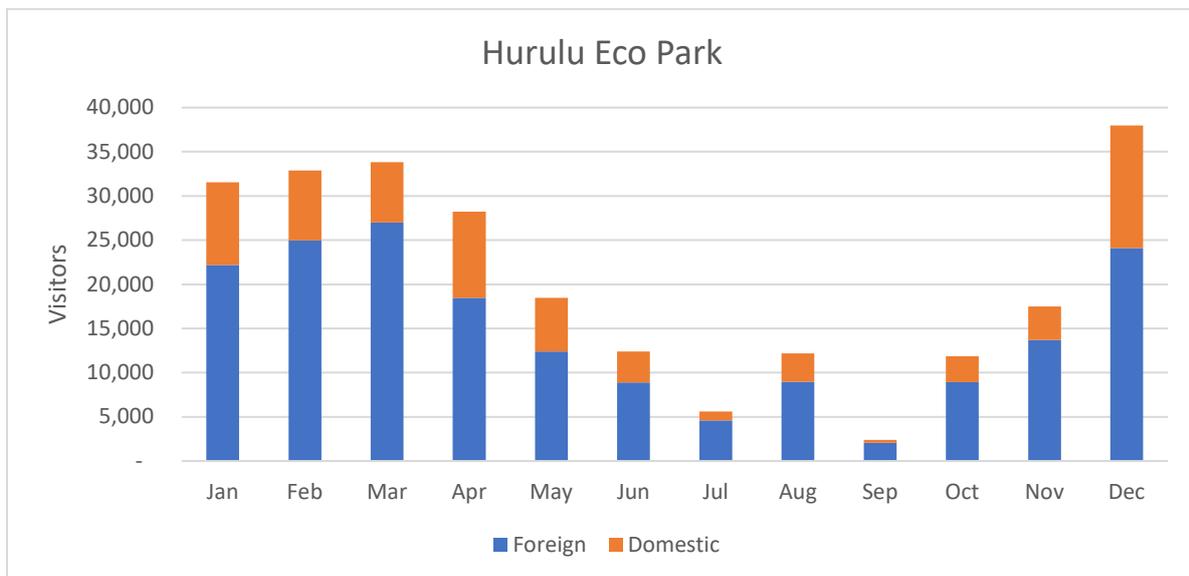
Figure 25: Monthly visitor numbers for Hurulu Eco Park, 2024. Source: SLTDA.

Overall, reviews on TripAdvisor are good, with an average of 4.0 (out of 5). However, there are a few highly critical reviews, all of which are related to overcrowding. Crowding is also mentioned by some of the more positive reviews and is an issue that needs to be addressed by management, so as to (a) limit animal disturbance, and (b) ensure quality tourist experiences. A detailed TripAdvisor content analysis[15] for Hurulu Eco Park is depicted in Table 7.

Table 7: Content analysis of TripAdvisor reviews for Hurulu Eco Park. Source: TripAdvisor

Theme	Frequency	Sentiment	Insight Summary
Elephant sightings	Very High	Positive	Reviewers consistently report abundant close-up encounters—"within feet," large numbers.
Overcrowding / many Jeeps	High	Negative	Common complaints about too many jeeps surrounding elephants, detracting from the experience.
Jeep ride & roads	High	Mixed (Physical but fun)	Rough roads mentioned; bumpy ride considered part of the adventure by some.
Driver behavior / respectfulness	Medium	Mixed	Many drivers are respectful and skilled; some push too close for views.
Wildlife diversity (birds, buffalo)	Medium	Positive	Peacocks, eagles, buffalo, and other wildlife frequently spotted.
Timing (early or late visits)	Medium	Positive	Afternoon/evening visits often yield better wildlife sightings and fewer crowds.
Value for money / private tours	Low–Medium	Positive	Private jeep safaris praised as cost-effective and rewarding.

As evident from the analysis, **negative comments** most frequently mention the overall high number of vehicles in the park but also single out inappropriate behavior of some of the drivers, who push too close to the animals for "better" views, sometimes even leading to complete encirclement of elephants, including babies. Inappropriate behavior by drivers also leads to the abovementioned unofficial trail problem, with the described consequences.

8.1.3   Management and stakeholders

As mentioned above, Hurulu Eco Park is managed by the DFC under the MOE, and has thus a different management structure than the two national parks in the area. This carries challenges; whereas all three parks share the same main attraction (elephants), there appears to be not much cooperation and exchange on tourism, although there are exchanges related to human-wildlife conflicts, when they

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[15] This content analysis was conducted with the help of AI (ChatGPT).

occur. Furthermore, the two departments collaborate when elephants die in Hurulu Eco Park, since only the DWC can conduct post mortem.

However, with relation to tourism, capacities at DFC are limited: Hurulu Eco Park has eight staff in total working at the ticket office, as well as three rangers, but no designated staff for tourism management and development.

Jeep drivers, guides and tour operators represent a second, important group of stakeholders. As mentioned above, jeep drivers are crucial, since their behavior and (non-) compliance with existing regulations has a direct impact on biodiversity conservation in the park. While most drivers appear to follow the existing Code of Conduct (COC), there are some that do not. This not only poses risks for elephants and other wildlife (e.g., when drivers approach animals too closely and disturb them, or when they follow unofficial tracks which leads to erosion and destruction of flora and fauna). However, such behavior will also hamper the tourist experience in the long run, since it threatens the main attraction that the park has to offer.

Some drivers and guides reportedly overcharge tourists visiting Hurulu Eco Park. The entrance fee is relatively low (LKR 2,060.00 for foreigners), much lower than in the national parks in the area. Since drivers usually buy tickets for their group at ticket counter at the main entrance before entering the park, some apparently claim that entrance fees are higher than they are in reality. Reportedly, it has also happened that drivers claimed they were in a different park with higher ticket costs.

While it has to be underlined that the large majority of jeep drivers and guides appear to adhere to the rules and understand their importance, the sheer number of jeeps in the area, estimated at around 700, also poses a problem. At present, there is no limitation in place on the number of jeeps operating in the PAs, nor on the number of vehicles allowed inside the parks at a given time.

Some members of the Tourist Hotels Association of Habarana are active in promoting more sustainable forms of wildlife tourism, e.g., by raising awareness about nature and wildlife conservation in general, and by cooperating with environmental NGOs to offer trainings for jeep drivers. These initiatives are driven by a group of committed entrepreneurs in the region.

Trainings are offered, in particular, by the **Federation of Environmental Organizations (FEO)** Sri Lanka under its **Nature Interpretation Programme (NIP)** for jeep drivers and wildlife guides, offered in cooperation with DWC and SLTDA. Drivers that have successfully completed the training receive a certificate. At Minneriya and Kandulla National Parks, only drivers with the certificate (visible as sticker on the front shield), are allowed to enter the park, but at Hurulu Eco Park, there is, so far, no such limitation.

8.2   Visitor management and infrastructure

Visitor flow management: There is an urgent need to **limit visitation** at peak times in Hurulu Eco Park (as well as in the other two parks, although they are not part of this assessment). There are too many vehicles in the park during the high season and during peak hours, notably in the late afternoon (up to 300-400/day). This hampers the tourist experience, as exemplified by negative statements on review websites. However, first and foremost, it poses a significant threat to elephants and other wildlife, the parks' key tourist assets.

Currently, tickets can only be bought at the ticket counter in Hurulu Eco Park. There is no online ticket system, no limitation with regard to the number of tickets per day, and no time-slot based reservation system.

In the park itself, there is a system of official dirt roads; however, as stated above, there is also a network of unofficial tracks which are sometimes used by drivers as shortcuts, or to get closer to animals. The park does not have the necessary resources to effectively control this situation.

Call to Action:

- Introduce **visitation quotas** (limit of maximum number of vehicles allowed in the park at any given time);
- Develop user-friendly **online reservation system** (time-slot based);
- Promote and support **trainings** for drivers and guides, allow access to the park only to drivers with official training completion certificate;
- Effectively control drivers' behavior in the park (including with increased ranger patrols, but potentially also with cameras and other technological tools at key locations);
- Impose fines and/or temporary bans for drivers not adhering to the established Code of Conduct;
- Close unofficial trails with physical barriers, e.g., logs or rocks.
- Consider introduction of one-way systems on some roads, and/or opening of a second entrance to better distribute visitors in space (see also next chapter on geolocation data).

Visitor experience enhancement: So far, the main factor that limits quality visitor experience is overcrowding and lack of visitor flow management (see above). However, there are other avenues to increase the visitor experience, and potentially also address the problem of congestion during certain times, and in certain places.

The most important tool is **experience diversification**: while elephants will remain the main attraction, there are other wildlife and nature experiences that Hurulu Eco Park has to offer, specifically with regard to **bird watching**. The park management should cooperate with interested stakeholders (hotels, guides, drivers), to develop alternative products.

At the moment, there are virtually no **interpretation boards** or other educational approaches at Hurulu Eco Park. There are a few information signs around the main entrance, but they are poorly designed and some even feature spelling and grammatical mistakes. Upgrading and enhancing information boards at the entrance can increase the quality of the visitor experience and provides also an opportunity for the park management to communicate the significance of biodiversity conservation.

Call to Action:

- Develop **alternative wildlife and nature tourism products** (e.g., bird watching, hiking);
- Upgrade **interpretation tools** (specifically information boards).

8.3   Monitoring and feedback systems

Monitoring of visitor flows inside the park is indispensable for sustainable management of this sensitive ecological attraction. Thus, data needs to be available that can be used to analyze visitor flows and crowding in both time and space, e.g., via **geolocation data** from smartphone apps. Having such data will allow for better planning of trajectories, visitation caps, and infrastructure. It can also support enforcement measures, e.g., by indicating which unofficial trails are most used and during which times.

An evaluation of smartphone-based geolocation data for Hurulu Eco Park for the period of Sep 2024 – Aug 2025 shows, in addition to the abovementioned seasonality, very strong differences in visitor distribution in the park during different time periods. Figure 26 depicts the aggregated daily PINs for the full 12-month period, whereas Figure 27 shows mapped geolocations for the hourly periods of 07:00 am until 01:00 pm.
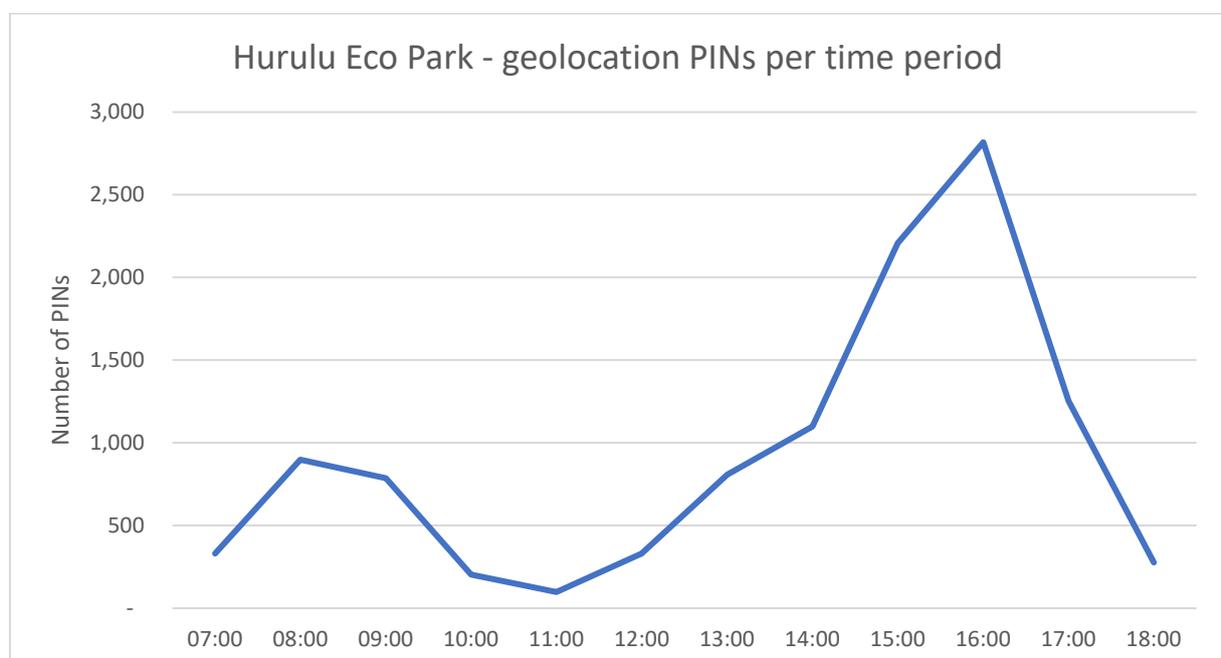
Figure 26: Hurulu Eco Park - geolocation PINs per time period (data for Sep 2024 - Aug 2025). Data Source: GapMaps/Azira.

The data supports suggests that visitor management measures need to be taken that re-distribute visitors in time and space. The introduction of one-way roads, in combination with the closure of unofficial trails, as well as opening a second entrance gate in the northern part of the park, may be measures to better distribute visitors in time and space.

That said, the introduction of time-bound (hourly) quotas and a time-bound reservation system, as described above, are indispensable.

Figure 27: PINs (smartphone-based geolocations), aggregated visualization of data for Sep 2024 - Aug 2025 for the time periods 07:00-07:59 am until 12:00-01:00 pm, Hurulu Eco Park. Data: GapMaps/Azira; map base: Google Earth.

Furthermore, **visitor feedback** should be regularly monitored on review platforms such as TripAdvisor, and visitors should also be provided the opportunity to leave feedback via clearly communicated ways, including digital ones (e.g., via QR codes).

> **Call to Action:**
>
> - Establish visitor flow monitoring, e.g., through geolocation data;
> - Use visitor flow (geolocation) data for informed decisions on visitor management (see previous chapter);
> - Monitor visitor feedback (including with regular visitor surveys);
> - Ensure consideration of visitor feedback in future management decisions.

8.4   Governance and management

There is currently no established forum for stakeholders to meet and take strategic decisions for visitor management and general tourism development. While Hurulu Eco Park as attraction is under the management of the DFC, there should be an institutionalized **Tourism Management Committee**, open to relevant actors from the private sector and the civil society.

In addition, there needs to be more active collaboration with stakeholders dealing with tourism management at the adjacent Minneriya and Kaudulla National Parks. Considering that those two are under the management of the DWC, this also implies a need for better inter-governmental collaboration and communication.

Within the park management, positions need to be created for **qualified tourism staff**, given the park's position as major tourist attraction in Sri Lanka.

> **Call to Action:**
>
> - Establish **Tourism Management Committee** with regular (proposal: quarterly) meetings; Objectives: stakeholder engagement and collaboration, visitor experience enhancement;
> - At **Hurulu Eco Park / DFC**: create positions for **staff dedicated fully to tourism** management, provide training and capacity building as required.

9 Galle Fort

9.1 Preliminary assessment

9.1.1 Context

Galle Fort is a **UNESCO World Heritage Site** located on the southwestern coast of
Sri Lanka. Constructed by the Portuguese in the 16th century and subsequently
fortified by the Dutch during the 17th century, the site represents a significant
example of a European-built fortified city in South and Southeast Asia. The fort's
historical importance is complemented by its cultural vibrancy, as it functions as
a living city with a diverse blend of architectural styles and contemporary life. The
area features narrow, cobblestone streets that contain various commercial and
cultural establishments, including boutique shops, art galleries, and cafés. Notable historical structures
within the fort include the Galle Lighthouse and the Dutch Reformed Church. The integration of
historical architecture with a dynamic urban environment makes Galle Fort a significant point of
interest for tourists, and one of the most visited attractions in Sri Lanka.

While Galle Fort is a prime tourism site in Sri Lanka, there are several challenges related to tourism
development and sustainability. A primary concern is the tension between commercialization and
heritage preservation. The increasing pace of tourism-related development, such as the conversion of
historic buildings into hotels and restaurants, is raising concerns about the loss of the fort's authentic
character and displacement of long-term residents, a phenomenon known as **tourism gentrification**.
This commercial pressure can lead to illegal alterations to heritage structures, with some stakeholders
reportedly making changes without proper authorization, while others face strict regulations for even
minor repairs.

Furthermore, the **physical infrastructure** struggles to cope with the influx of visitors. Reports from
residents and business owners highlight significant issues with traffic congestion, particularly on
narrow inner roads, and inefficient waste management, with garbage and food waste collection being
insufficient for the volume of a tourist-heavy area. These issues not only undermine the **quality of life**
for the **local community** but also detract from the **visitor experience**.

9.1.2 Visitation patterns

There are no visitor numbers available for the Galle Fort area, given that it is a regular part of the city
of Galle, with residential, administrative and economic functions, and no access control. There are
several attractions within the Galle Fort boundaries that do log visitor numbers, including three
museums (two managed by the Department of Museums, one by CCF). It is fair to assume that they
only capture a relatively small fraction of total visitors.

In 2024, Galle Museum, Galle National Museum and Galle Maritime Museum were visited by a total of
155,794 tourists, 83.8% of which were domestic visitors. This suggests that these museums fail to
attract a significant share of the many foreigners who visit Galle Fort.

Monthly visitor numbers are only available for Galle Museum managed by CCF. However, it can be
assumed that they provide a general overview on seasonality at Galle Fort in general. Thereby, January
and December are by far the months that attract the highest numbers of tourists (see Figure 28).
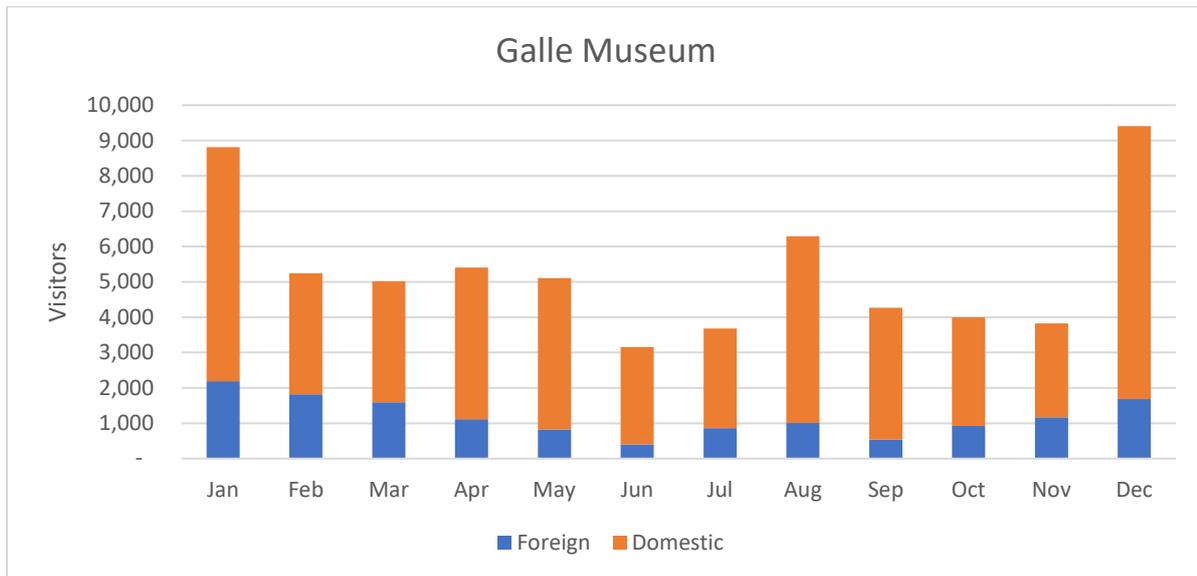
Figure 28: Monthly visitor numbers at Galle Museum. Source: CCF/SLTDA.

A smartphone app-based geolocation analysis reveals that visitation also strongly differs throughout the day. The highest number of PINs (unique geolocation events) are registered between noon and the early afternoon, whereas the mornings are much less frequented. There is a secondary peak after 6 pm, when people start heading out for dinner (see Figure 29). The figures also show that visitation drops significantly after dark, partly due to a lack of nighttime activities and events.

Geolocation events were also analyzed in terms of their spatial distribution within the Galle Fort area, and the result is depicted as heatmap in Figure 30. It clearly shows that there is a concentration in the center of the Fort area, which is somewhat surprising, given that there are no major heritage sites at these locations; however, there are many shops, restaurants and hotels popular with tourists, suggesting that these commercial establishments are more important for many visitors, than the actual heritage assets of the area.
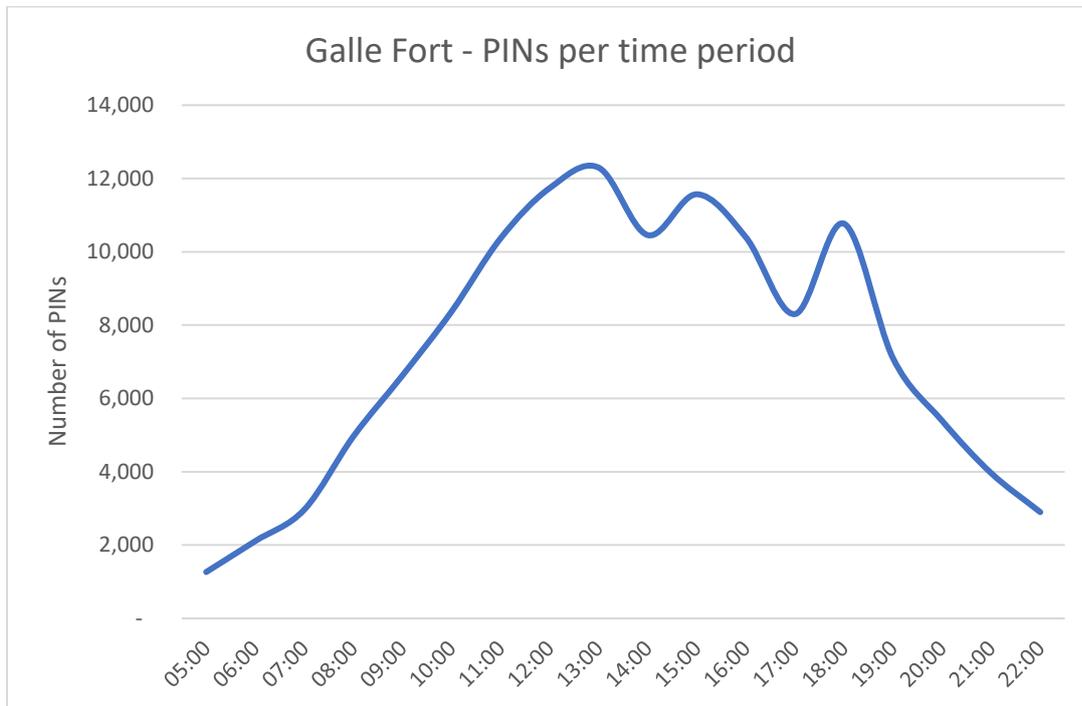
Figure 29: Galle Fort - geolocation PINs per time period (Jan-May 2025). Source: Azira / GapMaps.
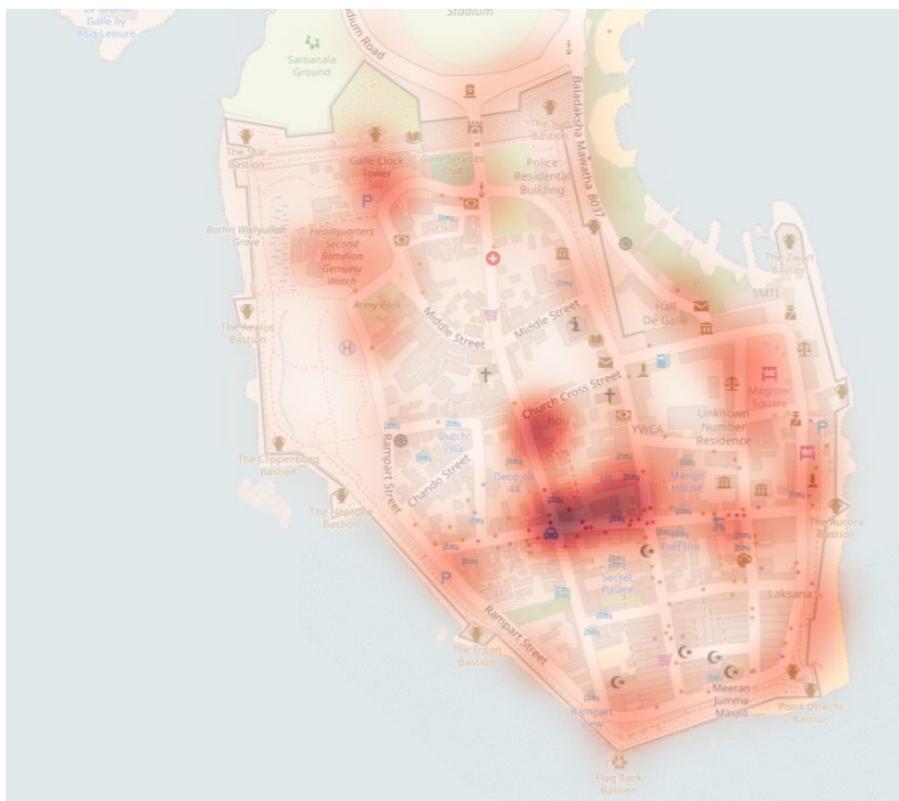
Figure 30: Heatmap of geolocation events in Galle Fort, Jan-May 2025. Source: Azira/GapMaps

Overall, reviews on TripAdvisor for Galle Fort are very good, with an average of 4.4 (out of 5). However, there are some critical aspects, notably related to perceived over-commercialization, crowding and problems with scamming, e.g., from tuk-tuk divers. A detailed TripAdvisor content analysis[16] for Galle Fort is depicted in Table 8.

Table 8: Content analysis of TripAdvisor reviews for Galle Fort. Source: TripAdvisor

Theme	Estimated Frequency	Typical Sentiment	Details & Key Points
Historical / colonial architecture & heritage	Very High (~70-80%)	**Strongly positive**	Many reviewers praise the preserved colonial buildings, Dutch walls, bastions, old churches, lighthouse, old gates, the ramparts. It's cited as the core draw: history + architecture.
Scenic views & ramparts walk / sea views	Very High	Positive	Walking along the walls, enjoying ocean views, views of the lighthouse, the sunset, coastal panoramas are frequent highlights.
Shops / restaurants / boutiques / cafes inside the Fort	High (~50-60%)	Mixed to Positive	Many recommend strolling through shops, nice cafes. But some reviewers complain that many shops are repetitive, many restaurants serve Western food rather than local, and prices can be higher inside the Fort.
Atmosphere & ambiance (sunset, evening vs morning)	High	Positive	Often people note the Fort is especially beautiful in early morning or late afternoon/sunset when light is nice, fewer crowds, more tranquil.
Crowds, traffic, tuk-tuk drivers & noise / congestion	Medium to High	Mixed / Negative	Complaints about traffic inside the Fort (vehicles), aggressive tuk-tuk drivers, crowds, safety of walking on roads with traffic.
Cleanliness / maintenance / litter	Medium	Mixed / Negative	Some reviewers mention litter or lack of garbage bins, needing better upkeep in certain parts, especially along ramparts or less-used paths.
Cost / value (within the Fort vs outside)	Medium	Mixed	Many say it's free or low cost to walk around, but food/drink/shop prices can be steep. Some visitor expectations of "colonial charm" vs cost lead to mixed feelings.

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[16] This content analysis was conducted with the help of AI (ChatGPT).

Theme	Estimated Frequency	Typical Sentiment	Details & Key Points
Walking comfort / physical effort / footwear	Medium	Mixed	Walking on uneven cobblestones, narrow streets, heat (sun exposure), lack of shade are mentioned as issues. Comfortable shoes recommended. Times of day matter.
Photogenic / photography	Medium to High	Positive	Reviewers love photo opportunities: walls, lighthouse, sunset, old colonial facades, narrow lanes. Often say "bring camera."

There are also some differences in the general sentiments between tourists of different origin:

- European visitors often compare preservation vs modern commercialization, talk about cafes/restaurants, sometimes lament repetitive shops.
- Asian/domestic visitors narrate more about the daily life inside the Fort, how the Fort functions as a living community, etc. (some reviews by local authors). Less emphasis on "touristy" downsides.

In short, European visitors tend to be more critical with regard to commercialization than locals and other tourists from Asian countries.

9.1.3   Management and stakeholders

The **Galle Heritage Foundation (GHF)** is the key statutory institution responsible for the preservation, conservation, and development of Galle Fort. It plays an important role in tourism management by acting as a central authority that coordinates various stakeholders to ensure the site's historical integrity is maintained. GHF's responsibilities include managing and maintaining the Fort's infrastructure and public amenities, regulating and enhancing the visitor experience through information centers and cultural programs, and promoting sustainable tourism that benefits the local community while protecting the site's unique cultural and historical character.

Furthermore, Galle Fort is characterized as an integral part of Galle City, with a local population, public and economic functions, of which many are not directly related to tourism (e.g., schools, court house, military barracks). This is part of Galle Fort's appeal as a "living" heritage site, but it also involves challenges, since interests of the local community and the tourism sector (which partly overlap, i.e., in the case of local tourism entrepreneurs) have to be aligned.

In recent years, the local tourism sector has been more and more characterized by an increase of foreign (or external) ownership, and the conversion of buildings and public spaces for tourism purposes (see abovementioned notes on **tourism gentrification**). Some businesses are organized in an association for owners of buildings and businesses.

Furthermore, there are **systemic challenges** in governance and community involvement. While the **Galle Heritage Foundation (GHF)** is staffed to manage the site, it faces a significant lack of capital for conservation activities and is financially dependent on external grants. There is also a noted absence of a clear, long-term tourism strategy that promotes sustainable benefits for the local community and

addresses the potential for over-tourism. A **lack of transparent zoning laws** and a need for greater collaboration between authorities, businesses, and residents also contribute to the ongoing management difficulties.

9.2   Visitor management and infrastructure

Visitor flow management: The Galle Fort suffers from overcrowding during certain peak times and days. This does not only hamper the tourist experience, but also negatively affects the daily lives of the local community.

As stated above, visitors concentrate in certain areas of the old fort, notably around commercial businesses, such as spa or souvenir shops, or popular restaurants, as well as a few key sites, such as the Galle Lighthouse or Clock Tower, and parts of the old ramparts. In general, most visitors follow a single, well-known path along the main ramparts and Pedlar Street. One reason appears to be that some guides lead tour groups to businesses from where they can obtain commission, rather than to public spaces or heritage sites.

There are **signposts** for independent visitors, but there should be more. Only two large-scale **maps** are installed inside the Fort area, and they are already faded out. They are located inside the walls, not at the entrances, where tourists are actually looking for orientation.

Some **interpretation and education boards** are available as well. They are made of stone and fit well into the general context; however, the text is often faded out and not fully readable anymore, due to the climatic and weather conditions near the sea shore (see Figure 31). Better signposts, better information boards, and available marked thematic walks would help to disperse visitor flows to currently under-visited areas, which would reduce crowding and benefit more local businesses, not only the financially strongest that can afford high commissions to guides and tuk tuk drivers.
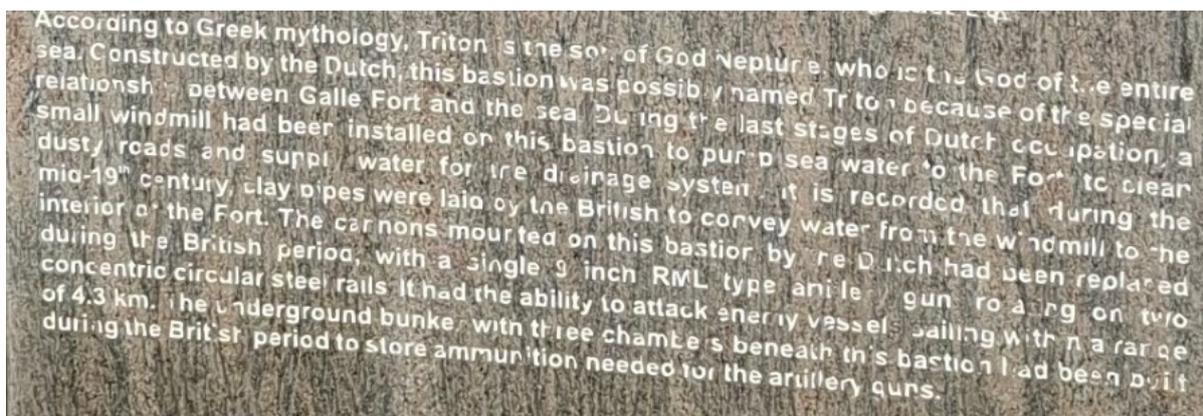
Figure 31: Information board near Triton Bastion in Galle Fort with faded text. Photo: Arnegger (2025).

Traffic inside the Galle Fort area needs to be restricted. Thus, access should be limited for non-locals, via smart access points.

Call to Action:

- Install signposts to key sights within Galle Fort;
- Renew information boards;
- Create and promote alternative walking trails: map out and clearly mark alternative walking routes that highlight lesser-known, quieter streets and attractions. These paths could be themed, for example, *"The Artisan Route"* showcasing local craftspeople or *"The Architectural Heritage Walk"* focusing on unique colonial buildings off the main streets. Promoting these routes through signage and visitor guides would encourage exploration and distribute crowds more evenly.

Visitor experience enhancement: Currently, a major drawback for visitors is aggressive behavior from some guides (especially fake, unlicensed guides)

The abovementioned lack of signposts and information boards not only affects visitor flows, but also the general **visitor experience**. At the moment, independent visitors entering the main gate are almost always approached, sometimes aggressively, by several persons attempting to sell guided tours by foot or tuk tuk. The argument generally is that self-guided visits are not possible due to a lack of signposts (which is partly true), and that the Fort area is not walkable, which is why a tuk tuk is needed (which is not true). Given that there is no official information center, nor clear signposts or information boards, at the main entrances, tourists often feel poorly informed and therefore pressured when guides or tuk-tuk drivers pester them. A Tourist Police post near the main entrance would help reduce these problems.

Furthermore, the area around the main entrance gate is used as parking area for tour buses, which significantly hampers the visual aesthetics, and the overall tourist experience (see Figure 32).

Figure 32: Tour buses parking in front of the Galle Fort ramparts. Photo: Arnegger (2025).

At the moment, there are **high concentrations of visitors during the day**, specifically around noon. This is related to the organized tour group's schedules, specifically cruise ship tours. However, there should be incentives and initiatives to re-distribute visitor numbers more evenly throughout the day. Ultimately, time-slot based entry schemes (at least for key sights, such as the Galle Fort ramparts), would help achieving this.

Figure 33: Main gate to Galle Fort (with simulated barrier). Photo: Arnegger (2025), AI-generated image components by ChatGPT.

Traffic still is a major issue within the fort area. There is currently a **traffic management plan** under development; it should emphasize traffic reduction and restrictions for non-local vehicles. **Automatic barriers** with sensors that open only to registered, legitimate vehicles (Figure 33), in combination with a smart one-way street, layout, would be a first step to tackle traffic-related challenges.

In 2023, there was an initiative by the Ministry of Cultural Affairs to charge foreign visitors USD15 to visit the Galle Fort ramparts. This plan has met with significant protests from local residents and businesses, and has, ultimately, been abandoned. However, given the current tourism-related challenges within the Fort area (specifically waste), it does seem to be a worthwhile idea to reconsider charging an **entrance fee**, at least for the key sights. Examples from around the world show that this could be a good tool to raise both awareness, and revenues, for heritage conservation. In the case of Galle Fort, specifically, charging entrance fee (at least to foreign visitors) would help the chronically under-funded GHF to adequately carry out its mandate. However, in light of recent protests, such a measure could only be implemented upon a genuinely participatory process with the local community.

Call to Action:

- Increase control of, and legal actions against, illegal guides and tuk tuk drivers;
- Establish Tourist Police posts at main entrances to Galle Fort;
- Develop Tourist Information Center in Galle Fort, and smaller information booths at main entrances (with possibility to hire official guides to reduce harassment);
- Prohibit parking of tour buses in front of main ramparts, and offer alternatives (against payment);
- Develop sustainable traffic system, including smart barriers at main entrance/exit to the Galle Fort area;
- Install Tourist Police posts at main entrances to Galle Fort;

9.3 Monitoring and feedback systems

Data should be available that can be used to analyze visitor flows and crowding in both time and space, e.g., via **geolocation data** from smartphone apps. Having such data will allow for better planning of

trajectories, visitation caps, and infrastructure. It can also support enforcement measures, e.g., by indicating which unofficial trails are most used and during which times.

Furthermore, visitor feedback should be regularly monitored on review platforms such as TripAdvisor, and visitors should also be provided the opportunity to leave feedback via clearly communicated ways, including digital ones (e.g., via QR codes).

Call to Action:

- Establish visitor flow monitoring, e.g., through geolocation data;
- Monitor visitor feedback (including with regular visitor surveys);
- Ensure consideration of visitor feedback in future management decisions.

9.4   Governance and management

There is currently no established forum for stakeholders to meet and take strategic decisions for visitor management and general tourism development. While Galle Fort as attraction is under the management of GHF, there should be an institutionalized **Tourism Management Committee**, open to relevant actors from the private sector and the civil society. Most importantly, this is relevant with regard to decisions that directly affect the local community, e.g., considerations to charge entrance fees for certain areas within Galle Fort. GHF's Board of Management currently does not include members of the private sector, or private sector organizations. This provides an opportunity to better align public and private interests in the future, due to increased cooperation.

Call to Action:

- Establish **Tourism Management Committee** with regular (proposal: quarterly) meetings; Objectives: stakeholder engagement and collaboration, visitor experience enhancement;
- At **GHF**: create positions for **staff dedicated fully to tourism** management, provide training and capacity building as required.
- Include private sector representatives in **GHF Board of Management**.

9.5   Sustainable Funding

At the moment, GHF is chronically **under-funded**, and requires external revenues. This includes, for instance, renting out public spaces for film productions, although this practice has been met with criticism from the local community, due to disruptions to daily lives, and also implies problems for tourism. However, at the moment, GHF relies on such external revenue sources to finance its operations.

In the future, it would be advisable to cooperate more directly with the local business community, and to create public-private partnerships that benefit both the private sector, and GHF (e.g., organization of cultural events, including at night, or improvement of signage and interpretation).

Call to Action:

- Collaborate with private sector to develop alternative revenue streams for GHF;
- Develop cultural events at Galle Fort to increase revenues, and better re-distribute visitor flows in time and space.

10 Mirissa

10.1 Preliminary assessment

10.1.1 Context

Mirissa, a community on Sri Lanka's South Coast, has emerged as a major tourist destination, particularly for **whale watching** and its vibrant **beach culture**, but its **rapid and largely unplanned growth** has created significant challenges. The tourism sector, while a vital economic driver, has led to a lack of coordinated planning and a focus on short-term gains over long-term sustainability. This has resulted in a host of issues, including overcrowded beaches and whale-watching boats during peak seasons, unregulated tour operators, and a general strain on local infrastructure. Many of these issues stem from the rapid growth of the tourism sector without sufficient government oversight or community involvement.

10.1.2 Visitation patterns

While Mirissa has experienced significant growth over the past years and decades, sound information on tourist arrival numbers or overnight stays is not available, due to the large number of illegal (unlicensed) accommodations.

For whale watching tours, the DWC collects a conservation fee for each passenger. Numbers have decreased during the COVID-19 pandemic but have since recovered. Interestingly, the number of domestic tourists participating in whale watching has increased as compared to before the pandemic, while the number of foreign tourists has slightly decreased (see Figure 34).
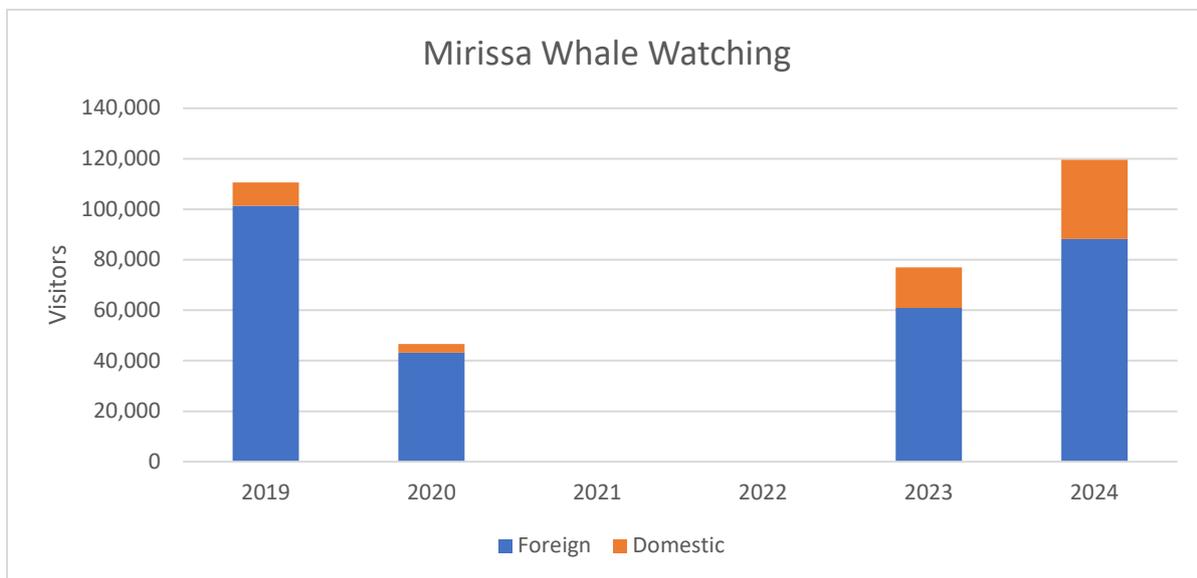
Figure 34: Mirissa whale watching tours - number of visitors. Source: SLTDA (no data for 2021-2022).

Unlike the other sites, no evaluation of reviews on TripAdvisor was carried out here. Mirissa as a city is not a single attraction or activity on TripAdvisor, which is why such an evaluation is not possible.

10.1.3 Management and stakeholders

The tourism stakeholder landscape in Mirissa is fragmented, and cooperation is low, even among actors from the same background (e.g., the accommodation sector). There appears to be a high level of distrust between business owners, specifically (and not surprisingly), between established and officially licensed accommodation providers, and illegal ones, many of which are owned by foreigners who channel revenues back to their home country.

In general, relationships between official, licensed businesses and the local government are good.

Comparable to the accommodation sector, there is also frustration among official, licensed whale watching operators, due to the significant number of **illegal boat operators** that offer whale watching tours without a license, without paying the corresponding conservation fee to the DWC, and sometimes offering illegal activities such as swimming with whales, which are putting wildlife and tourists at risk. Some of these operators officially claim to offer fishing tours, whereas, in fact, they do whale watching tours.

10.2 Visitor management and infrastructure

Mirissa town – visitor experience and infrastructure: Mirissa is a sprawling seaside town that lacks systematic planning. The A2 Highway passes through the town, which leads to significant traffic, often going at high speed. In large parts of the town, there are no paved and clearly marked sidewalks, making walking on foot uncomfortable, and dangerous due to the massive traffic. This means that the town, other than the beach areas, is rather unattractive.

> **Call to Action:**
>
> - Construct sidewalks and bike lanes along main road (A2 highway);
> - Limit traffic speed on main highway, e.g., through:
>   - Speed bumps or speed tables;
>   - Chicanes;
>   - Roundabouts.
> - Create public parking area and limit parking on side lanes of the main road.

Figure 35 shows possible improvements of the main road with pedestrian infrastructure and speed bumps to slow down traffic.

Figure 35: Current state of the main road in Mirissa (left), possible improvement through sidewalks and speed bumps (right). Photo: Arnegger, AI-generated image components with ChatGPT.

Other infrastructure measures are also urgently required, notably related to wastewater and waste management, which would need to be addressed by the municipal government. A key measure is better control of illegal construction and tourist operations, since this puts unsustainable pressure on urban infrastructure, and leads to social disruption (see above).

Whale watching – visitor experience and infrastructure: Whale watching is one of the most important tourist attractions in Mirissa and generates significant local revenues. There are 65 licensed whale watching boats in total. However, whale watching operators claim that only ten are currently in operation, and that the business is more difficult than in the early 2010s, despite the solid growth in whale watching passengers since the pandemic described in chapter 10.1.2.

Whale watching vessels operate out of the **Mirissa harbor**, which is mostly used for fishing operations, and has a very **low aesthetic appeal for tourism**. In many places, it looks unkempt and littered with trash. In some cases, old, sunken boats can be seen next to the whale watching boats, which does not inspire confidence in tourists (see Figure 36).

Figure 36: Whale watching vessel in Mirissa harbor. Photo: Arnegger (2025).

Standard **whale watching tours** generally cost about USD 50-60 per person, which includes a USD 18.88[17] **conservation fee** payable to the DWC. The DWC operates a small office in the harbor where these fees have to be paid. It is common that the whale watching operator pays the total sum for all passengers on one tour. While it is technically possible for tourists to individually pay this fee at the abovementioned DWC office, very few do so. At the office, there is no explanation on what this money is for (e.g., marine wildlife conservation, law enforcement and patrolling, etc.). In fact, a note on the windows refers to a "government fee", rather than a conservation fee.

This praxis has several implications:

- Tourists may not realize at all that about one third of the ticket price goes to the DWC;
- They do not understand the purpose of the fee, as it is not explained at the DWC office; whale watching operators do not seem to be fully aware either of what the payment is actually for.

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[17] Fee for adult foreign tourists.

Call to Action:

- **DWC:**
  - o Renovate office/counter building for conservation fee payments;
  - o Install information boards about marine wildlife, DWC's conservation work, and clearly explain that the payable fee is used to support this work for biodiversity conservation;
- **Whale watching operators:**
  - o Initiate harbor clean-up action at whale watching piers;
  - o Re-consider pricing scheme in coordination with DWC – conservation fee payable by tourists themselves at the DWC counter or agree with whale watching operators to issue tickets clearly showing the price breakdown, including the conservation fee.

10.3 Governance and management

There is currently no established forum for stakeholders to meet and take strategic decisions for visitor management and general tourism development. It is recommended to establish an institutionalized **Tourism Management Committee**, open to relevant actors from the private sector and the civil society. The ultimate objective should be to develop a common vision, and subsequently a destination management plan.

Call to Action:

- Establish **Tourism Management Committee** with regular (proposal: quarterly) meetings; Objectives: stakeholder engagement and collaboration, visitor experience enhancement;
- Develop **destination vision** and destination management plan.

11 Yala National Park

11.1 Preliminary assessment

11.1.1 Context

Yala National Park, located in Sri Lanka's southeastern region, is a premier ecotourism destination renowned for its exceptional biodiversity and high density of **leopards**. As the country's **most visited and second-largest national park**, it serves as a critical habitat for a diverse range of fauna, including Sri Lankan elephants, sloth bears, and numerous endemic bird species. The park's varied landscape, comprising semi-arid scrublands, dry monsoon forests, grasslands, and marine wetlands, contributes to its ecological significance. Beyond its wildlife, Yala also holds cultural and historical importance, with ancient Buddhist pilgrimage sites situated within its boundaries.

11.1.2 Visitation patterns

Yala National Park was visited by 646,704 tourists in 2024, almost as many as before the COVID-19 pandemic (see Figure 37). 54.7% of these visitors were foreigners.
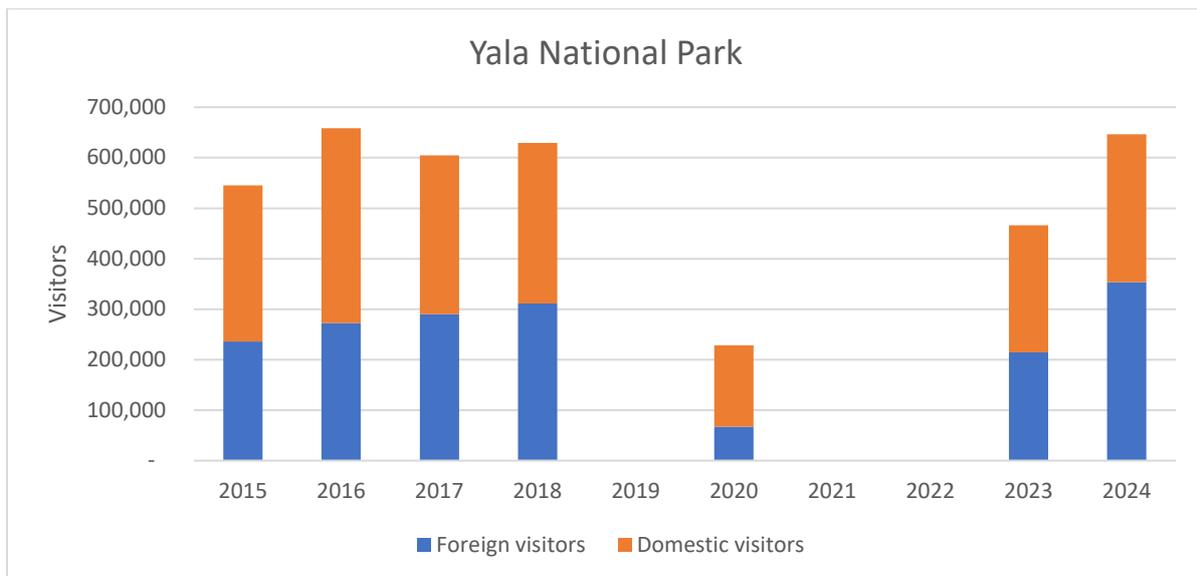
Figure 37: Visitor numbers in Yala National Park, 2015-2024. Source: SLTDA (no data for 2019, 2021-2022).

Visitor numbers are **unevenly distributed across the year** and differ between 28,543 (Jun) and 84,734 (Dec). However, even in the least popular month, there are still almost 1,000 tourists per day (see Figure 38). This relatively high number is aggravated by the fact, that over 90% of all visitors go to Block 1, which is closest to the main entrance, and the easiest to reach from the majority of nearby hotels, e.g., in Kirinda.

Furthermore, visitor numbers are also **unevenly distributed during the day**, as in other national parks and cultural sites. Most tourists visit in the early morning, or in the later afternoon, when wildlife sightings are most likely.
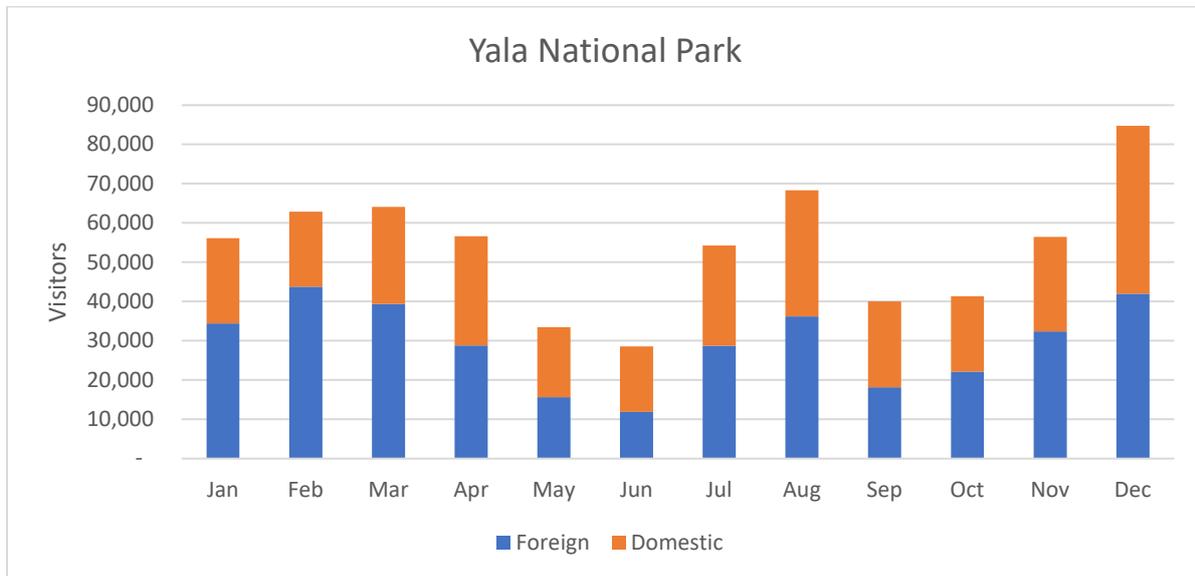
Figure 38: Monthly visitor numbers in Yala National Park, 2024. Source: SLTDA

Whereas the term **"overtourism"** is often debatable, in Yala National Park it is undoubtedly applicable. During the high season, there are sometimes up to 500 jeeps in the park at the same time, almost all in Block 1 within a limited area, where leopard sightings are common and which is easily reachable from the main entrance.

Figure 39: Safari vehicles in Yala National Park. Photo: Arnegger (2025).

Even in off-peak months, the number of vehicles at one single spot can be high, since drivers communicate leopard sightings via radio, and try to rush to these spots to make it possible for their customers to see Yala National Park's most famous animal. Figure 39 shows such a gathering of safari vehicles in the off-season month of June 2025.

There are no daily or hourly limits to the number of vehicles that can enter the park. That said, the park is generally closed for visitors at noon (12 -2 pm), but this regulation is softened through exceptions for cruise ship passengers, who, due to their schedules, cannot visit in the mornings or late afternoons.

Overtourism is also clearly reflected in **tourists' review** of the park. On TripAdvisor, Yala National Park holds an overall rating of 3.5 – a **dangerously low average rating for such a popular tourist attraction**, calling for urgent management interventions. Reviews[18] are summarized in Table 9.

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[18] The content analysis was conducted with the help of ChatGPT.

Table 9: Content analysis of TripAdvisor reviews of Yala National Park. Source: TripAdvisor.

Theme	Frequency	Predominant Sentiment	Illustrative Insights / Quotes
Animal / wildlife sightings (leopards, bears, elephants etc.)	Very High	**Positive**, though tempered by luck and expectations	Many reviewers are thrilled by leopard sightings, bears, elephants, crocodiles etc. A private safari review says: "one of the most memorable Safari experiences ever … we also spotted a Leopard … wild Buffaloes …" etc.
Overcrowding / too many vehicles / loss of tranquility	High	**Negative**	Complaints that too many jeeps converge on the same spots, creating traffic jams, noise, and that animals stay hidden. Example: *"park is extremely overcrowded with jeeps … you feel like you're on safari in a crowded theme park …"*
Guide/driver quality and knowledge	High	Mixed-Positive	Good drivers/guides are praised when they help locate animals and give interesting info. But criticism where drivers are less motivated, or trajectories are repetitive.
Timing & luck of sightings	High	Mixed-Positive	Many say sightings depend heavily on timing, weather, season, luck. Even when wildlife is sparse, scenery or the environment can compensate.
Cost / value for money	Medium	Mixed / Negative	Some feel the entrance + safari + jeep + guide costs are high relative to what is seen, especially if few sightings.
Roads / terrain / comfort	Medium	Mixed / Negative	Rough roads, bouncing jeep rides, discomfort for people sensitive to motion.
Scenery / natural beauty beyond animals	Medium-High	Positive	Even absent big wildlife, many value the landscapes, water bodies, birdlife, and simply being in wilderness. (Tripadvisor)
Park management / regulations (jeep quotas etc.)	Medium	Negative to Mixed	Some calls for stricter regulation of number of vehicles, better enforcement of rules so wildlife isn't disturbed.

These sentiments also differ somewhat based on the origin of visitors: domestic and Asian tourists' critical reviews often focus on prices, and the fact that animals are not always present during safaris. European, North American and Australian visitors, on the other hand, mention more often overcrowding and "over-commercialization", and some would wish for more emphasis on "serenity" or "nature experience" than just seeing big animals.

Overtourism is a phenomenon that is **restricted to a relatively small area of the vast Yala National Park**. Therefore, a potential solution would be to promote a certain dispersion of tourism intensity over a larger area – as long as this is compatible with conservation objectives. Other blocks of the park should be made more accessible, both in terms of roads and gates, but also regulations.

11.1.3 Management and stakeholders

The management of Yala National Park is a **complex multi-stakeholder process**, primarily overseen by the DWC, which is tasked with the conservation and management of the park's natural resources and is the primary regulatory body for tourism activities. However, its effectiveness is often challenged by resource constraints, a lack of staff, and political interference. Furthermore, communication and coordination between the local and central levels are sometimes challenging.

In terms of tourism **regulations**, the park management has put in place a series of regulations and restrictions, but they are often not enforced, partly due to a lack of resources for effective patrolling and law enforcement. E.g., the official speed limit inside the park is 30 km/h; however, during research for this project, it was obvious that numerous vehicles were driving at much faster speed than that, specifically when the drivers were trying to get to a spot where a leopard was sighted. Officially, drivers breaking the rules can be temporarily banned, but, according to official documents, this happens very rarely (about once per month over the past months).

In total, there are **550 licensed jeeps**, and this number has increased from 350 in the past year, and is, according to local actors, expected to increase further. Licenses are granted by the DWC headquarter in Colombo, and local stakeholders claim that the award procedures are not always transparent.

The **local tourism industry** includes tour operators, jeep drivers, and accommodation providers who are directly involved in facilitating tourist visits. Their actions, particularly the high volume of safari jeeps, can lead to environmental issues like congestion, noise pollution, and disturbance to wildlife. Businesses are organized in different associations for jeep and business owners.

Tourism in Yala National Park is one of the **main economic drivers** in the region, and this leads to economic pressure from local communities. Currently, many young people want to buy a jeep as soon as they finish school, which suggests that pressure will further increase in the future if no countermeasures are taken.

In addition, there is an urgent need to develop a **joint vision** for the park as sustainable tourist attraction – and the understanding, that its natural beauty and wildlife do not represent infinite resources.

11.2 Vision

Currently, it appears that Yala National Park is seen as a tourism cash cow by various actors, but there is **no clear vision for the park as a sustainable tourist attraction**. Such a vision should be established

in a **multi-stakeholder workshop**, which could also serve as starting point for a more institutionalized **Tourism Management Committee.**

> **Call to Action:**
>
> - Organize visioning workshops with relevant stakeholders
> - Develop vision for Yala National Park as *sustainable* tourist attraction.

11.3 Visitor management and infrastructure

Visitor flow management: As pointed out above, there is an urgent need to limit visitation in certain areas (Block 1) during peak times, and for better control and enforcement of existing rules. There is an online ticketing system in place. Prices are slightly lower, but the main advantage is that online ticket holders do not have to queue at the ticket counter, but can proceed directly to the park gate (where there is usually also a queue of vehicles during peak times). However, online tickets have to be reserved a day in advance, which makes spontaneous bookings impossible. Online tickets are rarely bought by tourists themselves, but through a tour operator that assigns them a safari vehicle.

The introduction of vehicle caps is absolutely required at this time, based on a further assessment of the maximum capacity of the Park, in particular Block 1, and broad stakeholder consultation.

Furthermore, an extended system of one-way roads (with strict rule enforcement) would also help reduce congestion and traffic bottlenecks.

Call to Action:

- **Control vehicle numbers and crowding:**
  - Implement vehicle cap (not more than 100-150 vehicles in Block 1 during morning and evening safari periods);
  - Vehicle caps for heavily visited areas could be gradually lowered further, while simultaneously improving infrastructure and promoting wildlife sightings in other, less-visited blocks of the park (e.g., Blocks 3, 4, and 5) to distribute visitors more evenly (see below).
  - Develop better online-booking system with real-time information and time slot reservation;
- **Strengthen rule enforcement:**
  - Mobile patrols to control park rules (e.g., speed limits, safe viewing distances) and penalties for offenders;
  - Consider mandating DWC-approved trackers/guides for every vehicle – this would raise costs for tourists, but can also increase the tourist experience, and create new jobs other than for jeep drivers;
  - Consider mandatory GPS tracking devices for safari vehicles to be able to monitor movements and speed.
- **Create "One-Way" roads** to ease traffic bottlenecks and reduce congestion, particularly at popular wildlife sighting spots.
- **Educate visitors:**
  - Provide educational and interpretive materials to visitors before they enter the park to help them understand proper safari etiquette and the importance of conservation.
  - Encourage visitors to report unacceptable behavior by drivers or other tourists.

Infrastructure: New entry points and opening up less-visited areas of the park would help to alleviate the pressure on the main, heavily trafficked gates. However, such measures always have to be carefully considered against environmental risks, given that they would also expose areas that are so far not visited by tourists. That said, in general, some dispersion of visitors appears much more acceptable than the current overcrowded conditions in certain areas of Block 1.

Call to Action:

- Open alternative entrances and roads: Creating new entry points and opening up less-visited areas of the park would help to alleviate the pressure on the main, heavily trafficked gates.
- As stated above, this can be combined with gradual limits on vehicles in Block 1.

Figure 40: Closed cafeteria at Yala National Park headquarters. Photo: Arnegger (2025).

Other infrastructure considerations refer to the facilities around the **national park headquarters** and main ticket counter. During peak times, services such as bathrooms are not sufficient for the number of visitors. There are several small exhibitions which are well-designed, but most people do not visit them prior to the tour, because guides aim to rush to the gate to be at the front of the queue. Improving these exhibitions, and making them more attractive, holds the additional potential for them to be an important educational tool to inform visitors about the importance of conservation, and about appropriate behavior inside the park (including from drivers and guides).

The existing souvenir shop is small and does not offer an attractive, authentic product range. The cafeteria was closed at the time of research.

Call to Action:

- Improve park facilities (bathrooms, rest areas, cafeteria, souvenir shops)
- Create authentic product range of quality handicraft souvenirs in cooperation with local artisans.
- Upgrade wildlife and nature interpretation exhibitions.

Visitor experience enhancement: Currently, the visitor experience is seriously hampered by overtourism. The abovementioned measures should help address this issue; however, besides that, there is also an opportunity for **product diversification** and **promotion of alternatives to the standard leopard safari**. Shifting the focus away from being "leopard-centric" and promoting the park's other attractions, including elephants, sloth bears and a wide variety of birds, could help to distribute visitors

and reduce the pressure on one single species. Furthermore, it would help manage tourists' expectations and increase the tourist experience.

> **Call to Action:**
>
> - Promote the park's diverse wildlife, not just leopards, to distribute tourist interest.

11.4 Governance and management

There is currently no established forum for stakeholders to meet and take strategic decisions for visitor management and general tourism development. It is recommended to establish an institutionalized **Tourism Management Committee**, open to relevant actors from the private sector and the civil society. The ultimate objective should be to develop a common vision, and subsequently a tourism and visitor management plan.

At DWC, there should be dedicated staff available for tourism and visitor management, as well as enforcement of regulations.

> **Call to Action:**
>
> - Establish **Tourism Management Committee** with regular (proposal: quarterly) meetings; Objectives: stakeholder engagement and collaboration, visitor experience enhancement;
> - Develop **joint vision** and tourism management plan;
> - **Improve institutional capacity at DWC:** hire and train staff, including rangers and guides, to effectively manage the park and enforce regulations.

11.5 Monitoring and feedback systems

Monitoring of visitor flows inside the park is indispensable for sustainable management of this sensitive ecological attraction. Thus, data needs to be available that can be used to analyze visitor flows and crowding in both time and space, e.g., via **geolocation data** from smartphone apps. Having such data will allow for better planning of trajectories, visitation caps, and infrastructure. It can also support enforcement measures, e.g., by indicating which unofficial trails are most used and during which times.

Furthermore, **visitor feedback** should be regularly monitored on review platforms such as TripAdvisor, and visitors should also be provided the opportunity to leave feedback via clearly communicated ways, including digital ones (e.g., via QR codes).

Call to Action:

- Establish visitor flow monitoring, e.g., through geolocation data;
- Monitor visitor feedback (including with regular visitor surveys);
- Ensure consideration of visitor feedback in future management decisions.

12 Nuwara Eliya

12.1 Preliminary assessment

12.1.1 Context

Nuwara Eliya, often called **"Little England"** for its colonial-era architecture and temperate climate, is a premier tourist destination in the heart of Sri Lanka's central highlands. This city, perched at an altitude of over 1,800 meters, attracts a diverse range of visitors, international tourists seeking a cool escape from the tropical heat, and, specifically, domestic travelers enjoying a local holiday in a cool climate and natural mountain environment. Its allure is built on a combination of natural beauty, including misty mountains, tea plantations, and scenic waterfalls, and a unique cultural heritage shaped by its British past.

Despite its potential and popularity, Nuwara Eliya faces a number of **challenges**. Compared to other destinations in the Hill Country, notably Ella, Nuwara Eliya is much less popular with international tourists, and stakeholders argue that it has continuously lost market shares over the past years, as Ella has become increasingly famous, partly due to social media. Nuwara Eliya is more difficult to reach than other mountain destinations in this part of Sri Lanka, since it is not connected to the railway.

The most pressing is the issue of **sustainability**. Rapid and often unplanned urbanization has led to environmental degradation, including improper waste management and the conversion of agricultural land and natural landscapes for development. Overcrowding, particularly during the peak "April season" for local tourists, strains the city's infrastructure, leading to severe traffic congestion, inflated prices, and a diminished visitor experience. While local tourists, generally speaking, appear to be less concerned about crowding and loud activities, such as jet ski rides on Lake Gregory, such issues may further deter international visitors more interested in relaxation and/or outdoor activities.

12.1.2 Visitation patterns

There are no exact visitor numbers (tourist arrivals or overnight stays) available for Nuwara Eliya. Visitor numbers for Hakgala Botanical Gardens, one of the key attractions, show that **visitation has stagnated/decreased** slightly even before the pandemic. Furthermore, visitor numbers show the dominance of domestic tourists – their share is above between 96.1% and 97.4% for all years since 2015 for which data is available (see Figure 41).

Hakgala Botanical Gardens may not be entirely representative for Nuwara Eliya in general, but the figures do provide a general approximation of recent visitation trends.

While visitor numbers appear to have stagnated in Nuwara Eliya in recent years, the number of **hotel rooms** has increased by 40.8% since 2019, from 1,779 rooms to 2,505 (see Figure 42). Stagnating demand and, at the same time, increasing supply points to stronger competition, not only against competing destinations, but also internally in Nuwara Eliya's tourism (accommodation) sector.

Note that the abovementioned figures only refer to licensed establishments. As elsewhere, the number of **unlicensed "boutique" style accommodations** marketed via OTA platforms, such as booking.com or Airbnb, is growing fast.
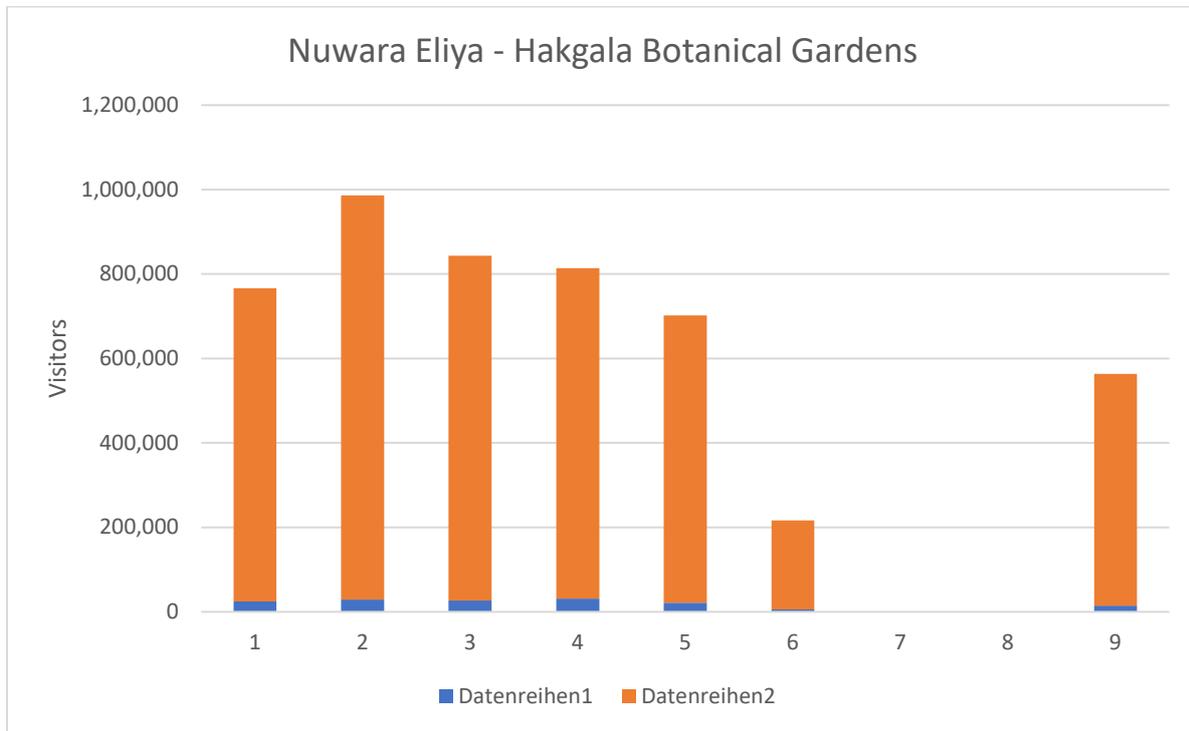
Figure 41: Visitor numbers for Hakgala Botanical Gardens near Nuwara Eliya, 2015-2023. Source: SLTDA.
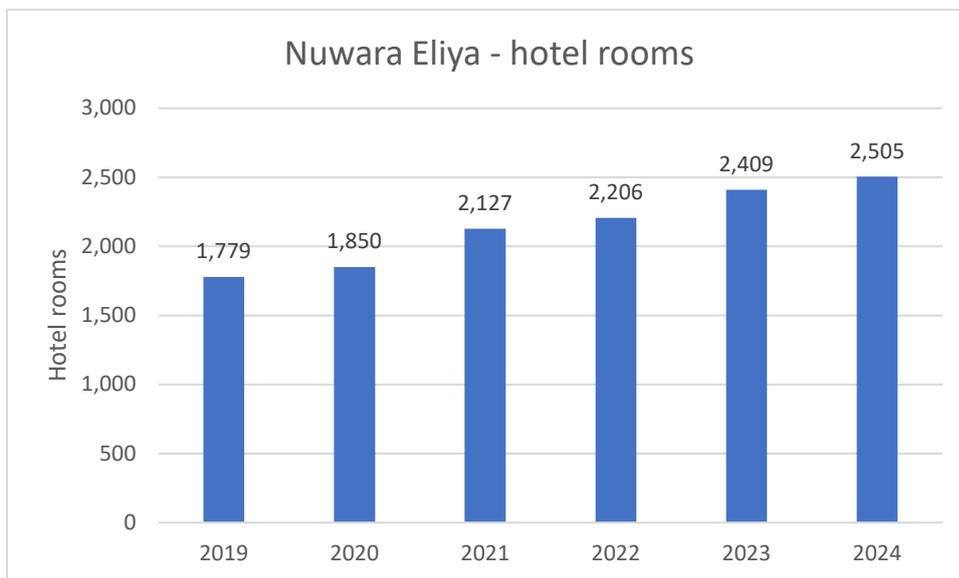
Figure 42: Hotel room development in Nuwara Eliya, 2019-2024. Source: SLTDA.

Tourists' online **reviews** on key attractions in Nuwara Eliya can also provide valuable insights into the destination's strengths and weaknesses among different target groups. For Gregory Lake, for instance,

the picture is mixed, and there are clear differences between foreign and domestic tourists. A content analysis[19] of TripAdvisor reviews on Gregory Lake is presented in Table 10.

Table 10: Content analysis of TripAdvisor reviews of Gregory Lake, Nuwara Eliya, 2020-2025. Source: TripAdvisor.

Theme	Frequency	Predominant Sentiment	Illustrative Insights
Scenic beauty & atmosphere	Very High	Positive	Visitors frequently praise the lake's picturesque setting, cool climate, and tranquil ambiance, making it ideal for walks, picnics, and relaxation.
Activities (boating, pony rides, cycling)	High	Mixed	While many enjoy boating and pony rides, some express concerns over cleanliness and maintenance in certain areas.
Cleanliness & maintenance	High	Negative	Reports of litter, animal waste, and neglected facilities, especially near the bicycle track, have been noted.
Pricing & value for money	Medium	Mixed	Some visitors feel that the entrance and activity fees are high, especially for foreigners, given the maintenance issues.
Weather & seasonal conditions	Medium	Mixed	Weather conditions, such as mist and cold winds, can affect the experience, particularly in the evenings.

There are differences in the **evaluations of foreign and domestic tourists** (see Table 11). In general, domestic tourists appear to be less critical and appreciate the lake's historic significance, and activities that are on offer, including "action" activities, such as jet ski rides. European tourists, specifically, see such kind of activities often rather critical, and also complain about entrance fees for relatively little value, and maintenance issues (trash).

While Gregory Lake is just one attraction in Nuwara Eliya, this analysis may provide additional insights with regard to the challenges it faces attracting more international tourists.

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[19] This content analysis was conducted with the help of ChatGPT.

Table 11: Differences in online reviews between tourists of different countries of origin, Gregory Lake, Nuwara Eliya. Source: TripAdvisor.

Origin Group	Observed Sentiment	Notes
Sri Lankan locals	Positive to Neutral	Often appreciate the lake's nostalgic value and local significance.
Indian tourists	Mixed	Some express concerns over cleanliness and maintenance, while others enjoy the activities.
Western tourists	Mixed to Critical	Highlight maintenance issues and value for money concerns more frequently.
Chinese & East Asian tourists	Limited data	Less frequent reviews available; trends are unclear.

12.1.3 Management and stakeholders

There is no established destination management at Nuwara Eliya, and the **stakeholder landscape** is complex and multifaceted.

Government agencies Nuwara Eliya Municipal Council and the Urban Development Authority (UDA) are responsible for planning and infrastructure. Ongoing infrastructure projects include enhancement of walking trails around Gregory Lake, new public toilets, and an underground car park. However, these governmental agencies, the Municipal Council specifically, lack funding for larger infrastructure projects. Furthermore, at the Municipal Council, there is no staff dedicated to tourism, also pointing to a lack of capacity and know-how on tourism markets.

There is no institution in charge of destination **marketing**.

Nuwara Eliya still has the **image** of "Little England", but there is little control of new construction projects, and no building design standards, which means that the destination's unique **heritage** may be replaced by cheap and unaesthetic tourism, notably accommodation, infrastructure.

The **private sector** is a key player, encompassing large upmarket establishments such as the iconic Grand Hotel, as well as boutique guesthouses and home stays. The local hotel association appears to be working well together and is a driver of the local tourism economy. It also has innovative ideas for future sustainable tourism development. However, it lacks the political and legal authority for strategic decision making, and there is little communication with governmental institutions.

In addition to accommodation establishments, the local tourism businesses include local tour operators, and small-scale vendors who offer everything from boat rides on Lake Gregory to pony treks.

The Sri Lankan Air Force also plays a role in tourism development, since it manages some of Nuwara Eliya's key attractions, notably the observation tower "Eagle's Viewpoint" on a mountain top at nearby village Shantipura, as well as access to Pidurutalagala, the highest peak in Sri Lanka at 2,524 m.

Effective destination management, therefore, requires coordinated efforts and clear policies to balance the interests of these various groups. Most importantly, stakeholders need to agree on a **clear, joint vision for a sustainable future of tourism in Nuwara Eliya**, which appears to be in the balance at the moment.

12.2 Vision

Currently, there is no clear vision or brand identity of what Nuwara Eliya represents as a sustainable tourist destination. Existing offers are **fragmented**, and include high-end, colonial heritage luxury hotels, as well as "action" activities such as jet ski rides, catering to a very different clientele. While Nuwara Eliya still (partly) lives off its **"Little England" image**, this is continuously **eroding** due to the **absence of development and building standards** that respect the unique heritage of the place.

A **vision** should thus be established in a **multi-stakeholder workshop**, which could also serve as starting point for a more institutionalized **Tourism Management Committee**. The vision should subsequently be the foundation of every tourism development activity, as well as destination marketing, which urgently needs to be established as well (see below).

> **Call to Action:**
>
> - Organize visioning workshops with relevant stakeholders
> - Develop vision for Nuwara Eliya as sustainable tourist destination.
> - Use agreed vision as basis for all tourism development activities and projects.

12.3 Visitor management and infrastructure

Visitor flow management and crowding: Crowding is mainly an issue during the peak season for domestic tourists (April), when traffic jams are common and litter is a problem, as well as general pressure on urban infrastructure which is not appropriate for such an influx of people. While April Season around the Sinhala and Tamil New Year is generally high season for Sri Lankan domestic travelers, in Nuwara Eliya there are special events that draw specifically large crowds, including horse races, motor racing events, flower shows, and various cultural events. It may be worth considering moving some events to other seasons in order to reduce seasonality.

Crowding can be a problem at key attractions during the peak season, specifically the Eagle's Viewpoint tower and its access road, which is very narrow. The tower itself does not have sufficient parking spaces for large crowds.

Enhancing visitor experience and infrastructure in Nuwara Eliya requires a multifaceted approach that addresses both the physical infrastructure and the intangible aspects of hospitality and service. One key area for enhancement is the management of popular attractions. By implementing a system of timed entry or online booking for sites such as Lake Gregory, Eagle's Viewpoint or Horton Plains National Park, **visitor flows** can be better regulated, reducing overcrowding and the associated environmental impact. This would not only protect fragile ecosystems but also create a more tranquil and enjoyable experience for those who visit.

Furthermore, investing in and promoting **lesser-known attractions and activities**, such as agro-tourism on small-scale farms, developing new hiking trails, or curating authentic local food tours, can help disperse visitors and alleviate pressure on the main tourist hubs, providing a more diverse and enriching experience for all.

Another critical component is the upgrade of public and private services. Enhancing public **infrastructure**, including improving road conditions and establishing a more organized public transportation system, would significantly ease the notorious traffic congestion, particularly during peak seasons. On the service side, there is a clear need for **capacity building** within the hospitality sector. This includes training for local guides and service staff in areas such as English language proficiency, customer service, and local knowledge. This would not only help overcome communication barriers but also empower local communities to become active and proud participants in the tourism industry, offering a more genuine and informative experience to visitors. Furthermore, encouraging local businesses to adopt eco-friendly practices and providing them with the necessary resources and incentives would resonate with the growing number of environmentally conscious travelers.

Finally, a strong focus on strategic **communication and information dissemination** is essential for a better visitor experience. A comprehensive, multilingual digital platform, including a website and a mobile app, could be developed to provide real-time information on weather, traffic conditions, attraction availability, and cultural events. This would allow visitors to plan their trips more effectively and navigate the area with greater ease.

Call to Action:

- Develop online booking/reservation systems for key attractions that currently face overcrowding at peak times;
- Enhance public infrastructure, notably transport (including to key attractions with road access limitations, such as Eagle's Viewpoint);
- Develop and promote alternative attractions and activities in line with Nuwara Eliya's long-term vision (to be developed): agro-tourism, outdoor sports (hiking, climbing, mountain biking), local food tours, etc.
- Enhance communication and marketing (see chapter below), including on digital platforms and a dedicated destination website.

12.4 Governance and management

There is currently no established forum for stakeholders to meet and take strategic decisions for visitor management and general tourism development. It is recommended to establish an institutionalized **Tourism Management Committee**, open to relevant actors from the private sector and the civil society. The ultimate objective should be to develop a common vision, and subsequently a destination management plan.

In the Municipal Council, there should be staff dedicated to tourism.

Call to Action:

- Establish **Tourism Management Committee** with regular (proposal: quarterly) meetings; Objectives: stakeholder engagement and collaboration, visitor experience enhancement;
- At **Nuwara Eliya Municipal Council**: create positions for **staff dedicated fully to tourism** management, provide training and capacity building as required.

12.5 Communication and marketing

There is currently no destination marketing at Nuwara Eliya, no managed destination brand, and no vision for future sustainable development (see above). This should urgently be established following a multi-stakeholder visioning process described in chapter 12.2.

Creating a **strong "Nuwara Eliya brand"** that highlights its unique selling point, e.g., its tea culture, cool climate, and colonial heritage, can help attract visitors who appreciate a more sustainable and culturally immersive travel experience. Note that this brand promise has to be kept by the tourism experience on-site – otherwise, visitors, especially travel-experience ones who can compare the experience with other destinations, will be disappointed. The creation of a brand should thus be a parallel process to enhancing tourist experiences, as described above, and there should be a broad consensus among stakeholders on what exactly this image should entail.

Call to Action:

- Allocate adequate staff resources for tourism marketing, implement staff trainings if required;
- Create Nuwara Eliya destination website and social media channels
- Consider launching a marketing campaign that moves beyond the "Little England" moniker and highlights the diverse heritage of Nuwara Eliya. This should showcase not only the colonial history and architecture but also the rich tea culture, the unique traditions of the estate communities, opportunities for outdoor sports, and the area's incredible biodiversity. Use a mix of high-quality video content, influencer marketing, and partnerships with travel bloggers to reach a wider, more discerning audience. Claim suggestion: "Little England, Big Heritage";
- Continuously post on social media (at least Facebook and Instagram), with content that supports Nuwara Eliya's vision and brand (see above).

13 Ella

13.1 Preliminary assessment

13.1.1 Context

Ella is a mountainous town in Sri Lanka's Uva Province which has evolved from a colonial-era rest stop to a major tourism hub. Development has been fast in recent years, partly fueled by social media posts by popular travel influencers. Its appeal lies in its temperate climate, verdant landscapes, and scenic attractions such as the Nine Arch Bridge and Ella Rock. This evolution has been driven by a rapid, often informal, expansion of tourism, which has brought economic benefits but also significant challenges in managing its growth and impacts.

13.1.2 Visitation patterns

Figure 43: Instagram screenshot with hashtag #ellasrilanka. Source: Instagram

The tourist profile of Ella can be characterized as primarily consisting of **independent, budget-conscious leisure travelers**. This demographic is drawn to the destination's natural environment and the opportunities it presents for **outdoor and adventure tourism**. The accessibility of Ella via the iconic Kandy-Ella railway line positions it as a key stop on a wider Sri Lankan itinerary for this type of traveler. This railway journey has become extremely popular in recent years, to a large extend driven by social media. Posts on social media channels, such as Instagram or TikTok, often refer to this train ride, or famous landmarks of this railway line, specifically the "Nine Arch Bridge" between the Ella and Demodara railway stations.

In terms of **demographics**, Ella is primarily visited by young to middle-aged (i.e., under 40 years old) independent travelers – the group includes solo travelers, couples, groups of friends, and families. Compared to other destinations, such as Nuwara Eliya, the share of foreign tourists is very high, leading to some socio-economic challenges, including reports of pricing disparities and a bias from some service providers towards foreign clientele.

Data on tourist arrivals or overnight stays for Ella is not available. However, the **number of rooms** in licensed accommodation establishments has increased in the Badulla District (in which Ella is located), even during the COVID-19 pandemic, which underlines the abovementioned growth in tourism in recent years. Over the past five years, accommodation capacity has increased by 45.1%, from 1,484 rooms in 2020, to 2,153 according to the most updated figures in 2025. These figures only refer to officially registered establishments – as in other parts of Sri Lanka, the number of unlicensed (i.e., illegal) establishments is probably even higher: while the number of officially licensed establishments in the Badulla District is 468 as of September 2025, Booking.com lists over 700 properties at the same time.

While it is difficult to assess **travelers' opinions** about Ella in general, online reviews about the Nine Arch Bridge, one of its most famous landmarks, provide some insights in the destination's key assets, as well as challenges, according to tourists. A summary of a content analysis of TripAdvisor reviews for the Nine Arch Bridge is presented in Table 12.

Most visitors rate the attraction and experience as very positive, with an average rating of 4.4 (out of 5.0). However, some critical issues are frequently mentioned, specifically with regard to a lack of management: crowding is often mentioned as an annoyance, and even a risk, as well as inflated prices by tuk tuk drivers. Negative aspects, especially regarding crowding, are most often mentioned by foreign visitors, especially from Europe.

Table 12: Content analysis of TripAdvisor reviews for Nine Arch Bridge, Ella, 2020-2025. Source: TripAdvisor.

Theme	Estimated Frequency	Predominant Sentiment	Key Insights / Quotes
The bridge & colonial architecture / engineering	Very High	**Strongly positive**	Visitors admire the design ("beautiful colonial-era viaduct surrounded by lush greenery") and its durability.
Scenic setting / views / photography	Very High	Positive	Many highlight lush green hills, jungle, the vale, and the "Instagram"-style views with the train crossing. Timing to see the train is repeatedly noted.
Train passing & timing / "building the moment"	High	Positive but with frustration when missed	People plan their visit around train schedules; when it is late or missed, it causes disappointment.
Walking / access path / approach (trail, difficulty, slipperiness)	High	Mixed	The walk along tracks or forest paths are praised for experience; but issues when paths are muddy, slippery after rain; footwear and navigation matter.
Overcrowding / number of tourists / "everyone wants the same shot"	High	Negative or mixed	Many say that the bridge is crowded especially when train is due; some comparison to "a circus" or hectic photo crowds.
Cost / transport / tuk-tuk / logistics	Medium	Mixed	Travel to the bridge: tuk tuks, walking vs paid transport; sometimes cost is high, especially return; no entry fee but incidental transport costs.

Theme	Estimated Frequency	Predominant Sentiment	Key Insights / Quotes
Safety / caution (bees, slippery paths, train track safety)	Medium	Mixed / Negative when issues occur, otherwise minimal	Warnings about wasp/bee nests under arches, slippery negative after rain, risk on tracks.
No entry fee / value for money	Medium	Positive	Many like that it's free to visit; value seen as high relative to the setting.
Weather / climate (mist, rain, humidity, heat)	Medium	Mixed	Rain or mist can both enhance scenery or make paths messy/slippery; sun exposure on paths.

13.1.3 Management and stakeholders

There is no established Destination Management at Ella, and the **stakeholder landscape** is heterogeneous and complex, characterized by a mix of formal and informal actors.

Ella is governed by a **Pradeshiya Sabha**, which has a limited scope of power, and focuses on basic services and development, rather than strategic tourism destination development. The **Uva Provincial Ministry of Tourism** has a Tourist Information Center at a strategic location next to the train station, with knowledgeable and committed staff willing to participate in Ella's strategic development. However, being primarily an information center, its influence is limited.

The **Urban Development Authority (UDA)** is, together with SLTDA, involved in the Ella Development Plan 2021-2030, as well as in the Ella Tourism Development Master Plan 2020-2030 – however, implementation appears to be lagging behind.

The **private sector** is highly fragmented, with numerous small and informal businesses such as homestays, cafes, and local tour guides operating alongside a smaller number of formal hotels and tour operators. The private sector is the key driver of tourism development, but initiatives are often isolated, not well coordinated, and developed from a single business perspective, not from a holistic and coordinated destination perspective.

The **local community** is a crucial stakeholder, with many residents directly or indirectly involved in tourism.

Destination management in Ella, therefore, requires coordination across these different scales and actors to ensure sustainable development, but this is hampered by a lack of governance, a fragmented stakeholder landscape, and conflicting interests. A clear **vision** of what Ella shall represent as a future, sustainable tourism destination, and the required development paths, should be elaborated in a participatory process by tourism stakeholders, as a basis for sustainable destination management, marketing and development.

13.2 Vision

Currently, there is no clear **vision or brand identity** of what Ella represents as a sustainable tourist destination. The existing image is largely shaped by **social media** but not managed from a destination perspective. Notably, risks related to overcrowding and breaches of **carrying capacity** are not managed, and threaten to negatively impact the visitor experience, and hence the image of the destination as a whole.

A vision should thus be established in a **multi-stakeholder workshop**, which could also serve as starting point for a more institutionalized **Tourism Management Committee**. The vision should subsequently be the foundation of every tourism development activity, as well as destination marketing.

> **Call to Action:**
>
> - Organize visioning workshops with relevant stakeholders
> - Develop vision for Ella as sustainable tourist destination.
> - Use agreed vision as basis for all tourism development activities and projects.

13.3 Visitor management and infrastructure

Visitor flow management: Overtourism is an issue, particularly at major attractions such as the Nine Arch Bridge and Little Adam's Peak. During **peak seasons**, the sheer volume of visitors leads to overcrowding, diminishing the "peaceful" and "natural" experience that is a primary draw for tourists. This concentration of visitors puts immense pressure on a few key sites, leading to congestion on trails and viewing platforms and a feeling of being in a "queue", which negatively impacts the quality of the visitor experience.

Tourists are increasingly drawn to these **major attractions** due to their presence in social media – a **self-reinforcing process**. Development and promotion of **alternative attractions** may ease pressure on existing ones, but this is difficult under the current fragmented stakeholder landscape.

Figure 44: Tourist crowds on the Nine Arch Bridge. Photo: Arnegger (2025).

By contrast, **private businesses** in vicinity of existing attractions try to increase their own revenues by developing more commercial tourist activities, which in turn (if they are successful) draw even more tourists to these places. For instance, at Little Adam's Peak, the access path passes through a private property, on which substantial tourism infrastructure, including a large-scale restaurant, pool and bar,

a rock-climbing tower, and a tree top walk, have been established in recent years, increasing the number of visitors even further.

> **Call to Action:**
>
> - Increase stakeholder cooperation to develop alternative attractions and trails in and around Ella within a coherent strategy, not as isolated initiatives;
> - Improve (or install) signage, create / improve designated viewing areas and pathways at popular sites to manage pedestrian traffic and minimize environmental impact.

Infrastructure: Ella faces significant challenges related to the **uncontrolled tourism development** in recent years, specifically construction of new accommodation facilities without proper spatial planning. This puts enormous **pressure on urban infrastructure and services**, such as the sewage system, and waste management. These challenges go beyond visitor management and the present project, but they do have to be addressed urgently.

In addition, there is a need for improved infrastructure for visitor **mobility**, including on foot and on bikes, such as widening roads, creating pedestrian pathways, and enhancing public lighting.

> **Call to Action:**
>
> - Enhance public infrastructure, notably pedestrian pathways and bike paths, public lighting, wastewater and waste management.

Enhancing visitor experience: The abovementioned measures, notably **dispersal of visitor flows** by creating alternative attractions and trails, should as such help to enhance the visitor experience. Furthermore, there needs to be a stricter oversight of tourism service providers, such as tuk tuk drivers or guides, in addition to better training to increase service quality (and reduce annoyances such as overcharging). With better knowledge of local tourist attractions, guides can also be instrumental in diverting visitor flows away from overcrowded places, or choosing the right time for visits when crowding is less of a problem

The responsible **authorities**, notably the Provincial Ministry of Tourism, should **focus their marketing on lesser-known attractions and features** of Ella, not on the ones already omnipresent on social media.

Furthermore, **new tourism products** may be developed (which must be in line with Ella's overall vision), e.g.:

- **Culinary Tourism:** Showcasing local tea culture, farm-to-table dining, and cooking classes.
- **Wellness and Retreats:** Promoting yoga, meditation, and spa treatments that leverage Ella's tranquil environment.
- **Cultural Immersion:** Highlighting local community life, craft workshops, and traditional music or dance performances.

Call to Action:

- Implement better oversight and regulations of tourism services;
- Offer trainings for service providers (e.g., guides, tuk tuk drivers);
- Stimulate the development of new tourism products.

13.4 Governance and management

There is currently no established forum for stakeholders to meet and take strategic decisions for visitor management and general tourism development. It is recommended to establish an institutionalized **Tourism Management Committee**, open to relevant actors from the private sector and the civil society. The ultimate objective should be to develop a common vision, and subsequently a destination management plan.

Call to Action:

- Establish **Tourism Management Committee** with regular (proposal: quarterly) meetings; Objectives: stakeholder engagement and collaboration, visitor experience enhancement.

13.5 Communication and marketing

There is currently no destination marketing for Ella, no managed **destination brand**, and no clear **vision** for future sustainable development (see above). This should urgently be established following a multi-stakeholder visioning process described in chapter 13.2.

Generally, destination marketing should support **moving beyond Ella's current informal, organic growth model to a more strategic and coordinated approach**. While the destination has benefited from word of mouth and (unmanaged) social media promotion, a more intentional marketing plan could help it attract a wider range of travelers, manage visitor flows more effectively, and enhance its overall brand.

Thereby, it is important to establish a **Unique Selling Proposition (USP)**, i.e., what makes Ella different from other Hill Country destinations. This could focus on its unique climate, the "four seasons" of Ella

(as mentioned in the Ella Development Plan), or its distinctive combination of adventure, nature, and social hub atmosphere.

A consistent **brand identity**, from social media to signage, is crucial. This could involve a new logo, color palette, and a unified narrative that is consistently used by all local tourism businesses.

Call to Action:

- Establish a destination website and official social media channels;
- Define USP and communicate it on different channels;
- Support creation of alternative attractions, trails and niche tourism products, rather than established (partly overcrowded) attractions.

14 Report on Stakeholder Workshop in Colombo and outlook

14.1 Stakeholder Workshop in Colombo: Objectives and key results

A recurrent theme during the site assessments was that in all tourism sites there are many committed and motivated stakeholders. However, one, if not the, key obstacle appeared to be a **lack of communication between different stakeholder groups**, specifically the public and the private sector.

Thus, it was decided that it was necessary not only to inform all relevant stakeholders about the project results and recommendations, but also to invite them to come together and to jointly develop ideas on a possible way forward for their respective tourism sites.

Therefore, on 24-25 September 2025, a **Stakeholder Workshop** was implemented at Galle Face Hotel in Colombo, at which representatives from all major stakeholder groups in all ten sites participated.

Figure 45: Participants of the Stakeholder Workshop in Colombo, 24-25 September 2025. Photo: SLTDA.

Key objectives of the workshop were:

- To present **main findings** of site assessments, international Best Practices, and the conceptual model for visitor management (see Volumes 1-3 of the final reports);
- To support stakeholder **communication and co-creation**;
- To motivate stakeholders to develop ideas for sustainable tourism development, and to commit to their implementation.

During the first day of the workshop, key findings of the site assessments (see final report Vol. I) and international relevant Best Practice examples (Vol. 2) were presented. Furthermore, the general model for visitor management was explained (Vol. 3). In the second half of the first workshop day, stakeholders worked in groups to identify and prioritize key actions for strengthened management at their sites, and to develop draft implementation plans for a limited number of key actions.

On the second day, the stakeholder groups presented and jointly discussed the proposed **key actions**. A major outcome of the workshop was that all representatives of the ten tourism sites committed to forming institutionalized **Tourism Management Committees**. These committees will meet regularly and collaborate to advance sustainable tourism development. Thus, the workshop was not only the closing event of the current project but also a potential starting point for strengthening sustainable tourism and visitor management at Sri Lanka's most popular sites — and possibly beyond.

High-level representatives of UN Tourism and SLTDA confirmed this in their final remarks, stating that these institutions will continue to support tourism stakeholders in their collaborative efforts to advance sustainable tourism.

The stakeholders' commitment to collaboration was embodied in their collective signing of a joint Statement of Intent on the formation of these Tourism Management Committees:

Statement of Intent

Workshop on Enhancing Visitor Experience and Visitor Management

in Key Tourism Sites

Colombo, Sri Lanka

24-25 September 2025

We, the representatives of 10 tourism sites across Sri Lanka, are gathered here together in Colombo for the Workshop on Enhancing Visitor Experience and Visitor Management.

The Workshop serves to fuel the exchange of experiences and ideas among tourism stakeholders, aimed at prioritized actions for strengthened tourism and visitor management, and above all, to encourage collaboration with each other as key players on sustainable tourism development in Sri Lanka.

We, the Participants of the Workshop, therefore, commit to the following **Statement of Intent**:

1. Considering the importance of collaboration and collective actions, to commit to actively participate in future Tourism Management Committees at our sites;
2. Fully recognizing the value of sustainable tourism development, to collaboratively implement strategies and actions to enhance the visitor experience, optimize visitor management, and foster sustainable tourism development;
3. Acknowledging tourism's role for broader sustainable development, to contribute to preserving the cultural and natural heritage of our sites, while ensuring a thriving and resilient tourism sector now and in the future.

In Colombo, on 25 September 2025

The workshop agenda, presentations and Statement of Intent are provided as electronic annex to this report.

14.2 Outlook

It is recommended to make use of the dynamic and motivation which exists among stakeholders at the site level, and which was visible and reinforced during the Stakeholder Workshop. Thus, it is recommended to further support the stakeholders in their work.

Key Points for sustainable tourism development at the ten sites include:

- Continued **commitment** and **ownership** by **local stakeholders** for tourism development;
- **Supportive public authorities** to facilitate visible results (including **"quick wins"**, i.e., actions that are implementable in relatively short time and with relatively small resources);
- Further support to Tourism Management Committees from **SLTDA** and other central institutions, including **capacity building**, **knowledge exchange**, backing of further **institutionalization**;
- Implementation of all necessary steps according to the conceptual model presented in Volume 3 of this report (prioritization and implementation sequence should be decided according to site-specific conditions);

Crucially, as pointed out above, local tourism development can only be successful, if local actors feel they have ownership over strategic decisions and actions that directly affect "their" tourism site. Thus, the newly-formed Tourism Management Committees need to be supported, and they need to have some form of decision-making power, at least in the sense that the respective authorities are open and supportive to the Committees' proposals.

As a long-term goal, Tourism Management Committees should ideally be converted into genuine Destination Management Organizations (see chapter 4.6 of Vol. 3 of the final report).

A **potential follow-up project** should support Tourism Management Committees on this journey, starting with further development and implementation of the ideas that emerged from the Stakeholder Workshop, required baseline assessments, and the support of a Visioning process in all the ten sites.

So as to strengthen **local ownership and co-creation**, while at the same time ensuring targeted capacity building, a twinning or **tandem approach** is recommended, based on a Best Practice example described in Volume 2 of this report (see chapter 8.1 of Vol. 2). Thereby, pairs of tourism sites in Sri Lanka team up to jointly develop concrete ideas for sustainable tourism and visitor management. Tandems should be accompanied and "mentored" by an expert in this process. Importantly, clear objectives and roadmaps should be defined at the start, and progress needs to be monitored regularly.

A possible **tandem project approach** is outlined in the following:

14.3 Outline of a possible tandem project to support tourism development and visitor management through Tourism Management Committees

A framework for a support project for Tourism Management Committees could be as follows:

14.3.1 Tandem Project Rationale

- Newly-formed Tourism Management Committees need capacity-building to take strategic leadership in visitor management.
- A **tandem mentorship model** (pairing two sites with similar or complementary challenges) creates peer learning, shared innovation, and efficient use of expert guidance.
- This approach aligns with the **conceptual model** (see Vol. 3 of the final report): vision-setting, planning, monitoring, governance, communication, and adaptive management.

14.3.2 Objectives

- Strengthen **local governance capacity** of Tourism Management Committees.
- Develop **site-specific Visitor Management Plans** aligned with the conceptual model presented in Volume 3, as well as national tourism strategies.
- Foster **peer-to-peer learning** through tandem partnerships.
- Introduce **monitoring systems** and adaptive management practices.
- Enhance **stakeholder engagement** and community participation.
- Promote **sustainable funding models** for long-term resilience.

14.3.3 Project structure

14.3.3.1 Tandem pairing of sites

Sites are paired based on shared challenges or complementary strengths, e.g.:

- Hurulu Eco Park & Yala NP (wildlife tourism, overcrowding, animal welfare);
- Temple of the Tooth & Polonnaruwa (cultural heritage, UNESCO sites);
- Sigiriya & Galle Fort (iconic heritage sites, commercialization);
- Mirissa & Nuwara Eliya (Leisure destinations, marine vs. hill station tourism, waste management).

Each tandem is accompanied by a **mentor expert** (short-term consultant or academic practitioner) who facilitates structured learning and guides the committees.

Note that trios (instead of tandems) are also possible, although the inclusion of a third partner site will increase coordination requirements. E.g., Ella could team up with Sigiriya and Galle Fort, or with Mirissa and Nuwara Eliya.

PEO is a special case as it is structurally different from the other sites. It may be supported individually, or team up with another zoo or wildlife park that offers encounters with animals in captivity.

14.3.3.2 Implementation phases

Instead of a rigid sequence of steps, the implementation phase is designed to be **open and adaptive**, allowing each Tourism Management Committee to determine its own priorities, pace, and order of actions. The role of the tandem partnerships and mentors is to **facilitate reflection, provide expertise, and encourage experimentation**. Roadmaps and clear implementation plans will be defined by each tandem at the project start.

Elements may include (example for a 12-month project):

- **Kick-off workshops:** Each tandem develops its vision, objectives, and a tailored roadmap with mentor guidance.

- **Flexible implementation:** Committees decide their own priorities and sequence of actions (e.g., crowd management, waste reduction, interpretation, digital tools).
- **Mentorship & exchange:** Mentors facilitate peer learning, provide technical input, and encourage experimentation.
- **National knowledge exchange:** Mentors meet regularly to report on tandem progress; national workshops for all tandems and mentors are held at least three times during the project implementation, to facilitate exchange across all participating tourism sites.
- **Monitoring & adaptation:** Committees and mentors track progress with simple KPIs and adjust as needed.
- **Consolidation:** At the project end, results are documented in a **Visitor Management Handbook** and shared at a national symposium.

14.3.3.3 Governance and roles

- **Tourism Management Committees:** Lead local implementation, stakeholder engagement.
- **Mentors (Experts):** Provide technical guidance, facilitate tandem learning.
- **SLTDA:** National oversight, policy alignment.
- **UN Tourism and other potential international partners:** Technical support.

This tandem project would not only operationalize the **conceptual visitor management model** but also create a **living laboratory of tourism governance** in Sri Lanka, where committees evolve into strong local institutions capable of balancing conservation, visitor satisfaction, and community well-being.

Call to Action:

- Implement tandem project to support Tourism Management Committees at tourism sites in Sri Lanka to develop, implement and strengthen sustainable tourism and visitor management (see outline above).

Annex 1: Flow calculation for Sigiriya stairway

Flow calculation for upper stairway

The instantaneous flow (throughput) of **q** (persons per hour) of the staircase can be calculated as:

$q = 3{,}600 \cdot D \cdot v$

where
D = density on the stair (persons per meter),
v = average forward speed (meters per second).
Equivalently, based on the distance between people **s** (meters per person in single file), **$D = 1 / s$** and

$q = 3{,}600 \cdot v / s$.

Using the measured climb time T (seconds) and stair length L (meters):
since **$v = L / T$**,

$q = 3{,}600 \cdot D \cdot L / T = 3{,}600 \cdot [(L \cdot D) / T]$.

The average number of people simultaneously on the stair is **$N = L \cdot D$**. By *Little's Law*[20] **$\lambda = N / T$** (persons per second), i.e., the number has to be multiplied by 3,600 to get per hour capacity.

Parameters:
L: given = 300 m.
T: measured average climb time (10-20 minutes) → T = 600 to T = 1,200 s.
$v = L / T$: gives 0.5 m/s (for 10 min) down to 0.25 m/s (for 20 min).
s (spacing) or D (density): depends on how close people are comfortable/allowed to be.
Single-file spacings commonly used are:
typical single file ~1.5 m spacing → $D \approx$ 0.67 person/m
conservative spacing ~2.0 m → D = 0.5 person/m

Example:
- *$T = 1{,}200$ s → $v = 300 / 1{,}200 = 0.25$ m/s*
- choose *$s = 1.5$ m → $D = 0.667$ person/m*
- *$q = 3{,}600 \cdot 0.667 \cdot 0.25 \approx 600$ persons/hour*

Practical considerations / safety margins
- The formulas above give theoretical maxima for steady flow. Real stairs have stoppages, slower overtaking, groups, two-way encounters, fatigue, photo stops, and safety buffers.

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[20] Little's Law is an important theorem in mathematical queuing theory developed by John Little (1928-2024). It states that the average number of items in a stable system (L) is equal to the average arrival rate (λ) multiplied by the average time an item spends in the system (W), usually expressed as the formula $L = \lambda W$. In our example, this same formula is expressed as N = $\lambda \cdot$ T with
with
- N = number of persons on the staircase at a given time,
- λ = throughput rate (persons per unit time),
- T = average traversal time (climb time).

- Sigiriya's stairs are narrow and steep; introduce a safety/operational reduction factor (e.g., 0.6–0.8) to account for interruptions.
- For crowd safety and comfort, pick the conservative end of the range and apply a reduction factor.

> **Recommendation:**
> Based on the given inputs (300 m length of stairway, 10–20 min climbing time) and a reasonable single-file spacing of 1.5–2.0 m, a **practical safe capacity** for the upper staircase is roughly **450–900 persons per hour**, and a conservative operational limit around **~600 persons/hour** (this corresponds to 20 min climb, 1.5 m spacing). This may be reduced further to allow some buffer, e.g. for stops or photo-breaks (e.g., to 300–500/h).

Annex 2: Stakeholder Workshop documentation

The following documents are available as electronic files under the following link: Downloads - Stakeholder Workshop Documentation

- Workshop agenda
- Presentation of site assessments, international Best Practices, conceptual model for visitor management (Prof. Dr. Julius Arnegger)
- Presentations by tourism stakeholders (note that some stakeholders presented their ideas orally – these presentations are not included in the Annex)
- Workshop evaluation report